

Automation Catalogue



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Controllers & Power Sources



A2-A6 Process Controller PEK

For use with ESAB CAN-controlled power sources and motors

- For use with ESAB automatic power sources LAF 631/ 1001/1251/1601, TAF 801/1251 and Aristo® 1000 AC/DC SAW.
- CAN-bus system for data transfer.
- Prepared for submerged arc welding (SAW), gas metal arc welding (GMAW) and arc gouging.
- User-friendly clear text menus.
- Selectable welding process.
- Memory for 255 parameter sets.
- Constant current or constant wire speed.
- Encoder controlled motors for top performance motion control.
- USB port for data back-up and transfer.
- Used welding parameters can be stored directly on a USB memory drive.
- Five Soft Keys can be configured according to operator preferences.



Ordering information

A2-A6 process controller PEK
Sales Literature

0460 504 880
XA00143720

Options & Accessories

I/O-Module	0462 080 001
Set of connectors	0462 119 880
Cable restraining bracket	0460 861 880
Control cable, 15 m (49 ft.)	0460 910 881
Control cable, 25 m (82 ft.)	0460 910 882
Control cable, 35 m (115 ft.)	0460 910 883
Control cable, 50 m (164 ft.)	0460 910 884

Adjustable sun shield for better visibility for outdoor use



Technical data

Connection voltage from the power source	42V AC, 50/60 Hz
Connection power	max 900 VA
Motor connection adjusted for ESAB's A2 and A6 motors	connection of 2 motors, motor current 6A cont., max 10A
Speed control	feedback from pulse encoder
Welding speed, m/min (ipm)	0.1-2.0 (4-79) depending on travel carriage
Max. manual travel speed, m/min (ipm)	2.0 (79)
Consumable wire feed speed, m/min (ipm)	0.3-25 (12-984) depending on wire feed unit
Valve output	1 pc, 42 V AC, 0.5A
Inputs	for connection of sensors or limit switches
Connection to power source	Burndy contact 12-poles
Max ambient temperature, °C (°F)	45 (113)
Min ambient temperature, °C (°F)	-15 (59)
Relative humidity (of air)	98%
Dimensions, LxWxH, mm (in.)	246x235x273 (7x9.25x11)
Weight, kg (lbs)	6.6 (14.5)
Enclosure class	IP23
Standards	EN60974-1, EN60974-10

A2 Process Controller PEI

For use with ESAB power sources and motors

- Control system for A2 tractors and A2 welding heads
- Analogue type that can control most brands of power supplies.
- Suitable for submerged arc welding (SAW) or gas metal arc welding (GMAW)
- Travel speed, voltage and wire feed speed can be adjusted by simply turning the knobs - actual data is shown on digital displays during welding.
- Change welding direction using switch on front panel.
- Choice of scratch start or direct start methods.
- Adjustable burn-back time.



Ordering information

A2 process controller PEI	0449 330 880
Sales Literature	XA00114320

Options & Accessories

Control cable, 15 m (49 ft)	0449 500 880
Control cable, 25 m (82 ft.)	0449 500 881
Control cable, 35 m (115 ft.)	0449 500 882
Control cable, 50 m (164 ft.)	0449 500 883
Control cable, 75 m (246 ft.)	0449 500 884
Control cable, 100 m (328 ft.)	0449 500 885

Technical data

Connection voltage from the power source	42V AC, 50/60 Hz
Connection power	max 700 VA
Motor connection adjusted for ESAB's A2 motors	42V DC, 3.5 A P100%, 4.5A P60%
Speed control	Internal EMK-adjustment
Welding speed, m/min (ipm)	0.1-2.0 (4-79) depending on travel carriage
Max. transport speed, m/min (ipm)	2.0 (79)
Consumable wire feed speed, m/min (ipm)	0.5-16.2 (20-640) depending on wire feed unit
Burnback time, s	0-2.0
Gas pre-flow time, s	0.5
Gas post-flow time, s	1.0
Connection to power source	Burndy contact, 23 poles
Welding voltage control, V DC	0-10
Flow guard	NO Contact / PNP OC
Limit switches	NO Contact / PNP OC
External current shunt, A/mV	1000/60, 1500/60, 600/100, 750/100
Operating temperature, °C (°F)	-10 - +40 (14-104)
Weight, kg (lbs.)	6.2 (14)
Dimensions LxWxH, mm (in.)	197x227x220 (7.8x9.0x8.7)
Enclosure class	IP23
Standards	EN50199, EN60974-1

Power sources LAF 631, 1001, 1251 and 1601

DC power sources for submerged-arc welding (SAW) or gas metal arc welding (GMAW)

- Three-phase, fan-cooled DC welding power sources designed for high productivity automated submerged-arc welding (SAW) or high productivity gas metal arc welding (GMAW).
- Used in combination with ESAB's A2-A6 equipment range and the A2-A6 Process Controllers (PEK or PEI).
- Good arc stability at both high and low arc voltages.
- Adjust and monitor the welding parameters on the power source from the front panel of the process controller (PEK or PEI).
- Welding current range can be extended by connecting two power sources in parallel for the most demanding applications.
- Ideal for SAW applications such as wind tower components, nuclear power vessels, boilers and in the ship building industry.
- Ideal for GMAW applications such as welding the root pass in heavy pipe production.



Ordering information

LAF 631	0460 512 880
LAF 1001	0460 513 880
LAF 1251	0460 514 880
LAF 1601	0460 515 880
LAF 1001 M	0460 513 881
LAF 1251 M	0460 514 881
LAF 1601 M	0460 515 881
Sales Literature	XA00143820

Options & Accessories

PEK

Control cable, 15 m (49 ft.)	0460 910 881
Control cable, 25 m (82 ft.)	0460 910 882
Control cable, 35 m (115 ft.)	0460 910 883
Control cable, 50 m (164 ft.)	0460 910 884

PEI

Control cable, 15 m (49 ft.)	0449 500 880
Control cable, 25 m (82 ft.)	0449 500 881
Control cable, 35 m (115 ft.)	0449 500 882
Control cable, 50 m (164 ft.)	0449 500 883
Control cable, 75 m (246 ft.)	0449 500 884
Control cable, 100 m (328 ft.)	0449 500 885
Wheel set LAF 631	0457 787 880



LAF 631 in combination with
MechTrac and GMH

Power sources LAF 631, 1001, 1251 and 1601

Cont.

Technical data	LAF 631	LAF 1001	LAF 1251	LAF 1601
Mains supply, 3 ph 50 Hz, V	400/415	400/415/500	400/415/500	400/415/500
Mains supply, 3 ph 60 Hz, V	440	400/440/550	400/440/550	400/440/550
Current 100%, 50 Hz, A	52	64/64/52	99/99/80	136/136/108
Current 100%, 60 Hz, A	52	64/64/52	99/99/80	136/136/108
Fuse, slow, 50 Hz, A	63	63	100/100/80	160/160/125
Fuse slow, 60 Hz, A	63	63	100/100/80	160/160/125
Maximum load at:				
100% duty cycle, A/V	630/44	800/44	1250/44	1600/44
80% duty cycle, A/V	-	-	-	-
60% duty cycle, A/V	800/44	1000/44	-	-
Setting range, A/V				
GMAW	50/17-630/44	50/17-1000/45	60/17-1250/44	-
SAW	30/21-800/44	40/22-1000/45	40/22-1250/44	40/22-1600/46
Open circuit voltage, V	54	52	51	54
Open circuit power, W	150	145	220	220
Efficiency	0.84	0.84	0.87	0.86
Power factor	0.90	0.95	0.92	0.87
Enclosure class	IP23	IP23	IP23	IP23
Dimensions, LxWxH, mm (in.)	670x490x930 (26x19x37)	646x552x1090 (25x22x43)	774x598x1428 (30.5x23.5x56)	774x598x1428 (30.5x23.5x56)
Weight, kg (lbs.)	260 (573)	330 (727.5)	490 (1080)	585 (1290)
Application class	S	S	S	S

Technical data	LAF 1001 M	LAF 1251 M	LAF 1601 M
Mains supply, 3 ph 50 Hz, V	230/400/415/500	230/400/415/500	230/400/415/500
Mains supply, 3 ph 60 Hz, V	230/400/440/550	230/400/440/550	230/400/440/550
Current 100%, 50 Hz, A	111/64/64/52	171/99/99/80	235/136/136/108
Current 60%, 50 Hz, A	138/80/80/65	-	-
Current 100%, 60 Hz, A	111/64/64/52	171/99/99/80	235/136/136/108
Current 60%, 60 Hz, A	138/80/80/65	-	-
Fuse, slow, 50 Hz, A	125/63/63/63	160/125/125/80	200/160/160/125
Fuse, slow, 60 Hz, A	125/63/63/63	160/100/100/80	200/160/160/125

For all other technical information, see LAF 1001, LAF 1251 and LAF 1601, above.

These welding power sources comply with the requirements of EN 60974-1 and IEC 974-1.

S This symbol indicates that the welding power source may be used in areas with an increased electrical hazard, e.g. areas where the electrical hazard is increased due to damp and/or the proximity to earthed metal objects.

Power sources TAF 801 and 1251

Square wave AC power sources for submerged arc welding (SAW)

- Square wave AC power sources that convert the secondary voltage from a sinus wave via a thyristor controlled rectifier bridge to a square wave arc voltage with excellent strike characteristics and good welding properties.
- 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 supply 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.
- Used in combination with ESAB's A2-A6 equipment range and the A2-A6 Process Controllers (PEK or PEI).



Ordering information

TAF 801	0460 516 880
TAF 1251	0460 517 880
Sales Literature	XA00143920

Options & Accessories

Control cable, 15 m (49 ft.)	0460 910 881
Control cable, 25 m (82 ft.)	0460 910 882
Control cable, 35 m (115 ft.)	0460 910 883
Control cable, 50 m (164 ft.)	0460 910 884

Technical data	TAF 801	TAF 1251
Mains supply, 1 ph 50 Hz, V	400/415/500	400/415/500
Mains supply, 1 ph 60 Hz, V	400/440/550	400/440/550
Maximum load at:		
100% duty cycle, A/V	800/44	1250/44
60% duty cycle, A/V	1000/44	1500/44
Setting range, A/V	300/28-800/44	400/28-1250/44
Open circuit voltage, V	71	72
Open circuit power, W	230	230
Efficiency	0.86	0.86
Power factor	0.75	0.76
Dimensions, LxWxH, mm (in.)	774x598x1428 (30.5x23.5x56)	774x598x1428 (30.5x23.5x56)
Weight, kg (lbs)	495 (1091)	608 (1340)
Enclosure class	IP23	IP23
Application class	<div style="border: 1px solid black; padding: 2px; display: inline-block;">S</div>	<div style="border: 1px solid black; padding: 2px; display: inline-block;">S</div>

Power source Aristo® 1000 AC/DC SAW

AC/DC inverter power source for efficient submerged arc welding

- Based on unique and patent pending technologies to deliver the best welding performance with the lowest power consumption.
- Designed for use with the digital PEK controller and the robust A2/A6 feeder units.
- A global inverter - connect to a three phase mains supply from 380 to 575 V, 50 or 60 Hz.
- Change between DC and AC "on the fly". Minimize downtime and weld defects by the push of a button with the patent pending "on the fly" function.
- **CableBoost™** patent-pending technology ensures the performance of the power source is unaffected even when long welding cables are used. What you set is what you get.
- Increase productivity up to 65% compared to DC+ welding by using the higher deposition rate of unbalanced AC with the same heat input.
- **Bead Profile Modelling™** provides adjustable AC settings for precise control of penetration profile and depth, dilution, arc stability and weld appearance to achieve the best productivity and quality for each weld.



Technical data

Mains supply, 3 ph, V, Hz	380-575, 50/60
Mains voltage (DC load), V	380/400/415/440/460/500/550/575
Mains current (DC load), A	86/82/79/74/71/66/59/57
Rated output at 100%, A / V	1000 / 44
AC Balance, %	25-75
AC Offset, A / V	±300 / ±10
AC Frequency, Hz	10-100
Output range, A	200-1000
EMC Filter	included
Parallel connection	available
Cable requirements, mm ²	2x95 / 2x120
Welding cable length (total)	up to 100 m
Remote On/Off input	available
Digital welding regulator	3rd generation
Open circuit voltage, V DC	130
Idle power, W	200
Efficiency at max output	0.88
Power factor	0.93
Dimensions, LxWxH, mm (in.)	865x610x1320 (34x24x52)
Weight, kg (lbs)	330 (727.5)
Enclosure class	IP23
Certification	CE-certified
Third party approvals	CSA, CCC, Ghost-R

Ordering information

Aristo® 1000 AC/DC SAW	0462 100 880
Interconnection cable, 4 m (for parallel/tandem operation)	0463 282 880
Installation manual (for parallel/tandem operation)	0740 801 030
Sales literature	XA00171020

Options & Accessories

Control cable, 15 m (49 ft.)	0460 910 881
Control cable, 25 m (82 ft.)	0460 910 882
Control cable, 35 m (115 ft.)	0460 910 883
Control cable, 50 m (164 ft.)	0460 910 884
A2-A6 Process controller PEK	0460 504 880

Welding Tractors



Railtrac™ 1000

Multi-purpose system for welding and cutting

- Ideal for a wide variety automated gas metal arc welding (GMAW) applications.
- Made from aluminium and steel parts to withstand harsh environments.
- Ideal for horizontal to horizontal and vertical (up only) welding.
- Can be customized with a wide range of accessories.
- New joint system allows for both stiff and flexible rail applications.
- Straightforward, well designed programming unit with up to 5 different programs.
- Standard software offers programmable interval welding and backfill function.
- Operator can control machine motions with hand held remote without lifting welding visor.
- Remote Control features: start and stop, shift program, weaving width, zero line displacement and many more.
- Adjust the welding current and voltage during welding with the two potentiometers on the remote control (when using ESAB equipment).
- Remote control only available on FW1000 and FWR1000 models.



Technical data	Railtrac F1000 Flexi	Railtrac FR1000 Flexi Return	Railtrac FW1000 Flexi-Weaver	Railtrac FW1000L Flexi-Weaver	Railtrac FWR1000 Flexi-Weaver-Return
Mains supply, V AC/DC	36-46/40-60	36-46/40-60	36-46/40-60	36-46/40-60	36-46/40-60
Max power consumption, W	30	30	80	80	80
Weight, excl rails, Kg (lbs)	6 (13)	6 (13)	7 (15)	7 (15)	7 (15)
Dimensions, LxWxH, mm (in.)	170x400x190 (6.7x15.8x7.5)	170x400x190 (6.7x15.8x7.5)	170x350x190 (6.7x13.8x7.5)	170x350x190 (6.7x13.8x7.5)	170x350x190 (6.7x13.8x7.5)
Flexi rail dimensions, LxW, mm (in.)	60x5 (2.4x0.2)	60x5 (2.4x0.2)	60x5 (2.4x0.2)	60x5 (2.4x0.2)	60x5 (2.4x0.2)
Stiffener bar, LxW, mm (in.)	40x10 (1.6x0.4)	40x10 (1.6x0.4)	40x10 (1.6x0.4)	40x10 (1.6x0.4)	40x10 (1.6x0.4)
Min bend diameter, external, mm (in.)	3000 (118)	3000 (118)	3000 (118)	3000 (118)	3000 (118)
Slide for height adjustment, mm (in.)	±22 (±0.87)	±22 (±0.87)	±22 (±0.87)	-	±22 (±0.87)
Mechanical lateral adjustment, mm (in.)	-	-	±35 (±1.4)	±35 (±1.4)	±35 (±1.4)
Welding speed, cm/min (ipm)	10-150 (3.9-59)	10-150 (3.9-59)	10-150 (3.9-59)	5-99 (1.95-39)	10-150 (3.9-59)
Quick transport, cm/min (ipm)	150 (59)	150 (59)	150 (59)	99 (39)	150 (59)
Preheating time, sec	0.0-9.9	0.0-9.9	0.0-9.9	0.0-9.9	0.0-9.9
Interval welding, cm (in.)	1-99 (0.4-39)	1-99 (0.4-39)	1-99 (0.4-39)	1-99 (0.4-39)	1-99 (0.4-39)
Crater-filling time, sec	0.0-9.9	0.0-9.9	0.0-9.9	0.0-9.9	0.0-9.9
"Backfill", mm (in.)	0-99 (0-3.9)	0-99 (0-3.9)	0-99 (0-3.9)	0-99 (0-3.9)	0-99 (0-3.9)
Weaving speed, mm/s (ips)	-	-	6-60 (0.2-2.4)	6-60 (0.2-2.4)	6-60 (0.2-2.4)
Weaving width, mm (in.)	-	-	1-30 (0.04-1.2)	1-30 (0.04-1.2)	1-30 (0.04-1.2)
Electrical 0-line displacement, mm (in.)	-	-	±12.5 (±0.5)	±12.5 (±0.5)	±12.5 (±0.5)
Pause time at outer edge, sec	-	-	0.0-9.9	0.0-9.9	0.0-9.9
Weaving pattern, No.	-	-	3	3	3
Number of programs	5	5	5	5	5
Temperature machine and magnets, °C	0-70	0-70	0-70	0-70	0-70
Temperature vacuum attachments, °C	0-90	0-90	0-90	0-90	0-90
Enclosure class	IP23	IP23	IP23	IP23	IP23

Railtrac™ 1000

System configuration

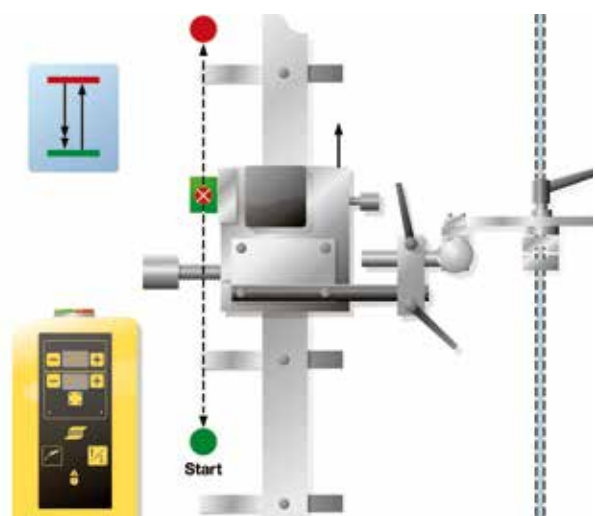
Railtrac™ F1000 Flexi

A mechanised system with a flexible combi-rail, suitable for both inside and outside welding and cutting along sharp curves as well as straight surfaces. This model is also suitable for thermal cutting.



Railtrac™ FR1000 Flexi Return

Railtrac FR1000 has the combi-rail and facilities for movable start and stop for automatic return for any length. This system is ideal for use in fixed installations or where a weld is repeated over and over again.



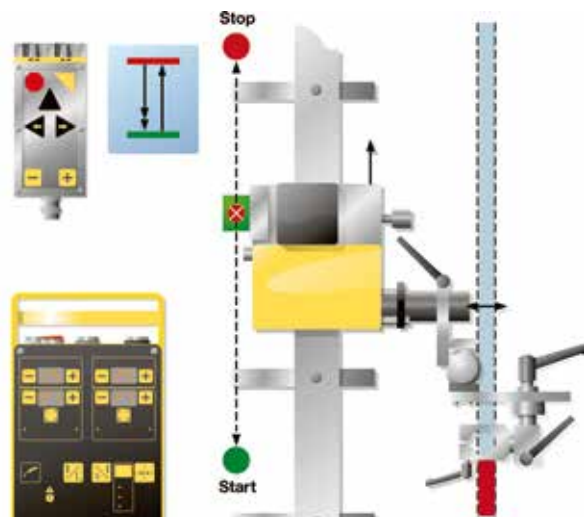
Railtrac™ FW1000 Flexi Weaver

This version has a flexible combi-rail and a weaver for weaving in many different patterns. It is also equipped with a remote-controlled unit with a user-friendly design.



Railtrac™ FWR1000 Flexi Weaver Return

Like the Flexi Weaver, this system has a weaving unit, but it also has adjustable start, stop and return facilities. Equipped with a remote control unit with a unique design, this is a very advanced solution for a number of applications.



Railtrac™ 1000

Cont.

Ordering information

Railtrac™ F1000 Flexi	0398 146 002
Railtrac™ FR1000 Flexi Return	0398 146 003
Railtrac™ FW1000 Flexi Weaver	0398 146 012
Railtrac™ FW1000L Flexi Weaver (<i>low speed</i>)	0398 146 014
Railtrac™ FWR1000 Flexi Weaver Return	0398 146 013
Sales Literature	XA00135520

Options & Accessories

Standard

Weaving unit *)
Control unit
Remote control *)
Universal Torch holder with slide
Automatic start and stop function **)

Components

Flexible alu-rail, 2.5 m (8 ft.)	0398 146 115
Flexible alu-rail, 2.5 m (8 ft.), 8 magnets	0398 146 112
Flexible alu-rail, 2.5 m (8 ft.), vacuum attachments	0398 146 113
Stiffener Bar, 2.5 m (8 ft.)	0398 146 116
Magnetic attachment 90°, at least 8/2.5 m (8/8 ft.)	0398 146 100
Vacuum attachment 90°, at least 4/2.5 m (4/8 ft.)	0398 146 104
Vacuum attachment 200°, at least 4/2.5 m (4/8 ft.)	0398 146 105
Screw attachment for stiffened rail	0398 146 114

Accessories

Torch holder	0398 145 101
Adapter for stiffened rail attachments	0398 146 106
Universal pivoted torch holder	0398 145 104
Attachment for IMP cutting torch	0398 145 260
Torch angle attachment	0398 145 215
Tilt unit for weaving unit *)	0398 145 200
Turning unit for weaving unit *)	0398 145 201
"Floating" head	0398 145 211
IMP cutting torch	0398 145 250
Transport and storage box	0398 145 199
Control cable, 5 m (16.4 ft.)	0457 360 880
AristoFeed wire feeder adaptor kit	0458 757 881
Universal control cable, 5 m (16.4 ft.)	0457 360 881
Transformer kit	0457 467 880

*) FW1000, FW1000L, FWR1000 only

**) FR1000 and FWR1000 only



Railtrac™ Orbital W

The machine to automate your tube welding

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. A standard ESAB welding torch can be attached quickly. Two motors guarantee an even, stable movement on the rail.

The control box allows you to control the following parameters and store 5 different welding programs:

- Start and stop
- Shift program
- Travel or welding direction
- Travel or welding speed
- Weaving width
- Zero line displacement
- Welding current (wire feed speed)
- Welding voltage
- Backfill function

Technical data

Control voltage, V AC	36-46
Power, W	90
Connection	Burndy, 12 pins
Welding speed, cm/min (ipm)	5-99 (2-39)
Slide for height adjustment, mm (in.)	±22 (±0.9)
Weaving speed, mm/sec. (ips.)	6-60 (0.2-2.4)
Weaving width, mm (in.)	1-30 (0.04-1.2)
Pause time at outer edge, sec	0.0-9.9
Electrical 0-line displacement, mm (in.)	±12.5 (±0.5)
Number of programs	5
Dimensions (LxWxH), mm (in.)	312x327x181 (12.3x12.9x7.1)
Weight, kg (lbs)	8 (17.6)
Enclosure class	IP 23



Ordering information

Railtrac™ Orbital W 0398 146 032

Options & Accessories

Floating head	0398 145 211
Orbital ring 6"	0449 900 706
Orbital ring 8"	0449 900 708
Orbital ring 10"	0449 900 710
Orbital ring 12"	0449 900 712
Orbital ring 14"	0449 900 714
Orbital ring 16"	0449 900 716
Orbital ring 18"	0449 900 718
Orbital ring 20"	0449 900 720
Orbital ring 22"	0449 900 722
Orbital ring 24"	0449 900 724
Orbital ring 26"	0449 900 726
Sales Literature	XA00133720

Larger ring sizes available on request

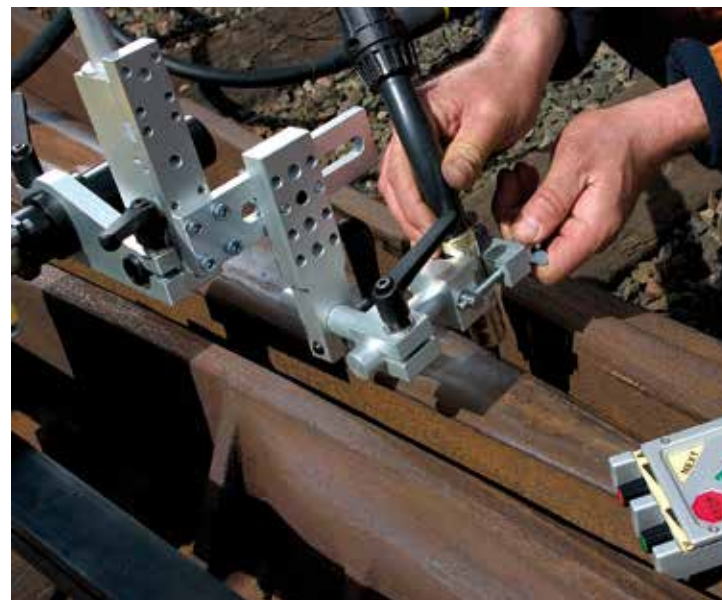
Railtrac™ BV/BVR 1000

Programmable equipment for hardfacing and repair of rail profiles

- Light weight makes it quick and easy to remove the aluminium travel beam from rail or crossing and simple to restore to its original position on the work piece.
- It can be used with a number of different power sources and wire feeder combinations.
- Precise adjustments of the weaving pattern, travel speed and zero line can all be achieved during welding.
- Welding parameters are adjustable from the remote control.
- CE and EMC approved.
- IP 23 enclosure class makes it suitable for use out-doors. Control voltage level of 42V AC is safe for use anywhere.

