

|                                                              | Page           |
|--------------------------------------------------------------|----------------|
| <b>Surveys</b>                                               | <b>50-53</b>   |
| Sales Literature                                             | 50             |
| Function of Soldering, Hot Air and Desoldering Stations      | 51             |
| Tools                                                        | 52             |
| Safety Rests                                                 | 53             |
| <b>Soldering Stations</b>                                    | <b>54-59</b>   |
| Electronically Controlled Soldering Stations                 | 54-57          |
| Solder Feeder Systems                                        | 58             |
| Solder Stations for use with Solder Robots                   | 59             |
| Ferro Magnetic Controlled Soldering Stations (Magnastat)     | 59             |
| <b>Soldering Irons &amp; Tips</b>                            | <b>60-83</b>   |
| Electronically Controlled Low Voltage Soldering Irons & Tips | 60-72          |
| Cordless Soldering Irons & Tips                              | 73-76          |
| Magnastat Controlled Low Voltage Soldering Irons & Tips      | 77-79          |
| Magnastat Controlled Line Voltage Soldering Irons & Tips     | 80-82          |
| Uncontrolled Line Voltage Soldering Irons & Tips             | 83             |
| <b>Hot Air Stations</b>                                      | <b>84-88</b>   |
| 100 W Hot Air Stations                                       | 84-85          |
| 700 W Hot Air Stations                                       | 86-87          |
| Hot Air Guns                                                 | 88             |
| <b>Hot Air Irons &amp; Nozzles</b>                           | <b>88-93</b>   |
| <b>Desoldering Stations</b>                                  | <b>94-97</b>   |
| <b>Desoldering Irons &amp; Nozzles &amp; Heads</b>           | <b>98-101</b>  |
| <b>BGA / QFP Rework</b>                                      | <b>102-107</b> |
| <b>Fume Extraction</b>                                       | <b>108-120</b> |
| Tip Extraction Units & FE Irons                              | 108-113        |
| Volume Extraction Units & Accessory                          | 114-118        |
| Pipe Systems                                                 | 119-120        |
| Accessory                                                    | 120            |
| <b>Accessory</b>                                             | <b>121-133</b> |
| Temperature Measuring & Calibration                          | 121            |
| Heating Plates                                               | 122            |
| PCB Board Holders                                            | 123            |
| Soldering Bathes                                             | 124            |
| Miscellaneous                                                | 125-129        |
| Extension Cords                                              | 129            |
| Safety Rests                                                 | 130-133        |
| <b>Index</b>                                                 | <b>203</b>     |
| Alpha-Numerical                                              | 203-205        |
| Numerical                                                    | 206-210        |

# Survey

## Available Sales Literature

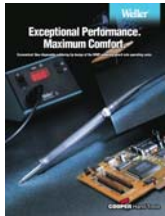


### Description

### Order No.

**Weller SL Soldering Stations, 6 Pages**

(D) 005 56 620 01  
(GB) 005 56 621 01  
(F) 005 56 622 00  
(I) 005 56 623 00



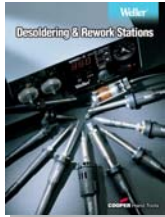
**Weller WSL / WMP Soldering Iron "Tip to Grip", 6 Pages**

(D) 005 56 826 00  
(GB) 005 56 825 00  
(F) 005 56 823 00  
(I) 005 56 824 00



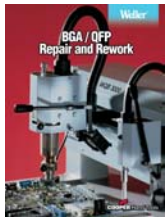
**Weller Hot Air Stations, 20 Pages**

(D) 005 56 061 03  
(GB) 005 56 062 03  
(F) 005 56 063 03



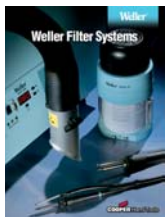
**Weller Desoldering Stations, 24 Pages**

(D) 005 56 615 00  
(GB) 005 56 616 00  
(F) 005 56 617 00  
(I) 005 56 618 00



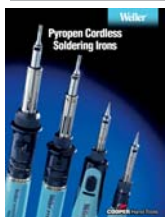
**Weller BGA / QFP Rework, 14 Pages**

(D) 005 56 339 02  
(GB) 005 56 342 02  
(F) 005 56 340 01



**Weller Zero-Smog Fume Extraction, 20 Pages**

(D) 005 56 170 03  
(GB) 005 56 171 03  
(F) 005 56 172 03  
(I) 005 56 174 03



**Weller Pyropen Brochure, 4 Pages**

(D) 005 56 008 01  
(GB) 005 56 009 01  
(F) 005 56 010 02  
(I) 005 56 011 01

All sales literature available as PDF files on

[www.cooperhandtools.com/europe/sales-literature/index.htm](http://www.cooperhandtools.com/europe/sales-literature/index.htm)

# Surveys

Function of Soldering, Hot Air and Desoldering Stations

● connectable

● scope of delivery

|                                               | Model                                                                                                                  | Soldering |      |       | Desoldering | Hot Air |       |
|-----------------------------------------------|------------------------------------------------------------------------------------------------------------------------|-----------|------|-------|-------------|---------|-------|
|                                               |                                                                                                                        | 50 W      | 80 W | 150 W | 80 W        | 100 W   | 700 W |
| None                                          |  <b>WS 51</b><br>p. 54                | ●         |      |       |             |         |       |
|                                               |  <b>WS 81</b><br>p. 54                | ●         | ●    |       |             |         |       |
|                                               |  <b>WSD 81 / WSL</b><br>p. 55         | ●         | ●    |       |             |         |       |
|                                               |  <b>WSD 161 / WSL 2</b><br>p. 56 + 57 | ●         | ●    | ●     |             |         |       |
|                                               |  <b>WSD 151</b><br>p. 57             | ●         | ●    | ●     |             |         |       |
| External Supply<br>Compressed Air / Inert Gas |  <b>WAD 101</b><br>p. 84            | ●         | ●    |       |             | ●       |       |
|                                               |  <b>WDD 81V/VIL</b><br>p. 94        | ●         | ●    |       | ●           |         |       |
|                                               |  <b>WDD 161V</b><br>p. 95           | ●         | ●    | ●     | ●           |         |       |
|                                               |  <b>WHA 3000V</b><br>p. 86          |           |      |       |             |         | ●     |
|                                               |  <b>WMA 3V</b><br>p. 84             | ●         | ●    |       | ●           | ●       |       |
| Self contained<br>Pump / Turbine              |  <b>WHA 3000P</b><br>p. 87          |           |      |       |             |         | ●     |
|                                               |  <b>WMD 1A</b><br>p. 85             | ●         | ●    | ●     | ●           | ●       |       |
|                                               |  <b>WMD 1D</b><br>p. 95             | ●         | ●    | ●     | ●           | ●       |       |
|                                               |  <b>WMD 3K</b><br>p. 85 + 96        | ●         | ●    | ●     | ●           | ●       |       |

# Surveys

## Tools

| Tool                  | Station | PUD 81R<br>p. 59 | WAD 101<br>p. 84 | WDD 81V<br>p. 94 | WDD 161V<br>p. 95 | WMA 3V<br>p. 84 | WMD 1S<br>p. 85+95 | WMD 3<br>p. 85+96 | WS 51<br>p. 54 | WS 81<br>p. 54 | WSD 81<br>p. 55 | WSD 151<br>p. 57 | WSD 161<br>p. 56 | WSL<br>p. 55 | WSL 2<br>p. 57 | WTCP 51<br>p. 59 |
|-----------------------|---------|------------------|------------------|------------------|-------------------|-----------------|--------------------|-------------------|----------------|----------------|-----------------|------------------|------------------|--------------|----------------|------------------|
| Dispenser             |         |                  |                  |                  |                   |                 |                    |                   |                |                |                 |                  |                  |              |                |                  |
| DSX 80 p. 98          |         |                  |                  |                  |                   |                 |                    |                   |                |                |                 |                  |                  |              |                |                  |
| DSXV 80 p. 98         |         |                  |                  |                  |                   |                 |                    |                   |                |                |                 |                  |                  |              |                |                  |
| FE 25                 |         |                  |                  |                  |                   |                 |                    |                   |                |                |                 |                  |                  |              |                |                  |
| FE 50 p. 110          |         |                  |                  |                  |                   |                 |                    |                   |                |                |                 |                  |                  |              |                |                  |
| FE 50M p. 110         |         |                  |                  |                  |                   |                 |                    |                   |                |                |                 |                  |                  |              |                |                  |
| FE 75 p. 110          |         |                  |                  |                  |                   |                 |                    |                   |                |                |                 |                  |                  |              |                |                  |
| FE 80 p. 110          |         |                  |                  |                  |                   |                 |                    |                   |                |                |                 |                  |                  |              |                |                  |
| HAP 1 p. 88           |         |                  |                  |                  |                   |                 |                    |                   |                |                |                 |                  |                  |              |                |                  |
| LR 21 p. 61           |         |                  |                  |                  |                   |                 |                    |                   |                |                |                 |                  |                  |              |                |                  |
| LR 82 p. 68           |         |                  |                  |                  |                   |                 |                    |                   |                |                |                 |                  |                  |              |                |                  |
| MLR 21 p. 60          |         |                  |                  |                  |                   |                 |                    |                   |                |                |                 |                  |                  |              |                |                  |
| MLR 21FE              |         |                  |                  |                  |                   |                 |                    |                   |                |                |                 |                  |                  |              |                |                  |
| MPR 80 p. 65          |         |                  |                  |                  |                   |                 |                    |                   |                |                |                 |                  |                  |              |                |                  |
| TCP S p. 77           |         |                  |                  |                  |                   |                 |                    |                   |                |                |                 |                  |                  |              |                |                  |
| Vac. tweezer          |         |                  |                  |                  |                   |                 |                    |                   |                |                |                 |                  |                  |              |                |                  |
| WHP 80 p. 122         |         |                  |                  |                  |                   |                 |                    |                   |                |                |                 |                  |                  |              |                |                  |
| WMP p. 63             |         |                  |                  |                  |                   |                 |                    |                   |                |                |                 |                  |                  |              |                |                  |
| WSB 80 p. 124         |         |                  |                  |                  |                   |                 |                    |                   |                |                |                 |                  |                  |              |                |                  |
| WSB 150 p. 124        |         |                  |                  |                  |                   |                 |                    |                   |                |                |                 |                  |                  |              |                |                  |
| WSP 80 / FE p. 85+110 |         |                  |                  |                  |                   |                 |                    |                   |                |                |                 |                  |                  |              |                |                  |
| WSP 150 p. 70         |         |                  |                  |                  |                   |                 |                    |                   |                |                |                 |                  |                  |              |                |                  |
| WST 20 p. 125         |         |                  |                  |                  |                   |                 |                    |                   |                |                |                 |                  |                  |              |                |                  |
| WTA 50 p. 72          |         |                  |                  |                  |                   |                 |                    |                   |                |                |                 |                  |                  |              |                |                  |

# Surveys

## Safety Rests

| Tool                | Safety Rest | Att. Kit WSFP FE<br>p. 86 | Combi Supp. 2x | AK 1 p. 130 | AK 10 p. 130 | AK 20 p. 130 | AK 21 p. 130 | AK 51 p. 130 | AKV p. 131 | AKS p. 130 | KH 4 p. 131 | KH 6 p. 131 | KH 15 p. 131 | KH 20 p. 131 | KH 23 p. 131 | KH 25P p. 131 | KH 27 p. 132 | KHP p. 112+132 | KHE p. 112+132 | KHEP p. 112+132 | KHE 21 | KHP 21 | KHEP21 | WPH 80 p. 133 | WPHM p. 133 | WPHT p. 133 |
|---------------------|-------------|---------------------------|----------------|-------------|--------------|--------------|--------------|--------------|------------|------------|-------------|-------------|--------------|--------------|--------------|---------------|--------------|----------------|----------------|-----------------|--------|--------|--------|---------------|-------------|-------------|
| DS 80               |             |                           |                |             |              |              |              |              |            |            |             |             |              |              |              |               |              |                |                |                 |        |        |        |               |             |             |
| DS 80UNC            |             |                           |                |             |              |              |              |              |            |            |             |             |              |              |              |               |              |                |                |                 |        |        |        |               |             |             |
| DSV 80              |             |                           |                |             |              |              |              |              |            |            |             |             |              |              |              |               |              |                |                |                 |        |        |        |               |             |             |
| DSV 80UNC           |             |                           |                |             |              |              |              |              |            |            |             |             |              |              |              |               |              |                |                |                 |        |        |        |               |             |             |
| DSVT 80             |             |                           |                |             |              |              |              |              |            |            |             |             |              |              |              |               |              |                |                |                 |        |        |        |               |             |             |
| DSX 80 p. 98        |             |                           |                |             |              |              |              |              |            |            |             |             |              |              |              |               |              |                |                |                 |        |        |        |               |             |             |
| DSXV 80 p. 98       |             |                           |                |             |              |              |              |              |            |            |             |             |              |              |              |               |              |                |                |                 |        |        |        |               |             |             |
| FE 25               |             |                           |                |             |              |              |              |              |            |            |             |             |              |              |              | 1)            |              |                |                |                 |        |        |        |               |             |             |
| FE 50 p. 110        |             |                           |                |             |              |              |              |              |            |            |             |             |              |              |              | 1)            |              |                |                |                 |        |        |        |               |             |             |
| FE 50M p. 110       |             |                           |                |             |              |              |              |              |            |            |             |             |              |              |              | 1)            |              |                |                |                 |        |        |        |               |             |             |
| FE 75 p. 110        |             |                           |                |             |              |              |              |              |            |            |             |             |              |              |              | 1)            |              |                |                |                 |        |        |        |               |             |             |
| FE 80 p. 110        |             |                           |                |             |              |              |              |              |            |            |             |             |              |              |              | 1)            |              |                |                |                 |        |        |        |               |             |             |
| HAP 1 p. 88         |             |                           |                |             |              |              |              |              |            |            |             |             |              |              |              |               |              |                |                |                 |        |        |        |               |             |             |
| HAP 2               |             |                           |                |             |              |              |              |              |            |            |             |             |              |              |              |               |              |                |                |                 |        |        |        |               |             |             |
| HAP 3               |             |                           |                |             |              |              |              |              |            |            |             |             |              |              |              |               |              |                |                |                 |        |        |        |               |             |             |
| LR 21 p. 61         |             |                           |                |             |              |              |              |              |            |            |             |             |              |              |              |               |              |                |                |                 |        |        |        |               |             |             |
| LR 82 p. 68         |             |                           |                |             |              |              |              |              |            |            |             |             |              |              |              |               |              |                |                |                 |        |        |        |               |             |             |
| MLR 21 p. 60        |             |                           |                |             |              |              |              |              |            |            |             |             |              |              |              |               |              |                |                |                 |        |        |        |               |             |             |
| MLR 21FE            |             |                           |                |             |              |              |              |              |            |            |             |             |              |              |              |               |              |                |                |                 |        |        |        |               |             |             |
| MLR 80              |             |                           |                |             |              |              |              |              |            |            |             |             |              |              |              |               |              |                |                |                 |        |        |        |               |             |             |
| MPR 80              |             |                           |                |             |              |              |              |              |            |            |             |             |              |              |              |               |              |                |                |                 |        |        |        |               |             |             |
| MT 1500             |             |                           |                |             |              |              |              |              |            |            |             |             |              |              |              |               |              |                |                |                 |        |        |        |               |             |             |
| MT 1500FE           |             |                           |                |             |              |              |              |              |            |            |             |             |              |              |              |               |              |                |                |                 |        |        |        |               |             |             |
| TCPS p. 77          |             |                           |                |             |              |              |              |              |            |            |             |             |              |              |              |               |              |                |                |                 |        |        |        |               |             |             |
| Vac. tweezer        |             |                           |                |             |              |              |              |              |            |            |             |             |              |              |              |               |              |                |                |                 |        |        |        |               |             |             |
| W 61 p. 80          |             |                           |                |             |              |              |              |              |            |            |             |             |              |              |              |               |              |                |                |                 |        |        |        |               |             |             |
| W 101 p. 81         |             |                           |                |             |              |              |              |              |            |            |             |             |              |              |              |               |              |                |                |                 |        |        |        |               |             |             |
| WMP p. 63           |             |                           |                |             |              |              |              |              |            |            |             |             |              |              |              |               |              |                |                |                 |        |        |        |               |             |             |
| WSFP 5/8            |             |                           |                |             |              |              |              |              |            |            |             |             |              |              |              |               |              |                |                |                 |        |        |        |               |             |             |
| WSP 80 /FE p.85+110 |             |                           |                |             |              |              |              |              |            |            |             |             |              |              |              |               |              |                |                |                 |        |        |        |               |             |             |
| WSP 150 p. 70       |             |                           |                |             |              |              |              |              |            |            |             |             |              |              |              |               |              |                |                |                 |        |        |        |               |             |             |
| WTA 50 p. 72        |             |                           |                |             |              |              |              |              |            |            |             |             |              |              |              |               |              |                |                |                 |        |        |        |               |             |             |

1) with special funnel

# Soldering Stations

## Electronically Controlled Soldering Stations

The Weller Silver Line Series has been developed for electronic experts. The tip temperature is electronically controlled. The maximum temperature is 450°C (WSD 151 550°C) within a tolerance of +- 2%. With the antistatic properties of the power unit and the soldering iron the stations meet all current requirements of ESD safety. Potential balance of the soldering tip can be effected by a plug. All electronically controlled Weller tools can be connected up to the maximum power of the according station. The automatic tool recognition provides the optimal settings of the tools.

|  | Order No.     | Model | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|----------------------------------------------------------------------------------|---------------|-------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                                                                  | 005 32 306 99 | WS 51 | <b>Soldering station analog 50 W, 230 V</b> <ul style="list-style-type: none"><li>• Analog controlled electronic for soldering tools up to 50 W</li><li>• Temperature range 150°C - 450°C</li><li>• Temperature control via rotary potentiometer</li><li>• Protection class 1</li><li>• Antistatic housing</li><li>• Equipotential bonding (normal state hard grounded)</li><li>• Automatic tool recognition</li><li>• Dimensions: 166 x 115 x 101 mm (L x W x H)</li></ul> |
| Soldering Tips: see page 61<br>Spare parts: see page 155                         | consists of:  |       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|                                                                                  | 005 32 326 99 | PU 51 | Control unit                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|                                                                                  | 005 25 106 99 | LR 21 | Soldering iron 50 W, 24 V with soldering tip ET B                                                                                                                                                                                                                                                                                                                                                                                                                           |
|                                                                                  | 005 15 020 99 | KH 20 | Safety rest                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|                                                                                  | 005 32 324 99 | PU 51 | <b>Control unit switchable 50 W, 120 V / 240 V, with US plug</b>                                                                                                                                                                                                                                                                                                                                                                                                            |

|  | Order No.     | Model  | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|------------------------------------------------------------------------------------|---------------|--------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                                                                    | 005 32 506 99 | WS 81  | <b>Soldering station analog 80 W, 230 V, with 80 W Silver Line soldering iron</b> <ul style="list-style-type: none"><li>• Analog controlled electronic for soldering tools up to 80 W</li><li>• Temperature range 150°C - 450°C</li><li>• Temperature control via rotary potentiometer</li><li>• Protection class 1</li><li>• Antistatic housing</li><li>• Equipotential bonding (normal state hard grounded)</li><li>• Automatic tool recognition</li><li>• Dimensions: 166 x 115 x 101 mm (L x W x H)</li></ul> |
| Soldering Tips: see page 66 / 67<br>Spare parts: see page 156                      | consists of:  |        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|                                                                                    | 005 32 526 99 | PU 81  | Control unit                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|                                                                                    | 005 29 161 99 | WSP 80 | Soldering iron 80 W, 24 V with soldering tip LT B                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|                                                                                    | 005 15 140 99 | WPH 80 | Safety rest                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|                                                                                    | 005 32 524 99 | PU 81  | <b>Control unit switchable 80 W, 120 V / 240 V, with US plug</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                  |

# Soldering Stations

## Electronically Controlled Soldering Stations

**Weller®**



Soldering Tips: see page 66 / 67  
Spare parts: see page 158

**Order No.**      **Model**  
**005 32 606 99**   **WSD 81**

### Description

#### **Soldering station digital 80 W, 230 V, with 80 W Silver Line soldering iron**

- Digital controlled electronic for soldering tools up to 80 W
- Temperature range 50°C - 450°C
- Temperature control via buttons
- 3-position digital display
- Calibration box WCB 2 (see page 121) may be connected for CALIBRATION, LOCK OUT or OFFSET function
- Key switch
- Protection class 1
- Antistatic housing
- Equipotential bonding (normal state hard grounded)
- Automatic tool recognition
- Dimensions: 166 x 115 x 101 mm (L x W x H)

consists of:

005 32 626 99   PUD 81  
005 29 161 99   WSP 80  
005 15 140 99   WPH 80

Control unit

Soldering iron 80 W, 24 V with soldering tip LT B

Safety rest

**005 32 624 99**   **PUD 81**

**Control unit switchable 80 W, 120 V / 240 V, with US plug**



Soldering Tips: see page 63 / 64

**Order No.**      **Model**  
**005 32 826 99**   **WSL**

### Description

#### **Soldering station digital 80 W, 230 V, with ergonomic "Tip to Grip" soldering iron**

- 65 W Ergonomical "Tip to Grip" soldering iron with integrated heating element
- Digital controlled electronic for soldering tools up to 80 W
- Temperature range 50°C - 450°C
- Temperature control via buttons
- 3-position digital display
- Calibration box WCB 2 (see page 121) may be connected for CALIBRATION, LOCK OUT or OFFSET function
- Protection class 1
- Antistatic housing
- Equipotential bonding (normal state hard grounded)
- Automatic tool recognition
- Dimensions: 166 x 115 x 101 mm (L x W x H)

consists of:

WSL  
WMP      WMP  
WPHM    WPHM

Control unit

Soldering iron 65 W, 24 V with soldering tip NT 1

Safety rest

**005 32 624 99**   **PUD 81**

**Control unit switchable 80 W, 120 V / 240 V, with US plug**

# Soldering Stations

## Electronically Controlled Soldering Stations

|  | Order No.     | Model | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|----------------------------------------------------------------------------------|---------------|-------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                                                                  | 005 32 866 99 | WSLT  | <b>Soldering station digital 80 W, 230 V, with ergonomic "Tip to Grip" soldering iron and safety rest with Stop + Go function</b> <ul style="list-style-type: none"><li>• WPHT Safety rest for Stop + Go function and temperature set back</li><li>• 65 W Ergonomical "Tip to Grip" soldering iron with integrated heating element</li><li>• Digital controlled electronic for soldering tools up to 80 W</li><li>• Temperature range 50°C - 450°C</li><li>• Temperature control via buttons</li><li>• 3-position digital display</li><li>• Calibration box WCB 2 (see page 121) may be connected for CALIBRATION, LOCK OUT or OFFSET function</li><li>• Protection class 1</li><li>• Antistatic housing</li><li>• Equipotential bonding (normal state hard grounded)</li><li>• Automatic tool recognition</li><li>• Dimensions: 166 x 115 x 101 mm (L x W x H)</li></ul> |
| Soldering Tips: see page 63 / 66                                                 |               |       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| consists of:                                                                     |               |       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|                                                                                  |               | WSL   | Control unit                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|                                                                                  |               | WMP   | Soldering iron 65 W, 24 V with soldering tip NT 1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|                                                                                  |               | WPHT  | Safety rest Stop + Go                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |

|               |        |                                                                  |
|---------------|--------|------------------------------------------------------------------|
| 005 32 624 99 | PUD 81 | <b>Control unit switchable 80 W, 120 V / 240 V, with US plug</b> |
|---------------|--------|------------------------------------------------------------------|

|  | Order No.     | Model   | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|------------------------------------------------------------------------------------|---------------|---------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                                                                    | 005 32 706 99 | WSD 161 | <b>Dual output soldering station digital 2 x 80 W, 230 V</b> <ul style="list-style-type: none"><li>• 2 x 80 W soldering iron WSP 80</li><li>• Digital controlled electronic for soldering tools up to 150 W</li><li>• Temperature range 50°C - 450°C</li><li>• Temperature control via buttons</li><li>• 3-position digital display</li><li>• Calibration box WCB 2 (see page 121) may be connected for CALIBRATION, LOCK OUT or OFFSET function</li><li>• Protection class 1</li><li>• Antistatic housing</li><li>• Equipotential bonding (normal state hard grounded)</li><li>• Automatic tool recognition</li><li>• Dimensions: 166 x 115 x 101 mm (L x W x H)</li></ul> |
| Soldering Tips: see page 66 / 67                                                   |               |         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| Spare parts: see page 161                                                          |               |         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| consists of:                                                                       |               |         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|                                                                                    | 005 32 726 99 | PUD 161 | Control unit                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|                                                                                    | 005 29 161 99 | WSP 80  | 2 x soldering iron 80 W, 24 V with soldering tip LT B                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|                                                                                    | 005 15 140 99 | WPH 80  | 2 x safety rest                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |

|               |         |                                                                      |
|---------------|---------|----------------------------------------------------------------------|
| 005 32 724 99 | PUD 161 | <b>Control unit switchable 2 x 80 W, 120 V / 240 V, with US plug</b> |
|---------------|---------|----------------------------------------------------------------------|

# Soldering Stations

## Electronically Controlled Soldering Stations

**Weller®**



Soldering Tips: see page 63 / 64 + 66 / 67  
Spare parts: see page 162

**Order No.**    **Model**  
**005 32 846 99**   **WSL 2**

### Description

**Dual output soldering station digital 2 x 80 W, 230 V, with ergonomic "Tip to Grip" soldering iron**

- 1 x 65 W Ergonomical "Tip to Grip" soldering iron with integrated heating element
- 1 x 80 W soldering iron WSP 80
- Digital controlled electronic for soldering tools up to 150 W
- Temperature range 50°C - 450°C
- Temperature control via buttons
- 3-position digital display
- Calibration box WCB 2 (see page 121) may be connected for CALIBRATION, LOCK OUT or OFFSET function
- Protection class 1
- Antistatic housing
- Equipotential bonding (normal state hard grounded)
- Automatic tool recognition
- Dimensions: 166 x 115 x 101 mm (L x W x H)

consists of:

|               |        |
|---------------|--------|
|               | WSL 2  |
| WMP           | WMP    |
| 005 29 161 99 | WSP 80 |
| WPHM          | WPHM   |
| 005 15 140 99 | WPH 80 |

Control unit

1 x Soldering iron 65 W, 24 V with soldering tip NT 1  
1 x soldering iron 80 W, 24 V with soldering tip LT B  
1 x safety rest for WMP  
1 x safety rest for WSP 80

**005 32 724 99**   **PUD 161**

**Control unit switchable 2 x 80 W, 120 V / 240 V, with US plug**



Soldering Tips: see page 70  
Spare parts: see page 160

**Order No.**    **Model**  
**005 32 766 99**   **WSD 151**

### Description

**Soldering station digital 150 W, 230 V**

- 150 W soldering iron WSP 150 for high temperature soldering
- Digital controlled electronic for soldering tools up to 150 W
- Temperature range 50°C - 550°C (automatically limited to 450°C if any other tool than WSP 150 is connected)
- Temperature control via buttons
- 3-position digital display
- Calibration box WCB 2 (see page 121) may be connected for CALIBRATION, LOCK OUT or OFFSET function
- Protection class 1
- Antistatic housing
- Equipotential bonding (normal state hard grounded)
- Automatic tool recognition
- Dimensions: 166 x 115 x 101 mm (L x W x H)

consists of:

|               |         |
|---------------|---------|
| 005 32 786 99 | PUD 151 |
| 005 29 170 99 | WSP 150 |
| 005 15 027 99 | KH 27   |

Control unit

Soldering iron 150 W, 24 V with soldering tip LHT F  
Safety rest

**005 32 784 99**   **PUD 151**

**Control unit switchable 150 W, 120 V / 240 V, with US plug**

# Soldering Stations

## Solder Feeder Systems

The WSF 81D5 will dispense solder wire with a diameter of 0,5 mm to 0,8 mm, the WSF 81D8 will dispense solder wire with a diameter of 0,8 mm to 1,5 mm. By switching over the operating mode and adjusting the heating element on the WSF soldering iron, the operator can switch between automatic (SFA) and continuous (SFC) solder supply at any time. In the operation mode “automatic” (SFA) the preset quantity of solder is fed by the activation of the finger switch (optional: foot switch or external contact). The required amount of solder can be continuously adjusted from 1 - 10 mm. The feed interval is shown digital. In the operation mode “continuous” (SFC) the solder feed is activated for as long as the finger switch (optional: foot switch or external contact) is activated. The speed of the feed rate can be continuously adjusted and is shown digitally. The control unit is fitted with digital electronics for regulating the soldering iron temperature and solder feed operation.



| Order No.     | Model    | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|---------------|----------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 005 28 206 99 | WSF 81D5 | <b>Solder feeder system 80 W, 230 V, for wire ø 0,5 - 0,8 mm</b> <ul style="list-style-type: none"><li>• Digital controlled electronic</li><li>• Temperature range 50°C - 450°C</li><li>• Temperature control via buttons</li><li>• 3-position digital display</li><li>• Calibration box WCB 2 (see page 121) may be connected for CALIBRATION, LOCK OUT or OFFSET function</li><li>• Protection class 1</li><li>• Antistatic housing</li><li>• Equipotential bonding (normal state hard grounded)</li><li>• Automatic tool recognition</li><li>• Dimensions: 120 x 217 x 199 mm (L x W x H)</li></ul> |

consists of:

Soldering Tips: see page 66 / 67  
Spare parts: see page 162

|               |        |                                                                            |
|---------------|--------|----------------------------------------------------------------------------|
| 005 28 116 99 | WSF 2  | Power unit                                                                 |
| 005 28 121 99 | WSFP 5 | Feeding unit                                                               |
| 005 15 028 99 | AKS    | Soldering iron 80 W, 24 V for wire ø 0,5 - 0,8 mm with soldering tip LT HX |
| 005 13 120 99 |        | Safety rest                                                                |
|               |        | Foot switch                                                                |



| Order No.     | Model    | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|---------------|----------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 005 28 226 99 | WSF 81D8 | <b>Solder feeder system 80 W, 230 V, for wire ø 0,8 - 1,5 mm</b> <ul style="list-style-type: none"><li>• Digital controlled electronic</li><li>• Temperature range 50°C - 450°C</li><li>• Temperature control via buttons</li><li>• 3-position digital display</li><li>• Calibration box WCB 2 (see page 121) may be connected for CALIBRATION, LOCK OUT or OFFSET function</li><li>• Protection class 1</li><li>• Antistatic housing</li><li>• Equipotential bonding (normal state hard grounded)</li><li>• Automatic tool recognition</li><li>• Dimensions: 120 x 217 x 199 mm (L x W x H)</li></ul> |

consists of:

Soldering Tips: see page 66 / 67  
Spare parts: see page 162

|               |        |                                                                            |
|---------------|--------|----------------------------------------------------------------------------|
| 005 28 116 99 | WSF 2  | Power unit                                                                 |
| 005 28 222 99 | WSFP 8 | Feeding unit                                                               |
| 005 15 028 99 | AKS    | Soldering iron 80 W, 24 V for wire ø 0,8 - 1,2 mm with soldering tip LT BX |
| 005 13 120 99 |        | Safety rest                                                                |
|               |        | Foot switch                                                                |

# Soldering Stations

## Soldering Stations for Use With Solder Robots

The PUD 81R is suitable for soldering tasks in industrial manufacturing in which the soldering process is to be automated. For this purpose the unit is equipped with a monitoring circuit. As a function of an adjustable temperature window (tolerance band), an un-powered contact is switched to a low impedance. Straightforward, easy operation is made possible by usage of a micro processor. Digital control electronics ensure optimal regulation behaviour with different soldering irons up to 80 W. The soldering irons are automatically recognized by the soldering station and assigned the appropriate control parameters.



Soldering Tips: see page 68  
Spare parts: see page 141

| Order No.     | Model   | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|---------------|---------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 005 32 646 99 | PUD 81R | <b>Soldering station digital 80 W, 230 V, for use with solder robots</b> <ul style="list-style-type: none"> <li>• Digital controlled electronic for soldering tools up to 80 W</li> <li>• Temperature range 50°C - 450°C</li> <li>• Temperature window adjustable +/- 99°C</li> <li>• Temperature control via buttons</li> <li>• 3-position digital display</li> <li>• Calibration box WCB 2 (see page 121) may be connected for CALIBRATION, LOCK OUT or OFFSET function</li> <li>• Protection class 1</li> <li>• Antistatic housing</li> <li>• Equipotential bonding (normal state hard grounded)</li> <li>• Automatic tool recognition</li> <li>• Potential free contact 24 V / 20 mA</li> <li>• Dimensions: 166 x 115 x 101 mm (L x W x H)</li> </ul> |

Accessory:

Special heating element for robot soldering see page 68

## Ferro Magnetic Controlled Soldering Station (Magnastat)

The Weller Magnastat system operates through a ferro-magnetic device which changes its characteristics when specific temperatures are reached. This causes it to either attract or repel a permanent magnet which operates a power supply switch. In this way power to the heating element can be quickly switched on or off to either provide extra power for soldering operations or reduced power when idling. Various preselected tip temperatures (260°C, 310°C, 370°C, 425°C, 480°C) are available for different soldering tasks. The unit is not suitable for ESD application because the iron is not antistatic.



Soldering Tips: see page 77 - 79  
Spare parts: see page 163

| Order No.     | Model   | Description                                                                                                                                                                                                                                                                                                                         |
|---------------|---------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 005 32 206 99 | WTCP 51 | <b>Soldering station Magnastat 50 W, 230 V</b> <ul style="list-style-type: none"> <li>• On / Off controller</li> <li>• Temperature control variable by soldering tip exchange</li> <li>• Protection class 1</li> <li>• Antistatic housing</li> <li>• Hard grounded</li> <li>• Dimensions: 166 x 115 x 101 mm (L x W x H)</li> </ul> |

consists of:

|               |       |                                                            |
|---------------|-------|------------------------------------------------------------|
| 005 32 226 99 | P 51  | Control unit 230 V                                         |
| 005 32 105 99 | TCPS  | Soldering iron 50 W, 24 V with soldering tip PTB 7 (370°C) |
| 005 15 020 99 | KH 20 | Safety rest                                                |

|               |      |                                                                  |
|---------------|------|------------------------------------------------------------------|
| 005 32 224 99 | P 51 | <b>Control unit switchable 50 W, 120 V / 240 V, with US plug</b> |
|---------------|------|------------------------------------------------------------------|

# Soldering Irons and Tips

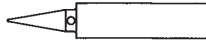
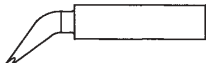
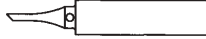
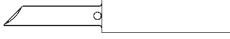
## Electronically Controlled Low Voltage Soldering Irons

The Weller soldering irons feature high precision and a very fast heat up time. The ergonomic design and high performance of the soldering irons allow fine soldering jobs as well as heavy duty tasks. A wide range of soldering tips makes them versatile for almost every job.

