ESAB Welding Automation
for quality, productivity, working environment
**Introduction Orbital TIG**

New and improved metal qualities, rising material and labour costs, but also more sensitive materials, and continuously increasing demands on quality and productivity are factors which you have to deal with daily. ESAB helps you to get ahead and stay ahead. Our metallurgists, chemists, engineers, technicians and skilled welders have one dedication: to find better materials and develop better equipment for your welding.

The ESAB welding program for mechanised tube welding is based on the TIG welding method with a non-consumable tungsten electrode.

To further improve weld quality and decrease costs, ESAB have developed micro-processor controlled power sources for orbital TIG welding, the Aristo® MechTig C2002i, MechTig 3000i and MechTig 4000iw with control boxes Aristo® MechControl 2 and 4. A21 is ESAB’s welding head for tube-to-tube welding, A22 is a welding head for tube-to-tube sheet welding and A25 is a modular component system for orbital TIG welding.

If you need other equipment than what is shown in the catalogue, please contact your nearest ESAB representative.

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**A21 PRB**

The PRB welding head is compact and easy to use as a result of its unique pincer action which reduces setting-up times to a minimum. The welding head is positioned and secured around the tube with great accuracy in seconds. The PRB welding heads are available in three sizes for tubes with outer diameters of 17 to 170 mm.

Use these welding heads together with the Aristo® MechTig power sources.

**Delivery includes**

7 m of connection cable (current, gas, water).

<table>
<thead>
<tr>
<th></th>
<th>PRB 17-49</th>
<th>PRB 33-90</th>
<th>PRB 60-170</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rate of rotation, rpm</td>
<td>0.1-2.4, 0.1-1.6, 0.05-0.95</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tube diameters OD, mm</td>
<td>17-49, 33-90, 60-170</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Max welding current, water, A</td>
<td>250, 250, 250</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Max welding current, air, A</td>
<td>100, 100, 100</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Electrode diameter, mm</td>
<td>1.6, 2.4, 2.4, 1.6</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Ordering information**

<table>
<thead>
<tr>
<th>Product</th>
<th>Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>PRB 17-49, water-cooled</td>
<td>0443 750 882</td>
</tr>
<tr>
<td>PRB 17-49, air-cooled</td>
<td>0443 750 883</td>
</tr>
<tr>
<td>PRB 33-90, water-cooled</td>
<td>0443 760 882</td>
</tr>
<tr>
<td>PRB 33-90, air-cooled</td>
<td>0443 760 883</td>
</tr>
<tr>
<td>PRB 60-170, water-cooled</td>
<td>0443 770 882</td>
</tr>
<tr>
<td>PRB 60-170, air-cooled</td>
<td>0443 770 883</td>
</tr>
</tbody>
</table>

**Accessories for PRB:**

<table>
<thead>
<tr>
<th>Product</th>
<th>Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rebuilding kit for PRB/PRC 17-49 for welding tubes with outside diameters from 8-17 mm</td>
<td>0444 002 880</td>
</tr>
<tr>
<td>Rebuilding kit PRB/PRC 33-90 for welding tubes with outside diameters from 20-33 mm</td>
<td>0443 908 880</td>
</tr>
<tr>
<td>Rebuilding kit PRB/PRC 60-170 for welding tubes with outside diameters from 44-60 mm</td>
<td>0443 909 880</td>
</tr>
<tr>
<td>Wire holder complete with gas lense diameter 24 mm with adjustable wire nozzle for PRB/PRC 33-170</td>
<td>0443 923 880</td>
</tr>
</tbody>
</table>
Orbital TIG welding
Welding heads orbital TIG

A21 PRC

The PRC welding head is a further development of our PRB welding head. The PRC features a zig-zag weaving movement and arc voltage control, which produces higher productivity and better welding quality, particularly when welding thick-walled tubes. These welding heads are used together with the Aristo® MechTig power sources.

**Delivery includes**
7 m of connection cable (current, gas, water).

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### A21 PRC Specifications

<table>
<thead>
<tr>
<th></th>
<th>PRC 17-49</th>
<th>PRC 33-90</th>
<th>PRC 60-170</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rate of rotation, rpm</td>
<td>0.1-2.4</td>
<td>0.1-1.6</td>
<td>0.05-0.95</td>
</tr>
<tr>
<td>Tube diameters OD, mm</td>
<td>17-49</td>
<td>33-90</td>
<td>60-170</td>
</tr>
<tr>
<td>Max welding current, A</td>
<td>20</td>
<td>20</td>
<td>20</td>
</tr>
<tr>
<td>Weaving range, mm</td>
<td>7</td>
<td>7</td>
<td>7</td>
</tr>
<tr>
<td>Weaving speed, mm/s</td>
<td>1.0-12</td>
<td>1.0-12</td>
<td>1.0-12</td>
</tr>
<tr>
<td>Dwell time, s</td>
<td>0.1-10</td>
<td>0.1-10</td>
<td>0.1-10</td>
</tr>
<tr>
<td>Arc setting speed, mm/s</td>
<td>1.1</td>
<td>1.1</td>
<td>1.1</td>
</tr>
<tr>
<td>Weight, kg</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Ordering information**

- PRC 17-49 with AVC: [0443 751 881]
- PRC 17-49 with AVC and weaving: [0443 752 881]
- PRC 33-90 with AVC: [0443 761 881]
- PRC 33-90 with AVC and weaving: [0443 762 881]
- PRC 60-170 with AVC: [0443 771 881]
- PRC 60-170 with AVC and weaving: [0443 772 881]

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A21 PRD 100

The PRD 100 welding head is designed for precision, quality and technology of the highest class. It is a TIG welding head for tubes with an outer diameter of 100 mm and upwards. The PRD 100 is very compact in design and, as a result of its low profile, requires only 73 mm of clearance around the tube. The welding head is water-cooled and designed for amperage of up to 400 A. The mechanical settings are easy, all the welding parameters are incorporated in the procedure program which are controlled by a microprocessor system. Use this welding head together with the Aristo® MechTig power sources.

**Delivery includes**
8 m of connection cable (current, gas, water) and motor cable.

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### A21 PRD 100 Specifications

<table>
<thead>
<tr>
<th></th>
<th>PRD 100</th>
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</thead>
<tbody>
<tr>
<td>Rotation speed, cm/min</td>
<td>2-40</td>
</tr>
<tr>
<td>Tube diameters OD, mm</td>
<td>100 to flat</td>
</tr>
<tr>
<td>Electrode diameter, mm</td>
<td>1.0-4.0</td>
</tr>
<tr>
<td>Max welding current, A</td>
<td>400 (pulsed DC)</td>
</tr>
<tr>
<td>Weaving range, mm</td>
<td>+/-15</td>
</tr>
<tr>
<td>Weaving speed, mm/s</td>
<td>1-10</td>
</tr>
<tr>
<td>Dwell time, s</td>
<td>0.1-10</td>
</tr>
<tr>
<td>Arc voltage control amplitude, mm</td>
<td>25</td>
</tr>
<tr>
<td>Arc setting speed, mm/s</td>
<td>2.0</td>
</tr>
<tr>
<td>Weight, kg</td>
<td>8</td>
</tr>
</tbody>
</table>

**Ordering information**

- PRD 100 welding head: [0444 016 880]
- Racks and accessories see page 69
Orbital TIG welding
Welding heads orbital TIG

**A21 PRD 160**

The PRD 160 is a water-cooled flexible pipe-welding head, for pipes with an outer diameter of 160 mm and upwards. The PRD consists of an articulated carriage that travels around the pipe on a rack that is adapted to match the diameter of the pipe. To ensure maximum flexibility, the welding head is built in modules. The basic unit, for thin-walled pipes, includes only one motor, for travel. Depending on the application, it is possible to add wire-feed-, arc voltage control- and weaving-modules for the thicker wall applications. PRD 160 can be used together with the Aristo® MechTig power sources.

**Delivery includes**

8 m of connection cable (current, gas, water) and motor cable.

**Ordering information**

Basic unit intended only for fusion welding with a floating head 0444 151 880
Basic unit with wire feeder unit complete 0444 151 881
Basic unit with AVC (Arc Voltage Control) 0444 151 882
Basic unit with AVC plus wire feeder unit complete 0444 151 883
Basic unit with AVC plus wire feeder unit complete and weave unit 0444 151 884
Wire feeder unit complete 0444 137 880
AVC (Arc Voltage Control) complete 0443 656 881
Weave unit complete 0444 140 880
Racks and accessories, see page 69

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**PRD 160**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>PRD 160</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rotation speed, cm/min</td>
<td>2-40</td>
</tr>
<tr>
<td>Tube diameters OD, mm</td>
<td>160-1025</td>
</tr>
<tr>
<td>Electrode diameter, mm</td>
<td>1.6-3.2</td>
</tr>
<tr>
<td>Max welding current, A</td>
<td>400 (pulsed DC)</td>
</tr>
<tr>
<td>Weaving range, mm</td>
<td>+/-15</td>
</tr>
<tr>
<td>Weaving speed, mm/s</td>
<td>2-12</td>
</tr>
<tr>
<td>Dwell time, s</td>
<td>0.1-10</td>
</tr>
<tr>
<td>Weight, kg</td>
<td>8</td>
</tr>
</tbody>
</table>

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**A21 PRH**

ESAB’s PRH tube-welding tool is designed for welding thin-walled, stainless steel tubes in order to provide maximum gas shielding around the tube. The tool has been designed according to the chamber principle to produce this shield. This means that the rotating part and the Tungsten electrodes are enclosed in a gas chamber formed by the outer casing, which also constitutes the clamping arrangement for the tube to be welded. The tube-welding tool is water-cooled and forms a complete unit which also incorporates the return conductor. It is available in three sizes, PRH 3-12, PRH 3-38 and PRH 6-76, making it possible to weld tubes of between 3 mm and 76.2 mm. All three heads are equipped with encoder motors for precise positioning of each sector when welding with different sets of parameters.

**Delivery includes**

8 m of connection cable (current, gas, water and return).

**PRH 3-12 PRH 3-38 PRH 6-76**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>PRH 3-12</th>
<th>PRH 3-38</th>
<th>PRH 6-76</th>
</tr>
</thead>
<tbody>
<tr>
<td>Max output at 100% duty cycle, A</td>
<td>15</td>
<td>50</td>
<td>60</td>
</tr>
<tr>
<td>Rate of rotation, rpm</td>
<td>0.65-12.6</td>
<td>0.5-9.5</td>
<td>0.31-6.15</td>
</tr>
<tr>
<td>Tube diameters OD, mm</td>
<td>3-12.7</td>
<td>3-38.1</td>
<td>6-76.2</td>
</tr>
<tr>
<td>Max welding current, water, A</td>
<td>40 (pulsed)</td>
<td>100 (pulsed)</td>
<td>100 (pulsed)</td>
</tr>
<tr>
<td>Electrode diameter, mm</td>
<td>1.0</td>
<td>1.6/2.4</td>
<td>1.6/2.4</td>
</tr>
<tr>
<td>Weight, kg</td>
<td>5.0</td>
<td>6.5</td>
<td>7.5</td>
</tr>
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</table>

**Ordering information**

Welding head PRH 3-12 0444 300 880
Welding head PRH 3-38 0444 301 880
Welding head PRH 6-76 0444 302 880

Cartridges and collets are available for all diameters within the working range for each tool. Standard sizes, see page 70
Orbital TIG welding
Welding heads orbital TIG

A22 POC
The POC 12-60 is a welding head for tube-to-tube sheet TIG welding. It is a precision-built, robust and versatile welding head which can be used for all types of tube-to-tube-sheet welding. The POC has a working range of 12 to 60 (93) mm outer tube diameter. The centering accuracy of the POC is very high and centering mandrels are available for inner tube diameters from 10.0 mm. POC can be used together with the Aristo® MechTig power sources.

Delivery includes
8 m of connection cable (current, gas, water).

<table>
<thead>
<tr>
<th>POC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rate of rotation, rpm</td>
</tr>
<tr>
<td>Working range, electrode parallel to tube axis, mm</td>
</tr>
<tr>
<td>Working range, electrode at 30° from tube axis, mm</td>
</tr>
<tr>
<td>Filler wire diameter, mm</td>
</tr>
<tr>
<td>Filler wire speed, mm/s</td>
</tr>
<tr>
<td>Max spool dimension/weight, Ø mm/kg</td>
</tr>
<tr>
<td>Weight, kg</td>
</tr>
</tbody>
</table>

Ordering information
POC 12-60 welding head 0443 930 880

Mandrels and accessories, see page 71
Orbital TIG welding
A25 modular components

A25
A25 is a modular component system – the key to TIG welding mechanisation. The modular components can easily be put together to create a system to suit your requirements. The TIG-narrow gap method can also be used together with the A25 system. Narrow gap with an extremely small joint angle and resulting in low joint volume.
The A25 modular system is used together with the Aristo® MechTig power sources.

<table>
<thead>
<tr>
<th>Parameter</th>
<th>A25</th>
</tr>
</thead>
<tbody>
<tr>
<td>AVC slide amplitude, mm</td>
<td>76</td>
</tr>
<tr>
<td>AVC slide speed, mm/s</td>
<td>2.81</td>
</tr>
<tr>
<td>Weaving slide amplitude, mm</td>
<td>76</td>
</tr>
<tr>
<td>Weaving slide speed, mm/s</td>
<td>19</td>
</tr>
<tr>
<td>Manual slide amplitude, mm</td>
<td>93</td>
</tr>
<tr>
<td>Floating slide amplitude, mm</td>
<td>76</td>
</tr>
<tr>
<td>Wire diameter, mm</td>
<td>0.6-1.6</td>
</tr>
<tr>
<td>Wire feed, m/min</td>
<td>0.1-2.6</td>
</tr>
<tr>
<td>Motor VEC with encoder, speed, rpm</td>
<td>1000</td>
</tr>
<tr>
<td>Motor VEC with encoder, ratio</td>
<td>672:1</td>
</tr>
</tbody>
</table>

Wire capacity as standard:
A25 with BTE 250M 0.6-1.2 mm,
A25 with BTE 500M 0.6-0.8, 1.2-1.6 mm

Ordering information
A25 welding automat with AVC and weaving slides, wire feed unit, VEC motor with turntable and BTE 250M torch mounted on a stand 0443 910 880
A25 welding automat with AVC and weaving slides, wire feed unit, VEC motor with turntable and BTE 500M torch mounted on a stand 0443 910 881
A25 welding automat with AVC and BTE 250M torch 0443 911 880
A25 welding automat with AVC and BTE 500M torch 0443 911 881
A25 welding automat with AVC and weaving slides, BTE 250M torch 0443 911 882
A25 welding automat with AVC and weaving slides, BTE 500M torch 0443 911 883
A25 welding automat with AVC and manual horizontal slide, BTE 250M torch 0443 911 884
A25 welding automat with AVC and manual horizontal slide, BTE 500M torch 0443 911 885
A25 welding automat with manual vertical and horizontal slide, BTE 250M torch 0443 911 886
A25 welding automat with manual vertical and horizontal slide, BTE 500 M torch 0443 911 887
A25 welding automat with slides for floating head, BTE 250M torch 0443 912 880
A25 welding automat with slides for floating head, BTE 500M torch 0443 912 881
Railbound carriage with a 2 m track for fitting A25 welding heads 0458 002 880
PAL 3 connection box for external motor regulator 0457 870 880

Components and accessories, see page 71
Orbital TIG welding

Accessories

Standard racks for PRD 100

A specific size of rack is used for each pipe diameter. The standard racks are listed under ordering information. Individual requirements relating to racks for other diameters can be supplied to order within the working range of the PRD welding head.