Ordering information

Railtrac™ BV 1000, complete excl weld equipment	0398 145 002
Railtrac™ BVR 1000, complete excl weld equipment	0398 145 003
Torch holder	0398 145 101
Sales Literature	XA00067820



Technical data

Control voltage, V AC / V DC	36-46 / 40-60
Max. output consumption, W	80
Weight excl. rail, kg (lbs.)	7 (15.4)
Weight of rail 2 m, kg (lbs.)	4 (8.8)
Slide for adjusting height of torch, mm (in.)	±22 (±0.9)
Mechanical lateral adjustment, mm (in.)	200 (7.9)
Gun attachment universal, mm (in.)	Ø 12-36 (Ø 0.5-1.4)
Max. effective weld length, mm (in.)	1500 (59)
Welding speed, cm/min (ipm)	10-150 (0.2-59)
Fast transport speed, cm/min (ipm)	150 (59)
Weaving speed, mm/s (ips)	7-50 (0.3-2.0)
Weaving width (W), mm (in.)	1-80 (0.04-3.1)
Zero-line shift, mm (in.)	25 / ±12.5 (1.0 / ±0.5)
Programmable edge length (L), cm (in.)	6-99 (2.4-39)
Number of programs	BV: 4, BVR: 6
Enclosure class	IP23

Tramtrac™ II

A cost-efficient and flexible solution for the repair of embedded city tramway rails.

Tramtrac™ II is ESAB's latest equipment for the repair of embedded grooved city tramway rails. Using the FCAW process with self-shielded wires, instead of the conventional SAW process, provides a number of advantages in terms of ease of use and cost-efficiency.

- The FCAW process makes Tramtrac™ II a small and ultra light-weight solution.
- Easy to store and move around from site to site.
- The tractor can be hand-carried and is easily installed and removed on and off the rail, allowing trams to pass within a controlled safety situation.

Ordering information

Tramtrac™ II	0814 721 880
Connection cable 10 m (33 ft.)	0457 360 884
Origo™ MIG 410	0349 303 563
Origo™ MIG 510	0349 303 565
Magnetic earth return cable & clamp	0000 500 415
OK Tubrodur 14.71, 1.6 mm (1/16 in.)	1471 167 730
OK Tubrodur 15.65, 1.6 mm (1/16 in.)	1565 167 730
Sales Literature	XA00133420

Technical data

Control voltage, V AC	36-46
Power, W	90
Welding speed, cm/min (ipm)	30-120 (11.8-47.2)
Dimensions LxWxH, mm (in.)	600x300x150 (23.6x11.8x5.9)
Weight without consumables, kg (lbs.)	12 (26.5)



Miggytrac™ 1001

The perfect complement to your GMAW power source

- Small, compact, motorized tractor.
- Easy to attach to ESAB welding torch.
- The tractor is held in the correct position on the workpiece with a magnet, even if the workpiece is bent or angled.
- Remote controlled travel.
- Start/stop function from the remote control panel.
- Travel speed settings of 150-1200 mm/min (6-47 ipm), wire feed speed and voltage all functions of the remote control.
- Significantly increased welding speed, especially when using cored wire.

Ordering information

Miggytrac™ 1001	0457 357 881
Welding screen	0457 463 880
Sales Literature	XA00126320

Options & Accessories

ESAB Control cable, 5 m (16.4 ft)
(12 pin male-23 pin male Burndy style)
Origo™ Feed and Aristo™ Feed feeders

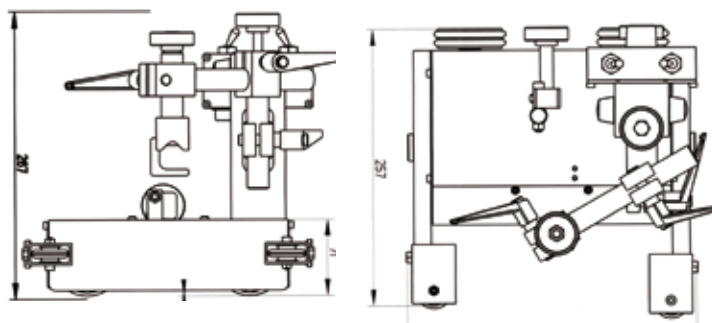
0457 360 880

ESAB AristoFeed adaptor kit
(required for connection of Miggytrac to
Aristo™ Feed feeders)

0459 681 880

Universal control cable, 5 m (16.4 ft)
(12 pin male Burndy style-open end).
Requires user-supplied plug to connect
cable to OEM feeders)

0457 360 881



Technical data

Control voltage, V AC	36-46
Power, W	20
Welding speed, mm/min (ipm)	150-1200 (6-47)
Remote control outlet	Volt and ampere (wire feed speed)
Connection	Burndy, 12 pins
Dimensions, LxWxH, mm (in.)	266x257x267 (10.5x10x10.5)
Weight, kg (lbs.)	7 (15.4)



Miggytrac™ 2000

The perfect complement to your GMAW power source

- Ideal for long welds eliminating stressful welding positions for the welder.
- The tractor is held in the correct position on the workpiece with a magnet, even if the workpiece is bent or angled.
- Guide wheels adjust to allow the unit to drive itself against the workpiece.
- Program for intermittent welding.
- Set length of weld and distance between welds from 1-99 cm (0.4-39 in.)
- High-speed travel between welds - 250 cm/min (98 ipm) - for increased efficiency.
- Backfill function for crater filling at the end of the weld.
- Adjust the welding current and voltage during welding with the two potentiometers on the control panel (when using ESAB equipment).



Ordering information

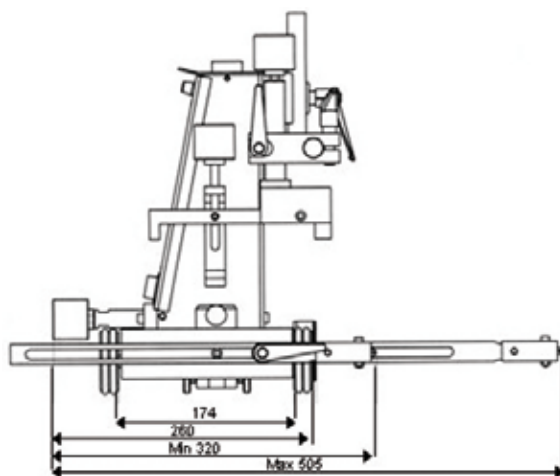
Miggytrac™ 2000	0457 358 880
Welding screen	0457 463 881
Sales Literature	XA00104720

Options & Accessories

ESAB Control cable, 5 m (16.4 ft) (12 pin male-23 pin male Burndy style) Origo™ Feed and Aristo™ Feed feeders	0457 360 880
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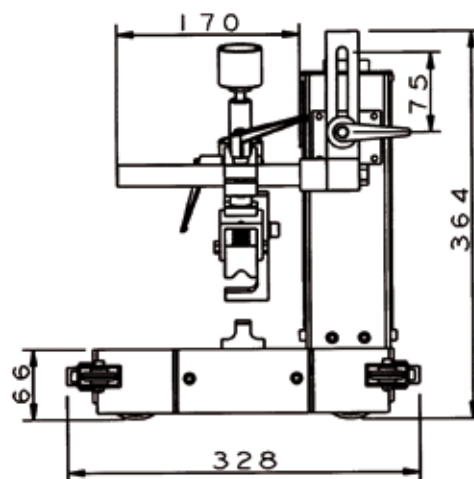
ESAB AristoFeed adaptor kit (required for connection of Miggytrac to Aristo™ Feed feeders)	0459 681 880
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Universal control cable, 5 m (16.4 ft) (12 pin male Burndy style-open end). Requires user-supplied plug to connect cable to OEM feeders)	0457 360 881
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Technical data

Control voltage, V AC	36-46
Power, W	40
Welding speed, mm/min (ipm)	150-1500 (6-59)
Fast travel speed, cm/min (ipm)	250 (98.4)
Programmable Interval Welding, cm (in.)	1-99 (0.4-37)
Linear slide stroke length (horizontal), mm (in.)	±17 (±0.67)
Remote control outlet	Volt and ampere (wire feed speed)
Connection	Burndy, 12 pins
Crater fill time, s	0-9.9
Backfill, cm (in.)	0-9.9 (0-4)
Dimensions, LxWxH, mm (in.)	330x260x360 (13x10x14)
Weight, kg (lbs)	9.5 (21)



Miggytrac™ 3000

The complete small welding automat for Gas Metal Arc Welding

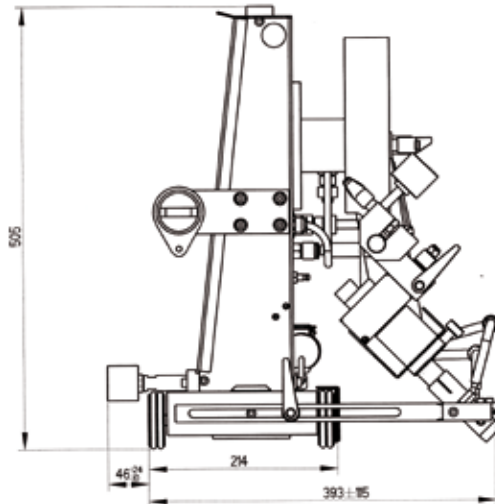
- Small, compact, motorized tractor with integrated wire feed and water-cooled welding torch designed for horizontal mechanized MIG welding of plates and beams
- Four-wheel drive carriage
- Carriage can travel diagonally towards the flange or stiffener to be welded.
- Program for intermittent welding.
- Carriage motion and wire feed controlled separately.
- Set weld length and distance between welds from 1-99 cm (0.4-39 in.)
- Distance between beads run at transport speed of 250 cm/min (98 ipm) for optimal efficiency.
- Program wire feed speed, time for gas pre-flow, gas post-flow and burnback.

Ordering information

Miggytrac™ 3000	0457 359 880
<i>With straight, water-cooled swan neck</i>	
<i>Delivered without contact tip</i>	
Sales Literature	XA00123620

Technical data

Wire dimensions, mm (inch)	
- Unalloyed steel	1.0-1.4 (0.040 - 0.055)
- Stainless steel	1.0-1.4 (0.040 - 0.055)
- Cored wire	1.0-1.4 (0.040 - 0.055)
Control voltage, V AC	36-46
Power, W	80
Welding speed, mm/min (ipm)	150-1500 (6-59)
Transport speed, cm/min (ipm)	250 (98.4)
Lengths at Intermittent welding, cm (in.)	1-99 (0.4-39)
Crater fill time, sec.	0-9.9
Backfill, cm (in.)	0-9.9 (0-4)
Wire feed speed, m/min (ipm)	2-25 (79-984)
Gas pre-flow/post-flow, sec	0-9.9
Burnback, sec.	0-9.9
Filler wire reel, in.	12
Dimensions, LxWxH, mm (in.)	370x400-530x520 (14.5x16-21x20.5)
Linear slide stroke length (horizontal), mm (in.)	±17 (±0.67)
Remote control, max value, Kohm	2.5
Max current over the start relay, A	5
Connection	straight 23-pin Burndy
Enclosure class	IP 23
Weight, excl wire reel, kg (lbs.)	17 (37.5)



Options & Accessories

Contact Tip M8 x 37 CuCrZr	
- CO ₂ 1.0	0468 502 005
- CO ₂ 1.2, Mix/Ar 1.0	0468 502 007
- CO ₂ 1.4, Mix/Ar 1.2	0468 502 008
Gas nozzle, water-cooled	0449 903 101
Bent swan neck, 15°	0449 903 115
Bent swan neck, 30°	0449 903 130
Wire feed roller for aluminium	0449 903 031
Pressure roller for aluminium	0449 903 032

For Connection cables and Adaptor Kit, please see separate leaflet for Miggytrac 3000.

A2 Multitrac with A2 process controller PEI

The universal welding tractor for better welding economy

- Can be connected to most analogue, DC power supplies.
- Compact and efficient design allows for easy movement between workpieces.
- Self-propelled, four-wheel drive for stable, accurate and constant operation.
- A2 Process Controller PEI allows simple setting of travel speed, voltage and wire feed speed.
- Heavy-duty feed unit ensures an even and stable wire feed, for top quality, homogenous welding.
- Horizontal, vertical and rotary slides allow for quick adjustment of the nozzle into various positions.
- Reliable mechanical components, even under harsh working conditions.
- Easy to use control equipment with different start methods; direct start or scratch start.
- Wide range of accessories available.



Ordering information

A2 Multitrac SAW, PEI	0449 360 880
A2 Multitrac SAW Twin, PEI	0449 360 881
A2 Multitrac GMAW, PEI	0449 361 880
Sales Literature	XA00114220

Options & Accessories

Guide wheel bogie	0413 542 880
Idling roller	0333 164 880
Guide bar 3 m (10 ft.)	0154 203 880
V-guide wheel	0333 098 881
V-wheeltrack in steel	0443 682 881
Loop for connection of two tractors	0334 680 881
Pilot lamp, laser diode	0821 440 880

Technical data	Single SAW	Twin SAW	GMAW
Wire diameters, mm (in.)			
- Steel	1.6-4.0 (1/16-5/32)	2x1.2-2.5 (2x(0.45x3/32))	0.8-1.6 (.030-1/16)
- Stainless steel	1.6-4.0 (1/16-5/32)	2x1.2-2.5 (2x(0.45x3/32))	0.8-1.6 (.040-1/16)
- Cored wire	1.6-4.0 (1/16-5/32)	-	1.2-2.4 (.045-3/32)
- Aluminium	-	-	1.2-1.6 (.045-1/16)
Max wire feed speed, m/min (ipm)	9 (354)	9 (354)	16 (630)
Wire reel weight, kg (lbs.)	30 (66)	2x15 (2.2x33)	30 (66)
Flux hopper capacity, l (gal.)	6 (1.4)	6 (1.4)	-
Weight, excl wire and flux, kg (lbs.)	47 (103)	47 (103)	43 (95)
Permissible load 100%, A	800	800	600
Control voltage, V AC	42	42	42
Travel speed, m/min (ipm)	0.1-1.7 (4-67)	0.1-1.7 (4-67)	0.1-1.7 (4-67)
Linear slides stroke length, mm (in.)	90 (3.5)	90 (3.5)	90 (3.5)
Rotary slide setting angle	360°	360°	360°

A2 Multitrac with A2/A6 process controller PEK

The universal welding tractor for Submerged-arc Welding (SAW) and Gas Metal Arc Welding (GMAW)

- 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, stable wire-feed speed.
- Four-wheel drive ensures accurate travel speed.
- Digital control panel allows exact pre-set and control of welding parameters.
- 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.
- Designed for use with LAF or TAF welding power sources.



Ordering information

A2 Multitrac A2TF (SAW), PEK	0461 233 880
A2 Multitrac A2TF (SAW Twin), PEK	0461 233 881
A2 Multitrac A2TG (GMAW), PEK	0461 234 880
A2 Multitrac A2TG (4WD, GMAW MTW 600), PEK	0451 234 881
Sales Literature SAW	XA00143220
Sales Literature GMAW	XA00143320

Options & Accessories

Guide wheel bogie	0413 542 880
Idling roller	0333 164 880
Guide bar 3 m (10 ft.)	0154 203 880
V-guide wheel	0333 098 881
V-wheeltrack in steel	0443 682 881
Loop for connection of two tractors	0334 680 881
Pilot lamp, laser diode	0821 440 880



Technical data	Single SAW	Twin SAW	Single GMAW	GMAW with MTW 600
Wire diameters, mm (in.)				
- Steel	1.6-4.0 (1/16-5/32)	2x1.2-2.5 (2x(0.45x3/32))	0.8-1.6 (.030-1/16)	1.0-1.6 (.039-1/16)
- Stainless steel	1.6-4.0 (1/16-5/32)	2x1.2-2.5 (2x(0.45x3/32))	0.8-1.6 (.040-1/16)	1.0-1.6 (.039-1/16)
- Cored wire	1.6-4.0 (1/16-5/32)	-	1.2-2.4 (.045-3/32)	1.0-2.4 (.039-3/32)
- Aluminium	-	-	1.2-1.6 (.045-1/16)	1.0-2.0 (.039-5/64)
Max wire feed speed, m/min (ipm)	9 (354)	9 (354)	16 (630)	25 (984)
Wire reel weight, kg (lbs.)	30 (66)	2x15 (2.2x33)	30 (66)	30 (66)
Flux hopper capacity, l (gal.)	6 (1.4)	6 (1.4)	-	-
Weight, excl wire and flux, kg (lbs.)	47 (103)	47 (103)	43 (95)	43 (95)
Permissible load 100%, A	800	800	600	600
Control voltage, V AC	42	42	42	42
Travel speed, m/min (ipm)	0.1-1.7 (4-67)	0.1-1.7 (4-67)	0.1-1.7 (4-67)	0.1-1.7 (4-67)
Linear slides stroke length, mm (in.)	90 (3.5)	90 (3.5)	90 (3.5)	90 (3.5)
Rotary slide setting angle	360°	360°	360°	360°

A2 Tripletrac A2TF

The superb welding tractor for internal circumferential welding

- For increased productivity and quality.
- Ideal for internal circumferential welding of large cylindrical objects that are rotating on a turning roll system.
- Heavy-duty feed unit secures even and stable wire feed for top quality, homogenous welds.
- Delivered with either the digital A2-A6 PEK or the analogue A2 PEI process controller.
- Unique steering system allows operator to simultaneously adjust the wheel and torch position for accurate and effortless seam tracking.
- Control equipment is easy to use and requires minimal training.
- Choose between start methods, burn-back times and other settings.



Ordering information

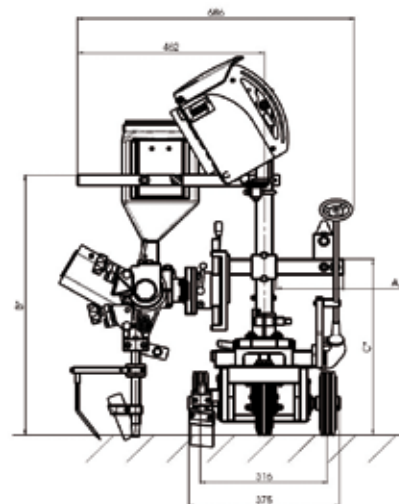
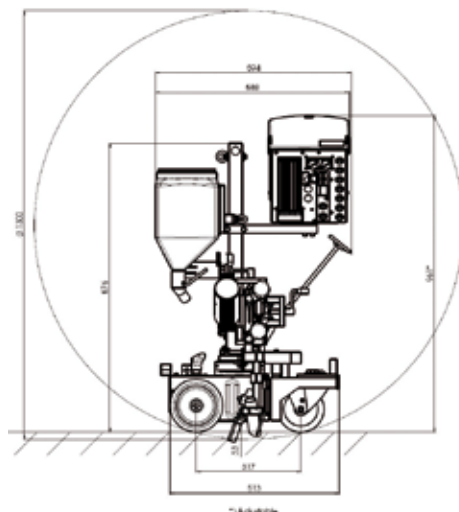
A2 Tripletrac with PEK	0461 236 880
A2 Tripletrac with PEI	0449 430 881
Sales Literature	XA00143520

Options & Accessories

Pilot lamp, laser diode	0821 440 880
Utility light, incl transf. and 50 m (164 ft.) cable	0449 443 880
Flux recovery unit OPC	0148 140 880
Bracket suction	0332 947 880
Flux hopper of silumin alloy	0413 315 881
Concentric flux feeding funnel (included in the A2 Tripletrac)	0145 221 881
Contact tube, bent	0413 511 001
Wire reel, plastic 30 kg (66 lbs.)	0153 872 880
Wire reel, steel, fixed width	0416 492 880
Wire reel, steel, flexible width	0449 125 880
Wire reel, steel, Ø 220 mm (8.6)	0671 164 080

Technical data

Wire diameters, mm (in.)	
- Steel	1.6-4.0 (1/16-5/32)
- Stainless steel	1.6-4.0 (1/16-5/32)
- Cored wire	1.6-4.0 (1/16-5/32)
Max wire feed speed, m/min (ipm)	9 (354)
Wire reel weight, kg (lbs.), W	30 (66)
Flux hopper capacity, l (gal.)	6 (1.4)
Weight, excl. wire and flux, kg (lbs.)	47 (103)
Permissible load 100%, A	800
Control voltage, V AC	42
Travel speed, m/min (ipm)	0.1-1.7 (4-67)
Linear slides stroke length, mm (in.)	90 (3.5)
Rotary slide setting angle	360°
Max inclination for the tractor	5°



A6 Mastertrac A6TF (SAW)

For efficient Submerged-arc Welding

- Self-propelled, four-wheel drive automatic welding machine.
- Easy to move with quick set-up for different workpieces.
- Suitable for heavy production welding with capacity for up to 6 mm (0.24 inch) wire using 1500A direct or alternating current.
- Designed for use with LAF or TAF welding power sources.
- Three different designs:

Single: available with standard or high speed motor

Twin-Arc: with a simple add-on for the extra wire, you can convert an A6 Single Mastertrac into a highly productive automatic Twin-arc welder for fillet and butt welds without the use of an extra machine or power source.

Tandem: the high deposition rate using a multi-electrode system increases productivity substantially. By selecting different combinations of direct and alternating currents, the A6 Tandem Mastertrac can handle any type of welding work resulting in increased profitability.

- Weld mild steel and aluminium solid or cored wire by modifying an A6 Single Mastertrac with an easy conversion kit for Gas metal arc welding (GMAW).
- Pre-set and control of welding parameters with the A2-A6 Process Controller PEK - a digital control system with display menus; 255 different weld sets can be stored.

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, AC/DC 1500)	0461 232 882
Sales Literature	XA00143420



A6 Mastertrac Tandem

Options & Accessories

Contact equipment heavy Twin Arc, compl.	0334 291 889
Wire reel, plastic 30 kg (66 lbs.)	0153 872 880
Wire reel, steel 30 kg (66 lbs.)	0416 492 880
Wire reel, steel, flexible width	0449 125 880
Brake hub extra	0146 967 880
Rebuilding kit GMAW	0334 299 890
Strip cladding kit	0155 972 880
Flux hopper holder for strip cladding	0148 107 003
Wire reel, steel for strip cladding	
30-100 mm (1.2-4.0 in.)	0671 161 880
Flux recovery nozzle, strip cladding	0156 025 001
Flux funnel	0254 900 880
Insert, extended	0254 900 301
Angular slide	0671 171 580
Pilot lamp, laser diode	0821 440 880
Flux recovery unit OPC	0148 140 880
Bracket suction	0332 947 880
Idler rollers (2 per automat)	0333 164 880
Guide wheel, fillet	0671 125 780
Magnet guide rail, 3 m (10 ft.)	0154 203 880

Carbon arc gouging

Rebuilding kit	
(use with carbon electrodes Ø 8.9-12.7)	0153 592 880
VEC-motor, 312:1	0145 063 905

Technical data	Single SAW	Single GMAW	Twin SAW	Tandem SAW
Permissible load 100%, A	1500	600	1500	2x1500
Wire diameter, mm (in.)	3.0-6.0 (1/8-1/4)	1.0-3.2 (0.045-1/8)	2x2.0-3.0 (2x3/32-1/8)	2x3.0-6.0 (2x1/8-1/4)
Wire feed speed, m/min (ipm)	0.2-4.0 (8-157.5)	0.8-16.6 (31.5-653.5)	0.2-4.0 (8-157.5)	0.2-4.0 (8-157.5)
Wire feed speed high, m/min (ipm)	0.4-8.0 (16-315)	-	0.4-8.0 (16-315)	-
Travel speed, m/min (ipm)	0.1-2.0 (4-79)	0.1-2.0 (4-79)	0.1-2.0 (4-79)	0.1-2.0 (4-79)
Control voltage, V AC	42	42	42	42
Wire reel weight, kg (lbs.)	30 (66)	30 (66)	2x30 (2x66)	2x30 (2x66)
Flux hopper capacity, l (gal.)	10 (2.6)	-	10 (2.6)	10 (2.6)
Weight excl wire and flux, kg (lbs.)	110 (242.5)	100 (220.5)	110 (242.5)	158 (348)

A6-DK

The portal welding machine

- Works with a single wire on each head.
- Each weld head is controlled by the A2-A6 PEK process controller and LAF (DC) or TAF (AC) power source.
- Ideal for simultaneous horizontal-vertical welding on both sides of a web or through panel.
- Straddles workpieces up to 800 mm (31 inch) tall and symmetrical profile widths of 400 mm (16 inch).
- Travels directly on a workpiece guided by a joint.
- Travel speed adjustable from 0.15-2.0 m/min (6-79 ipm).
- Store up to 10 l (2.6 gal.) of flux in the hopper.
- Each weld head is equipped with OPC flux recovery system.