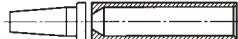


| Order No.     | Model  | Description                                              |
|---------------|--------|----------------------------------------------------------|
| 005 29 101 99 | MLR 21 | Micro soldering iron 25 W, 24 V, with soldering tip MT H |
| 005 15 019 99 | KH 15  | Safety rest                                              |

### Soldering tips for MLR 21

|                                                                                     | Order No.     | Model | Description                                  | Width A   | Length B |
|-------------------------------------------------------------------------------------|---------------|-------|----------------------------------------------|-----------|----------|
|   | 005 44 105 99 | MT 1S | Longform conical                             | ø 0,25 mm | –        |
|  | 005 44 101 99 | MT 1  | Micropoint                                   | 0,25 mm   | 1,6 mm   |
|  | 005 44 106 99 | MT 6  | Chisel slim                                  | 1,6 mm    | 0,4 mm   |
|  | 005 44 112 99 | MT H  | Chisel                                       | 0,8 mm    | 0,4 mm   |
|                                                                                     | 005 44 110 99 | MT A  | Chisel                                       | 1,2 mm    | 0,4 mm   |
|                                                                                     | 005 44 111 99 | MT B  | Chisel                                       | 2,4 mm    | 0,4 mm   |
|  | 005 44 113 99 | MT HX | Chisel bent 45°                              | 0,8 mm    | 0,4 mm   |
|  | 005 44 104 99 | MT 4  | Sloped                                       | ø 1,2 mm  |          |
|  | 005 44 119 99 | MT GW | Gull wing                                    | ø 2,0 mm  |          |
|  | 005 44 114 99 |       | MT Measuring tip for thermo element ø 0,5 mm |           |          |

If any other tips are required, use LT tip series with MT / LT adapter

| Order No./Model                                                                                   | Description                                                  |
|---------------------------------------------------------------------------------------------------|--------------------------------------------------------------|
|  005 44 121 99 | MT-LT Adapter for use with LT series tips (see page 66 / 67) |

# Soldering Irons and Tips

Electronically Controlled Low Voltage Soldering Irons



| Order No.     | Model | Description              |
|---------------|-------|--------------------------|
| 005 33 112 99 | LR 21 | Soldering Set 50 W, 24 V |

consists of:

|               |       |                                                   |
|---------------|-------|---------------------------------------------------|
| 005 25 106 99 | LR 21 | Soldering iron 50 W, 24 V with soldering tip ET B |
| 005 15 020 99 | KH 20 | Safety rest                                       |

## Soldering tips for LR 21

|                                                                                     | Order No.     | Model  | Description                                  | Width A  | Length B |
|-------------------------------------------------------------------------------------|---------------|--------|----------------------------------------------|----------|----------|
|    | 4ETS          | ET S   | Micropoint long                              | 0,4 mm   |          |
|                                                                                     | 4ETO          | ET O   | Micropoint long                              | 0,8 mm   |          |
|    | 4ETR          | ET R   | Chisel slim                                  | 1,6 mm   | 0,7 mm   |
|  | 4ETH          | ET H   | Chisel                                       | 0,8 mm   | 0,4 mm   |
|                                                                                     | 4ETA          | ET A   | Chisel                                       | 1,6 mm   | 0,7 mm   |
|                                                                                     | 4ETB          | ET B   | Chisel                                       | 2,4 mm   | 0,8 mm   |
|                                                                                     | 4ETC          | ET C   | Chisel                                       | 3,2 mm   | 0,8 mm   |
|                                                                                     | 4ETD          | ET D   | Chisel                                       | 4,6 mm   | 0,8 mm   |
|                                                                                     | 4ETE          | ET E   | Chisel                                       | 5,6 mm   | 1,2 mm   |
|  | 4ETK          | ET K   | Chisel long                                  | 1,2 mm   | 0,4 mm   |
|                                                                                     | 4ETL          | ET L   | Chisel long                                  | 2,0 mm   | 1,0 mm   |
|                                                                                     | 4ETM          | ET M   | Chisel long                                  | 3,2 mm   | 1,2 mm   |
|  | 4ETF          | ET F   | Round sloped 45°                             | ø 1,2 mm |          |
|                                                                                     | 4ETBB         | ET BB  | Round sloped 45°                             | ø 2,4 mm |          |
|                                                                                     | 4ETCC         | ET CC  | Round sloped 45°                             | ø 3,2 mm |          |
|  | 4ETP          | ET P   | Round tip blunt                              | ø 0,8 mm |          |
|                                                                                     | 4ETBS         | ET BS  | Round tip blunt                              | ø 2,4 mm |          |
|                                                                                     | 4ETCS         | ET CS  | Round tip blunt                              | ø 3,2 mm |          |
|  | 005 41 039 99 | ET SMD | Chip soldering / desoldering tip             | 2,5 mm   | 1,5 mm   |
|                                                                                     | 005 41 040 99 | ET SMD | Chip soldering / desoldering tip             | 3,8 mm   | 1,5 mm   |
|  | 005 41 045 99 | ET GW  | Gull wing                                    |          |          |
|                                                                                     | 005 41 703 99 |        | Screw in tip with M5 outside thread          |          |          |
|  | 005 24 750 99 |        | ET Measuring tip for thermo element ø 0,5 mm |          |          |

If any other tips are required, use LT tips series with ET / LT adapter

# Soldering Irons and Tips

## Electronically Controlled Low Voltage Soldering Irons

### ET-LT Adapter



#### Order No./Model

005 87 207 81

#### Description

ET-LT Adapter for use LR 21 with LT tip series

### SMT Adapter + Tips for LR 21



#### Order No.

SMTA

#### Model

SMTA

#### Description

SMT Adapter for LR 21



SMT0504A

SMT0504A

A/1 for components 1,0 x 1,2 mm, 12 x 1,0 mm, 1,2 x 1,2 mm, 1,6 x 0,8 mm



SMT0805B

SMT0805B

B/1, for components 1,8 x 1,2 mm, 2,0 x 1,2 mm



SMT1206D

SMT1206D

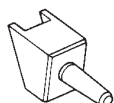
D/1, for components 3,2 x 1,6 mm, 3,2 x 2,5 mm



SMT23I

SMT23I

I/1, for components 3,0 x 2,5 mm



SMT8K

SMT8K

K/2, for components 5,0 x 4,0 mm



005 41 744 99

DIL16WGEC

Desoldering head for DIL 16, 7,62 mm x 2,54 mm

005 41 747 99

DILE24



005 13 042 99

DS7EC

Desoldering adapter

005 13 804 99

Spare tiptlets for desoldering adapter DS7EC, 1,5 mm

# Soldering Irons and Tips

Electronically Controlled Low Voltage Soldering Irons



| Order No.     | Model | Description                                                                                                                                                                                                                                                                                                                                                             |
|---------------|-------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 005 33 155 99 | WMP   | <b>Soldering set 65 W, 24 V, with ergonomic "Tip to Grip" soldering iron</b><br>The WMP micro soldering pencil is suitable to handle all micro components and fine pitch tasks. The WMP provides an extremely short tip-to-grip distance and a very short heating-up time. The heater is integrated into the handle. When the tip wear out the heating element goes on. |
| consists of:  |       |                                                                                                                                                                                                                                                                                                                                                                         |
| WMP           | WMP   | Micro soldering pencil 65 W, 24 V with soldering tip NT 1                                                                                                                                                                                                                                                                                                               |
| WPHM          | WPHM  | Safety rest                                                                                                                                                                                                                                                                                                                                                             |



|               |         |                                                                                                  |
|---------------|---------|--------------------------------------------------------------------------------------------------|
| 005 33 157 99 | WMPT    | <b>Soldering set 65 W, 24 V, with ergonomic "Tip to Grip" soldering iron and Stop+Go support</b> |
| consists of:  |         |                                                                                                  |
| WMP           | WMP     | Micro soldering pencil 65 W, 24 V with soldering tip NT 1                                        |
| WPHT          | WPHT    | Safety rest with Stop+Go function                                                                |
| 005 15 144 99 | WPH 81T | <b>Stop+Go support for WSP 80 / WMPFE</b>                                                        |

## Soldering tips for WMP

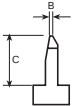
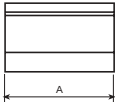
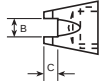
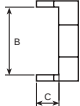
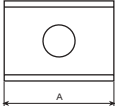
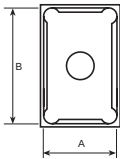
| Order No. | Model | Description                                  | Width A   | Thickness B | Length C |
|-----------|-------|----------------------------------------------|-----------|-------------|----------|
| NT H      | NT H  | Chisel                                       | 0,8 mm    | 0,4 mm      | 8,4 mm   |
| NT K      | NT K  | Chisel                                       | 1,2 mm    | 0,4 mm      | 8,4 mm   |
| NT A      | NT A  | Chisel                                       | 1,6 mm    | 0,4 mm      | 9,5 mm   |
| NT 6      | NT 6  | Chisel                                       | 1,6 mm    | 0,4 mm      | 7,4 mm   |
| NT B      | NT B  | Chisel                                       | 2,4 mm    | 0,8 mm      | 7,8 mm   |
| NT C      | NT C  | Chisel                                       | 3,2 mm    | 0,8 mm      | 8,2 mm   |
| NT D      | NT D  | Chisel                                       | 4,0 mm    | 0,8 mm      | 8,6 mm   |
| NT AX     | NT AX | Chisel Bent                                  | 1,6 mm    | 0,4 mm      | 8,2 mm   |
| NT 1S     | NT 1S | Round tip slim                               | ø 0,25 mm |             | 8,5 mm   |
| NT 1      | NT 1  | Round tip                                    | ø 0,25 mm |             | 7,4 mm   |
| NT 1X     | NT 1X | Round tip bent 45°                           | ø 1,6 mm  |             | 8,6 mm   |
| NT 4      | NT 4  | Round tip sloped 45°                         | ø 1,2 mm  |             | 9,9 mm   |
| NT GW     | NT GW | Gull wing                                    | 2,0 mm    | 3,0 mm      | 13,4 mm  |
| NT MS     | NT MS | NT Measuring tip for thermo element ø 0,5 mm |           |             |          |

# Soldering Irons and Tips

Electronically Controlled Low Voltage Soldering Irons

|  | Order No.     | Model | Description                                            | Width A | Thickness B | Length C |
|-----------------------------------------------------------------------------------|---------------|-------|--------------------------------------------------------|---------|-------------|----------|
|                                                                                   | 005 87 517 17 |       | Silicon pad for changing bent NT series tips           |         |             |          |
|                                                                                   | 005 87 517 10 |       | Tip changing tool for changing straight NT series tips |         |             |          |

## SMD Tips for WMP

|    |   | Order No. | Model    | Description | Width A | Thickness B | Length C |
|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-----------|----------|-------------|---------|-------------|----------|
|                                                                                     |                                                                                     | NTSMT01   | NT SMT01 | Blade       | 10,4 mm | 0,6 mm      | 7,1 mm   |
|                                                                                     |                                                                                     | NTSMT02   | NT SMT02 | Blade       | 16,8 mm | 0,6 mm      | 7,1 mm   |
|                                                                                     |                                                                                     | NTSMT03   | NT SMT03 | Blade       | 20,8 mm | 0,6 mm      | 7,1 mm   |
|  |  | NTSMT04   | NT SMT04 | Slot        | 1,8 mm  | 3,4 mm      | 1,8 mm   |
|                                                                                     |                                                                                     | NTSMT05   | NT SMT05 | Slot        | 1,5 mm  | 2,3 mm      | 1,8 mm   |
|                                                                                     |                                                                                     | NTSMT06   | NT SMT06 | Slot        | 2,5 mm  | 1,7 mm      | 1,4 mm   |
|                                                                                     |                                                                                     | NTSMT07   | NT SMT07 | Slot        | 2,3 mm  | 4,5 mm      | 1,8 mm   |
|  |  | NTSMT08   | NT SMT08 | Tunnel      | 4,6 mm  | 5,1 mm      | 2,3 mm   |
|                                                                                     |                                                                                     | NTSMT09   | NT SMT09 | Tunnel      | 10,4 mm | 5,1 mm      | 2,3 mm   |
|                                                                                     |                                                                                     | NTSMT10   | NT SMT10 | Tunnel      | 11,5 mm | 6,9 mm      | 2,3 mm   |
|                                                                                     |                                                                                     | NTSMT11   | NT SMT11 | Tunnel      | 13,2 mm | 9,5 mm      | 3,2 mm   |
|                                                                                     |                                                                                     | NTSMT12   | NT SMT12 | Tunnel      | 15,8 mm | 9,5 mm      | 3,2 mm   |
|                                                                                     |                                                                                     | NTSMT13   | NT SMT13 | Tunnel      | 18,3 mm | 9,5 mm      | 3,2 mm   |
|                                                                                     |                                                                                     | NTSMT14   | NT SMT14 | Tunnel      | 18,8 mm | 9,0 mm      | 3,2 mm   |
|  |  | NTSMT15   | NT SMT15 | Quad        | 2,7 mm  | 7,7 mm      | 3,8 mm   |
|                                                                                     |                                                                                     | NTSMT16   | NT SMT16 | Quad        | 10,4 mm | 10,4 mm     | 3,8 mm   |
|                                                                                     |                                                                                     | NTSMT17   | NT SMT17 | Quad        | 12,7 mm | 12,7 mm     | 3,8 mm   |
|                                                                                     |                                                                                     | NTSMT18   | NT SMT18 | Quad        | 13,7 mm | 8,6 mm      | 3,8 mm   |
|                                                                                     |                                                                                     | NTSMT19   | NT SMT19 | Quad        | 19,1 mm | 19,1 mm     | 3,8 mm   |
|                                                                                     |                                                                                     | NTSMT20   | NT SMT20 | Quad        | 23,2 mm | 17,3 mm     | 3,8 mm   |
|                                                                                     |                                                                                     | NTSMT21   | NT SMT21 | Quad        | 24,5 mm | 24,5 mm     | 3,8 mm   |
|                                                                                     |                                                                                     | NTSMT22   | NT SMT22 | Quad        | 29,6 mm | 29,6 mm     | 3,8 mm   |

# Soldering Irons and Tips

Electronically Controlled Low Voltage Soldering Irons



| Order No.     | Model  | Description                                                                                                                                                                                                                     |
|---------------|--------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 005 33 125 99 | WSP 80 | <b>Soldering set 80 W, 24 V</b><br>This soldering pencil can be used universally in all situations from extremely delicate soldering to those where more power is required. The WSP 80 have an extremely short heating up time. |
| consists of:  |        |                                                                                                                                                                                                                                 |
| 005 29 161 99 | WSP 80 | Soldering iron 80 W, 24 V with soldering tip LT B                                                                                                                                                                               |
| 005 15 140 99 | WPH 80 | Safety rest                                                                                                                                                                                                                     |



| Order No.     | Model    | Description                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|---------------|----------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 005 33 158 99 | WSP 80IG | <b>Inert gas soldering set 80 W, 24 V, with Stop+Go function</b><br>For use in applications when soldering under an atmosphere of inert gas to prevent joint oxidation is required. Driven from the WAD 101 hot air station (see page 84), inert gas is fed through the tip nut of the iron to envelope the solder joint. The Stop+Go safety rest automatically start the gas flow when the iron is removed and stop it when the iron is replaced. |
| consists of:  |          |                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| 005 28 190 99 | WSP 80IG | Inert gas soldering iron 80 W, 24 V with soldering tip LT B                                                                                                                                                                                                                                                                                                                                                                                        |
| 005 15 144 99 | WPH 81T  | Safety rest with Stop+Go function                                                                                                                                                                                                                                                                                                                                                                                                                  |

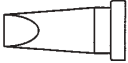
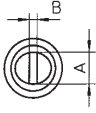
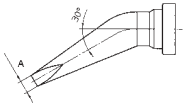
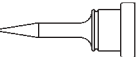
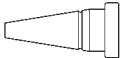
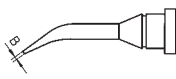


| Order No.     | Model  | Description                                                                                                                                                               |
|---------------|--------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 005 33 131 99 | MPR 80 | <b>Soldering set Peritronic 80 W, 24 V</b><br>The Peritronic soldering pencil gives all-round vision when making intricate connections. Adjustable head for maximum view. |
| consists of:  |        |                                                                                                                                                                           |
| 005 29 163 99 | MPR 80 | Soldering iron 80 W, 24 V Peritronic with soldering tip LT B                                                                                                              |
| 005 15 033 99 | KH 25P | Safety rest                                                                                                                                                               |

# Soldering Irons and Tips

## Electronically Controlled Low Voltage Soldering Irons

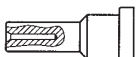
### Soldering Tips for WSP 80, WSP 80IG, WSP 80FE, FE 75 and MPR 80

|                                                                                     |                                                                                     | Order No.     | Model   | Description                               | Width A   | Length B |
|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|---------------|---------|-------------------------------------------|-----------|----------|
|    |    | 005 44 437 99 | LT H    | Chisel                                    | 0,8 mm    | 0,4 mm   |
|                                                                                     |                                                                                     | 005 44 430 99 | LT HHPB | Chisel, for HPB solder *                  | 0,8 mm    | 0,4 mm   |
|                                                                                     |                                                                                     | 005 44 403 00 | LT A    | Chisel                                    | 1,6 mm    | 0,7 mm   |
|                                                                                     |                                                                                     | 005 44 431 99 | LT AHPB | Chisel, for HPB solder*                   | 1,6 mm    | 0,7 mm   |
|                                                                                     |                                                                                     | 005 44 470 00 | LT ALF  | Chisel, for lead free solder*             | 1,6 mm    | 0,7 mm   |
|                                                                                     |                                                                                     | 005 44 405 00 | LT B    | Chisel                                    | 2,4 mm    | 0,8 mm   |
|                                                                                     |                                                                                     | 005 44 432 99 | LT BHPB | Chisel, for HPB solder *                  | 2,4 mm    | 0,8 mm   |
|                                                                                     |                                                                                     | 005 44 446 00 | LT BLF  | Chisel, for lead free solder**            | 2,4 mm    | 0,8 mm   |
|                                                                                     |                                                                                     | 005 44 407 00 | LT C    | Chisel                                    | 3,2 mm    | 0,8 mm   |
|                                                                                     |                                                                                     | 005 44 447 00 | LT CLF  | Chisel, for lead free solder**            | 3,2 mm    | 0,8 mm   |
|                                                                                     |                                                                                     | 005 44 409 00 | LT D    | Chisel                                    | 4,6 mm    | 0,8 mm   |
|                                                                                     |                                                                                     | 005 44 448 00 | LT DLF  | Chisel, for lead free solder* *           | 4,6 mm    | 0,8 mm   |
|     |    | 005 44 413 00 | LT K    | Chisel long                               | 1,2 mm    | 0,4 mm   |
|                                                                                     |                                                                                     | 005 44 414 00 | LT L    | Chisel long                               | 2,0 mm    | 1,0 mm   |
|                                                                                     |                                                                                     | 005 44 476 00 | LT LLF  | Chisel long, for lead free solder**       | 2,0 mm    | 1,0 mm   |
|                                                                                     |                                                                                     | 005 44 415 00 | LT M    | Chisel long                               | 3,2 mm    | 1,2 mm   |
|                                                                                     |                                                                                     | 005 44 477 00 | LT MLF  | Chisel long, for lead free solder**       | 3,2 mm    | 1,2 mm   |
|   |  | 005 44 420 99 | LT HX   | Chisel bent                               | 0,8 mm    | 0,4 mm   |
|                                                                                     |                                                                                     | 005 44 443 00 | LT ALX  | Chisel bent                               | 1,6 mm    | 0,7 mm   |
|                                                                                     |                                                                                     | 005 44 442 00 | LT BX   | Chisel bent                               | 2,4 mm    | 0,8 mm   |
|                                                                                     |                                                                                     | 005 44 469 00 | LT MXLF | Chisel bent for lead free solder**        | 3,2 mm    | 0,8 mm   |
|   |  | 005 44 427 00 | LT AX   | Chisel bent 30°                           | 1,6 mm    | 0,8 mm   |
|                                                                                     |                                                                                     | 005 44 480 00 | LT AXLF | Chisel bent 30°<br>for lead free solder** | 1,6 mm    | 0,8 mm   |
|  |  | 005 44 436 99 | LT 1S   | Round slim                                | ø 0,2 mm  | 1,6 mm   |
|  |  | 005 44 435 99 | LT 1    | Round                                     | ø 0,25 mm |          |
|                                                                                     |                                                                                     | 005 44 404 00 | LT AS   | Round                                     | ø 1,6 mm  |          |
|                                                                                     |                                                                                     | 005 44 471 00 | LT ASLF | Round, for lead free solder**             | ø 1,6 mm  |          |
|                                                                                     |                                                                                     | 005 44 411 00 | LT CS   | Round                                     | ø 3,2 mm  |          |
|                                                                                     |                                                                                     | 005 44 474 00 | LT CSLF | Round, for lead free solder**             | ø 3,2 mm  |          |
|   |  | 005 44 426 99 | LT 1SLX | Round slim bent                           | ø 2,0 mm  | 0,4 mm   |
|   |  | 005 44 428 00 | LT 4X   | Round bent 30°                            | ø 1,2 mm  | 0,4 mm   |
|                                                                                     |                                                                                     | 005 44 425 99 | LT 1X   | Round bent 30°                            | ø 2,0 mm  | 0,4 mm   |
|   |  | 005 44 439 99 | LT 4    | Round sloped 45° slim                     | ø 1,2 mm  |          |
|  |  | 005 44 408 00 | LT F    | Round sloped 45°                          | ø 1,2 mm  |          |

# Soldering Irons and Tips

Electronically Controlled Low Voltage Soldering Irons

## Soldering Tips for WSP 80, WSP 80IG, WSP 80FE, FE 75 and MPR 80

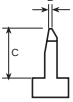
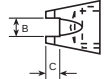
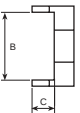
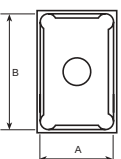
|                                                                                    | Order No.     | Model   | Description                                       | Width A  | Length B |
|------------------------------------------------------------------------------------|---------------|---------|---------------------------------------------------|----------|----------|
|   | 005 44 444 00 | LT BB   | Round sloped 45° long                             | 2,4 mm   | 4,0 mm   |
|                                                                                    | 005 44 472 00 | LT BBLF | Round sloped 45° long, for lead free solder**     | 2,4 mm   | 4,0 mm   |
|                                                                                    | 005 44 445 00 | LT CC   | Round sloped 45° long                             | 3,2 mm   | 6,0 mm   |
|                                                                                    | 005 44 473 00 | LT CCLF | Round sloped 45° long, for lead free solder**     | 3,2 mm   | 6,0 mm   |
|                                                                                    | 005 44 478 00 | LT DDLF | Round sloped 45° long, for lead free solder**     | 4,6 mm   | 6,0 mm   |
|   | 005 44 423 99 | LT 1L   | Conical long                                      | ø 0,2 mm |          |
|                                                                                    | 005 44 406 99 | LT S    | Conical long                                      | ø 0,4 mm |          |
|                                                                                    | 005 44 482 00 | LT TLF  | Conical long, for lead free solder**              | ø 0,6 mm |          |
|                                                                                    | 005 44 481 00 | LT OLF  | Conical long, for lead free solder**              | ø 0,8 mm |          |
|   | 005 44 424 99 | LT 1LX  | Conical long bent                                 | ø 0,2 mm |          |
|   | 005 44 410 00 | LT GW   | Gull wing 45°                                     | ø 2,3 mm | 3,2 mm   |
|                                                                                    | 005 44 475 00 | LT GWLF | Gull wing 45°, for lead free solder**             | ø 2,3 mm | 3,2 mm   |
|   | 005 44 479 00 | LT KNLF | Soldering knife tip 6,2 mm for lead free solder** | 6,2 mm   |          |
|  | 005 44 416 00 | LT      | Measuring tip for thermo element 0,5 mm           |          |          |

005 44 449 99 LT Screw in tip with M4 outside thread

\* HPB solder = solder with high consumption of lead for special high melting applications

\*\*Lead free solder = the LF soldering tips have thicker layer of iron. This improves the lifetime and makes them ideal of working with lead free solder. Regular soldering tips can be used with lead free solder but it reduces their lifetime for physical reasons.

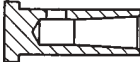
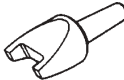
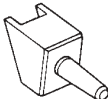
## SMD Soldering Tips for WSP 80

|                                                                                     | Order No. | Model    | Description | Width A | Thickness B | Length C |
|-------------------------------------------------------------------------------------|-----------|----------|-------------|---------|-------------|----------|
|  | LTSMT01   | LT SMT01 | Blade       | 10,4 mm | 0,6 mm      | 7,1 mm   |
|                                                                                     | LTSMT02   | LT SMT02 | Blade       | 16,8 mm | 0,6 mm      | 7,1 mm   |
|                                                                                     | LTSMT03   | LT SMT03 | Blade       | 20,8 mm | 0,6 mm      | 7,1 mm   |
|  | LTSMT04   | LT SMT04 | Slot        | 1,8 mm  | 3,4 mm      | 1,8 mm   |
|                                                                                     | LTSMT05   | LT SMT05 | Slot        | 1,5 mm  | 2,3 mm      | 1,8 mm   |
|                                                                                     | LTSMT06   | LT SMT06 | Slot        | 2,5 mm  | 1,7 mm      | 1,4 mm   |
|                                                                                     | LTSMT07   | LT SMT07 | Slot        | 2,3 mm  | 4,5 mm      | 1,8 mm   |
|  | LTSMT08   | LT SMT08 | Tunnel      | 4,6 mm  | 5,1 mm      | 2,3 mm   |
|                                                                                     | LTSMT09   | LT SMT09 | Tunnel      | 10,4 mm | 5,1 mm      | 2,3 mm   |
|                                                                                     | LTSMT10   | LT SMT10 | Tunnel      | 11,5 mm | 6,9 mm      | 2,3 mm   |
|                                                                                     | LTSMT11   | LT SMT11 | Tunnel      | 13,2 mm | 9,5 mm      | 3,2 mm   |
|                                                                                     | LTSMT12   | LT SMT12 | Tunnel      | 15,8 mm | 9,5 mm      | 3,2 mm   |
|                                                                                     | LTSMT13   | LT SMT13 | Tunnel      | 18,3 mm | 9,5 mm      | 3,2 mm   |
|                                                                                     | LTSMT14   | LT SMT14 | Tunnel      | 18,8 mm | 9,0 mm      | 3,2 mm   |
|  | LTSMT15   | LT SMT15 | Quad        | 2,7 mm  | 7,7 mm      | 3,8 mm   |
|                                                                                     | LTSMT16   | LT SMT16 | Quad        | 10,4 mm | 10,4 mm     | 3,8 mm   |
|                                                                                     | LTSMT17   | LT SMT17 | Quad        | 12,7 mm | 12,7 mm     | 3,8 mm   |
|                                                                                     | LTSMT18   | LT SMT18 | Quad        | 13,7 mm | 8,6 mm      | 3,8 mm   |
|                                                                                     | LTSMT19   | LT SMT19 | Quad        | 19,1 mm | 19,1 mm     | 3,8 mm   |
|                                                                                     | LTSMT20   | LT SMT20 | Quad        | 23,2 mm | 17,3 mm     | 3,8 mm   |
|                                                                                     | LTSMT21   | LT SMT21 | Quad        | 24,5 mm | 24,5 mm     | 3,8 mm   |
|                                                                                     | LTSMT22   | LT SMT22 | Quad        | 29,6 mm | 29,6 mm     | 3,8 mm   |

# Soldering Irons and Tips

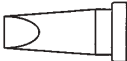
## Electronically Controlled Low Voltage Soldering Irons

### SMD Adapter + Tips for WSP 80, WSP 80IG and MPR 80

|    | Order No.     | Model    | Description                                                              |
|-------------------------------------------------------------------------------------|---------------|----------|--------------------------------------------------------------------------|
|                                                                                     | 005 44 417 99 |          | LT Adapter for SMD tips 13,5 mm                                          |
|    | SMT0504A      | SMT0504A | A/1 for components 1,0 x 1,2 mm, 12 x 1,0 mm, 1,2 x 1,2 mm, 1,6 x 0,8 mm |
|    | SMT0805B      | SMT0805B | B/1, for components 1,8 x 1,2 mm, 2,0 x 1,2 mm                           |
|    | SMT1206D      | SMT1206D | D/1, for components 3,2 x 1,6 mm, 3,2 x 2,5 mm                           |
|   | SMT23I        | SMT23I   | I/1, for components 3,0 x 2,5 mm                                         |
|  | SMT8K         | SMT8K    | K/2, for components 5,0 x 4,0 mm                                         |

### LT Soldering Tips for Robot Application

Soldering tips with twist lock. Only for use with robot application.

|  | Order No.     | Model | Description                                            | Width A | Length B |
|-------------------------------------------------------------------------------------|---------------|-------|--------------------------------------------------------|---------|----------|
|                                                                                     | 005 44 441 99 | LTR A | Chisel                                                 | 1,6 mm  | 0,8 mm   |
|                                                                                     | 005 44 422 99 | LTR B | Chisel, 1,5 mm wettable                                | 2,4 mm  | 0,8 mm   |
|                                                                                     | 005 44 422 71 | LTR B | Chisel, 6 mm wettable                                  | 2,4 mm  | 0,8 mm   |
|                                                                                     | 005 44 433 99 | LTR C | Chisel                                                 | 3,2 mm  | 0,8 mm   |
|                                                                                     | 005 87 447 38 |       | Heating Element WSP 80 for Soldering Robot Application |         |          |

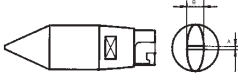
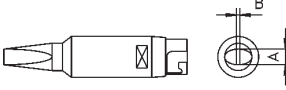
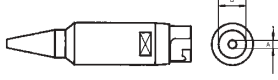
| Order No.     | Model | Description                                                                                                      |
|---------------|-------|------------------------------------------------------------------------------------------------------------------|
| 005 33 113 99 | LR 82 | <b>Soldering set 80 W, 24 V</b><br>Electronically temperature controlled soldering iron for high mass soldering. |
| consists of:  |       |                                                                                                                  |
| 005 26 152 99 | LR 82 | Soldering iron 80 W, 24 V with soldering tip HT 2                                                                |
| 005 15 027 99 | KH 27 | Safety rest                                                                                                      |

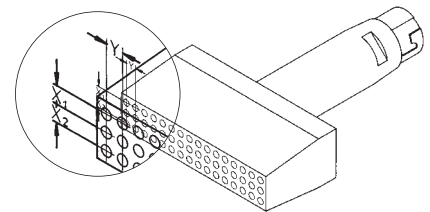


# Soldering Irons and Tips

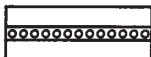
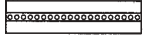
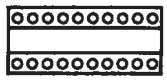
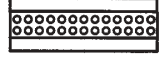
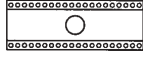
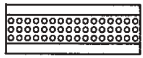
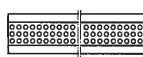
Electronically Controlled Low Voltage Soldering Irons

## Soldering Tips for LR 82 and FE 80

|                                                                                   | Order No.     | Model | Description                                  | Width A  | Length B |
|-----------------------------------------------------------------------------------|---------------|-------|----------------------------------------------|----------|----------|
|                                                                                   |               |       |                                              |          |          |
|  | 005 44 260 99 | HT 1  | Chisel                                       | 3,2 mm   | 1,0 mm   |
|                                                                                   | 005 44 261 99 | HT 2  | Chisel                                       | 5,2 mm   | 1,2 mm   |
|                                                                                   | 005 44 262 99 | HT 3  | Chisel                                       | 7,0 mm   | 1,2 mm   |
|  | 005 44 267 99 | HT C  | Chisel long                                  | 3,2 mm   | 1,0 mm   |
|                                                                                   | 005 44 268 99 | HT D  | Chisel long                                  | 4,6 mm   | 1,0 mm   |
|                                                                                   | 005 44 269 99 | HT E  | Chisel long                                  | 5,6 mm   | 1,0 mm   |
|  | 005 44 264 99 | HT BS | Round                                        | Ø 2,4 mm |          |
|                                                                                   | 005 44 265 99 | HT CS | Round                                        | Ø 3,2 mm |          |
|                                                                                   | 005 44 266 99 | HT DS | Round                                        | Ø 5,0 mm |          |
|                                                                                   | 005 44 270 99 |       | HT Screw in tip with outside thread M8       |          |          |
|  | 005 44 263 99 |       | HT Measuring tip for thermo element Ø 0,5 mm |          |          |



## Desoldering Heads for LR 82

|                                                                                     | Order No.     | Model | Description                                  | x1      | x1+x2+x  | y       |
|-------------------------------------------------------------------------------------|---------------|-------|----------------------------------------------|---------|----------|---------|
|                                                                                     |               |       |                                              |         |          |         |
|  | 005 44 184 99 | HT 10 | Desoldering head<br>20 pol. 25,86 x 12,0     | 2,54 mm |          | 2,54 mm |
|  | 005 44 183 99 | HT 13 | Desoldering head<br>13 pol. 33,48 x 12 mm    | 2,54 mm |          | 2,54 mm |
|  | 005 44 187 99 | HT 20 | Desoldering head<br>20 pol. 51, 26 x 12,0 mm | 2,54 mm |          | 2,54 mm |
|  | 005 44 181 99 | HT 20 | Desoldering head<br>20 pol. 25,86 x 11,2 mm  | 2,54 mm | 7,62 mm  | 2,54 mm |
|  | 005 44 186 99 | HT 29 | Desoldering head<br>29 pol. 74,12 x 12,0 mm  | 2,54 mm |          | 2,54 mm |
|  | 005 44 180 99 | HT 40 | Desoldering head<br>40 pol. 51,26 x 18,7 mm  | 2,54 mm | 15,24 mm | 2,54 mm |
|  | 005 44 192 99 | HT 48 | Desoldering head 48 pol.                     | 2,54 mm | 5,08 mm  | 2,54 mm |
|  | 005 44 190 99 | HT 96 | Desoldering head 96 pol.                     | 2,54 mm | 5,08 mm  | 2,54 mm |

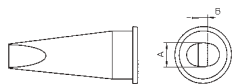
# Soldering Irons and Tips

## Electronically Controlled Low Voltage Soldering Irons



| Order No.     | Model   | Description                                                                                                                                                                                                                                               |
|---------------|---------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 005 33 135 99 | WSP 150 | <b>Soldering set 150 W , 24 V</b><br>The WSP 150 is specially developed for soldering tasks with extremely high heat requirements. The 150 W heater power combined with optimal heat transfer to the soldering tip guarantee high performance capability. |
| consists of:  |         |                                                                                                                                                                                                                                                           |
| 005 29 170 99 | WSP 150 | Soldering iron 150 W, 24 V with soldering tip LHT F                                                                                                                                                                                                       |
| 005 15 027 99 | KH 27   | Safety rest                                                                                                                                                                                                                                               |

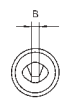
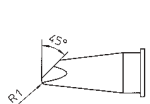
### Soldering Tips for WSP 150



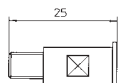
| Order No.     | Model | Description | Width A | Length B |
|---------------|-------|-------------|---------|----------|
| 005 44 455 99 | LHT C | Chisel      | 3,2 mm  | 1,2 mm   |
| 005 44 452 99 | LHT D | Chisel      | 4,7 mm  | 1,8 mm   |
| 005 44 451 99 | LHT E | Chisel      | 6,7 mm  | 1,8 mm   |
| 005 44 450 99 | LHT F | Chisel      | 9,3 mm  | 1,8 mm   |



|               |        |             |       |      |
|---------------|--------|-------------|-------|------|
| 005 44 462 00 | LHT DX | Chisel bent | 5 mm  | 2 mm |
| 005 44 461 00 | LHT EX | Chisel bent | 7 mm  | 2 mm |
| 005 44 460 00 | LHT FX | Chisel bent | 10 mm | 2 mm |



|               |           |                                       |  |  |
|---------------|-----------|---------------------------------------|--|--|
| 005 44 456 00 | LHT D 45° | Sloped 45° for solar panel production |  |  |
|---------------|-----------|---------------------------------------|--|--|



|               |  |                                         |  |  |
|---------------|--|-----------------------------------------|--|--|
| 005 44 454 00 |  | LHT Screw in tip with outside thread M6 |  |  |
|---------------|--|-----------------------------------------|--|--|



|               |  |                                                           |  |  |
|---------------|--|-----------------------------------------------------------|--|--|
| 005 44 453 99 |  | LHT Measuring tip for thermo element $\varnothing$ 0,5 mm |  |  |
|---------------|--|-----------------------------------------------------------|--|--|

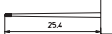
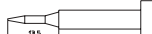
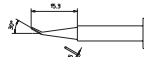
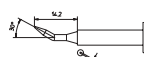
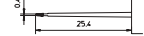
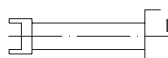
| Order No./Model | Description                                                                                     |
|-----------------|-------------------------------------------------------------------------------------------------|
| 005 30 060 99   | <b>Soldering iron 80 W, 24 V,</b><br><b>for MT 1500 soldering station, w/o tip (spare part)</b> |



# Soldering Irons and Tips

Electronically Controlled Low Voltage Soldering Irons

## Soldering Tips for MT 1500

|                                                                                     | Order No. | Model  | Description      | Width A  | Length B |
|-------------------------------------------------------------------------------------|-----------|--------|------------------|----------|----------|
|    | MT202     | MT 202 | Conical          | Ø 0,8 mm | 25,4 mm  |
|    | MT302     | MT 302 | Conical          | Ø 0,4 mm | 5,0 mm   |
|    | MT606     | MT 606 | Conical          | Ø 0,4 mm | 13,5 mm  |
|    | MT613     | MT 613 | Conical          | Ø 0,5 mm | 13,5 mm  |
|    | MT609     | MT 609 | Conical          | Ø 0,6 mm | 15,5 mm  |
|    | MT603     | MT 603 | Conical bent 30° | Ø 0,5 mm | 15,3 mm  |
|    | MT605     | MT 605 | Conical bent 30° | Ø 0,4 mm | 14,2 mm  |
|   | MT614     | MT 614 | Chisel           | 2,5 mm   | 5,0 mm   |
|  | MT211     | MT 211 | Chisel           | 1,1 mm   | 0,4 mm   |
|  | MT212     | MT 212 | Chisel           | 1,1 mm   | 0,1 mm   |
|  | MT301     | MT 301 | Chisel           | 2,0 mm   | 5,0 mm   |
|  | MT601     | MT 601 | Chisel           | 1,8 mm   | 9,8 mm   |
|                                                                                     | MT602     | MT 602 | Chisel           | 2,5 mm   | 9,9 mm   |
|                                                                                     | MT604     | MT 604 | Chisel           | 1,5 mm   | 9,9 mm   |
|                                                                                     | MT610     | MT 610 | Chisel           | 5,0 mm   | 8,9 mm   |
|  | MT607     | MT 607 | Sloped 45°       | 0,5 mm   | 14,7 mm  |
|  | MT608     | MT 608 | Sloped 45°       | 1,0 mm   | 14,2 mm  |
|  | MT621     | MT 621 | Tip for SOIC 8   |          |          |

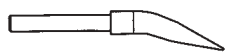
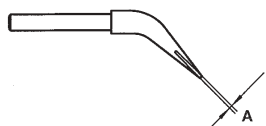
# Soldering Irons and Tips

## Electronically Controlled Low Voltage Soldering Irons / Cordless Soldering Irons



| Order No.     | Model  | Description                                                                                                                                       |
|---------------|--------|---------------------------------------------------------------------------------------------------------------------------------------------------|
| 005 33 133 99 | WTA 50 | <b>Desoldering tweezer set 50 W, 24 V</b><br>This tweezer is to desolder SMD components. The tweezer has two moveable heating tips with each 25 W |
| consists of:  |        |                                                                                                                                                   |
| 005 13 171 99 | WTA 50 | Desoldering tweezer 50 W, 24 V with tip set WTA 1                                                                                                 |
| 005 15 042 99 | AK 51  | Safety rest                                                                                                                                       |
| Accessory:    |        |                                                                                                                                                   |
| 005 13 176 99 |        | Align device for WTA tips                                                                                                                         |

### Tip Sets for WTA 50



| Order No.     | Model  | Description                                  | Width A | Length B |
|---------------|--------|----------------------------------------------|---------|----------|
| 005 44 145 99 | WTA 1S | Tip set bent 45°                             | 0,5 mm  | 0,5 mm   |
| 005 44 141 99 | WTA 1  | Tip set bent 45°                             | 1,0 mm  | 0,5 mm   |
| 005 44 146 99 | WTA 2  | Tip set bent 45°                             | 3,0 mm  | 0,5 mm   |
| 005 44 147 99 | WTA 3  | Tip set bent 45°                             | 6,0 mm  | 0,5 mm   |
| 005 44 143 99 | WTA 4  | Tip set bent 45°                             | 12,5 mm | 0,5 mm   |
| 005 44 144 99 | WTA 5  | Tip set bent 45°                             | 18,5 mm | 0,5 mm   |
| 005 44 152 99 | WTA 11 | Tip set for vertical use                     | 1,0 mm  | 0,5 mm   |
| 005 44 153 99 | WTA 12 | Tip set for vertical use                     | 3,0 mm  | 0,5 mm   |
| 005 44 149 99 |        | WT Measuring tip for thermo element ø 0,5 mm |         |          |

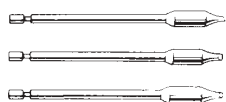
## Cordless Soldering Irons + Tips

The cordless soldering irons from Weller provide temperature variable soldering without the need for an electrical supply.



| Order No.     | Model  | Description                                                                                                                                                                                                                             |
|---------------|--------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 005 16 002 99 | WC 100 | <b>Cordless soldering set 15 W, 2,4 V</b><br>The WC 100 is a cordless soldering iron fitted with a Nickel-Cadmium battery and built in work light.<br>Recharge time within 12 h, max. temperature of 370°C is reached in a few seconds. |
| consists of:  |        |                                                                                                                                                                                                                                         |
| 005 16 010 99 | WC 100 | Soldering iron 15 W, 2,4 V with soldering tips WC 111, WC 112 and WC 113                                                                                                                                                                |
| 005 16 021 99 |        | Charger 230 V                                                                                                                                                                                                                           |

### Soldering Tips for WC 100



| Order No.     | Model  | Description | Width A |
|---------------|--------|-------------|---------|
| 005 16 102 99 | WC 113 | Chisel      | 0,8 mm  |
| 005 16 100 99 | WC 112 | Chisel      | 1,5 mm  |
| 005 16 101 99 | WC 111 | Chisel      | 2,5 mm  |

# Soldering Irons and Tips

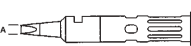
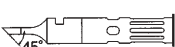
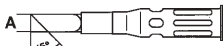
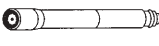
## Butane Gas Powered Soldering Irons

Powered by Butane gas, the Pyropens offer soldering iron, hot air blow and blow torch options. They have a short heat up time and are refilled in seconds from a refill cylinder. A sight glass shows the level of gas in the reservoir. The temperature variation is obtained by increasing respectively decreasing the gas flow. All Pyropen soldering irons need very clean refill (accessory) for precise temperature regulation.



| Order No.                                                                                                                                                                     | Model  | Description                                     |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------|-------------------------------------------------|
| 005 16 087 99                                                                                                                                                                 | WP 60K | <b>Pyropen Butane gas powered soldering kit</b> |
| <ul style="list-style-type: none"> <li>• Manually ignition</li> <li>• One filling lasts ~ 1 hour</li> <li>• Temperature range soldering: ~ 500°C, hot air: ~ 650°C</li> </ul> |        |                                                 |
| Soldering iron                                                                                                                                                                |        |                                                 |
| Needle tip $\varnothing$ 0,5 mm                                                                                                                                               |        |                                                 |
| Hot air nozzle $\varnothing$ 4,7 mm                                                                                                                                           |        |                                                 |
| Hot knife 5,0 mm, 45°                                                                                                                                                         |        |                                                 |
| Protective cap                                                                                                                                                                |        |                                                 |

### Soldering Tips for WP 60

|                                                                                     | Order No.     | Model    | Description                           | Width A              |
|-------------------------------------------------------------------------------------|---------------|----------|---------------------------------------|----------------------|
|    | 005 16 134 99 | 60-01-05 | Needle                                | $\varnothing$ 0,5 mm |
|                                                                                     | 005 16 443 99 | 60-01-01 | Needle                                | $\varnothing$ 1,0 mm |
|  | 005 16 444 99 | 60-01-02 | Chisel                                | 2,4 mm               |
|                                                                                     | 005 16 446 99 | 60-01-04 | Chisel                                | 5,0 mm               |
|  | 005 16 445 99 | 60-01-03 | Round spade 45°                       | $\varnothing$ 2,0 mm |
|  | 005 16 447 99 | 60-01-52 | Hot air nozzle                        | $\varnothing$ 4,7 mm |
|  | 005 16 135 99 | 60-01-06 | Knife 45°                             | 5,0 mm               |
|  | 005 16 448 99 | 60-07U   | Ejector unit                          |                      |
|                                                                                     | 005 16 449 99 | 60-14    | Barrell (spare part)                  |                      |
|                                                                                     | 005 16 450 99 | 60-02    | Protective cap for WP 60 (spare part) |                      |



| Order No.                                                                                                                                                                           | Model       | Description                                           |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|-------------------------------------------------------|
| 005 16 075 99                                                                                                                                                                       | Pyropen Jr. | <b>Pyropen Butane gas powered mini soldering iron</b> |
| <ul style="list-style-type: none"> <li>• Manually ignition</li> <li>• One filling lasts ~ 1 hour</li> <li>• Temperature range soldering: 400°C - 500°C, hot air: ~ 650°C</li> </ul> |             |                                                       |
| Soldering iron                                                                                                                                                                      |             |                                                       |
| Needle tip $\varnothing$ 0,5 mm                                                                                                                                                     |             |                                                       |
| Aluminium protective cap                                                                                                                                                            |             |                                                       |

consists of:

005 16 165 99 71-01-01

# Soldering Irons and Tips

## Butane Gas Powered Soldering Irons

### Soldering Tips for Pyropen Jr.

|                                                                                   | Order No.     | Model    | Description     | Width A  |
|-----------------------------------------------------------------------------------|---------------|----------|-----------------|----------|
|  | 005 16 165 99 | 71-01-01 | Needle          | ø 0,5 mm |
|  | 005 16 166 99 | 71-01-02 | Chisel          | 3,0 mm   |
|                                                                                   | 005 16 161 99 | 71-01-04 | Chisel          | 5,0 mm   |
|  | 005 16 167 99 | 71-01-03 | Round spade 45° | ø 3,0 mm |
|  | 005 16 168 99 | 71-01-50 | Hot air nozzle  | ø 1,5 mm |
|                                                                                   | 005 16 169 99 | 71-01-52 | Hot air nozzle  | ø 4,9 mm |
|                                                                                   | 005 16 172 99 | 71-07U   | Ejector unit    |          |

|                                                                                    | Order No. | Model  | Description                                                                                                                                                                                                                   |
|------------------------------------------------------------------------------------|-----------|--------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|  | WSTA6     | WSTA 6 | <b>Pyropen Butane gas powered soldering iron</b><br><ul style="list-style-type: none"> <li>• Self ignition</li> <li>• One filling lasts ~ 1 hour</li> <li>• Temperature range soldering: ~ 500°C, hot air: ~ 650°C</li> </ul> |
| consists of:                                                                       |           |        |                                                                                                                                                                                                                               |
|                                                                                    | WPT01     | WPT-01 | Soldering iron<br>Needle tip ø 1,0 mm<br>Protective cap                                                                                                                                                                       |

### Soldering Tips for WSTA 6

|                                                                                     | Order No. | Model  | Description | Width A  |
|-------------------------------------------------------------------------------------|-----------|--------|-------------|----------|
|  | WPT01     | WPT-01 | Needle      | ø 1,0 mm |
|  | WPT02     | WPT-02 | Chisel      | 2,4 mm   |
|                                                                                     | WPT04     | WPT-04 | Chisel      | 5,0 mm   |

# Soldering Irons and Tips

## Butane Gas Powered Soldering Irons



| Order No.            | Model          | Description                                                                                                                                                                                                                                                                                                                             |
|----------------------|----------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>005 16 060 99</b> | <b>Pyropen</b> | <b>Pyropen Butane gas powered profi line soldering iron</b> <ul style="list-style-type: none"> <li>• Manually ignition</li> <li>• One filling lasts ~ 3 hours</li> <li>• Temperature range soldering: 350°C - 500°C, hot air: ~ 650°C</li> <li>• Metal box with iron holder, cleaning sponge and burn proof accessory pocket</li> </ul> |
| consists of:         |                |                                                                                                                                                                                                                                                                                                                                         |
| 005 16 121 99        | 70-01-02       | Soldering iron                                                                                                                                                                                                                                                                                                                          |
| 005 16 142 99        | 70-01-52       | Chisel tip 3,0 mm                                                                                                                                                                                                                                                                                                                       |
| 005 16 151 99        | 70-07TU        | Hot air nozzle Ø 4,9 mm                                                                                                                                                                                                                                                                                                                 |
| 005 16 160 99        | RB-TS          | Torch ejector                                                                                                                                                                                                                                                                                                                           |
| 005 16 156 99        | 7040U          | Butane gas refill canister 0,75 ml                                                                                                                                                                                                                                                                                                      |
| 005 16 281 99        | 7042           | Metal box                                                                                                                                                                                                                                                                                                                               |
|                      |                | Burn proof accessory pocket                                                                                                                                                                                                                                                                                                             |
|                      |                | Iron holder                                                                                                                                                                                                                                                                                                                             |
|                      |                | Cleaning sponge                                                                                                                                                                                                                                                                                                                         |



| Order No.            | Model                | Description                                                                                                                                                                                                                                                                                                                                 |
|----------------------|----------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>005 16 059 99</b> | <b>Pyropen Piezo</b> | <b>Pyropen Butane gas powered profi line soldering iron</b> <ul style="list-style-type: none"> <li>• Self ignition (Piezo)</li> <li>• One filling lasts ~ 3 hours</li> <li>• Temperature range soldering: 350°C - 500°C, hot air: ~ 650°C</li> <li>• Metal box with iron holder, cleaning sponge and burn proof accessory pocket</li> </ul> |
| consists of:         |                      |                                                                                                                                                                                                                                                                                                                                             |
| 005 16 121 99        | 70-01-02             | Soldering iron                                                                                                                                                                                                                                                                                                                              |
| 005 16 142 99        | 70-01-52             | Chisel tip 3,0 mm                                                                                                                                                                                                                                                                                                                           |
| 005 16 159 99        | 70-01-55             | Hot air nozzle Ø 4,9 mm                                                                                                                                                                                                                                                                                                                     |
| 005 16 160 99        | RB-TS                | Reflector Ø 6,0 mm, 18,0 mm width for heat shrinking                                                                                                                                                                                                                                                                                        |
| 005 16 156 99        | 7040U                | Butane gas refill canister 0,75 ml                                                                                                                                                                                                                                                                                                          |
| 005 16 281 99        | 7042                 | Metal box                                                                                                                                                                                                                                                                                                                                   |
|                      |                      | Burn proof accessory pocket                                                                                                                                                                                                                                                                                                                 |
|                      |                      | Iron holder                                                                                                                                                                                                                                                                                                                                 |
|                      |                      | Cleaning sponge                                                                                                                                                                                                                                                                                                                             |

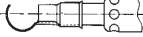
## Soldering Tips for Pyropen and Pyropen Piezo

|                                                                                     | Order No.            | Model           | Description     | Width A  |
|-------------------------------------------------------------------------------------|----------------------|-----------------|-----------------|----------|
|  | <b>005 16 120 99</b> | <b>70-01-01</b> | Needle          | Ø 0,5 mm |
|                                                                                     | <b>005 16 124 99</b> | <b>70-01-05</b> | Needle tapered  | Ø 0,5 mm |
|  | <b>005 16 129 99</b> | <b>70-01-10</b> | Needle bent 30° | Ø 0,5 mm |

# Soldering Irons and Tips

## Butane Gas Powered Soldering Irons

### Soldering Tips for Pyropen and Pyropen Piezo

|                                                                                     | Order No.     | Model    | Description                                 | Width A   | Length B |
|-------------------------------------------------------------------------------------|---------------|----------|---------------------------------------------|-----------|----------|
|    | 005 16 131 99 | 70-01-12 | Round head                                  | 8,0 mm    |          |
|    | 005 16 121 99 | 70-01-02 | Chisel                                      | 3,0 mm    |          |
|                                                                                     | 005 16 132 99 | 70-01-13 | Chisel                                      | 5,0 mm    |          |
|                                                                                     | 005 16 130 99 | 70-01-11 | Chisel                                      | 8,0 mm    |          |
|                                                                                     | 005 16 122 99 | 70-01-03 | Round spade                                 | ø 2,0 mm  |          |
|                                                                                     | 005 16 123 99 | 70-01-04 | Round spade                                 | ø 3,0 mm  |          |
|                                                                                     | 005 16 125 99 | 70-01-06 | Spade conical                               | ø 3,0 mm  |          |
|                                                                                     | 005 16 127 99 | 70-01-08 | Round spade 35°                             | ø 2,0 mm  |          |
|                                                                                     | 005 16 128 99 | 70-01-09 | Round spade 35°                             | ø 3,0 mm  |          |
|                                                                                     | 005 16 126 99 | 70-01-07 | Pyramide taper                              |           |          |
|    | 005 16 140 99 | 70-01-50 | Hot air nozzle                              | ø 1,59 mm |          |
|                                                                                     | 005 16 141 99 | 70-01-51 | Hot air nozzle                              | ø 3,3 mm  |          |
|                                                                                     | 005 16 142 99 | 70-01-52 | Hot air nozzle                              | ø 4,9 mm  |          |
|                                                                                     | 005 16 143 99 | 70-01-53 | Hot air nozzle                              | ø 7,4 mm  |          |
|                                                                                     | 005 16 151 99 | 70-07TU  | Torch ejector                               |           |          |
|                                                                                     | 005 16 150 99 | 70-07SU  | Solder ejector                              |           |          |
|  | 005 16 159 99 | 70-01-55 | Reflector for heat shrinking                | ø 6,0 mm  | 18,0 mm  |
|                                                                                     | 005 16 158 99 | 70-01-54 | Reflector for heat shrinking                | ø 8,0 mm  | 22,0 mm  |
|                                                                                     | 005 16 133 99 | 70-01-14 | Adapter tip ø 8,4 mm with M\$ inside thread |           |          |

### Accessory for all Pyropen Soldering Irons



| Order No.     | Model | Description                        |
|---------------|-------|------------------------------------|
| 005 16 160 99 | RB-TS | Butane gas refill canister 0,75 ml |

# Soldering Irons and Tips

## Magnastat Controlled Low Voltage Soldering Irons

The Weller Magnastat system operates through a ferro-magnetic sensing device which changes its characteristics when specific temperatures are reached. Working temperature selection is achieved by simply changing the "temperature sensing" soldering tip. These tips are available in 260°C, 310°C, 370°C, 425°C and 480°C versions.



| Order No.     | Model  | Description                                                                                                                                                                                                                    |
|---------------|--------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 005 32 105 99 | TCPS   | <b>Magnastat soldering iron 50 W, 24 V, with soldering tip PTB 7</b> <ul style="list-style-type: none"> <li>• 3 Wire Silicone cord and plug for Weller WTCP 51 Magnastat soldering station</li> <li>• Hard grounded</li> </ul> |
| 005 10 001 99 | TCP 24 | <b>Magnastat soldering iron 50 W, 24 V, with soldering tip PTB 7</b> <ul style="list-style-type: none"> <li>• 2 wire Silicone cord without plug</li> <li>• No grounding possible</li> </ul>                                    |
| 005 10 053 99 | TCP 12 | <b>Magnastat soldering iron 30 / 40 W, 12 / 14 V, with batterie clamps and soldering tip PTD 7</b> <ul style="list-style-type: none"> <li>• 3 m cord with battery clamps</li> </ul>                                            |



## Soldering Tips for TCPS, TCP 12, TCP 24 and FE 50M

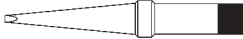
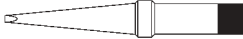
| Order No. | Model | Description       | Width A | Length B |
|-----------|-------|-------------------|---------|----------|
| 4PTR7     | PT R7 | Chisel slim 370°C | 1,6 mm  | 0,7 mm   |
| 4PTR8     | PT R8 | Chisel slim 425°C | 1,6 mm  | 0,7 mm   |
| 4PTH6     | PT H6 | Chisel 310°C      | 0,8 mm  | 0,4 mm   |
| 4PTH7     | PT H7 | Chisel 370°C      | 0,8 mm  | 0,4 mm   |
| 4PTH8     | PT H8 | Chisel 425°C      | 0,8 mm  | 0,4 mm   |
| 4PTA6     | PT A6 | Chisel 310°C      | 1,6 mm  | 0,7 mm   |
| 4PTA7     | PT A7 | Chisel 370°C      | 1,6 mm  | 0,7 mm   |
| 4PTA8     | PT A8 | Chisel 425°C      | 1,6 mm  | 0,7 mm   |
| 4PTB6     | PT B6 | Chisel 310°C      | 2,4 mm  | 0,8 mm   |
| 4PTB7     | PT B7 | Chisel 370°C      | 2,4 mm  | 0,8 mm   |
| 4PTB 8    | PT B8 | Chisel 425°C      | 2,4 mm  | 0,8 mm   |
| 4PTB9     | PT B9 | Chisel 480°C      | 2,4 mm  | 0,8 mm   |
| 4PTC7     | PT C7 | Chisel 370°C      | 3,2 mm  | 0,8 mm   |
| 4PTC8     | PT C8 | Chisel 425°C      | 3,2 mm  | 0,8 mm   |
| 4PTC9     | PT C9 | Chisel 480°C      | 3,2 mm  | 0,8 mm   |
| 4PTD7     | PT D7 | Chisel 370°C      | 4,6 mm  | 0,8 mm   |
| 4PTD8     | PT D8 | Chisel 425°C      | 4,6 mm  | 0,8 mm   |
| 4PTD9     | PT D9 | Chisel 480°C      | 4,6 mm  | 0,8 mm   |
| 4PTE7     | PT E7 | Chisel 370°C      | 5,6 mm  | 1,2 mm   |
| 4PTE8     | PT E8 | Chisel 425°C      | 5,6 mm  | 1,2 mm   |
| 4PTE9     | PT E9 | Chisel 480°C      | 5,6 mm  | 1,2 mm   |



# Soldering Irons and Tips

Magnastat Controlled Low Voltage Soldering Irons

## Soldering Tips for TCPS, TCP 12, TCP 24 and FE 50M

|    | Order No.     | Model  | Description                          | Width A | Length B |
|-------------------------------------------------------------------------------------|---------------|--------|--------------------------------------|---------|----------|
|                                                                                     |               |        |                                      |         |          |
|    | 4PTK6         | PT K6  | Chisel long 310°C                    | 1,2 mm  | 0,4 mm   |
|                                                                                     | 4PTK7         | PT K7  | Chisel long 370°C                    | 1,2 mm  | 0,4 mm   |
|                                                                                     | 4PTK8         | PT K8  | Chisel long 425°C                    | 1,2 mm  | 0,4 mm   |
|                                                                                     | 4PTL6         | PT L6  | Chisel long 310°C                    | 2,0 mm  | 1,0 mm   |
|                                                                                     | 4PTL7         | PT L7  | Chisel long 370°C                    | 2,0 mm  | 1,0 mm   |
|                                                                                     | 4PTL8         | PT L8  | Chisel long 425°C                    | 2,0 mm  | 1,0 mm   |
|                                                                                     | 4PTM7         | PT M7  | Chisel long 370°C                    | 3,2 mm  | 1,2 mm   |
|                                                                                     | 4PTM8         | PT M8  | Chisel long 425°C                    | 3,2 mm  | 1,2 mm   |
|                                                                                     | 4PTM9         | PT M9  | Chisel long 480°C                    | 3,2 mm  | 1,2 mm   |
|    | 005 41 307 99 | PT MX7 | Chisel bent, one side wettable 370°C | 3,2 mm  | 1,2 mm   |
|                                                                                     | 4PTCS7        | PT CS7 | Round 370°C                          | 3,2 mm  |          |
|                                                                                     | 4PTDS7        | PT DS7 | Round 370°C                          | 5,0 mm  |          |
|                                                                                     | 4PTS7         | PT S7  | Round long 370°C                     | 0,4 mm  |          |
|                                                                                     | 4PTS8         | PT S8  | Round long 425°C                     | 0,4 mm  |          |
|                                                                                     | 4PTO6         | PT O6  | Round long 310°C                     | 0,8 mm  |          |
|                                                                                     | 4PTO7         | PT O7  | Round long 370°C                     | 0,8 mm  |          |
|                                                                                     | 4PTO8         | PT O8  | Round long 425°C                     | 0,8 mm  |          |
|  | 4PTF7         | PT F7  | Round sloped 370°C                   | 1,2 mm  |          |
|                                                                                     | 4PTF8         | PT F8  | Round sloped 425°C                   | 1,2 mm  |          |
|                                                                                     | 4PTAA7        | PT AA7 | Round sloped 370°C                   | 1,6 mm  |          |
|                                                                                     | 4PTAA8        | PT AA8 | Round sloped 425°C                   | 1,6 mm  |          |
|                                                                                     | 4PTAA9        | PT AA9 | Round sloped 480°C                   | 1,6 mm  |          |
|                                                                                     | 4PTBB7        | PT BB7 | Round sloped 370°C                   | 2,4 mm  |          |
|                                                                                     | 4PTBB8        | PT BB8 | Round sloped 425°C                   | 2,4 mm  |          |
|                                                                                     | 4PTBB9        | PT BB9 | Round sloped 480°C                   | 2,4 mm  |          |
|                                                                                     | 4PTCC7        | PT CC7 | Round sloped 370°C                   | 3,2 mm  |          |
|                                                                                     | 4PTCC8        | PT CC8 | Round sloped 425°C                   | 3,2 mm  |          |
|                                                                                     | 4PTCC9        | PT CC9 | Round sloped 480°C                   | 3,2 mm  |          |
|                                                                                     | 4PTDD7        | PT DD7 | Round sloped 370°C                   | 5,0 mm  |          |
|                                                                                     | 4PTDD8        | PT DD8 | Round sloped 425°C                   | 5,0 mm  |          |
|                                                                                     | 4PTDD9        | PT DD9 | Round sloped 480°C                   | 5,0 mm  |          |
|                                                                                     | 4PTP7         | PT P7  | 370°C                                | 0,8 mm  |          |
|                                                                                     | 4PTP8         | PT P8  | 425°C                                | 0,8 mm  |          |

If other temperature or tips are required use PT / LT adapter see page 79

# Soldering Irons and Tips

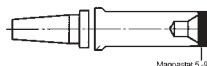
Magnastat Controlled Low Voltage Soldering Irons

Weller®

## Soldering Tips for TCPS, TCP 12 and TCP 24

### PT-LT Adapter

Adapter to use LT tip series with Magnastat controlled low voltage soldering irons



| Order No.     | Model  | Description                   |
|---------------|--------|-------------------------------|
| 005 87 207 85 | PT5-LT | PT 5 - LT adapter with barell |
| 005 87 207 86 | PT6-LT | PT 6 - LT adapter with barell |
| 005 87 207 87 | PT7-LT | PT 7 - LT adapter with barell |
| 005 87 207 88 | PT8-LT | PT 8 - LT adapter with barell |
| 005 87 207 89 | PT9-LT | PT 9 - LT adapter with barell |



|               |          |                                        |
|---------------|----------|----------------------------------------|
| 005 41 734 99 | DIL 16WG | Desoldering tip for Dual-In-Line 310°C |
|---------------|----------|----------------------------------------|



|               |      |                                                         |
|---------------|------|---------------------------------------------------------|
| 005 13 040 99 | DS 7 | Desoldering attachment 370°C                            |
| 005 13 804 99 |      | Spare triplet for desoldering attachment DS 7, ø 1,5 mm |

# Soldering Irons and Tips

## Magnastat Controlled Line Voltage Soldering Irons

The Weller Magnastat system operates through a ferro-magnetic sensing device which changes its characteristics when specific temperatures are reached. Working temperature selection is achieved by simply changing the "temperature sensing" soldering tip. These tips are available in 260°C, 310°C, 370°C and 425°C versions.

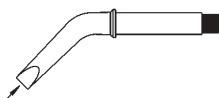


| Order No.     | Model | Description                                                                                                                  |
|---------------|-------|------------------------------------------------------------------------------------------------------------------------------|
| 005 61 036 99 | W 61  | <b>Line voltage soldering iron 60 W, 230 V, Magnastat controlled</b><br>• complete with soldering tip CT5 B7 and safety rest |

### Soldering Tips for W 61



| Order No. | Model  | Description  | Width A |
|-----------|--------|--------------|---------|
| 4CT5A6    | CT5 A6 | Chisel 310°C | 1,6 mm  |
| 4CT5A7    | CT5 A7 | Chisel 370°C | 1,6 mm  |
| 4CT5A8    | CT5 A8 | Chisel 425°C | 1,6 mm  |
| 4CT5B7    | CT5 B7 | Chisel 370°C | 2,4 mm  |
| 4CT5B8    | CT5 B8 | Chisel 425°C | 2,4 mm  |
| 4CT5C6    | CT5 C6 | Chisel 310°C | 3,2 mm  |
| 4CT5C7    | CT5 C7 | Chisel 370°C | 3,2 mm  |
| 4CT5C8    | CT5 C8 | Chisel 425°C | 3,2 mm  |
| 4CT5D7    | CT5 D7 | Chisel 370°C | 5,0 mm  |
| 4CT5D8    | CT5 D8 | Chisel 425°C | 5,0 mm  |



|               |         |                   |        |
|---------------|---------|-------------------|--------|
| 005 42 107 99 | CT5 AX7 | Chisel bent 370°C | 1,6 mm |
| 005 42 108 99 | CT5 AX8 | Chisel bent 425°C | 1,6 mm |
| 005 42 117 99 | CT5 BX7 | Chisel bent 370°C | 2,4 mm |
| 005 42 127 99 | CT5 CX7 | Chisel bent 370°C | 3,2 mm |
| 005 42 128 99 | CT5 CX8 | Chisel bent 425°C | 3,2 mm |
| 005 42 137 99 | CT5 DX7 | Chisel bent 370°C | 5,0 mm |
| 005 42 138 99 | CT5 DX8 | Chisel bent 425°C | 5,0 mm |



|               |           |                                        |
|---------------|-----------|----------------------------------------|
| 005 41 735 99 | DIL 16WGN | Desoldering tip for Dual-In-Line 310°C |
|---------------|-----------|----------------------------------------|



|               |       |                                                          |
|---------------|-------|----------------------------------------------------------|
| 005 13 041 99 | DS 7N | Desoldering attachment 370°C                             |
| 005 13 804 99 |       | Spare triplet for desoldering attachment DS 7, Ø 1,53 mm |

# Soldering Irons and Tips

## Magnastat Controlled Line Voltage Soldering Irons

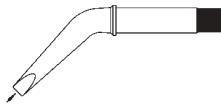


| Order No.                                            | Model | Description                                                    |
|------------------------------------------------------|-------|----------------------------------------------------------------|
| 005 61 046 99                                        | W 101 | Line voltage soldering iron 100 W, 230 V, Magnastat controlled |
| • complete with soldering tip CT6 E7 and safety rest |       |                                                                |

### Soldering Tips for W 101



| Order No. | Model  | Description  | Width A |
|-----------|--------|--------------|---------|
| 4CT6C7    | CT6 C7 | Chisel 370°C | 3,2 mm  |
| 4CT6C8    | CT6 C8 | Chisel 425°C | 3,2 mm  |
| 4CT6D7    | CT6 D7 | Chisel 370°C | 5,0 mm  |
| 4CT6D8    | CT6 D8 | Chisel 425°C | 5,0 mm  |
| 4CT6E7    | CT6 E7 | Chisel 370°C | 7,0 mm  |
| 4CT6E8    | CT6 E8 | Chisel 425°C | 7,0 mm  |



|               |         |                   |        |
|---------------|---------|-------------------|--------|
| 005 42 307 99 | CT6 CX7 | Chisel bent 370°C | 3,2 mm |
| 005 42 318 99 | CT6 DX8 | Chisel bent 425°C | 5,0 mm |
| 005 42 327 99 | CT6 EX7 | Chisel bent 370°C | 7,0 mm |



| Order No.                                                                   | Model   | Description                                                                    |
|-----------------------------------------------------------------------------|---------|--------------------------------------------------------------------------------|
| 005 61 096 99                                                               | W 101SP | Line voltage soldering iron 100 W, 230 V, Magnastat controlled with twist lock |
| • complete with welding wedge Teflon coated, 50 x 40 x 4 mm and safety rest |         |                                                                                |

### Soldering Tips for W 101 with Twist Lock



| Order No.     | Model | Description                                 |
|---------------|-------|---------------------------------------------|
| 005 11 767 99 |       | Welding wedge Teflon coated, 50 x 40 x 4 mm |

# Soldering Irons and Tips

## Magnastat Controlled Line Voltage Soldering Irons / Uncontrolled Line Voltage Soldering Irons

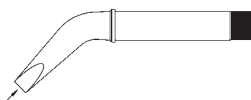


| Order No.     | Model | Description                                                                                                                   |
|---------------|-------|-------------------------------------------------------------------------------------------------------------------------------|
| 005 61 056 99 | W 201 | <b>Line voltage soldering iron 200 W, 230 V, Magnastat controlled</b><br>• complete with soldering tip CT2 F7 and safety rest |

### Soldering Tips for W 201



| Order No.     | Model  | Description  | Width A |
|---------------|--------|--------------|---------|
| 005 42 407 99 | CT2 E7 | Chisel 370°C | 7,0 mm  |
| 005 42 408 99 | CT2 E8 | Chisel 425°C | 7,0 mm  |
| 005 42 417 99 | CT2 F7 | Chisel 370°C | 10,0 mm |
| 005 42 418 99 | CT2 F8 | Chisel 425°C | 10,0 mm |
| 005 42 427 99 | CT2 G7 | Chisel 370°C | 11,0 mm |
| 005 42 428 99 | CT2 G8 | Chisel 425°C | 11,0 mm |



|               |         |                   |         |
|---------------|---------|-------------------|---------|
| 005 42 507 99 | CT2 EX7 | Chisel bent 370°C | 7,0 mm  |
| 005 42 508 99 | CT2 EX8 | Chisel bent 425°C | 7,0 mm  |
| 005 16 517 99 | CT2 FX7 | Chisel bent 370°C | 10,0 mm |
| 005 42 518 99 | CT2 FX8 | Chisel bent 425°C | 10,0 mm |

### Uncontrolled Line Voltage Soldering Irons

Robust heating elements of special steel between natural mica-leaves, embedded in cast ceramics and first-class material make the Weller SPI irons outstanding in technology and life-time. The SPI irons come with plated and oxidation prevented Weller "Longlife" tips.



| Order No.     | Model  | Description                                                                                                                                                                     |
|---------------|--------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 005 64 005 99 | SPI 16 | <b>Line voltage soldering iron 15 W, 230 V, uncontrolled</b><br>• complete with soldering tip 4SPI15212 and holder<br>• Heating up time ~ 180 sec.<br>• Tip temperature ~ 360°C |

### Soldering Tips for SPI 16

| Order No. | Model     | Description | Width A |
|-----------|-----------|-------------|---------|
| 4SPI15210 | SPI15 210 | Pointed     | 0,4 mm  |
| 4SPI15213 | SPI15 213 | Pointed     | 0,8 mm  |
| 4SPI15212 | SPI15 212 | Chisel      | 1,2 mm  |
| 4SPI15211 | SPI15 211 | Chisel      | 2,0 mm  |

# Soldering Irons and Tips

## Uncontrolled Line Voltage Soldering Irons



| Order No.     | Model  | Description                                                                                                                                                                                                                                 |
|---------------|--------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 005 64 021 99 | SPI 27 | <b>Line voltage soldering iron 25 W, 230 V, uncontrolled</b> <ul style="list-style-type: none"> <li>• complete with soldering tip 4SPI126206 and holder</li> <li>• Heating up time ~ 180 sec.</li> <li>• Tip temperature ~ 410°C</li> </ul> |

### Soldering Tips for SPI 27

| Order No. | Model     | Description | Width A |
|-----------|-----------|-------------|---------|
| 4SPI26206 | SPI26 206 | Chisel      | 1,2 mm  |
| 4SPI26200 | SPI26 200 | Chisel      | 2,0 mm  |
| 4SPI26201 | SPI26 201 | Chisel      | 3,0 mm  |



| Order No.     | Model  | Description                                                                                                                                                                                                                                |
|---------------|--------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 005 64 037 99 | SPI 41 | <b>Line voltage soldering iron 40 W, 230 V, uncontrolled</b> <ul style="list-style-type: none"> <li>• complete with soldering tip 4SPI40224 and holder</li> <li>• Heating up time ~ 180 sec.</li> <li>• Tip temperature ~ 450°C</li> </ul> |

### Soldering Tips for SPI 41

| Order No. | Model     | Description | Width A |
|-----------|-----------|-------------|---------|
| 4SPI40224 | SPI40 224 | Chisel      | 2,0 mm  |
| 4SPI40225 | SPI40 225 | Chisel      | 3,0 mm  |
| 4SPI40220 | SPI40 220 | Chisel      | 5,0 mm  |
| 4SPI40226 | SPI40 226 | Chisel bent | 2,0 mm  |



| Order No.     | Model  | Description                                                                                                                                                                                                                                |
|---------------|--------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 005 64 053 99 | SPI 81 | <b>Line voltage soldering iron 80 W, 230 V, uncontrolled</b> <ul style="list-style-type: none"> <li>• complete with soldering tip 4SPI80237 and holder</li> <li>• Heating up time ~ 180 sec.</li> <li>• Tip temperature ~ 480°C</li> </ul> |

### Soldering Tips for SPI 81

| Order No. | Model     | Description | Width A |
|-----------|-----------|-------------|---------|
| 4SPI80234 | SPI80 234 | Chisel      | 3,0 mm  |
| 4SPI80235 | SPI80 235 | Chisel      | 5,0 mm  |
| 4SPI80230 | SPI80 230 | Chisel      | 7,0 mm  |
| 4SPI80231 | SPI80 231 | Chisel      | 9,5 mm  |
| 4SPI80237 | SPI80 237 | Chisel bent | 5,0 mm  |
| 4SPI80232 | SPI80 232 | Chisel bent | 7,0 mm  |

# Hot Air Stations

## 100 W Hot Air Stations

This range of four stations is suited to reworking smaller SMD components. The type D and type Q nozzles do have an integral hot plate but other types do not. These stations do not have a nozzle vacuum pick up; therefore it is necessary to use either manual or vacuum tweezers to remove the component. As well as the HAP 1 hot air pencil, all other tools of the Weller range can be connected to these stations and dependent upon the station up to three tools could be controlled independently. Two of the four stations have an internal electrically driven pump. The other two are operated from either a compressed air or inert gas supply.



Hot air nozzles: see page 89 / 90  
Spare parts: see page 144

| Order No.     | Model     | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|---------------|-----------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 005 32 666 99 | WAD 101   | <b>Hot air station digital 105 W, 230 V, compressed air or inert gas operated</b> <ul style="list-style-type: none"><li>• 1 channel</li><li>• Digital controlled electronic for soldering and hot air tools up to 100 W</li><li>• Inlet pressure 400 KPA (58 psi) oil-free, dry compressed air or inert gas</li><li>• Temperature range 50°C - 550°C (HAP 1)</li><li>• Temperature control via buttons</li><li>• Air volume control via regulator</li><li>• 3-position digital display</li><li>• Calibration box WCB 2 (see page 121) may be connected for CALIBRATION, LOCK OUT or OFFSET function</li><li>• Protection class 1</li><li>• Antistatic housing</li><li>• Equipotential bonding (normal state hard grounded)</li><li>• Automatic tool recognition</li><li>• Dimensions: 166 x 134 x 101 mm (W x L x H)</li></ul> |
| consists of:  |           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| 005 32 686 99 | PUWAD 101 | Control unit 230 V                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| 005 27 115 99 | HAP 1     | Hot air pencil 100 W / 24 V with hot air nozzle round R 06 Ø 3,0 mm                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| 005 15 027 99 | KH 27     | Safety rest                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| 005 87 278 21 | R 04      | Hot air nozzle round Ø 1,2 mm                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |



Hot air nozzles: see page 89 / 90  
Spare parts: see page 152

| Order No.     | Model    | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|---------------|----------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 005 33 086 99 | WMA 3V   | <b>Hot air station multi analog 130 W, 230 V, compressed air or inert gas operated</b> <ul style="list-style-type: none"><li>• Including dispenser and vacuum pick-up</li><li>• 1 channel</li><li>• Analog controlled electronic for soldering, desoldering and hot air tools up to 100 W</li><li>• Inlet pressure 400 KPA (58 psi) oil-free, dry compressed air or inert gas</li><li>• Temperature range 50°C - 550°C (HAP 1)</li><li>• Max. vacuum - 0,7 bar</li><li>• Air volume hot air 1 - 10 l/min</li><li>• Temperature control via rotary potentiometer</li><li>• Air flow control via rotary button</li><li>• Timer</li><li>• Protection class 1</li><li>• Antistatic housing</li><li>• Equipotential bonding (normal state hard grounded)</li><li>• Automatic tool recognition</li><li>• Dimensions: 240 x 270 x 105 mm (W x L x H)</li></ul> |
| consists of:  |          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| 005 27 115 99 | HAP 1    | Control unit 230 V                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| 005 15 027 99 | KH 27    | Hot air pencil 100 W, 24 V with hot air nozzle round R 06 Ø 3,0 mm                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| 005 87 278 21 | R 04     | Safety rest                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| 3000ESD       | 3000 ESD | Hot air nozzle round Ø 1,2 mm                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| 3232          | 3232     | Erem 3000 vacuum pick-up                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| 2052E         | 2052E    | Erem adapter fix for use with suction cup 2052E                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| 005 15 052 99 |          | Erem suction cup 4,5 mm, Silicone rubber                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| 005 13 120 99 |          | Combi support for dispenser and vacuum pick-up                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| 005 13 500 99 |          | Foot switch 1-step                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| KDS 810 S6    |          | Cleaning tool complete                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|               |          | 10CC syringes adapter                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |

# Hot Air Stations

## 100 W Hot Air Stations

**Weller®**



Hot air nozzles: see page 89 / 90  
Spare parts: see page 153

| Order No.     | Model  |
|---------------|--------|
| 005 33 306 99 | WMD 1A |

### Description

#### Hot air station multi digital 175 W, 230 V, with internal pump

- 1 channel
- Digital controlled electronic for soldering, desoldering and hot air tools up to 150 W
- Temperature range 50°C - 550°C (HAP 1)
- Air volume hot air 1 - 10 l/min
- Temperature + air volume control via buttons
- 3-position digital display
- Calibration box WCB 2 (see page 121) may be connected for CALIBRATION, LOCK OUT or OFFSET function
- Protection class 1
- Antistatic housing
- Equipotential bonding (normal state hard grounded)
- Automatic tool recognition
- Dimensions: 240 x 270 x 105 mm (W x L x H)

consists of:

|               |        |
|---------------|--------|
| 005 33 286 99 | WMD 1S |
| 005 27 115 99 | HAP 1  |
| 005 15 027 99 | KH 27  |
| 005 87 278 21 | R 04   |
| 005 13 500 99 |        |

**005 33 284 99**

Control unit 230 V

Hot air pencil 100 W / 24 V with hot air nozzle round R 06 Ø 3,0 mm

Safety rest

Hot air nozzle round Ø 1,2 mm

Cleaning tool complete

#### WMD 1S Power unit switchable 120 V / 240 V with US plug



Hot air nozzles: see page 89 / 90  
Soldering tips: see page 66 / 67  
Desoldering nozzles: see page 99 / 100  
Spare parts: see page 154

| Order No.     | Model  |
|---------------|--------|
| 005 33 026 75 | WMD 3K |

### Description

#### Hot air station multi digital 310 W, 230 V, with internal pump

- 3 channels
- Including hot air pencil, soldering and desoldering iron
- Digital controlled electronic for soldering, desoldering and hot air tools up to 150 W
- Temperature range 50°C - 550°C (HAP 1)
- Air volume hot air 1 - 10 l/min
- Max. vacuum -0,7 bar
- Temperature, vacuum and air volume control via buttons
- 3-position digital display
- Protection class 1
- Antistatic housing
- Equipotential bonding (normal state hard grounded)
- Automatic tool recognition
- Dimensions: 240 x 270 x 105 mm (W x L x H)

consists of:

|               |        |
|---------------|--------|
| 005 33 026 99 | WMD 3  |
| 005 27 115 99 | HAP 1  |
| 005 15 027 99 | KH 27  |
| 005 87 278 21 | R 04   |
| 005 29 161 99 | WSP 80 |
| 005 15 140 99 | WPH 80 |
| 005 13 190 99 | DSX 80 |
| 005 15 030 99 | AK 20  |
| 005 13 142 00 | DX 112 |
| 005 13 143 00 | DX 113 |
| 005 13 500 99 |        |

Accessory:

005 13 120 99

Control unit 230 V

Hot air pencil 100 W / 24 V with hot air nozzle round R 06 Ø 3,0 mm

Safety rest

Hot air nozzle round Ø 1,2 mm

Soldering iron 80 W, 24 V with soldering tip LT B

Safety rest

Desoldering iron 80 W, 24 V with nozzle DX 113HM

Safety rest

Desoldering nozzle

Desoldering nozzle

Cleaning tool complete

Foot switch 1-step

# Hot Air Stations

## 700 W Hot Air Stations

These stations use temperature and volume controlled hot air with Weller patented technology nozzles and the HAP 3 / 3000 hot air pencil to solder and desolder larger dual in line and quad pack components. There are three stations in the range giving users the option of digital control with an integral air supply, digital control with an external air or inert gas supply or analogue control with an integral air supply. A wide range of hot air nozzles type ND and NQ with integral hot plates to heat the component body and types NR and DR without hot plates complete the range .