Ordering information

**Outer diameter of the pipe:**

<table>
<thead>
<tr>
<th>Diameter</th>
<th>Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>114.30 mm</td>
<td>333 400 880</td>
</tr>
<tr>
<td>141.30 mm</td>
<td>333 400 881</td>
</tr>
<tr>
<td>168.27 mm</td>
<td>333 400 882</td>
</tr>
<tr>
<td>189.07 mm</td>
<td>333 400 883</td>
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<tr>
<td>273.05 mm</td>
<td>333 400 884</td>
</tr>
<tr>
<td>323.85 mm</td>
<td>333 400 885</td>
</tr>
<tr>
<td>406.40 mm</td>
<td>333 400 887</td>
</tr>
<tr>
<td>457.20 mm</td>
<td>333 400 888</td>
</tr>
<tr>
<td>508.00 mm</td>
<td>333 400 889</td>
</tr>
<tr>
<td>558.80 mm</td>
<td>333 400 890</td>
</tr>
<tr>
<td>609.60 mm</td>
<td>333 400 891</td>
</tr>
<tr>
<td>660.00 mm</td>
<td>333 400 892</td>
</tr>
<tr>
<td>711.00 mm</td>
<td>333 400 893</td>
</tr>
<tr>
<td>762.00 mm</td>
<td>333 400 894</td>
</tr>
<tr>
<td>813.00 mm</td>
<td>333 400 895</td>
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</tbody>
</table>

**Feet for standard racks with tube diameters minus ...**

<table>
<thead>
<tr>
<th>Diameter</th>
<th>Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>4 mm</td>
<td>0333 402 881</td>
</tr>
<tr>
<td>8 mm</td>
<td>0333 402 882</td>
</tr>
<tr>
<td>12 mm</td>
<td>0333 402 883</td>
</tr>
<tr>
<td>16 mm</td>
<td>0333 402 884</td>
</tr>
<tr>
<td>20 mm</td>
<td>0333 402 885</td>
</tr>
<tr>
<td>24 mm</td>
<td>0333 402 886</td>
</tr>
<tr>
<td>28 mm</td>
<td>0333 402 887</td>
</tr>
<tr>
<td>32 mm</td>
<td>0333 402 888</td>
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<tr>
<td>36 mm</td>
<td>0333 402 889</td>
</tr>
<tr>
<td>40 mm</td>
<td>0333 402 890</td>
</tr>
</tbody>
</table>

Standard racks for PRD 160

Ordering information

**Outer diameter of the pipe:**

<table>
<thead>
<tr>
<th>Diameter</th>
<th>Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>161-177 mm</td>
<td>0444 063 880</td>
</tr>
<tr>
<td>185-201 mm</td>
<td>0444 063 881</td>
</tr>
<tr>
<td>209-225 mm</td>
<td>0444 063 882</td>
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<tr>
<td>225-241 mm</td>
<td>0444 063 883</td>
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<tr>
<td>249-265 mm</td>
<td>0444 063 884</td>
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<tr>
<td>265-281 mm</td>
<td>0444 063 885</td>
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<td>289-305 mm</td>
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<td>313-329 mm</td>
<td>0444 063 887</td>
</tr>
<tr>
<td>329-345 mm</td>
<td>0444 063 888</td>
</tr>
<tr>
<td>345-361 mm</td>
<td>0444 063 889</td>
</tr>
<tr>
<td>361-377 mm</td>
<td>0444 063 890</td>
</tr>
<tr>
<td>385-401 mm</td>
<td>0444 063 891</td>
</tr>
<tr>
<td>401-417 mm</td>
<td>0444 063 892</td>
</tr>
<tr>
<td>425-441 mm</td>
<td>0444 063 893</td>
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<tr>
<td>449-465 mm</td>
<td>0444 063 894</td>
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<td>473-489 mm</td>
<td>0444 063 895</td>
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<td>497-513 mm</td>
<td>0444 063 896</td>
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<td>513-529 mm</td>
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<td>537-553 mm</td>
<td>0444 063 898</td>
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<td>553-569 mm</td>
<td>0444 063 899</td>
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**Feet for standard racks with tube diameters minus ...**

<table>
<thead>
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<tbody>
<tr>
<td>577-593 mm</td>
<td>0444 063 900</td>
</tr>
<tr>
<td>601-617 mm</td>
<td>0444 063 901</td>
</tr>
<tr>
<td>625-641 mm</td>
<td>0444 063 902</td>
</tr>
<tr>
<td>649-665 mm</td>
<td>0444 063 903</td>
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<tr>
<td>665-681 mm</td>
<td>0444 063 904</td>
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<tr>
<td>689-705 mm</td>
<td>0444 063 905</td>
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<td>705-721 mm</td>
<td>0444 063 906</td>
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<tr>
<td>729-745 mm</td>
<td>0444 063 907</td>
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<tr>
<td>753-769 mm</td>
<td>0444 063 908</td>
</tr>
<tr>
<td>777-793 mm</td>
<td>0444 063 909</td>
</tr>
<tr>
<td>801-817 mm</td>
<td>0444 063 910</td>
</tr>
<tr>
<td>817-833 mm</td>
<td>0444 063 911</td>
</tr>
<tr>
<td>841-857 mm</td>
<td>0444 063 912</td>
</tr>
<tr>
<td>857-873 mm</td>
<td>0444 063 913</td>
</tr>
<tr>
<td>881-897 mm</td>
<td>0444 063 914</td>
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<td>905-921 mm</td>
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<tr>
<td>929-945 mm</td>
<td>0444 063 916</td>
</tr>
<tr>
<td>953-969 mm</td>
<td>0444 063 917</td>
</tr>
<tr>
<td>969-985 mm</td>
<td>0444 063 918</td>
</tr>
<tr>
<td>993-1009 mm</td>
<td>0444 063 919</td>
</tr>
<tr>
<td>1009-1025 mm</td>
<td>0444 063 920</td>
</tr>
</tbody>
</table>

Other diameters are available upon request.
## Orbital TIG welding

### Accessories

### Collets and cartridges

#### Ordering information

<table>
<thead>
<tr>
<th>Cartridge</th>
<th>Part Number</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cartridge C</td>
<td>0444 310 880</td>
<td>PRH 3-12 Collets PRH 6-76 blanks</td>
</tr>
<tr>
<td>Cartridge MF 6.0 mm</td>
<td>0444 310 881</td>
<td>Collets PRH 6-76 6.0 mm</td>
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<td>Cartridge MF 6.35 mm</td>
<td>0444 310 882</td>
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</tr>
<tr>
<td>Cartridge MF 8.0 mm</td>
<td>0444 310 883</td>
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<td>Cartridge MF 9.53 mm</td>
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<td>Cartridge MF 10.0 mm</td>
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<td>Cartridge MF 12.0 mm</td>
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<tr>
<td>Cartridge MF 12.70 mm</td>
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<td>Collets PRH 6-76 12.70 mm</td>
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<tr>
<td>Cartridges for Cartridge C, one set, four halves</td>
<td></td>
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<tr>
<td>Collets C blanks</td>
<td>0444 311 001</td>
<td>Collets PRH 6-76 13.50 mm</td>
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<td>Collets C 6.0 mm</td>
<td>0444 311 002</td>
<td>Collets PRH 6-76 16.0 mm</td>
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<td>Collets C 6.35 mm</td>
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<tr>
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<td>0444 311 005</td>
<td>Collets PRH 6-76 19.05 mm</td>
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<tr>
<td>Collets C 10.0 mm</td>
<td>0444 311 006</td>
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<td>Collets C 12.0 mm</td>
<td>0444 311 007</td>
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<tr>
<td>Collets C 12.70 mm</td>
<td>0444 311 008</td>
<td>Collets PRH 6-76 22.00 mm</td>
</tr>
<tr>
<td>PRH 6-76 Collets, one set, four halves</td>
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<td></td>
</tr>
<tr>
<td>Collets PRH 3-38, blanks</td>
<td>0444 312 001</td>
<td>Collets PRH 6-76 25.0 mm</td>
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<td>Collets PRH 6-76 53.0 mm</td>
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<td>Collets PRH 6-76 6.0 mm</td>
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<td>Collets PRH 3-38 34.0 mm</td>
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<td>Collets PRH 6-76 12.70 mm</td>
</tr>
<tr>
<td>Collets PRH 3-38 35.0 mm</td>
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<td>Collets PRH 6-76 13.50 mm</td>
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<td>Collets PRH 3-38 38.10 mm</td>
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<td>Collets PRH 6-76 16.0 mm</td>
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<td>Collets PRH 6-76 12.0 mm</td>
<td>0444 310 887</td>
<td>Collets PRH 6-76 21.30 mm</td>
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</tbody>
</table>
Orbital TIG welding

Accessories

A25 components and accessories

Ordering information
Bracket 0441 404 880
Wire feed unit, incl feed roller, 0.6-0.8 mm 0441 300 882
Feed roller 1.0 – 1.2 mm 0369 557 003
Feed roller 1.2 – 1.6 mm 0369 557 007
Outlet pipe 0.8 – 1.2 mm 0441 456 881
Outlet pipe 1.6 mm 0441 456 882
Connection cable, feed unit 10 m 0456 904 881
Wire hose, per metre (std 400 mm) 0192 799 112
Wire nozzle, BTE 250M 0441 407 880
Wire nozzle, BTE 500M 0441 407 881
TIG torch BTE 250M, 4.0 m 0444 295 880
TIG torch BTE 500M, 4.0 m 0444 296 880
Holder BTE 250M 0441 414 880
Holder BTE 500M 0441 414 881
Slide AVC, setting range 76 mm 0443 913 880
Circular slide 0145 945 880
Slide manual, setting range 90 mm 0413 518 880
Slide weaving, setting range 76 mm 0441 674 881
Slide floating, setting range 76 mm 0441 674 881
Single guide wheel unit, BTE 250M 0441 833 881
Single guide wheel unit, BTE 500M 0441 833 881
Bracket 0441 412 880
Brake hub 0146 967 881
Motor VEC with tacho, speed 1000 rpm, ratio 672:1 0457 258 880
Control unit to VEC 0457 222 880
Turntable with return cable connection for VEC motor 0442 712 880
Narrow Gap kit for BTE 500M 0441 667 880

POC 12-60 accessories

Ordering information
Counterbalancing block 0332 207 880
Three-point support complete with electrode holder. To be used for fillet weld up to Ø 36 mm 0333 897 880
Three-point support complete with electrode holder. To be used for fillet weld from Ø 36 mm to Ø 93 mm 0333 897 883
Front casting, titanium 0441 000 880
Internal bore welding torch 9.5-15 0441 131 880
Internal bore welding torch 15-20 0441 132 880
Internal bore welding torch 20-30 0441 133 880
Orbital TIG welding
Accessories

Angular support
The angular support is used to adjust the electrode angle in the joint. The support is available for PRB/PRC 17-49, 33-90 and 60-170.

Ordering information
Angular support 0443 875 880

Narrow gap head for PRD
ESAB have developed equipment for Narrow Gap welding together with the PRD welding head. The TIG Narrow Gap Orbital Welding has an extremely narrow groove with a subsequent small joint volume. Welding in all positions is possible. Stainless and carbon steel can be welded.

Ordering information
Narrow Gap head 50 mm, PRD 100 0441 623 880
Narrow Gap head 80 mm, PRD 100 0441 623 881
Narrow Gap head 50 mm, PRD 160 0444 339 880
Wire straightener Ø 0.8 mm 0441 355 882
Wire straightener Ø 1.2 mm 0441 355 880

Balancing block
The balancing block is capable of carrying welding heads, drilling and grinding machines weighing 5.5-9 kg. The wire can be extended to a maximum length of 2.7 metre. The spring force is constant, i.e. the wire has the same lifting capacity irrespective of the length to which it has been extended.

Ordering information
Balancing block 0332 330 005

Remote control MechT 1 CAN
MechT 1 CAN is a small remote control that is easy to use and can control most of the parameters on Aristo® MechControl 2 and 4 and Aristo® MechTig C2002i. The cable between the control unit and remote control is available in different lengths.

Ordering information
Remote control MechT 1 CAN 0460 181 880
Cable, length 5 m 0459 554 880
Cable, length 10 m 0459 554 881
Cable, length 15 m 0459 554 882
Cable, length 25 m 0459 554 883
Cable, length 0.25 m 0459 554 884
Orbital TIG welding
Ancillary equipment

MEI 21 wire feed unit
The MEI 21 is a wire feed unit with four wheel drive for orbital TIG welding. A separate wire feed unit is a great advantage since it eliminates the need for a wire feed unit and wire spool mounted on the welding head. 5 kg wire spools can be used. The MEI 21 can be used for wire dimensions from 0.6 mm to 0.8 mm and can be used together with the Aristo® MechTig power sources.

Delivery includes
The MEI 21 wire feed unit is delivered with a wire hose.