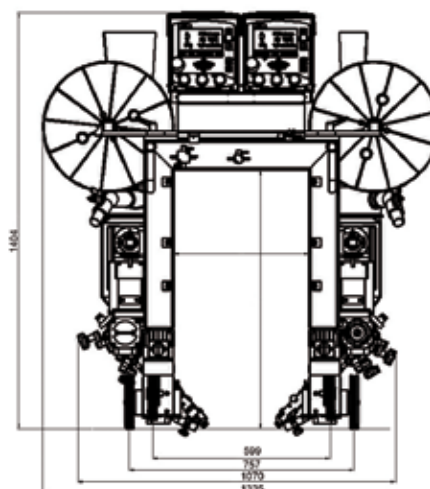
Ordering information

A6-DK SAW, single wire
excl. wire reel, feed rollers and contact jaws *) 0461 237 901
Sales Literature XA00143620

*) when contact equipment is excluded, feed rollers and contact jaws have to be ordered separately.

Options & Accessories

Wire reel, plastic, 30 kg (66 lbs.) 0153 872 880
Wire reel, steel, 30 kg (66 lbs.) 0416 492 880

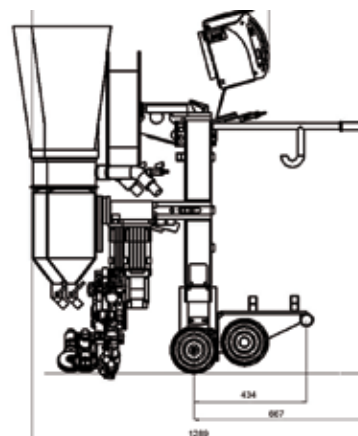


Technical data

Permissible load 100%, A	1500
Travel speed, m/min (ipm)	0.15-2.0 (6-79)
Wire feed speed, m/min (ipm)	0.2-4.0 (8-157.5)
Wire reel weight, kg (lbs.)	2x30 (2x66)
Wire diameter SAW, mm (in.)	3.0-6.0 (1/8-1/4)
Flux hopper capacity (each weld head), l (gal.)	10 (2.6)
Weight, excl wire and flux, kg (lbs.)	150 (331)

Straddle opening:

Vertical space limitation, mm (in.)	800 (31)
Longitudinal. symmetrical extension, mm (in.)	400 (16)



Welding Heads



A2S Mini Master

A multi-purpose automatic welding system

- Versatile welding system for single wire SAW, twin wire SAW or GMAW.
- Light-weight, compact design allows for greater flexibility.
- Modular design allows user to expand, integrate or modify the system quickly and easily.
- Uses A2-A6 PEK or A2 PEI process controller.
- Accurate, easy joint-tracking with manual or motorized slide system and manual PAV or automatic GMH joint tracking.
- The system attaches to any beam travelling carriage or Column & Boom system.



Ordering information

A2S Mini Master SAW Systems

Incl A2-A6 Process controller PEK and wire equipment

With manual slides 90x90 mm	0449 170 900
With motorized slides 180x180 mm and PAV	0449 170 901
With motorized slides 180x180 mm and GMH	0449 170 902

Incl A2 Process controller PEI and wire equipment

With manual slides 90x90 mm	0449 370 880
With motorized slides 180x180 mm and PAV	0449 370 881
With motorized slides 180x180 mm and GMH	0449 370 882

A2S Mini Master GMAW MTW (4WD) Systems

Incl A2-A6 Process controller PEK and wire equipment

With manual slides 90x90 mm	0449 181 900
With motorized slides 180x180 mm and PAV	0449 181 901
With motorized slides 180x180 mm and GMH	0449 181 902

Incl A2 Process controller PEI and wire equipment

With manual slides 90x90 mm	0449 380 880
With motorized slides 180x180 mm and PAV	0449 380 881
With motorized slides 180x180 mm and GMH	0449 380 882

Options & Accessories

Pilot lamp, laser diode (for PEK), 2 m cable	0821 440 880
Pilot lamp, laser diode (for PEK), 5 m cable	0821 440 882
Pilot lamp, laser diode (for PEK), 7 m cable	0821 440 883
Thin wire straightener, single wire	0332 565 880

Gas handling equipment, GMAW only:

Cooling unit OCE 2H, 220V AC 50/60 Hz	0414 191 881
Gas hose	0190 270 101
Water-cooling hose	0190 315 104
Arc shield	0334 689 880

Optional equipment SAW:

Flux recovery unit OPC	0148 140 880
Flux container, silumin alloy	0413 315 881
Concentric flux funnel	0145 221 881
Contact tube, bent	0413 511 001
Wire reel, plastic, 30 kg (66 lbs.)	0153 872 880
Wire reel, steel, 30 kg (66 lbs.)	0416 492 880
Wire reel, steel, flexible width	0449 125 880
Wire reel, steel, Ø 220 mm (8.7 inch)	0671 164 080

For PEK:

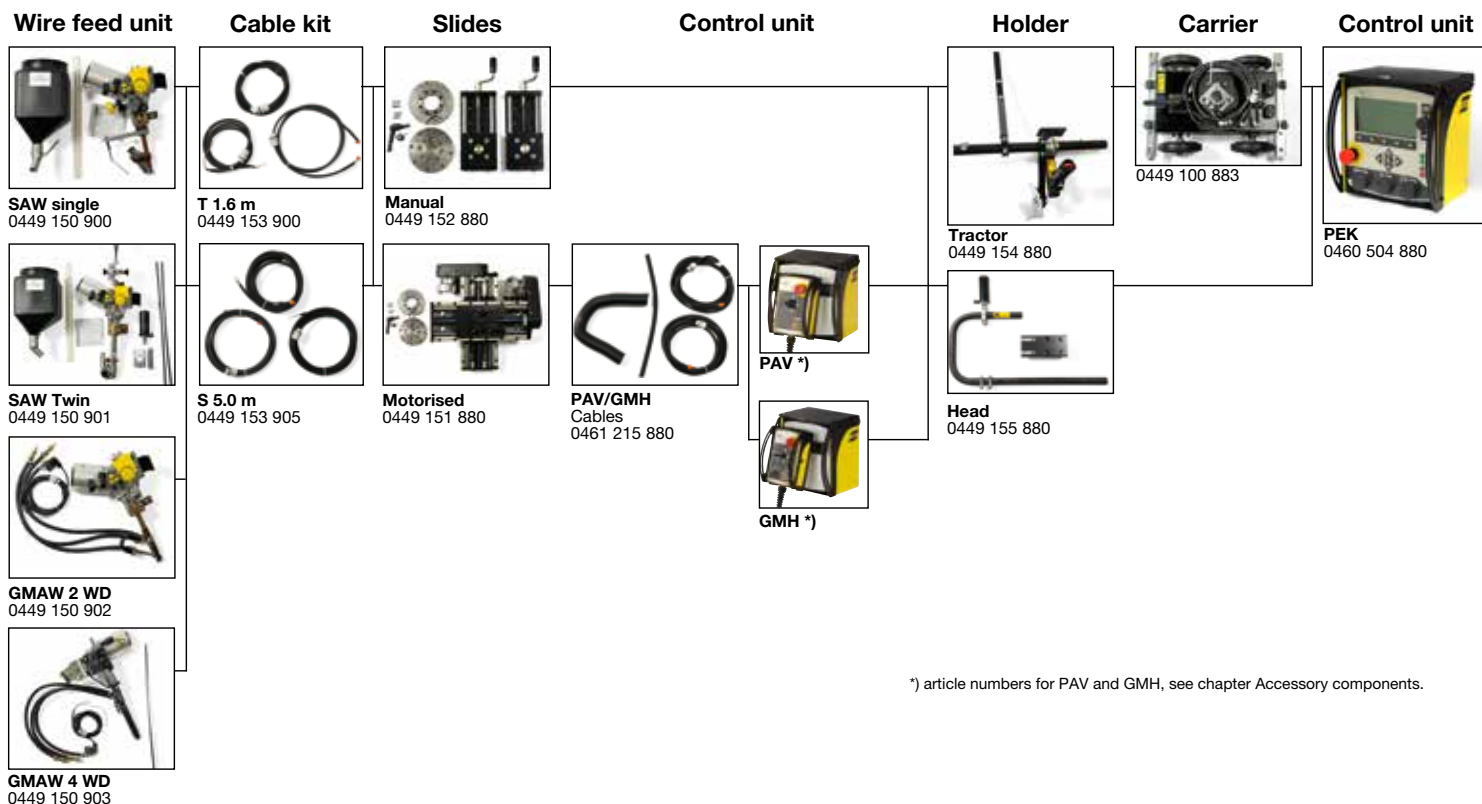
Conversion kit, SAW to GMAW A2 (2WD)	0461 247 880
Conversion kit, SAW to GMAW MTW (4WD)	0461 248 880

For PEI:

Conversion kit, SAW to GMAW	0413 526 881
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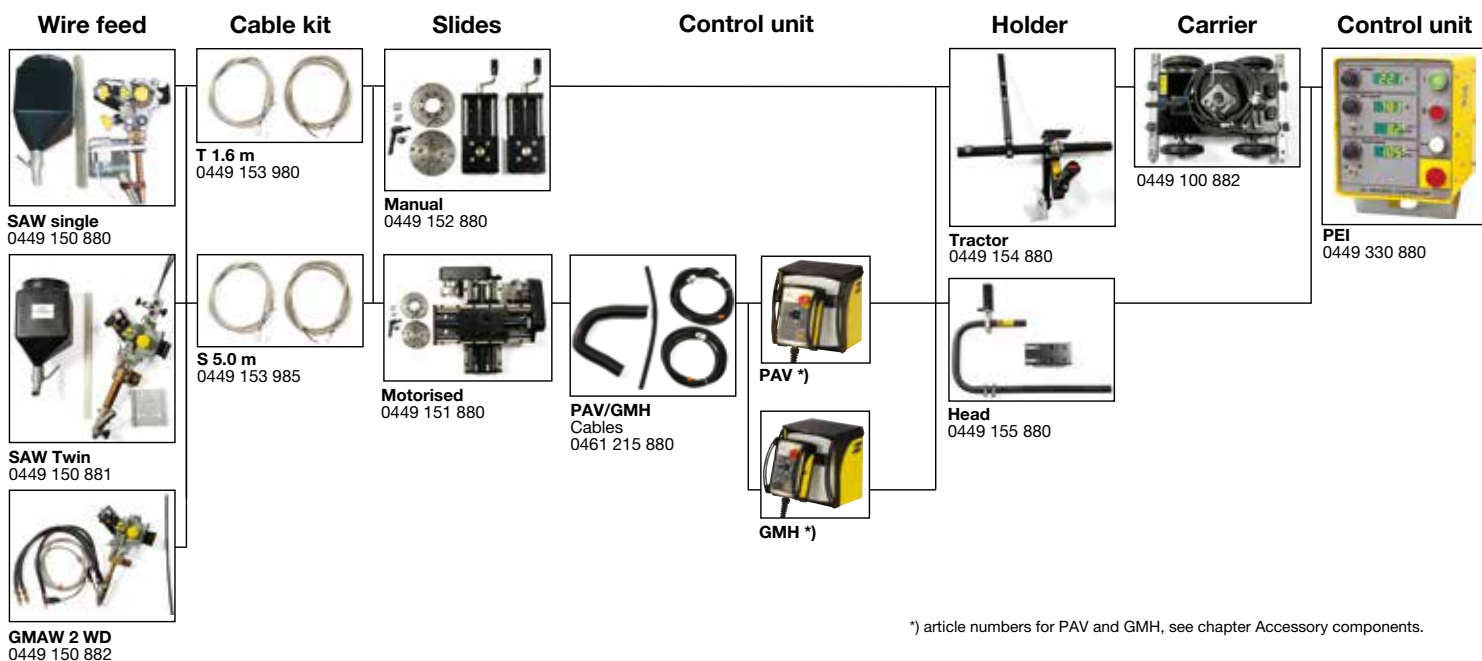
Technical data	Single wire SAW	Twin wire SAW	GMAW	GMAW MTW 600w
Wire diameter, mm (in.)	Steel 1.6-4.0 (1/16-5/32) Stainless Steel 1.6-4.0 (1/16-5/32) Cored wire 1.6-4.0 (1/16-5/32) Aluminium -	2x1.2-2.5 (2x.045-3/32) - - -	0.8-1.6 (.030-1/16) 0.8-1.6 (.030-1/16) 1.2-2.4 (.045-3/32) 1.2-1.6 (.045-1/16)	1.0-1.6 (.040-1/16) 1.0-1.6 (.040-1/16) 1.0-2.4 (.040-3/32) 1.0-2.0 (.040-5/64)
Max. wire feed speed, m/min (ipm)	9 (354)	9 (354)	16 (630)	25 (984)
Flux hopper capacity, l (gal.)	6 (1.4)	6 (1.4)	-	-
Max. permissible load 100%, A	800	800	600	600
Control voltage, V AC	42	42	42	42
Linear slide stroke length, mm (in.)	90 (3.5)	90 (3.5)	90 (3.5)	90 (3.5)
Rotary slide setting range	360°	360°	360°	360°

A2 Component system Modularization - PEK



*) article numbers for PAV and GMH, see chapter Accessory components.

A2 Component system Modularization - PEI



*) article numbers for PAV and GMH, see chapter Accessory components.

A6S Arc Master

Flexibility as standard

- Flexibility, reliability and superior performance capability
- Comprehensive component and module system make process customization easy.
- A6 VEC motor for reliable and consistent wire feed.
- Accurate, easy manual PAV or automatic GMH joint tracking with manual slides or joystick-controlled motor-operated cross slides.
- Capable of heavy-duty gas metal arc welding (GMAW), single/twin wire submerged arc welding (SAW), as well as strip cladding and Integrated Cold Electrode (ICE) welding with optional accessories.
- Uses A2-A6 PEK process controller for fast, accurate pre-setting of all parameters before welding starts.
- Feedback system ensures high and consistent welding quality - saves time and material.
- The welding heads can be equipped with a standard wire feed unit (gear ratio 156:1) or with a high-speed wire feed unit (gear ratio 74:1).



Ordering information

Single wire SAW systems

standard wire feed unit (gear ratio 156:1)

With manual slides 210x210 mm	0449 270 900
With motorized slides 300x300 mm and PAV	0449 270 901
With motorized slides 300x300 mm and GMH	0449 270 902

high-speed wire feed unit (gear ratio 74:1)

With manual slides 210x210 mm	0449 270 910
With motorized slides 300x300 mm and PAV	0449 270 911
With motorized slides 300x300 mm and GMH	0449 270 912

Twin-wire SAW system

high-speed wire feed unit (gear ratio 74:1)

With manual slides 210x210 mm	0449 271 910
With motorized slides 300x300 mm and PAV	0449 271 911
With motorized slides 300x300 mm and GMH	0449 271 912



Technical data	Ratio 156:1	Ratio 74:1
Max. wire feed speed, m/min (ipm)	0.2-4.0 (8-157)	0.4-8.0 (16-315)
Wire diameter, single, mm (in.)	3.0-6.0 (0.118-0.236)	1.6-4.0 (0.063-0.157)
Wire diameter, twin, mm (in.)	2x2.0-2x3.0 (2x0.079-2x0.118)	2x1.6-2x2.5 (2x0.063-2x0.098)
Tubular wire single, mm (in.)	3.0-4.0 (0.118-0.157)	1.6-4.0 (0.063-0.157)
Linear slide stroke length, mm (in.)	90 (3.5)	90 (3.5)
Rotary slide setting range		
Circular slide, crank operated	± 180°	± 180°
Straightener	± 45°	± 45°
Max. permissible load, 100%, A	1500	1500

A6 Component system Modularization

Wire feed unit



Single
0449 250 880



Twin
0449 250 881



Single High-speed
0449 250 890



Twin High-speed
0449 250 891

Cable kit



T 1.6 m
0449 253 900



S 5.0 m
0449 253 902

Slides



Manual T
0449 252 880



Motorised
0449 251 884



Manual S
0449 252 881

Control unit for motorised slides



GMH *)



PAV *)



PAV/GMH cables
0461 215 880

Holder



Holder
0449 254 880



Bobbin holder
0449 255 880



Bobbin holder
0449 255 881

Carrier



0449 490 881

Control unit



PEK
0460 504 880

*) article numbers for PAV and GMH, see chapter Accessory components.

A6S and A6DS Tandem welding heads

For optimum productivity

- Suitable for heavy construction welding.
- Capable of welding DC/DC, DC/AC or AC/AC.
- Uses A2-A6 Process Controller PEK for quick and accurate programming of welding parameters for each torch.
- Feedback system gives high and consistent welding quality from start to finish, saving time and money.
- Versatile positioning through easy to use, complete slide assembly for welding torch position, distance stick-out and angle on both leading and trailing torches.
- Enhance productivity by adding optional equipment such as Twin Wire and Integrated Cold Wire systems.
- Available in two basic versions, A6S Tandem Master and A6DS Tandem Master with several configurations to match specific safety, quality and productivity requirements.
- Welding heads can be equipped with a standard wire feed unit (gear ratio 156:1) or with a high-speed wire feed unit (gear ratio 74:1).



Ordering information

A6S Tandem Master, standard (156:1)	0818 971 880
A6S Tandem Master, high-speed (74:1)	0818 971 881
A6DS Tandem Master, standard (156:1)	0818 970 880
A6DS Master, high-speed (74:1)	0818 970 881
Sales Literature	XA00119120

Options & Accessories

Twinkit (one per torch)	0809 934 882
GMH, joint tracking with remote, complete	0460 884 880
GMH, joint tracking with control panel, compl	0460 884 881
GMH, slide motor cables, 5.0 m (16 ft.)	0461 215 880
Laser lamp, 5 m cable (16 ft.)	0821 440 882
Laser lamp, 7 m cable (23 ft.)	0821 440 883
Bracket (straight) for wire	0334 318 880
Brake hub, for wire reel	0146 967 880
Wire reel, plastic, 30 kg (66 lbs.)	0153 872 880
Wire reel, steel, fixed width, 30 kg (66 lbs.)	0416 492 880
Wire reel, steel, flexible width, 30 kg (66 lbs.)	0449 125 880

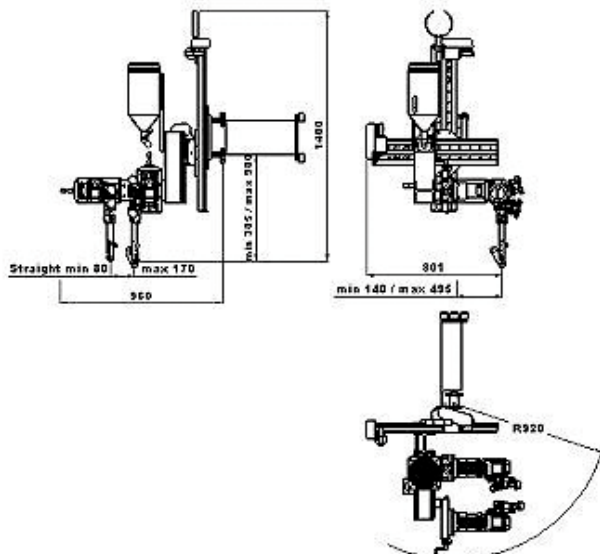
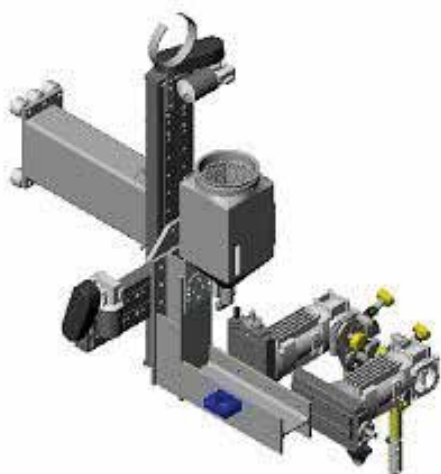
Technical data (Basic components)	A6S Tandem Master	A6DS Tandem Master
A6 feed unit HD type for wire 3-6 mm (1/8-1/4 in.)	2 pcs	2 pcs
Horizontal motorized slide with double runners L=355 mm (14 in.)	1 pc	1 pc
Vertical motorized slide with double runners L=595 mm (23.4 in.)	1 pc	1 pc
PEK, process controller	2 pcs	2 pcs
Flux hopper, 10 l (2.3 gal.) incl bracket	1 pc	1 pc
Cable holder	1 pc	1 pc
Main bracket with mounting flange for cross slide assembly	1 pc (0810 786 880)	-
Swivel bracket for rotating head 90°	1 pc (0334 549 880)	1 pc (0809 873 880)
Welding head	2 pcs	2 pcs
Each welding head has:		
A6 manual slide L=90 mm	1 pc (0154 465 880)	1 pc (0154 465 880)
A6 circular slide	1 pc (0671 171 580)	1 pc (0671 171 580)
Insulators	4 pcs (0278 300 180)	4 pcs (0278 300 180)
Total weight (excl PEK, wire and flux) approx. kg (lbs)	215 (474)	190 (419)

A6S and A6DS Tandem welding heads

cont.

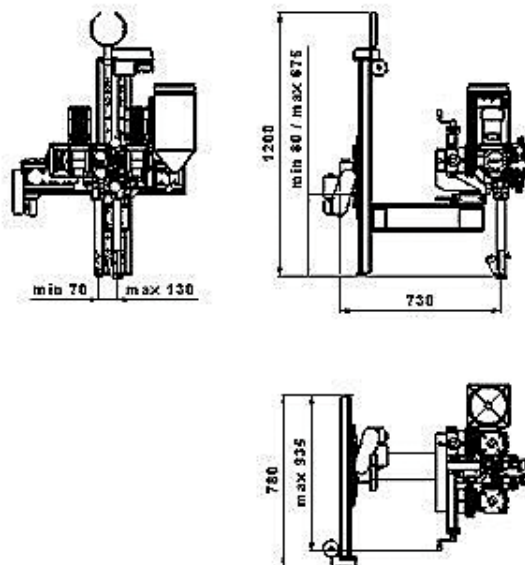
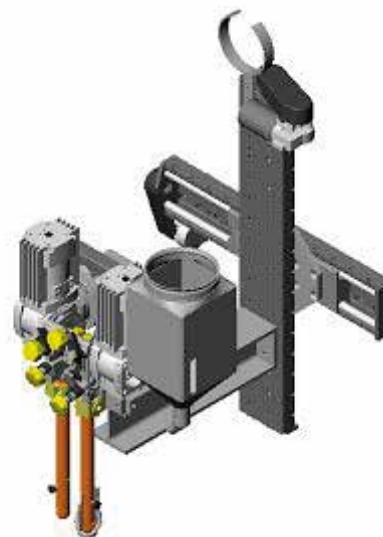
A6S Tandem Master

- Optimized for welding across multiple perpendicular axes and is key in the welding of cylindrical objects where both longitudinal and circumferential welding is required.
- Adjustable $+90^\circ$ interval turning bracket and cross slide.
- Automatic joint tracking keeps in track no matter which direction welding occurs.



A6DS Tandem Master

- Optimized for welding in multiple directions and is key in the automated welding of long weld joints such as beams and girders.
- Adjustable $\pm 90^\circ$ interval turning bracket and fixed cross slide.
- Automatic joint tracking in any direction when integrated to ESAB column and boom M-model systems; simply rotate the head 180° and weld in the reverse direction.