Hot air nozzles: see page 91 / 93  
Spare parts: see page 149

| Order No.     | Model   | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|---------------|---------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 005 33 216 99 | WHA 300 | <b>Hot air station analog 700 W, 230 V, with built-in turbine</b> <ul style="list-style-type: none"><li>• Anaolg controlled electronic</li><li>• Temperature range 50°C - 550°C</li><li>• Air volume 5 - 10 l/min (not ESD Safe)</li><li>• Temperature control via rotary potentiometer</li><li>• Air flow control via rotary button</li><li>• Protection class 1</li><li>• Antistatic housing</li><li>• NQ 30 nozzle</li><li>• without nozzle vacuum</li><li>• Dimensions: 130 x 220 mm (D x H)</li></ul> |



Hot air nozzles: see page 91 / 93  
Spare parts: see page 151

| Order No.     | Model     | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|---------------|-----------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 005 33 366 99 | WHA 3000V | <b>Hot air station digital 700 W / 230 V, for use with compressed air or inert gas</b> <ul style="list-style-type: none"><li>• Digital controlled electronic</li><li>• 4 - 6 bar compressed air supply or inert gas</li><li>• LCD display</li><li>• Manual or automatic operation</li><li>• RS 232 interface and software for control via PC</li><li>• External sensor socket</li><li>• Temperature range 50°C - 550°C</li><li>• Air volume 5 - 50 l/min (ESD Safe)</li><li>• Max. nozzle vacuum -0,6 bar</li><li>• Stop+Go support</li><li>• Protection class 1</li><li>• Antistatic housing</li><li>• Dimensions: 240 x 270 x 100 mm (W x L x H)</li></ul> |

consists of:

|               |          |                                                             |
|---------------|----------|-------------------------------------------------------------|
|               | HAP 3000 | Control unit 230 V for use with compressed air or inert gas |
| 005 15 043 99 | AKT 30   | Hot air pencil with NQ 30 nozzle                            |
| 005 87 577 70 |          | Safety rest with Stop+Go function                           |
| 005 15 049 99 |          | Foot switch 2-stage                                         |
|               |          | Nozzle change tool                                          |

# Hot Air Stations

700 W Hot Air Stations

**Weller®**



Hot air nozzles: see page 91 / 93  
Spare parts: see page 150

| Order No.     | Model     | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|---------------|-----------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 005 33 346 99 | WHA 3000P | <b>Hot air station digital 700 W / 230 V, with built-in turbine</b> <ul style="list-style-type: none"> <li>• Digital controlled electronic</li> <li>• LCD display</li> <li>• Manual or automatic operation</li> <li>• RS 232 interface and software for control via PC</li> <li>• External sensor socket</li> <li>• Temperature range 50°C - 550°C</li> <li>• Air volume 5 - 50 l/min</li> <li>• Max. vacuum -0,6 bar</li> <li>• Stop+Go support</li> <li>• Protection class 1</li> <li>• Antistatic housing</li> <li>• Dimensions: 240 x 270 x 100 mm (W x L x H)</li> </ul> |
| consists of:  |           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|               | HAP 3000  | Control unit 230 V with built-in pump                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| 005 15 043 99 | AKT 30    | Hot air pencil with NQ 30 nozzle                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| 005 87 577 70 |           | Safety rest with Stop+Go function                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| 005 15 049 99 |           | Foot switch 2-stage                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|               |           | Nozzle change tool                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |

## Accessory for WHA 3000V and WHA 3000P



| Order No.     | Description                                   |
|---------------|-----------------------------------------------|
| 005 87 367 80 | Manual control panel                          |
| 005 87 577 70 | Foot switch 2-stage                           |
| 005 15 049 99 | Nozzle change tool                            |
| 005 87 549 51 | External sensor type K, Ø 0,25 mm             |
| 005 31 190 99 | External sensor type K, Ø 0,5 mm              |
| 005 15 048 99 | Stand for hot air nozzles, for max. 6 nozzles |

# Hot Air Stations

## Hot Air Heat Gun

The hot air heat gun can be used for heat shrink applications or drying and to detect faulty components on circuit boards. Cooling is also possible because the air flow is independent of the heater. Temperature range ca. 400°C - 430°C.



| Order No.    | Model | Description                    |
|--------------|-------|--------------------------------|
| 6966E        | 6966E | Hot air heat gun 210 W / 230 V |
| consists of: |       |                                |
|              |       | Hot air heat gun 230 V         |
| 6964         | 6964  | 0,2" Reflector                 |
| 6957         | 6957  | 1,5" Reflector                 |
| 6958         | 6958  | Shrinking nozzle               |
| Accessory    |       |                                |
| 6965A        | 6965A | Holder for gun                 |

# Hot Air Irons and Nozzles

Electronically Controlled Hot Air Irons for 100 W Hot Air Stations

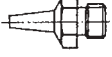
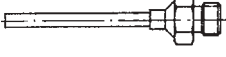
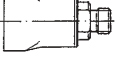
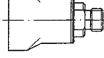


| Order No.                                                                                                                                                                                                                     | Model | Description                                                  |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|--------------------------------------------------------------|
| 005 33 114 99                                                                                                                                                                                                                 | HAP 1 | Hot air pencil set 100 W, 24 V                               |
| The HAP 1 provides a directional hot air flow that is adjustable and static-free. Electronically temperature controlled from 50°C to 550°C. Different nozzles available as accessory. Finger switch controls adjustable pump. |       |                                                              |
| consists of:                                                                                                                                                                                                                  |       |                                                              |
| 005 27 115 99                                                                                                                                                                                                                 | HAP 1 | Hot air pencil 100 W, 24 V with hot air nozzle R 06 Ø 3,0 mm |
| 005 15 027 99                                                                                                                                                                                                                 | KH 27 | Safety rest                                                  |
| 005 87 278 21                                                                                                                                                                                                                 | R 04  | Hot air nozzle Ø 1,2 mm                                      |

# Hot Air Irons and Nozzles

Hot Air Nozzles for 100 W Hot Air Stations

## Hot Air Nozzles for HAP 1

|                                                                                     |                                                                                     | Order No.                                               | Model | Description                                      | Width A  | Thickness B |
|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|---------------------------------------------------------|-------|--------------------------------------------------|----------|-------------|
|    |    | 005 87 277 74                                           | F02   | Flat nozzle                                      | 8,0 mm   | 1,5 mm      |
|    |    | 005 87 277 73                                           | F04   | Flat nozzle                                      | 10,5 mm  | 1,5 mm      |
|    |    | 005 87 277 72                                           | F06   | Flat nozzle                                      | 12,0 mm  | 1,5 mm      |
|    |    | 005 87 278 23                                           | R02   | Round nozzle                                     | ø 0,8 mm |             |
|    |    | 005 87 278 21                                           | R04   | Round nozzle                                     | ø 1,2 mm |             |
|  |  | 005 87 278 22                                           | R06   | Round nozzle                                     | ø 3,0 mm |             |
|  |  | 005 87 277 87                                           | R10   | Round nozzle long                                | ø 2,0 mm |             |
|  |  | 005 87 277 86                                           | R08   | Round nozzle long bent                           | ø 2,0 mm |             |
|  |  | 005 87 277 76                                           | FD2   | Dual nozzle                                      | ø 1,5 mm | 8 mm        |
|  |  | 005 87 277 75                                           | FD4   | Dual nozzle                                      | ø 1,5 mm | 10 mm       |
|                                                                                     |                                                                                     | <b>Two sides heated (Type D, width X = heated side)</b> |       |                                                  |          |             |
|  |  | Order No.                                               | Model | Description                                      | Width X  | Thickness Y |
|                                                                                     |                                                                                     | 005 87 277 79                                           | D04   | Hot air nozzle, two sides heated, with hot plate | 10,5 mm  | 10,5 mm     |
|  |  | 005 87 277 82                                           | D06   | Hot air nozzle, two sides heated, with hot plate | 13,0 mm  | 10,0 mm     |
|  |  | 005 87 277 81                                           | D08   | Hot air nozzle, two sides heated, with hot plate | 15,0 mm  | 10,0 mm     |
|  |  | 005 87 277 84                                           | D10   | Hot air nozzle, two sides heated, with hot plate | 18,0 mm  | 10,0 mm     |

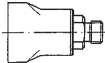
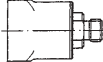
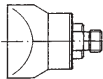


# Hot Air Irons and Nozzles

Hot Air Nozzles for 100 W Hot Air Stations

## Hot Air Nozzles for HAP 1 Four sides heated (Type Q)



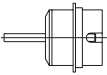
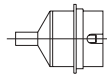
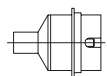
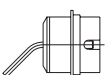
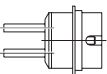
|    |    | Order No.     | Model  | Description                                              | Width X | Thickness Y |
|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|---------------|--------|----------------------------------------------------------|---------|-------------|
|                                                                                     |                                                                                     | 005 87 277 77 | Q02    | Hot air nozzle, four sides heated, with hot plate        | 6,0 mm  | 6,5 mm      |
|    |    | 005 87 277 78 | Q04    | Hot air nozzle, four sides heated, with hot plate        | 6,0 mm  | 9,0 mm      |
|    |    | 005 87 277 80 | Q06    | Hot air nozzle, four sides heated, with hot plate        | 15,0 mm | 10,0 mm     |
|    |    | 005 87 277 83 | Q08    | Hot air nozzle, four sides heated, with hot plate        | 12,5 mm | 15,0 mm     |
|   |   | 005 87 278 12 | SK709  | Hot air nozzle, four sides heated, with hot plate        | 12,0 mm | 12,0 mm     |
|                                                                                     |                                                                                     | 005 87 278 16 | SK769A | Hot air nozzle, four sides heated, with hot plate        | 16,0 mm | 16,0 mm     |
|                                                                                     |                                                                                     | 005 87 277 85 | Q10    | Hot air nozzle, four sides heated, with hot plate        | 18,0 mm | 18,0 mm     |
|  |  | 005 87 278 08 | R01    | Measuring nozzle for thermo element $\varnothing$ 0,5 mm |         |             |

# Hot Air Irons and Nozzles

## Hot Air Nozzles for 700 W Hot Air Stations

### Hot Air Nozzles for 700 W Hot Air Stations for HAP 3000 (WHA 3000P / V), HAP 2 (WHA 2000) and HAP 3 (WHA 700, WHA 300)

The ND and NQ nozzles have an integrated pre-heating plate for pre-heating components by means of contact heat. Air outlet slots are located around the plate with a width of approx. 1 mm for the hot air.

|                                                                                     |                                                                                     | Order No.     | Model | Description                       | Width A      | Thickness B |
|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|---------------|-------|-----------------------------------|--------------|-------------|
|    |    | 005 87 368 81 | NR04  | Round nozzle, without vacuum      | ø 2,5 mm     |             |
|    |    | 005 87 368 67 | NR05  | Round nozzle, without vacuum      | ø 4,0 mm     |             |
|    |    | 005 87 368 70 | NR10  | Round nozzle, without vacuum      | ø 7,0 mm     |             |
|    |    | 005 87 368 82 | NR02  | Round nozzle bent, without vacuum | 1,7 mm x 45° |             |
|  |  | 005 87 368 83 | DR05  | Dual nozzle round, without vacuum | 2 x ø 2,5 mm | 2 x 9,5 mm  |

### Two sides heated (Type ND, width X = heated side)

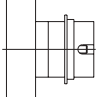
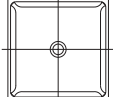
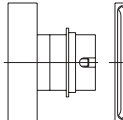
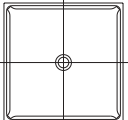
|                                                                                     |                                                                                     | Order No.     | Model      | Description                                                         | Width X | Thickness Y |
|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|---------------|------------|---------------------------------------------------------------------|---------|-------------|
|  |  | 005 87 368 43 | ND05       | Hot air nozzle, two sides heated                                    | 10,7 mm | 10,7 mm     |
|  |  | 005 87 368 42 | ND 10      | Hot air nozzle, two sides heated                                    | 14,0 mm | 10,0 mm     |
|  |  | 005 87 368 41 | ND 15      | Hot air nozzle, two sides heated                                    | 19,0 mm | 12,0 mm     |
|  |  | 005 87 368 40 | ND 20      | Hot air nozzle, two sides heated                                    | 21,5 mm | 14,8 mm     |
|                                                                                     |                                                                                     | 005 87 369 32 | ND SK535/A | Hot air nozzle, ND width A heated, without edge for thin components | 8,5 mm  | 20,0 mm     |
|                                                                                     |                                                                                     | 005 87 369 33 | ND SK535/B | Hot air nozzle, ND width A heated, without edge for thin components | 10,5 mm | 20,0 mm     |
|                                                                                     |                                                                                     | 005 87 507 34 | ND SK699   | Hot air nozzle, ND width A heated, without edge for thin components | 12,5 mm | 20,0 mm     |
|                                                                                     |                                                                                     | 005 87 369 34 | ND SK535/C | Hot air nozzle, ND width A heated, without edge for thin components | 14,0 mm | 20,0 mm     |

# Hot Air Irons and Nozzles

## Hot Air Nozzles for 700 W Hot Air Stations



### Four sides heated (Type NQ)

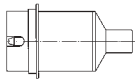
|                                                                                     |                                                                                     | Four sides heated (Type NQ) |       | Description                       | Width X | Thickness Y |
|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-----------------------------|-------|-----------------------------------|---------|-------------|
|                                                                                     |                                                                                     | Order No.                   | Model |                                   |         |             |
|    |    | 005 87 368 39               | NQ05  | Hot air nozzle, four sides heated | 10,7 mm | 10,7 mm     |
|    |    | 005 87 368 38               | NQ15  | Hot air nozzle, four sides heated | 14,5 mm | 10,0 mm     |
|    |    | 005 87 368 18               | NQ10  | Hot air nozzle, four sides heated | 14,8 mm | 14,8 mm     |
|    |    | 005 87 368 37               | NQ20  | Hot air nozzle, four sides heated | 15,5 mm | 13,0 mm     |
|    |    | 005 87 368 14               | NQ25  | Hot air nozzle, four sides heated | 18,0 mm | 18,0 mm     |
|  |  | 005 87 507 21               | NQ30  | Hot air nozzle, four sides heated | 17,5 mm | 23,5 mm     |
|  |  | 005 87 368 07               | NQ35  | Hot air nozzle, four sides heated | 20,5 mm | 20,5 mm     |
|  |  | 005 87 368 80               | NQ    | Hot air nozzle, four sides heated | 24,0 mm | 12,0 mm     |
|  |  | 005 87 368 04               | NQ40  | Hot air nozzle, four sides heated | 26,0 mm | 26,0 mm     |
|   |  | 005 87 368 33               | NQ45  | Hot air nozzle, four sides heated | 31,3 mm | 31,3 mm     |
|  |  | 005 87 368 91               | NQ50  | Hot air nozzle, four sides heated | 36,0 mm | 36,0 mm     |
|  |  | 005 87 368 90               | NQ55  | Hot air nozzle, four sides heated | 43,0 mm | 43,0 mm     |

# Hot Air Irons and Nozzles

Hot Air Nozzles for 700 W Hot Air Stations

Weller®

| Order No.     | Model  | Description                                                                    | Width A | Thickness B |
|---------------|--------|--------------------------------------------------------------------------------|---------|-------------|
| 005 87 507 41 | NQT 10 | Hot air nozzle, four sides heated, without protruding edge for thin components | 14,8 mm | 14,8 mm     |
| 005 87 507 42 | NQT25  | Hot air nozzle, four sides heated, without protruding edge for thin components | 18,0 mm | 18,0 mm     |
| 005 87 507 39 | NQT    | Hot air nozzle, four sides heated, without protruding edge for thin components | 22,0 mm | 22,0 mm     |
| 005 87 368 75 | NA 20  | Measuring nozzle                                                               |         |             |



Special design on request.

# Desoldering Stations

## Electronically Controlled Desoldering Stations

| Order No.     | Model   | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|---------------|---------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 005 32 566 99 | WDD 81V | <b>Desoldering station digital 95 W, 230 V, compressed air or inert gas operated</b> <ul style="list-style-type: none"><li>• 1 channel</li><li>• Digital controlled electronic for soldering or desoldering tools up to 80 W</li><li>• Compressed air converter provides vacuum for the desoldering iron</li><li>• Inlet pressure 500 - 600 KPA (58 - 87 psi) oil-free, dry compressed air or inert gas</li><li>• Temperature range 50°C - 450°C</li><li>• Temperature control via buttons</li><li>• 3-position digital display</li><li>• Calibration box WCB 2 (see page 121) may be connected for CALIBRATION, LOCK OUT or OFFSET function</li><li>• Protection class 1</li><li>• Antistatic housing</li><li>• Equipotential bonding (normal state hard grounded)</li><li>• Automatic tool recognition</li><li>• Dimensions: 166 x 115 x 101 mm (W x L x H)</li></ul> |



Nozzles: see page 99 - 101  
Spare parts: see page 145

|               |          |                                                  |
|---------------|----------|--------------------------------------------------|
| consists of:  |          |                                                  |
| 005 32 586 99 | PUDD 81V | Control unit 230 V                               |
| 005 13 190 99 | DSX 80   | Desoldering iron 80 W, 24 V with nozzle DX 113HM |
| 005 15 030 99 | AK 20    | Safety rest                                      |
| 005 13 142 00 | DX 112   | Nozzle                                           |
| 005 13 143 00 | DX 113   | Nozzle                                           |
| 005 13 500 99 |          | Cleaning set                                     |

| Order No.     | Model     | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|---------------|-----------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 005 32 546 99 | WDD 81VIL | <b>Desoldering station digital 95 W, 230 V, with inline desoldering iron compressed air or inert gas operated</b> <ul style="list-style-type: none"><li>• 1 channel</li><li>• Digital controlled electronic for soldering or desoldering tools up to 80 W</li><li>• Compressed air converter provides vacuum for the inline desoldering iron</li><li>• Inlet pressure 500 - 600 KPA (58 - 87 psi) oil-free, dry compressed air or inert gas</li><li>• Temperature range 50°C - 450°C</li><li>• Temperature control via buttons</li><li>• 3-position digital display</li><li>• Calibration box WCB 2 (see page 121) may be connected for CALIBRATION, LOCK OUT or OFFSET function</li><li>• Protection class 1</li><li>• Antistatic housing</li><li>• Equipotential bonding (normal state hard grounded)</li><li>• Automatic tool recognition</li><li>• Dimensions: 166 x 115 x 101 mm (W x L x H)</li></ul> |



Nozzles: see page 99 - 101  
Spare parts: see page 145

|               |          |                                                         |
|---------------|----------|---------------------------------------------------------|
| consists of:  |          |                                                         |
| 005 32 586 99 | PUDD 81V | Control unit 230 V                                      |
| 005 13 197 99 | DSXV 80  | Inline desoldering iron 80 W, 24 V with nozzle DX 113HM |
| 005 15 038 99 | AKV      | Safety rest                                             |
| 005 13 142 00 | DX 112   | Nozzle                                                  |
| 005 13 143 00 | DX 113   | Nozzle                                                  |
| 005 13 500 99 |          | Cleaning set                                            |

# Desoldering Stations

## Electronically Controlled Desoldering Stations

**Weller®**

|  | Order No.     | Model    | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|-----------------------------------------------------------------------------------|---------------|----------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                                                                   | 005 32 806 99 | WDD 161V | <b>Desoldering station digital 165 W, 230 V, compressed air or inert gas operated</b> <ul style="list-style-type: none"> <li>• 2 channels</li> <li>• Digital controlled electronic for soldering or desoldering tools up to 150 W</li> <li>• Compressed air converter provides vacuum for the desoldering iron</li> <li>• Inlet pressure 500 - 600 KPA (58 - 87 psi) oil-free, dry compressed air or inert gas</li> <li>• Temperature range 50°C - 450°C</li> <li>• Temperature control via buttons</li> <li>• 3-position digital display</li> <li>• Calibration box WCB 2 (see page 121) may be connected for CALIBRATION, LOCK OUT or OFFSET function</li> <li>• Protection class 1</li> <li>• Antistatic housing</li> <li>• Equipotential bonding (normal state hard grounded)</li> <li>• Automatic tool recognition</li> <li>• Dimensions: 166 x 115 x 101 mm (W x L x H)</li> </ul> |

Nozzles: see page 99 - 101  
Soldering Tips: see page 66 / 97  
Spare parts: see page 145

consists of:

|               |           |                                                   |
|---------------|-----------|---------------------------------------------------|
| 005 32 886 99 | PUDD 161V | Control unit 230 V                                |
| 005 13 190 99 | DSX 80    | Desoldering iron 80 W, 24 V with nozzle DX 113HM  |
| 005 29 161 99 | WSP 80    | Soldering iron 80 W, 24 V with soldering tip LT B |
| 005 15 030 99 | AK 20     | Safety rest                                       |
| 005 15 140 99 | WPH 80    | Safety rest                                       |
| 005 13 142 00 | DX 112    | Nozzle                                            |
| 005 13 143 00 | DX 113    | Nozzle                                            |
| 005 13 500 99 |           | Cleaning set                                      |

|  | Order No.     | Model  | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|-------------------------------------------------------------------------------------|---------------|--------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                                                                     | 005 33 326 99 | WMD 1D | <b>Desoldering station multi digital 175 W, 230 V, with internal pump</b> <ul style="list-style-type: none"> <li>• 1 channel</li> <li>• Digital controlled electronic for soldering, desoldering or hot air tools up to 150 W</li> <li>• Temperature range 50°C - 450°C</li> <li>• Temperature control via buttons</li> <li>• Max. vacuum -0,7 bar</li> <li>• 3-position digital display</li> <li>• Calibration box WCB 2 (see page 121) may be connected for CALIBRATION, LOCK OUT or OFFSET function</li> <li>• Protection class 1</li> <li>• Antistatic housing</li> <li>• Equipotential bonding (normal state hard grounded)</li> <li>• Automatic tool recognition</li> <li>• Dimensions: 240 x 270 x 105 mm (W x L x H)</li> </ul> |

Nozzles: see page 76 / 78 / 79  
Spare parts: see page 153

consists of:

|               |        |                                                     |
|---------------|--------|-----------------------------------------------------|
| 005 33 286 99 | WMD 1S | Control unit 230 V                                  |
| 005 13 190 99 | DSX 80 | Desoldering iron 80 W, 24 V with nozzle DX 113HM    |
| 005 15 030 99 | AK 20  | Safety rest                                         |
| 005 13 142 00 | DX 112 | Nozzle                                              |
| 005 13 143 00 | DX 113 | Nozzle                                              |
| 005 13 500 99 |        | Cleaning set                                        |
| 005 33 284 99 | WMD 1S | Control unit switchable 120 V / 240 V, with US plug |

# Desoldering Stations

## Electronically Controlled Desoldering Stations



Soldering tips: see page 66 / 67  
Desoldering nozzles: see page 154  
Hot air nozzles: see page 89 / 90  
Desoldering nozzles: see page 99 / 100

| Order No.     | Model  | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|---------------|--------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 005 33 026 75 | WMD 3K | <b>Desoldering station multi digital 310 W, 230 V, with internal pump</b> <ul style="list-style-type: none"><li>• 3 channel</li><li>• Including hot air pencil, soldering and desoldering iron</li><li>• Digital controlled electronic for soldering, desoldering and hot air tools tools up to 150 W</li><li>• Temperature range 50°C - 450°C (HAP 1: 550°C)</li><li>• Air volume hot air 1 - 10 l/min</li><li>• Max. vacuum -0,7 bar</li><li>• Temperature, vacuum and air volume control via buttons</li><li>• 3-position digital display</li><li>• Protection class 1</li><li>• Antistatic housing</li><li>• Equipotential bonding (normal state hard grounded)</li><li>• Automatic tool recognition</li><li>• Dimensions: 240 x 270 x 105 mm (W x L x H)</li></ul> |
| consists of:  |        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| 005 33 026 99 | WMD 3  | Control unit 230 V                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| 005 27 115 99 | HAP 1  | Hot air pencil 100 W / 24 V with hot air nozzle round R 06 ø 3,0 mm                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| 005 15 027 99 | KH 27  | Safety rest                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| 005 87 278 21 | R 04   | Hot air nozzle round ø 1,2 mm                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| 005 29 161 99 | WSP 80 | Soldering iron 80 W, 24 V with soldering tip LT B                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| 005 15 140 99 | WPH 80 | Safety rest                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| 005 13 190 99 | DSX 80 | Desoldering iron 80 W, 24 V with nozzle DX 113HM                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| 005 15 030 99 | AK 20  | Safety rest                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| 005 13 142 00 | DX 112 | Desoldering nozzle                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| 005 13 143 00 | DX 113 | Desoldering nozzle                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| 005 13 500 99 |        | Cleaning set                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| Accessory:    |        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| 005 13 120 99 |        | Foot switch 1-step                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |

# Desoldering Stations

## Electronically Controlled Desoldering Stations

**Weller®**



Hot air nozzles: see page 89 / 90  
Spare parts: see page 152

| Order No.     | Model    | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|---------------|----------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 005 33 086 99 | WMA 3V   | <b>Desoldering station multi analog 130 W, 230 V, compressed air or inert gas operated</b> <ul style="list-style-type: none"> <li>• Including dispenser and vacuum pick-up</li> <li>• 1 channel</li> <li>• Analog controlled electronic for soldering, desoldering and hot air tools up to 100 W</li> <li>• Inlet pressure 400 KPA (58 psi) oil-free, dry compressed air or inert gas</li> <li>• Temperature range 50°C - 550°C (HAP 1)</li> <li>• Max. vacuum - 0,7 bar</li> <li>• Air volume hot air 1 - 10 l/min</li> <li>• Temperature control via rotary potentiometer</li> <li>• Air flow control via rotary button</li> <li>• Timer</li> <li>• Protection class 1</li> <li>• Antistatic housing</li> <li>• Equipotential bonding (normal state hard grounded)</li> <li>• Automatic tool recognition</li> <li>• Dimensions: 240 x 270 x 105 mm (W x L x H)</li> </ul> |
| consists of:  |          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| 005 27 115 99 | HAP 1    | Control unit 230 V                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| 005 15 027 99 | KH 27    | Hot air pencil 100 W, 24 V with hot air nozzle round R 06 Ø 3,0 mm                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| 005 87 278 21 | R 04     | Safety rest                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| 3000ESD       | 3000 ESD | Hot air nozzle round Ø 1,2 mm                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| 3232          | 3232     | Erem 3000 vacuum pick-up                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| 2052E         | 2052E    | Erem adapter fix for use with suction cup 2052E                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| 005 15 052 99 |          | Erem suction cup 4,5 mm, Silicone rubber                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| 005 13 120 99 |          | Combi support for dispenser and vacuum pick-up                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| 005 13 500 99 |          | Foot switch 1-step                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| KDS 810 S6    |          | Cleaning tool complete                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|               |          | 10CC syringes adapter                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |

# Desoldering Irons, Nozzles & Heads

## Electronically Controlled Desoldering Irons



| Order No.     | Model  | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|---------------|--------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 005 33 138 99 | DSX 80 | <b>Desoldering iron set 80 W, 24 V, with threadless nozzle fixture system</b><br>Desoldering iron for electronics rework with external solder reservoir. For horizontal handling similar to regular soldering irons. Electronically temperature controlled. Micro finger switch controls quick start, fast action vacuum pump. Different interchangeable nozzles plus several CSF heads are available. The DSX series tools feature a novel threadless desoldering nozzle fixture system whereby the nozzle is inserted into the head and locked into place by applying a 1/4 turn. This feature allows the desoldering nozzles to be quickly and easily exchanged and also improves the rate of thermal transfer from the desoldering head to the desoldering nozzle providing the tools with a faster heat up time and recovery rate. Additionally, because there are no threads in the head to foul, maintenance and costs are reduced. |
| consists of:  |        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| 005 13 190 99 | DSX 80 | Desoldering iron 80 W, 24 V with nozzle DX 113HM                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| 005 15 030 99 | AK 20  | Safety rest                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| 005 13 142 00 | DX 112 | Nozzle                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| 005 13 143 00 | DX 113 | Nozzle                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| 005 13 500 99 |        | Cleaning set                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| 005 13 603 99 |        | Gaskets for Glastube (10)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |



| Order No.     | Model   | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|---------------|---------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 005 33 137 99 | DSXV 80 | <b>Inline desoldering iron set 80 W, 24 V, with threadless nozzle fixture system</b><br>Desoldering iron for electronics rework with internal solder reservoir. For vertical handling. Electronically temperature controlled. Micro finger switch controls quick start, fast action vacuum pump. Different interchangeable nozzles plus several CSF heads are available. The DSX series tools feature a novel threadless desoldering nozzle fixture system where by the nozzle is inserted into the head and locked into place by applying a 1/4 turn. This feature allows the desoldering nozzles to be quickly and easily exchanged and also improves the rate of thermal transfer from the desoldering head to the desoldering nozzle providing the tools with a faster heat up time and recovery rate. Additionally, because there are no threads in the head to foul, maintenance and costs are reduced. |
| consists of:  |         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| 005 13 197 99 | DSXV 80 | Inline desoldering iron 80 W, 24 V with nozzle DX 113HM                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| 005 15 038 99 | AKV     | Safety rest                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| 005 13 142 00 | DX 112  | Nozzle                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| 005 13 143 00 | DX 113  | Nozzle                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| 005 13 500 99 |         | Cleaning set                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |

# Desoldering Irons, Nozzles & Heads

## Electronically Controlled Desoldering Irons

### Desoldering nozzles with threadless fixture system for DSX 80 and DSXV 80

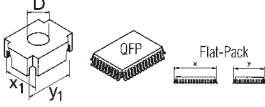
The DSX series tools feature a novel threadless desoldering nozzle fixture system whereby the nozzle is inserted into the head and locked into place by applying a  $\frac{1}{4}$  turn. This feature allows the desoldering nozzles to be quickly and easily exchanged and also improves the rate of thermal transfer from the desoldering head to the desoldering nozzle providing the tools with a faster heat up time and recovery rate. Additionally, because there are no threads in the head to foul, maintenance and costs are reduced.

|                                                                                     | Order No.     | Model    | Description                                                                                                          | Outside ø | Inside ø | Nozzle Length |
|-------------------------------------------------------------------------------------|---------------|----------|----------------------------------------------------------------------------------------------------------------------|-----------|----------|---------------|
|    | 005 13 140 00 | DX 110   | Nozzle                                                                                                               | 1,9 mm    | 0,7 mm   | 23 mm         |
|    | 005 13 141 00 | DX 111   | Nozzle                                                                                                               | 2,5 mm    | 0,7 mm   | 23 mm         |
|    | 005 13 142 00 | DX 112   | Nozzle                                                                                                               | 2,3 mm    | 1,0 mm   | 23 mm         |
|    | 005 13 143 00 | DX 113   | Nozzle                                                                                                               | 2,5 mm    | 1,2 mm   | 23 mm         |
|    | 005 13 150 00 | DX 113HM | Nozzle with improved thermal transfer                                                                                | 2,5 mm    | 1,2 mm   | 23 mm         |
|   | 005 13 144 00 | DX 114   | Nozzle                                                                                                               | 3,3 mm    | 1,8 mm   | 23 mm         |
|  | 005 13 145 00 | DX 115   | Nozzle                                                                                                               | 1,9 mm    | 0,7 mm   | 23 mm         |
|  | 005 13 146 00 | DX 116   | Nozzle                                                                                                               | 2,7 mm    | 1,2 mm   | 29 mm         |
|  | 005 13 147 00 | DX 117   | Nozzle                                                                                                               | 2,9 mm    | 1,5 mm   | 23 mm         |
|  | 005 13 148 00 | DX 118   | Nozzle                                                                                                               | 1,5 mm    | 0,7 mm   | 23 mm         |
|  | 005 13 151 00 | DX 119   | Needle tiptet with not wettable stainless steel tube for removal of solder bridges in connection with hot air pencil | 1,1 mm    | 0,7 mm   | 31 mm         |
|  | 005 13 152 00 | DX 120   | Nozzle without inside tube for cleaning SMD pads                                                                     | 2,5 mm    | 1,1 mm   | 22 mm         |
|  | 005 13 153 99 |          | Measuring nozzle                                                                                                     | 3,3 mm    | 0,55 mm  | 21, 5 mm      |
|  | 005 87 067 94 |          | Conus insert cleaning tool                                                                                           |           |          |               |
|                                                                                     | 005 13 790 99 |          | Nozzle set DX 110 - DX 115                                                                                           |           |          |               |

# Desoldering Irons, Nozzles & Heads

Electronically Controlled Desoldering Irons

## CSF-Q



x1 (mm) x y1 (mm)

x1 > x + 0,3

y1 > y + 0,3

| CSF-Head<br>Order No. |                      |
|-----------------------|----------------------|
| 12,0 x 12,0           | <b>005 87 417 33</b> |
| 12,0 x 14,5           | <b>005 87 417 34</b> |
| 12,7 x 12,7           | <b>005 87 417 35</b> |
| 17,0 x 17,0           | <b>005 87 417 36</b> |
| 17,0 x 23,0           | <b>005 87 417 37</b> |
| 19,6 x 19,6           | <b>005 87 417 38</b> |

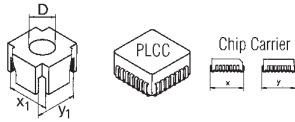
Adaptor  
Ø

Adaptor for  
DSX 80,  
DSXV 80

Adaptor for  
DS 80,  
DSV 80

Adaptor for  
DSVT 80

## CSF-QI



|             |                      |
|-------------|----------------------|
| 12,7 x 12,7 | <b>005 87 417 39</b> |
| 12,7 x 15,6 | <b>005 87 417 76</b> |
| 17,8 x 17,8 | <b>005 87 417 40</b> |
| 20,4 x 20,4 | <b>005 87 417 41</b> |
| 25,4 x 25,4 | <b>005 87 417 42</b> |
| 30,4 x 30,4 | <b>005 87 417 43</b> |

## CSF-D

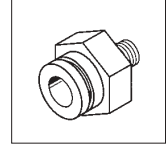
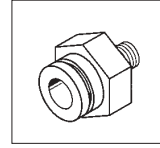
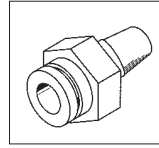


|             |                      |
|-------------|----------------------|
| 5,5 x 10,0  | <b>005 87 417 23</b> |
| 5,8 x 10,5  | <b>005 87 417 24</b> |
| 6,7 x 10,0  | <b>005 87 417 25</b> |
| 9,3 x 13,0  | <b>005 87 417 26</b> |
| 9,4 x 10,0  | <b>005 87 417 27</b> |
| 9,8 x 18,0  | <b>005 87 417 28</b> |
| 10,0 x 16,0 | <b>005 87 417 29</b> |
| 10,5 x 16,0 | <b>005 87 417 30</b> |
| 10,7 x 18,0 | <b>005 87 417 31</b> |
| 11,0 x 26,5 | <b>005 87 417 32</b> |

## CSF-DI



|            |                      |
|------------|----------------------|
| 9,0 x 18,0 | <b>005 87 417 44</b> |
|------------|----------------------|



6

005 87 418 03

005 87 417 15

005 87 417 84

6

005 87 418 03

005 87 417 15

005 87 417 84

6

005 87 418 03

005 87 417 15

005 87 417 84

11

005 87 418 04

005 87 417 16

005 87 417 85

16

005 87 418 05

005 87 417 17

005 87 417 86

11

005 87 418 04

005 87 417 16

005 87 417 85

6

005 87 418 03

005 87 417 15

005 87 417 84

6

005 87 418 03

005 87 417 15

005 87 417 84

11

005 87 418 04

005 87 417 16

005 87 417 85

16

005 87 418 05

005 87 417 17

005 87 417 86

16

005 87 418 05

005 87 417 17

005 87 417 86

16

005 87 418 05

005 87 417 17

005 87 417 86

6

005 87 418 03

005 87 417 15

005 87 417 84

6

005 87 418 03

005 87 417 15

005 87 417 84

6

005 87 418 03

005 87 417 15

005 87 417 84

6

005 87 418 03

005 87 417 15

005 87 417 84

6

005 87 418 03

005 87 417 15

005 87 417 84

6

005 87 418 03

005 87 417 15

005 87 417 84

6

005 87 418 03

005 87 417 15

005 87 417 84

6

005 87 418 03

005 87 417 15

005 87 417 84

6

005 87 418 03

005 87 417 15

005 87 417 84

11

005 87 418 04

005 87 417 16

005 87 417 85

6

005 87 418 03

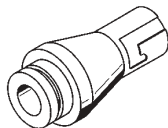
005 87 417 15

005 87 417 84

# Desoldering Irons, Nozzles & Heads

## Electronically Controlled Desoldering Irons

### Adapter



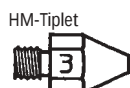
| Order No. / Model | Description                   |
|-------------------|-------------------------------|
| 005 87 418 03     | ø 6 mm, for DSX 80 + DSXV 80  |
| 005 87 418 04     | ø 11 mm, for DSX 80 + DSXV 80 |
| 005 87 418 05     | ø 16 mm, for DSX 80 + DSXV 80 |
| 005 87 417 15     | ø 6 mm, for DS 80 + DSV 80    |
| 005 87 417 16     | ø 11 mm, for DS 80 + DSV 80   |
| 005 87 417 17     | ø 16 mm, for DS 80 + DSV 80   |
| 005 87 417 84     | ø 6 mm, for DSVT 80           |
| 005 87 417 85     | ø 11 mm, for DSVT 80          |
| 005 87 417 86     | ø 16 mm, for DSVT 80          |

### Rubber insert (spare)



| Order No. / Model | Description        |
|-------------------|--------------------|
| 005 87 137 99     | ø 4,5 mm, 10 pcs.  |
| 005 87 137 98     | ø 10,0 mm, 10 pcs. |

### Desoldering nozzles with thread for DS 22, DS 80 and DSV 80



| Order No.     | Model    | Description                                                                                                           | Outside ø | Inside ø | Nozzle Length |
|---------------|----------|-----------------------------------------------------------------------------------------------------------------------|-----------|----------|---------------|
| 005 13 510 00 | DS 110   | Nozzle                                                                                                                | 1,9 mm    | 0,7 mm   | 18 mm         |
| 005 13 532 00 | DS 110HM | Nozzle with improved heat transfer                                                                                    | 1,9 mm    | 0,7 mm   | 18 mm         |
| 005 13 511 00 | DS 111   | Nozzle                                                                                                                | 2,5 mm    | 0,7 mm   | 18 mm         |
| 005 13 512 00 | DS 112   | Nozzle                                                                                                                | 2,3 mm    | 1,0 mm   | 18 mm         |
| 005 13 533 00 | DS 112HM | Nozzle with improved heat transfer                                                                                    | 1,9 mm    | 0,9 mm   | 18 mm         |
| 005 13 513 00 | DS 113   | Nozzle                                                                                                                | 2,5 mm    | 1,2 mm   | 18 mm         |
| 005 13 530 00 | DS 113HM | Nozzle with improved heat transfer                                                                                    | 2,5 mm    | 1,2 mm   | 18 mm         |
| 005 13 514 00 | DS 114   | Nozzle                                                                                                                | 3,3 mm    | 1,8 mm   | 18 mm         |
| 005 13 515 00 | DS 115   | Nozzle                                                                                                                | 1,9 mm    | 0,7 mm   | 24,5 mm       |
| 005 13 516 00 | DS 116   | Nozzle                                                                                                                | 2,7 mm    | 1,2 mm   | 24,5 mm       |
| 005 13 550 00 | DS 117   | Nozzle                                                                                                                | 2,9 mm    | 1,5 mm   | 18 mm         |
| 005 13 551 00 | DS 118   | Nozzle                                                                                                                | 1,5 mm    | 0,7 mm   | 18 mm         |
| 005 13 527 00 | DS 119   | Needle tiptlet with not wettable stainless steel tube for removal of solder bridges in connection with hot air pencil | 1,9 mm    | 0,7 mm   | 26 mm         |
| 005 13 552 00 | DS 120   | Nozzle without inside tube, for cleaning SMD pads                                                                     | 2,5 mm    | 1,1 mm   | 15,5 mm       |
| 005 24 749 99 |          | Measuring nozzle                                                                                                      | 3,3 mm    | 0,55 mm  | 18 mm         |
| 005 13 770 99 |          | Nozzle set DS 110 - DS 115                                                                                            |           |          |               |

### Desoldering nozzles for SCD 100 desoldering gun

| Order No. | Model   | Description               |
|-----------|---------|---------------------------|
| SCD113    | SCD 113 | Desoldering nozzle 1,2 mm |
| SCD114    | SCD 114 | Desoldering nozzle 1,8 mm |

# BGA / QFP Rework

## Weller WQB Repair System

The WQB repair system upgrades the Weller product range in the SMD tool sector. A well thought-out design concept combines reliability and maximum process control with ease of use and technically mature detail solutions. Usefull accessories increase the possible uses of these repair work stations. For the universal circuit board repair of SMD components, it is necessary to preheat the circuit board effectively from below and from above to precisely heat the components to be repaired to the reflow temperature as well as to reliably control the process. On the WQB 3000 the temperature regulated 2-Zone infrared bottom heater provides rapid warm-up and homgeneous substrate temperatures. The hot air top heater, with digital control electronics for temperature monitoring and regulation of the air flow rate, facilitates the finely metered supply of heat to the components. A temperature sensor placed directly in the hot air nozzle efficiently regulates the top heater and thus provides maximum process control. On the digital programming unit all process steps can be programmed, saved and if necessary protected against unauthorized use as required. The most important process parameters are optionally displayed on the LC display during operation.

The programming unit assists with the determination of temperature profiles and in this way facilitates the definition of optimal soldering process data in the easiest possible manner. Optionally the WQB 3000 can be controlled with a PC using the software WQB 3000 CONTROL. The programming of comprehensive special functions permits the adaptation of the process to a very wide range of boundary conditions, and thus enables repairs to be made even on the most difficult assemblies.

| Order No.     | Model       | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|---------------|-------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 005 33 516 99 | WQB 3000OPS | <b>BGA/SMT Rework system 2300 W / 230 V, for component placement with camera guided positioning system</b><br>At the heart of the placing system is the modern Fire Wire colour camera with fully digital data transfer. The data transfer from the camera to the PC is made in real time via the IEEE 1394a interface. The telecentric precision objective lens produces an image of the component to be placed free of perspective distortion and has a wide depth of focus. The included positioning software contains a component library, from which the component to be placed is selected. New components can be edited very easily by the user and added to the library. Using the built-in positioning frame in the live image from the camera, the circuit board and the component can be aligned independently of each other using the X,Y and Theta axis fine adjustment drives. |



consists of:

- Base unit with top heater, bottom heater, control electronics and pneumatic unit
- Positioning unit with digital camera and telecentric objective
- Circuit board holder with fine adjustment in X and Y direction
- Lighting for soldering head
- Temperature sensor PT 100
- Push rod for bottom heater
- Nozzle change tool
- 5 pcs. Vacuum inserts ø 4,5 mm
- 5 pcs. Vacuum inserts ø 10,0 mm
- Reducer insert for the vacuum pickup
- Software WQB 3000 CONTROL and WQB OPS
- Serial interface cable
- Calibration tool
- Vacuum pick up with 2 changeable vacuum inserts
- Mains cable
- 2 m connecting tube for compressed air
- Instruction manual

### Accessory for WQB 3000OPS

| Order No.     | Description                                    |
|---------------|------------------------------------------------|
| 005 87 557 67 | LED illumination module for positioning system |

# BGA / QFP Rework



**Order No.** 005 33 506 99  
**Model** WQB 3000

## Description

### BGA/SMT Rework system 2300 W / 230 V, for component placement with templates

The Weller template system offers a low cost but still precise positioning system for BGA and leaded components. The templates can be used on populated boards and are manufactured for most BGA, QFP and PLCC components.

consists of:

- Base unit with bottom heater, soldering head, placement head, control electronics and pneumatic unit
- Circuit board holder with precision drive in X and Y direction
- Lighting for soldering head
- Programming unit with RS 232 connecting cable
- Temperature sensor PT 100
- Push rod for bottom heater
- Nozzle change tool
- 5 pcs. Vacuum inserts  $\varnothing$  4,5 mm
- 5 pcs. Vacuum inserts  $\varnothing$  10,0 mm
- Reducer insert for the vacuum pickup
- Mains cable
- 2 m connecting tube for compressed air
- Instruction manual
- Software WQB 3000 CONTROL for the optional user of the system via PC

## Accessory for WQB 3000OPS and WQB 3000

### Order No. / Model

### Description



005 87 549 24

Clamping set for irregular shaped circuit boards (e.g. mobilephones, video/digital camera boards, etc.)