<table>
<thead>
<tr>
<th></th>
<th>MEI 21</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wire diameter, mm</td>
<td>0.6-0.8</td>
</tr>
<tr>
<td>Wire feed, m/min</td>
<td>0.1-2.6</td>
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<tr>
<td>Max spool dimension/weight, Ø mm/kg</td>
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<tr>
<td>Hub width, mm</td>
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<tr>
<td>Hub hole diameter, mm</td>
<td>51.5</td>
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<tr>
<td>Wire guide length, m</td>
<td>4.2</td>
</tr>
<tr>
<td>Weight, kg</td>
<td>4</td>
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</tbody>
</table>

Ordering information
MEI 21 0443 830 880

MEI 10 wire feed unit
The MEI 10 is a wire feed unit developed for mounting on PRB/PRC 17-170 tools (PRC 17-49 only with AVC). PRB/PRC tools with MEI 10 can be used together with the Aristo® MechTig power sources.

The increase in size of the tool when it is mounted, is kept to a minimum due to the compact design of the wire feed unit. Thanks to the very short distance the wire needs to be fed, from the reel to the molten pool, the MEI 10 is ideal for aluminium welding. It is naturally also possible to use the wire-feed unit for mild and stainless steel welding. The MEI 10 weighs only 0.5 kg (without bobbin and cable) and it can be used for wire dimensions of 0.8 mm to 1.0 mm for aluminium and 0.8 mm for steel. A geared DC motor drives the feed roller via gear wheels. The motor is equipped with a pulse generator which enables the precise adjustment of the wire feed speed.

<table>
<thead>
<tr>
<th></th>
<th>MEI 10</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wire diameter, mm</td>
<td>0.8 (steel)</td>
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<tr>
<td>Wire feed, m/min</td>
<td>0.1-1.2</td>
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<tr>
<td>Max spool dimension/weight, Ø mm/kg</td>
<td>60/0.26</td>
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<tr>
<td>Wire guide length, m</td>
<td>0.1</td>
</tr>
<tr>
<td>Weight, kg</td>
<td>0.5 (excl bobbin)</td>
</tr>
</tbody>
</table>

Ordering information
MEI 10 for PRB 17-49 & PRC 17-49 with AVC 0444 211 880
MEI 10 for PRB 33-90, PRC 33-90 with AVC & PRC with AVC and weaving 0444 212 880
MEI 10 for PRB 60-170, PRC 60-170 with AVC & PRC 60-170 with AVC and weaving 0444 213 880
Bobbin (empty) 0444 192 001
Orbital TIG welding
Power sources orbital TIG

Aristo® MechTig C2002i
Aristo® MechTig C2002i is a small and compact orbital welding power source with integrated water cooler which together with the excellent tube welding heads provides high quality and productivity. The machine is equipped with a 10 inch colour monitor and the interface is windows like. For control of the welding settings you can either use a graphical interface to control all necessary parameters or a spread sheet where you can see all parameters. The Aristo® MechTig C2002i is delivered with a ready library where you can find a number of pre-defined programs that you can use for fast and easy set-up. There is also a function for auto generation of programs. This function creates a start program, the only thing you need to do is to key in some basic parameters as material, outer diameter and the thickness of the pipe. The welding program can then be stored in the program library. Aristo® MechTig C2002i can be used together with the welding heads PRB, PRD 160 with wire feed unit, PRH, POC, wire feed units MEI 10, MEI 21 and A25 component system with manual/floating slides.

<table>
<thead>
<tr>
<th>Aristo™ MechTig C2002i</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mains supply, V/Hz</td>
</tr>
<tr>
<td>Setting range TIG, A</td>
</tr>
<tr>
<td>Open circuit voltage, V</td>
</tr>
<tr>
<td>Fuse (slow), A</td>
</tr>
<tr>
<td>Max output at 35% duty cycle, A/V</td>
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<tr>
<td>Max output at 60% duty cycle, A/V</td>
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<tr>
<td>Max output at 100% duty cycle, A/V</td>
</tr>
<tr>
<td>External dimensions, LxWxH</td>
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<tr>
<td>Weight, kg</td>
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</table>

Ordering information
Aristo® MechTig C2002i 0444 700 880

Accessories:
Trolley 0301 100 880
Remote control MechT 1 CAN 0460 181 880
Cable between MechTig C2002i and MechT 1 CAN:
Length 5 m 0459 554 880
Length 10 m 0459 554 881
Length 15 m 0459 554 882
Length 25 m 0459 554 883
Length 0.25 m 0459 554 884

Aristo® MechControl 2 and 4
Aristo® MechControl 2 and 4 is a small and compact orbital welding control box that together with a MechTig power source will provide high quality and productivity together with the excellent tube welding heads. The machine is equipped with a 10 inch colour monitor and the interface is windows like. For control of the welding settings you can either use a graphical interface to control all necessary parameters or a spread sheet where you can see all parameters. The Aristo® MechControl 2 and 4 are delivered with a ready library where you can find a number of pre-defined programs that you can use for fast and easy set-up. There is also a function for auto generation of programs. This function creates a start program, the only thing you need to do is to key in some basic parameters as material, outer diameter and the thickness of the pipe. The welding program can then be stored in the program library. Aristo® MechControl 2 can use the same tools as Aristo® MechTig C2002i, i.e. welding heads PRB, PRD 160 with wire feed unit, PRH, POC, wire feed units MEI 10, MEI 21 and A25 component system with manual/floating slides. Aristo® MechControl 4 can use all the tools that we have in our program.

<table>
<thead>
<tr>
<th>Aristo® MechControl 2 and 4</th>
</tr>
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<tbody>
<tr>
<td>Mains supply, V/Hz</td>
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<tr>
<td>External dimensions, LxWxH, mm</td>
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<tr>
<td>Weight, kg</td>
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<td>Weight, kg</td>
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</table>

Ordering information
Aristo® MechControl 2 0444 500 880
Aristo® MechControl 4 0444 500 881

Accessories:
Connection cable 1.7 m 0460 210 880
Connection cable 8.0 m 0460 210 881
Remote control MechT 1 CAN 0460 181 880
Cable between MechControl 2 or 4 and MechT 1 CAN:
Length 5 m 0459 554 880
Length 10 m 0459 554 881
Length 15 m 0459 554 882
Length 25 m 0459 554 883
Length 0.25 m 0459 554 884
Orbital TIG welding
Power sources orbital TIG

Aristo® MechTig 3000i
Aristo® MechTig 3000i is the ideal partner together with Aristo MechControl 2 or 4 when it comes to efficient production and prefabrication of high alloyed and low alloyed materials with a very high demand on the welding performance.

**Aristo® MechTig 3000i**

- Mains supply, V/Hz: 3x400, 50/60
- Open circuit voltage, V: 57-67
- External dimensions, LxWxH, mm: 652x249x423
- Weight, kg: 30

**Ordering information**

Aristo® MechTig 3000i

0459 745 882

Accessories:
- CoolMidi 1800 MechTig
  0459 840 881
- Trolley 2-wheel
  0459 366 890
- Trolley 4-wheel
  0460 060 880
- Connection cable, 1.7 m
  0460 210 880
- Connection cable, 8.0 m
  0460 210 881

Delivery includes 5 m mains cable incl plug and 5 m return cable incl earth clamp.

Aristo® MechTig 4000iw
The Aristo® MechTig 4000iw is designed to work together with the Aristo® MechControl 2 and 4. The power source is compact and sturdy and based on inverter technology that provides reliable equipment with outstanding welding characteristics.

Connection cables up to 8 meters provides a working range of up to 16 meters to suit all your individual welding needs.

**Aristo™ MechTig 4000iw**

- Mains supply, V/Hz: 3x400, 50/60
- Setting range TIG DC, A: 4-400
- Open circuit voltage, V: 78-90
- Fuse (slow), A: 16
- Max output at 35% duty cycle, A / V: 400 / 26
- Max output at 60% duty cycle, A / V: 320 / 23
- Max output at 100% duty cycle, A / V: 250 / 20
- Power factor at maximum current: 0.75
- Efficiency at maximum current, %: 97.1
- External dimensions (with cooling unit), LxWxH: 625x394x776
- Weight, kg: 81

**Ordering information**

Aristo® MechTig 4000iw

0458 625 886

Accessories
- Multi voltage unit, wide body
  0459 145 880
- Handles incl mounting screws for Multi voltage unit (compl set = 2)
  0459 307 881
- Trolley
  0458 530 880
- Guide pin (if no trolley)
  0458 731 880
- Connection cable, 1.7 m
  0460 210 880
- Connection cable, 8.0 m
  0460 210 881

Delivery includes:
- 5 m mains cable incl plug and 5 m return cable incl earth clamp.
Welding automation
Mechanisation equipment

Railtrac 1000

Railtrac 1000 is a series of programmable and portable equipment for mechanising welding and cutting. Different solutions often provide the answer to monotonous, gruelling work and produce higher productivity and more consistent quality at the same time. Railtrac is specially designed for MIG/MAG and TIG welding and thermal cutting.

Railtrac is made up of robust components and is available in the following four basic models. All the models have five different programs, including interval welding. The rail can be fixed in place using suction cups of the ejector type, screw attachments or permanent magnets.

- Railtrac F1000, Flexi, the least complex equipment for welding or cutting along a combi-rail, either flexible or stiffened.
- Railtrac FW1000, Flexi Weaver, the Flexi system plus a remote-control unit and a weaving device which makes it possible to weave the arc according to different patterns.
- Railtrac FR1000, Flexi Return, has the combi-rail. It also has movable start and stop indicators for automatic operation.
- Railtrac FWR1000, Flexi Weaver Return, also has the flexible combi-rail, a remote-control unit, a weaving device and start and stop indicators for automatic operation.

Using the remote control, it is possible to select:

- Start and stop
- Travel or welding direction/cutting direction
- Travel or welding speed/cutting speed
- Weaving width
- Zero-line displacement
- Rapid speed on/off
- Backfill function
- Potentiometer control of welding parameters

<table>
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<tbody>
<tr>
<td>Rail length, m</td>
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<tr>
<td>Rail bending radius, min, mm</td>
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<tr>
<td>Welding speed, m/min</td>
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<tr>
<td>Transport speed, m/min</td>
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<tr>
<td>Weaving range, mm</td>
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<tr>
<td>Weaving speed, mm/s</td>
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<tr>
<td>Dwell time, s</td>
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</table>
Welding automation
Mechanisation equipment

Railtrac F1000
Railtrac F1000, Flexi, for welding and thermal cutting.
• Welds and cuts in all positions on magnetic and non-magnetic materials
• Quick assembly and easy operation
• Programmable with five programs
• Calibrated setting values in cm, mm and sec
• Programmable “backfill” for crater filling
• Self-instructive programming manual
• Stiff or flexible, robust rail made of standard aluminium profiles without racks
• Track which can be extended or cut to required length
• Angled attachment for quick adjustment of pistol angle (option)
• “Floating” head for mechanical height maintenance (option)

Railtrac FR1000
Railtrac FR1000, Flexi Return, for welding and cutting with automatic return.
• Welds and cuts in all positions on magnetic and non-magnetic materials
• Quick set-up and easy operation
• Programmable with five programs
• Calibrated setting values in mm, cm and sec
• Programmable “backfill” for crater filling
• Self-instructive programming manual
• Stiff or flexible rail made of standard aluminium profiles without racks
• Rail which can be extended bent or cut
• Angle bracket for quick adjustment of torch angle (option)
• “Floating” head for mechanical height maintenance (option)

Railtrac FWR1000
Railtrac FWR1000, Flexi Weaver Return, for oscillated welding with automatic return.
• Welds in all positions on magnetic and non-magnetic materials
• Quick set-up and easy operation
• Programmable with five programs
• Calibrated setting values in mm, cm and sec
• Programmable “backfill” for crater filling
• Self-instructive programming manual
• Flexible rail made of standard aluminium profiles without racks
• Rail which can be extended or cut to required length
• Angle bracket for quick adjustment of torch angle (option)
• Tiltable weaving unit for fillet welds (option)
• Turnable weaving unit for horizontal weaving in sloping joints (option)
• “Floating” head for mechanical height maintenance (option)
• Potentiometers in the remote control for parameter adjustments

Railtrac FW1000/FW1000 L
Railtrac FW1000, Flexi Weaver, for oscillated welding. The Railtrac FW1000 can be delivered in a "FW1000 L" version if the welding process need to be done with a lower welding speed than with FW1000.
• Welds and cuts in all positions on magnetic and non-magnetic materials
• Quick set-up and easy operation
• Programmable with five programs
• Calibrated setting values in cm, mm and sec
• Self-instructive programming manual
• Resilient remote control with profiled membrane buttons
• Stiff or flexible rail made of standard aluminium profiles without racks
• Rail which can be extended or cut to required length
• Angle bracket for quick adjustment of torch angle (option)
• Tiltable weaving unit for fillet welds (option)
• Turnable weaving unit for horizontal weaving in sloping joints (option)
• “Floating” head for mechanical height maintenance (option)
• Potentiometers in the remote control for parameter adjustments
Welding automation
Mechanisation equipment

Railtrac BV1000/BVR1000

Railtrac BV1000 and BVR1000 are two automatic units for mechanising the repair and hardfacing of rail profiles smoothly and efficiently. The equipment can be assembled, programmed and controlled quickly and easily by one person. Learning to use it is easy and handling is extremely fast.

The system comprises two rail fasteners, a stable aluminium profile, a carriage with a weaving unit, control electronics and remote control. The weaving unit and control electronics are fully synchronised to enable a number of weaving patterns to be pre-programmed.

The weaving movements start from a laterally adjustable zero line, either the outer side or the inner side of the rail. This zero line can also be moved laterally during welding. Different speeds can be used in each program to produce the most consistent weld metal thickness possible.

The remote control unit enables the welder to have full control of all the movements of the machine without lifting his/her welding visor.

Railtrac BV1000, with a weaving device and four different programs.

Railtrac BVR1000, with a weaving device, start and stop indicators, return function for automatic operation and six different programs.

<table>
<thead>
<tr>
<th>Railtrac BV/BVR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rail length, m</td>
</tr>
<tr>
<td>Welding speed, m/min</td>
</tr>
<tr>
<td>Weaving range, mm</td>
</tr>
<tr>
<td>Weaving speed, mm/s</td>
</tr>
<tr>
<td>Max power consumption, W</td>
</tr>
<tr>
<td>Control voltage, V, AC</td>
</tr>
<tr>
<td>Crater fill duration, s</td>
</tr>
<tr>
<td>Zero-line shift, mm</td>
</tr>
<tr>
<td>Programmable edge length, cm</td>
</tr>
<tr>
<td>Weight, kg</td>
</tr>
</tbody>
</table>

Tramtrac™ II

Tramtrac™ II is a light weight tractor for repairing worn city tram rails. It has a wire feed unit and controls for travel speed, wire feed speed, inching and start/stop of the welding process.