A6S Compact welding heads for internal welding

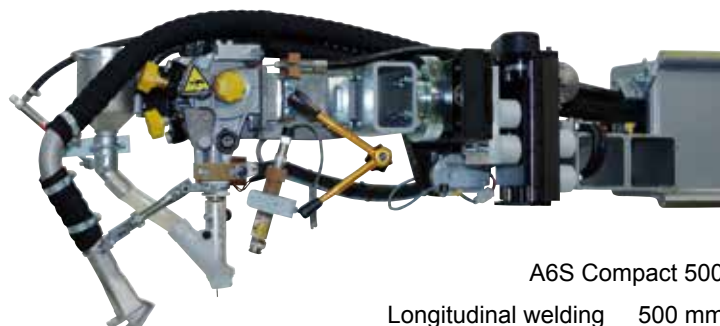
For excellent welding results

- For welding longitudinal and circumferential butt joints inside tubes.
- Three versions available:
A6S Compact 300 for internal welding of tubes down to 300 mm (12 inch) inside diameter.
A6S Compact 500 for internal welding of tubes down to 500 mm (20 inch) inside diameter.
A6S Compact 700 for internal welding of tubes down to 700 mm (27.5 inch) inside diameter.
- Equipped with reliable, VEC feed motor for superior weld performance.
- Supervise and adjust the head position via TV monitoring system - Optional.
- Use standard mini-cross slide assembly and PAV manual tracking system or GMH automatic joint tracking system to easily follow the joint - Optional.
- Add either the FFRS Basic/Super or FFRS 1200/3000 Flux Feed & Recovery System to optimize the welding process.



A6S Compact 300

Longitudinal welding 300 mm
Min ID circ. welding 500 mm



A6S Compact 500

Longitudinal welding 500 mm
Min ID circ. welding 550 mm

Ordering information

A6S Compact 300 Welding head, standard	0809 280 880
A6S Compact 300 Welding head, high-speed	0809 280 881
A6S Compact 500 Welding head, standard	0416 967 880
A6S Compact 500 Welding head, high-speed	0416 967 882
A6S Compact 700 Welding head, standard	0811 054 880
A6S Compact 700 Welding head, high-speed	0811 054 881
Sales Literature	XA00124620

Technical data

Compact 300

Wire diameters, mm (in.)	
- Steel	3.0-4.0 (1/8-5/32)
- Stainless steel	3.2 (1/8)
Permissible load 100%, A	800
Control voltage, V AC	42
Travel speed, m/min (ipm)	0.1-1.7 (4-67)
Linear slides stroke range, mm (in.)	50 (2)
Rotary slide setting range	360°
Wire feed speed, standard, m/min (ipm)	0.2-4.0 (8-157)
Wire feed speed, high-speed, m/min (ipm)	0.4-8.0 (15.7-315)

For technical data for Compact 500 and 700, please contact your local ESAB representative.



A6S Compact 700

Longitudinal welding 700 mm
Min ID circ. welding 750 mm

Options & Accessories - Compact 300

Flux valve control kit, including solenoid valve and 5 m (16.4 ft.) air hose	0813 620 880
TV monitoring equipment	0811 176 880
Laser pointer	0811 177 880

Contact tips, wire size

M12, 3.0 mm (7/64 in.)	0154 623 005
M12, 3.2 mm (1/8 in.)	0154 623 004
M12, 4.0 mm (5/32 in.)	0154 623 003

Feed rollers, wire size

3.0-3.2 mm (1/8 in.)	0218 510 298
4.0 mm (5/32 in.)	0218 510 286

A6S SAW strip cladding kit

For surfacing with high alloyed materials

- Used in combination with standard A6S Arc Master welding head.
- Provides an economical solution for surfacing with high alloyed materials such as stainless steel or nickel-based alloys.
- Choose a wider variety of parent materials and consumables.
- Stainless steel cladding is widely used in production of components where additional strength or corrosion resistance is required.
- Welding head can be fitted with electrode strips as wide as 30-100 mm (1.2-4.0 inch) and as thick as 0.5 mm (0.02 inch).

Ordering information

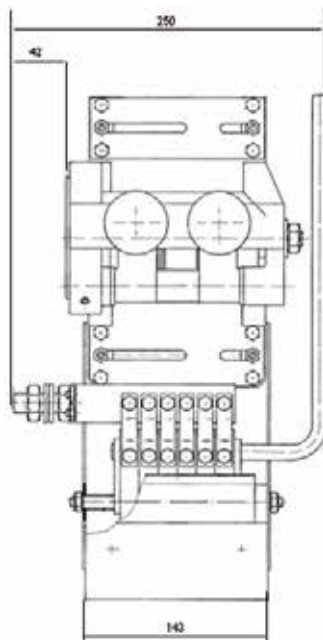
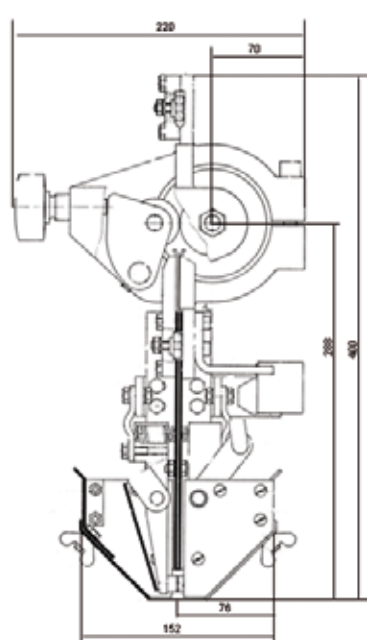
Strip cladding kit
(for use with A6T SAW Tractor or
A6S Arc Master HD)
Sales Literature

0155 972 880
XA00101020

Options & Accessories

Reel holder (not to be used with
motor-operated cross slide)
Wire reel, steel
Suction nozzle, flux

0417 636 880
0416 492 880
0156 025 001



Technical data

Max. welding current at 100% duty cycle, A	1500
Feed roller diameter, mm (in.)	50 (2.0)
Strip width, mm (in.)	30-100 (1.2-4.0)
Strip thickness, mm (in.)	0.5 (0.02)
Strip feed speed	see sales literature for A6 Mastertrac, (XA00109420) or A6S Arc Master (XA00088920)

ESW - Electroslag welding

ESW is a method of strip cladding, but differs from SAW strip cladding in that the arc is created between the electrode and the workpiece.

The welding flux that is put into the joint melts and a slag pool is produced, which then increases in depth.

When the temperature of the slag and its conductive capacity thereby increases, the arc is extinguished and the welding current is conducted via the molten slag where the necessary welding energy is produced through resistance.

This method can be used for joining thicknesses of 25 mm (1 in.) and above.

Contact ESAB for Options & Accessories and Technical Data for the ESW Welding Head.

Column & Booms



CaB Systems

Cost efficient and flexible weld mechanization

- Modular design concept allows total customization using standard components.
- Large selection of available components to integrate for a custom solution:
- Any A2 or A6 weld head
- A2-A6 Process Controller PEK with ESAB DC or AC power sources
 - ESAB turning rolls and positioners
 - ESAB flux feeding and recovery systems
 - Monitoring systems and cameras
 - Four basic station configurations, suitable for most standard applications.
- Three different sizes; 300, 460 and 600 (number refers to boom profile height (mm) which determines working range and load capability).
- Choose from stationary or mobile, rail-travelling carriage systems.
- Versatile to respond to any automated welding demand.



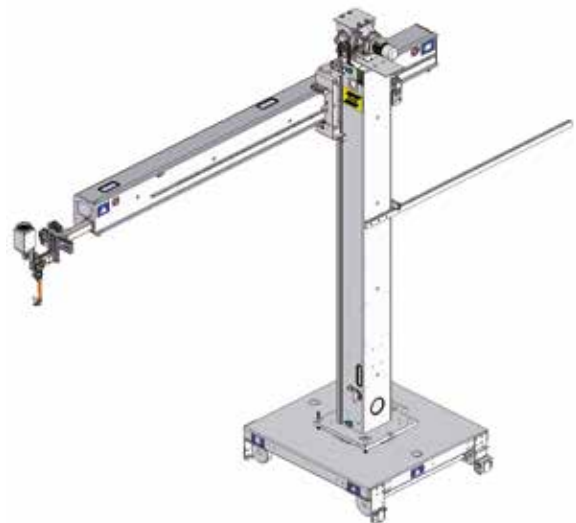
Standard CaB sizes

The three different sizes 300, 460 and 600 are the beam height dimensions of the boom in millimeters. Each boom size has a corresponding column. The different sizes are not only limited in where it can fit, but also how far the boom can extend and how much load that can be put on.

CaB 300S / 460S

Standard format - exceptional economy

- Conventional column and boom with a movable boom and the welding head mounted at the end of the boom.
- Standard mechanical performance, with cable support.
- Options like camera system, pulse encoder-regulated speed and flux control.
- The CaB 300S have a working range of 3 to 5 m (10 to 16.5 ft.) both vertically and horizontally.
- The CaB 460S have a working range of 5 to 7 m (16.5 to 23 ft.) both vertically and horizontally.



Basic Station 1 - Standard format

Conventional Column and boom, with a movable boom and welding head at boom end. Welding equipment can be positioned along four axes.

CaB Systems

Cont.

CaB 300M / 460M / 600M

Modular format - extended functionality

- A modular range of column and booms, available in three load sizes.
- Standard mechanical performance, including cable chains for the boom motions.
- The welding head is mounted at the front end of the boom.
- More than 20 options fully integrated, such as tandem welding, shift function, transport speed etc.
- Due to modularity and the fixed configuration possibilities the lead times for delivery can be kept at a minimum.



Basic Station 1 - Modular and Custom format

Conventional Column and boom, with a movable boom and welding head at boom end. Welding equipment can be positioned along four axes. Cable chains are included.

CaB 300C / 460C / 600C

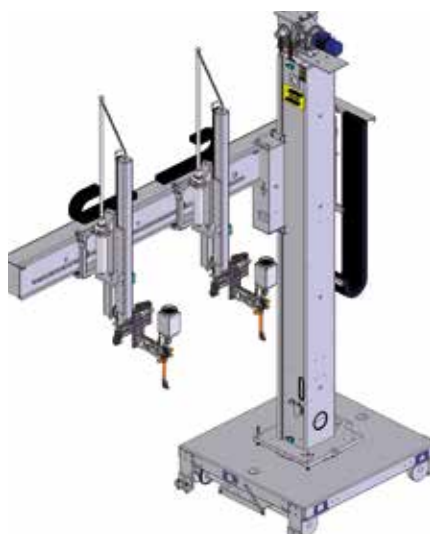
Custom format - special capabilities

- A customized range of welding column and booms for different customer requirements and applications.
- 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, MIG and SAW cladding as well as Nar row Gap can be chosen on customized stations.



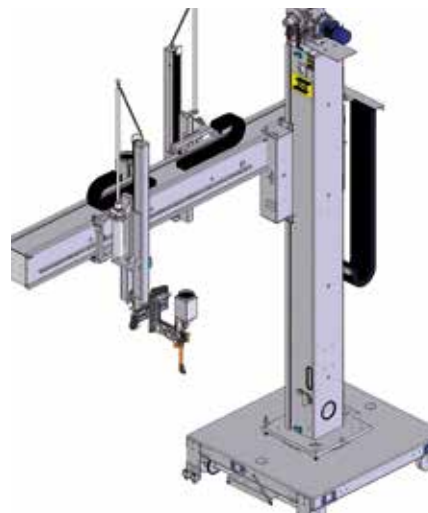
Basic Station 2 - Custom format

Conventional Column and boom, with a movable boom and welding head at boom end combined with a boom-carriage-mounted welding head (not CaB 300).



Basic Station 3 - Custom format

Side-boom manipulator with horizontally fixed boom, supporting one or two welding heads. This welding station, which offers flexible movement, is the basic unit for welding girders and profiles and for joining plates and sections.



Basic Station 4 - Custom format

Side-boom manipulator with double-track boom. Welding heads mounted on either side of the boom. The boom carriages can be individually controlled by the joint tracking systems, on separate tracks. Ideal for transversal double-fillet welding of stiffeners.

CaB Systems

Technical data CaB 300S and CaB 300M

Technical data - Column

CaB 300S / 300M

Effective working range, m (ft.)	3 (10)	4 (13)	5 (16.5)
Max. boom height A , mm (ft.)	4070 (13)	5070 (16.5)	6070 (20)
using movable carriage, min mm (ft.)	930 (3)	930 (3)	930 (3)
Max. boom height B , mm (ft.)	3955 (15.6)	4955 (19.5)	5955 (23.5)
using concrete stand, min mm (ft.)	815 (2.67)	815 (2.67)	815 (2.67)
Max. boom height C , mm (ft.)	3750 (14.7)	4750 (18.7)	5750 (22.6)
using stationary foot plate, min mm (ft.)	610 (2.4)	610 (2.4)	610 (2.4)
Total height D	5170 (17)	6170 (20)	7170 (23.5)
using movable carriage, mm (ft.)			
Total height E	5055 (16.5)	6055 (20)	7055 (23)
using concrete stand, mm (ft.)			
Total height F	4850 (16)	5850 (19)	6850 (22.5)
using stationary foot plate, mm (ft.)			
Lifting speed, m/min (ipm)	0.7 (27.5)	0.7 (27.5)	0.7 (27.5)
Max total load on column platform, kg (lbs)	600 (1320)	600 (1320)	600 (1320)

Technical data - Boom

Extension G , max mm (ft.)	3580 (11.75)	4580 (15)	5580 (18)
min mm (ft.)	540 (1.77)	540 (1.77)	540 (1.77)
Permissible loads:			
total, max kg (lbs.)	300 (660)	220 (485)	150 (330)
one end, max kg (lbs.)	240 (530)	150 (331)	75 (165)
Cross-sectional diameter H , mm (ft.)	325 (13)	325 (13)	325 (13)
Welding speed, m/min (ipm)	0.1-2.0 (4-79)	0.1-2.0 (4-79)	0.1-2.0 (4-79)
Transport speed, m/min (ipm)	2.0 (79)	2.0 (79)	2.0 (79)

Technical data - Rail carriage

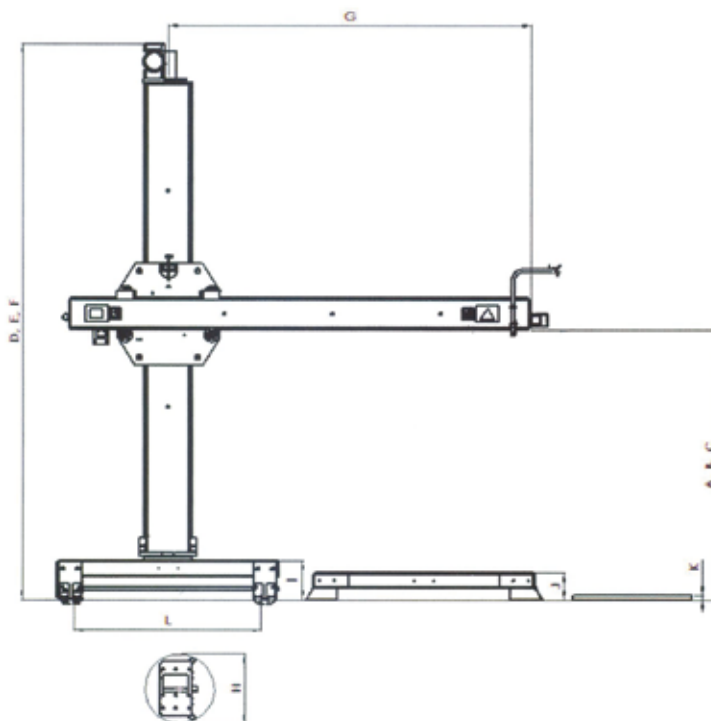
Track width L , inside to inside, mm (in.)	1730 (68.11)
Width x length, mm (in.)	2060x2330 (81.1x91.7)
Height I , mm (in.)	365 (14.37)
Welding speed, m/min (ipm)	0.1-2.0 (4-79)
Transport speed, m/min (ipm)	2.0 (79)
Total weight, kg (lbs.)	1670 (3681)

Technical data - Concrete stand

Width x length, mm (in.)	2060x2100 (81.1x82.7)
Height J , mm (in.)	250 (9.84)
Total weight, kg (lbs.)	1550 (3417)

Technical data - Foot plate

Width x length, mm (in.)	1100x1100 (43.3x43.3)
Height K , mm (in.)	40 (1.57)
Total weight, kg (lbs.)	350 (772)



CaB Systems

Technical data CaB 460S and CaB 460M

Technical data - Column	CaB 460M only	CaB 460S CaB 460M	CaB 460S CaB 460M	CaB 460S CaB 460M
Effective working range, m (ft.)	4 (13)	5 (16.5)	6 (20)	7 (23)
Max. boom height A , mm (ft.) using movable carriage, min mm (ft.)	4950 (16) 950 (3.12)	5950 (19.5) 950 (3.12)	6950 (23) 950 (3.12)	7950 (26.08) 950 (3.12)
Max. boom height B , mm (ft.) using concrete stand, min mm (ft.)	4845 (16) 845 (2.77)	5845 (19) 845 (2.77)	6845 (22.5) 845 (2.77)	7845 (25.74) 845 (2.77)
Max. boom height C , mm (ft.) using stationary foot plate, min mm (ft.)	4510 (15) 510 (1.6)	5510 (18) 510 (1.6)	6510 (21.5) 510 (1.6)	7510 (24.64) 510 (1.6)
Total height D using movable carriage, mm (ft.)	6275 (20.5)	7275 (24)	8275 (27)	9275 (30.43)
Total height E using concrete stand, mm (ft.)	6170 (21)	7170 (23.5)	8170 (27)	9170 (30)
Total height F using stationary foot plate, mm (ft.)	5835 (20)	6835 (22.5)	7835 (25.5)	8835 (29)
Lifting speed, m/min (ipm)	2.0 (79)	2.0 (79)	2.0 (79)	2.0 (79)
Max total load on column platform, kg (lbs)	1500 (3300)	1500 (3300)	1500 (3300)	1500 (3300)

Technical data - Boom

Extension G , max mm (ft.) min mm (ft.)	4715 (15.5) 715 (2.35)	5715 (18.8) 715 (2.35)	6715 (22) 715 (2.35)	7715 (25.3) 715 (2.35)
Permissible loads: total, max kg (lbs.) one end, max kg (lbs.)	1100 (2423) 550 (1213)	1050 (2313) 450 (992)	1000 (2203) 350 (772)	950 (2094) 150 (331)
Cross-sectional diameter H , mm (ft.)	630 (25)	630 (25)	630 (25)	630 (25)
Welding speed, m/min (ipm)	0.1-2.0 (4-79)	0.1-2.0 (4-79)	0.1-2.0 (4-79)	0.1-2.0 (4-79)
Transport speed, m/min (ipm)	2.0 (79)	2.0 (79)	2.0 (79)	2.0 (79)

Technical data - Rail carriage

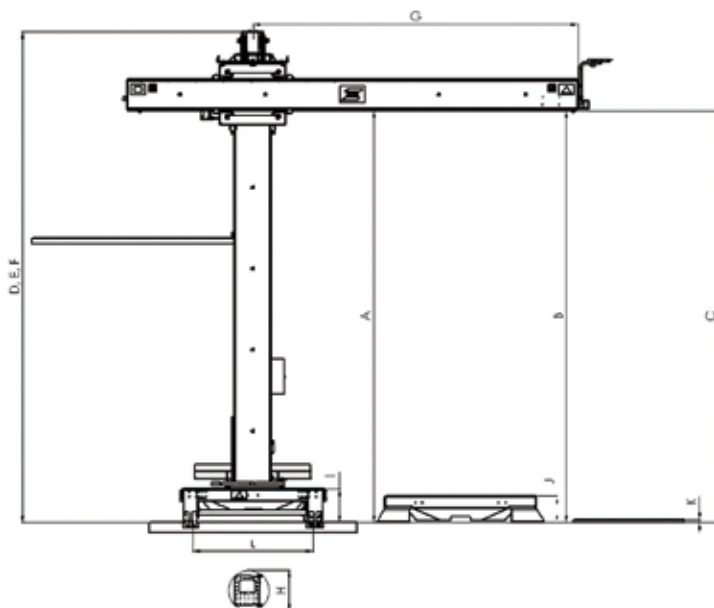
Track width L , inside to inside, mm (in.)	1730 (68.11)
Width x length, mm (in.)	2100x2380 (82.7x93.7)
Height I , mm (in.)	485 (19.1)
Welding speed, m/min (ipm)	0.1-2.0 (4-79)
Transport speed, m/min (ipm)	2.0 (79)
Total weight, kg (lbs.)	2860 (6305)

Technical data - Concrete stand

Width x length, mm (in.)	2100x2410 (82.7x94.9)
Height J , mm (in.)	380 (14.96)
Total weight, kg (lbs.)	2900 (6393)

Technical data - Foot plate

Width x length, mm (in.)	1600x1600 (63x63)
Height K , mm (in.)	40 (1.57)
Total weight, kg (lbs.)	505 (1113)



CaB Systems

Technical data CaB 600M

Technical data - Column

CaB 600M

Effective working range, m (ft.)	6 (20)	7 (23)	8 (26)	9 (29.5)	10 (33)
Max. boom height A , mm (ft.)	7025 (276.6)	8025 (316)	9025 (355.3)	10025 (395)	11025 (434)
using movable carriage, min mm (ft.)	1075 (42.3)	1075 (42.3)	1075 (42.3)	1075 (42.3)	1075 (42.3)
Max. boom height B , mm (ft.)	6950 (22.8)	7950 (26.1)	8950 (29.4)	9950 (32.6)	10950 (35.9)
using concrete stand, min mm (ft.)	1000 (3.3)	1000 (3.3)	1000 (3.3)	1000 (3.3)	1000 (3.3)
Max. total height C , mm (ft.)	8585 (28.2)	9585 (31.4)	10585 (34.7)	11585 (38)	12585 (41.3)
using movable carriage					
Max. total height D , mm (ft.)	8510 (27.9)	9510 (31.2)	10510 (34.5)	11510 (37.8)	12510 (41)
using concrete stand					
Lifting speed, m/min (ipm)	2.0 (79)	2.0 (79)	2.0 (79)	2.0 (79)	2.0 (79)

Technical data - Boom

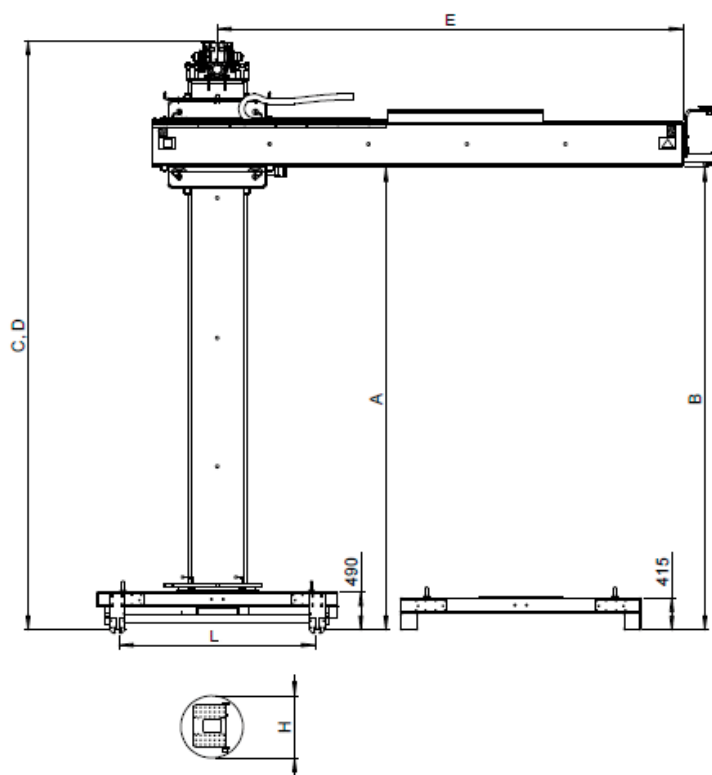
Extension E, max mm (ft.)	7000 (23)	8000 (26)	9000 (29.5)
min mm (ft.)	1000 (3.3)	1000 (3.3)	1000 (3.3)
Permissible loads:			
total, max kg (lbs.)	1940 (4277)	1830 (4034)	1700 (3748)
one end, max kg (lbs.)	550 (1213)	400 (882)	250 (551)
Cross-sectional diameter H , mm (ft.)	1000 (3.3)	1000 (3.3)	1000 (3.3)
Welding speed, m/min (ipm)	0.1-2.0 (4-79)	0.1-2.0 (4-79)	0.1-2.0 (4-79)
Transport speed, m/min (ipm)			
Total weight incl cables, kg (lbs.)	1050 (2315)	1165 (2568)	1280 (2822)

Technical data - Rail carriage 4WD

Track width L , inside to inside, mm (in.)	2500 (98.4)
Width x length, mm (in.)	3100x2600 (122x102)
Height I , mm (in.)	490 (19.3)
Welding speed, m/min (ipm)	0.1-2.0 (4-79)
Transport speed, m/min (ipm)	2.0 (79)
Total weight, kg (lbs.)	4800 (10582)

Technical data - Concrete stand

Width x length, mm (in.)	3100x2680 (122x105.5)
Height J , mm (in.)	415 (16.3)
Total weight, kg (lbs.)	4250 (9370)



CaB 22 VLS

For light-duty applications

- The CaB 22 VLS is specifically designed for light duty applications.
- Smooth 360° lockable rotation.
- Linear guidings on column and boom for smooth movement which makes it ideal for gas metal arc welding (GMAW), gas tungsten arc welding (GTAW) and submerged arc welding (SAW) processes.
- Cable chain on column and boom.
- Movable carriage or fixed stand.
- Pendant control station uses low voltage, features generous 10 m (33 ft.) cable.
- Standard safety features include anti-fall device and limit switches for all motions.