005 87 557 45

Support for large dimensioned circuit boards



005 87 548 73

Adjustable circuit boarder stop



005 87 557 41

Downholder for circuit boards

005 87 549 42

Manual control console for easy process control

005 87 549 48

Temperature sensor for top heater

005 87 549 51  
005 31 190 99

External sensor type K,  $\varnothing$  0,25 mm  
External sensor type K,  $\varnothing$  0,5 mm

005 87 549 70

Adapter for NQ/NO hot air nozzles for WQB 3000 (see page 91 / 92)

005 87 137 99  
005 87 137 98

10 pcs. Vacuum inserts  $\varnothing$  4,5 mm  
10 pcs. Vacuum inserts  $\varnothing$  10,0 mm

005 31 191 99

Serial interface cable



# BGA / QFP Rework

## Hot Air Nozzles for WQB 3000OPS and WQB 3000

The patented hot air nozzles of the WQB rework stations, coupled with digital control of the hot air temperature and its flow rate provide an even convective heating of the component. This in turn ensures repeatability of the reflow process.



| Order No.     | Model | Nozzle Housing Inside | Nozzle Housing Outside |
|---------------|-------|-----------------------|------------------------|
| 005 87 479 47 |       | 7,6 x 7,99 mm         | 8,6 x 8,9 mm           |
| 005 87 479 43 |       | 6,5 x 6,5 mm          | 7,5 x 7,5 mm           |
| 005 87 479 45 |       | 8,5 x 8,5 mm          | 9,5 x 9,5 mm           |
| 005 87 479 61 |       | 8,5 x 10,6 mm         | 9,5 x 11,6 mm          |
| 005 87 549 67 |       | 10,0 x 10,0 mm        | 11,0 x 11,0 mm         |
| 005 87 478 48 |       | 12,0 x 12,0 mm        | 13,0 x 13,0 mm         |
| 005 87 479 04 |       | 13,5 x 13,5 mm        | 14,3 x 14,3 mm         |
| 005 87 479 35 |       | 15,5 x 15,5 mm        | 6,5 x 16,5 mm          |
| 005 87 478 93 |       | 15,0 x 11,0 mm        | 16,0 x 12,0 mm         |
| 005 87 548 36 |       | 18,5 x 10,0 mm        | 19,5 x 11,0 mm         |
| 005 87 479 77 |       | 15,5 x 23,5 mm        | 16,5 x 24,5 mm         |
| 005 87 478 33 |       | 18,0 x 18,0 mm        | 20,0 x 20,0 mm         |
| 005 87 547 70 |       | 21,0 x 21,0 mm        | 23,0 x 23,0 mm         |
| 005 87 548 20 |       | 22,0 x 22,0 mm        | 24,0 x 24,0 mm         |
| 005 87 477 64 |       | 25,0 x 25,0 mm        | 27,0 x 27,0 mm         |
| 005 87 479 93 |       | 27,0 x 23,0 mm        | 29,0 x 25,0 mm         |
| 005 87 478 50 |       | 27,0 x 27,0 mm        | 29,0 x 29,0 mm         |
| 005 87 479 27 |       | 29,0 x 29,0 mm        | 31,0 x 31,0 mm         |
| 005 87 479 99 |       | 28,0 x 32,0 mm        | 30,0 x 34,0 mm         |
| 005 87 479 06 |       | 33,0 x 33,0 mm        | 35,0 x 35,0 mm         |
| 005 87 548 87 |       | 35,0 x 35,0 mm        | 37,0 x 37,0 mm         |
| 005 87 477 53 |       | 37,0 x 37,0 mm        | 39,0 x 39,0 mm         |
| 005 87 478 71 |       | 39,5 x 39,5 mm        | 41,5 x 41,5 mm         |
| 005 87 478 74 |       | 42,0 x 42,0 mm        | 44,0 x 44,0 mm         |
| 005 87 549 03 |       | 45,0 x 11,0 mm        | 47,0 x 13,0 mm         |
| 005 87 477 63 |       | 46,0 x 46,0 mm        | 48,0 x 48,0 mm         |
| 005 87 479 16 |       | 47,0 x 47,0 mm        | 49,0 x 49,0 mm         |
| 005 87 479 41 |       | 49,0 x 49,0 mm        | 51,0 x 51,0 mm         |
| 005 87 479 85 |       | 57,0 x 18,5 mm        | 59,0 x 20,0 mm         |

## Positioning Templates for WQB 3000

The Weller template system offers a low cost but still precise positioning system for BGA and leaded components. The templates can be used on populated boards and are manufactured for most BGA, QFP and PLCC components. Templates for other components on request.

## Positioning Templates for BGA Components



| Order No. / Model | Matrix  | Pitch |
|-------------------|---------|-------|
| 005 87 549 46     | 35 x 35 | 0,5   |
| 005 87 479 58     | 10 x 10 | 0,8   |
| 005 87 549 81     | 12 x 12 | 0,8   |
| 005 87 479 59     | 13 x 13 | 0,8   |
| 005 87 557 05     | 16 x 16 | 0,8   |
| 005 87 557 06     | 20 x 20 | 0,8   |
| 005 87 557 07     | 21 x 21 | 0,8   |
| 005 87 557 08     | 22 x 22 | 0,8   |
| 005 87 479 30     | 14 x 14 | 1,0   |
| 005 87 479 31     | 16 x 16 | 1,0   |
| 005 87 547 78     | 18 x 18 | 1,0   |
| 005 87 547 60     | 22 x 22 | 1,0   |
| 005 87 547 79     | 24 x 24 | 1,0   |
| 005 87 547 77     | 26 x 26 | 1,0   |
| 005 87 547 61     | 29 x 29 | 1,0   |
| 005 87 548 50     | 34 x 34 | 1,0   |
| 005 87 479 87     | 39 x 39 | 1,0   |
| 005 87 479 83     | 10 x 40 | 1,27  |
| 005 87 478 57     | 16 x 16 | 1,27  |
| 005 87 478 61     | 17 x 17 | 1,27  |
| 005 87 477 81     | 19 x 19 | 1,27  |
| 005 87 479 66     | 20 x 20 | 1,27  |
| 005 87 479 11     | 23 x 23 | 1,27  |
| 005 87 478 94     | 25 x 25 | 1,27  |
| 005 87 477 79     | 26 x 26 | 1,27  |
| 005 87 478 59     | 31 x 31 | 1,27  |
| 005 87 477 82     | 15 x 15 | 1,5   |

# BGA / QFP Rework

## Positioning Templates for QFP Components

| Order No. / Model | Component | Pitch |
|-------------------|-----------|-------|
| 005 87 478 44     | TQFP 100  | 0,5   |
| 005 87 549 82     | TQFP 128  | 0,5   |
| 005 87 478 69     | QFP 176   | 0,5   |
| 005 87 478 40     | QFP 208   | 0,5   |
| 005 87 478 67     | QFP 240   | 0,5   |
| 005 87 478 85     | QFP 112   | 0,65  |
| 005 87 478 38     | QFP 160   | 0,65  |
| 005 87 479 82     | QFP 64    | 0,8   |
| 005 87 478 42     | QFP 80    | 0,8   |



## Weller WAM 3000 Vapour Phase SMD Reflow System

Using vapour phase soldering systems enable to solder highly complex assemblies and components without thermal problems. The compact design makes the WAM 3000 the ideal soldering system particularly for use in the laboratory and for prototyping, usual EMS production. The device is also suitable for small production runs due to the innovative air-cooling. The system impresses with its ease of use and reproducible process parameters. All device functions are controlled and monitored by a microcontroller. Serial interface for PC control, monitoring and documentation of the soldering process. Any adjustments to suit the evaporating liquid used are made automatically. Heat transfer via condensation of a saturated vapour phase. The boiling points of the various process media define the required working temperature. The built-in lift moves the solder goods to the loading position.

### Advantages:

- Oxygen-free soldering environment, mild flux can be used
- Process conditions and soldering profile that are reproducible and can be documented
- Even heating of the circuit board without overheating of the electronic assemblies
- No time-consuming preparation of temperature curves
- Environmentally friendly – CFC-free
- Low maintenance due to air cooling
- Process tank made of high-quality stainless steel
- Control by means of external PC

### Technical data:

- Max. format of item to be soldered: 300 mm x 300 mm
- Max. height of item to be soldered: 55 mm
- Mains supply: 230 V / 50 Hz
- Rated power: 2 KW
- Process temperature: Medium-dependent up to 240°C
- Medium consumption: approx. 3 - 10 g / cycle
- Medium capacity: 1 kg
- System weight: 80 kg
- Dimensions: 490 x 615 x 950 mm (W x D x H)

| Order No.     | Model    | Description                                   |
|---------------|----------|-----------------------------------------------|
| 005 33 396 99 | WAM 3000 | Vapour phase SMD reflow system 2000 W / 230 V |



## Accessory for WAM 3000

| Order No. / Model | Description                         |
|-------------------|-------------------------------------|
| 005 33 272 99     | Desoldering set for WAM 2000 / 3000 |
| 005 33 274 99     | Vapour Phase Medium HT 200 (200°)   |
| 005 33 275 99     | Vapour Phase Medium HT 200 (230°)   |

# Fume Extraction

## Zero-Smog

The Weller Zero-Smog Systems put an end to air pollution caused by soldering, adhesives and laser work. In all of these applications fumes or fine particles are released into the work place atmosphere which are hazardous to staff exposed to them. The Weller Zero-Smog Systems' combination of pumps, electronic controls and filters removes this hazard.

### Tip Extraction

Weller FE soldering irons have an integral smoke tube mounted in the handle. It is positioned directly above the joint during the soldering process to collect any fumes generated. Fume extraction irons can be connected to Weller Zero-Smog Systems WFE and WFE P bench mounted units driving up to 2 irons or WFE 20D mobile unit driving up to 20 irons. Fume extraction attachments can be retro fitted to non fume extraction Weller soldering irons.

### Extraction Units

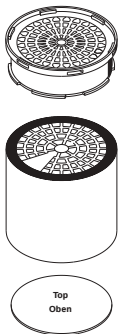


| Order No.     | Model | Description                                                                                                                                                                                                                                                                                                                                                                           |
|---------------|-------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 005 36 402 99 | WFE   | <b>Portable fume extraction unit for tip suction, compressed air operated</b> <ul style="list-style-type: none"><li>• Height x Diameter 200 x 140 mm</li><li>• Weight 2,7 kg</li><li>• Operating pressure 3,5 - 6 bar</li><li>• Air consumption 30 l/min</li><li>• Sound level 39 db (A) at 1 m distance</li><li>• Max. vacuum 20.000 Pa</li><li>• Max. capacity 2 FE irons</li></ul> |
| consists of:  |       | Fume extraction unit<br>Compressed air cleaning filter<br>Compact filter (HEPA filter H13 + wide band gas filter<br>50 % active carbon / 50 % Puratex)<br>Fine dust filter F 7                                                                                                                                                                                                        |



| Order No.     | Model | Description                                                                                                                                                                                                                                                                                                                                                                                                             |
|---------------|-------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 005 36 386 99 | WFE P | <b>Portable fume extraction unit 230 V / 50 Hz, for tip suction with built in pump</b> <ul style="list-style-type: none"><li>• Vacuum pump with 2 power stages for higher extraction performance</li><li>• Height x Diameter 295 x 140 mm</li><li>• Weight 4 kg</li><li>• Power input 50 W</li><li>• Sound level 40 db (A) at 1 m distance</li><li>• Max. vacuum 30.000 Pa</li><li>• Max. capacity 2 FE irons</li></ul> |
| consists of:  |       | Fume extraction unit 230 V / 50 Hz<br>Compact filter (HEPA filter H13 + wide band gas filter<br>50 % active carbon / 50 % Puratex)<br>Fine dust filter F 7                                                                                                                                                                                                                                                              |

### Spare filter for WFE + WFE P



| Order No.     | Model | Description                                                                                  |
|---------------|-------|----------------------------------------------------------------------------------------------|
| 005 87 357 57 |       | Compressed air cleaning filter (for WFE only)                                                |
| 005 36 410 99 |       | Compact filter (HEPA filter H13 + wide band gas filter<br>50 % active carbon / 50 % Puratex) |
| 005 36 407 99 |       | Compact filter (HEPA filter H13 + wide band gas filter<br>100 % active carbon)               |
| 005 36 421 99 |       | Fine dust filter F 7 (3 pcs.)                                                                |

# Fume Extraction

Tip Extraction Units + FE Irons

**Weller®**



| Order No.     | Model   |
|---------------|---------|
| 005 36 476 99 | WFE 20D |

## Description

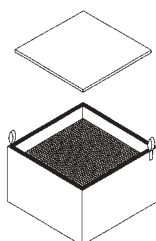
**Fume extraction unit 230 V / 50 Hz,  
for tip suction with built in turbine**

- Electronically controlled turbine
- Two selectable operating modes
- Electronic filter check (LED)
- Electronic filter operation status display
- Interface RS 232 for optional remote control
- Dimensions 450 x 450 x 695 mm (L x W x H)
- Weight 45 kg
- Power input 630 VA
- Sound level 51db (A) at 1 m distance
- Max. vacuum 12.000 Pa
- Max. delivery rate 100 m3/h
- Max. capacity 20 FE irons

consists of:

Fume extraction unit 230 V / 50 Hz  
Compact filter (HEPA filter H13 + wide band gas filter  
50 % active carbon / 50 % Puratex)  
Fine dust filter F 7

## Spare filter for WFE 20D



| Order No.     | Model |
|---------------|-------|
| 005 87 358 37 |       |
| 005 87 358 36 |       |

## Description

Fine dust filter F 5  
Fine dust filter F 7

005 87 358 38

Compact filter (HEPA filter H13 + wide band gas filter  
50 % active carbon / 50 % Puratex)

# Fume Extraction

## Tip Extraction Units + FE Irons

### FE Soldering Irons

Weller FE soldering irons are specifically designed for tip extraction applications. The smoke tube is integral with the handle and is normally placed over the joint when soldering but can be retracted when access to the joint is a problem or removed for cleaning. The irons are temperature controlled, ergonomic and allow precise handling. The electronically controlled irons can be driven from any PU /PUD series power unit compatible with the rating of the iron or any rework station. FE 50M irons can only be driven from the P51 power unit. The range of iron power ratings and the extensive range of solder tips mean that there is an iron to suit all applications. The FE irons are supplied with a 5 mm-dia. burn proof hose 2.5 m long, all handles, leads and hoses are ESD safe.

| Order No.            | Model            | Description                              |
|----------------------|------------------|------------------------------------------|
| <b>005 33 150 99</b> | <b>FE 50 Set</b> | <b>FE Soldering iron set 50 W / 24 V</b> |

consists of:

|               |           |                                                       |
|---------------|-----------|-------------------------------------------------------|
| 005 25 153 99 | FE 50 Set | FE Soldering iron 50 W / 24 V with soldering tip 4ETB |
| 005 15 020 99 | KH 20     | Safety rest                                           |
| 005 50 050 99 |           | Funnel for KH 20                                      |
| 005 25 409 99 |           | Cleaning brush for FE tube                            |

| Order No.            | Model         | Description                                                |
|----------------------|---------------|------------------------------------------------------------|
| <b>005 32 152 99</b> | <b>FE 50M</b> | <b>FE Soldering iron 50 W / 24 V, Magnastat controlled</b> |

consists of:

|               |        |                                                                                    |
|---------------|--------|------------------------------------------------------------------------------------|
|               | FE 50M | FE Soldering iron 50 W / 24 V Magnastat controlled with soldering tip PT B7 2,4 mm |
| 005 50 050 99 |        | Funnel for KH 20                                                                   |
| 005 25 409 99 |        | Cleaning brush for FE tube                                                         |

| Order No.            | Model            | Description                              |
|----------------------|------------------|------------------------------------------|
| <b>005 33 151 99</b> | <b>FE 75 Set</b> | <b>FE Soldering iron set 80 W / 24 V</b> |

consists of:

|               |       |                                                       |
|---------------|-------|-------------------------------------------------------|
| 005 29 166 99 | FE 75 | FE Soldering iron 80 W / 24 V with soldering tip LT B |
| 005 15 020 99 | KH 20 | Safety rest                                           |
| 005 50 050 99 |       | Funnel for KH 20                                      |
| 005 25 409 99 |       | Cleaning brush for FE tube                            |

| Order No.            | Model           | Description                          |
|----------------------|-----------------|--------------------------------------|
| <b>005 29 162 99</b> | <b>WSP 80FE</b> | <b>FE Soldering iron 80 W / 24 V</b> |

consists of:

|               |          |                                                       |
|---------------|----------|-------------------------------------------------------|
|               | WSP 80FE | FE Soldering iron 80 W / 24 V with soldering tip LT B |
| 005 87 417 55 |          | Cleaning brush for FE tube ø 3,2mm                    |

| Order No.            | Model        | Description                                                   |
|----------------------|--------------|---------------------------------------------------------------|
| <b>005 26 162 99</b> | <b>FE 80</b> | <b>FE Soldering iron 80 W / 24 V, with soldering tip HT B</b> |

consists of:

|               |       |                                                       |
|---------------|-------|-------------------------------------------------------|
|               | FE 80 | FE Soldering iron 80 W / 24 V with soldering tip HT B |
| 005 50 050 99 |       | Funnel for KH 20                                      |
| 005 25 409 99 |       | Cleaning brush for FE tube                            |



Soldering Tips: see page 61



Soldering Tips: see page 77 / 78



Soldering Tips: see page 66 / 67



Soldering Tips: see page 66 / 67



Soldering Tips: see page 69

# Fume Extraction

## Tip Extraction Units + FE Irons

**Weller®**

### FE attachments

A range of FE attachments is available to fit to Weller soldering and desoldering irons to convert standard products to fume extraction versions. The attachments are supplied with all necessary fittings and hoses. The performance of the retro fitted tools is not affected.



| Order No.     | Description                                                                  |
|---------------|------------------------------------------------------------------------------|
| 005 29 167 99 | FE Attachment for WSP 80 soldering iron                                      |
| 005 29 127 99 | FE Attachment for MLR 21 + MLR 80 soldering iron                             |
| 005 25 125 99 | FE Attachment for LR 21, LR 82, TCPS, W 61, W 101 and WSP 150 soldering iron |
| 005 28 126 99 | FE Attachment for WSF 80D5/8 with AK S safety rest                           |
| 005 13 125 99 | FE Attachment for DS 22, DS 80 and DSX 80 desoldering iron                   |

### Accessory for FE Irons



| Order No.     | Description                       |
|---------------|-----------------------------------|
| 005 36 352 99 | Locking clip for extraction hose  |
| 005 25 410 00 | Extraction hose (spare), by metre |



### Cord support

The cord support keeps the cord of the soldering iron out of the direct working area. This allows an easy handling of the soldering iron. Especially recommended for use with FE soldering irons.

| Order No.     | Description            |
|---------------|------------------------|
| 005 15 065 99 | Cord support for AK 20 |
| 005 15 066 99 | Cord support for KH 23 |

### Safety Rests for FE Irons



| Order No.     | Model  | Description                                                                                   |
|---------------|--------|-----------------------------------------------------------------------------------------------|
| 005 15 030 99 | AK 20  | Safety rest for FE 50, FE 50M, FE 75 and FE 80, for LR 21, LR 82 and TCP S with FE attachment |
| 005 15 020 99 | KH 20  | Safety rest for FE 50, FE 50M, FE 75 and FE 80                                                |
| 005 15 023 99 | KH 23  | Safety rest for FE 25                                                                         |
| 005 15 140 99 | WPH 80 | Safety rest for WSP 80FE, for MLR 21 with FE attachment                                       |

# Fume Extraction

## Tip Extraction Units + FE Irons

### Safety Rests Stop+Go for FE Irons with WFE or WFE P

The Weller Stop + Go supports are recommended accessories for FE irons using the WFE or WFE P extraction units. A fibre optic sensor switches the extraction unit on when the FE iron is removed from the bench support and when the FE iron is replaced in the bench support, after a short delay to gather the fumes from any solder on the tip it switches the unit off. This reduces running costs.

|    | Order No.     | Model       | Description                                                                                                             |
|-------------------------------------------------------------------------------------|---------------|-------------|-------------------------------------------------------------------------------------------------------------------------|
|                                                                                     | 005 15 086 99 | KHP         | Basic unit pneumatic (for WFE) Stop+Go + safety rest with fibre optic sensor for FE 25, FE 50, FE 50M, FE 75 and FE 80  |
|    | 005 15 076 99 | KHE         | Basic unit electric (for WFE P) Stop+Go + safety rest with fibre optic sensor for FE 25, FE 50, FE 50M, FE 75 and FE 80 |
|  | 005 15 080 99 | KHE/P       | Second safety rest with fibre optic sensor for extending to 2 workplaces for FE 25, FE 50, FE 50M, FE 75 and FE 80      |
|  | 005 15 084 99 | KHP 80      | Basic unit pneumatic (for WFE) Stop+Go + safety rest with fibre optic sensor for WSP 80FE                               |
|  | 005 15 083 99 | KHE 80      | Basic unit electric (for WFE P) Stop+Go + safety rest with fibre optic sensor for WSP 80FE                              |
|  | 005 15 141 99 | KHE 80/P 80 | Second safety rest with fibre optic sensor for extending to 2 workplaces for WSP 80 FE                                  |

# Fume Extraction

Tip Extraction Units + FE Irons

## Accessory for Tip Extraction



**Order No.**  
**005 36 316 99**

**Model**

**Description**

Extraction hose 40, 1 m, Ø 40 mm, complete with 2 connecting elements



**005 36 414 00**

Extraction hose 40, Ø 40 mm without connecting elements, sold by metre



**005 36 415 99**

Connection element 40-50



**005 36 326 99**

Extension hose Ø 17 mm, 5 m



**005 87 358 65**

Connection nipple for extension hose 17

**005 87 358 66**

Nut G 3/8" for connection nipple



**005 36 343 99**

Adapter 17 for connection extension hose 17 with 5 mm hose of FE iron



**005 36 338 99**

Connection nipple for 5 mm hose of FE iron for direct connection to pipe system

# Fume Extraction

## Volume Extraction Units + Accesory

### Volume Extraction

For applications where volume extraction is more suitable, e.g. solder baths, hot air soldering, micro solders and gluing work, Weller offers the mobile systems WFE 2S and WFE 4S. The units purify the air at upto 8 workplaces. A wide range of accessory is available for each system.

### Extraction Units



| Order No.     | Model  | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|---------------|--------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 005 36 266 99 | WFE 2S | <b>Portable fume extraction unit 230 V / 50 Hz, for volume extraction with built in turbine</b> <ul style="list-style-type: none"> <li>• Speed set by rotary potentiometer</li> <li>• Red/green LED to indicate filter condition</li> <li>• Interface RS 232 for optional remote control</li> <li>• Dimensions 320 x 320 x 395 mm (L x W x H)</li> <li>• Weight 19 kg</li> <li>• Power input 275 VA</li> <li>• Sound level 48db (A) at 1 m distance</li> <li>• Max. vacuum 2.700 Pa</li> <li>• Max. extraction rate 230 m3/h</li> <li>• Max. capacity 2 work places</li> <li>• Standard connection pipe system 50</li> </ul> |

consists of:

Fume extraction unit 230 V / 50 Hz  
Compact filter (HEPA filter H13 + wide band gas filter 50 % active carbon / 50 % Puratex)  
Fine dust filter F 5

| Order No.     | Model  | Description                                                                                                                                                               |
|---------------|--------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 005 36 466 99 | WFE 2S | <b>Portable fume extraction unit 230 V / 50 Hz, for volume extraction with built in turbine with adhesive fume filter</b><br>Same as WFE 2S but with adhesive fume filter |

consists of:

Fume extraction unit 230 V / 50 Hz  
Compact filter for adhesive fumes (wide band gas filter 50 % active carbon / 50 % Puratex)  
Fine dust filter F 5



| Order No.     | Model     | Description                                                        |
|---------------|-----------|--------------------------------------------------------------------|
| 005 36 436 99 | WFE 2Kit1 | <b>Portable fume extraction kit 230 V / 50 Hz, for 1 workplace</b> |

consists of:

WFE 2S Fume extraction unit 230 V / 50 Hz  
Compact filter (HEPA filter H13 + wide band gas filter 50 % active carbon / 50 % Puratex)  
Fine dust filter F 5  
WFAN 50 Extraction arm with nozzle, flexible, Ø 50 mm  
WFTB 50 Bench mounting bracket  
System seal  
Extraction hose 50, 3 m, Ø 50 mm

|               |          |
|---------------|----------|
| 005 36 374 99 | WFAN 50  |
| 005 36 379 99 | WFTB 50  |
| 005 36 371 99 | WFFMP 50 |

# Fume Extraction

## Volume Extraction Units + Accessory

| Order No.     | Model        | Description                                                                                                                                                        |
|---------------|--------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 005 36 446 99 | WFE 2Kit1    | <b>Portable fume extraction kit 230 V / 50 Hz, for 1 workplace with adhesive fume filter</b>                                                                       |
|               | consists of: | WFE 2S Fume extraction unit 230 V / 50 Hz<br>Compact filter for adhesive fumes<br>(wide band gas filter 50 % active carbon / 50 % Puratex)<br>Fine dust filter F 5 |
| 005 36 374 99 | WFAN 50      | WFAN 50 Extraction arm with nozzle, flexible, Ø 50 mm                                                                                                              |
| 005 36 379 99 | WFTB 50      | Bench mounting bracket                                                                                                                                             |
| 005 36 371 99 | WFFMP 50     | System seal<br>Extraction hose 50, 3 m, Ø 50 mm                                                                                                                    |

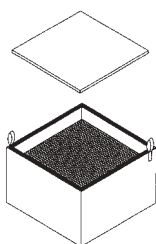


| Order No.     | Model        | Description                                                                                                                                                 |
|---------------|--------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 005 36 456 99 | WFE 2Kit2    | <b>Portable fume extraction kit 230 V / 50 Hz, for 2 workplaces</b>                                                                                         |
|               | consists of: | WFE 2S Fume extraction unit 230 V / 50 Hz<br>Compact filter (HEPA filter H13 + wide band gas filter 50 % active carbon / 50 % Puratex) Fine dust filter F 5 |
| 005 36 374 99 | WFAN 50      | 2 x Extraction arm with nozzle, flexible, Ø 50 mm                                                                                                           |
| 005 36 379 99 | WFTB 50      | 2 x Bench mounting bracket                                                                                                                                  |
| 005 36 371 99 | WFFMP 50     | 2 x System seal<br>2 x Extraction hose 50, 3 m, Ø 50 mm                                                                                                     |
| 005 87 358 47 |              | Hose connector 50                                                                                                                                           |

| Order No.     | Model        | Description                                                                                                                                                        |
|---------------|--------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 005 36 486 99 | WFE 2Kit2    | <b>Portable fume extraction kit 230 V / 50 Hz, for 2 workplaces with adhesive fume filter</b>                                                                      |
|               | consists of: | WFE 2S Fume extraction unit 230 V / 50 Hz<br>Compact filter for adhesive fumes<br>(wide band gas filter 50 % active carbon / 50 % Puratex)<br>Fine dust filter F 5 |
| 005 36 374 99 | WFAN 50      | 2 x Extraction arm with nozzle, flexible, Ø 50 mm                                                                                                                  |
| 005 36 379 99 | WFTB 50      | 2 x Bench mounting bracket                                                                                                                                         |
| 005 36 371 99 | WFFMP 50     | 2 x System seal<br>2 x Extraction hose 50, 3 m, Ø 50 mm                                                                                                            |
| 005 87 358 47 |              | Hose connector 50                                                                                                                                                  |

### Spare filter for WFE 2S, WFE 2Kit1 and WFE 2Kit2

| Order No.     | Model | Description                                                                                   |
|---------------|-------|-----------------------------------------------------------------------------------------------|
| 005 87 358 84 |       | Fine dust filter F 5 (10 pcs.)                                                                |
| 005 87 358 85 |       | Fine dust filter F 7 (10 pcs.)                                                                |
| 005 87 358 83 |       | Compact filter (HEPA filter H13 + wide band gas filter 50 % active carbon / 50 % Puratex)     |
| 005 87 358 95 |       | Compact filter for adhesive fumes<br>(wide band gas filter 50 % active carbon / 50 % Puratex) |



# Fume Extraction

## Volume Extraction Units + Accessory



| Order No.     | Model  | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|---------------|--------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 005 36 256 99 | WFE 4S | <b>Mobile fume extraction unit 230 V / 50 Hz, for volume extraction with built in turbine</b> <ul style="list-style-type: none"> <li>• Electronically controlled</li> <li>• 3 Operating modes</li> <li>• LED display for filter condition indication</li> <li>• Interface RS 232 for optional remote control</li> <li>• Dimensions 320 x 320 x 395 mm (L x W x H)</li> <li>• Weight 21 kg</li> <li>• Power input 450 VA</li> <li>• Sound level 51db (A) at 1 m distance</li> <li>• Max. vacuum 2.800 Pa</li> <li>• Max. extraction rate 615 m3/h</li> <li>• Max. capacity 8 work places</li> <li>• Standard connection pipe system 75</li> </ul> |

consists of:

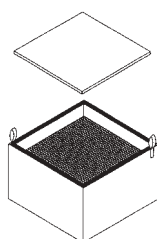
Fume extraction unit 230 V / 50 Hz  
Compact filter (HEPA filter H13 + wide band gas filter  
50 % active carbon / 50 % Puratex)  
Fine dust filter F 5

| Order No.     | Model  | Description                                                                                                                                                             |
|---------------|--------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 005 36 496 99 | WFE 4S | <b>Mobile fume extraction unit 230 V / 50 Hz, for volume extraction with built in turbine with adhesive fume filter</b><br>Same as WFE 4S but with adhesive fume filter |

consists of:

Fume extraction unit 230 V / 50 Hz  
Compact filter for adhesive fumes  
(wide band gas filter 50 % active carbon / 50 % Puratex)  
Fine dust filter F 5

### Spare Filter for WFE 4S



| Order No.     | Description                                                                                   |
|---------------|-----------------------------------------------------------------------------------------------|
| 005 87 358 37 | Fine dust filter F 5 (10 pcs.)                                                                |
| 005 87 358 36 | Fine dust filter F 7 (10 pcs.)                                                                |
| 005 87 358 38 | Compact filter (HEPA filter H13 + wide band gas filter<br>50 % active carbon / 50 % Puratex)  |
| 005 87 358 35 | Compact filter for adhesive fumes<br>(wide band gas filter 50 % active carbon / 50 % Puratex) |



### Pre Filter for WFE 2S And WFE 4S

| Order No.     | Description                                                                                  |
|---------------|----------------------------------------------------------------------------------------------|
| 005 87 358 62 | <b>Pre Filter for WFE 2S or WFE 4S to extend capacity</b>                                    |
| consists of:  | Filter box<br>Fine dust filter F 7<br>2 x hose connection 75<br>Pocket filter for pre filter |
| 005 87 358 60 |                                                                                              |

# Fume Extraction

Volume Extraction Units + Accesory

## Accessory for Volume Extraction

|                                                                                     | Order No.     | Model   | Description                                                                                            |
|-------------------------------------------------------------------------------------|---------------|---------|--------------------------------------------------------------------------------------------------------|
|    | 005 87 358 47 |         | Hose connection 50 for WFE 2S and WFE 4S                                                               |
|                                                                                     | 005 87 358 32 |         | Hose connection 75 for WFE 2S and WFE 4S                                                               |
|    | 005 87 358 48 |         | Hose connection 50, 90° for WFE 2S and WFE 4S                                                          |
|                                                                                     | 005 87 358 33 |         | Hose connection 50, 90° for WFE 2S and WFE 4S                                                          |
|   | 005 87 353 27 |         | Extraction hose 50, Ø 50 mm, by metre                                                                  |
|                                                                                     | 005 87 353 13 |         | Extraction hose 75, Ø 75 mm, by metre                                                                  |
|  | 005 87 358 79 |         | Hose clamp 50 - 70 mm, for extraction hose 50, 2 units                                                 |
|                                                                                     | 005 87 358 31 |         | Hose clamp 70 - 90 mm, for extraction hose 75, 2 units                                                 |
|  | 005 87 358 49 |         | Extraction arm 50, flexible, with articulated joint and airflow control valve and benc clamp. ESD safe |
|  | 005 36 374 99 | WFAN 50 | Extraction arm 50, Ø 50 mm, with nozzle Ø 50 mm, max. length 800 mm, ESD safe                          |
|  | 005 36 372 99 | WFAF 50 | Extraction arm 50, Ø 50 mm, with funnel Ø 100 mm, max. length 840 mm, ESD safe                         |
|  | 005 36 373 99 | WFAS 50 | Extraction arm 50, Ø 50 mm, with flat nozzle 210 x 20 mm, max. length 820 mm, ESD safe                 |

# Fume Extraction

Accessory for Tip and Volume Extraction

**Weller®**

## Pipe System 50 Tip Extraction

Tip extraction systems demand a high value and constant level of vacuum across the installation, the volume of air extracted is of lesser importance. To achieve this it is necessary to use a pipe system with relatively small diameter. The Weller piep system 50 allows extraction installations of up to 200 m when used with the WFE 20D unit in a stand alone system. The pipe sections are designed to stick together and have internal sealing bushes. In a central system, the FE irons are connected directly to the fume extraction units.

|                                                                                     | Order No.     | Model | Description                                                        |
|-------------------------------------------------------------------------------------|---------------|-------|--------------------------------------------------------------------|
|    | 005 36 323 99 |       | Pipe 2m, with seal at one end, plastic, black                      |
|    | 005 36 322 99 |       | Right angle pipe, 90°, 0,5 m, with seal at one end, plastic, black |
|  | 005 36 344 99 |       | T-piece, 2 x 90°, 1 m, with 3 seals, plastic, black                |
|  | 005 36 321 99 |       | Branch, 2 x 45°, 1m, with 2 seals, plastic, black                  |
|  | 005 36 319 99 |       | Double socket, plastic, black                                      |
|  | 005 36 324 99 |       | End seal, plastic, transparent                                     |
|  | 005 36 329 99 |       | Pipe clamps, plastic, grey                                         |

# Fume Extraction

## Accesory for Tip and Volume Extraction

### Pipe System 75 Volume Extraction

Volume etraction systems require a large volume of air to be extracted and the level of vacuum is of lesser importance. This means that a relatively large diameter piep system is required, if the pipe diameter was too small the flow resistance would increase and extraction capacity reduced. The pipe system 75 allows installations up to 30 m with the WFE 4S uses in a stand alon system. The pipe sections are designed to stick together and have internal sealing bushes

### Pipe System 75



| Order No.     | Model | Description                                                        |
|---------------|-------|--------------------------------------------------------------------|
| 005 87 358 70 |       | Pipe 2m, with seal at one end, plastic, black                      |
| 005 87 358 69 |       | Right angle pipe, 90°, 0,5 m, with seal at one end, plastic, black |
| 005 87 358 71 |       | T-piece, 2 x 90°, 1 m, with 3 seals, plastic, black                |
| 005 87 358 55 |       | End seal, plastic, transparent                                     |
| 005 87 358 64 |       | Pipe clamps, plastic, grey                                         |
| 005 87 358 63 |       | Adapter pipe system 75 to pipe system 50, with seals               |
| 005 87 358 56 |       | Adapter pipe system 75 to pipe system 50, without seals            |

### Exhaust Adapters for Blow Waste Air Out of Building

| Order No.     | Model | Description                            |
|---------------|-------|----------------------------------------|
| 005 87 359 20 |       | Exhaust adapter of pipe 100 to WFE 20D |
| 005 87 358 40 |       | Exhaust adapter of pipe 100 to WFE 4S  |
| 005 87 359 15 |       | Exhaust adapter of pipe 75 to WFE 2S   |

### Remote Control



| Order No.     | Model | Description                                            |
|---------------|-------|--------------------------------------------------------|
| 005 87 359 09 |       | Remote control for use with WFE 20D, WFE 2S and WFE 4S |
| 005 31 191 99 |       | Interface cable RS 232, 2 m                            |

# Accessory

## Temperature Measuring and Calibration

### WCB 2 Measuring and Calibration Box

The WCB 2 is an external input unit for programming additional functions. It works with every digital Weller station. The setting is fast and easy. Battery powered supply makes the box independent from any mains and easy to transport. The WCB 2 has an PC interface (RS 232) and an integrated temperature gauge for thermo couple type K (accessory). The functions are:

- OFFSET: correction value for soldering tip temperature
- SETBACK: Reduction of the set temperature after a specified period of time
- LOCK: locking the set temperature
- °C / °F: switching temperature display °C / °F
- WINDOW: setting a set value window. If the actual temperature is within the set value window a potential-free contact is activated (only PUD 81R Power unit page 59)
- Temperature measuring tips are available for each soldering iron



| Order No.     | Model | Description                   |
|---------------|-------|-------------------------------|
| 005 31 180 99 | WCB 2 | Calibration unit              |
| consists of:  |       |                               |
|               |       | Calibration box               |
|               |       | Battery 4 x 1,5 V             |
| Accessory:    |       |                               |
| 005 31 184 99 |       | Network adapter 230 V, 50 Hz  |
| 005 31 190 99 |       | Thermoelement type K o 0,5 mm |
| 005 31 191 99 |       | Interface Cable RS 232        |

### WTT 1 Temperature Measuring Unit

The WTT 1 digital temperature measuring system has been specially designed for measuring the temperature of soldering iron tips. The probe has a double sensor system and an own internal heat source. The measured temperature is fed to a control system that records the flow of heat in the probe and stabilises it with the aid of the internal heat source. This design ensures that no heat is drawn by the probe from the object to be measured. Erroneous measurements due to the large thermal load of the probe are thus prevented. The measured temperature is indicated on a three-digit LED display to a resolution of 1°C. A red dot in the display is used to indicate the measured value and simplifies the reading of the measured temperature. An adjustable preheat temperature ensures a rapid response even at high temperatures. Different methods of equipotential bonding and the ESD appropriate design of the control unit and probe supplement the quality of this measuring unit.



| Order No.     | Model | Description                                                                                                                                                                                     |
|---------------|-------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 005 31 246 99 | WTT 1 | Temperature measuring system                                                                                                                                                                    |
| consists of:  |       |                                                                                                                                                                                                 |
|               |       | <ul style="list-style-type: none"> <li>• Temperature range 50°C - 500°C</li> <li>• Tolerance <math>\pm 5^{\circ}\text{C}</math></li> <li>• Dimensions 166 x 115 x 101 mm (L x W x H)</li> </ul> |
|               |       | Power unit                                                                                                                                                                                      |
| 005 29 109 99 |       | Probe for WTT 1                                                                                                                                                                                 |

# Accessory

## Heating Plates

Heating plates are used to preheat circuit boards under repair to reduce the possibility of thermal damages and to reduce the heat requirement of the soldering tool for speeding up the repair process.



| Order No.     | Model  | Description                                                                                                                                                                                                                                                                                               |
|---------------|--------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 005 27 028 99 | WHP 80 | <b>Heating plate 80 W, 24 V, 80 x 50 mm</b> <ul style="list-style-type: none"> <li>• for use with all Weller 80 W soldering stations</li> <li>• Heating surface 80 x 50 mm</li> <li>• Size housing 150 x 120 x 65 mm (L x W x H)</li> <li>• Temperature range 50°C - 200°C</li> <li>• ESD safe</li> </ul> |
| consists of:  |        | Heating plate                                                                                                                                                                                                                                                                                             |



| Order No.     | Model   | Description                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|---------------|---------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 005 33 066 99 | WHP 300 | <b>Heating plate 300 W, 230 V, 100 x 160 mm</b> <ul style="list-style-type: none"> <li>• Digital display for set and read temperature</li> <li>• Isolated supply</li> <li>• External sensor (accessory) connectable</li> <li>• Heating surface 100 x 160 mm (Europe-Card-Size)</li> <li>• Size housing 220 x 160 x 45 mm (L x W x H)</li> <li>• Temperature range 50°C - 300°C</li> <li>• +/- 2°C from end value</li> <li>• ESD safe</li> </ul> |
| consists of:  |         | Power unit 300 W, 230 V                                                                                                                                                                                                                                                                                                                                                                                                                         |
| 005 33 066 72 |         | Heating plate                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| 005 33 160 99 |         |                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Accessory:    |         |                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| 005 33 161 99 |         | Hand support antistatic                                                                                                                                                                                                                                                                                                                                                                                                                         |
| 005 87 017 23 |         | External sensor                                                                                                                                                                                                                                                                                                                                                                                                                                 |



| Order No.     | Model    | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|---------------|----------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 005 33 386 99 | WHP 3000 | <b>Heating plate 600 W / 230 V, 120 x 190 mm</b> <ul style="list-style-type: none"> <li>• Digital display for set and read temperature</li> <li>• Electronic temperature control</li> <li>• 3 High temperature ceramic elements for fast and efficient heat up</li> <li>• Two heated zones can be selected</li> <li>• External sensor (accessory) connectable</li> <li>• RS 232 Interface e.g. for connection to Weller hot air stations WHA 3000</li> <li>• Heating surface 120 x 190 mm</li> <li>• Temperature range 50°C - 400°C</li> <li>• ESD safe</li> </ul> |
| consists of:  |          | Heating plate 200 W / 600W, 230 V                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |



| Order No.     | Model    | Description                                                                                                 |
|---------------|----------|-------------------------------------------------------------------------------------------------------------|
| 005 33 646 99 | WHP 3000 | <b>Heating plate 1200 W, 230 V, 190 x 245 mm</b><br>same as WHP 3000 but with heatable surface 190 x 245 mm |
| consists of:  |          | Heating plate 1200 W, 230 V                                                                                 |
| Accessory:    |          |                                                                                                             |
| 005 31 191 99 |          | Interface Cable RS 232                                                                                      |
| 005 31 190 99 |          | External sensor 0,5 mm                                                                                      |
| 005 33 163 99 |          | PCB board holder with pivoting stand                                                                        |
| 005 33 162 99 |          | PCB board holder without stand                                                                              |