The best way to get most out of your Tramtrac™ II is to use it together with either OK Tubrodur 14.71 or OK Tubrodur 15.65. Both are self shielded wires needing no shielding gas and the best power source to use is the Origo™ Mig 410.

<table>
<thead>
<tr>
<th>Tramtrac™ II</th>
</tr>
</thead>
<tbody>
<tr>
<td>Welding speed, m/min</td>
</tr>
<tr>
<td>Control voltage, V, AC</td>
</tr>
<tr>
<td>Power, W</td>
</tr>
<tr>
<td>External dimensions, LxWxH</td>
</tr>
<tr>
<td>Weight, without consumables, kg</td>
</tr>
</tbody>
</table>

Ordering information

Tramtrac™ II 0814 721 880
Connection cable 10 m 0457 360 884
Accessories:
Magnetic earth clamp 0000 500 415
Frametrac™

The Frametrac™ is a superb alternative when you wish to automate your frame welding. It is built for use together with ESAB’s semi-automatic power sources and feed units.

The Frametrac™ is a compact, motor-powered tractor that travels on the door frame to be welded. The four driving wheels guarantee an even, stable movement on the frame.

A standard ESAB torch can be mounted in the torch attachment and can be adjusted to fit your frame and type of welding.

From the control box and from the remote control you can control travel direction and speed, weaving speed and width. To secure best possible arc stability, Frametrac™ is equipped with an automatic current control, ACC, that holds the arc length stable.

### Frametrac™

- **Welding speed, m/min**: 1.0-9.9
- **Control voltage, V, AC**: 36-46
- **Power, W**: 80
- **External dimensions, LxWxH**: 280x430x508
- **Weight, without consumables, kg**: 30

### Ordering information

<table>
<thead>
<tr>
<th>Description</th>
<th>Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>Frametrac with ACC</td>
<td>0449 925 880</td>
</tr>
<tr>
<td>Connection cable (2 pcs needed)</td>
<td>0457 360 880</td>
</tr>
</tbody>
</table>

Frame 1
On this type of frame, the Frametrac can be used directly.

Frame 2
On this type of frame, a template is needed.
Railtrac Orbital W

The Railtrac Orbital W is a superb alternative if you wish to automate your tube welding. It is ideal for use with ESAB’s semi-automatic power sources and feed units. The Railtrac Orbital W is a small, compact, motor powered tractor to which a standard ESAB welding torch can be attached quickly. Two motors guarantee an even, stable movement on the rail.

<table>
<thead>
<tr>
<th>Railtrac Orbital W</th>
</tr>
</thead>
<tbody>
<tr>
<td>Welding speed, m/min</td>
</tr>
<tr>
<td>Weaving range, mm</td>
</tr>
<tr>
<td>Weaving speed, mm/s</td>
</tr>
<tr>
<td>Max power consumption, W</td>
</tr>
<tr>
<td>Control voltage, V, AC</td>
</tr>
<tr>
<td>Weight, kg</td>
</tr>
</tbody>
</table>

Ordering information
Railtrac Orbital W 0398 146 032

Floating head 0398 145 211
Ring sizes from 6" - 78", please contact your nearest ESAB representative.

Miggytrac 1001

The Miggytrac 1001 is a small and compact, motor-powered tractor to which a standard ESAB welding torch can be attached.

The four driving wheels, together with the magnet which is fitted on the tractor, guarantee even, stable movement. The magnet holds the tractor in the correct position on the workpiece, even if it is bent or angled. The tractor functions as a straightforward remote control for the feed unit; you decide on the travel direction and then start and stop welding from the panel. The panel features additional functions such as travel speed settings, wire feed, voltage and welding on/off. The tractor follows the joint using guide wheels.

<table>
<thead>
<tr>
<th>Miggytrac 1001</th>
</tr>
</thead>
<tbody>
<tr>
<td>Welding speed, m/min</td>
</tr>
<tr>
<td>Control voltage, V, AC</td>
</tr>
<tr>
<td>Power, W</td>
</tr>
<tr>
<td>Weight, kg</td>
</tr>
<tr>
<td>External dimensions, LxWxH, mm</td>
</tr>
</tbody>
</table>

Ordering information
Miggytrac 1001 0457 357 881
Connection cable to wire feed unit 0457 360 880
Welding screen 0457 463 880
Universal connectors:
Transformers 230/36 V 0457 467 880
Universal connection cable for other brands 0457 360 881
Welding automation
Tractor automats

Miggytrac 2000
The Miggytrac 2000 is a small, compact, motor-operated trolley that is designed for the mechanisation of GMAW, gas metal arc welding, in particular. Just fix the torch in the holder and Miggytrac 2000 will take over the welding procedure. The permanent built-in magnet, which can be switched on/off, holds the tractor in the correct position on the workpiece. The lightweight trolley has four-wheel drive to ensure smooth and steady welding travel.
The Miggytrac 2000 has a digital display to permit simple programming. It is very easy to move the trolley from one welding task to the next.

<table>
<thead>
<tr>
<th>Miggytrac 2000</th>
</tr>
</thead>
<tbody>
<tr>
<td>Travel speed, m/min</td>
</tr>
<tr>
<td>Welding speed, m/min</td>
</tr>
<tr>
<td>Control voltage, V, AC</td>
</tr>
<tr>
<td>Max power consumption, W</td>
</tr>
<tr>
<td>Intermittent welding range, cm</td>
</tr>
<tr>
<td>Crater fill duration, s</td>
</tr>
<tr>
<td>Weight, kg</td>
</tr>
<tr>
<td>External dimensions, LxWxH, mm</td>
</tr>
</tbody>
</table>

Ordering information
Miggytrac 2000 0457 358 880
Connection cable to wire feed unit 0457 360 880
Welding screen 0457 463 880
Universal connectors
Transformers 230/36 V 0457 467 880
Universal connection cable for other brands 0457 360 881

Miggytrac 3000
The Miggytrac 3000 is designed to be used together with ESAB's semi-automatic power sources.
The Miggytrac 3000 is a small, compact, motor-powered tractor with integrated wire feed and water-cooled welding torch, designed for horizontal MIG/MAG welding of plates and beams. Miggytrac 3000 is provided with four-wheel drive. The carriage follows the weld joint by means of one front and one rear guide wheel. The wheels are adjusted so as to make the carriage travel diagonally towards the flange or stiffener to be welded.

<table>
<thead>
<tr>
<th>Miggytrac 3000</th>
</tr>
</thead>
<tbody>
<tr>
<td>Travel speed, m/min</td>
</tr>
<tr>
<td>Welding speed, m/min</td>
</tr>
<tr>
<td>Control voltage, V, AC</td>
</tr>
<tr>
<td>Max power consumption, W</td>
</tr>
<tr>
<td>Intermittent welding range, cm</td>
</tr>
<tr>
<td>Crater fill duration, s</td>
</tr>
<tr>
<td>Weight, kg</td>
</tr>
<tr>
<td>External dimensions, LxWxH, mm</td>
</tr>
</tbody>
</table>

Ordering information
Miggytrac 3000, with straight water-cooled swan neck 0457 359 880
Contact tip 1.0 CO₂ 0468 502 005
Contact tip 1.2 CO₂ 0468 502 007
Contact tip 1.4 CO₂ 0468 502 008
A2 Multitrac with A2/A6 process controller PEK

The A2 Multitrac with the A2/A6 process controller PEK is available for both the SAW and the GMAW method. If the SAW-version is chosen, the A2 Multitrac is capable of working equally well with either single or twin wire. The feed unit secures an even and stable wire-feed speed. Accurate travel speed is ensured by means of four-wheel drive. Exact presetting and control of the welding parameters is done on the instrument panel, which is equipped with a digital display. The Multitrac is fully mobile and can easily be moved from one welding station to another. It can also be quickly set-up for different workpieces.

<table>
<thead>
<tr>
<th>Single SAW</th>
<th>Twin SAW</th>
<th>Single GMAW</th>
<th>Single GMAW with MTW 600</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wire Ø, unall. solid</td>
<td>1.6-4.0</td>
<td>2x1.2-2.5</td>
<td>0.8-1.6</td>
</tr>
<tr>
<td>Wire Ø, SS</td>
<td>1.6-4.0</td>
<td>2x1.2-2.5</td>
<td>0.8-1.6</td>
</tr>
<tr>
<td>Wire Ø, Al</td>
<td>-</td>
<td>-</td>
<td>1.2-1.6</td>
</tr>
<tr>
<td>Wire Ø, CW</td>
<td>1.6-4.0</td>
<td>-</td>
<td>1.2-2.4</td>
</tr>
<tr>
<td>Wire feed, m/min</td>
<td>0.2-9</td>
<td>0.2-9</td>
<td>0.2-16</td>
</tr>
<tr>
<td>Travel speed, m/min</td>
<td>0.1-1.7</td>
<td>0.1-1.7</td>
<td>0.1-1.7</td>
</tr>
<tr>
<td>External dimensions, LxWxH, mm</td>
<td>870x400</td>
<td>870x400</td>
<td>870x400</td>
</tr>
<tr>
<td>Weight, kg</td>
<td>47</td>
<td>47</td>
<td>43</td>
</tr>
</tbody>
</table>

Ordering information
A2 Multitrac A2TF with A2/A6 process controller PEK (SAW single) | 0461 233 880
A2 Multitrac A2TF with A2/A6 process controller PEK (SAW Twin) | 0461 233 881
A2 Multitrac A2TG with A2/A6 process controller PEK (GMAW) | 0461 234 880
A2 Multitrac A2TG with A2/A6 process controller PEK (GMAW with MTW 600) | 0461 234 881

A2 Multitrac with A2 process controller PEI

The A2 Multitrac with the process controller PEI is available for both the SAW and the GMAW method. If the SAW-version is chosen, the A2 Multitrac is capable of working equally well with either single or twin wire. The feed unit secures an even and stable wire-feed speed. Accurate travel speed is ensured by means of four-wheel drive. The control equipment is very easy to use with a minimum of training. The welding parameters are adjusted by turning knobs and the actual parameters are shown on the digital displays. The Multitrac is fully mobile and can easily be moved from one welding station to another. It can also be quickly set-up for different workpieces.

<table>
<thead>
<tr>
<th>Single SAW</th>
<th>Twin SAW</th>
<th>GMAW</th>
</tr>
</thead>
<tbody>
<tr>
<td>Max load at 100% duty cycle, A</td>
<td>800</td>
<td>800</td>
</tr>
<tr>
<td>Wire Ø, unall. solid</td>
<td>1.6-4.0</td>
<td>2x1.2-2.5</td>
</tr>
<tr>
<td>Wire Ø, SS</td>
<td>1.6-4.0</td>
<td>2x1.2-2.5</td>
</tr>
<tr>
<td>Wire Ø, Al</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Wire Ø, CW</td>
<td>1.6-4.0</td>
<td>-</td>
</tr>
<tr>
<td>Wire feed, m/min</td>
<td>0.2-9</td>
<td>0.2-9</td>
</tr>
<tr>
<td>Travel speed, m/min</td>
<td>0.1-1.7</td>
<td>0.1-1.7</td>
</tr>
<tr>
<td>External dimensions, LxWxH, mm</td>
<td>870x400</td>
<td>870x400</td>
</tr>
<tr>
<td>Weight, kg</td>
<td>47</td>
<td>47</td>
</tr>
</tbody>
</table>

Ordering information
A2 Multitrac with A2 process controller PEI SAW | 0449 360 880
A2 Multitrac with A2 process controller PEI SAW Twin | 0449 360 881
A2 Multitrac with A2 process controller PEI GMAW | 0449 361 880
Wear parts, see page 90-91
A2 Tripletrac

The A2 Tripletrac is superb for internal circumferential welding of large cylindrical objects due to its clever design with a steering wheel. The tractor can be equipped with ESAB’s A2-A6 Process Controller PEK or A2 Welding Controller PEI. The A2 Tripletrac’s three-wheeled tractor carriage steers with the front wheel. This, combined with the fact that the steering wheel also controls the horizontal slide, ensures easy control of the wire position. This makes the A2 Tripletrac ideal for internal circumferential welding of large cylindrical objects that are rotating on a roller bed, for example pressure vessels and wind towers.

The compact, efficient design makes it easy to move the A2 Tripletrac from one place to another, such as between different welding workpieces. The carriage is equipped with a handle to disengage the gear, so the A2 Tripletrac can easily be pushed to another place.

---

### Single SAW

<table>
<thead>
<tr>
<th>Specification</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Max load at 100% duty cycle, A</td>
<td>800</td>
</tr>
<tr>
<td>Wire Ø, unall. solid</td>
<td>1.6-4.0</td>
</tr>
<tr>
<td>Wire Ø, SS</td>
<td>1.6-4.0</td>
</tr>
<tr>
<td>Wire Ø, CW</td>
<td>1.6-4.0</td>
</tr>
<tr>
<td>Wire feed, m/min</td>
<td>0.2-9</td>
</tr>
<tr>
<td>Travel speed, m/min</td>
<td>0.1-1.7</td>
</tr>
<tr>
<td>External dimensions, LxWxH, mm</td>
<td>594x686x956</td>
</tr>
<tr>
<td>Weight, kg</td>
<td>47 (excl wire, flux)</td>
</tr>
</tbody>
</table>

### Ordering information

A2 Tripletrac with process controller PEK 0461 236 880
A2 Tripletrac with process controller PEI 0449 430 881
Welding automation
Tractor automats

A6 Mastertrac

The A6 Mastertrac is a heavily-dimensioned self-propelled, four-wheel drive, automatic welding machine. The advanced electronic control equipment provides high precision and the digital display enables all the welding parameters to be preset accurately – either beforehand or during welding. The A6 Mastertrac is easy to use and once it is running, it requires only the supervision of the operator. The automat can be supplied for SAW in single, twin or tandem version. Also available for GMAW.

The picture shows A6 Mastertrac Tandem.