Technical data

Mains supply, 50 Hz, 3-phase, V	380/400/415
60 Hz, 3-phase, V	440/460/480
Capacity, at 200 mm (7.8 in.) away from end of boom, kg (lbs.)	120 (265)
Vertical speed at 50 Hz, mm/min (ipm)	600 (23.6)
Boom speed, mm/min (ipm)	275-2750 (10.8-108)
Max. under boom height, mm (in.)	2000 (78.7)
Min. under boom height, mm (in.)	700 (27.6)
Effective boom travel, mm (in.)	2000 (78.7)
Weight, kg (lbs.)	1270 (2800)

Ordering information

For ordering information, please contact your nearest ESAB representative.

CaB 44, 55, 66 and 77

- Designed and robustly built to withstand rugged work environments.
- Smooth 360° 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 gearbox 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 54 pendant control station using low voltage on the generous 10 m (33 ft.) cable.
- Anti-fall device and limit switches for all motions.
- Pay load of 300 kg (661 lbs.) at 600 mm (24 in.) from boom end.



Ordering information

CaB 44, motorized carriage	0370 250 601
CaB 55, motorized carriage	0370 250 602
CaB 66, motorized carriage	0370 250 603
CaB 77, motorized carriage	0370 250 604
CaB 44, fixed stand	0370 250 606
CaB 55, fixed stand	0370 250 607
CaB 66, fixed stand	0370 250 608
CaB 77, fixed stand	0370 250 609

Options & Accessories

Spools at rear end of the boom	0370 250 617
Motorized rotation	0370 250 618
0.5 m boom section	0370 250 621
0.5 m column section	0370 250 622

Technical data	44	55	66	77
Overall height (motorised carriage), mm (in.)	5445 (214.3)	6445 (253.7)	7445 (293.1)	8445 (332.4)
Overall height (fixed stand), mm (in.)	5420 (213.3)	6420 (252.7)	7420 (292.1)	8420 (331.5)
Max. boom height, mm (in.)	5700 (224.4)	6700 (263.8)	7700 (303.1)	8700 (342.5)
Vertical under boom (min), mm (in.)	1000 (39.4)	1000 (39.4)	1000 (39.4)	1000 (39.4)
Vertical under boom (max), mm (in.)	4000 (157.5)	5000 (197)	6000 (236.2)	7000 (275.5)
Boom range horizontal, mm (in.)	4000 (157.5)	5000 (197)	6000 (236.2)	7000 (275.5)
Rail G-G, mm (in.)	2000 (78.7)	2000 (78.7)	2500 (98.4)	3000 (118.1)
Vertical speed, mm/min (ipm) at 50 Hz	1250 (49.2)	1250 (49.2)	1250 (49.2)	1250 (49.2)
Boom speed, mm/min (ipm) at 5-50 Hz	165/1650 (6.5/65)	165/1650 (6.5/65)	165/1650 (6.5/65)	165/1650 (6.5/65)
Travel speed, mm/min (ipm) at 5-50 Hz	333/3335 (13/131.3)	333/3335 (13/131.3)	333/3335 (13/131.3)	333/3335 (13/131.3)
Vertical drive AC, kW c/w brake	3	3	3	3
Boom drive AC, kW c/w force cooling	0.55	0.55	0.55	0.55
Travel car drive AC, kW c/w brake	0.75	0.75	0.75	0.75
IP classification	IP54	IP54	IP54	IP54
Power supply, V 50Hz/3ph	380/400/415	380/400/415	380/400/415	380/400/415
Power supply, V 60Hz/3ph	440/460/480	440/460/480	440/460/480	440/460/480
Control voltage, V AC	24	24	24	24
Slewing	Manual	Manual	Manual	Manual

Telbo™ 6500 and Telbo™ 9500

Telescopic boom

- Save valuable workshop space with the unique 3-section telescope-like retraction of the boom, securing operator safety.
- Outstanding reach-out with heavy loading capacity to ensure superior productivity and weld quality.
- Ideal for internal/external circumferential welding of windtower applications.
- Flexible production, no matter if mixed sizes and plate thicknesses are to be welded - productive results are obvious.
- Loaded with 1000 kg (2204 lbs.) Flux BigBag and 1000 kg Wire EcoCoils, welding is continuously performed and costly dwell times are minimized.



Ordering information

For ordering information, please contact nearest ESAB representative.

Features

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

Applications

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

Technical data	Telbo™ 6500	Telbo™ 9500
Effective work range, m (ft.)	6.5 (21.33)	9.5 (31.17)
Max extension, m (ft.) *)	8.0 (26.25)	12.5 (41)
Max load at boom end, kg (lbs.)	300 (661.4)	500 (1102)
Welding process	SAW / GMAW	SAW
Welding heads	A6	A6 SAW, Single/Tandem and Tandem/Twin
Control system	PLC / GMH	PLC / GMH
Operator seat	No	Yes

*) Measured from column centre.

Carriers & Gantries



Mechtrac 1730/2100/2500/3000

For mechanized gantry automation

- Fast and flexible way to increase productivity.
- Equipped with A2-A6 PEK process controller and A2 welding equipment for mechanized submerged arc welding (SAW) or gas metal arc welding (GMAW).
- Weld various profiles such as I-, T- or L-beams, straight columns or tapered columns.
- Available in four versions (width of gantry): 1730 mm (68 in.), 2100 mm (83 in.), 2500 mm (94 in.) or 3000 mm (118 in.).
- All versions have standard gantry leg height of 1500 mm (59 in.).
- Floor mounted rail delivered in standard lengths of 3 m (118 in.) - can be easily extended.
- Dual-drive motors are standard.
- Gantry can support a maximum weight of 220 kg (485 lbs.) - up to two A2 welding heads, complete with GMH joint tracking and OPC flux recovery systems.



Mechtrac equipped with A2 welding heads, process controller PEK and power sources LAF 631

Ordering information

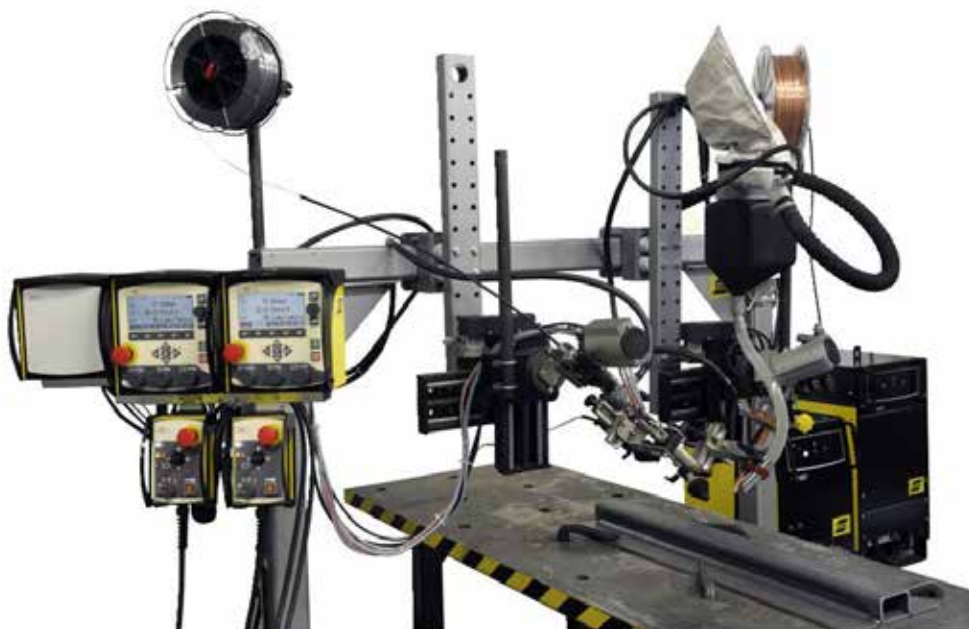
Mechtrac 1730, dual drive	0809 670 881
Mechtrac 2100, dual drive	0809 670 882
Mechtrac 2500, dual drive	0809 670 883
Mechtrac 3000, dual drive	0809 670 884
Sales Literature	XA00101220

Technical data

Travel speed, m/min (ipm)	0.2-1.9 (8-75)
Maximum load, kg (lbs.)	220 (485)
Standard rail length, m (ft.)	3 (9.8)
Gantry width, mm (in.)	1730-3000 (68-118)

Options & Accessories

Travelling rail, 3 m (9.8 ft.)	0806 707 880
Travelling rail, extension, 3 m (9.8 ft.)	0806 707 881



Gantrac

Highly stabilized manipulation of welding torches with optimized welding results

- Rigid legs supported by encoder-controlled DC-driven bogie carriages as well as a cross beam to ensure uniform, stable welding speed.
- The gantry beam is equipped with guides and a rack on one or both sides for motorized welding carriages.
- The well-proven A6 welding heads are mounted on heavy duty slides with comprehensive working strokes to obtain good access to the workpieces.
- Incorporates the A2-A6 Process Controller PEK, equipped with GMH automatic joint tracking to control the vertical and horizontal axes.
- Submerged arc welding is the ideal 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.
- The welding heads can be turned ± 180 degrees for welding in both X-directions as well as 90 degrees for welding in Y-direction across the beam.
- A large number of positioning axes permit flexible welding production.



Ordering information

For ordering information, please contact your nearest ESAB representative.

Walltrac

Minimal floor working area thanks to the single rail/wall support

- For production of various beam structures, such as I/H and box beams of tapered and non-symmetrical design, stiffener sections and the joining of plates and sections.
- Longitudinal and transverse welding procedures.
- Uses A6 welding heads and A2-A6 Process Controller PEK.
- Automatic joint tracking GMH controls the vertical and horizontal axes, i.e. the slides and the carriages, to safeguard the superior weld quality.
- A large number of positioning axes permit flexible welding production.



Accessory Components



Beam Travelling Carriage

To be used with ESAB A2 and A6 welding heads

- Ideal solution for submerged arc welding (SAW) or gas metal arc welding (GMAW) applications requiring beam mounted carriage.
- Can be fitted with any A2 or A6 welding head.
- For longitudinal welding or welding of circumferential workpieces.
- Place the carriage on either a standard I-beam IPE 300 or specially machined I-beam (contact ESAB for details).
- Fast and easy pre-programming of travel motion and welding parameters using the A2-A6 process controller PEK.

Ordering information

Beam travelling carriage	0457 897 881
Sales Literature	XA00091920

Options & Accessories

Mounting bracket for Tandem head	0458 026 001
Track in lengths of 3000 mm (9.8 ft.)	0145 282 880
Required number of floor columns: 2	
Track in lengths of 4500 mm (14.8 ft.)	0145 282 881
Required number of floor columns: 3	
Track in lengths of 6000 mm (19.7 ft.)	0145 282 882
Required number of floor columns: 3	
Track in lengths of 8000 mm (26 ft.)	0145 282 883
Required number of floor columns: 4	



Technical data

Travel speed beam carriage, cm/min (ipm)	6-200 (2-79)
Weight carriage, kg (lbs.)	60 (132)

MBVA 330 and 550

Beam welding carriage

- Heavy side beam carriage, suitable for multiple submerged-arc welding heads and most options available on column and booms.
- Cross beams available up to 1.2 m (4 ft.), capacity up to 1.4 ton.
- VEC motor with gear, rack and pinion, for powerful, consistent carriage travel.
- Different travel units for speeds to match process.



Ordering information

MBVA 330 carriage	0150 765 880
MBVA 550 carriage	0150 901 880
Sales Literature	XA00105120

Options & Accessories

Cable, length 1.5-50 m (5-164 ft.)	contact ESAB
Travel unit, speed range 3-80 cm/min (1.2-32 ipm)	0150 943 880
Travel unit, speed range 11-125 cm/min (4-49 ipm)	0150 943 881
Travel unit, speed range 14-250 cm/min (5.5-98 ipm)	0150 943 882
Travel unit, speed range 37-1500 cm/min (14.5-590 ipm)	0150 943 883
Travel unit, speed range 27-530 cm/min (11-208 ipm)	0150 943 884
Beam 330, 300 cm (118 in.), 240 kg (529 lbs.)	0803 348 880
Beam 330, 450 cm (177 in.), 480 kg (1058 lbs.)	0803 348 881
Beam 330, 600 cm (236 in.), 720 kg (1587 lbs.)	0803 348 882
Beam 330, 750 cm (295 in.), 960 kg (2116 lbs.)	0803 348 883
Beam 330, 900 cm (354 in.), 1000 kg (2204 lbs.)	0803 348 884
Beam 330, 1050 cm (413 in.), 1200 kg (2645.5 lbs.)	0803 348 885
Beam 330, 1200 cm (472 in.), 1420 kg (3130.5 lbs.)	0803 348 886
Beam 550, 300 cm (118 in.)	0321 527 880
Beam 550, 450 cm (177 in.)	0321 527 881
Beam 550, 600 cm (236 in.)	0321 527 882
Beam 550, 800 cm (315 in.)	0321 527 883
Beam 550, 1200 cm (472 in.)	0321 527 884

Technical data

	MBVA 330	MBVA 550
Rated load, N (kp)	10000 (1000)	20000 (2000)
Rated moment, Nm (kpm)	3300 (330)	10000 (1000)
Weight, kg (lbs.)	95 (209)	275 (606)

Servo Slide

Motorized slide for linear motion

- Heavy duty capacity with high precision slide for accurate and rapid joint tracking and positioning.
- Can be installed in vertical or horizontal positions - setting lengths up to 1030 mm (41 in.) with a central point of attachment.
- Operates jointly with A2 or A6 components.
- Slides available from 60 mm (2.4 in.) to 1030 mm (41 in.) working range.
- Permissible load of 1500 N (337 lbf/ft.) in any mounting position.
- Maximum torque for vertical unit is 400 Nm (3540 lbf/in.); maximum torque for horizontal unit is 280 Nm (2480 lbf/in.).
- Designed to be used together with joint positioning and tracking systems PAV and GMH.



Ordering information

Servo slide, 60 mm (2 in.)	0334 333 880
Servo slide, 120 mm (5 in.)	0334 333 881
Servo slide, 180 mm (7 in.)	0334 333 882
Servo slide, 240 mm (9 in.)	0334 333 883
Servo slide, 300 mm (12 in.)	0334 333 884
Servo slide, 420 mm (17 in.)	0334 333 885
Servo slide, 540 mm (21 in.)	0334 333 886
Servo slide, 730 mm (29 in.)	0334 333 887
Servo slide, 1030 mm (41 in.)	0334 333 888
Servo slide, 358 mm (14 in.), heavy duty	0416 190 880
Servo slide, 598 mm (23.5 in.), heavy duty	0416 190 884
Sales Literature	XA00032720

Options & Accessories

Connecting cable, 2 m (6.5 ft.)	0460 745 880
Connecting cable, 5 m (16.4 ft.)	0460 745 881
Connecting cable, 10 m (32.8 ft.)	0460 745 882

Technical data

Control voltage, V DC	42
Max ambient temperature	80°C (176°F)
Axial play, runner, mm (in.)	0.1 (0.004)
Max. torque-free load, kg (lbs.)	150 (330)

Technical data	Slide 60 mm (2 in.)	Slide 120 mm (5 in.)	Slide 180 mm (7 in.)	Slide 240 mm (9 in.)	Slide 300 mm (12 in.)	Slide 420 mm (17 in.)	Slide 540 mm (21 in.)	Slide 730 mm (29 in.)	Slide 1030 mm (41 in.)
Total length, mm (in.)	305 (12)	365 (14)	425 (17)	485 (19)	545 (21.5)	665 (26)	785 (31)	1025 (40)	1385 (54.5)
Number of 60 mm (2.4 in.) indexings	3	4	5	6	7	9	11	14	21
Weight, kg (lbs.)	11.5 (25)	13.2 (29)	15 (33)	16.7 (37)	18.5 (41)	21.9 (48)	25.4 (56)	30.9 (68)	38.8 (85.5)

PAV and GMH

Joint Positioning and Tracking systems

- Simple and easy to use.
- Adapt for use with almost any type of welding joint.
- The PAV system is for manual joint tracking and the GMH system is for automatic joint tracking.
- The PAV and GMH work equally well with ESAB A2 or A6 welding systems.
- Motorized servo slides guarantee a reliable and accurate joint tracking.
- Both the PAV and GMH systems are available in three versions; with control panel on the front, with remote control or without control panel suitable for integration into customized solutions.
- The GMH automatic joint tracking system is designed for use in fillet and butt joints using sensor fingers.
- GMH compensates for irregularities in weld joint, tracks simple geometric shapes and avoids parallax problems.



Adjustable sun shield for better visibility for outdoor use

Ordering information

PAV without control panel	0460 502 880
PAV with control panel	0460 502 881
PAV with remote control	0460 697 880
GMH without control panel	0460 503 880
GMH with control panel	0460 503 881
GMH with remote control	0460 698 880
GMH system compl with remote control , sensor, sensor cable and mini cross saddle	0460 884 880
GMH system compl with control panel , sensor, sensor cable and mini cross saddle	0460 884 881
Sales Literature PAV	XA00139420
Sales Literature GMH	XA00139320

Technical data

Control voltage, V AC, Hz	42, 50-60
Fuse, A	10
Max. welding current at 100% duty cycle, A	6
Armature voltage, V DC	40
Field voltage, V DC	60
Current limit, A	15
Dimensions, mm (inch)	246x235x273 (9.7x9.3x10.7)
Weight, kg (lbs.)	6 (13)
Enclosure class	IP23



GMH with and without remote control



PAV with and without remote control

Options & Accessories

Cable restraining bracket	0460 861 880
Motor cable, 5 m (16.4 ft.)	0460 745 881
Motor cable, 10 m (32.8 ft.)	0460 745 882
Motor cable, 19 m (62.3 ft.)	0460 745 884
Servo slides	0334 333 xxx
(see former page)	

For GMH only:

Sensor cable, 5 m (16.4 ft.)	0416 749 888
Sensor cable, 9 m (29.5 ft.)	0416 749 889
Sensor cable, 19 m (62.3 ft.)	0416 749 880
Sensor with finger	0416 688 880
Mini cross saddle + sensor support	0416 739 880
Remote control	0460 570 880
Protective rubber boot for sensor	0412 013 001
Standard finger	0146 586 001
Finger with ball	0416 719 001
Finger for heat exchange plates	0443 328 880
Finger for beam welding	0443 187 880
Intermediate transformer	0148 636 002

AVPS Laser Seam Tracking System

For Circumferential and Longitudinal Welding

- Laser vision sensing improves the productivity and quality of circumferential and longitudinal welding processes as typically found in windtower manufacturing.
- Longitudinal weld seam tracking on roll-formed tubes.
- Inside circumferential weld seam tracking.
- Outside circumferential weld seam tracking.
- Servo-Robot's intelligent seam tracking technology, combined with ESAB's GMH joint tracking system and pendant control, maintains precise wire position both in the joint and with respect to the vertical direction ensuring a consistent wire stickout.
- Parameters are easily set with the ESAB remote control pendant eliminating the need for special operator training.
- The operator selects the correct joint template (butt, groove, etc.) using the remote control pendant.
- The welding head is mounted on a motorized double servo slide where the head can be moved up-down and left-right.
- The Servo-Robot Mini-Box Control unit is at the center of the tracking acting as both a vision control unit and as a process control unit which communicates with the GMH system to perform the tracking tasks.



Ordering information

For ordering information, please contact your nearest ESAB representative.

Technical data Mini-I/D Laser Camera

Laser class	IIb
Standoff distance, mm (in.)	80 (3)
Field of view depth, mm (in.)	100 (4)
Field of view width, mm (in.)	30-60 (1.2-2.4)
Average depth resolution, mm (in.)	0.05 (0.0002)
Average lateral resolution, mm (in.)	0.05 (0.0002)
Dimension, LxWxH, mm (in.)	30x56x90 (1.2x2.2x3.5)
Weight, kg (lbs.)	0.5 (1)

Technical data Mini-Box Control unit with ESAB GMH Interface

Mains supply, V DC	24
HMI port	Ethernet 10/100 Mbps
E-STOP input	External alarm input for laser safety
Camera cooling control output	Used with SRI camera air cooling system
Laser enable key-lock	Key-lock switch for laser safety
Operating temperature, °C (°F)	5-40° (41-104°)
Dimension, LxWxH, mm (in.)	300x300x150 (12x12x6)
Weight, kg (lbs.)	3.5 (7.7)

OPC Basic & Super

Sturdy compact flux recovery systems

- Robust and compact design.
- Easy to operate and practically maintenance-free.
- Integrated system for maximum productivity - lower investment and service costs.
- Adapts to any A2 or A6 welding system - tractor or stationary.
- Uses only compressed air - safe and inexpensive.
- Can be integrated into complete FFRS flux feeding and recovery system.
- Three filter types; filter bag for A2 applications, cyclone filter with filter bag for most A6 applications and Tedak filter for heavy-duty applications.
- OPC system includes; ejector, cyclone, filter with attachment hardware, securing strap, suction hose and four suction nozzles (for butt welds, normal and large; fillet welds, left and right).

OPC Basic Flux Recovery System

- Works on ejector principle using compressed air
- Cyclone separator, on top of flux hopper, efficiently separates dust from recovered flux.
- Slag is separated and flux is returned to hopper.

Ordering information

OPC Basic, with standard filter bag	0148 140 880
OPC Basic, with cyclone filter	0802 415 882
OPC Basic, with Tedak filter	0802 415 883
OPC Super *)	0339 719 880
OPC Super complete, with cyclone filter	0802 415 892
OPC Super complete, with Tedak filter	0802 415 893
Sales Literature	XA00105020
Sales Literature Wear parts OPC	XA00126420

*) excl. hose, nozzles and filter

Technical data	OPC Basic	OPC Super
Airflow capacity		
at working pressure 0.4 MPa, l/min	175	420
at working pressure 0.5 MPa, l/min	225	500
at working pressure 0.6 MPa, l/min	250	580
Max working pressure, MPa	0.6	0.6
Max suction height		
at working pressure 0.4 MPa, m *)	0.8	1.0
at working pressure 0.5 MPa, m *)	0.8	1.2
at working pressure 0.6 MPa, m *)	0.8	1.4
Sound level at work, dB	70	72
Max working temperature, °C	130	150
Short term temperature, °C **)	170	190

*) Suction height with normal flux bead and a welding speed of 100 cm/min

**) Tested with preheated flux to temp. max 220°C and weld object temp. max 350°C.



OPC Super Flux Recovery System

- Similar to Basic System but with stronger ejector and cyclone - provides better suction.
- Can also be used with pre-heated flux.

Options & Accessories

Air pressure hose 3/8 in.	0190 343 104
Air pressure hose 1/2 in.	0190 343 106
Air pressure tube Ø 63 mm, 2.5 in.	0193 125 003
Air central	0417 714 880
Plastic bag	0190 665 004
Filter bag, paper	0155 966 001
Filter bag, cotton	0332 448 001
Cyclone filter	0379 538 880
Tedak filter	0453 708 881



FFRS Flux Feed and Recovery Systems

Efficient flux handling for cost-effective welding

- Ideal for continuous and high capacity welding
- Minimum manual flux handling.
- Reduced flux consumption for better welding economy.
- Fewer weld stops for increased efficiency.
- Efficient filtration of used air.
- Flux feeds from a 75 l (20 gal.) capacity TPC-75 pressurized flux tank to the ESAB flux hopper of your choice; 6 l or 10 l (1.6 gal. or 2.6 gal.)
- Flux feed inlet options; straight or bent.