# Accessory

## PCB Board Holders

For retaining and securing the circuit boards under repair.



| Order No.     | Model      | Description                                                                                                                                                                                                                                       |
|---------------|------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 005 15 026 99 | ESF 120ESD | <b>PCB board holder</b> <ul style="list-style-type: none"> <li>• Max. size 160 x 235 mm</li> <li>• Rotates through 360° in increments of 15°</li> <li>• Spring clamp</li> <li>• Cushioned arm for component fixing</li> <li>• ESD safe</li> </ul> |



| Order No.     | Model     | Description                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|---------------|-----------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 005 33 163 99 | WBH 3000S | <b>PCB board holder with pivoting stand for WHA 3000P and WHA 3000V</b> <ul style="list-style-type: none"> <li>• Max. size 310 x 320 mm</li> <li>• Board positioning in X and Y directions</li> <li>• For single and doublesided boards</li> <li>• Pivoting stand to mount hot air pencil HAP 3000</li> <li>• Stop+Go function for mounted hot air pencil</li> <li>• Heating plate WHP 3000 could be fitted under the board holder</li> </ul> |



| Order No.     | Model    | Description                                                                                                                                     |
|---------------|----------|-------------------------------------------------------------------------------------------------------------------------------------------------|
| 005 33 162 99 | WBH 3000 | <b>PCB board holder without pivoting stand</b> <ul style="list-style-type: none"> <li>• Same as WBH 3000S but without pivoting stand</li> </ul> |

### Accessory for WBH 3000S + WBH 3000:

|               |                                                                                                                               |
|---------------|-------------------------------------------------------------------------------------------------------------------------------|
| 005 87 548 73 | Adjustable circuit boarder stop                                                                                               |
| 005 87 557 45 | Support for large dimensioned circuit boards                                                                                  |
| 005 87 557 41 | Downholder for circuit boards                                                                                                 |
| 005 87 549 24 | Clamping set for irregular shaped circuit boards<br>(e.g. mobile phones, video/digital camera boards, etc.)<br>(see page 103) |

# Accessory

## Soldering Bathes

Rework preparation tool e.g. for tin coating of wire ends and leads of all extraneous components.



| Order No.     | Model  | Description                                                                                                                                                                                                                                                                                                                                   |
|---------------|--------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 005 61 093 99 | W 101H | <b>Miniature soldering bath 100 W, 230 V</b> <ul style="list-style-type: none"> <li>• Miniature soldering bath with horizontal stand</li> <li>• inside <math>\varnothing</math> 17,4 mm, depth 22 mm</li> <li>• Temperature 330°C</li> <li>• Magnastat temperature control</li> <li>• different temperatures available (accessory)</li> </ul> |
| consists of:  |        | soldering bath with 330°C insert<br>horizontal stand                                                                                                                                                                                                                                                                                          |
| Accessory:    |        |                                                                                                                                                                                                                                                                                                                                               |
| 005 11 706 99 |        | Insert for temperature 285°C                                                                                                                                                                                                                                                                                                                  |
| 005 11 707 99 |        | Insert for temperature 330°C                                                                                                                                                                                                                                                                                                                  |
| 005 11 708 99 |        | Insert for temperature 380°C                                                                                                                                                                                                                                                                                                                  |
| 005 11 709 99 |        | Insert for temperature 450°C                                                                                                                                                                                                                                                                                                                  |



| Order No.     | Model  | Description                                                                                                                                                                                                                                                                                                                                                                |
|---------------|--------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 005 27 040 99 | WSB 80 | <b>Soldering bath 80 W, 24 V</b> <ul style="list-style-type: none"> <li>• Connectable to all Weller digital stations with minimum 80 W</li> <li>• Size housing: 150 x 120 x 65 mm (L x W x H)</li> <li>• Size bath: Inside <math>\varnothing</math> 20 mm, depth 25 mm</li> <li>• Temperature range 50°C - 450°C</li> <li>• Heat-up time ~ 7 min (50°C - 350°C)</li> </ul> |
| consists of:  |        | Soldering bath                                                                                                                                                                                                                                                                                                                                                             |



| Order No.     | Model   | Description                                                                                                                                                                                                                                                                                                                                                                                                         |
|---------------|---------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 005 27 042 99 | WSB 150 | <b>Soldering bath 150 W, 24 V</b> <ul style="list-style-type: none"> <li>• Connectable to all Weller digital stations with minimum 150 W</li> <li>• V2A tray to guard against dripping solder residue</li> <li>• Size housing: 150 x 120 x 65 mm (L x W x H)</li> <li>• Size bath: 58 x 33 x 19 mm (L x W x H)</li> <li>• Temperature range 50°C - 550°C</li> <li>• Warm-up time ~ 11 min (50°C - 350°C)</li> </ul> |
| consists of:  |         | Soldering bath                                                                                                                                                                                                                                                                                                                                                                                                      |

# Accessory

## Miscellaneous

### Stripping Tools

| Order No.     | Model  | Description                              |
|---------------|--------|------------------------------------------|
| 005 25 030 99 | WST 20 | <b>Thermal stripping tool 50 W, 24 V</b> |

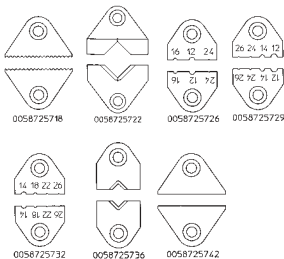


consists of:

005 13 030 99  
005 87 270 71  
005 87 250 34  
005 87 257 18  
005 87 257 42  
005 87 257 26

The WST 20 temperature controlled thermal stripping tool is suitable to all digital Weller stations. It strips off thermoplastic insulation materials by using precisely shaped stripping blades. The stripping length is adjustable up to 30 mm. Optimal temperature control via power unit (accessory)

Wire stripping tool  
Antiblock paste 10 g  
Wrench SW 8  
Brush  
Flat cable knife set 1,27 mm  
Cutting knife set  
Knife set AWG 12, 16, 24  
Safety rest



Accessory:

005 87 257 18  
005 87 257 22  
005 87 257 26  
005 87 257 29  
005 87 257 32  
005 87 257 36  
005 87 257 42

Flat cable knife set 1,27 mm  
Universal knife set  
Knife set AWG 12, 16, 24 (2,0, 1,3, 0,51 mm)  
Knife set AWG 12, 14, 24, 26 (2,0, 1,6, 0,51, 0,4 mm)  
Knife set AWG 14, 18, 22, 26 (1,6, 1,02, 0,64, 0,4 mm)  
V Knife set 4,25 mm x 2 mm  
Cutting knife set

| Order No.     | Model  | Description                                             |
|---------------|--------|---------------------------------------------------------|
| 005 25 031 99 | WST 82 | <b>Thermal stripping tool 80 W, 24 V, with flexcord</b> |

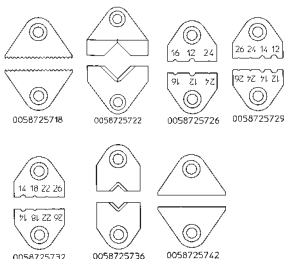


consists of:

005 13 030 99  
005 87 270 71  
005 87 250 34  
005 87 257 36

The WST 82 temperature controlled thermal stripping tool is suitable to all digital Weller stations with minimum 80 W. It strips off thermoplastic insulation materials by using precisely shaped stripping blades. The stripping length is adjustable up to 30 mm. Optimal temperature control via power unit (accessory). Flex cord for 1,5 - 3,5 m working distance

Wire stripping tool  
Antiblock paste 10 g  
Wrench SW 8  
Brush  
V Knife set 4,25 mm x 2 mm  
Safety rest



Accessory:

005 87 257 18  
005 87 257 22  
005 87 257 26  
005 87 257 29  
005 87 257 32  
005 87 257 36  
005 87 257 42

Flat cable knife set 1,27 mm  
Universal knife set  
Knife set AWG 12, 16, 24 (2,0, 1,3, 0,51 mm)  
Knife set AWG 12, 14, 24, 26 (2,0, 1,6, 0,51, 0,4 mm)  
Knife set AWG 14, 18, 22, 26 (1,6, 1,02, 0,64, 0,4 mm)  
V Knife set 4,25 mm x 2 mm  
Cutting knife set

# Accessory

## Miscellaneous

### Desoldering Pumps

With the hand-held desoldering pumps a vacuum is produced by means of a piston, cylinder and spring force. The piston is tensioned manually and secured automatically. The piston is moved back suddenly by pressing the release button and a vacuum is created briefly so that the soldered joint is freed of liquified solder.

| Order No.    | Model          | Description                                                                                                                                     |
|--------------|----------------|-------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>SA21A</b> | <b>SA 21 A</b> | <b>Manuel desoldering pump</b> <ul style="list-style-type: none"> <li>• Length 200 mm</li> <li>• Metal housing</li> <li>• antistatic</li> </ul> |



Accessory:  
SA21A1

SA 21A1 Desoldering tip antistatic for SA 21A

| Order No.     | Model          | Description                                                                                                                                                                                                   |
|---------------|----------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>PS100A</b> | <b>PS 100A</b> | <b>Manuel desoldering pump</b> <ul style="list-style-type: none"> <li>• Length 150 mm</li> <li>• Strong vacuum, minimal rebound</li> <li>• Metal housing</li> <li>• antistatic (with tip PS 1001A)</li> </ul> |



Accessory:  
PS1001A

PS 1001A Desoldering tip antistatic for PS 100A

| Order No.     | Model          | Description                                                                                                                                                                                                  |
|---------------|----------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>PS200A</b> | <b>PS 200A</b> | <b>Manuel desoldering pump</b> <ul style="list-style-type: none"> <li>• Length 200 mm</li> <li>• Strong vacuum, minimal rebound</li> <li>• Metal housing</li> <li>• antistatic (with tip PS2001A)</li> </ul> |



Accessory:  
PS2001  
PS2001A

PS 2001 Desoldering tip Teflon for PS 200A 2,70  
PS 2001A Desoldering tip antistatic for PS 200A

| Order No.      | Model           | Description                                                           |
|----------------|-----------------|-----------------------------------------------------------------------|
| <b>PS3001A</b> | <b>PS 3001A</b> | <b>Desoldering tip antistatic for manuel desoldering pump PS 300A</b> |

### Vacuum Pen

For easy pick and place of delicate SMD components. The vacuum pen avoids stress and damages to the versatile compact sized pen is independent from compressed air or batteries.

| Order No.      | Model           | Description       |
|----------------|-----------------|-------------------|
| <b>WLSK200</b> | <b>WLSK 200</b> | <b>Vacuum pen</b> |

Accessory:

|         |          |                                |
|---------|----------|--------------------------------|
| WLSKT18 | WLSKT 18 | Replacement tip, rubber 3,2 mm |
| WLSKT38 | WLSKT 38 | Replacement tip, rubber 9,5 mm |
| KDS260S | KDS 260S | Replacement rubber 3,2 mm      |
| KDS260L | KDS 260L | Replacement rubber 9,5 mm      |



# Accessory

## Miscellaneous

### Solder Dispenser



| Order No.     | Model   | Description                                                                                                                                                                                                                                            |
|---------------|---------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 005 13 017 99 | SD 1000 | <b>Solder dispenser</b> <ul style="list-style-type: none"> <li>• for coils up to 1000 g</li> <li>• for use of coil up to: length 95 mm, core <math>\varnothing &gt; 17</math> mm<br/>length 84 mm, core <math>\varnothing &lt; 12</math> mm</li> </ul> |



| Order No.     | Model | Description                                                                                                                                                                                                                                                                                           |
|---------------|-------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 005 13 013 99 | ABW 2 | <b>Extension for additional reel</b> <ul style="list-style-type: none"> <li>• to be fixed on SD 1000</li> <li>• for coils up to 1000 g</li> <li>• for use of coil up to: length 95 mm, core <math>\varnothing &gt; 17</math> mm<br/>length 84 mm, core <math>\varnothing &lt; 12</math> mm</li> </ul> |

### Cleaning Set for Desoldering Nozzles

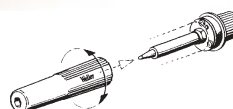


| Order No./Model | Description                                                                                                                                  |
|-----------------|----------------------------------------------------------------------------------------------------------------------------------------------|
| 005 13 500 99   | <b>Cleaning set complete</b> <ul style="list-style-type: none"> <li>• for cleaning of desoldering nozzles and for nozzle exchange</li> </ul> |

consists of:

005 87 488 61  
005 13 501 99

Handle  
Replacement needle set 0,4 mm / 0,9 mm / 1,4 mm / 1,9 mm



Accessory

005 13 501 99

Replacement needle set standard 1 x each 0,4 mm / 0,9 mm / 1,4 mm / 1,9 mm

005 13 502 99

Replacement needle set 1 x 1,9 mm, 3 x 0,9 mm

005 13 503 99

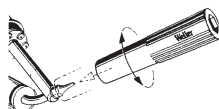
Replacement needle set 1 x 1,9 mm, 3 x 0,4 mm

005 13 504 99

Replacement needle set 1 x 1,9 mm, 3 x 1,4 mm

005 87 488 61

Handle



### PCB Training Set



| Order No./Model | Description                                                                                                                                                                                                                                                                                                                                                                     |
|-----------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 005 55 066 99   | <b>PCB training set</b> <p>This set offers the opportunity to gain experience in soldering and desoldering of SMD components. The different soldering and desoldering techniques can be taught without damaging the expensive regular components or boards. The set consists of two boards and SMD components starting with chip 0402 up to QFP 208 with 0,5 pitch, BGA 256</p> |

# Accessory

## Miscellaneous

### Lead free solder



| Order No.     | Description                                                                                                      |
|---------------|------------------------------------------------------------------------------------------------------------------|
|               | <b>Lead Free Solder Wire</b>                                                                                     |
|               | Weller lead free solder wire for hand soldering application.<br>The wire is save packed in a ESD safe handy red. |
| 005 13 822 99 | Ø 0,5 mm SN 96,5 AG3,0CU-0,5 F3L1, 4,0 m                                                                         |
| 005 13 823 99 | Ø 1,0 mm SN 96,5 AG3,0CU-0,5 F3L1, 1,5 m                                                                         |



| Order No.     | Model | Description                                                                                                                                                                                                                                                                                |
|---------------|-------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 005 13 031 99 |       | <b>Tip Activator</b>                                                                                                                                                                                                                                                                       |
|               |       | The Weller Tip Activator for regeneration of oxidized tips works fast and easy with low temperature. The Tip Activator is environmentally safe and contains no halides, lead, rosin or residue. Regular use will prolong the life time of the tips.<br>Content 43 g. Packaging unit 6 pcs. |



| Order No.     | Model | Description                                                                                                                                                                        |
|---------------|-------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 005 13 030 99 |       | <b>Antiblock Paste</b>                                                                                                                                                             |
|               |       | The Weller Antiblock paste is to prevent screwed in desoldering nozzles (e.g. DS 80) seizing due to oxidation or heat.<br>Regular use will ensure easy tip exchange. Content 10 g. |

| Order No.     | Model | Description                                                                                                                       |
|---------------|-------|-----------------------------------------------------------------------------------------------------------------------------------|
|               |       | <b>Desoldering Wires</b>                                                                                                          |
|               |       | The desoldering wire consists of a copper net with flux F-SW32.<br>The special surface treatment allows efficient solder removal. |
| 005 13 010 99 |       | Desoldering wire 1,6 m coil, width 1,5 mm                                                                                         |
| 005 13 011 99 |       | Desoldering wire 1,6 m coil, width 2 mm                                                                                           |
| 005 13 012 99 |       | Desoldering wire 1,6 m coil, width 2,5 mm                                                                                         |
| 005 13 028 99 |       | Desoldering wire 15 m coil, width 2,5 mm                                                                                          |
| 005 13 026 99 |       | Desoldering wire 30 m coil, width 1,5 mm                                                                                          |
| 005 13 027 99 |       | Desoldering wire 30 m coil, width 2 mm                                                                                            |

| Order No.     | Model | Description                                                                                       |
|---------------|-------|---------------------------------------------------------------------------------------------------|
| 005 13 016 99 |       | <b>Flux Set</b>                                                                                   |
|               |       | Liquid flux with brush, 100 ml, type 1.1.3.A (F-SW32), EN29 454. Remaining flux is not corrosive. |

| Order No.     | Model | Description                                                                                                                                                                                                                                                                                                        |
|---------------|-------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 005 33 525 99 |       | <b>Flux Pen</b>                                                                                                                                                                                                                                                                                                    |
|               |       | For easy and exact application of flux, eliminating the mess from flux bottles. The spring loaded tip dispenses just the right amount of flux to the soldering joint. Body and function like a text marker.<br>Content 10 cm <sup>3</sup> , Halogen-free, not refillable.<br>Flux type 1.1.3.A (F-SW32), EN29 454. |



# Accessory

## Miscellaneous



| Order No. | Model | Description                                                                                                                                                                                                                                                                                  |
|-----------|-------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| SM15748BK |       | <b>Spot-Mask</b><br>The Spot-Mask is a material to protect connectors of PCBs from tinning during the reflow process. For manual rework the Spot-Mask is easily applied and removed. Mechanical fixture after 6 min, hardened after 2 -3 hours by 20°C, 1 hour by 95°C. Stockable 12 months. |

## Insertion and Extraction Tools



| Order No.  | Model          | Description        |
|------------|----------------|--------------------|
| 0054700199 | DIP IC TO      | Insertion tool     |
| 0054700299 | DIP IC 6/8     | Insertion tool     |
| 0054700399 | DIP IC 14/16 I | Insertion tool     |
| 0054700499 | DIP IC 24      | Insertion tool     |
| 0054700599 | DIP IC 40      | Insertion tool     |
| 0054700699 | DIP IC 18/20   | Insertion tool     |
| 0054700799 | DIP IC 28      | Insertion tool     |
| 0054701199 | PUL IC TO      | IC Extraction tool |
| 0054701299 | PUL IC 6/8     | IC Extraction tool |
| 0054701399 | PUL IC 14/20   | IC Extraction tool |
| 0054701499 | PUL IC 24/28   | IC Extraction tool |
| 0054701599 | PUL IC 36-40   | IC Extraction tool |
| 0054702399 | FLIP DIP 14/16 | IC Extraction tool |

## Extension Cords for Soldering Irons



| Order No.     | Description                                                       |
|---------------|-------------------------------------------------------------------|
| 005 32 099 99 | Extension cord 3-wire, 4 m for TCP S, T 3001                      |
| 005 25 098 99 | Extension cord 5-wire, 4 m, up to 50 W, for LR 21, MLR 21, WTA 50 |
| 005 26 098 99 | Extension cord 7-wire, 3 m, up to 80 W, for WMP, WSP 80, LR 82    |

# Accessory

## Safety Rests

Safety rests for all Weller soldering and desoldering tools, complete with sponge.  
See survey "Safety Rests" on page 53

|                                                                                     | Order No.     | Model  | Description                                                                                                                                                                     |
|-------------------------------------------------------------------------------------|---------------|--------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                                                                     | 005 15 010 99 | AK 1   | Safety rest for DS 80 (+ UNC), DSX 80 desoldering iron, LR 21, LR 82 soldering iron, HAP 1 hot air pencil                                                                       |
|    |               |        |                                                                                                                                                                                 |
|    | 005 15 045 99 | AK 10  | Safety rest without sponge for HAP 2 (WHA 2000), HAP 3 (WHA 700)                                                                                                                |
|   | 005 15 030 99 | AK 20  | Safety rest for DS 80 (+ UNC), DSX 80 desoldering iron, FE 50, FE 50M, FE 75, FE 80 soldering iron, LR 21, LR 82, TCP S soldering iron with FE attachment, HAP 1 hot air pencil |
|  | 005 15 012 99 | AK 21  | Safety rest for MPR 30, MPR 80 Peritronic soldering iron, MLR 21FE soldering iron                                                                                               |
|  | 005 15 042 99 | AK 51  | Safety rest for WTA 50 desoldering tweezer                                                                                                                                      |
|  | 005 15 028 99 | AKS    | Safety rest for WSF P5/8 (WSF 81D5/8 solder feeder) wiht                                                                                                                        |
|  | 005 15 043 99 | AKT 30 | Safety rest for HAP 3000 with Stop+Go function                                                                                                                                  |

# Accessory

## Safety Rests

|                                                                                     |                                          |                            |                                                                                                               |
|-------------------------------------------------------------------------------------|------------------------------------------|----------------------------|---------------------------------------------------------------------------------------------------------------|
|    | <b>Order No.</b><br><b>005 15 038 99</b> | <b>Model</b><br><b>AKV</b> | <b>Description</b><br>Safety rest for DSV 80 (+ UNC), DSVT 80, DSXV 80                                        |
|    | <b>005 15 004 99</b>                     | <b>KH 4</b>                | Safety rest for W 61 soldering iron with straight tip                                                         |
|   | <b>005 15 006 99</b>                     | <b>KH 6</b>                | Safety rest for W 101 soldering iron with straight tip                                                        |
|  | <b>005 15 019 99</b>                     | <b>KH 15</b>               | Safety rest for MLR 21 soldering iron                                                                         |
|  | <b>005 15 020 99</b>                     | <b>KH 20</b>               | Safety rest for LR 21, T 3001, TCP S soldering iron, FE 50, FE 50M, FE 75, FE 80 soldering iron               |
|  | <b>005 15 023 99</b>                     | <b>KH 23</b>               | Safety rest for FE 25, FE 50, FE 50M, Fe 75, FE 80 soldering iron                                             |
|  | <b>005 15 033 99</b>                     | <b>KH 25P</b>              | Safety rest for MLR 21, MLR 21FE, MT 1500, MT 1500FE soldering iron, MPR 30, MPR 80 Peritronic soldering iron |

# Accessory

## Safety Rests

|                                                                                     |                                   |                             |                                                                                                                              |
|-------------------------------------------------------------------------------------|-----------------------------------|-----------------------------|------------------------------------------------------------------------------------------------------------------------------|
|    | <b>Order No.</b><br>005 15 027 99 | <b>Model</b><br>KH 27       | <b>Description</b><br>Safety rest for LR 82, WSP 150 soldering iron,<br>HAP 1 hot air pencil                                 |
|    | <b>Order No.</b><br>005 15 076 99 | <b>Model</b><br>KHE         | Basic unit electric (for WFE P) Stop+Go + safety rest<br>with fibre optic sensor for FE 25, FE 50, FE 50M FE 75<br>and FE 80 |
|    | <b>Order No.</b><br>005 15 086 99 | <b>Model</b><br>KHP         | Basic unit pneumatic (for WFE) Stop+Go + safety rest with<br>fibre optic sensor for FE 25, FE 50, FE 50M FE 75 and FE 80     |
|  | <b>Order No.</b><br>005 15 080 99 | <b>Model</b><br>KHE/P       | Second safety rest with fibre optic sensor for extending<br>to 2 workplaces                                                  |
|   | <b>Order No.</b><br>005 15 083 99 | <b>Model</b><br>KHE 80      | Basic unit electric (for WFE P) Stop+Go + safety rest with<br>fibre optic sensor for WSP 80FE                                |
|  | <b>Order No.</b><br>005 15 084 99 | <b>Model</b><br>KHP 80      | Basic unit pneumatic (for WFE) Stop+Go + safety rest with<br>fibre optic sensor for WSP 80FE                                 |
|  | <b>Order No.</b><br>005 15 141 99 | <b>Model</b><br>KHE 80/P 80 | Second safety rest with fibre optic sensor for extending<br>to 2 workplaces                                                  |

# Accessory

## Safety Rests

|    | Order No.     | Model  | Description                                                                                                                                             |
|-------------------------------------------------------------------------------------|---------------|--------|---------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                                                                     | 005 15 052 99 | WDP    | Combi support for dispenser and vacuum pick-up (WMA 3V desoldering station)                                                                             |
|    | 005 15 140 99 | WPH 80 | Safety rest for WSP 80, WSP 80FE soldering iron, MLR 21 with FE attachment                                                                              |
|                                                                                     | WPHM          | WPHM   | Safety rest for WMP soldering iron                                                                                                                      |
|  | WPHT          | WPHT   | Safety rest with Stop+Go function for WSP 80IG inert gas soldering iron, WMP, WSP 80, WSP 80FE soldering iron, MPR 30, MPR 80 Peritronic soldering iron |
|                                                                                     | 005 15 048 99 |        | Stand for HAP 3000, HAP 2, HAP 3 hot air nozzles, for 6 nozzles, facilitates nozzle change                                                              |
|  | 6965A         | 6965A  | Stand for 6966 hot air heat gun                                                                                                                         |

# Alpha-Numerical Index

| Model No. | Page   | Model No.      | Page | Model No.      | Page   | Model No. | Page |
|-----------|--------|----------------|------|----------------|--------|-----------|------|
| 2052 E    | 84, 97 | CT2 G8         | 82   | ET SMD         | 61     | LT 1X     | 66   |
| 3000 ESD  | 84, 97 | CT5 A6         | 80   | ET SMD         | 61     | LT 4      | 66   |
| 3232      | 84, 97 | CT5 A7         | 80   | ET-LT Adapter  | 61     | LT 4X     | 66   |
| 60-01-01  | 73     | CT5 A8         | 80   | F02            | 89     | LT A      | 66   |
| 60-01-02  | 73     | CT5 AX7        | 80   | F04            | 89     | LT AHPB   | 66   |
| 60-01-03  | 73     | CT5 AX8        | 80   | F06            | 89     | LT ALF    | 66   |
| 60-01-04  | 73     | CT5 B7         | 80   | FD2            | 89     | LT ALX    | 66   |
| 60-01-05  | 73     | CT5 B8         | 80   | FD4            | 89     | LT AS     | 66   |
| 60-01-06  | 73     | CT5 BX7        | 80   | FE 50 Set      | 110    | LT ASLF   | 66   |
| 60-01-52  | 73     | CT5 C6         | 80   | FE 50 Set      | 110    | LT AX     | 66   |
| 60-02     | 73     | CT5 C7         | 80   | FE 50M         | 110    | LT AXLF   | 66   |
| 60-07U    | 73     | CT5 C8         | 80   | FE 75          | 110    | LT B      | 66   |
| 60-14     | 73     | CT5 CX7        | 80   | FE 75 Set      | 110    | LT BHPB   | 66   |
| 6957      | 88     | CT5 CX8        | 80   | FE 80          | 110    | LT BLF    | 66   |
| 6958      | 88     | CT5 D7         | 80   | FLIP DIP 14/16 | 129    | LT BB     | 67   |
| 6964      | 88     | CT5 D8         | 80   | FP 7N          | 80     | LT BBLF   | 67   |
| 6965A     | 133    | CT5 DX7        | 80   | HAP 1          | 88     | LT BX     | 66   |
| 6965A     | 133    | CT5 DX8        | 80   | HAP 1          | 88     | LT C      | 66   |
| 6966E     | 88     | CT6 C7         | 81   | HT 1           | 69     | LT CLF    | 66   |
| 70-01-01  | 75     | CT6 C8         | 81   | HT 10          | 69     | LT CC     | 67   |
| 70-01-02  | 76     | CT6 CX7        | 81   | HT 13          | 69     | LT CCLF   | 67   |
| 70-01-03  | 76     | CT6 D7         | 81   | HT 2           | 69     | LT CS     | 66   |
| 70-01-04  | 76     | CT6 D8         | 81   | HT 20          | 69     | LT CSLF   | 66   |
| 70-01-05  | 75     | CT6 DX8        | 81   | HT 20          | 69     | LT D      | 66   |
| 70-01-06  | 76     | CT6 E7         | 81   | HT 29          | 69     | LT DLF    | 66   |
| 70-01-07  | 76     | CT6 E8         | 81   | HT 3           | 69     | LT DDLF   | 67   |
| 70-01-08  | 76     | CT6 EX7        | 81   | HT 40          | 69     | LT F      | 66   |
| 70-01-09  | 76     | D04            | 89   | HT 48          | 69     | LT GW     | 67   |
| 70-01-10  | 75     | D06            | 89   | HT 96          | 69     | LT GWLF   | 67   |
| 70-01-11  | 76     | D08            | 89   | HT BS          | 69     | LT H      | 66   |
| 70-01-12  | 76     | D10            | 89   | HT C           | 69     | LT HHPB   | 66   |
| 70-01-13  | 76     | DIL 16WG       | 79   | HT CS          | 69     | LT HX     | 66   |
| 70-01-14  | 76     | DIL 16WGN      | 80   | HT D           | 69     | LT K      | 66   |
| 70-01-50  | 76     | DIL 24N        | 80   | HT DS          | 69     | LT KNLF   | 67   |
| 70-01-51  | 76     | DIL16WGEC      | 62   | HT E           | 69     | LT L      | 66   |
| 70-01-52  | 76     | DIP IC 14/16 I | 129  | KDS 81056      | 84, 97 | LT LLF    | 66   |
| 70-01-53  | 76     | DIP IC 18/20   | 129  | KH 15          | 131    | LT M      | 66   |
| 70-01-54  | 76     | DIP IC 24      | 129  | KH 20          | 131    | LT MLF    | 66   |
| 70-01-55  | 76     | DIP IC 28      | 129  | KH 23          | 131    | LT MXLF   | 66   |
| 70-07SU   | 76     | DIP IC 40      | 129  | KH 25P         | 131    | LT S      | 67   |
| 70-07TU   | 76     | DIP IC 6/8     | 129  | KH 27          | 132    | LT SMT01  | 67   |
| 71-01-01  | 74     | DIP IC TO      | 129  | KH 4           | 131    | LT SMT02  | 67   |
| 71-01-02  | 74     | DR05           | 91   | KH 6           | 131    | LT SMT03  | 67   |
| 71-01-03  | 74     | DS 7           | 79   | KHE            | 132    | LT SMT04  | 67   |
| 71-01-04  | 74     | DS 7N          | 80   | KHE 80         | 132    | LT SMT05  | 67   |
| 71-01-50  | 74     | DS TON         | 80   | KHE 80/P80     | 132    | LT SMT06  | 67   |
| 71-01-52  | 74     | DS7EC          | 62   | KHE/P          | 132    | LT SMT07  | 67   |
| 71-07U    | 74     | DSX 80         | 98   | KHP            | 132    | LT SMT08  | 67   |
| ABW 2     | 127    | DSXV 80        | 98   | KHP 80         | 132    | LT SMT09  | 67   |
| AK 1      | 130    | DX 112         | 99   | LHT C          | 70     | LT SMT10  | 67   |
| AK 10     | 130    | DX 113         | 99   | LHT D          | 70     | LT SMT11  | 67   |
| AK 20     | 130    | ESF 120ESD     | 123  | LHT D 45°      | 70     | LT SMT12  | 67   |
| AK 21     | 130    | ET A           | 61   | LHT DX         | 70     | LT SMT13  | 67   |
| AK 51     | 130    | ET B           | 61   | LHT E          | 70     | LT SMT14  | 67   |
| AKS       | 130    | ET C           | 61   | LHT EX         | 70     | LT SMT15  | 67   |
| AKT 30    | 130    | ET D           | 61   | LHT F          | 70     | LT SMT16  | 67   |
| AKV       | 131    | ET E           | 61   | LHT FX         | 70     | LT SMT17  | 67   |
| CT2 E7    | 82     | ET GW          | 61   | LR 21          | 61     | LT SMT18  | 67   |
| CT2 E8    | 82     | ET H           | 61   | LR 21          | 61     | LT SMT19  | 67   |
| CT2 EX7   | 82     | ET K           | 61   | LR 82          | 68     | LT SMT20  | 67   |
| CT2 EX8   | 82     | ET L           | 61   | LR 82          | 68     | LT SMT21  | 67   |
| CT2 F7    | 82     | ET M           | 61   | LT 1           | 66     | LT SMT22  | 67   |
| CT2 F8    | 82     | ET O           | 61   | LT 1L          | 67     | LTR A     | 68   |
| CT2 FX7   | 82     | ET P           | 61   | LT 1LX         | 67     | LTR B     | 68   |
| CT2 FX8   | 82     | ET R           | 61   | LT 1S          | 66     | LTR B     | 68   |
| CT2 G7    | 82     | ET S           | 61   | LT 1SLX        | 66     | LTR C     | 68   |

# Alpha-Numerical Index

| Model No.        | Page | Model No.      | Page | Model No.           | Page | Model No.       | Page |
|------------------|------|----------------|------|---------------------|------|-----------------|------|
| MLR 21 .....     | 60   | NT C .....     | 63   | PT F7 .....         | 78   | SK460A .....    | 92   |
| MPR 80 .....     | 65   | NT D .....     | 63   | PT F8 .....         | 78   | SK709 .....     | 90   |
| MPR 80 .....     | 65   | NT GW .....    | 63   | PT H6 .....         | 77   | SK769A .....    | 90   |
| MT 1 .....       | 60   | NT H .....     | 63   | PT H7 .....         | 77   | SM15 748 .....  | 129  |
| MT 15 .....      | 60   | NT K .....     | 63   | PT H8 .....         | 77   | SMT0504A .....  | 62   |
| MT 202 .....     | 71   | NT MS .....    | 63   | PT K6 .....         | 78   | SMT0504A .....  | 68   |
| MT 203 .....     | 71   | NT SMT01 ..... | 64   | PT K7 .....         | 78   | SMT0805B .....  | 62   |
| MT 211 .....     | 71   | NT SMT02 ..... | 64   | PT K8 .....         | 78   | SMT0805B .....  | 68   |
| MT 212 .....     | 71   | NT SMT03 ..... | 64   | PT L6 .....         | 78   | SMT1206D .....  | 62   |
| MT 301 .....     | 71   | NT SMT04 ..... | 64   | PT L7 .....         | 78   | SMT1206D .....  | 68   |
| MT 302 .....     | 71   | NT SMT05 ..... | 64   | PT L8 .....         | 78   | SMT23I .....    | 68   |
| MT 4 .....       | 60   | NT SMT06 ..... | 64   | PT M7 .....         | 78   | SMT23J .....    | 62   |
| MT 6 .....       | 60   | NT SMT07 ..... | 64   | PT M8 .....         | 78   | SMT8K .....     | 62   |
| MT 601 .....     | 71   | NT SMT08 ..... | 64   | PT M9 .....         | 78   | SMT8K .....     | 68   |
| MT 602 .....     | 71   | NT SMT09 ..... | 64   | PT MX7 .....        | 78   | SMTA .....      | 62   |
| MT 603 .....     | 71   | NT SMT10 ..... | 64   | PT O6 .....         | 78   | SPI 16 .....    | 82   |
| MT 604 .....     | 71   | NT SMT11 ..... | 64   | PT O7 .....         | 78   | SPI 27 .....    | 83   |
| MT 605 .....     | 71   | NT SMT12 ..... | 64   | PT O8 .....         | 78   | SPI 41 .....    | 83   |
| MT 606 .....     | 71   | NT SMT13 ..... | 64   | PT P7 .....         | 78   | SPI 81 .....    | 83   |
| MT 607 .....     | 71   | NT SMT14 ..... | 64   | PT P8 .....         | 78   | SPI15 210 ..... | 82   |
| MT 608 .....     | 71   | NT SMT15 ..... | 64   | PT R7 .....         | 77   | SPI15 211 ..... | 82   |
| MT 609 .....     | 71   | NT SMT16 ..... | 64   | PT R8 .....         | 77   | SPI15 212 ..... | 82   |
| MT 610 .....     | 71   | NT SMT17 ..... | 64   | PT S7 .....         | 78   | SPI15 213 ..... | 82   |
| MT 613 .....     | 71   | NT SMT18 ..... | 64   | PT S8 .....         | 78   | SPI26 200 ..... | 83   |
| MT 614 .....     | 71   | NT SMT19 ..... | 64   | PT5-LT .....        | 79   | SPI26 201 ..... | 83   |
| MT 619 .....     | 71   | NT SMT20 ..... | 64   | PT6-LT .....        | 79   | SPI26 206 ..... | 83   |
| MT 621 .....     | 71   | NT SMT21 ..... | 64   | PT7-LT .....        | 79   | SPI40 224 ..... | 83   |
| MT A .....       | 60   | NT SMT22 ..... | 64   | PT8-LT .....        | 79   | SPI40 220 ..... | 83   |
| MT B .....       | 60   | P 51 .....     | 59   | PT9-LT .....        | 79   | SPI40 222 ..... | 83   |
| MT GW .....      | 60   | PS 1001A ..... | 126  | PU 51 .....         | 54   | SPI40 225 ..... | 83   |
| MT H .....       | 60   | PS 100A .....  | 126  | PU 81 .....         | 54   | SPI40 226 ..... | 83   |
| MT HX .....      | 60   | PS 2001 .....  | 126  | PUAD 101 .....      | 84   | SPI80 230 ..... | 83   |
| NA 20 .....      | 93   | PS 2001A ..... | 126  | PUD 151 .....       | 57   | SPI80 231 ..... | 83   |
| ND 10 .....      | 91   | PS 200A .....  | 126  | PUD 161 .....       | 56   | SPI80 232 ..... | 83   |
| ND 15 .....      | 91   | PS 3001A ..... | 126  | PUD 81 .....        | 55   | SPI80 234 ..... | 83   |
| ND 20 .....      | 91   | PT A6 .....    | 77   | PUD 81R .....       | 59   | SPI80 235 ..... | 83   |
| ND SK535/A ..... | 91   | PT A7 .....    | 77   | PUDD 161V .....     | 95   | SPI80 237 ..... | 83   |
| ND SK535/B ..... | 91   | PT A8 .....    | 77   | PUDD 81V .....      | 94   | TCP 12 .....    | 77   |
| ND SK535/C ..... | 91   | PT AA7 .....   | 78   | PUL IC 14/20 .....  | 129  | TCP 24 .....    | 77   |
| ND SK699 .....   | 91   | PT AA8 .....   | 78   | PUL IC 24/28 .....  | 129  | TCPS .....      | 77   |
| ND05 .....       | 91   | PT AA9 .....   | 78   | PUL IC 36-40 .....  | 129  | W 101 .....     | 81   |
| NQ05 .....       | 92   | PT B5 .....    | 77   | PUL IC 6/8 .....    | 129  | W 101H .....    | 124  |
| NQ10 .....       | 92   | PT B6 .....    | 77   | PUL IC TO .....     | 129  | W 101SP .....   | 81   |
| NQ15 .....       | 92   | PT B7 .....    | 77   | Pyropen .....       | 75   | W 201 .....     | 82   |
| NQ20 .....       | 92   | PT B8 .....    | 77   | Pyropen Jr. ....    | 73   | W 61 .....      | 80   |
| NQ25 .....       | 92   | PT B9 .....    | 77   | Pyropen Piezo ..... | 75   | WAD 101 .....   | 84   |
| NQ30 .....       | 92   | PT BB7 .....   | 78   | Q02 .....           | 90   | WAM 3000 .....  | 107  |
| NQ35 .....       | 92   | PT BB8 .....   | 78   | Q04 .....           | 90   | WBH 3000 .....  | 123  |
| NQ40 .....       | 92   | PT BB9 .....   | 78   | Q06 .....           | 90   | WBH 3000S ..... | 123  |
| NQ45 .....       | 92   | PT C7 .....    | 77   | Q08 .....           | 90   | WC 100 .....    | 72   |
| NQ50 .....       | 92   | PT C8 .....    | 77   | Q10 .....           | 90   | WC 100 .....    | 72   |
| NQ55 .....       | 92   | PT C9 .....    | 77   | R 04 .....          | 89   | WC 111 .....    | 72   |
| NQT 10 .....     | 93   | PT CC7 .....   | 78   | R01 .....           | 90   | WC 112 .....    | 72   |
| NQT25 .....      | 93   | PT CC8 .....   | 78   | R02 .....           | 89   | WC 113 .....    | 72   |
| NR02 .....       | 91   | PT CC9 .....   | 78   | R06 .....           | 89   | WCB 2 .....     | 121  |
| NR04 .....       | 91   | PT CS7 .....   | 78   | R08 .....           | 89   | WDD 161V .....  | 95   |
| NR05 .....       | 91   | PT D7 .....    | 77   | R10 .....           | 89   | WDD 81V .....   | 94   |
| NR10 .....       | 91   | PT D8 .....    | 77   | RB 14/16 .....      | 129  | WDD 81VIL ..... | 94   |
| NT 1 .....       | 63   | PT D9 .....    | 77   | RB 18/20 .....      | 129  | WDP .....       | 133  |
| NT 1S .....      | 63   | PT DD7 .....   | 78   | RB 24/28 .....      | 129  | WFAF 50 .....   | 117  |
| NT 1X .....      | 63   | PT DD8 .....   | 78   | RB 36/40 .....      | 129  | WFAN 50 .....   | 117  |
| NT 4 .....       | 63   | PT DD9 .....   | 78   | RBS 7 .....         | 76   | WFCC 50 .....   | 118  |
| NT 6 .....       | 63   | PT DS7 .....   | 78   | SA 21 A .....       | 126  | WFDD 50 .....   | 118  |
| NT A .....       | 63   | PT E7 .....    | 77   | SA 21A1 .....       | 126  | WFE .....       | 108  |
| NT AX .....      | 63   | PT E8 .....    | 77   | SD 1000 .....       | 127  | WFE 20D .....   | 109  |
| NT B .....       | 63   | PT E9 .....    | 77   | SK1119B .....       | 93   | WFE 2Kit1 ..... | 114  |