<table>
<thead>
<tr>
<th></th>
<th>Single SAW</th>
<th>Single GMAW</th>
<th>Twin SAW</th>
<th>Tandem SAW</th>
</tr>
</thead>
<tbody>
<tr>
<td>Max load at 100% duty cycle, A</td>
<td>1500</td>
<td>600</td>
<td>1500</td>
<td>2x1500</td>
</tr>
<tr>
<td>Wire diameter, mm</td>
<td>3.0-6.0</td>
<td>1.0-3.2</td>
<td>2x2.0-3.0</td>
<td>2x3.0-6.0</td>
</tr>
<tr>
<td>Wire feed, m/min</td>
<td>0.2-4.0</td>
<td>0.8-16.6</td>
<td>0.2-4.0</td>
<td>0.2-4.0</td>
</tr>
<tr>
<td>Travel speed, m/min</td>
<td>0.1-2.0</td>
<td>0.1-2.0</td>
<td>0.1-2.0</td>
<td>0.1-2.0</td>
</tr>
<tr>
<td>External dimensions, LxWxH, mm</td>
<td>1410x750 x850</td>
<td>1410x750 x850</td>
<td>1410x750 x850</td>
<td>1410x990 x850</td>
</tr>
<tr>
<td>Weight, kg</td>
<td>110</td>
<td>100</td>
<td>110</td>
<td>158</td>
</tr>
</tbody>
</table>

Ordering information

A6 Mastertrac A6TF (SAW) 0461 235 880
A6 Mastertrac A6TF (SAW, Twin) 0461 235 881
A6 Mastertrac A6TF (SAW, high-speed) 0461 235 890
A6 Mastertrac A6TF (SAW, twin, high-speed) 0461 235 891
A6 Mastertrac tandem A6TF (SAW, DC/AC 1500) 0461 232 882
Wear parts, see page 90-91

A6-DK

The A6-DK welding machine has two welding heads. It is built up by components from the well-known A6 system. A6-DK is designed for simultaneously welding horizontal-vertical fillets on both sides of a web or through panels. A6-DK straddles work pieces up to 800 mm high and with a symmetrical profile of 400 mm. A6-DK travels directly on the work piece and is guided along the joint with the aid of a guide unit attached to the contact unit. The travel speed is steplessly adjustable from 0.15 to 2.0 m/min.

<table>
<thead>
<tr>
<th></th>
<th>A6-DK SAW</th>
</tr>
</thead>
<tbody>
<tr>
<td>Max load at 100% duty cycle, A</td>
<td>1500</td>
</tr>
<tr>
<td>Wire diameter, mm</td>
<td>3.0-6.0</td>
</tr>
<tr>
<td>Wire feed, m/min</td>
<td>0.2-4.0</td>
</tr>
<tr>
<td>Travel speed, m/min</td>
<td>0.15-2.0</td>
</tr>
<tr>
<td>External dimensions, LxWxH, mm</td>
<td>870x400x830</td>
</tr>
<tr>
<td>Vertical space limitation, mm</td>
<td>800</td>
</tr>
<tr>
<td>Longitudinal symmetrical extension, mm</td>
<td>400</td>
</tr>
<tr>
<td>Weight, kg</td>
<td>150</td>
</tr>
</tbody>
</table>

Ordering information

A6-DK SAW single wire excl. wire reel, feed rollers and contact jaws* 0461 237 901
Wire reel plastic 30 kg 0153 872 880
Wire reel steel 30 kg 0416 492 880
*When contact equipment is excluded feed rollers and contact jaws have to be ordered separately.
Welding automation
Storage and tank welder

AGW1 and AGW2
Single-side & Double-side tank welder

AGW1 and AGW2 Tank Welder is a series of self-propelled 3 o'clock welding equipment primarily developed for on-site erection of large storage tanks, silos, blast furnaces and similar cylindrical objects. It is available as a single-side version and a double-side version. Usually it is designed to travel on the top edge of the tank shell.

As there are different ways of building tanks, one machine in the series is designed to travel on a rail which is temporarily fixed to the shell or on a stand-alone ring outside the shell.

Operator safety CE approved
The operator of each machine (if a double-side version) rides in a cabin, where he supervises and controls the welding process with the control panel within easy reach.

For weather protection the cage can be covered by curtains. The cabin of a double-side machine is equipped with step ladders and a joining bridge at the top to facilitate for the operators to climb onboard. The bridge also has guard rails for the safety of the operators.

For more information, please contact your nearest ESAB representative.
Welding automation
Welding heads

A2 S Mini Master
The A2 S Mini Master represents an automatic welding system designed with the emphasis on low weight, compactness and flexible use. The system is built around basic units. The degree of automation and process orientation of the basic unit you choose can be expanded or modified as required, depending on the application. Appropriate welding heads can be combined with suitable manipulators, which results in a total solution to a specific welding problem.

<table>
<thead>
<tr>
<th>Single SAW</th>
<th>Twin SAW</th>
<th>Single GMAW</th>
</tr>
</thead>
<tbody>
<tr>
<td>Max load at 100% duty cycle, A</td>
<td>800</td>
<td>800</td>
</tr>
<tr>
<td>Wire feed, m/min</td>
<td>0.2-9</td>
<td>0.2-9</td>
</tr>
</tbody>
</table>

Ordering information
For ordering information please contact your nearest ESAB representative.
Wear parts, see page 90-91

A2 S GMAW Mini Master
The A2 S GMAW Mini Master is a compact MIG/MAG version of the A2 S SAW Mini Master welding head. The GMAW welding head is equipped with an MTW 600 welding torch, which is specially designed for use where an automatic MIG/MAG welding torch is required for heavy-duty use.
The very effective "whircool liquid cooling system" is integrated in both the contact tube and the outer jacket of the torch for maximum cooling effect. All connections are positioned in the upper end of the torch to facilitate the mounting of the necessary supply and to protect the connection from welding arc radiation.

<table>
<thead>
<tr>
<th>Single GMAW</th>
</tr>
</thead>
<tbody>
<tr>
<td>Max load at 100% duty cycle, A - Mix/Ar</td>
</tr>
<tr>
<td>Max load at 100% duty cycle, A - CO₂</td>
</tr>
<tr>
<td>Wire feed, m/min</td>
</tr>
</tbody>
</table>

Ordering information
For more information, please contact your nearest ESAB representative.
Wear parts, see page 90-91
Welding automation

Welding heads

A6 S Arc Master

The A6S Arc Master is the complete system for heavy production welding offering flexibility, operational reliability and durability. It constitutes the base of ESAB’s automatic welding program with an extensive modular and component system. It is available in a number of standard models and can be adapted to suit the customer’s specific demands. From an existing model, the A6 S can be rebuilt and extended to the required automation level, by means of positioning, joint tracking, flux handling and so on, as the requirements change.

<table>
<thead>
<tr>
<th></th>
<th>Single SAW, 156:1</th>
<th>Twin SAW, 156:1</th>
<th>Single SAW, 74:1</th>
<th>Twin SAW, 74:1</th>
<th>Single GMAW, 74:1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Max load at 100% duty cycle, A</td>
<td>1500</td>
<td>1500</td>
<td>1500</td>
<td>1500</td>
<td>600</td>
</tr>
<tr>
<td>Wire diameter, mm</td>
<td>3.0-6.0</td>
<td>2x2.0-3.0</td>
<td>1.6-4.0</td>
<td>2x1.6-2.0</td>
<td>0.8-3.2</td>
</tr>
<tr>
<td>Wire feed, m/min</td>
<td>0.2-4.0</td>
<td>0.2-4.0</td>
<td>0.4-8.0</td>
<td>0.4-8.0</td>
<td>0.8-16.6</td>
</tr>
</tbody>
</table>

Ordering information

For ordering information, please contact your nearest ESAB representative

Wear parts, see page 90-91

A6 S Tandem Master

The A6 S Tandem Master is a highly versatile welding automat equipped with two A6 heads – for either DC/DC or DC/AC welding. Direct current provides good penetration, whereas alternating current secures a high deposition rate. The A6 S Tandem Master is available in a number of models to match the customer’s safety, quality and productivity requirements.

<table>
<thead>
<tr>
<th></th>
<th>A6 S Tandem Master</th>
</tr>
</thead>
<tbody>
<tr>
<td>Max load at 100% duty cycle, A</td>
<td>2x1500</td>
</tr>
<tr>
<td>Wire diameter, mm</td>
<td>2x3.0-6.0</td>
</tr>
<tr>
<td>Wire feed, m/min</td>
<td>0.2-4.0</td>
</tr>
</tbody>
</table>

Ordering information

For ordering information, please contact your nearest ESAB representative.
Welding automation
Welding heads/Power sources

A6 S Compact

The A6 S Compact 300/500/700 are three reliable members of the A6 family for the efficient, high-productivity SAW method. These welding heads make it possible to build highly-efficient stations for the internal longitudinal welding of butt joints inside tubes in different versions for tubes down to dia 300 mm. TV-monitoring equipment can be integrated into the system, thereby enabling the operator to supervise and adjust the head position from the outside via the TV-screen.

| Max load at 100% duty cycle, A | 800 |
| Wire diameter, mm | 2.5, 3.0, 4.0 |
| Wire feed, m/min | 0.4-8.0 |

Ordering information
For ordering information please contact your nearest ESAB representative

TAF 801 and 1251

The AC power sources TAF 801 and TAF 1251 are using a unique square wave technology suitable for a wide range of AC welding applications.

- Capacity for continuous welding
- Pre-setting of arc voltage
- Reliable square wave striking
- Arc voltage or current feed back
- Optimized open circuit voltage
- Compensation of mains voltage fluctuation
- Voltage drop compensation for long welding cables
- High power factor ensuring low power consumption
- Designed and built for convenient servicing
- Safety control voltage 42V
- Prepared for Scott connection of two power sources

| TAF 801 | TAF 1251 |
| Max output at 60% duty cycle, A | 1000/44 | 1500/44 |
| Max output at 100% duty cycle, A | 800/44 | 1250/44 |
| Setting range, A/V | 300/28-800/44 | 400/28-1250/44 |
| Open circuit voltage, V | 71 | 72 |
| Efficiency at max current | 0.86 | 0.86 |
| Power factor at max current | 0.75 | 0.76 |
| Voltage, 1 ph 50 Hz, V | 400/415/500 | 400/415/500 |
| Voltage, 1 ph 60 Hz, V | 400/440/550 | 400/440/550 |
| Enclosure class, protection | IP23 | IP23 |
| External dimensions, LxWxH, mm | 774x598x1428 | 774x598x1428 |
| Weight, kg | 495 | 608 |

Ordering information
For more information, please contact your nearest ESAB representative.
Welding automation
Power sources

LAF 631, 1001, 1251 and 1601

The LAF series are three phase, fan-cooled DC welding power sources designed for high productivity mechanized submerged or high productivity MIG/MAG arc welding. They are used in combination with ESAB’s A2-A6 equipment range and the A2-A6 Process Controllers (PEK or PEI).

Ordering information

<table>
<thead>
<tr>
<th></th>
<th>LAF 631</th>
<th>LAF 1001</th>
<th>LAF 1251</th>
<th>LAF 1601</th>
</tr>
</thead>
<tbody>
<tr>
<td>Max output at 60% duty cycle, A</td>
<td>800/44</td>
<td>1000/44</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Max output at 100% duty cycle, A</td>
<td>630/44</td>
<td>800/44</td>
<td>1250/44</td>
<td>1600/44</td>
</tr>
<tr>
<td>Setting range, A/V, MIG/MAG</td>
<td>50/17-630/44</td>
<td>50/17-1000/45</td>
<td>60/17-1250/44</td>
<td>-</td>
</tr>
<tr>
<td>Setting range, A/V, SAW</td>
<td>30/21-800/44</td>
<td>40/22-1000/45</td>
<td>40/22-1250/44</td>
<td>40/22-1600/46</td>
</tr>
<tr>
<td>Open circuit voltage, V</td>
<td>54</td>
<td>52</td>
<td>51</td>
<td>54</td>
</tr>
<tr>
<td>No load power, W</td>
<td>150</td>
<td>145</td>
<td>220</td>
<td>220</td>
</tr>
<tr>
<td>Efficiency at max current</td>
<td>0.84</td>
<td>0.84</td>
<td>0.87</td>
<td>0.86</td>
</tr>
<tr>
<td>Power factor at max current</td>
<td>0.90</td>
<td>0.95</td>
<td>0.92</td>
<td>0.87</td>
</tr>
<tr>
<td>Voltage, 3 ph 50 Hz, V</td>
<td>400/415</td>
<td>400/415/500</td>
<td>400/415/500</td>
<td>400/415/500</td>
</tr>
<tr>
<td>Voltage, 3 ph 60 Hz, V</td>
<td>440</td>
<td>400/440/550</td>
<td>400/440/550</td>
<td>400/440/550</td>
</tr>
<tr>
<td>Enclosure class, protection</td>
<td>IP23</td>
<td>IP23</td>
<td>IP23</td>
<td>IP23</td>
</tr>
<tr>
<td>External dimensions, LxWxH, mm</td>
<td>670x490x930</td>
<td>646x552x1090</td>
<td>774x598x1428</td>
<td>774x598x1428</td>
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<tr>
<td>Weight, kg</td>
<td>260</td>
<td>330</td>
<td>490</td>
<td>585</td>
</tr>
</tbody>
</table>

For more information, please contact your nearest ESAB representative.
## Welding automation

### Wear parts

| Contact nozzles wire size | Ordering information | M6 0.8 mm | M6 1.0 mm | M6 1.2 mm | M6 1.6 mm | M6 2.0 mm | M6 2.4 mm | M10 0.8 mm | M10 1.0 mm | M10 1.2 mm | M10 1.6 mm | M10 2.0 mm | M10 2.4 mm | M10 3.2 mm | M12 1.6 mm | M12 2.0 mm | M12 2.4-2.5 mm | M12 3.0 mm | M12 4.0 mm |
|--------------------------|---------------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------------|----------|----------|
|                          |                     | 0153 501 002 | 0153 501 004 | 0153 501 005 | 0153 501 007 | 0153 501 009 | 0153 501 010 | 0258 000 914 | 0258 000 913 | 0258 000 908 | 0258 000 909 | 0258 000 910 | 0258 000 911 | 0258 000 915 | 0154 623 008 | 0154 623 007 | 0154 623 006 | 0154 623 005 | 0154 623 003 |