FFRS Super

- Built on OPC Super modules
- **Super** - for increased flux and heat conditions.
- Based on ejector vacuum principle.

FFRS 2000 & 3000

- Based upon an electrical suction unit creating vacuum.
- For use when extra high recovery force is required and for compact welding heads.
- Flux dust separated automatically in a pre-separator.

Options & Accessories

Air central	0417 714 880
Flux hopper 10 l (2.6 gal.)	0147 649 881
Flux hopper 6 l (1.6 gal.)	0413 315 881
Holder for hopper	0148 487 880
Level indicator for TPC	0452 048 880
Pneumatic flux valve	0802 540 880
Flux valve control unit	0813 620 880
Sales Literature FFRS Super	XA00104820
Sales Literature FFRS 2000 & 3000	XA00104920



FFRS 3000

Ordering information

FFRS Super with cyclone filter	0809 914 881
FFRS Super with heaters in TPC	0809 914 882
FFRS Super with Tedak dust filter	0809 914 883
FFRS Super with heaters and Tedak filter	0809 914 884

FFRS Super systems include 25 m 1/2" air pressure hose, 25 m flux feed hose from TPC to hopper (20 m for heated systems) 2 m flux suction hose, 6 m dust hose from hopper to filter (10 m for systems with Tedak), bent inlet for flux hopper and flux recovery nozzles.

FFRS 2000	0809 914 893
FFRS 2000 with heaters	0809 914 894
FFRS 3000	0809 914 887
FFRS 3000 with heaters	0809 914 888

FFRS 1200/3000 systems include 25 m 1/2" air pressure hose, 25 m flux feed hose from TPC to hopper (20 m for heated systems) 16 m flux suction hose, suction hose between the primary separator and the vacuum unit (1200 = 2 m, 3000 = 5 m), bent inlet for flux hopper and flux recovery nozzles.

Technical data	FFRS 2000	FFRS 3000
Weight without flux, kg (lbs.)	320 (705)	400 (882)
Dimensions, LxWxH, mm (in.)	1100x800x2210 (43.3x31.5x87)	750x450x2210 (30x18x87)
Primary separator		
Volume, l (gal.)	50 (13)	50 (13)
Dimensions, LxW, mm (in.)	450x700 (18x28)	450x900 (18x35)
Suction unit		
Power, W	2000	3000
Mains supply, V/Hz	400 / 3-50	400 / 3-50
Fuse, A	16	16
Max. vacuum, kPa	-30	-25
Max. air flow capacity, m³/h	240	270
Sound level, dB	71	63
Filter area, m²	3	3
Filtration efficiency, %	99.95	99.95
Life-span of filter, work hours	5-6000	4000-6000
Weight, kg (lbs.)	74 (163)	194 (428)
Dimensions, LxWxH, mm (in.)	950x640x1200 (37x25x47)	1200x690x2000 (47x27x79)

CRE 30 & CRE 60 Air Drying Units

For use with ESAB flux handling systems

- Designed for use with any flux handling system.
- The system is based on the absorption principle - reduces the risk of hydrogen cracking in weld metal by ensuring flux remains dry.
- Built-in monitor - warns if the programmed humidity limit is exceeded.
- Reduces condensation - less corrosion and malfunctions.
- Simple system monitoring - manometer on pressurized dryer bottles with easy-to read dew point indicator.



Ordering information

CRE 30 air drying unit	0443 570 880
CRE 60 air drying unit	0443 570 881
Sales Literature	XA00101920

Options & Accessories

Desiccant, type 512 (package per 25 kg (55 lbs.))	0443 570 017
Oil filter	0443 570 018
Dust filter	0443 570 019

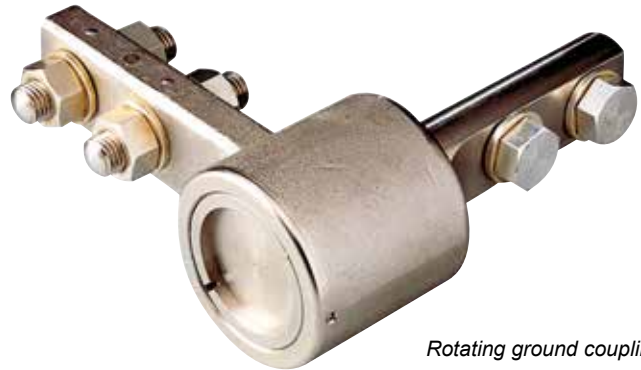
Technical data	CRE 30	CRE 60
Mains supply, V AC, Hz	230, 50/60	230, 50/60
Max. power rating, W	40	50
Net air flow capacity at 6 bar, m ³ /h (ft ³ /hr at 87 psi)	30 Normal (1060)	60 Normal (2120)
Regenerating flow at 6 bar (87 psi), %	14	14
Max. dew point under nominal working conditions, °C (°F)	-26 (-14)	-26 (-14)
Desiccant Type 512		
Sodium-Aluminium-Silicate, kg (lbs.)	10 (22)	16 (35)
Normal pore size, Ångström	4	4
Particle size, mm (in.)	2.5-5.0 (0.01-0.20)	2.5-5.0 (0.01-0.20)
Density, kg/m ³ (lbs/in. ³)	720 (0.023)	720 (0.026)
Cycle time per container	5	5
Max. permissible air flow for oil separation filter, m ³ /hr	60 Normal	60 Normal
Manifold thread size	R12	R12
Max. working pressure, bar (psi)	6 (87)	6 (87)
Max. air pressure at testing, bar (psi)	10 (145)	10 (145)
Max. inlet air temperature under nominal conditions, °C (°F)	30 (86)	30 (86)

Rotating Ground Couplings

- For a good connection to the workpiece to obtain optimal welding performance.
- For rotating workpieces, a ground connection with a rotatable coupling is the safest choice.
- To attach the coupling to the workpiece, special clamps are available, see "Ground Clamps" below.

Ordering information

NKK 600, max. 600A, 2.2 kg (4.8 lbs.)	0700 004 007
NKK 800, max. 800A, 2.7 kg (5.9 lbs.)	0700 004 001
NKK 1200, max 1200A, 4.0 kg (8.8 lbs.)	0700 004 002
NKK 2000, max 2000A, 7.3 kg (16 lbs.)	0700 004 003



Rotating ground coupling NKK

Ground Clamps for Rotating Workpieces

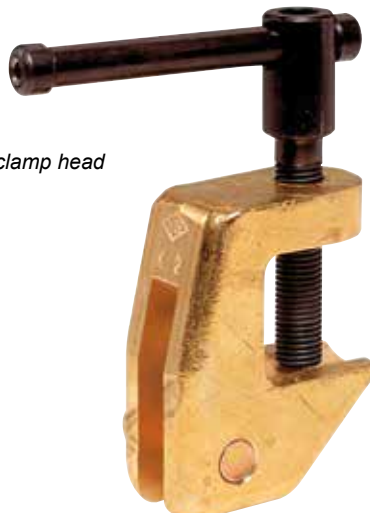
- K2 or PZ3 ground clamps can be mounted directly onto the rotatable ground coupling to create good contact between the workpiece and the return cable.
- Return clamps can also be used together with the GA 800 handle connection to form a complete ground clamp to handle high current welding on non-rotating workpieces.

Ordering information

K2 Clamp head for NKK 800/1200	0700 004 004
GA 800 Handle connection for K2	0700 004 005
PZ3 Pole clamp for NKK 2000	0700 004 006



Handle connection GA 800



K2 clamp head



Pole clamp PZ3

Camera System

For Submerged Arc Welding (SAW)

- Air-cooled camera (water cooling available on request).
- Designed for overview of submerged arc welding.
- 15" monitor with control box, work light (LED) and crosshair generator forms a complete system powered from one point.

Scope (complete set)

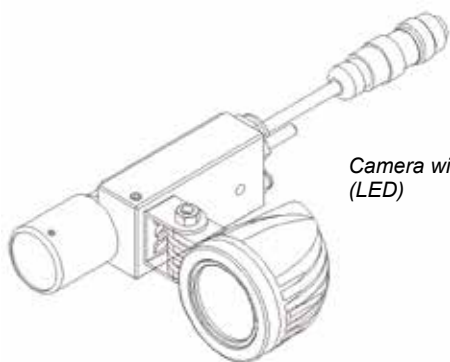
- Camera (colour)
- Monitor with protection box and crosshair generator
- Camera cable, 30 m
- Flexible arm
- Mounting bracket for welding torch
- Work light, LED
- Air pressure regulator (for air cooling)

Ordering information

Camera system, complete set	0829 300 880
Power supply unit, 12 V DC	0809 928 880



Monitor with protection box and crosshair generator



Camera with work light (LED)

Technical data

Camera

Model	SAW Camera, v2 (PAL)
Image device	1/3 Sony CCD, colour
Number of pixels PAL	795 (H) x 596 (V)
Synchronizing system	Internal
Video output	Composite Video, 1Vp-p, 75 Ohm
Resolution (horizontal)	700 TV lines
Minimum illumination	0.01 Lux
Gamma characteristic	0.45
S/N ratio	> 48 dB
White balance	Automatic
Electronic iris	1/50 ~ 1/100,000 sec.
Built-in lens	4.0-9.0 mm
Vari-focal lens	F1.6
Power supply	+12 V DC



Camera installed onto bracket for welding torch



OCE-2H Cooling unit

Compact and efficient

- Can be used for gas metal arc welding (GMAW) as well as for tungsten arc welding (GTAW).
- Both for manual and automatic welding.
- Flow guard as option.
- Designed for use together with water-cooled welding equipment, manual or automatic.
- The water tank and pump are manufactured of corrosion resistant material. A flow guard is available as optional equipment for control of the water flow down to about 1 l/min (0.26 gal.)

Ordering information

Cooling unit OCE-2H	0414 191 881
Flow guard for OCE-2H	0414 231 880
Sales Literature	XA00043120



Technical data Pump with motor

Max power consumption, W	250
Mains supply, V, Hz	230, 50/60, 1-phase
Mains water pressure at	
50 Hz	300 kPa (3 bar)
60 Hz	410 kPa (4.1 bar)

Technical data Cooler

Cooling power	
40° overtemp and 2.0 l/min, kW	1.1
60° overtemp and 2.0 l/min, kW	1.7
Water pressure at 2.0 l/min, kPa	220
Coolant volume, l (gal.)	8 (2.11)
Dimensions, LxWxH, mm (in.)	236x316x398 (9.3x12.4x15.7)

Handling Equipment



CD 5-120 and CI 5-120

Conventional Roller Beds

- Robust design with durable rollers.
- Gritblasted steelwork with polyurethane finished coating to endure the abrasive environment of offshore and marine industries.
- Specially formulated high-load polyurethane tire design for high wear resistance.
- Cast steel gearbox with double worm gear arrangement for smooth operation and minimum backlash.
- Solid state inverter for precise speed control.
- Motorized and idler rail bogie versions.



Ideal for:

- Wind tower fabrication
- Offshore and shipyards
- Pressure vessels
- Pipelines

Options & Accessories

Foot pedal	0370 250 301
Synchronise kit	0370 250 302
Pendant with digital display	0370 250 431
PEK connection kit with 25 m cable	0370 251 514
(Note: I/O board and PEK not included)	

For rail bogie details, please see page 68.

Ordering information

Drive unit

Roller bed CD-5	0370 250 000
Roller bed CD-15	0370 250 004
Roller bed CD-30	0370 250 006
Roller bed CD-60	0370 250 008
Roller bed CD-90	0370 250 107
Roller bed CD-120	0370 250 012

Idler unit

Roller bed CI-5	0370 250 001
Roller bed CI-15	0370 250 005
Roller bed CI-30	0370 250 007
Roller bed CI-60	0270 250 009
Roller bed CI-90	0370 250 109
Roller bed CI-120	0370 250 013

Technical data		CD/CI-5	CD/CI-15	CD/CI-30	CD/CI-60	CD/CI-90	CD/CI-120
Max loading capacity, ton/section	Drive unit	2.5	7.5	15	30	45	60
	Idler unit	2.5	7.5	15	30	45	60
Turning capacity, ton	Drive unit	7.5	22.5	45	90	135	180
Turning speed, min-max, mm/min (ipm)		100-1000 (3.94-39.37)	102-1020 (4-40)	125-1250 (4.92-49.2)	130-1300 (5-51)	130-1300 (5-51)	130-1300 (5-51)
Workpiece diameter, min-max, mm (in.)		200-4300 (7.9-169)	200-5000 (7.9-197)	500-6000 (19.7-236)	500-6000 (19.7-236)	500-6000 (19.7-236)	500-6000 (19.7-236)
Mains supply, V	50Hz, 3ph	380/400/415	380/400/415	380/400/415	380/400/415	380/400/415	380/400/415
	60Hz, 3ph	440/460/480	440/460/480	440/460/480	440/460/480	440/460/480	440/460/480
Control voltage, V AC		24	24	24	24	24	24
Weight, kg (lbs.)	Drive unit	480 (1058)	655 (1444)	1370 (3020)	2000 (4409)	3200 (6107)	3355 (7397)
	Idler unit	265 (584)	360 (794)	820 (1808)	1342 (2959)	2100 (4630)	1841 (4059)
Dimensions LxHxW, mm (in.)	Drive unit	2908x540x671 (115x21x26)	3416x620x791 (134x24.5x31)	3916x765x892 (154x30x35)	4026x765x940 (159x30x37)	4323x865x1176 (170x34x46)	4232x947x1378 (167x37.2x54)
	Idler unit	2465x540x568 (97x21x22)	2465x620x576 (97x24.5x23)	2790x765x690 (110x30x27)	2850x765x898 (112x30x35)	2850x865x1090 (112x34x43)	2850x865x1300 (112x34x51)
Cable, control box, m (in.)		10 (394)	10 (394)	10 (394)	10 (394)	10 (394)	10 (394)

SD 5-120 and SI 5-120

Self-aligning Roller Beds

- Robust design with durable rollers.
- Gritblasted steelwork with polyurethane finished coating to endure the abrasive environment of offshore and marine industries.
- Specially formulated high-load polyurethane tire design for high wear resistance.
- Cast steel gearbox with double worm gear arrangement for smooth operation and minimum backlash.
- Solid state inverter for precise speed control.
- Motorized and idler rail bogie versions.
- Electrical clutch

Ideal for:

- Wind tower fabrication
- Offshore and shipyards
- Pressure vessels
- Thinwall vessels / Pipes

Options & Accessories

Foot pedal	0370 250 301
Synchronize kit	0370 250 302
Pendant with digital display	0370 250 431
PEK connection kit with 25 m cable	0370 251 514
(Note: I/O board and PEK not included)	

For rail bogie details, please see page 68.



Ordering information

Drive unit

Roller bed SD-5	0370 250 050
Roller bed SD-15	0370 250 134
Roller bed SD-30	0370 250 136
Roller bed SD-60	0370 250 058
Roller bed SD-90	0370 250 138
Roller bed SD-120	0370 250 095

Idler unit

Roller bed SI-5	0370 250 051
Roller bed SI-15	0370 250 135
Roller bed SI-30	0370 250 137
Roller bed SI-60	0270 250 059
Roller bed SI-90	0370 250 139
Roller bed SI-120	0370 250 096

Technical data		SD/SI-5	SD/SI-15	SD/SI-30	SD/SI-60	SD/SI-90	SD/SI-120
Max loading capacity, ton/section	Drive unit	2.5	7.5	15	30	45	60
	Idler unit	2.5	7.5	15	30	45	60
Turning capacity, ton	Drive unit	7.5	22.5	45	90	135	180
Turning speed, mm/min (ipm)		127.3-1273 (5-50)	130-1300 (5-51)	120-1200 (4.7-47)	120-1200 (4.7-47)	100-1000 (4-40)	100-1000 (4-40)
Workpiece diameter - 2 tyre, mm (in.)		200-788.8 (7.87-31.06)	200-788.8 (7.87-31.06)	300-1136 (11.8-44.72)	300-1136 (11.8-44.72)	200-1070 (7.87-42.13)	300-1156 (11.8-45.51)
Workpiece diameter - 4 tyre, mm (in.)		789-6600 (31.06-259.84)	789-6600 (31.06-259.84)	1137-7200 (44.76-283.46)	1137-7600 (44.76-299.21)	1071-8300 (42.17-326.77)	1157-8100 (45.55-318.9)
Mains supply, V	50Hz, 3ph	380/400/415	380/400/415	380/400/415	380/400/415	380/400/415	380/400/415
	60Hz, 3ph	440/460/480	440/460/480	440/460/480	440/460/480	440/460/480	440/460/480
IP Classification		IP54	IP54	IP54	IP54	IP54	IP54
Control voltage, V AC		24	24	24	24	24	24
Dimensions LxHxW, mm (in.)	Drive unit	3816x930x753 (150.24x37x29.6)	3814x930x788 (150.16x37x31)	4232x1295x818 (166.6x51x32.2)	4537x1295x965 (178.6x51x38)	4800x1406x987 (189x55.4x38.9)	4866x1502x1082 (191.6x59x42.6)
	Idler unit	3100x930x686 (122x37x27)	3100x930x756 (122x37x29.8)	3400x1295x814 (133.9x51x32)	3600x1295x890 (141.7x51x35)	3900x1406x938 (153.5x55.4x37)	3968x1502x975 (156.2x59x38.4)
Weight, kg (lbs.)	Drive unit	880 (1940)	1170 (2579)	2245 (4949)	3000 (6614)	3260 (7187)	4397 (9694)
	Idler unit	620 (1367)	820 (1808)	1465 (3230)	2000 (4409)	2466 (5437)	3410 (7518)
Cable, control box, m (in.)		10 (394)	10 (394)	10 (394)	10 (394)	10 (394)	10 (394)

Rail Bogie DB/IB 5-120

Motorized and Idler Rail bogie Variants

- Space saving for transport.
- Modularization means easy stocking.
- Standard size rail 1730/2000 mm (68-79 in.)
- Bolted on with standard conventional and self-aligning roller beds.



Ordering information

Motorized Bogie

Rail bogie DB 5-30	0370 250 250
Rail bogie DB 60	0370 250 252
Rail bogie DB 90	0370 250 254
Rail bogie DB 120	0370 250 256

Idler Bogie

Rail bogie IB 5-30	0370 250 251
Rail bogie IB 60	0370 250 253
Rail bogie IB 90	0370 250 255
Rail bogie IB 120	0370 250 257



Technical data	DB/IB 5-30	DB/IB 60	DB/IB 90	DB/IB 120
Max loading capacity, drive/idler, ton	15	30	45	60
Turning capacity, drive unit, ton	45	90	135	180
Wheel, mm (in.)	1725/1995 (68/78.5)	1725/1995 (68/78.5)	1725/1995 (68/78.5)	1725/1995 (68/78.5)
Mains supply, 50 Hz 3-phase, V 60 Hz 3-phase, V	380/400/415 440/460/480	380/400/415 440/460/480	380/400/415 440/460/480	380/400/415 440/460/480
IP Classification	IP 54	IP 54	IP 54	IP 54
Isolator rating, A	50	50	50	50
Control voltage, V AC	24	24	24	24
Travel car speed, mm/min (ipm)	310-3100 (12-122)	315-3150 (12.4-124)	300-3000 (11.8-118)	300-3000 (11.8-118)
Motor, kW	2 x 0.75	2 x 1.1	2 x 1.1	2 x 1.5
Weight, kg (lbs.)				
Drive unit	460 (1014)	660 (1455)	720 (1587)	860 (1896)
Idler unit	360 (794)	948 (430)	526 (1159)	640 (1411)
Dimensions LxHxW, mm (in.)				
Drive unit	2242x320x1390 (88x12.5x55)	2253x328x1500 (89x13x59)	2252x320x1670 (87x12.5x66)	2252x383x1920 (87x15x75.5)
Idler unit	2242x320x1220 (88x12.5x48)	2253x343x1290 (89x13.5x51)	2252x320x1490 (87x12.5x59)	2252x383x1700 (87x15x67)

FUB 30 and FUB 60

Fit-up beds

- Designed and robustly built to withstand rugged work environments
- Fastest system to assemble 1 + 1 sections.
- One FUB set consists of one power and one idler roller bed 30T, four independently adjustable rollers to align the two sections with each other.
- The roller bed and rollers are all mounted on one main frame.
- Tires of type Polyurethane 20.5 x 7 inch.



Ideal for:

- Wind tower fabrication
- Vessels
- Pipemills



Ordering information

FUB 30 0370 250 931
FUB 60 0370 250 932

Technical data	FUB 30	FUB 60
Max. loading capacity, ton	30	60
Min. workpiece diameter, mm (in.) at 90° included angle	610 (24)	610 (24)
Max. workpiece diameter, mm (in.) at 30° included angle	6435 (253.3)	6435 (253.3)
Roller speed, mm/min (ipm)	130-1295 (5-51)	130-1295 (5-51)
Control voltage, V DC	24	24
Mains supply, 50 Hz, 3-phase, V 60 Hz, 3-phase, V	380/400/415 400/460/480	380/400/415
Travel car bogie	yes	yes
Travel car speed, mm/min (ipm)	238-2380 (9.4-94)	240-2400 (9.5-95)
Travel car drive, AC kW	1.1	2.2
Power pack rating, kW	1.5	1.5
IP classification (motor)	IP55	IP55
IP classification (electrical)	IP43	IP43
Pump, cc	2.1	2.1
Tank capacity, l	16 (4.23)	16 (4.23)
Weight, kg (lbs.)	5250 (11575)	7360 (16226)

FIR 35, 75 and 100

Heavy duty Roller Beds for growing line production

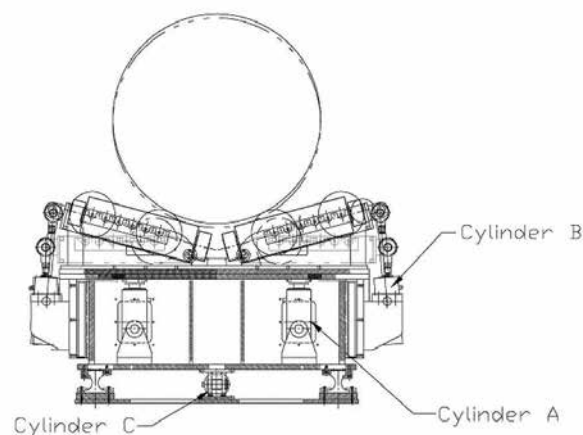
- Designed and robustly built to withstand rugged work environments.
- This unit is part of a growing line, ideal for wind tower production.
- FIR has four independently adjustable rollers to align the workpieces (cans) with each other and two cross rollers to lift up the section for conveying out the workpiece.

Ideal for:

- Wind tower fabrication
- Vessels
- Pipemills

Ordering information

Roller bed FIR 35	0370 250 934
Roller bed FIR 75	0370 250 935
Roller bed FIR 100	0370 250 936



Technical data	FIR 35	FIR 75	FIR 100
Max loading capacity, ton	35	75	100
Workpiece diameter, mm (in.)	2200-5000 (86.6-197)	1500-6500 (59-256)	2000-6000 (79-236)
Tire type, steel, Ø mm (in.)	300 (11.8)	300 (11.8)	300 (11.8)
Control voltage, V AC	24	24	24
Mains supply, 50Hz-3ph, V 60Hz-3ph, V	380/400/415 440/460/480	380/400/415 440/460/480	380/400/415 440/460/480
Power supply voltage	8	13	13
Fuses	12	19	19
IP classification (electrical)	IP55	IP55	IP55
Power pack rating, kW	3	5.5	5.5
Pump, cc	3.2	5.5	5.5
Tank capacity, l (gal.)	60 (15.9)	90 (23.8)	90 (23.8)
Stroke length cylinder A, mm (in.)	Ø125x160x2 (4.9x6.3x0.08)	Ø150x85x160x2 (5.9x3.3x6.3x0.08)	Ø180x160x2 (7.1x6.3x0.08)
Stroke length cylinder B, mm (in.)	Ø100x210x4 (3.9x8.3x0.16)	Ø150x85x350x4 (5.9x3.3x13.8x0.16)	Ø180x400x4 (7.1x15.8x0.16)
Stroke length cylinder C, mm (in.)	Ø150x300 (5.9x11.8)	Ø150x85x300 (5.9x3.3x11.8)	Ø180x300 (7.1x11.8)
Net weight, kg (lbs.)	4850 (10692)	8400 (18519)	9000 (19842)
Dimension LxWxH, mm (in.)	2327x1600x1151 (91.6x63x45.3)	2680x1600x1329 (105.5x63x52.3)	2790x1480x1180 (109.8x58.3x46.5)
Cable length control pendant, m (in.)	10 (394)	10 (394)	10 (394)

FIT 30, 60 and 100

Fit-up Truck

- Designed and robustly built to withstand rugged work environments.
- This unit can be used in one for aligning several cans or used as part of a growing line, ideal for wind tower production.
- Two independently adjusted rollers to align the workpieces (cans) with each other.
- Delivered with or without rail bogie.