# Alpha-Numerical Index

| Model No.         | Page   |
|-------------------|--------|
| WFE 2Kit2 .....   | 115    |
| WFE 2S .....      | 114    |
| WFE 4S .....      | 116    |
| WFE P .....       | 108    |
| WFFMP 50 .....    | 118    |
| WFTB 50 .....     | 118    |
| WHA 300 .....     | 86     |
| WHA 3000P .....   | 87     |
| WHA 3000V .....   | 86     |
| WHP 300 .....     | 122    |
| WHP 3000 .....    | 122    |
| WHP 80 .....      | 122    |
| WMA 3V .....      | 84, 97 |
| WMD 1A .....      | 85     |
| WMD 1D .....      | 95     |
| WMD 1S .....      | 85, 95 |
| WMD 3 .....       | 85, 96 |
| WMD 3K .....      | 85, 96 |
| WMP .....         | 63     |
| WMPT .....        | 63     |
| WP 60 .....       | 73     |
| WP 60K .....      | 73     |
| WPH 80 .....      | 133    |
| WPHM .....        | 133    |
| WPHT .....        | 133    |
| WPT-01 .....      | 74     |
| WPT-02 .....      | 74     |
| WPT-04 .....      | 74     |
| WQB 3000 .....    | 103    |
| WQB 3000OPS ..... | 102    |
| WS 150 .....      | 70     |
| WS 51 .....       | 54     |
| WS 81 .....       | 54     |
| WSB 150 .....     | 124    |
| WSB 80 .....      | 124    |
| WSD 151 .....     | 57     |
| WSD 161 .....     | 56     |
| WSD 81 .....      | 55     |
| WSF 2 .....       | 58     |
| WSF 81D5 .....    | 58     |
| WSF 81D8 .....    | 58     |
| WSFP 5 .....      | 58     |
| WSFP 8 .....      | 58     |
| WSL .....         | 55     |
| WSL 2 .....       | 57     |
| WSLT .....        | 56     |
| WSP 150 .....     | 70     |
| WSP 80 .....      | 65     |
| WSP 80FE .....    | 110    |
| WSP 80IG .....    | 65     |
| WST 20 .....      | 125    |
| WST 82 .....      | 125    |
| WSTA 6 .....      | 74     |
| WTA 1 .....       | 72     |
| WTA 11 .....      | 72     |
| WTA 12 .....      | 72     |
| WTA 1S .....      | 72     |
| WTA 2 .....       | 72     |
| WTA 3 .....       | 72     |
| WTA 4 .....       | 72     |
| WTA 5 .....       | 72     |
| WTA 50 .....      | 72     |
| WTCP 51 .....     | 59     |
| WTT 1 .....       | 121    |

# Numerical Index

| Order No.          | Page | Order No.          | Page | Order No.          | Page | Order No.          | Page |
|--------------------|------|--------------------|------|--------------------|------|--------------------|------|
| 005 10 001 99..... | 77   | 005 13 190 99..... | 98   | 005 16 010 99..... | 72   | 005 16 228 00..... | 164  |
| 005 10 053 99..... | 77   | 005 13 197 99..... | 98   | 005 16 021 99..... | 72   | 005 16 233 00..... | 164  |
| 005 10 112 99..... | 164  | 005 13 435 99..... | 164  | 005 16 059 99..... | 75   | 005 16 237 00..... | 164  |
| 005 10 113 99..... | 164  | 005 13 444 99..... | 164  | 005 16 060 99..... | 75   | 005 16 252 00..... | 164  |
| 005 10 121 99..... | 164  | 005 13 500 99..... | 127  | 005 16 075 99..... | 73   | 005 16 275 99..... | 164  |
| 005 10 201 99..... | 164  | 005 13 500 99..... | 127  | 005 16 077 99..... | 73   | 005 16 280 99..... | 164  |
| 005 10 203 99..... | 164  | 005 13 500 99..... | 127  | 005 16 087 99..... | 73   | 005 16 281 99..... | 75   |
| 005 10 311 99..... | 164  | 005 13 500 99..... | 127  | 005 16 100 99..... | 72   | 005 16 281 99..... | 75   |
| 005 10 424 99..... | 164  | 005 13 500 99..... | 127  | 005 16 101 99..... | 72   | 005 16 443 99..... | 73   |
| 005 10 425 99..... | 164  | 005 13 500 99..... | 127  | 005 16 102 99..... | 72   | 005 16 444 99..... | 73   |
| 005 10 426 01..... | 164  | 005 13 500 99..... | 127  | 005 16 120 99..... | 75   | 005 16 445 99..... | 73   |
| 005 10 426 99..... | 164  | 005 13 500 99..... | 127  | 005 16 121 99..... | 76   | 005 16 446 99..... | 73   |
| 005 10 427 98..... | 164  | 005 13 500 99..... | 127  | 005 16 122 99..... | 76   | 005 16 447 99..... | 73   |
| 005 10 428 01..... | 164  | 005 13 500 99..... | 127  | 005 16 123 99..... | 76   | 005 16 448 99..... | 73   |
| 005 10 428 99..... | 164  | 005 13 501 99..... | 127  | 005 16 124 99..... | 75   | 005 16 449 99..... | 73   |
| 005 10 520 99..... | 164  | 005 13 501 99..... | 127  | 005 16 125 99..... | 76   | 005 16 450 99..... | 73   |
| 005 10 660 99..... | 164  | 005 13 502 99..... | 127  | 005 16 126 99..... | 76   | 005 16 517 99..... | 82   |
| 005 11 300 99..... | 164  | 005 13 503 99..... | 127  | 005 16 127 99..... | 76   | 005 20 014 99..... | 164  |
| 005 11 301 99..... | 164  | 005 13 504 99..... | 127  | 005 16 128 99..... | 76   | 005 21 413 99..... | 164  |
| 005 11 302 99..... | 164  | 005 13 520 99..... | 164  | 005 16 129 99..... | 75   | 005 21 610 99..... | 164  |
| 005 11 342 99..... | 164  | 005 13 522 99..... | 164  | 005 16 130 99..... | 76   | 005 22 414 99..... | 164  |
| 005 11 343 99..... | 164  | 005 13 603 99..... | 164  | 005 16 131 99..... | 76   | 005 22 419 01..... | 164  |
| 005 11 344 99..... | 164  | 005 13 604 99..... | 164  | 005 16 132 99..... | 76   | 005 22 419 99..... | 164  |
| 005 11 622 99..... | 164  | 005 13 605 99..... | 164  | 005 16 133 99..... | 76   | 005 24 110 99..... | 164  |
| 005 11 631 00..... | 164  | 005 13 610 99..... | 164  | 005 16 134 99..... | 73   | 005 24 119 99..... | 164  |
| 005 11 632 99..... | 164  | 005 13 612 99..... | 164  | 005 16 135 99..... | 73   | 005 24 122 99..... | 164  |
| 005 11 634 99..... | 164  | 005 13 613 99..... | 164  | 005 16 140 99..... | 76   | 005 24 501 99..... | 164  |
| 005 11 706 99..... | 124  | 005 13 616 99..... | 164  | 005 16 141 99..... | 76   | 005 24 750 99..... | 61   |
| 005 11 707 99..... | 124  | 005 13 631 99..... | 164  | 005 16 142 99..... | 76   | 005 25 030 99..... | 125  |
| 005 11 708 99..... | 124  | 005 13 703 99..... | 164  | 005 16 143 99..... | 76   | 005 25 031 99..... | 125  |
| 005 11 709 99..... | 124  | 005 13 737 99..... | 164  | 005 16 150 99..... | 76   | 005 25 098 99..... | 129  |
| 005 11 767 99..... | 81   | 005 13 804 99..... | 62   | 005 16 151 99..... | 76   | 005 25 106 99..... | 61   |
| 005 13 010 99..... | 128  | 005 13 804 99..... | 79   | 005 16 152 99..... | 164  | 005 25 113 98..... | 164  |
| 005 13 011 99..... | 128  | 005 13 804 99..... | 80   | 005 16 153 99..... | 164  | 005 25 125 99..... | 111  |
| 005 13 012 99..... | 128  | 005 13 822 99..... | 128  | 005 16 154 99..... | 164  | 005 25 153 99..... | 110  |
| 005 13 013 99..... | 127  | 005 13 832 99..... | 128  | 005 16 155 99..... | 164  | 005 25 407 99..... | 164  |
| 005 13 016 99..... | 128  | 005 15 004 99..... | 131  | 005 16 156 99..... | 75   | 005 25 409 99..... | 110  |
| 005 13 017 99..... | 127  | 005 15 006 99..... | 131  | 005 16 157 99..... | 164  | 005 25 410 00..... | 111  |
| 005 13 026 99..... | 128  | 005 15 010 99..... | 130  | 005 16 158 99..... | 76   | 005 25 410 99..... | 164  |
| 005 13 027 99..... | 128  | 005 15 012 99..... | 130  | 005 16 159 99..... | 76   | 005 25 411 99..... | 164  |
| 005 13 028 99..... | 128  | 005 15 019 99..... | 131  | 005 16 160 99..... | 76   | 005 25 413 99..... | 164  |
| 005 13 030 99..... | 128  | 005 15 020 99..... | 131  | 005 16 161 99..... | 74   | 005 25 414 99..... | 164  |
| 005 13 030 99..... | 128  | 005 15 023 99..... | 131  | 005 16 165 99..... | 74   | 005 25 425 99..... | 164  |
| 005 13 030 99..... | 128  | 005 15 024 99..... | 164  | 005 16 166 99..... | 74   | 005 26 098 99..... | 129  |
| 005 13 031 99..... | 128  | 005 15 026 99..... | 123  | 005 16 167 99..... | 74   | 005 26 152 99..... | 68   |
| 005 13 040 99..... | 79   | 005 15 027 99..... | 132  | 005 16 168 99..... | 74   | 005 26 162 99..... | 110  |
| 005 13 041 99..... | 80   | 005 15 028 99..... | 131  | 005 16 169 99..... | 74   | 005 26 201 99..... | 164  |
| 005 13 042 99..... | 62   | 005 15 030 99..... | 130  | 005 16 170 99..... | 164  | 005 26 202 99..... | 164  |
| 005 13 106 99..... | 164  | 005 15 033 99..... | 131  | 005 16 172 99..... | 74   | 005 26 203 99..... | 165  |
| 005 13 111 99..... | 164  | 005 15 038 99..... | 131  | 005 16 173 99..... | 164  | 005 26 204 99..... | 165  |
| 005 13 115 99..... | 164  | 005 15 042 99..... | 130  | 005 16 176 99..... | 164  | 005 26 410 99..... | 165  |
| 005 13 118 99..... | 164  | 005 15 043 99..... | 130  | 005 16 177 99..... | 164  | 005 26 701 99..... | 165  |
| 005 13 120 99..... |      | 005 15 045 99..... | 130  | 005 16 178 00..... | 164  | 005 26 706 99..... | 165  |
| 005 13 120 99..... | 58   | 005 15 048 99..... | 87   | 005 16 179 00..... | 164  | 005 26 713 99..... | 165  |
| 005 13 120 99..... | 84   | 005 15 049 99..... | 87   | 005 16 180 00..... | 164  | 005 26 721 99..... | 165  |
| 005 13 120 99..... | 84   | 005 15 052 99..... | 133  | 005 16 191 99..... | 164  | 005 27 028 99..... | 122  |
| 005 13 120 99..... | 96   | 005 15 065 99..... | 111  | 005 16 192 99..... | 164  | 005 27 040 99..... | 124  |
| 005 13 120 99..... | 96   | 005 15 066 99..... | 111  | 005 16 193 99..... | 164  | 005 27 042 99..... | 124  |
| 005 13 120 99..... | 164  | 005 15 076 99..... | 132  | 005 16 195 99..... | 164  | 005 27 096 99..... | 165  |
| 005 13 124 99..... | 164  | 005 15 080 99..... | 132  | 005 16 196 99..... | 164  | 005 27 110 99..... | 165  |
| 005 13 125 99..... | 111  | 005 15 083 99..... | 132  | 005 16 198 99..... | 164  | 005 27 115 99..... | 88   |
| 005 13 130 99..... | 164  | 005 15 084 99..... | 132  | 005 16 212 00..... | 164  | 005 28 110 99..... | 165  |
| 005 13 142 00..... | 99   | 005 15 086 99..... | 132  | 005 16 217 00..... | 164  | 005 28 111 99..... | 165  |
| 005 13 143 00..... | 99   | 005 15 140 99..... | 133  | 005 16 218 00..... | 164  | 005 28 116 99..... | 58   |
| 005 13 171 99..... | 72   | 005 15 141 99..... | 132  | 005 16 219 00..... | 164  | 005 28 120 99..... | 165  |
| 005 13 176 99..... | 164  | 005 16 002 99..... | 72   | 005 16 227 00..... | 164  | 005 28 121 99..... | 58   |

# Numerical Index

| Order No.          | Page               | Order No.          | Page   | Order No.          | Page | Order No.          | Page |
|--------------------|--------------------|--------------------|--------|--------------------|------|--------------------|------|
| 005 28 122 99..... | 165                | 005 33 135 99..... | 70     | 005 36 415 99..... | 113  | 005 44 180 99..... | 69   |
| 005 28 126 99..... | 111                | 005 33 136 99..... | 165    | 005 36 421 99..... | 108  | 005 44 181 99..... | 69   |
| 005 28 190 99..... | 65                 | 005 33 150 99..... | 110    | 005 36 436 99..... | 114  | 005 44 181 99..... | 69   |
| 005 28 206 99..... | 58                 | 005 33 151 99..... | 110    | 005 36 446 99..... | 115  | 005 44 183 99..... | 69   |
| 005 28 222 99..... | 58                 | 005 33 155 99..... | 63     | 005 36 456 99..... | 115  | 005 44 186 99..... | 69   |
| 005 28 226 99..... | 58                 | 005 33 157 99..... | 63     | 005 36 466 99..... | 114  | 005 44 187 99..... | 69   |
| 005 28 706 99..... | 165                | 005 33 158 99..... | 65     | 005 36 476 99..... | 109  | 005 44 190 99..... | 69   |
| 005 28 707 99..... | 165                | 005 33 160 99..... | 122    | 005 36 486 99..... | 115  | 005 44 192 99..... | 69   |
| 005 29 101 99..... | 60                 | 005 33 161 99..... | 122    | 005 36 496 99..... | 116  | 005 44 260 99..... | 69   |
| 005 29 109 99..... | 121                | 005 33 162 99..... | 123    | 005 41 039 99..... | 61   | 005 44 261 99..... | 69   |
| 005 29 113 99..... | 165                | 005 33 163 99..... | 123    | 005 41 040 99..... | 61   | 005 44 262 99..... | 69   |
| 005 29 127 99..... | 111                | 005 33 216 99..... | 86     | 005 41 045 99..... | 61   | 005 44 263 99..... | 69   |
| 005 29 161 99..... | 65                 | 005 33 271 99..... | 165    | 005 41 307 99..... | 78   | 005 44 264 99..... | 69   |
| 005 29 162 99..... | 110                | 005 33 272 99..... | 107    | 005 41 727 99..... | 129  | 005 44 265 99..... | 69   |
| 005 29 163 99..... | 65                 | 005 33 273 99..... | 165    | 005 41 728 99..... | 129  | 005 44 266 99..... | 69   |
| 005 29 166 99..... | 110                | 005 33 274 99..... | 107    | 005 41 729 99..... | 129  | 005 44 267 99..... | 69   |
| 005 29 167 99..... | 111                | 005 33 275 99..... | 165    | 005 41 730 99..... | 129  | 005 44 268 99..... | 69   |
| 005 29 170 99..... | 70                 | 005 33 284 99..... | 85, 95 | 005 41 734 99..... | 79   | 005 44 269 99..... | 69   |
| 005 30 060 99..... | 70                 | 005 33 306 99..... | 85     | 005 41 735 99..... | 80   | 005 44 270 99..... | 69   |
| 005 31 180 99..... | 121                | 005 33 326 99..... | 95     | 005 41 736 99..... | 80   | 005 44 404 00..... | 66   |
| 005 31 184 99..... | 121                | 005 33 346 99..... | 87     | 005 41 744 99..... | 62   | 005 44 405 00..... | 66   |
| 005 31 190 99..... | 87, 103, 121, 122  | 005 33 366 99..... | 86     | 005 41 761 99..... | 80   | 005 44 406 99..... | 67   |
| 005 31 191 99..... | 103, 120, 121, 122 | 005 33 386 99..... | 122    | 005 41 762 99..... | 80   | 005 44 407 00..... | 66   |
| 005 31 246 99..... | 121                | 005 33 396 99..... | 107    | 005 42 107 99..... | 80   | 005 44 408 00..... | 66   |
| 005 31 266 99..... | 165                | 005 33 506 99..... | 103    | 005 42 108 99..... | 80   | 005 44 409 99..... | 66   |
| 005 32 098 99..... | 165                | 005 33 516 99..... | 102    | 005 42 117 99..... | 80   | 005 44 410 00..... | 67   |
| 005 32 099 99..... | 129                | 005 33 525 99..... | 128    | 005 42 127 99..... | 80   | 005 44 411 00..... | 66   |
| 005 32 105 99..... | 77                 | 005 33 533 99..... | 165    | 005 42 128 99..... | 80   | 005 44 414 00..... | 66   |
| 005 32 152 99..... | 110                | 005 33 534 99..... | 165    | 005 42 137 99..... | 80   | 005 44 415 00..... | 66   |
| 005 32 206 99..... | 59                 | 005 33 535 99..... | 165    | 005 42 138 99..... | 80   | 005 44 416 00..... | 67   |
| 005 32 226 99..... | 59                 | 005 33 536 99..... | 165    | 005 42 307 99..... | 81   | 005 44 417 99..... | 68   |
| 005 32 306 99..... | 54                 | 005 33 646 99..... | 122    | 005 42 318 99..... | 81   | 005 44 420 99..... | 66   |
| 005 32 326 99..... | 54                 | 005 36 043 99..... | 165    | 005 42 327 99..... | 81   | 005 44 422 71..... | 68   |
| 005 32 506 99..... | 54                 | 005 36 045 99..... | 165    | 005 42 407 99..... | 82   | 005 44 422 99..... | 68   |
| 005 32 526 99..... | 54                 | 005 36 060 99..... | 165    | 005 42 408 99..... | 82   | 005 44 423 99..... | 67   |
| 005 32 546 99..... | 94                 | 005 36 144 99..... | 165    | 005 42 417 99..... | 82   | 005 44 424 99..... | 67   |
| 005 32 566 99..... | 94                 | 005 36 153 99..... | 165    | 005 42 418 99..... | 82   | 005 44 425 99..... | 66   |
| 005 32 586 99..... | 94                 | 005 36 154 99..... | 165    | 005 42 427 99..... | 82   | 005 44 426 99..... | 66   |
| 005 32 606 99..... | 55                 | 005 36 155 99..... | 165    | 005 42 428 99..... | 82   | 005 44 427 00..... | 66   |
| 005 32 624 99..... | 55                 | 005 36 164 99..... | 165    | 005 42 507 99..... | 82   | 005 44 428 00..... | 66   |
| 005 32 646 99..... | 59                 | 005 36 256 99..... | 116    | 005 42 508 99..... | 82   | 005 44 430 99..... | 66   |
| 005 32 666 99..... | 84                 | 005 36 266 99..... | 114    | 005 42 518 99..... | 82   | 005 44 431 99..... | 66   |
| 005 32 686 99..... | 84                 | 005 36 316 99..... | 113    | 005 43 200 00..... | 165  | 005 44 432 99..... | 66   |
| 005 32 706 99..... | 56                 | 005 36 319 99..... | 119    | 005 43 201 00..... | 165  | 005 44 433 99..... | 68   |
| 005 32 724 99..... | 56                 | 005 36 321 99..... | 119    | 005 43 202 00..... | 165  | 005 44 435 99..... | 66   |
| 005 32 754 99..... | 107                | 005 36 322 99..... | 119    | 005 43 203 00..... | 165  | 005 44 436 99..... | 66   |
| 005 32 766 99..... | 57                 | 005 36 323 99..... | 119    | 005 44 101 99..... | 60   | 005 44 437 99..... | 66   |
| 005 32 784 99..... | 57                 | 005 36 324 99..... | 119    | 005 44 104 99..... | 60   | 005 44 438 00..... | 66   |
| 005 32 806 99..... | 95                 | 005 36 326 99..... | 113    | 005 44 105 99..... | 60   | 005 44 439 99..... | 66   |
| 005 32 826 99..... | 55                 | 005 36 329 99..... | 119    | 005 44 106 99..... | 60   | 005 44 440 00..... | 66   |
| 005 32 846 99..... | 57                 | 005 36 338 99..... | 113    | 005 44 110 99..... | 60   | 005 44 441 99..... | 68   |
| 005 32 866 99..... | 56                 | 005 36 343 99..... | 113    | 005 44 111 99..... | 60   | 005 44 442 00..... | 66   |
| 005 32 886 99..... | 95                 | 005 36 344 99..... | 119    | 005 44 112 99..... | 60   | 005 44 443 00..... | 66   |
| 005 33 026 75..... | 85, 96             | 005 36 352 99..... | 111    | 005 44 113 99..... | 60   | 005 44 444 00..... | 67   |
| 005 33 026 99..... | 85, 96             | 005 36 370 99..... | 118    | 005 44 114 99..... | 60   | 005 44 445 00..... | 67   |
| 005 33 066 72..... | 122                | 005 36 371 99..... | 118    | 005 44 119 99..... | 60   | 005 44 446 00..... | 66   |
| 005 33 066 99..... | 122                | 005 36 372 99..... | 117    | 005 44 121 99..... | 60   | 005 44 447 00..... | 66   |
| 005 33 086 99..... | 84, 97             | 005 36 374 99..... | 117    | 005 44 141 99..... | 72   | 005 44 448 00..... | 66   |
| 005 33 112 99..... | 61                 | 005 36 378 99..... | 118    | 005 44 143 99..... | 72   | 005 44 449 99..... | 67   |
| 005 33 113 99..... | 68                 | 005 36 379 99..... | 118    | 005 44 144 99..... | 72   | 005 44 450 99..... | 70   |
| 005 33 114 99..... | 88                 | 005 36 380 99..... | 118    | 005 44 145 99..... | 72   | 005 44 451 99..... | 70   |
| 005 33 125 99..... | 65                 | 005 36 386 99..... | 108    | 005 44 146 99..... | 72   | 005 44 452 99..... | 70   |
| 005 33 126 99..... | 165                | 005 36 402 99..... | 108    | 005 44 147 99..... | 72   | 005 44 453 99..... | 70   |
| 005 33 128 99..... | 165                | 005 36 407 99..... | 108    | 005 44 149 99..... | 72   | 005 44 454 00..... | 70   |
| 005 33 131 99..... | 65                 | 005 36 410 99..... | 108    | 005 44 152 99..... | 72   | 005 44 455 99..... | 70   |
| 005 33 133 99..... | 72                 | 005 36 414 00..... | 113    | 005 44 153 99..... | 72   | 005 44 456 00..... | 70   |

# Numerical Index

| Order No.          | Page | Order No.          | Page | Order No.          | Page | Order No.          | Page     |
|--------------------|------|--------------------|------|--------------------|------|--------------------|----------|
| 005 44 460 00..... | 70   | 005 87 039 22..... | 165  | 005 87 277 78..... | 90   | 005 87 328 85..... | 166      |
| 005 44 461 00..... | 70   | 005 87 060 43..... | 127  | 005 87 277 79..... | 89   | 005 87 337 64..... | 166      |
| 005 44 462 00..... | 70   | 005 87 067 82..... | 165  | 005 87 277 80..... | 90   | 005 87 337 66..... | 166      |
| 005 44 469 00..... | 66   | 005 87 067 83..... | 165  | 005 87 277 81..... | 89   | 005 87 337 67..... | 166      |
| 005 44 470 00..... | 66   | 005 87 067 84..... | 165  | 005 87 277 82..... | 89   | 005 87 337 75..... | 166      |
| 005 44 471 00..... | 66   | 005 87 067 85..... | 165  | 005 87 277 83..... | 90   | 005 87 353 13..... | 117      |
| 005 44 472 00..... | 67   | 005 87 067 92..... | 165  | 005 87 277 84..... | 89   | 005 87 353 27..... | 117      |
| 005 44 473 00..... | 67   | 005 87 067 94..... | 165  | 005 87 277 85..... | 90   | 005 87 354 13..... | 120      |
| 005 44 474 00..... | 66   | 005 87 110 06..... | 165  | 005 87 277 86..... | 89   | 005 87 357 42..... | 166      |
| 005 44 475 00..... | 67   | 005 87 117 18..... | 165  | 005 87 277 87..... | 89   | 005 87 357 49..... | 166      |
| 005 44 476 00..... | 66   | 005 87 117 19..... | 165  | 005 87 278 08..... | 90   | 005 87 357 55..... | 166      |
| 005 44 477 00..... | 66   | 005 87 117 20..... | 165  | 005 87 278 12..... | 90   | 005 87 357 57..... | 109      |
| 005 44 478 00..... | 67   | 005 87 117 22..... | 165  | 005 87 278 16..... | 90   | 005 87 357 57..... | 166      |
| 005 44 479 00..... | 67   | 005 87 137 98..... | 103  | 005 87 278 21..... | 89   | 005 87 357 60..... | 166      |
| 005 44 480 00..... | 66   | 005 87 137 99..... | 103  | 005 87 278 22..... | 89   | 005 87 357 61..... | 166      |
| 005 47 001 99..... | 129  | 005 87 167 01..... | 165  | 005 87 278 23..... | 89   | 005 87 358 22..... | 166      |
| 005 47 002 99..... | 129  | 005 87 167 40..... | 165  | 005 87 278 24..... | 165  | 005 87 358 31..... | 117      |
| 005 47 003 99..... | 129  | 005 87 167 41..... | 165  | 005 87 278 27..... | 165  | 005 87 358 32..... | 117      |
| 005 47 004 99..... | 129  | 005 87 167 43..... | 165  | 005 87 278 28..... | 165  | 005 87 358 33..... | 117      |
| 005 47 005 99..... | 129  | 005 87 167 48..... | 165  | 005 87 287 56..... | 165  | 005 87 358 35..... | 116      |
| 005 47 006 99..... | 129  | 005 87 167 63..... | 165  | 005 87 287 57..... | 165  | 005 87 358 36..... | 109, 116 |
| 005 47 007 99..... | 129  | 005 87 167 80..... | 165  | 005 87 317 41..... | 165  | 005 87 358 37..... | 109, 116 |
| 005 47 011 99..... | 129  | 005 87 167 82..... | 165  | 005 87 327 46..... | 165  | 005 87 358 38..... | 109, 116 |
| 005 47 012 99..... | 129  | 005 87 167 89..... | 165  | 005 87 327 47..... | 165  | 005 87 358 39..... | 166      |
| 005 47 013 99..... | 129  | 005 87 167 91..... | 165  | 005 87 327 49..... | 165  | 005 87 358 40..... | 120      |
| 005 47 014 99..... | 129  | 005 87 167 92..... | 165  | 005 87 327 84..... | 165  | 005 87 358 43..... | 166      |
| 005 47 015 99..... | 129  | 005 87 167 94..... | 165  | 005 87 327 92..... | 165  | 005 87 358 45..... | 118      |
| 005 47 023 99..... | 129  | 005 87 167 95..... | 165  | 005 87 327 94..... | 165  | 005 87 358 47..... | 117      |
| 005 50 037 99..... | 165  | 005 87 168 00..... | 165  | 005 87 327 95..... | 165  | 005 87 358 48..... | 117      |
| 005 50 038 99..... | 165  | 005 87 197 06..... | 165  | 005 87 327 97..... | 165  | 005 87 358 49..... | 117      |
| 005 50 039 99..... | 165  | 005 87 207 01..... | 165  | 005 87 327 98..... | 165  | 005 87 358 55..... | 120      |
| 005 50 040 99..... | 165  | 005 87 207 39..... | 165  | 005 87 327 99..... | 165  | 005 87 358 56..... | 120      |
| 005 50 041 99..... | 165  | 005 87 207 41..... | 165  | 005 87 328 00..... | 165  | 005 87 358 61..... | 166      |
| 005 50 042 99..... | 165  | 005 87 207 42..... | 165  | 005 87 328 01..... | 165  | 005 87 358 62..... | 116      |
| 005 50 043 99..... | 165  | 005 87 207 43..... | 165  | 005 87 328 02..... | 165  | 005 87 358 63..... | 120      |
| 005 50 050 99..... | 110  | 005 87 207 44..... | 165  | 005 87 328 04..... | 165  | 005 87 358 64..... | 120      |
| 005 55 066 99..... | 127  | 005 87 207 46..... | 165  | 005 87 328 05..... | 165  | 005 87 358 65..... | 113      |
| 005 61 036 99..... | 80   | 005 87 207 62..... | 165  | 005 87 328 32..... | 165  | 005 87 358 66..... | 113, 166 |
| 005 61 046 99..... | 81   | 005 87 207 76..... | 165  | 005 87 328 33..... | 165  | 005 87 358 69..... | 120      |
| 005 61 056 99..... | 82   | 005 87 207 78..... | 165  | 005 87 328 34..... | 165  | 005 87 358 70..... | 120      |
| 005 61 093 99..... | 124  | 005 87 207 79..... | 165  | 005 87 328 35..... | 165  | 005 87 358 71..... | 120      |
| 005 61 096 99..... | 81   | 005 87 207 80..... | 165  | 005 87 328 36..... | 166  | 005 87 358 79..... | 117      |
| 005 61 206 99..... | 165  | 005 87 207 81..... | 61   | 005 87 328 38..... | 166  | 005 87 358 83..... | 115      |
| 005 61 216 99..... | 165  | 005 87 207 85..... | 79   | 005 87 328 39..... | 166  | 005 87 358 84..... | 115      |
| 005 61 226 99..... | 165  | 005 87 207 86..... | 79   | 005 87 328 40..... | 166  | 005 87 358 85..... | 115      |
| 005 64 005 99..... | 82   | 005 87 207 87..... | 79   | 005 87 328 41..... | 166  | 005 87 358 95..... | 115      |
| 005 64 021 99..... | 83   | 005 87 207 88..... | 79   | 005 87 328 48..... | 166  | 005 87 359 09..... | 120      |
| 005 64 037 99..... | 83   | 005 87 207 89..... | 79   | 005 87 328 50..... | 166  | 005 87 359 20..... | 120      |
| 005 64 053 99..... | 83   | 005 87 227 46..... | 165  | 005 87 328 62..... | 166  | 005 87 367 80..... | 87, 166  |
| 005 64 216 99..... | 165  | 005 87 250 34..... | 125  | 005 87 328 63..... | 166  | 005 87 367 86..... | 166      |
| 005 64 226 99..... | 165  | 005 87 257 18..... | 125  | 005 87 328 64..... | 166  | 005 87 367 95..... | 166      |
| 005 64 236 99..... | 165  | 005 87 257 22..... | 125  | 005 87 328 66..... | 166  | 005 87 367 96..... | 166      |
| 005 64 246 99..... | 165  | 005 87 257 26..... | 125  | 005 87 328 67..... | 166  | 005 87 368 04..... | 92       |
| 005 70 030 99..... | 165  | 005 87 257 29..... | 125  | 005 87 328 68..... | 166  | 005 87 368 07..... | 92       |
| 005 70 040 99..... | 165  | 005 87 257 32..... | 125  | 005 87 328 69..... | 166  | 005 87 368 14..... | 92       |
| 005 70 062 99..... | 165  | 005 87 257 36..... | 125  | 005 87 328 70..... | 166  | 005 87 368 18..... | 92       |
| 005 87 017 23..... | 122  | 005 87 257 38..... | 165  | 005 87 328 73..... | 166  | 005 87 368 33..... | 92       |
| 005 87 017 23..... | 165  | 005 87 257 39..... | 165  | 005 87 328 74..... | 166  | 005 87 368 37..... | 92       |
| 005 87 037 31..... | 165  | 005 87 257 42..... | 125  | 005 87 328 75..... | 166  | 005 87 368 38..... | 92       |
| 005 87 037 55..... | 165  | 005 87 270 71..... | 125  | 005 87 328 76..... | 166  | 005 87 368 39..... | 92       |
| 005 87 038 62..... | 165  | 005 87 277 72..... | 89   | 005 87 328 77..... | 166  | 005 87 368 40..... | 91       |
| 005 87 038 63..... | 165  | 005 87 277 73..... | 89   | 005 87 328 78..... | 166  | 005 87 368 41..... | 91       |
| 005 87 038 64..... | 165  | 005 87 277 74..... | 89   | 005 87 328 80..... | 166  | 005 87 368 42..... | 91       |
| 005 87 038 65..... | 165  | 005 87 277 75..... | 89   | 005 87 328 81..... | 166  | 005 87 368 43..... | 91       |
| 005 87 038 92..... | 165  | 005 87 277 76..... | 89   | 005 87 328 82..... | 166  | 005 87 368 67..... | 91       |
| 005 87 039 13..... | 165  | 005 87 277 77..... | 90   | 005 87 328 84..... | 166  | 005 87 368 70..... | 91       |

# Numerical Index

| Order No.          | Page | Order No.          | Page | Order No.          | Page | Order No.          | Page |
|--------------------|------|--------------------|------|--------------------|------|--------------------|------|
| 005 87 368 75..... | 93   | 005 87 447 65..... | 166  | 005 87 479 74..... | 105  | 005 87 488 56..... | 167  |
| 005 87 368 80..... | 92   | 005 87 447 66..... | 166  | 005 87 479 77..... | 104  | 005 87 488 58..... | 167  |
| 005 87 368 81..... | 91   | 005 87 447 94..... | 166  | 005 87 479 82..... | 106  | 005 87 488 61..... | 167  |
| 005 87 368 82..... | 91   | 005 87 447 95..... | 166  | 005 87 479 83..... | 105  | 005 87 488 62..... | 167  |
| 005 87 368 83..... | 91   | 005 87 448 10..... | 166  | 005 87 479 85..... | 104  | 005 87 488 65..... | 167  |
| 005 87 368 90..... | 92   | 005 87 467 31..... | 166  | 005 87 479 87..... | 105  | 005 87 489 02..... | 167  |
| 005 87 368 91..... | 92   | 005 87 467 32..... | 166  | 005 87 479 90..... | 106  | 005 87 489 08..... | 167  |
| 005 87 369 32..... | 91   | 005 87 467 33..... | 166  | 005 87 479 93..... | 104  | 005 87 489 13..... | 167  |
| 005 87 369 33..... | 91   | 005 87 467 44..... | 166  | 005 87 479 99..... | 104  | 005 87 489 15..... | 167  |
| 005 87 369 34..... | 91   | 005 87 477 53..... | 104  | 005 87 487 27..... | 166  | 005 87 489 17..... | 167  |
| 005 87 369 40..... | 166  | 005 87 477 63..... | 104  | 005 87 487 28..... | 167  | 005 87 489 19..... | 167  |
| 005 87 377 01..... | 166  | 005 87 477 64..... | 104  | 005 87 487 29..... | 167  | 005 87 489 20..... | 167  |
| 005 87 377 11..... | 166  | 005 87 477 78..... | 106  | 005 87 487 30..... | 167  | 005 87 489 22..... | 167  |
| 005 87 381 21..... | 166  | 005 87 477 79..... | 106  | 005 87 487 31..... | 167  | 005 87 489 25..... | 167  |
| 005 87 387 28..... | 166  | 005 87 477 81..... | 105  | 005 87 487 32..... | 167  | 005 87 489 26..... | 167  |
| 005 87 387 47..... | 166  | 005 87 477 82..... | 106  | 005 87 487 33..... | 167  | 005 87 489 28..... | 167  |
| 005 87 387 48..... | 166  | 005 87 477 83..... | 105  | 005 87 487 34..... | 167  | 005 87 489 29..... | 167  |
| 005 87 387 49..... | 166  | 005 87 478 33..... | 104  | 005 87 487 35..... | 167  | 005 87 489 30..... | 167  |
| 005 87 388 14..... | 166  | 005 87 478 38..... | 106  | 005 87 487 36..... | 167  | 005 87 489 31..... | 167  |
| 005 87 397 07..... | 166  | 005 87 478 40..... | 106  | 005 87 487 37..... | 167  | 005 87 489 32..... | 167  |
| 005 87 397 27..... | 166  | 005 87 478 42..... | 106  | 005 87 487 38..... | 167  | 005 87 489 33..... | 167  |
| 005 87 397 56..... | 166  | 005 87 478 44..... | 106  | 005 87 487 39..... | 167  | 005 87 489 35..... | 167  |
| 005 87 397 74..... | 166  | 005 87 478 47..... | 105  | 005 87 487 40..... | 167  | 005 87 489 36..... | 167  |
| 005 87 397 75..... | 166  | 005 87 478 48..... | 104  | 005 87 487 41..... | 167  | 005 87 489 37..... | 167  |
| 005 87 407 25..... | 166  | 005 87 478 50..... | 104  | 005 87 487 42..... | 167  | 005 87 489 39..... | 167  |
| 005 87 407 45..... | 166  | 005 87 478 57..... | 105  | 005 87 487 43..... | 167  | 005 87 489 40..... | 167  |
| 005 87 407 46..... | 166  | 005 87 478 59..... | 106  | 005 87 487 44..... | 167  | 005 87 489 41..... | 167  |
| 005 87 407 62..... | 166  | 005 87 478 61..... | 105  | 005 87 487 45..... | 167  | 005 87 489 42..... | 167  |
| 005 87 407 78..... | 166  | 005 87 478 67..... | 106  | 005 87 487 46..... | 167  | 005 87 489 43..... | 167  |
| 005 87 408 01..... | 166  | 005 87 478 69..... | 106  | 005 87 487 47..... | 167  | 005 87 489 44..... | 167  |
| 005 87 408 02..... | 166  | 005 87 478 71..... | 104  | 005 87 487 48..... | 167  | 005 87 489 51..... | 167  |
| 005 87 408 13..... | 166  | 005 87 478 73..... | 106  | 005 87 487 49..... | 167  | 005 87 489 68..... | 167  |
| 005 87 408 20..... | 166  | 005 87 478 74..... | 104  | 005 87 487 64..... | 167  | 005 87 489 74..... | 167  |
| 005 87 408 21..... | 166  | 005 87 478 76..... | 106  | 005 87 487 65..... | 167  | 005 87 497 03..... | 167  |
| 005 87 408 25..... | 166  | 005 87 478 85..... | 106  | 005 87 487 70..... | 167  | 005 87 497 09..... | 167  |
| 005 87 417 45..... | 166  | 005 87 478 93..... | 104  | 005 87 487 71..... | 167  | 005 87 497 11..... | 167  |
| 005 87 417 49..... | 166  | 005 87 478 94..... | 106  | 005 87 487 72..... | 167  | 005 87 507 21..... | 92   |
| 005 87 417 50..... | 166  | 005 87 478 97..... | 106  | 005 87 487 73..... | 167  | 005 87 507 34..... | 91   |
| 005 87 417 51..... | 166  | 005 87 479 04..... | 104  | 005 87 487 74..... | 167  | 005 87 507 39..... | 93   |
| 005 87 417 52..... | 166  | 005 87 479 06..... | 104  | 005 87 487 89..... | 167  | 005 87 507 41..... | 93   |
| 005 87 417 53..... | 166  | 005 87 479 11..... | 106  | 005 87 487 91..... | 167  | 005 87 507 42..... | 93   |
| 005 87 417 54..... | 166  | 005 87 479 13..... | 106  | 005 87 487 92..... | 167  | 005 87 517 09..... | 167  |
| 005 87 417 55..... | 166  | 005 87 479 16..... | 104  | 005 87 487 93..... | 167  | 005 87 517 10..... | 63   |
| 005 87 417 58..... | 166  | 005 87 479 24..... | 106  | 005 87 487 94..... | 167  | 005 87 517 17..... | 63   |
| 005 87 417 59..... | 166  | 005 87 479 27..... | 104  | 005 87 487 95..... | 167  | 005 87 547 47..... | 167  |
| 005 87 417 79..... | 166  | 005 87 479 29..... | 105  | 005 87 487 96..... | 167  | 005 87 547 50..... | 106  |
| 005 87 417 80..... | 166  | 005 87 479 30..... | 105  | 005 87 487 97..... | 167  | 005 87 547 60..... | 105  |
| 005 87 417 82..... | 166  | 005 87 479 31..... | 105  | 005 87 487 98..... | 167  | 005 87 547 61..... | 105  |
| 005 87 417 83..... | 166  | 005 87 479 32..... | 105  | 005 87 488 02..... | 167  | 005 87 547 66..... | 167  |
| 005 87 418 06..... | 166  | 005 87 479 33..... | 105  | 005 87 488 03..... | 167  | 005 87 547 70..... | 104  |
| 005 87 427 24..... | 166  | 005 87 479 34..... | 105  | 005 87 488 04..... | 167  | 005 87 547 72..... | 167  |
| 005 87 447 10..... | 166  | 005 87 479 35..... | 104  | 005 87 488 05..... | 167  | 005 87 547 73..... | 167  |
| 005 87 447 11..... | 166  | 005 87 479 37..... | 106  | 005 87 488 06..... | 167  | 005 87 547 74..... | 167  |
| 005 87 447 12..... | 166  | 005 87 479 41..... | 104  | 005 87 488 07..... | 167  | 005 87 547 75..... | 167  |
| 005 87 447 13..... | 166  | 005 87 479 43..... | 104  | 005 87 488 33..... | 167  | 005 87 547 77..... | 105  |
| 005 87 447 24..... | 166  | 005 87 479 45..... | 104  | 005 87 488 34..... | 167  | 005 87 547 78..... | 105  |
| 005 87 447 29..... | 166  | 005 87 479 47..... | 104  | 005 87 488 46..... | 167  | 005 87 547 79..... | 105  |
| 005 87 447 30..... | 166  | 005 87 479 48..... | 106  | 005 87 488 47..... | 167  | 005 87 548 08..... | 106  |
| 005 87 447 38..... | 68   | 005 87 479 58..... | 105  | 005 87 488 48..... | 167  | 005 87 548 09..... | 106  |
| 005 87 447 38..... | 166  | 005 87 479 59..... | 105  | 005 87 488 49..... | 167  | 005 87 548 10..... | 106  |
| 005 87 447 40..... | 166  | 005 87 479 61..... | 104  | 005 87 488 50..... | 167  | 005 87 548 11..... | 106  |
| 005 87 447 57..... | 166  | 005 87 479 63..... | 105  | 005 87 488 51..... | 167  | 005 87 548 12..... | 106  |
| 005 87 447 61..... | 166  | 005 87 479 64..... | 105  | 005 87 488 52..... | 167  | 005 87 548 13..... | 106  |
| 005 87 447 62..... | 166  | 005 87 479 66..... | 106  | 005 87 488 53..... | 167  | 005 87 548 20..... | 104  |
| 005 87 447 63..... | 166  | 005 87 479 71..... | 105  | 005 87 488 54..... | 167  | 005 87 548 36..... | 104  |
| 005 87 447 64..... | 166  | 005 87 479 73..... | 105  | 005 87 488 55..... | 167  | 005 87 548 41..... | 105  |