<table>
<thead>
<tr>
<th>Adapter M6/M10</th>
<th>Ordering information</th>
<th>Adapter M6/M10</th>
<th>0147 333 001</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Contact jaws D35</th>
<th>Ordering information</th>
<th>2.0 mm L=65 mm</th>
<th>2.4-2.5 mm L=65 mm</th>
<th>3.0 mm L=58 mm</th>
<th>4.0 mm L=58 mm</th>
<th>5.0 mm L=58 mm</th>
<th>6.0 mm L=58 mm</th>
<th>1.6-3.2 mm L=75 mm</th>
<th>2 x 1.6 mm</th>
<th>2 x 2.0 mm</th>
<th>2 x 2.4-2.5 mm</th>
<th>2 x 2.5-3.0 mm</th>
<th>0265 902 882</th>
<th>0265 902 881</th>
<th>0265 902 884</th>
<th>0265 902 880</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Contact jaws heavy twin</th>
<th>Ordering information</th>
<th>2 x 1.6 mm</th>
<th>2 x 2.0 mm</th>
<th>2 x 2.4-2.5 mm</th>
<th>2 x 2.5-3.0 mm</th>
<th>0265 902 882</th>
<th>0265 902 881</th>
<th>0265 902 884</th>
<th>0265 902 880</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Feed roller single wire size</th>
<th>Ordering information</th>
<th>0.8 mm</th>
<th>1.0 mm</th>
<th>1.2 mm</th>
<th>1.6 mm</th>
<th>2.0 mm</th>
<th>2.4-2.5 mm</th>
<th>3.0-3.2 mm</th>
<th>4.0 mm</th>
<th>5.0 mm</th>
<th>6.0 mm</th>
<th>3.0-5.0 mm Knurled V-groove</th>
<th>0145 538 881</th>
<th>0145 538 882</th>
<th>0145 538 883</th>
<th>218 510 281</th>
<th>0218 510 282</th>
<th>0218 510 283</th>
<th>0218 510 298</th>
<th>0218 510 286</th>
<th>0218 510 287</th>
<th>0218 510 288</th>
<th>0218 510 299</th>
<th>0153 148 880</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Pressure roller, single wire</th>
<th>Ordering information</th>
<th>Pressure roller, single wire</th>
<th>0153 148 880</th>
</tr>
</thead>
</table>

---

*Tandem head - see single head SAW
tw = twin wire, s = single wire, G = GMAW

A2 Multitrac
A6* Mastertrac
A2 Mini Master
A6* Arc Master
A6 Compact
SAW G SAW G SAW G SAW G SAW G SAW
## Welding automation

### Wear parts

*Tandem head - see single head SAW

tw = twin wire, s = single wire, G = GMAW

<table>
<thead>
<tr>
<th>Feed roller grooved</th>
<th>Ordering information</th>
<th>A2 Multitrac</th>
<th>A6* Mastertrac</th>
<th>A2 Mini Master</th>
<th>A6* Arc Master</th>
<th>A6 Compact</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tubular wire 1.2-1.6 mm</td>
<td>0146 024 880</td>
<td>s ** t **</td>
<td>s ** t **</td>
<td>s ** t **</td>
<td>s ** t **</td>
<td>s ** t **</td>
</tr>
<tr>
<td>Tubular wire 2.0-4.0 mm</td>
<td>0146 024 881</td>
<td>s ** t **</td>
<td>s ** t **</td>
<td>s ** t **</td>
<td>s ** t **</td>
<td>s ** t **</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Pressure roller wire size</th>
<th>Ordering information</th>
<th>0.8-1.6 mm</th>
<th>0146 025 880</th>
<th>2.0-4.0 mm</th>
<th>0146 025 881</th>
<th>Shaft stud for above pressure roller</th>
<th>0212 901 101</th>
</tr>
</thead>
<tbody>
<tr>
<td>Feed roller twin wire size</td>
<td>Ordering information</td>
<td>2 x 1.2 mm</td>
<td>0218 522 486</td>
<td>2 x 1.6 mm</td>
<td>0218 522 488</td>
<td>2 x 2.0 mm</td>
<td>0218 522 484</td>
</tr>
<tr>
<td>Pressure roller, twin wire</td>
<td>Ordering information</td>
<td>Pressure roller, twin wire</td>
<td>0218 524 580</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### MTW 600 MIG Torch

#### Contact nozzle M8

<table>
<thead>
<tr>
<th>Ordering information</th>
<th>1.0 mm Fe, Ss, Cw / Al</th>
<th>0457 625 005</th>
<th>1.2 mm Fe, Ss, Cw</th>
<th>0457 625 006</th>
<th>1.2 mm Al</th>
<th>0457 625 007</th>
<th>1.4 mm Fe, Ss, Cw</th>
<th>0457 625 008</th>
<th>1.6 mm Fe, Ss, Cw / Al</th>
<th>0457 625 009</th>
<th>2.0 mm Al</th>
<th>0457 625 011</th>
<th>2.4 mm Fe, Ss, Cw / Al</th>
<th>0457 625 012</th>
</tr>
</thead>
</table>

### A2 4WD Wire feeder

#### Feed roller single solid wire

| Ordering information | 0.6-0.8 mm Fe, Ss | 0369 557 001 | 0.8-0.9 mm Al | 0369 557 011 | 0.8-1.0 mm Fe, Ss | 0369 557 002 | 1.0-1.2 mm Fe, Ss | 0369 557 003 | 1.0-1.2 mm Al | 0369 557 006 | 1.2-1.6 mm Fe, Ss | 0369 557 007 | 1.4-1.6 mm Fe, Ss | 0369 557 013 | 1.6 mm Al | 0369 557 008 | 2.0 mm Al | 0369 557 009 | 2 x 1.2 mm Fe, Ss | 0369 557 010 | Pressure roller (flat) | 0369 728 001 |
|----------------------|----------------------|-------------|---------------|-------------|-------------|---------------|---------------|---------------|-------------|---------------|-------------|---------------|---------------|---------------|-----------|-------------|---------------|---------------|----------------|---------------|

#### Knurled feed roller single wire

<table>
<thead>
<tr>
<th>Ordering information</th>
<th>1.0-1.2/1.4-1.6 mm Cw</th>
<th>0369 557 004</th>
<th>1.4-1.6/2.0-2.4 mm Cw</th>
<th>0369 557 005</th>
<th>Pressure roller (knurled)</th>
<th>0466 262 001</th>
</tr>
</thead>
</table>
A2/A6 Beam-travelling carriage

For many applications, a beam-mounted carriage, fitted with an A2 or A6 welding head, is the ideal solution for submerged arc and gas metal arc welding. The beam-bound carriage has a robust, cast-metal chassis with the opportunity to mount a standard A2S or A6S welding head.

### A2/A6 Beam-travelling carriage

<table>
<thead>
<tr>
<th>Travel speed, m/min</th>
<th>0.06-2.0</th>
</tr>
</thead>
<tbody>
<tr>
<td>Weight, kg</td>
<td>60</td>
</tr>
</tbody>
</table>

**Ordering information**

For ordering information, please contact your nearest ESAB representative.

**MechTrac 1730, 2100, 2500 and 3000**

MechTrac might very well be the most flexible and fastest way to increase your productivity. The MechTrac is built as a gantry and can be equipped with an A2 welding equipment for SAW or MIG/MAG to create a complete welding station. If the workpiece rotates, other welding methods such as TIG and Plasma can be used, depending on the application and handling equipment. The MechTrac unit is suitable for different types of workpieces that can be covered by a gantry. The gantry offers the possibility to weld profiles such as I-, T-, or L-beams, columns or tapered beams. The MechTrac is available in four versions, depending on the size of the workpiece. The difference is the width of the gantry – 1730 mm, 2100 mm, 2500 mm or 3000 mm between the legs.

The length of the legs is the same for all types, 1500 mm from the top of the rail to the inside of the overhead beam.

The gantry can support a maximum weight of 220 kg, corresponding to a maximum of two A2 welding heads (single or twin wire) complete with automatic joint tracking GMH and an OPC flux recovery unit.

The picture shows MechTrac equipped with A2 welding heads, Process Controller PEK and Power sources LAF 631.

### MechTrac 1730, 2100, 2500 and 3000

<table>
<thead>
<tr>
<th>Travel speed, m/min</th>
<th>0.2-1.9</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rail length, m</td>
<td>3</td>
</tr>
<tr>
<td>Max load, kg</td>
<td>220</td>
</tr>
</tbody>
</table>

**Ordering information**

MechTrac 1730, dual drive 0809 670 881
MechTrac 2100, dual drive 0809 670 882
MechTrac 2500, dual drive 0809 670 883
MechTrac 3000, dual drive 0809 670 884
Travelling rail, 3 m 0806 707 880
Rail, 3 m to extend the travelling rail 0806 707 881
Welding automation
Carriers and gantries

Walltrac
This column and boom welding station is designed for the production of various beam structures, such as I/H and box beams of tapered and non-symmetrical designs, stiffener sections and the joining of plates and sections. The flexible solution also permits quite a number of other applications to improve productivity and weld quality.

The wall-supported manipulator travelling on a single rail is designed for rack-and-pinion drive from the floor-mounted rail. An idler wheel support mounted on the column allows the manipulator to travel on a rail support.

To ensure a uniform, stable welding speed, the bogie carriage is equipped with two parallel-connected DC motors. The fixed boom, which has rails and a rack, is equipped with two motorised side-running welding carriages, each carrying a twin-wire sub-arc-welding head. Each welding head is fitted to a servomounted slide which is cross mounted on the carriage via a manually-adjusted vertical boom. Transverse welding with the speed generated from the side-running carriage is possible, using the outer welding head.

The well-proven A6 welding heads incorporating the user-friendly, microprocessor based PEK are a combination which safely secures the welding process. Automatic joint tracking GMH controls the vertical and horizontal axes, i.e. the slides and the carriages, to safeguard the superior weld quality.

Advantages: Minimal floor working area thanks to the single rail/wall support. Longitudinal and transverse welding procedures can be used. A large number of positioning axes permit flexible welding production.

Ordering information
For ordering information please contact your nearest ESAB representative.

Gantrac
This gantry has rigid legs supported by tacho-controlled bogie carriages with cable chains to ensure a uniform, stable welding speed. The two legs support the gantry beam, which is equipped with guides and a rack for the two motorised welding carriages. The operator can easily control the welding procedure from the platform mounted on one of the bogie carriages. All in all, this is a very sturdy and reliable manipulator solution.

The well-proven A6 welding heads are mounted on rack-and-pinion slides with comprehensive working strokes to obtain good access to the workpieces. Incorporating the user-friendly, microprocessor-based PEK, the welding process is safely secured. Automatic joint tracking GMH controls the vertical and horizontal axes, i.e. the slides and the carriages, to safeguard the superior weld quality.

Submerged arc welding is the superior method for the applications intended for this station.

The flux-handling equipment can be operated conveniently, without time-wasting interruptions. At the same time as flux consumption is reduced, the workplace is kept clean and free from flux spillage.

Advantages: Highly stabilised manipulation of welding torches with optimised welding results.

A large number of positioning axes permit flexible beam production.

Ordering information
For ordering information please contact your nearest ESAB representative.
Welding automation
Components and modules

OCE-2 H cooling unit
The OCE-2 H water-cooling unit is an efficient, compactly-dimensioned cooling unit designed for use together with water-cooled equipment for arc welding by hand or in automatic plants. The water tank and pump is made of corrosion-resistant material.

**OCE-2 H**

<table>
<thead>
<tr>
<th>Mains supply, V/Hz</th>
<th>230/50-60</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cooling water, l/min</td>
<td>6</td>
</tr>
<tr>
<td>Max water pressure, bar</td>
<td>2.8</td>
</tr>
<tr>
<td>External dimensions, LxWxH, mm</td>
<td>320x270x360</td>
</tr>
<tr>
<td>Weight, kg</td>
<td>15</td>
</tr>
</tbody>
</table>

**Ordering information**

- Cooling unit OCE-2 H 0414 191 881
- Flowguard 0414 231 880

A6 synergic cold wire
The ESAB A6 – SCW SAW process
The ESAB A6-SCW kit offers a unique opportunity to increase the productivity by boosting the deposition rate. The cold wire is fed in synergy with the arc wire into a weld pool where it melts. This means that the arc and cold wire ratio always remains constant after a suitable wire diameter is selected. The chemistry of the weld and the deposition rate is controlled and pre-selected. It is easy for the operator to use as no additional control unit or separate feed device is needed.

The SCW process can be used in an endless variety of combinations with solid and/or cored wires, single, twin, tandem, and multiple wire applications and so on. It can also be used in surfacing applications with cored/solid wires such as concast rollers or built-up, large-diameter engine pistons. The cold wire has no arc and therefore carries no restrictions when it comes to incorporating “hard to weld” alloys in cored wires. The cold wire kit is suitable for all ESAB’s new and existing A6 systems and can be installed in a few minutes.

**Ordering information**

For ordering information please contact your nearest ESAB representative

Slides
For the accurate and comfortable positioning of the welding head in the joint, the robust A2 and A6 slides are available in a series of standard lengths for any mounting position.

The A2 linear slides have a compact box profile and adjustable guides, which form a light and plain slide. The A6 linear slide is a flexible component and, with its high loading capacity, it can be freely mounted for positioning the A6 welding head. The A6 linear slide can also be supplied with an extended runner which increases loading capacity by 25%.

The A6 servo slide is primarily intended for use in connection with positioning and joint tracking. It can be operated jointly with other A6 components, such as rotary slides for the rotation of the welding head in the joint. These servo slides are normal supplementary units for our standard joint tracking systems, like the A6.

The ORB 40 is a rotary slide for the A2 welding head. It has a lockable rotary slide and compact design with a divided clamp. The A6 rotary slide with worm gear is used when the electrode angle requires frequent adjustment in relation to the joint. These adjustments can be made continuously from 0-360° using the hand-wheel. The A6 rotary ball bearing slide is another type designed for heavier loads. The rotary ball bearing disc can be rotated 360° and locked by a lever.
Welding automation
Components and modules

Wire feed units
The ESAB A2/A6 system comprises different wire feed units; A2 SAW, A2 GMAW, A6 SAW and A6 GMAW.