Ideal for:

- Wind tower fabrication
- Vessels
- Pipemills



Ordering information

Roller bed FIT 30	0370 250 937
Roller bed FIT 30IB	0370 250 938
Roller bed FIT 60	0370 250 939
Roller bed FIT 60IB	0370 250 940
Roller bed FIT 100	0370 250 941
Roller bed FIT 100IB	0370 250 942

Technical data	FIT 30	FIT 60	FIT 100
Max. loading capacity, ton	15	30	50
Max. lifting capacity, ton	15	30	50
Workpiece diameter, mm	600-5000	1500-6500	2000-8000
Power supply, 50 Hz 3-phase, V	380/400/415	380/400/415	380/400/415
Power supply, 60 Hz 3-phase, V	440/460/480	440/460/480	440/460/480
Fuse, A	9	10	12
Control voltage, V AC	24	24	24
Mains supply, 50/60Hz-3ph, V	400	400	400
IP classification (motor)	IP54	IP54	IP54
Power pack rating, kW	1.1	2.2	4
Weight with rail bogie, kg	1915	2885	6075
Dimension with rail bogie, LxWxH, mm	3439x915x888	4220x730x935	5090x1400x1105
Dimension without travel car, LxWxH, mm (in.)	3439x935x1115	4220x1017x1160	5090x1580x2210
Cable length control box, m (in.)	10 (394)	10 (394)	10 (394)

RT3 - RT35

Two-axis Positioner for rotating and tilting workpieces

- Continuously (stepless) adjustable speed.
- Low voltage (24) remote control unit for all functions.
- 2-axis: tilting and rotation.
- Inverter-controlled rotation speed.
- All drives are equipped with AC motors which require less maintenance, no carbon-brush to change.
- Mechanically and electrically designed for easier maintenance with few spare parts.

Ideal for:

- Pipe shops
- Vessels
- Cladding of dish ends
- Fuel tanks



Ordering information

Positioner RT3	0370 250 851
Positioner RT5	0370 250 852
Positioner RT10	0370 250 853
Positioner RT15	0370 250 854
Positioner RT20	0370 250 855
Positioner RT35	0370 250 856

Options & Accessories

Foot pedal	0370 250 298
Pendant with digital display	0370 250 431

Technical data	RT3	RT5	RT10	RT15	RT20	RT35
Max. loading capacity, ton	3	5	10	15	20	35
Rotation motor, kW	1.5	2.2	4	5.5	9.2	11
Rotation cont AC inverter, kW	1.5	2.2	4	5.5	11	11
Rotation speed, rpm	0.1-1.0	0.08-0.82	0.048-0.48	0.1-1.0	0.048-0.48	0.029-0.29
Tilting range table plate, °	0-135	0-135	0-135	0-135	0-135	0-90
Tilting speed, sec.	80	113	177	120	177	105
Tilting motor c/w brake	1.5	2.2	4	7.5	9.2	7.5
Power supply, 50 Hz, 3-ph, V 60 Hz, 3-ph, V	380/400/415 440/460/480	380/400/415 440/460/480	380/400/415 440/460/480	380/400/415 440/460/480	380/400/415 440/460/480	380/400/415 440/460/480
Power supply rating, Amp.	9	11	18	20	38	40
Fuse, A	13	16	27	30	57	60
Control voltage, V AC	24	24	24	24	24	24
Table plate diameter, mm (in.)	1200 (47)	1500 (59)	1800 (71)	1800 (71)	2200 (87)	2800 (110)
Max. welding current, A	800	1000	1000	1000	1000	1000
IP classification	IP54	IP54	IP54	IP54	IP54	IP54
Weight, kg (lbs.)	1570 (3461)	2720 (5996.5)	4530 (9987)	7100 (15653)	10000 (22046)	17000 (37479)
Dimensions LxWxH, mm (in.)	1625x1070x1057 (64x42x41)	1720x1590x1227 (68x62.5x48)	2453x2070x1586 (96.5x81.5x62.4)	2800x2190x1840 (110x86x72.5)	3050x2400x1850 (120x94.5x73)	1940x2950x2600 (76x116x102)
Cable length, control box, m (in.)	6 (236)	6 (236)	6 (236)	10 (394)	10 (394)	10 (394)

TAP 1-HD / TAP 3-HD / TAP 6-HD

Three-axis Positioner for small objects

- Height, angle and speed are continuously (stepless)adjustable.
- Low voltage (24V) remote control unit for all functions.
- 3-axis: height, tilting angle and rotation.
- Inverter-controlled rotation speed.
- All drives are equipped with AC motors which require less maintenance, no carbon-brush to change.
- The hydraulics for height and tilt adjustment are equipped with built-in safety valves preventing hose failure.
- Mechanically and electrically designed to be more compact and with fewer components for easier maintenance and fewer spare parts.

Ideal for:

- Pipe shops
- Vessels
- Cladding of dish ends
- Fuel tanks



Ordering information

Positioner TAP 1-HD	0370 250 753
Positioner TAP 3-HD	0370 250 754
Positioner TAP 6-HD	0370 250 755

Options & Accessories

Foot pedal	0370 250 298
Pendant with LCD display for TAP series	0370 250 752

Technical data	TAP 1-HD	TAP 3-HD	TAP 6-HD
Max. loading capacity, ton	1	3	6
Max. turning capacity, ton @ mm (in.)	1 @ 11 (270)	3 @ 165 (6.5)	6 @ 150 (6)
Max tilting capacity, ton @ mm (in.)	1 @ 11 (270)	3 @ 165 (6.5)	6 @ 150 (6)
Rotation speed, rpm	0.115-1.15	0.061-0.61	0.089-0.89
Tilting range table plate, degree	0-135	0-135	0-135
Tilting range arm, degree	0-45	0-45	0-45
Mains supply 50 Hz, 3ph, V	380/400/415	380/400/415	380/400/415
Mains supply 60 Hz, 3 ph, V	440/460/480	440/460/480	440/460/480
Fuse, A	9	9	18
Control voltage, V AC	24	24	24
Motor, kW	0.75	1.5	3
IP classification	IP54	IP54	IP54
Table plate diameter, mm (in.)	900 (35)	1000 (39)	1200 (47)
Max. welding current, A	800	800	800
Max tilting height, mm (in.)	1354 (53)	1738 (68)	1976 (78)
Weight, kg (lbs.)	1150 (2535)	1935 (4266)	4340 (9568)
Dimensions, LxWxH, mm (in.)	1294x1620x790 (51x64x31)	1280x2280x1058 (50x90x42)	1690x2500x1130 (66.5x98x44)
Cable length, control box, m (in.)	6 (20)	6 (20)	6 (20)

SHP-6-MHA and SHP-10 MHA

Sky Hook Positioner

- A basic solution for handling large and demanding workpieces in all positions.
- Optimized motor and gear drive sizes.
- The positioner have 3 axis: height adjustment, tilting angle and rotation.
- All drives are equipped with AC motors which require less main tenance, no carbon-brush to change.
- Adjustable height available
- Ideal for highly demanding tasks with heavy workpieces.



Ordering information

Sky Hook Positioner SHP-6-MHA
Sky Hook Positioner SHP-10-MHA

0370 250 960
0370 250 961

Technical data	SHP-6-MHA	SHP-10-MHA
Max loading capacity, rotation, tons	6 tons at 150 mm	10 tons at 140 mm
Max loading capacity, tilting, tons	6 tons at 300 mm	10 tons at 200 mm
Rotation speed, rpm	0.1-1	0.1-1
Rotation motor, kW	2.2	4.0
AC inverter, kW	3	7.5
Height adjust speed, mm/min (ipm)	82-820 (3.2-32.3)	70-700 (2.8-27.6)
Height adjust motor, kW	2.2	7.5
Tilting speed, rpm	0.03-0.3	0.075-0.75
Tilting motor, kW	3	4.0
Power supply, 50Hz/3-phase, V 60Hz/3-phase, V	380/400/415 440/460/480	380/400/415 440/460/480
Fuse, A	12	20
Control voltage, V AC	24	24
IP Classification	IP 54	IP 54
Table plate diameter, mm (in.)	1400 (55)	1400 (55)
Welding current, A	800	800
Weight, kg (lbs.)	5800	12195
Dimensions, LxHxW, mm (in.)	1360x3564x3978 (53.5x140.3x156.6)	2170x4413x5147 (85.4x173.7x202.6)
Cable length control box, m (in.)	10 (394)	10 (394)

PR7/10 and IR7

Pipe Spool Rotator & Idler

- Equipped with dual motorized drives.
- Even and certain rotation since both axes of power section are motorized.
- Solid state inverter for precise speed control.
- Idler Rail Bogie option.

Ideal for:

- Pipe spool and flange welding applications
- Welding of pipes
- Prefabrication/welding of pipe systems
- Welding of curved pipes, angle tees

Ordering information

Pipe Spool Rotator PR7/10 0370 251 056
Idler IR7 0370 251 060

Options & Accessories

Pendant with digital display 0370 250 431



Technical data	PR7/10	IR7
Max loading capacity, ton	3.5	3.5
Turning capacity, kg (lbs).	10 (22)	-
Roller speed, mm/min (ipm)	75-750 (2.95-29.5)	-
Workpiece diameter, min-max mm (in.)	100-970 (3.94-38.2)	165-970 (6.5-38.2)
Power supply, 50 Hz, 3-ph, V 60 Hz, 3-ph, V	380/400/415 440/460/480	-
Polyurethane Tire, Ø mm (in.) Width mm (in.)	254 (10) 80 (3.15)	254 (10) 80 (3.15)
Fuses, A	16	-
Control voltage, V AC	24	-
Motor, kW	1.1	-
IP classification (Motor)	IP 55	-
IP classification (Electrical)	IP 43	-
AC inverter, kW	1.1	-
Weight, kg (lbs.)	1210 (2668)	772 (1702)
Dimensions, LxWxH, mm (in.)	1500x3150x500 (59x124x19.7)	1200x850x715 (47.2x33.5x715)
Cable, control box, m (in.)	10 (394)	-

MTS1 and MTS3

Pipe rotator

- MTS1 and MTS3 are used for supporting workpieces with different diameter and length.
- Positioning of the workpiece with headstock and positioner.

Ordering information

Pipe rotator MTS1 0370 251 057
Pipe rotator MTS3 0370 251 058



Technical data	MTS1	MTS3
Max loading capacity, ton	1	3
Vessel size, Ø mm (in.)	100-610 (3.94-24.02)	150-914 (5.9-36)
Roller type	PU Black	PU Black
Roller size, mm (in.)	150 (5.9)	200 (7.87)
Weight, kg (lbs.)	198 (436.5)	335 (738.5)
Dimensions, LxWxH, mm (in.)	635x1020x500 (25x40.2x19.7)	800x1310x550 (31.5x51.6x21.7)

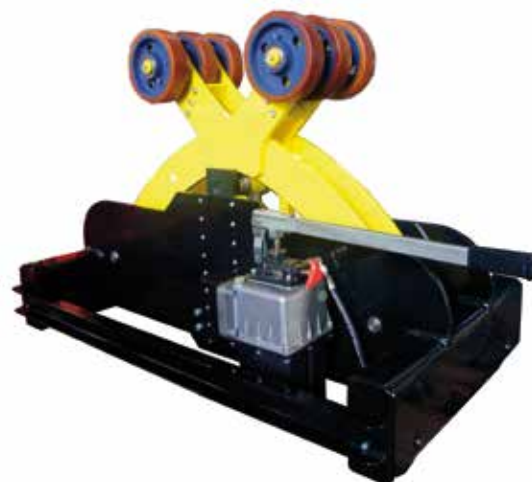
HPS-3T

Pipe rotator

- The HPS pipe rotator is used for supporting tubes with diameter from 100 to 1000 mm (3.9 to 39 inch).
- A manually operated hydraulic system will set the rollers for the diameter requested.

Ordering information

Pipe rotator HTS-3T 0370 251 044



Technical data	MTS3
Max loading capacity, ton	3
Workpiece size, Ø mm (in.)	100-1000
Roller size, mm (in.)	200 (7.87)
Weight, kg (lbs.)	345 (761)
Dimensions, LxWxH, mm (in.)	1500x1100x710 (59x43.3x28)

Tank welder AGW1 and AGW2

Single-side and double-side

- 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.
- Available as a single-side version and a double-side version.
- 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.
- 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.
- The cabin, whose floor level under the carriage is variable to suit the height of the plate, is built as a cage to give the operator(s) maximum safety and comfort.
- 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.



Ordering information

Tank welder single-side, AGW1	0370 250 700
Tank welder double-side, AGW2	0370 250 702

Options & Accessories

Transportable stand AGW1	0370 250 703
Transportable stand AGW2	0370 250 704
Set of cables, 95 mm ² (75 & 25 m)	0370 250 705
Cabine light	0370 250 706

Technical data	AGW1	AGW2
Carry load, kg (lbs.)	300 (661)	300 (661)
Shell height, mm (in.)	1800-3500 (70.8-137.8)	1800-3500 (70.8-137.8)
Height increment, mm (in.)	100 (3.9)	100 (3.9)
Max. shell thickness, mm (in.)	50 (1.96)	50 (1.96)
Min. side clearance, mm (in.)	1450 (57)	1450 (57)
Travel speed, mm (in.)	244-2440 (9.6-96.06)	278-2780 (10.9-109.4)
AC motor travel, kW	1x0.55	2x0.55
AC inverter travel, kW	1x1.1	1x1.1
IP classification (motor)	IP55	IP55
IP classification (electrical)	IP43	IP43
Max. flux hoist, kg (lbs.)	70 (154.3)	70 (154.3)
Electrical panel	yes	yes
Dimensions, LxWxH, mm (in.)	1440x5836x2102 (56.7x229.8x82.8)	2210x5836x2120 (87x229.8x83.5)
Weight, kg (lbs.)	1300 (2866)	1460 (3219)

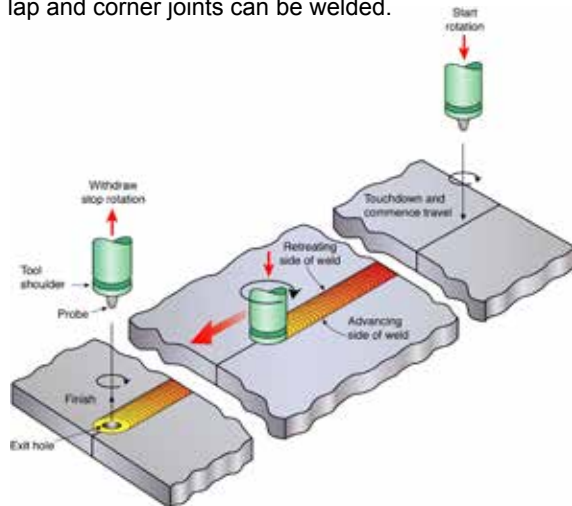
Special Applications



Friction Stir Welding

Quality in depth

- The Friction Stir Welding (FSW) method is based on the principle of obtaining a sufficiently high temperature and pressure to join two components together by using a rotating tool, which under high pressure, moves along the joint and thereby creates a weld.
- FSW is ideal for joining straight profiles and flat plates from 1.2 to 130 mm (0.045 - 1.18 inch) with full penetration.
- Butt, lap and corner joints can be welded.



Suitable application areas

The FSW process is capable of welding a large variety of products in diverse industries:

- Aerospace - fuel tanks
- Transportation - rail cars
- Marine - deck panels
- Automotive - suspension, bumper, seat parts
- Nuclear power - copper canisters
- Heat transfer - heat sinks & exchangers



Key benefits

- Minimal distortion and shrinkage
- No joint preparation - degreasing only
- No grinding, polishing or straightening
- No repair welding
- Reduced weight (40% less than GMAW)
- Consistent weld quality
- Increased tensile strength
- Outstanding fatigue properties
- No fumes, sparks or spatter
- Low noise level
- Improved repeatability

SuperStir™ Friction Stir Welding System

The ESAB SuperStir™ range is purpose-built for high-volume production of large aluminium panels, girders and trusses. The large custom-designed units offer a safe, clean and simple welding process that can be fully automated, dramatically reducing production costs.

ESAB SuperStir™ FSW technology is applied across the entire industrial spectrum, from shipping, offshore, construction and transportation to defence and aerospace.

Friction Stir Welding

Cont.

SuperStir™ FSW Gantry

- A flexible gantry for friction stir welding based upon a modular, five-axis motion system platform that can be scaled to cover a range of applications.
- The SuperStir FSW Gantry system for automated friction stir welding is a modular, 5-axis motion platform in a gantry configuration
- The gantry system is based on ESAB's well proven control system and is designed to fit a broad range of welding applications with a modular architecture that allows it to be tailored to the specific needs of your application.
- The gantry operates on rails making it particularly well suited to weld long components.
- Fully Automated Process. At the heart of ESAB's SuperStir technology is the control system developed for the FSW process.
- For fast support, operation of the gantry can be remotely monitored in real time from any PC computer using a standard Ethernet connection.
- High quality welds - increased tensile strength and outstanding fatigue properties compared to conventional welding.
- Minimum of post treatment - low distortion and shrinkage thanks to low heat input

Options

- FSW heads for different welding thicknesses
- Retractable PIN Tool (RTP) & Bobbin tool head
- Welding FSW tools
- Joint tracking system
- Weld video monitoring system
- Milling head
- Vacuum system
- Protection bellows for Y and Z range motion components
- Central lubrication system
- Fixture systems

Other combinations of working ranges and welding thicknesses available on request.



Technical data

Basic System

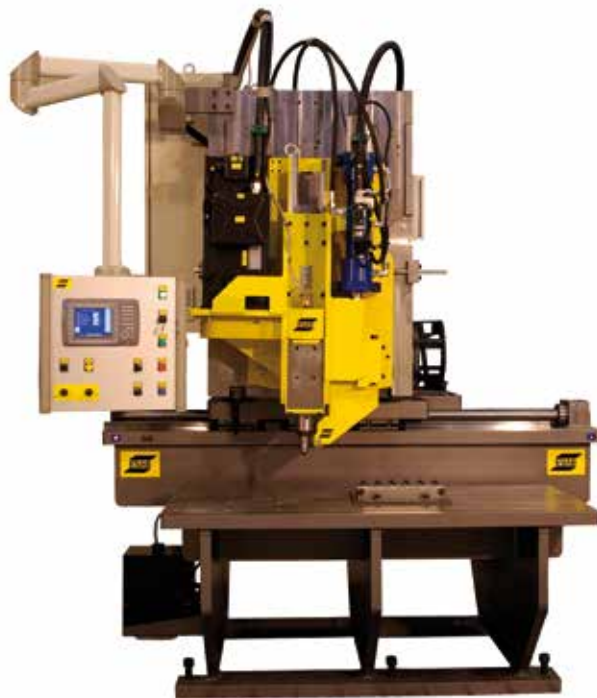
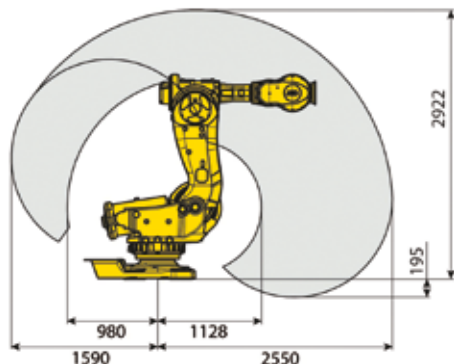
Working range, m		
X axis	up to 150	
Y axis	up to 10	
Z axis	up to 3	
Rotation axis		
A axis	± 6° (around Y axis)	
B axis	± 90° (around X axis)	
Transport speed, m/min	up to 10	
Welding speed, m/min	up to 3	
Welding tool rotation, rpm	100-3000	
Power supply, V	400 ± 10%	
Power consumption, kW	approx. 50	
Welding aluminium thickness (welding tool dependent)	Head 4	Head 5
Series 6000, mm	1-18	1-35
Series 5000 mm	1-10	1-20
Series 2000 & 7000 mm	1-8	1-18
Downforce Z axis, kN	60	100

Friction Stir Welding

Cont.

LEGIO™ Friction Stir Welding System

- The modular system makes it possible to assemble welding stations to suit the most varied Friction Stir welding applications.
- The LEGIO™ system consists of 5 basic designs in a series of seven sizes, covering a welding depth of 1.2 to 65 mm (0.045 to 2.4 in.)
- These basic types can be supplemented with different types of equipment to suit the most varied production needs with maximum flexibility to any production line.
- The larger 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.



Rosio™ Friction Stir Welding Robot

- Designed for complex joints.
- The latest IRC5 control system, featuring embedded force control, ensures high accuracy in-contact motion.
- The upgraded motion software permits linear welding in arbitrary patterns, as well as circular and square paths.
- Additional functionalities to support customized path programming and spindle operation, permit advanced welding, even with limited programming skills.
- A user-friendly HMI extends the IRC5 interface, providing full operator feedback via a Flex Pendant.

Technical data

Rosio™

Aluminium series 6000, mm (in.)	1-7 (0.04-0.28)
series 5000, mm (in.)	1-6 (0.04-0.24)
series 2000, mm (in.)	1-5 (0.04-0.20)
series 7000, mm (in.)	1-5 (0.04-0.20)
Welding speed, mm/min (ipm)	>1000 (39.4)
Max.spindle rotation, rpm	3000
Max down force, kN	13
Robot reach, mm (inch)	2550 (100.4)
Robot base dimension, mm (in.)	1206.5 x 1200 (47.4 x 47.2)
Robot weight, kg (lbs.)	2500 (5511.55)
Cabinet dimension, mm (in.)	2160x725x710 (85.04x28.54x27.95)
Cabinet weight, kg (lbs.)	250 (551.16)
Mains, V/HZ	400/50

ICE™

Revolutionary SAW technology for enhanced productivity

- ESAB's patent pending ICE™ technology exploits the excess heat from the Twin SAW process to increase productivity by up to 100% without increasing heat input.
- **Up to 50% higher deposition rate.** Submerged arc welding is already the most productive welding process. But as with any other welding process, the need to limit heat input inhibits productivity. Instead of adding more energy, ICE™ utilises the excess heat available to melt more wire. This boosts productivity by up to 50%, depending on the application.
- **High Deposition Root™** - the ICE™ technology enables the use of tandem welding in root passes, for improved penetration and high productivity and eliminating the need for back gouging. High Deposition Root can increase productivity up to 100% in root welding, depending on the application.
- **Higher welding speed** - the increased deposition rate can also be utilised to increase welding speed. This can significantly improve productivity in applications where welding speed is the key to maximising productivity.
- **Reduced energy consumption** - welding is an energy intensive manufacturing operation. The ICE™ process enables an increase in deposition rate by up to 50%, without adding more energy. This combines environmental benefits with significantly reduced energy consumption.
- **Innovative Flat Cap Control™** - adjusting the ratio of "cold wire" used for cap runs makes it possible to produce a flatter cap to the weld. This increases fatigue resistance and reduces the need for post weld treatment. Just one more boost to your productivity.
- **Reduced flux consumption** - The significant productivity improvement provided by ICE™ enables many applications to be completed with fewer runs. In this way, flux consumption can be reduced by up to 20% when welding with a 50% higher deposition rate.



Comparison of deposition rate for ICE™ and other methods.

Deposition rate →



ICE™



Twin DC+



Single DC+

Single power-source and welding-head solutions

Deposition rate →



DC + AC ICE™



DC + Twin AC+



DC + AC

Two power-source and welding-head solutions (tandem welding)

These results are based on the testing results carried out under controlled conditions by ESAB using ESAB consumables and experienced welding engineers and may vary accordingly.