# Numerical Index

| Order No.          | Page    | Order No.      | Page | Order No.      | Page   | Order No.     | Page |
|--------------------|---------|----------------|------|----------------|--------|---------------|------|
| 005 87 548 46..... | 105     | 4PTA7.....     | 77   | 4SPI80231..... | 83     | NT K.....     | 63   |
| 005 87 548 47..... | 105     | 4PTA8.....     | 77   | 4SPI80232..... | 83     | NT MS.....    | 63   |
| 005 87 548 48..... | 106     | 4PTAA7.....    | 78   | 4SPI80234..... | 83     | NT SMT01..... | 64   |
| 005 87 548 49..... | 105     | 4PTAA8.....    | 78   | 4SPI80235..... | 83     | NT SMT02..... | 64   |
| 005 87 548 50..... | 105     | 4PTAA9.....    | 78   | 4SPI80237..... | 83     | NT SMT03..... | 64   |
| 005 87 548 73..... | 103     | 4PTB 8.....    | 77   | 6957.....      | 88     | NT SMT04..... | 64   |
| 005 87 548 73..... | 103     | 4PTB5.....     | 77   | 6958.....      | 88     | NT SMT05..... | 64   |
| 005 87 548 74..... | 105     | 4PTB6.....     | 77   | 6964.....      | 88     | NT SMT06..... | 64   |
| 005 87 548 75..... | 106     | 4PTB7.....     | 77   | 6965A.....     | 133    | NT SMT07..... | 64   |
| 005 87 548 79..... | 105     | 4PTB9.....     | 77   | 6965A.....     | 133    | NT SMT08..... | 64   |
| 005 87 548 87..... | 104     | 4PTBB7.....    | 78   | 6966E.....     | 88     | NT SMT09..... | 64   |
| 005 87 549 03..... | 104     | 4PTBB8.....    | 78   | KDS81056.....  | 84, 97 | NT SMT10..... | 64   |
| 005 87 549 24..... | 103     | 4PTBB9.....    | 78   | LTSMT01.....   | 67     | NT SMT11..... | 64   |
| 005 87 549 42..... | 103     | 4PTC7.....     | 77   | LTSMT02.....   | 67     | NT SMT12..... | 64   |
| 005 87 549 45..... | 105     | 4PTC8.....     | 77   | LTSMT03.....   | 67     | NT SMT13..... | 64   |
| 005 87 549 46..... | 105     | 4PTC9.....     | 77   | LTSMT04.....   | 67     | NT SMT14..... | 64   |
| 005 87 549 47..... | 167     | 4PTCC7.....    | 78   | LTSMT05.....   | 67     | NT SMT15..... | 64   |
| 005 87 549 48..... | 103     | 4PTCC8.....    | 78   | LTSMT06.....   | 67     | NT SMT16..... | 64   |
| 005 87 549 50..... | 167     | 4PTCC9.....    | 78   | LTSMT07.....   | 67     | NT SMT17..... | 64   |
| 005 87 549 51..... | 87, 103 | 4PTCS7.....    | 78   | LTSMT08.....   | 67     | NT SMT18..... | 64   |
| 005 87 549 67..... | 104     | 4PTD7.....     | 77   | LTSMT09.....   | 67     | NT SMT19..... | 64   |
| 005 87 549 70..... | 103     | 4PTD8.....     | 77   | LTSMT10.....   | 67     | NT SMT20..... | 64   |
| 005 87 549 77..... | 167     | 4PTD9.....     | 77   | LTSMT11.....   | 67     | NT SMT21..... | 64   |
| 005 87 549 78..... | 167     | 4PTDD7.....    | 78   | LTSMT12.....   | 67     | NT SMT22..... | 64   |
| 005 87 549 81..... | 105     | 4PTDD8.....    | 78   | LTSMT13.....   | 67     | PS1001A.....  | 126  |
| 005 87 549 82..... | 106     | 4PTDD9.....    | 78   | LTSMT14.....   | 67     | PS100A.....   | 126  |
| 005 87 557 05..... | 105     | 4PTDS7.....    | 78   | LTSMT15.....   | 67     | PS2001.....   | 126  |
| 005 87 557 06..... | 105     | 4PTE7.....     | 77   | LTSMT16.....   | 67     | PS2001A.....  | 126  |
| 005 87 557 07..... | 105     | 4PTE8.....     | 77   | LTSMT17.....   | 67     | PS200A.....   | 126  |
| 005 87 557 08..... | 105     | 4PTE9.....     | 77   | LTSMT18.....   | 67     | PS3001A.....  | 126  |
| 005 87 557 41..... | 103     | 4PTF7.....     | 78   | LTSMT19.....   | 67     | SA21A.....    | 126  |
| 005 87 557 45..... | 103     | 4PTF8.....     | 78   | LTSMT20.....   | 67     | SA21A1.....   | 126  |
| 005 87 577 70..... | 87      | 4PTH6.....     | 77   | LTSMT21.....   | 67     | SCD201.....   | 167  |
| 2052E.....         | 84, 97  | 4PTH7.....     | 77   | LTSMT22.....   | 67     | SM15748.....  | 129  |
| 3000ESD.....       | 84, 97  | 4PTH8.....     | 77   | MT202.....     | 71     | SMT0504A..... | 62   |
| 3232.....          | 84, 97  | 4PTK6.....     | 78   | MT203.....     | 71     | SMT0504A..... | 68   |
| 4CT5A6.....        | 80      | 4PTK7.....     | 78   | MT211.....     | 71     | SMT0805B..... | 62   |
| 4CT5A7.....        | 80      | 4PTK8.....     | 78   | MT212.....     | 71     | SMT0805B..... | 68   |
| 4CT5A8.....        | 80      | 4PTL6.....     | 78   | MT301.....     | 71     | SMT1206D..... | 62   |
| 4CT5B7.....        | 80      | 4PTL7.....     | 78   | MT302.....     | 71     | SMT1206D..... | 68   |
| 4CT5B8.....        | 80      | 4PTL8.....     | 78   | MT601.....     | 71     | SMT23J.....   | 62   |
| 4CT5C6.....        | 80      | 4PTM7.....     | 78   | MT602.....     | 71     | SMT23J.....   | 68   |
| 4CT5C7.....        | 80      | 4PTM8.....     | 78   | MT603.....     | 71     | SMT8K.....    | 62   |
| 4CT5C8.....        | 80      | 4PTM9.....     | 78   | MT604.....     | 71     | SMT8K.....    | 68   |
| 4CT5D7.....        | 80      | 4PTO6.....     | 78   | MT605.....     | 71     | SMTA.....     | 62   |
| 4CT5D8.....        | 80      | 4PTO7.....     | 78   | MT606.....     | 71     | WMP.....      | 63   |
| 4CT6C7.....        | 81      | 4PTO8.....     | 78   | MT607.....     | 71     | WPHM.....     | 133  |
| 4CT6C8.....        | 81      | 4PTP7.....     | 78   | MT608.....     | 71     | WPHT.....     | 133  |
| 4CT6D7.....        | 81      | 4PTP8.....     | 78   | MT609.....     | 71     | WPT01.....    | 74   |
| 4CT6D8.....        | 81      | 4PTR7.....     | 77   | MT610.....     | 71     | WPT02.....    | 74   |
| 4CT6E7.....        | 81      | 4PTR8.....     | 77   | MT613.....     | 71     | WPT04.....    | 74   |
| 4CT6E8.....        | 81      | 4PTS7.....     | 78   | MT614.....     | 71     | WSTA6.....    | 74   |
| 4ETA.....          | 61      | 4PTS8.....     | 78   | MT619.....     | 71     |               |      |
| 4ETB.....          | 61      | 4SPI15210..... | 82   | MT621.....     | 71     |               |      |
| 4ETC.....          | 61      | 4SPI15211..... | 82   | NT 1.....      | 63     |               |      |
| 4ETD.....          | 61      | 4SPI15212..... | 82   | NT 1S.....     | 63     |               |      |
| 4ETE.....          | 61      | 4SPI15213..... | 82   | NT 1X.....     | 63     |               |      |
| 4ETH.....          | 61      | 4SPI26200..... | 83   | NT 4.....      | 63     |               |      |
| 4ETK.....          | 61      | 4SPI26201..... | 83   | NT 6.....      | 63     |               |      |
| 4ETL.....          | 61      | 4SPI26206..... | 83   | NT A.....      | 63     |               |      |
| 4ETM.....          | 61      | 4SPI40220..... | 83   | NT AX.....     | 63     |               |      |
| 4ETO.....          | 61      | 4SPI40222..... | 83   | NT B.....      | 63     |               |      |
| 4ETP.....          | 61      | 4SPI40224..... | 83   | NT C.....      | 63     |               |      |
| 4ETR.....          | 61      | 4SPI40225..... | 83   | NT D.....      | 63     |               |      |
| 4ETS.....          | 61      | 4SPI40226..... | 83   | NT GW.....     | 63     |               |      |
| 4PTA6.....         | 77      | 4SPI80230..... | 83   | NT H.....      | 63     |               |      |

## Numerical Index

| Order No.   | Page | Order No.       | Page | Order No.        | Page |
|-------------|------|-----------------|------|------------------|------|
| 18633.....  | 173  | 519928.....     | 174  | 0090990938.....  | 177  |
| 18635.....  | 173  | 519929.....     | 175  | 0099404288.....  | 176  |
| 18637.....  | 173  | 519936.....     | 173  | 0099407625.....  | 171  |
| 18640.....  | 175  | 521105.....     | 174  | 0099407661.....  | 171  |
| 26245.....  | 175  | 521116.....     | 175  | 10591WW.....     | 177  |
| 26263.....  | 173  | 521198.....     | 174  | 26100AA5.....    | 171  |
| 26495.....  | 173  | 521199.....     | 175  | 26110AA4.....    | 171  |
| 500130..... | 172  | 522201.....     | 175  | 28000AC1.....    | 171  |
| 500352..... | 173  | 522202.....     | 174  | 28010AB2.....    | 171  |
| 500353..... | 173  | 522203.....     | 174  | 420E.....        | 172  |
| 501097..... | 173  | 522204.....     | 175  | 508813.....      | 177  |
| 501381..... | 173  | 522205.....     | 174  | 508814.....      | 177  |
| 501389..... | 173  | 522211.....     | 174  | 508816.....      | 177  |
| 502118..... | 173  | 522212.....     | 175  | 508818.....      | 177  |
| 502129..... | 175  | 525650.....     | 176  | 508822.....      | 177  |
| 502134..... | 173  | 525651.....     | 176  | 508831.....      | 177  |
| 504155..... | 173  | 525652.....     | 176  | 511209.....      | 177  |
| 504222..... | 173  | 525653.....     | 176  | 511399.....      | 177  |
| 504769..... | 172  | 525654.....     | 176  | 517155.....      | 177  |
| 504908..... | 173  | 525655.....     | 176  | 517219.....      | 177  |
| 504910..... | 173  | 527812.....     | 174  | 530976.....      | 177  |
| 504939..... | 173  | 527813.....     | 175  | 532748.....      | 177  |
| 505084..... | 172  | 990046.....     | 174  | 990063WWW.....   | 174  |
| 505244..... | 172  | 990420.....     | 172  | 990064WWW.....   | 175  |
| 505279..... | 173  | 990421.....     | 172  | 990158.....      | 177  |
| 505373..... | 173  | 990422.....     | 172  | 990275.....      | 177  |
| 505413..... | 173  | 990423.....     | 172  | 990348.....      | 177  |
| 505415..... | 173  | 990424.....     | 172  | 990403.....      | 177  |
| 506445..... | 173  | 990435.....     | 175  | 990420.....      | 177  |
| 506781..... | 173  | 990561.....     | 174  | 990421.....      | 177  |
| 506991..... | 173  | 990562.....     | 175  | 990457.....      | 177  |
| 506999..... | 175  | 990563.....     | 174  | 990519.....      | 177  |
| 507063..... | 173  | 990579.....     | 174  | 990650WWW.....   | 171  |
| 507100..... | 175  | 990646.....     | 174  | 990655.....      | 177  |
| 507356..... | 173  | 990681.....     | 174  | 990682.....      | 177  |
| 507502..... | 173  | 990734.....     | 173  | 990822.....      | 177  |
| 507573..... | 173  | 990753.....     | 174  | 990859.....      | 177  |
| 508105..... | 173  | 990764.....     | 174  | A26664.....      | 172  |
| 509278..... | 173  | 990765.....     | 175  | A31478.....      | 172  |
| 509405..... | 173  | 990779.....     | 174  | WRAP3F30.....    | 172  |
| 509436..... | 172  | 990780.....     | 175  | WRAPECOMAXI..... | 172  |
| 509489..... | 172  | 990841.....     | 174  | WRAPECOMIDI..... | 172  |
| 511203..... | 172  | 990846.....     | 174  | WRAPECOMINI..... | 172  |
| 511225..... | 172  | 990847.....     | 175  |                  |      |
| 511250..... | 173  | 990891.....     | 173  |                  |      |
| 511274..... | 175  | 990967.....     | 174  |                  |      |
| 511274..... | 175  | 990995.....     | 174  |                  |      |
| 511439..... | 173  | 990996.....     | 174  |                  |      |
| 512056..... | 175  | 990997.....     | 175  |                  |      |
| 512058..... | 173  | 0090000013..... | 176  |                  |      |
| 515664..... | 172  | 0090293153..... | 171  |                  |      |
| 515665..... | 172  | 0090293154..... | 171  |                  |      |
| 515666..... | 172  | 0090293155..... | 171  |                  |      |
| 515716..... | 172  | 0090293178..... | 171  |                  |      |
| 517104..... | 173  | 0090293179..... | 171  |                  |      |
| 517228..... | 175  | 0090296503..... | 171  |                  |      |
| 518910..... | 174  | 0090520101..... | 171  |                  |      |
| 518911..... | 175  | 0090525633..... | 177  |                  |      |
| 518931..... | 174  | 0090912968..... | 176  |                  |      |
| 518932..... | 175  | 0090914414..... | 176  |                  |      |
| 519066..... | 174  | 0090914414..... | 177  |                  |      |
| 519067..... | 175  | 0090914415..... | 176  |                  |      |
| 519070..... | 173  | 0090914415..... | 177  |                  |      |
| 519070..... | 173  | 0090920031..... | 177  |                  |      |
| 519926..... | 174  | 0090990012..... | 177  |                  |      |
| 519927..... | 175  | 0090990936..... | 177  |                  |      |

## Alpha-Numerical-Index

| Model       | Page |
|-------------|------|
| 14G1A.....  | 171  |
| 14HP1C..... | 171  |
| 14R3G.....  | 171  |
| 14YB3.....  | 171  |
| 14YP1.....  | 171  |

# Numerical Index

| Order No.  | Page | Order No. | Page | Order No. | Page | Order No. | Page |
|------------|------|-----------|------|-----------|------|-----------|------|
| 993        | 188  | 57CG      | 199  | 9920XTD   | 193  | 996       | 188  |
| 994        | 199  | 59CG      | 195  | 9921      | 190  | 996       | 189  |
| 9938       | 190  | 59CG      | 197  | 9921      | 191  | 996       | 190  |
| 9968       | 190  | 600       | 195  | 9921      | 195  | 996       | 191  |
| 9968       | 193  | 600       | 197  | 9921      | 197  | 996       | 192  |
| 9968       | 195  | 612N      | 194  | 9921      | 199  | 9961      | 190  |
| 9968       | 197  | 64CG      | 199  | 9921BP    | 192  | 9961      | 193  |
| 9969       | 190  | 66CG      | 195  | 9922      | 190  | 9961      | 195  |
| 9969       | 193  | 66CG      | 197  | 9922      | 191  | 9961      | 197  |
| 9969       | 195  | 812N      | 194  | 9922      | 195  | 9962      | 190  |
| 9969       | 197  | 86CG      | 184  | 9922      | 197  | 9962      | 193  |
| 99821      | 189  | 86CG      | 194  | 9922      | 199  | 9962      | 195  |
| 99831      | 193  | 86CG      | 195  | 9922BP    | 192  | 9962      | 197  |
| 99832      | 193  | 86CG      | 197  | 9923      | 190  | 9963      | 190  |
| 99833      | 193  | 86CG      | 199  | 9923      | 191  | 9963      | 193  |
| 51650699   | 200  | 9910      | 188  | 9923      | 195  | 9963      | 195  |
| 51651800   | 200  | 9910      | 189  | 9923      | 197  | 9963      | 197  |
| 0016100402 | 194  | 9910      | 190  | 9923      | 199  | 9964      | 190  |
| 0044130000 | 194  | 9910      | 192  | 9923BP    | 192  | 9964      | 193  |
| 0051304199 | 194  | 9910      | 199  | 9924      | 190  | 9964      | 195  |
| 0054002599 | 194  | 9910M     | 196  | 9924      | 191  | 9964      | 197  |
| 0056103699 | 194  | 9910M     | 198  | 9924      | 195  | 9965      | 190  |
| 0060403504 | 194  | 9910MM    | 193  | 9924      | 197  | 9965      | 193  |
| 100X       | 184  | 9910XTD   | 191  | 9924      | 199  | 9965      | 195  |
| 101S       | 184  | 9910XTD   | 193  | 9924BP    | 192  | 9965      | 197  |
| 101S       | 199  | 9911      | 188  | 9925      | 190  | 9966      | 190  |
| 102SV      | 184  | 9911      | 189  | 9925      | 191  | 9966      | 193  |
| 103S       | 184  | 9911      | 190  | 9925      | 195  | 9966      | 195  |
| 103S       | 194  | 9911      | 192  | 9925      | 197  | 9966      | 197  |
| 103S       | 195  | 9911      | 199  | 9925      | 199  | 9967      | 190  |
| 103S       | 197  | 9911MM    | 193  | 99250     | 188  | 9967      | 193  |
| 1178D      | 184  | 9912      | 188  | 99250     | 189  | 9967      | 195  |
| 1178M      | 184  | 9912      | 189  | 99250     | 190  | 9967      | 197  |
| 170D       | 184  | 9912      | 190  | 99250     | 192  | 996MM     | 193  |
| 170M       | 184  | 9912      | 192  | 99250     | 194  | 996MM     | 194  |
| 170M       | 194  | 9912      | 199  | 99250     | 195  | 996XTD    | 193  |
| 175D       | 184  | 99125     | 190  | 99250     | 197  | 997       | 188  |
| 175M       | 184  | 99125     | 195  | 99250     | 199  | 997       | 188  |
| 2178M      | 184  | 99125     | 197  | 9925BP    | 192  | 997       | 189  |
| 2211P      | 194  | 99125     | 199  | 9925XTD   | 193  | 997       | 190  |
| 378D       | 184  | 9914      | 188  | 9926      | 190  | 997       | 192  |
| 378M       | 184  | 9914      | 189  | 9926      | 191  | 9971MM    | 191  |
| 378SMD     | 184  | 9914      | 190  | 9926      | 195  | 9971MM    | 194  |
| 378SMM     | 184  | 9914      | 199  | 9926      | 197  | 9971MMBP  | 192  |
| 42H        | 195  | 9915XTD   | 191  | 9926      | 199  | 9972MM    | 191  |
| 42H        | 197  | 9915XTD   | 193  | 9926BP    | 192  | 9972MM    | 194  |
| 43H        | 199  | 9916      | 188  | 9927XTD   | 193  | 9972MMBP  | 192  |
| 46CG       | 188  | 9916      | 189  | 99312     | 190  | 9973MM    | 191  |
| 46CG       | 188  | 9916      | 190  | 99312     | 194  | 9973MM    | 194  |
| 46CG       | 195  | 9916      | 199  | 99312     | 195  | 9973MMBP  | 192  |
| 46CG       | 197  | 991R      | 195  | 99312     | 197  | 9974MM    | 191  |
| 46CG       | 199  | 991R      | 197  | 99312     | 199  | 9974MM    | 194  |
| 50CG       | 195  | 991X      | 188  | 9938      | 188  | 9974MMBP  | 192  |
| 50CG       | 197  | 991X      | 189  | 9938      | 194  | 9975MM    | 191  |
| 51CG       | 195  | 991X      | 190  | 9938      | 195  | 9975MM    | 194  |
| 51CG       | 197  | 991X      | 191  | 9938      | 197  | 9975MMBP  | 192  |
| 51CG       | 199  | 991X      | 191  | 9938      | 199  | 99764     | 190  |
| 52CG       | 188  | 991X      | 192  | 994       | 190  | 99764     | 191  |
| 53CG       | 195  | 991X      | 193  | 9945MM    | 193  | 99764     | 195  |
| 53CG       | 197  | 991X      | 194  | 9945MM    | 194  | 99764     | 197  |
| 53CG       | 199  | 991X      | 195  | 994MM     | 193  | 99764     | 199  |
| 542E       | 194  | 991X      | 197  | 994MM     | 194  | 99764BP   | 192  |
| 543E       | 194  | 991X      | 199  | 994R      | 194  | 9976MM    | 191  |
| 54CG       | 195  | 9920      | 190  | 994R      | 195  | 9976MM    | 194  |
| 54CG       | 197  | 9920      | 191  | 994R      | 197  | 9976MMBP  | 192  |
| 55CG       | 188  | 9920      | 195  | 9955MM    | 193  | 9977MM    | 191  |
| 55CG       | 199  | 9920      | 197  | 9955MM    | 194  | 9977MM    | 194  |
| 57CG       | 195  | 9920      | 199  | 995MM     | 193  | 9977MMBP  | 192  |
| 57CG       | 197  | 9920BP    | 192  | 995MM     | 194  | 997MM     | 193  |

# Numerical Index

| Order No.  | Page | Order No. | Page | Order No. | Page | Order No. | Page |
|------------|------|-----------|------|-----------|------|-----------|------|
| 997MM      | 194  | 99S8      | 188  | P24       | 186  | T1        | 191  |
| 998        | 188  | 99SM      | 188  | P3        | 187  | TA2       | 185  |
| 998        | 189  | 99SMX     | 188  | P3161     | 186  | TA2       | 186  |
| 998        | 190  | 99SPC     | 191  | P3161     | 187  | TA2       | 187  |
| 998        | 191  | 99X10     | 188  | P3321     | 186  | TC100MT   | 196  |
| 998        | 192  | 99X10     | 188  | P35MM     | 187  | TC100ST   | 195  |
| 998        | 199  | 99X10     | 195  | P3MM      | 187  | TCMB100MT | 198  |
| 99811      | 188  | 99X10     | 197  | P4        | 187  | TCMB100ST | 197  |
| 99811      | 189  | 99X5      | 190  | P45MM     | 187  | TCMB150MT | 194  |
| 99811      | 190  | 99X5      | 191  | P4MM      | 187  | TCS200MT  | 199  |
| 99811      | 191  | 99X5      | 192  | P5        | 187  | TCS200ST  | 199  |
| 99811      | 192  | 99X5      | 193  | P5321     | 186  | X1        | 191  |
| 99811      | 194  | 99X5      | 194  | P55MM     | 187  | XL10      | 200  |
| 99811      | 195  | 99X5      | 195  | P5MM      | 187  | XL12      | 200  |
| 99811      | 197  | 99X5      | 197  | P6        | 187  | XL14      | 200  |
| 99811      | 199  | 99X5      | 199  | P6MM      | 187  | XL16      | 200  |
| 99820      | 190  | 99XTD7    | 193  | P7        | 187  | XL17      | 185  |
| 99820      | 191  | AC16C     | 194  | P71       | 186  | XL17      | 200  |
| 99820      | 194  | E1        | 191  | P72       | 186  | XL18      | 200  |
| 99820      | 195  | Erop330   | 194  | P73       | 186  | XL20      | 185  |
| 99820      | 197  | HS10      | 196  | P74       | 186  | XL20      | 200  |
| 99820      | 199  | HS10      | 198  | P75       | 186  | XL21      | 185  |
| 99821      | 188  | HS11      | 196  | P76       | 186  | XL21      | 200  |
| 99821      | 190  | HS11      | 198  | P764      | 186  | XL24      | 200  |
| 99821      | 191  | HS12      | 196  | P77       | 186  | XL25      | 185  |
| 99821      | 192  | HS12      | 198  | P78       | 186  | XL25      | 200  |
| 99821      | 194  | HS14      | 196  | P7MM      | 187  | XL27      | 185  |
| 99821      | 195  | HS14      | 198  | P8        | 187  | XL27      | 200  |
| 99821      | 197  | HS16      | 196  | P8        | 187  | XL3       | 200  |
| 99821      | 199  | HS16      | 198  | P8MM      | 187  | XL4       | 200  |
| 99822      | 188  | HS18      | 196  | P9        | 187  | XL5       | 200  |
| 99822      | 189  | HS18      | 198  | PS120     | 187  | XL50X     | 200  |
| 99822      | 190  | HS6       | 196  | PS120     | 196  | XL6       | 200  |
| 99822      | 192  | HS6       | 198  | PS120     | 198  | XL7       | 200  |
| 99822      | 194  | HS8       | 196  | PS121MM   | 187  | XL70      | 200  |
| 99822      | 195  | HS8       | 198  | PS130     | 187  | XL75      | 185  |
| 99822      | 197  | K22       | 197  | PS88      | 186  | XL75      | 194  |
| 99822      | 199  | K22       | 199  | PS89      | 186  | XL75      | 195  |
| 998M       | 190  | M00       | 185  | PS90MM    | 186  | XL75      | 197  |
| 998M       | 196  | M01       | 185  | R1        | 191  | XL8       | 200  |
| 998M       | 198  | M02       | 185  | R144      | 196  | XL9       | 200  |
| 998MM      | 193  | M03       | 185  | R144      | 198  | XN100     | 183  |
| 998MM      | 194  | M04       | 185  | R146      | 196  | XN200     | 183  |
| 998XTD     | 193  | M05       | 185  | R146      | 198  | XN210     | 183  |
| 999        | 188  | M60       | 185  | R181      | 196  | XNB101    | 183  |
| 999        | 189  | M60       | 195  | R181      | 198  | XNB103    | 183  |
| 999        | 190  | M60       | 197  | R184      | 196  | XNB103B   | 183  |
| 999        | 192  | P0        | 186  | R184      | 198  | XNB105    | 183  |
| 999        | 199  | P1        | 186  | R3164     | 196  | XNB201    | 183  |
| 99964      | 190  | P1        | 187  | R3164     | 198  | XNB203    | 183  |
| 99964      | 191  | P10       | 187  | R3166     | 196  | XNB205    | 183  |
| 99964      | 195  | P10MM     | 187  | R3166     | 198  | XNS100    | 183  |
| 99964      | 197  | P11       | 187  | R3323     | 195  | XP1B      | 200  |
| 99964      | 199  | P12       | 187  | R3323     | 197  | XP1CE     | 200  |
| 99964BP    | 192  | P141      | 186  | R5325     | 198  | XP600     | 185  |
| 999MM      | 193  | P141      | 187  | S3161     | 196  | XPTX600   | 185  |
| 999MM      | 194  | P18       | 196  | S3161     | 198  | XST100    | 196  |
| 99MP       | 190  | P18       | 198  | S388      | 196  | XST100    | 198  |
| 99PA       | 200  | P181      | 186  | S388      | 198  | XST101    | 194  |
| 99PR       | 189  | P181      | 187  | S5161     | 196  | XST101    | 196  |
| 99PS40     | 191  | P19       | 186  | S5161     | 198  | XST101    | 198  |
| 99PS40BP   | 192  | P19       | 196  | S5166     | 196  | XST102    | 196  |
| 99PS41MM   | 191  | P19       | 198  | S5166     | 198  | XST102    | 198  |
| 99PS41MMBP | 192  | P2        | 186  | SB1       | 195  |           |      |
| 99PS50     | 192  | P2        | 187  | SB1       | 197  |           |      |
| 99PS51MM   | 193  | P20       | 186  | SX101     | 194  |           |      |
| 99PS60     | 193  | P21       | 186  | SX101     | 196  |           |      |
| 99S10      | 188  | P22       | 186  | SX101     | 198  |           |      |
| 99S12      | 188  | P23       | 186  | SX102     | 194  |           |      |

# General delivery conditions and terms of payment

## 1. General Provisions

1.1 The conditions set forth hereinafter shall apply to each order. Any other terms and conditions shall be binding on us only if they have been confirmed by us in writing. Should an order be performed by us despite our being aware of other discrepant terms and conditions, this does not constitute a confirmation of the application of such other discrepant conditions.

1.2 Orders shall be executed in accordance with our written order confirmation. This shall also apply to customized products. Drawings, measurements and weights indicated in the price lists constitute approximations customary in the trade.

1.3 Quotations are not binding and are subject to change.

## 2. Prices

2.1 The sales prices, terms and conditions valid on the date of the order confirmation shall apply. If delivery is effected more than 4 months after conclusion of the contract, the prices, terms and conditions valid on the date of delivery shall apply.

2.2 Value added tax in force on the date of delivery shall be payable on top of the price agreed.

2.3 Prices are ex works or ex warehouse of our agent including packaging, unless otherwise agreed.

## 3. Delivery

3.1 Orders valued at over Euro 500,- net are delivered freight prepaid within Germany or FOB German border. The minimum order value is Euro 75,-. For orders under Euro 75,- we charge an additional processing fee of Euro 15,-.

3.2 Delivery is effected at the expense and risk of the buyer from the factory warehouse or warehouse of our agent. The transport route and type of transportation shall be chosen at our discretion. At the buyer's request the consignment shall be insured at the buyer's expense.

3.3 Delivery periods and delivery dates, which may be agreed as being binding or non-binding, shall apply subject to the precondition that production is free of any disturbance and adequate raw materials and supplies are available. Non-compliance with a delivery date shall entitle the buyer to rescind the contract only under the condition that the buyer has already set a reasonable extended deadline. Setting a deadline is dispensable, if we had confirmed a delivery date in writing and knew that the buyer had no interest in the performance in case of late delivery. Our liability for damages and compensation of expenditure under § 284 Civil Code (BGB) on account of late delivery shall be governed by Article 10.

3.4 If we are prevented from delivering because our operating procedures or those of our suppliers are disturbed in such a way as was impossible to avert using reasonable care, or due to labour disputes or force majeure, the delivery deadline shall be extended appropriately. If delivery should become impossible as a result thereof, our obligation to deliver shall lapse without any obligation arising for us to compensate for damage.

3.5 We have the right to rescind the contract if the financial situation of the buyer should deteriorate by the delivery date, so that under the circumstances of which we become aware, punctual or complete performance of the buyer's payment obligation does not appear likely.

3.6 Modifications in design or form by the manufacturer are reserved during the delivery period insofar as the product being sold is not considerably modified and provided that the modifications are reasonably acceptable for the buyer.

3.7 A minimum order size is compulsory in case of customized products manufactured on the basis of a sample or drawing. We reserve the right to supply 15% more or less. Customized products are not returnable.

## 4. Objections to Defects and Complaints

4.1 The precondition for the buyer's asserting any and all claims on account of defects is compliance with the duty to examine and object to defects set forth in Section 377 German Commercial Code [HGB]. This also applies in case of recourse by the buyer in accordance with Sections 478, 479 German Civil Code [BGB].

4.2 An objection to a defect discernable externally

shall only be deemed effected on time if we receive such objection within 10 days of delivery of our consignment to the buyer. Concealed defects must be objected to as soon as they are discerned, functional defects must be notified immediately after commissioning the equipment.

## 5. Rights of the buyer in case of defects

(formerly warranty) In case of defects (which must have existed at the time of passing of risk to trigger off liability) our liability is as follows:

5.1 We shall effect subsequent performance by delivering a defect-free product unless it is absolutely imperative for the buyer to have the defect remedied and provided that it is possible for us to do so at reasonable expense. We have to be given reasonable time and opportunity to effect subsequent performance. If we are not given this possibility we are released from the obligation to effect subsequent performance and to this extent from further claims on account of defects.

5.2 If no subsequent performance is effected within the deadline set, the buyer shall be entitled to demand damages in lieu of performance and/or rescission in case of considerable defects and, also in case of minor defects, to demand a reduction of the purchase price in lieu of rescission. Setting a deadline as required under subsection

5.1 Above is dispensable only if we have definitively refused to effect subsequent performance, if at least three abortive attempts have been made to effect subsequent performance and if, in case of delivery not properly effected on time on a specific date, we had confirmed a delivery date in writing and knew that the buyer had no interest in subsequent performance if contractual delivery is not effected on time.

5.3 Our duty to pay damages and compensate for any abortive expenses within the meaning of Section 284 BGB on account of defects shall be governed by Article 10. Further reaching claims or claims other than those governed by this Article 5 are excluded on account of defects.

5.4 Subsequent performance and other claims on account of defects do not extend to natural wear and tear or to damage arising after the transfer of risk due to faulty or careless treatment, excess strain, unsuitable operating resources or which arise due to special external influences which are not provided for under the terms of the contract, or to improper modifications or maintenance by the buyer.

5.4 In case of objections to defects the buyer may only withhold payment to an extent which is commensurate with the defects arising.

5.5 The buyer's claims on account of defects shall become time-barred one year after delivery to the buyer. This shall not apply to the buyer's rights to recourse pursuant to Sections 478, 479 BGB.

5.6 We are only liable on the basis of a guarantee given by us if the guarantee of the characteristics or durability is given by us in writing and uses the term "guarantee".

## 6. Returning the products

Products shall only be taken back after a written agreement has been issued by the sales management. The returned products must be in re-saleable condition and in accordance with the current state of the art. Products returned shall be issued with a credit note for the original price less a 15% deduction for processing and transport costs. Customized products may not be returned.

## 7. Payments

7.1 Invoices are payable within 14 days less a 2% discount, alternatively the net amount is payable within 30 days. No higher discount is given.

7.2 We reserve the right to charge default interest in case of late payment.

7.3 Payments made are always offset against the oldest invoice due.

7.4 Bills of exchange are not accepted as a means of payment.

7.5 Payments shall be deemed effected on the day on which we can dispose of the funds.

7.6 A right of retention or offset may only be asserted by the buyer in case of claims which are expressly undisputed or which have been ruled res judicata by a court of law.

## 8. Reservation of title

8.1 We retain title to the goods delivered pending performance in full of all claims to which we are entitled on the basis of the business relation with the buyer. This shall apply subject to the proviso that the reservation of title shall expire definitively upon each settlement of the account during the course of the business relation and that we shall release our security at our discretion at the request of the buyer to the extent that the value of our security lastingly exceeds our outstanding claims by more than 20%. At any event we shall retain title to the goods delivered pending complete payment of the purchase price for the specific goods.

8.2 The buyer is only entitled to on-sell the goods with reserved title in the normal course of business. Pledging the goods or assigning them as security is not permissible. The buyer assigns to us all claims to which the buyer is entitled on the basis of the further sale of the goods with reserved title in the amount of our claim. At our request the buyer shall advise its customers of the assignment and support us in collecting the claims.

8.3 Loss, damage, attachment or other interference in the goods with reserved title by third parties or attachment of the assigned claims are to be notified immediately. Insofar as we recover the goods with reserved title due to danger of damage or other improper treatment, this does not constitute rescission of the contract. Costs arising in connection with asserting our claims shall be refunded by the buyer.

8.4 The recovery of goods or assertion of our reserved title on account of default in payment constitutes rescission of the contract unless otherwise expressly stated by us in writing.

## 9. Impossibility

If the performance due by us is impossible due to a circumstance for which we are responsible, the buyer shall be entitled to claim damages. The amount of such claim for damages shall, however, be limited to 10% of the value of that part of the delivery which cannot be put into pertinent operation due to the impossibility. This shall not apply insofar as we are subject to compulsory liability in case of intent or gross negligence. The buyer's right to rescind the contract shall remain unaffected.

## 10. Liability

Claims for damages or compensation of expenditure by the buyer (hereinafter: claims for damages), irrespective of the legal ground thereof, in particular on account of a breach of duties arising from the obligatory relation or a tortious act, shall be excluded. This shall not apply insofar as there is compulsory liability for instance pursuant to the German Product Liability Act, in case of fatal or physical injury or damage to health, or in case of intent, gross negligence in case of issuance of a guarantee or in case of breach of an essential contractual obligations. Damages on account of a violation of material contractual obligations shall, however, be limited to foreseeable damage typical of the contract, except in case of intent or gross negligence. In cases other than those set forth in these terms and conditions, the buyer may only rescind the contract in the event of fault on our part.

## 11. Final Provisions

11.1 Insofar as these Terms and Conditions provide for liability for fault, whether it be with respect to damages or to rescission, only on account of gross negligence or intent by the seller, this does not involve any reversal of the duty of proof to the detriment of the buyer.

11.2 If one or several of the provisions contained in these Terms and Conditions should be ineffective, this shall not affect the effectiveness of the remaining provisions.

11.3 Place of performance for all obligations is Attendorf, Germany. If the buyer is a registered merchant under German law, either the courts with jurisdiction at the place of domicile of the buyer or, at our discretion, the courts with jurisdiction at the registered office of the company shall have jurisdiction and venue.

11.4 Our contractual relation shall be governed by the laws of the Federal Republic of Germany.

Issued May 2003



# C E R T I F I C A T E

**DQS GmbH**

Deutsche Gesellschaft zur Zertifizierung von Managementsystemen

hereby certifies that the company

**COOPER Hand Tools**

**Cooper Tools GmbH**

Carl-Benz-Strasse 2  
D-74354 Besigheim

for the scope

Development, manufacturing and Distribution of  
electronical and soldering tools, soldering systems and handtools

has implemented and maintains a

**Quality Management System.**

An audit, documented in a report, has verified that this  
quality management system fulfills the requirements  
of the following standard:

**DIN EN ISO 9001 : 2000**

December 2000 edition

This certificate is valid until 2006-06-23

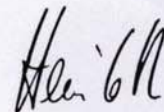
Certificate Registration No.: 000839 QM

Frankfurt am Main, Berlin 2003-06-24



Dr.-Ing. K. Petrick

MANAGING DIRECTORS



Dipl.-Ing. S. Heinloth



D-60433 Frankfurt am Main, August-Schanz-Straße 21  
D-10787 Berlin, Burggrafenstraße 6