The A2 wire feed unit is designed for small wire Submerged Arc welding (SAW) or Gas Metal Arc welding (GMAW) while operating in confined spaces.
The A2 SAW wire feed unit can be used for single or twin-wire welding. The A6 SAW wire feed unit is designed for heavy-duty welding. The wire feed unit is the standard base in most SAW automatics in the heavy production industry. You can use single or twin wire, strip cladding or arc-air gouging. The A6 GMAW wire feed unit is specially designed for the mechanisation of MIG/MAG welding in steel and aluminium. The GMAW version is robust equipment for heavy-production welding. It has a water-cooled torch mounted directly on the feed unit.

A2-A6 Process Controller PEK
A2-A6 Process Controller PEK can be used with CAN controlled ESAB’s power sources and motors. It is prepared for Submerged Arc Welding, Gas Metal Arc Welding and Arc gouging.
- Clear text menus for user friendliness
- CAN Bus controlled
- Selectable welding process
- Pre-setting of all welding parameters
- Memory for 255 parameter sets
- Constant current (CA) or constant wire speed (CW)
- Heat input visible on display
- Encoder controlled motors for top performance motion control
- USB slot for data backup and transfer
- Used welding parameters can be stored directly on a USB memory stick
- Data transfer to and from PC/LAN
- Documentation of used welding parameters on PC or through LAN with WeldPoint™

A2 process controller PEI
The A2 process controller PEI is a control system for ESAB A2 tractors and A2 welding heads. The controller is connected to the power source by a control cable and can be connected to the ESAB LAF 631 and 1001.
The A2 process controller PEI is suitable for both submerged arc welding and gas metal arc welding. The control system is very easy to use with a minimum of training.

A2 process controller PEI
Enclosure class, protection IP 23
External dimensions, LxWxH, mm 197x227x220
Mains supply, V/Hz 42 (AC)/50-60
Weight, kg 6.2
Max power consumption, VA 700

Positioning and joint tracking system
The high-precision, heavy-duty A6 servo slide forms an important part of ESAB's automatic welding program. The slide is primarily intended for use in connection with positioning and joint tracking. Depending on the desired function and the work to be performed, the slide can be combined with two different control systems: PAV or GMH. The PAV is a manual, servo-assisted, joystick-controlled positioning and joint-tracking system for one or two slides. The GMH automatic joint-tracking system covers a wide range of applications and provides convenient handling. The basic function of the GMH is to correct irregularities in weld joints and to track simple workpiece geometries. You can also use sensor fingers with the GMH system to eliminate parallax faults.
Welding automation
Flux equipment

OPC Basic & Super flux equipment
ESAB has a number of different flux equipment/systems to combine with our automatic submerged arc welding equipment. The OPC flux recovery units have a robust, compact design – easy to fit and easy to use. They can be fitted equally well to A2 and A6 equipment, both stationary or travelling. The OPC Basic recovery unit works on the ejector principle using compressed air.

Like the OPC Basic, the OPC Super recovery unit has been developed for use in a demanding working environment and on heavy-duty jobs. The OPC Super, with its stronger ejector and cyclone, produces higher suction height than the Basic. The OPC Super can also be used with pre-heated flux, as it is heat enforced.

There are three filter types for cleaning used air. A filter bag is used for A2 tractors and light-duty welding applications. A cyclone filter with a filter bag is a solution for most A2/A6 subarc welding. The Tedak filter is for heavy-duty and continuous welding applications.

To upgrade this system to a system for heavy continuous welding, add the FFS flux-feed system, and create the FFRS Basic & Super Flux system. For more information, see the leaflet entitled "FFRS – Basic & Super".

Technical data
OPC recovery unit Basic
Air-flow capacity at working pressure 0.6 MPa: 250 lit/min
Max suction height at working pressure 0.6 MPa: 0.8 m

OPC recovery unit Super
Air-flow capacity at working pressure 0.6 MPa: 580 lit/min
Max suction height at working pressure 0.6 MPa: 1.4 m

Ordering information
OPC Basic 0148 140 880
Air pressure hose 3/8", max 50 meters 0190 343 104
OPC Basic with cyclone filter 0802 415 882
OPC Basic with Tedak filter 0802 415 883
OPC Super with cyclone filter 0802 415 892
OPC Super with Tedak filter 0802 415 893
Air pressure hose 1/2", max 50 meters 0190 343 106
Filter tube diam. 63 mm, max 12 meters 0193 125 003

FFRS Basic & Super flux equipment
The FFRS system is designed for continuous, high-capacity welding operations. It is ideal for long runs and mass production. The system is built on two different modules: the OPC Basic and Super, which are based on the ejector principle. The Basic type is for normal welding operation. The Super is used with increased flux bead and heat conditions.

FFRS – Basic & Super
These are recirculated systems for continuous Submerged Arc Welding. FFRS Basic/Super are complete equipment combining the effective recovery of flux with OPC Basic/Super systems and flux feed to the flux hopper with the well-known flux tank TPC 75. Added to ordering data is inlet pipe type, straight or bent, for easy connection to standard delivered aluminium hopper.

The system FFRS Basic and Super are built up from variants of OPC Basic/Super and Flux feed system FFS. The FFS comprises of a flux tank TPC with different inlets for the 6 and 10-litre flux hopper.

The system of FFS consists of:
Air flux feed tank TPC 75
Plastic hose 1” for flux, 30 meter
Inlet to flux hopper
Included in the package is an instruction of how to install inlet in hopper with drilling data.

Ordering information
FFS (straight inlet) 0806 697 887
FFS (bent inlet) 0806 697 886
Welding automation
Flux equipment

FFRS 1200 & 3000 flux equipment

The FFRS system is designed for continuous, high-capacity submerged arc welding operations. It is ideal for long runs and mass production. The FFRS 1200 & 3000 are based on an electric suction unit creating a vacuum, which is the alternative when extra high recovery force is required. In confined areas, they are the ideal flux-handling equipment. On the FFRS 1200 and 3000, there is an electrically-powered recovery unit. The recovered flux is cleaned from dust and slag in the pre-separator and passed back to the pressure tank for re-use. On the FFRS 1200, the power is 1200 W and, on the FFRS 3000, it is 3,000 W. The FFRS 1200/3000 is a flux feed and recovery system for heavy production SAW stations or submerged arc welding in confined spaces.

Technical data
FFRS 1200
External dimensions, LxWxH, mm: 1053x450x2210
Weight, kg, without flux: 230

FFRS 3000
External dimensions, LxWxH, mm: 750x450x2210
Weight, kg, without flux: 400

FFRS 1200 suction unit P160
External dimensions, LxWxH, mm: 480x400x1160
Fuse, slow, A: 10
Mains supply, V/Hz: 110-230/50-60 (others on request)
Weight, kg: 19

FFRS 3000 suction unit for E-PAK 150
External dimensions, LxWxH, mm: 1200x690x2000
Fuse, slow, A: 16
Mains supply, V/Hz: 400/3-phase, 50 Hz (others on request)
Weight, kg: 194

Ordering information
FFRS 1200 0801 500 901
FFRS 3000 0801 500 921
Air pressure hose 1/2”, max 50 m*) 0190 343 106
Suction hose D47/38, max 12 m*) 0379 016 001
Accessories FFRS
Bent inlet to flux hopper 0186 961 881
Straight inlet to flux hopper 0186 961 880
Extra hopper with inlet, see leaflet FFRS XA00104820
*) length according to customer requirements

CRE 30/60 air-drying units

- Reduces the risk of hydrogen cracking
- Built-in monitor – warns if the pre-set humidity is exceeded
- Reduces condensation – less corrosion and malfunction

The A6 CRE 30/60 air-drying units are designed for use with the ESAB flux handling system. The air-drying units work on the adsorption principle and is reactivated cold.

Most industries use compressed air as an energy source for many processes. For most of them, humidity is of no importance. The welding industry uses compressed air to transport flux for submerged arc welding. The necessity to keep these consumables dry is well known. The need to keep the humidity in the air at a low level is of the same importance as all the other precautions that are taken in a weld shop to limit the risk of hydrogen cracking.

The CRE 30/60 are air dryers for compressed air. It connects to the normal air distribution system at a plant. The capacity is sufficient to handle a delivery/recovery system for SAW. Thirty normal cubic metres per hour is the capacity at rated input for CRE 30. For CRE 60 the capacity is sixty normal cubic metres per hour.

The CRE 30/60 reduces the condensation of water in pneumatic systems and thereby reduces corrosion and malfunction. Another advantage is the built-in monitor that emits a warning if the pre-set dewpoint of the air is exceeded.

Ordering information
CRE 30 air-drying unit 0443 570 880
CRE 60 air-drying unit 0443 570 881
Desiccant type 512, 10 kg 0443 570 017
Oil filter 0443 570 018
Dust filter 0443 570 019
Welding automation
Column and boom

CaB 300/460 S

**CaB 300 S**
The CaB 300 S (standard) column and boom can reach over distances of 3 to 5 m both vertically and horizontally. The 180° column rotation facility provides a total action radius. The 4x4 size is capable of 150 kg load at the end of the boom. The A2 and A6 welding systems are easily combined with the CaB 300 S.

**CaB 460 S**
The CaB 460 S (standard) column and boom can reach over distances of 5 to 7 m both vertically and horizontally. The 180° column rotation facility provides a total action radius. The 6x4 size is capable of 350 kg load at the end of the rack and pinion driven boom. The A2 and A6 systems are easily combined with the CaB 460 S.

Station solution
Conventional column and boom with a movable boom and the welding head mounted at the end of the boom.

CaB 300/460/600 M

A modular range of column and booms, available in three load sizes. The modular system gives possibilities to configure a range of different welding station solutions that can fulfill most common welding applications. Due to modularity and the fixed configuration possibilities the lead times for delivery can be kept at a minimum.

Station solution
Conventional column and boom with a movable boom and the welding head mounted at the end of the boom. Cable chains are included.
CaB 300/460/600 C

A customized range of welding column and booms are available for different customer requirements and applications, with loading capacities and working strokes for utmost accessibility to the welding joints. Based on the modular CaB range, solutions to meet the most demanding request can be achieved. Welding methods as TIG, plasma welding and SAW cladding as well as Narrow Gap can be chosen on customized stations. We can offer four basic stations with numerous alternatives.

Station solution 1 is a conventional column and boom with a movable boom and the welding head mounted at the end of the boom.

Station solution 2 is a conventional column and boom, with a movable boom and one welding head mounted at the end, combined with a boom-carriage-mounted welding head. (Not CaB 300).

Station solution 3 side-boom manipulator with one or two welding heads. This welding station with 5-axes movement is the basic unit for welding girders and profiles and for joining plates and sections.

Station solution 4 is a side-boom manipulator with a double track boom. The welding heads are placed on each side of the boom. The boom carriages can be individually controlled by the joint tracking systems, on separate tracks. Positioning from the rail carriage helps to create a highly-efficient welding station for the transversal, double fillet welding of stiffeners, for example.
Telbo™ 9500

Telbo™ a giant innovative step towards highly productive automatic welding. Saving valuable workshop space by means of the unique 3-section telescope-like retraction of the boom and securing the safety of operator.

Outstanding 12 m reach-out with boom end loading capacity of heavy 500 kg with capacity to ensure superior productivity and quality of weld.

Telbo™ is ideal for internal/external circumferential welding of windtower applications.

Flexible production is the lodestar, no matter if mixed sizes and plate thicknesses are to be welded – productive results are obvious.

Loaded with 1000 kg Flux BigBag and 1000 kg Wire EcoCoils, welding is continuously performed and costly dwell times are minimized.

Features:
- PLC Control system for synchronized boom motion
- Automatic "Wind Back" of wire during boom retraction
- Telescopic wire guides
- Remote controlled flux nozzle
- Remote controlled height adjustment of joint tracking sensor
- Saving in Factory-floor foot print
- Increased workshop safety
- Enables flexible production
- Big Pack™ handling concepts
- Camera supervision system (option)

Applications:
- Power generation, especially wind tower manufacturing lines
- Pipeline, pipe mill contractors
- General fabrication (small workshops with limited space)

| Effective work range, m | 9.5 |
| Max reach out, m | 12.5 *) |
| Max load at boom end, kg | 500 |
| Welding process | SAW |
| Welding heads | A6 SAW, Single/Tandem and Tandem/Twin |
| Control system | PLC / GMH |
| Operator seat | yes |

*) Measured from column centre
**Welding automation**

**Column and boom**

**CaB 2200**
- The Column & Boom CaB 2200 is purposely designed for light duty.
- A smooth 360-degree lockable rotation.
- Linear guidings on column and boom for smooth movement which makes it ideal for the MIG, TIG and SAW welding processes.
- Cable chain on column and boom.
- Movable carriage or fixed stand
- IP 55 pendant control station using low voltage on the generous 10 metre cable.
- A standard safety feature including anti-fall device and limit switches for all motions.
- Pay load of 70 kg.

**Power Supply, V**
- 230/380/400/440

**Frequency**
- 50/60Hz-3ph

**Vertical speed, mm/min**
- 600

**Boom Speed, mm/min**
- 0-2050

**Electrical Panel**
- IP 55

**Rotation**
- Manual

**Boom height max (a), mm**
- 2500

**Boom height min (a), mm**
- 450

**Boom height max (b), mm**
- 2700

**Boom extension min (c), mm**
- 490

**Boom extension max (d), mm**
- 2500

**Boom extension min (d), mm**
- 490

**Wheel centre distance (e), mm**
- 1600

**Axle centre distance (f), mm**
- 1500

**Height of column (g), mm**
- 3200

**Ordering information**

| CaB 2200, manual carriage | 0370 250 600 |
| CaB 2200, fixed stand | 0370 250 605 |

**CaB 44, 55, 66 and 77**
- The Column & Boom CaB 44, 55, 66 and 77 is purposely designed and robustly built to withstand the rugged environment in the welding industry.
- A smooth 360-degree lockable rotation.
- All vertical and horizontal guidings are precisely machined for smooth movement.
- Solid state inverter for variable speed of horizontal travel and travel carriage.
- Worm gear box for vertical travel via AC motor complete with brake for added safety.
- High tensile roller chain used for vertical travel with the addition of a counter balance system with the column that provides smooth effortless travel.
- IP 55 pendant control station using low voltage on the generous 10 metre cable.
- A standard safety feature including anti-fall device and limit switches for all motions.
- Pay load of 420 kg.

<table>
<thead>
<tr>
<th>Overall height, mm</th>
<th>CaB 44</th>
<th>CaB 55</th>
<th>CaB 66</th>
<th>CaB 77</th>
</tr>
</thead>
<tbody>
<tr>
<td>5425</td>
<td>6425</td>
<td>7425</td>
<td>8425</td>
<td></td>
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</table>

<table>
<thead>
<tr>
<th>Boom length, mm</th>
<th>5700</th>
<th>6700</th>
<th>7700</th>
<th>8700</th>
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</thead>
<tbody>
<tr>
<td>Vertical under boom (min), mm</td>
<td>1000</td>
<td>1000</td>
<td>1000</td>
<td>1000</td>
</tr>
<tr>
<td>Vertical under boom (max), mm</td>
<td>4000</td>
<td>5000</td>
<td>6000</td>
<td>7000</td>
</tr>
<tr>
<td>Boom range horizontal, mm</td>
<td>4000</td>
<td>5000</td>
<td>6000</td>
<td>7000</td>
</tr>
<tr>
<td>Rail G-G, mm</td>
<td>2000</td>
<td>2000</td>
<td>2500</td>
<td>3000</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Vertical speed, mm/min</th>
<th>1250/1500 (50/60 Hz)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Boom speed, mm/min</td>
<td>165/1650 (50/60 Hz)</td>
</tr>
<tr>
<td>Travel Speed, mm/min</td>
<td>333/3335 (5-50Hz)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Electrical IP55</th>
</tr>
</thead>
<tbody>
<tr>
<td>Power Supply 380/400/415V-50Hz/3ph</td>
</tr>
<tr>
<td>Power Supply 440/460/480V-60Hz/3ph</td>
</tr>
</tbody>
</table>

**Ordering information**

| CaB 44, motorised carriage | 0370 250 601 |
| CaB 55, motorised carriage | 0370 250 602 |
| CaB 66, motorised carriage | 0370 250 603 |
| CaB 77, motorised carriage | 0370 250 604 |
| CaB 44, fixed stand        | 0370 250 605 |
| CaB 55, fixed stand        | 0370 250 607 |
| CaB 66, fixed stand        | 0370 250 608 |
| CaB 77, fixed stand        | 0370 250 609 |
Roller beds

Roller beds are designed to enable large round items to be welded and handled during rotation welding for example. ESAB offers a large range of roller beds of different models and load possibilities. The range partly consists of conventional roller beds, where the operator manually and mechanically sets the distance between the rollers to different diameters – and partly self-adjusting roller beds, where the rollers automatically adjust themselves to the diameter of the workpiece. All roller beds are designed to be easily combined with ESAB A2/A6 program and can be controlled via a remote control unit or from the process controller PEK.

**CD 5-120 and CI 5-120**, conventional roller beds with rail bogie. Max loading capacity from 2.5 – 60 tons/section.

**CD-30/60/100/120-DB** and **CI-30&0/100/120-IB**, conventional roller beds with rail bogie. Max loading capacity from 15 – 60 tons/section.

**FIR 35, 75 and 100**. These units are part of a growing line and used especially in wind tower production. Max loading capacity 35, 75 or 100 tons.

**FIT 30, 60 and 100**, conventional idler roller beds with built-in hydraulic height adjustment. These units are part of a growing line and used especially in wind tower production. Max loading capacity 15, 30 or 50 tons.

**FUB 30**, complete unit for fit-up of section. One set of FUB consists of one power and one idler roller bed 30T, four independently adjusted rollers to align the two sections with each other. Max loading capacity 30 tons.

**SD 5-100 and SI 5-100**, self-aligning roller beds. Motorised and idler rail bogie versions. Max loading capacity 2.5 – 50 tons/section.

**SD 5-100 DB and SI 5-100 IB**, self-aligning roller beds. Motorised and idler rail bogie versions. Max loading capacity 2.5 – 50 tons/section.

**Suitable application areas:**
- Wind tower fabrication
- Offshore and shipyards
- Pressure vessels
- Pipelines

**Versatile accessories**
A wide range of accessories is available for ESAB’s roller beds, which additionally improve workpiece handling during welding.

For more information, please contact your nearest ESAB representative.
Welding times can be drastically reduced by placing the workpiece on a positioner when welding. Up to 25 – 30 % higher welding speed can be achieved if the joint is welded lying down instead of vertically. The optimum welding position can always be obtained with ESAB’s positioners.

Welding in the optimum position improves the welding quality as welding work becomes considerably easier for the welder to carry out in a safer way. The arc time factor also increases when welding in the positioner, especially when working on large, heavy workpieces. The changes in position of the workpiece is reduced to a minimum in comparison to using a spindle guide or other lifting tool, which often means unproductive waiting times. ESAB has a wide program range of positioners for welding and these can also be used for installation work. During automated welding, a positioner is often a part of the total application and all the models are fully designed to be combined with ESAB’s automation program, which means that they can be controlled remotely or connected by the application’s process controller PEK.

Depending on the size, weight and complexity of the workpiece and position angle requirements, the following ESAB positioners are available:

**RT 250 – RT 500**
Two axis positioners for rotating and tilting lightweight workpieces. Maximum loading capacity from 250 to 500 kg.

**RT 1 – RT 35**
Two axis positioners for rotating and tilting workpieces. Maximum loading capacity from 1000-35000 kg.

The positioners of the RT-series have 2 axis; height and rotation, which give a perfect ergonomic working position.

All the positioners come with a low voltage (24V) remote control for all functions. For daily work these positioners offer perfect solutions with optimized motor and gear drive sizes.

**TAP 1T and TAP 3T**
Three axis positioners for lifting, rotating and tilting demanding workpieces. The positioners of the TAP-series have 3 axis; height, tilting angle and rotation. Thus 3-axis operation guarantees the ideal ergonomic working position. Height, angle and speed are continuously adjustable.

**Suitable application areas:**
- Pipe shops
- Vessels
- Cladding of dish ends
- Fuel tanks

**Versatile accessories**
A wide range of accessories is available for ESAB’s positioners, which additionally improve workpiece handling during welding.

For more information, please contact your nearest ESAB representative.
Welding solutions for Pipemills
ESAB is a complete, reliable partner for pipemill welding. Not only do we have in-depth experience of demanding multi-wire submerged-arc welding. We also have a comprehensive range of products for this type of production.

Flexible, reliable welding equipment
We have a wide range of products developed in house for various multi-wire SAW applications which are particularly suitable for pipe welding. The range includes AC-DC power sources in the Pipemill Edition, controls for multi-wire processes including documentation, as well as columns and booms with a wide variety of welding heads.

Precise, high-speed longitudinal welding
Our concept for longitudinal submerged-arc welding is suitable for pipes in a normal diameter range of 20-64", a normal wall thickness of 6 to 40 mm and a length of up to 18 m.

Internal and external welding
For internal welding we have designed pre-stressed booms as well as welding heads for up to four wires. During internal welding, front-mounted laser sensor guides the welding head via the cross-slide. Video camera observation of accurate guiding and the welding process is standard.

The external welding station is based on a column and boom solution with a very stable cross-slide to adapt to different pipe diameters. The actual welding head, with its up to five-wire feed systems mounted on a so-called "rainbow fixture", is based on the ESAB A6S-Arc Master System which has been tested more than 10.000 times.

Problem-free flux and wire feed systems
We offer the smooth feeding of wire in different diameters and the equally straightforward supply of new and re-used flux. The constant and reliable wire feed is secured by high torque wire feed motors and enclosed double wire straightening mounted in 90 degrees to each other.

The correct combination of compressed air, flux feeding, easy replenishment of new flux via the BigBag system, a vacuum unit, a reliable magnetic separator and continuous recovery helps to create welding stations with less downtime, high-quality welds and, last but not least, a cleaner working environment.

Spiral pipe welding
Many end users require spiral-welded pipes for different purposes, such as water pipes. Normally, the wall thickness is limited to 25 mm, but the diameter range can be up to roughly 2.5 m. As in longitudinal pipe welding solutions, an internal welding head mounted on a long boom and an outside head mounted on a column and boom are used for offline spiral pipe welding.

However, this is the only similarity.
First of all, internal and external welding is performed at one and the same station. Internal welding starts first and, after half a turn, external welding then begins – internally with two or in some cases three wires and externally with one or three wires in the welding process, depending on the diameter and wall thickness of the pipe.

Ordering information
For more information, please contact your nearest ESAB representative.
Beam welding

ESAB has more than 30 years’ experience in the field of beam and profile welding. ESAB's beam and profile machines are equipped with the well-known and well-proven ESAB A6 system welding equipment.

ESAB offers you a complete and effective way of welding beams and profiles. Whether you weld I-, T- or L-beams, wide flange beams, columns, tapered beams or non-symmetrical beams, ESAB has the know-how and the welding equipment to match your efficiency, quality, precision, versatility, productivity and overall welding economy requirements.

The machines are of two types: IT-machines, where the beams are welded with the web unit in the vertical position, and I-machines, where the beams are produced in the horizontal position.

The main advantage of both machine types, apart from their high production capacity, is that the welding operation takes place when the flange and the web are pressed together under pressure in order completely to eliminate the gap between the surfaces. This ensures perfect weld quality.

The IT-machines have a built-in straightening device which compensates for the pull-back of the flanges (see picture). ESAB’s beam-welding machine program gives you the opportunity to choose the right type of equipment for your particular type of production.

Total range of beam sizes that can be welded:

<table>
<thead>
<tr>
<th>Machine type</th>
<th>Web</th>
<th>Flange</th>
</tr>
</thead>
<tbody>
<tr>
<td>IT-258</td>
<td>200-2500 mm</td>
<td>100-800 mm</td>
</tr>
<tr>
<td>IT-158</td>
<td>200-1500 mm</td>
<td>100-800 mm</td>
</tr>
</tbody>
</table>

Ordering information
For more information please contact your nearest ESAB representative
ESAB Friction Stir Welding

ESAB has extended its product programme to include machines for the Friction Stir Welding method (FSW). This method has been developed and patented by TWI in the UK. The FSW method is based on the principle of obtaining sufficiently high temperatures to forge two aluminium components, using a rotating tool that moves along the joint. Using the FSW method, aluminium components are joined together without increasing the temperature above melting point. The Friction Stir Welding of aluminium has been shown to produce joints with high-strength values and without inclusions and impurities. Bending tests and tensile tests have been conducted with superb results. The fatigue properties are outstanding compared with other welding methods. Furthermore, the joint is almost free from stress and has a perfect root surface when welded from one side. This results in a minimum of supplementary work. Friction Stir Welding is ideal for joining straight profiles and flat plates with a thickness of 1.2-25 mm. When welding materials with a thickness of more than 15 mm, the welding is done from both sides. The maximum thickness is around 60 mm at 100% penetration.

Suitable application areas:
- Shipbuilding
- Offshore platforms
- Aerospace industry
- Railway wagons, trams, underground train carriages
- Automotive industry
- Production of electric motors
- Defence industry
- Cooling elements
- Basically all aluminium, copper and magnesium alloys can be friction stir welded with high quality and speed.

ESAB LEGIO™

The ESAB LEGIO™ concept combines the latest technology with proven quality. The modular system makes it possible to assemble welding stations to suit the most varied friction stir welding applications. The LEGIO™ system consists of five basic designs in a series of seven sizes, covering a welding depth of 1.2 mm to 60 mm. These basic types can be supplemented with different types of equipment to suit the most varied production needs and give maximum flexibility to any production line. The S- and the U-models are designed to be easily integrated with larger fixtures, rotary units and exchangeable clamping systems. For the production of smaller workpieces, the UT- and the ST-model are the most suitable. They have tables prepared with a hole pattern, where fixtures can be attached.

ESAB SuperStir™

The ESAB SuperStir™ programme includes a variety of machines developed from a standardized ESAB SuperStir™ base unit and with working ranges of 0.5 x 1.5 m up to 10x20 m within the same concept. The programme also include customized models of different designs to meet our customers specifications in their different production areas. These different designs are today used worldwide in R&D centers, in joining of extrusions to panels, in production of pressure vessels as well as small parts for the automotive and electronic industries etc.
Welding automation
Friction Stir welding

Rosio™ Friction Stir Welding Robot
Friction Stir Welding Robot for welding of challenging joints
The ESAB Friction Stir Welding robot system enables flexible joining of complex structures, preferably in Aluminium. The ability to perform welds in an arbitrary direction of a 3-dimensional workspace increases the possibilities of usage for new challenging FSW applications.

The FSW method’s benefits:
- Reliable and uniform high weld quality
- Unbeatable strength
- High productivity
- Low distortion and shrinkage
- Minimum of supplementary work
- Low energy consumption
- Environment friendly

Flash butt welding
ESAB manufacture a complete series of flash butt welding machines for different welding objects with a welding area of 500 mm² up to 30,000 mm².
The flash butt welding technique is especially convenient and profitable for precision and mass production work as it permits a high level of mechanization and automation of the manufacturing process.

ESAB’s resistance welding program
Chain-making installations, type Carousel
Size 5 – 10, Ø 18 – 173 mm
Fully automated chain-making plant type ZAC
ZAC 554 Ø 18–34 mm
ZAC 42M Ø 18–42 mm
Chain-welding installation, type Rocat
WT 18–26 Ø 18–26 mm
WT 22–36 Ø 22–36 mm
Fully automatic link-bending plant, type YLN
YLN 451 Ø 14–26 mm
YLN 552 Ø 22–36 mm
Flash butt welding machines, type SVU-K
Welding areas 1,400 – 10,000 mm²
Th figures are based on an upsetting force of 5 kp/mm²
Resistance heaters, type ZSM
Ø 14 – 173 mm depending on size of machine
Chain-bending machines, type ZKBH
Ø 17 – 173 mm, depending on size of machine
Rail-welding machine, type ZFR
ZFSC 10 Welding areas 12,000 mm²
ZFR 10 B Welding areas 10,000 mm²
ZFR 11 GC Welding areas 12,000 mm²
Flash butt welding machine for tubes, type SVU
SVU 7884-H Welding areas 2,300 mm²
SVU 8884-H Welding areas 3,600 mm²
Flash butt welding machines for repair anode studs in the aluminium industry
SVU 9883-S Ø 140 mm
ZF 12 AA Ø 160 mm
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