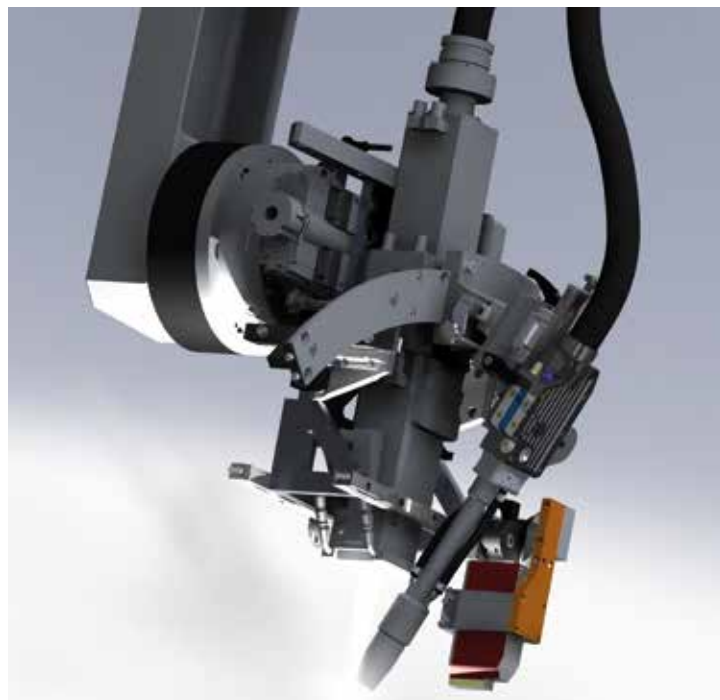
Suitable application areas

- On- and offshore windtower manufacturing
- Offshore fabrication
- Pipe welding
- General heavy fabrication
- Shipbuilding

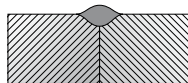
Hybrio™ - Hybrid Laser Welding

Lighting the way

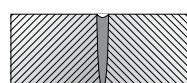
- ESAB's Hybrio™ hybrid laser welding technology combines the deep weld penetration and low heat input associated with laser welding with the excellent weld properties and superior gap tolerance of gas metal arc welding (GMAW).
- A radically new welding alternative, it produces extremely narrow and deep welds at very high travel speeds. In a single pass, the Hybrio™ process can often achieve what might require multiple weld passes using a conventional fusion welding process.
- Heat input to the part is reduced, as is the associated weld shrinkage and distortion that can make post-welding geometry unpredictable - and costly to repair.
- Using GMAW in combination with a laser, the Hybrio™ process solves laser-only welding's limitations, concerning its ability to produce acceptable welds in joints with less than perfect fit-up between parts. This enables a widened, more robust process envelope by a factor of three compared to a conventional laser-only process.
- GMAW also allows users to add filler metal to adjust the weld's metallurgical properties and create beads and fillets, while the slower cooling rate reduces hardness. These features are especially beneficial when joining high performance carbon and stainless steels.
- ESAB's exclusive adaptive closed-loop control system detects joint fit-up conditions and changes the process parameters in real-time to achieve a constant weld profile. This broadens the process window by a further 5 times over non-adaptive control.



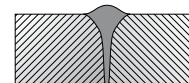
GMAW (MIG/MAG)



Autogenous Laser (laser only)



Hybrid Laser Welding



Graphic illustrating differences between GMAW, Laser and Hybrid Laser Welding weld profiles



Ordering information

For more information, please contact your nearest ESAB representative.

Sales Literature

XA00153320

The Hybrio™ Value Proposition:

- Operating costs reduced by 50-80%.
- Productivity improved by 300-1000%.
- Heat input and distortion reduced by 80-90%.
- Reduced weld repair rates.
- Reduced labour content through fully automated operation.
- Reduced operator skill requirement due to easy, PC-based machine controller.
- Lower downstream assembly, welding and finishing costs, through reduced part distortion.
- Higher overall plant throughput and revenue generation.
- Feasibility of new, lighter, stiffer and simpler product design and construction methods.
- Full backing and support of ESAB's process experts and service professionals, with extended warranty and service agreements.

Hybrio™ - Hybrid Laser Welding

Cont.

Hybrio™ Flex

The Hybrio™ Flex flexible hybrid laser welding cell is based upon a modular, six-axis motion system platform that can be scaled to cover a large range of working envelopes up to 4m x 20 m and longer. Additionally, this system can be configured to cover a range of Z-axis depths from 1 m to 3 m (3 to 10 ft.). This gives the user the flexibility to use the Hybrio™ Flex system for large variety of product geometries and weld joint configurations.



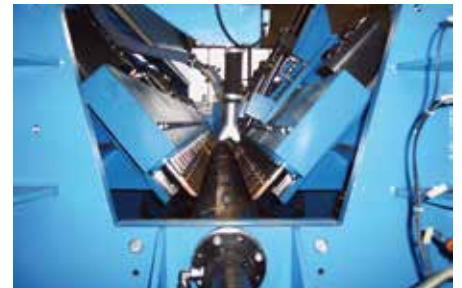
Hybrio™ Beam

The Hybrio™ Beam hybrid laser beam welding system is based upon ESAB's robust submerged-arc beam welding systems that can be found in plants around the world. These systems come in horizontal and vertical configurations and are designed to center and feed web and flange parts through a fixed welding station. Components are aligned and pressed together ensuring excellent joint conditions at the point of welding. Equipped with the Hybrio™ process, these systems can out-produce traditional beam welding equipment by a factor of three to ten times depending upon the web thickness.



Hybrio™ Seam

Hybrio™ Seam hybrid laser seam welding systems cover a range of raw sheet and plate thicknesses and sizes from small sheet and coil joining systems to large panel line plate welding machines. These systems are designed to press and clamp sheet or plate joints into position as the Hybrio™ process moves along the joint, performing the weld. These systems can achieve single-side, full-penetration butt welds up to 12.5 mm (1/2 in.) in thickness in a single pass and thicker with subsequent passes.



Hybrio™ Tube

Hybrio™ Tube hybrid laser tube and pipe systems are longitudinal seam welding systems designed to press the material together at the weld joint to achieve the fit up needed for HLAW welding. The part is then drawn through the machine to perform the weld. These systems can produce straight or tapered tubes and pipes up to 1 m (3 ft.) in diameter and with wall thicknesses up to 12.5 mm (1/2 in.).



Hybrio™ Orbit

The Hybrio™ Orbit hybrid laser pipe girth welding system is specially designed for welding full pipe girths as well as for rapidly producing high-quality root passes for subsequent processing with traditional high-deposition processes. These are fully orbital welding systems, capable of 360 degree continuous welds around cylindrical products with very low clearances. The Hybrio™ Orbit system was specifically developed for the oil and gas industry, but has applications in many other industry segments.



Hybrio™ Process Package for Integrators

ESAB's Hybrio™ hybrid laser arc welding process technology leads the industry in ease of use and process robustness. ESAB has developed a fifth-generation welding system that is capable of sensing its environment, the joint location and fit-up and then adapting the process in real-time to maintain high weld quality over a wide range of fit-up conditions. ESAB has built this technology into a complete process package that is available not only as part of our turnkey hybrid welding systems but also to machine tool OEM and system integrators. ESAB provides the hybrid welding expertise along with the support of our Laser Process Centers in North America and Europe, to minimize the technical risk to our OEM and integration partners worldwide.

Chain Making Equipment

For cost-efficient production and superior quality

Carousel - Anchor chain making equipment

Carousel is the most common chain making system thanks to its flexibility and large capacity. ESAB delivers complete installations; semi-automatic or fully automated for one to five operators, depending on the grade of automation.

Four or five chains (depending on type of chain) are simultaneously undergoing working and the chains are transported from station to station by the carousel. After completion the chains are transported out of the plant in four or five endless lengths.

Overhead Crane - For heavy anchor chain production

When welding chains in large dimensions (>130 mm) there is no advantage in terms of production rate to have more than two chains in production simultaneously.

The equipment consists of two overhead cranes, operating independently of each other on one parallel pairs of rails. On each crane a carriage is placed for sideways movement between the production stations.

Two chains are simultaneously undergoing production and the chains are transported from station to station along the “working line” – formed by the link forming machine, the flash welding machine, the flash trimming machine and the stud press.

The chains are conveyed out of the plant after completion in two endless lengths, which are collected outside the plant

Chain making installations can be custom-built to suit individual specifications.

ESAB also supplies single machine units, resistance heaters, bending machines, flash butt welding machines, trimming machines, stud presses, chain transport equipment and manipulator systems.

Main components

- Automatic resistance heater incl magazine for bars
- Roller track
- Automatic link forming machine
- Automatic flash butt welding machine
- Automatic upset trimming machine
- Automatic stud press
- Chain transport equipment

Chain types that can be produced automatically or semi-automatically

- Anchor chain (with or without studs)
- Intermediate and end links
- Offshore chain including oil-rig and supply ship chain
- Buoy mooring chain
- Similar types or stud- and studless chain



Chain Making Equipment

Cont.

ZAC 42 MR - Automatic production of mining chain

Operational control is automatic. Pre-setting the number of links to be produced contributes to higher productivity and consistent quality.

Robotic handling in combination with the PLC system ensure correct positioning of the link throughout the production process for fully automatic operation.

The PLC system also controls position and force on the hydraulic cylinders. This is a big advantage when changing the link dimension, instead of adjusting mechanical stops, a major part of the positions are part of the program.

Low energy consumption due to welding takes place immediately after the heating/forming operation. Rings, single links or short chain lengths can be continuously produced.

Systems for automatic welding of mining chains with forged links and for welding of master links are available.

Advantages achieved by the process include superior welding quality and unsurpassed production rate.



Main components

- High capacity resistance heater with magazine
- Link forming machine
- Flash butt welding unit
- Flash trimming machine
- Chain transport equipment
- Rotary platform with chain boxes for chain collection
- Main operation table
- Hydraulic power unit

Typical chain types

- Chains for coal shearers
- Conveyor chains for stage loaders and feeders



Ordering information

For more information, please contact your nearest ESAB representative.

Sales Literature
XA00163720

HNG Multi

Narrow Gap Welding System

- Designed for both Single (AC or DC) and tandem (DC/AC or AC/AC) wire welding in parallel or almost parallel joints, ranging in width from 18 mm (0.71 in.) and in depth down to 350 mm (13.8 in.).
- Continuous double-sided joint tracking gives a high reliability at shift overlap.
- Continuous measuring of joint width
- Short-circuit protected, welding head - workpiece.
- Automatic positioning.
- Possible to weld up to 50 mm (1.97 in.) joint width
- Air-cooled torch
- Reliable and uniform high weld quality
- High productivity.
- Minimum of supplementary work.

Technical data

Weld joint type	Butt
Wire dimension, mm (in.)	3-4 (0.12-0.16)
Wire feed motor	A6 VEC 156:1, 4000 rpm
Max. wire feed speed, m/min (ipm.)	4 (157)
Max welding current DC, A	800
Max welding current AC, A	800
Beads in each layer	2-4
Deposition rate, kg/h (lbs./h)	approx. 7/16 (15.4/35.3) (Single/Tandem)
Tilting angle of weld nozzle	± 3.5°
Max. joint depth, mm (in.)	350 (13.8)
Joint width, mm (in.)	18-50 (0.71-1.97)
Wire angle between wires	15°
Distance between wires, mm (in.)	15 (0.59) (valid for 30 mm (1.18) stick-out)
Accuracy of joint tracking, mm (in.)	± 0.15
Max heat resistance, workpiece, °C (°F)	300 (572)
Min weld diameter, mm (in.)	500/1200 (19.7/47.2) Single/Tandem
Flux hopper unit	OPC Super
Flux hopper capacity, l (gal.)	approx. 10 (2.64)
Min clearance internal weld	
- Longitudinal, Ø mm (in.)	1500 (59.06)
- Circumferential, Ø mm (in.)	1500 (59.06)
Weight, kg (lbs.)	140/165 (309/364) (Single/Tandem)



Ordering information

For more information, please contact your nearest ESAB representative.

Sales Literature

XA00141620



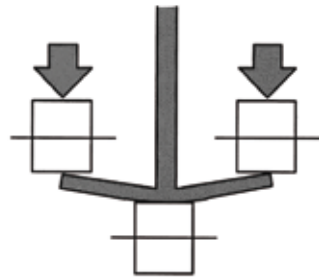
Double-sided joint tracking

Beam Welding - Pull Through Welders

For welding of beams and profiles

- ESAB offers 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 expertise and welding equipment to match your efficiency, quality, precision, versatility, productivity, and overall welding economy requirements.
- Two types of machines: IT-machines where the beams are welded with the web unit in the vertical position, and I-machines, where the beams are produced in horizontal position.
- High production capacity and perfect weld quality.
- 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.

Straightening principle:



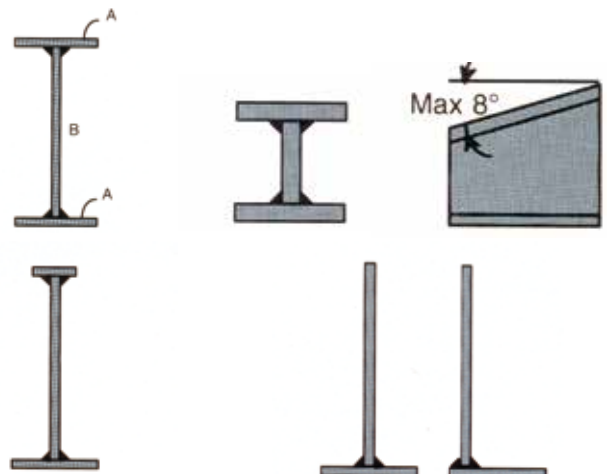
Beam welder IT-258



Total range of beam sizes that can be welded:

Machine type	Web	Flange
IT-258	200-2500 mm	100-800 mm
IT-158	200-1500 mm	100-800 mm

Examples of beams than can be welded:



Welding solutions for Pipemills

Our experience and knowledge - your benefit!

Flexible, reliable welding equipment

A wide range of products developed in-house for various multi-wire SAW applications which are particularly suitable for pipe welding.

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 6-40 mm (0.24-1.57 in.) and a length of up to 18 m (708.66 in.).

Internal and external welding

For internal welding we have designed pre-stressed booms as well as welding heads for up to four wires.

The external welding station is based on a column and boom solution with a very stable cross-slide to adapt to different pipe diameters.

Return current systems (grounding)

High current circuits have to be closed back to the power source by efficient systems at constantly moving pipes. Flexible steel brushes in two rows in front and behind the welding process are pressed with defined force from outside to the pipe to catch the current with a minimum of voltage loss and to surely avoid any arc blow effect, which would disturb the weld process.

Problem-free flux and wire feed systems

Smooth feeding of wire in different diameters and equally straight-forward supply of new and re-used flux.

The correct combination of compressed air, flux feeding, easy replenishment of new flux via the Big/Bag system, a vacuum unit, a reliable magnetic separator and continuous recovery helps to create welding stations with less downtime, high-quality welds and a cleaner working environment.

Spiral pipe welding

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.

Sales Literature

XA00136520



Internal welding

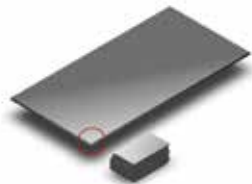


External welding

Windmill Tower Manufacturing

Dedicated solutions for dedicated manufacturers

- The key to efficient production of wind towers is smooth component flow in the workshop. The benefit of a high deposition welding process is completely lost if the set-up or handling of components in any area of the process fails or takes an unacceptable amount of time.
- ESAB can assist with the welding and cutting process in wind tower production and deliver finely tuned solutions for each step in the production process.
- With a complete package from ESAB, you only need to work with one supplier for product, service and support. This results in a large project being organized efficiently, with a fixed cost and agreed time schedule. Smooth production flow is part of the complete delivery.



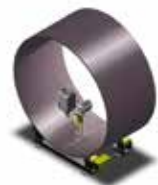
Oxy-fuel or plasma cutting of plate and seam preparation



Rolling, forming and tack welding of the shell



External longitudinal submerged-arc welding using a column and boom



Internal longitudinal submerged-arc welding using a column and boom



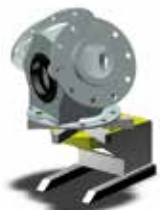
Submerged-arc welding of flanges and supports



Joining of shell sections using roller beds with hydraulic fit-up system. Internal and external submerged-arc welding performed by a column and boom station.



Automatic welding of the door frame.

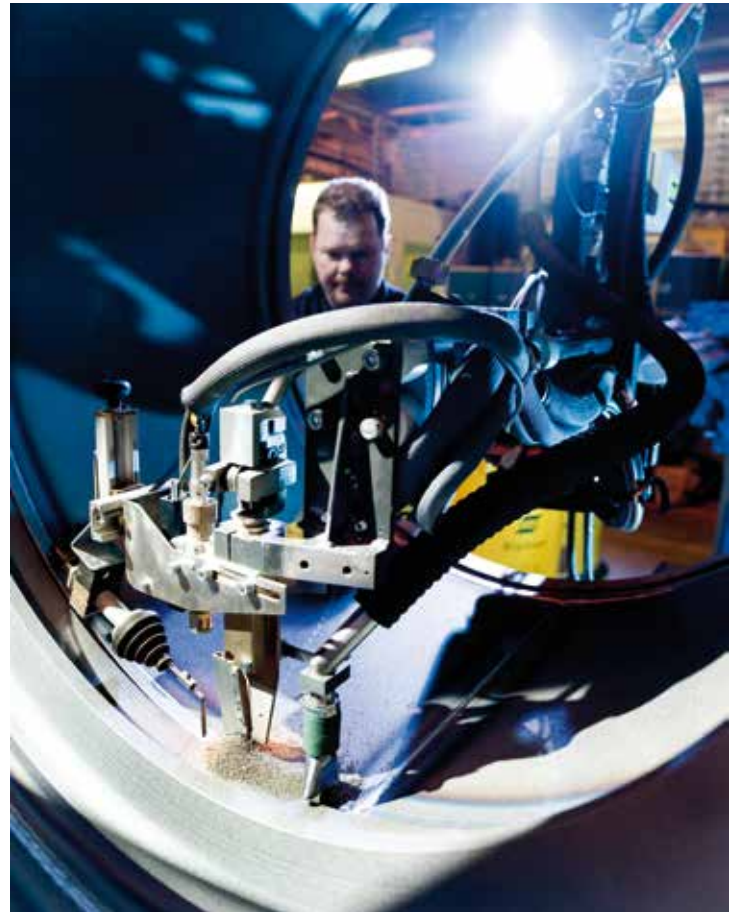


Production of sub-components using an ESAB positioner and manual welding equipment

ESAB Retrofit

Modernization and upgrading

- ESAB's service group can upgrade any brand of existing equipment to virtually new condition, with the latest process equipment and accessories.
- Accessories include seam trackers, flux recovery systems, wire handling equipment, strip cladding equipment - all can be added to existing equipment.
- Material quality, thickness and required properties will decide the most suitable welding process. Over a time these conditions will change which might lead to a change of process. ESAB can offer a variety of different welding heads for different processes to be fitted on any carrier.
- ESAB Retrofit is an ideal alternative to investment in new equipment. Not least when it comes to the added values that frequently accompany this kind of upgrade.
- In addition to increased availability, a conversion of this kind frequently also leads to a substantial rise in productivity and quality, not to mention improvements to the working environment.
- ESAB works with many OEM's for equipment - specify the ESAB process system and accessories and get the advantage of ESAB performance from your existing supplier of machinery.



Why Retrofit?

- It is difficult to find parts for your old equipment
- The productivity is too low with your present equipment
- The quality of the process is unacceptable
- The process is not ideal for the present production

Time to Retrofit?

What kind of carrier can be retrofitted?

- ESAB can retrofit manipulators, gantries, seamers, shipyard panel lines etc. We even retrofit flash butt welding machines to a new life.
- Integration of welding equipment to new carriers or production lines produced by integrators of automation equipment for example pipemills, panel lines etc.
- We do small retrofits by just replacing the existing equipment and we do large integrated solutions.




Wear Parts




A2 Wear Parts

Secure your welding quality and productivity with ESAB original parts


Wear Part Kits

Contents	Wire Diameter, mm (in.)	Part Number	
Wear part kit A2 SAW 15 pcs contact nozzles 2 pcs feed rollers 2 pcs pressure rollers 1 pc contact tube	2.5 (3/32) 3.0 (0.12) 3.2 (1/8) 4.0 (5/32)	0810123880 0810123881 0810123882 0810123883	
Wear part kit A2 GMAW 10 pcs contact nozzles 1 pc feed roller 1 pc pressure roller 1 pc contact tube 1 pc gas nozzle 2 pcs insulating sleeve 1 pc plug 1 pc tip adaptor 1 set of O-rings	1.0 (.035) 1.2 (.045) 1.6 (1/16) 2.0 (5/64)	0810125880 0810125881 0810125882 0810125883	
Wear part kit A2 SAW Twin 20 pcs contact nozzles 1 pc feed roller 1 pc pressure roller 1 pc nozzle holder	1.2 (.045) 1.6 (1/16) 2.0 (5/64)	0810124880 0810124881 0810124882	


Feed Roller Single Wire

Wire Dimension mm (in.)	Part Number	SAW Single	GMAW	
0.8 (.030)	0145538881		•	
1.0 (.035)	0145538882		•	
1.2 (.045)	0145538883		•	
1.6 (1/16)	0218510281	•	•	
2.0 (5/64)	0218510282	•	•	
2.4-2.5 (3/32)	0218510283	•	•	
3.0-3.2 (.012-1/8)	0218510298	•	•	
4.0 (5/32)	0218510286	•	•	
Pressure roller	0153148880	•	•	



Feed Roller Twin Wire

Wire Dimension mm (in.)	Part Number	SAW Twin	
2 x 1.2 (.045)	0218522486	•	
2 x 1.6 (1/16)	0218522488	•	
2 x 2.0 (5/64)	0218522484	•	
2 x 2.4-2.5 (3/32)	0218522480	•	
Pressure roller	0218524580	•	

Feed Roller Grooved and Knurled

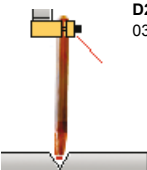
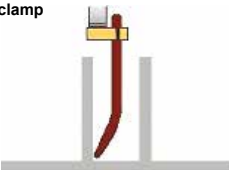
Wire Dimension Cored Wire, mm (in.)	Part Number	SAW Single	GMAW	
0.8-1.6 (.030-1/16)	0146024880	•	•	
2.0-4.0 (5/64-5/32)	0146024881	•	•	

Pressure Roller Grooved and Knurled


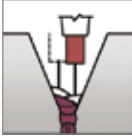



Wire Dimension Cored Wire, mm (in.)	Part Number	SAW Single	GMAW	
0.8-1.6 (.030-1/16)	0146025880 ¹	•	•	 
2.0-4.0 (5/64-5/32)	0146025881 ¹	•	•	
Shaft for pressure roller	0212901101	•	•	

¹Use with shaft for pressure roller 0212901101.

Contact Tube D20 Single Wire

Length, mm (in.)	Part Number	SAW Single	
100 (4)	0413510003	•	 
190 (7.5)	0413510002	•	
260 (10.2)	0413510001	•	
500 (19.7)	0413510004	•	
260 (10.2) bent	0413511001	•	

Contact Nozzles

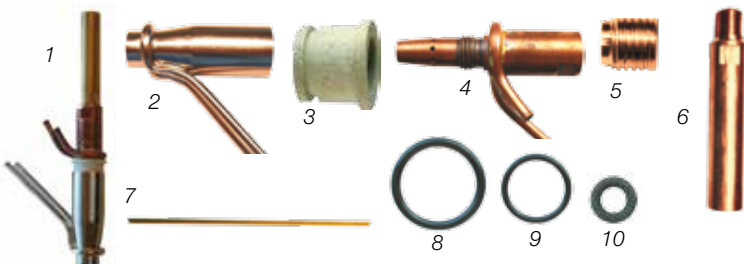
Wire Dimension mm (in.)	Part Number	SAW Single	GMAW	SAW Twin	
M12					 
1.6 (1/16)	0154623008	•			
2.0 (5/64)	0154623007	•			
2.5 (3/32)	0154623006	•			
3.0 (0.12)	0154623005	•			
3.2 (1/8)	0154623004	•			
4.0 (5/32)	0154623003	•			
M6					 
0.8 (.030)	0153501002 ¹		•		
1.0 (.035)	0153501004 ¹		•		
1.2 (.045)	0153501005 ¹		•	•	
1.6 (1/16)	0153501007 ¹		•	•	
2.0 (5/64)	0153501009		•	•	
2.4-2.5 (3/32)	0153501010		•	•	
Tip adaptor M10 to M6	0147333001		•		
M10					
0.8 (.030)	0258000914		•		
1.0 (.035)	0258000913		•		
1.2 (.045)	0258000908		•		
1.6 (1/16)	0258000909		•		
2.0 (5/64)	0258000910		•		
2.4 (3/32)	0258000911		•		
3.0 (.012)	0258000918	•			
3.2 (1/8)	0258000915	•			
4.0 (5/32)	0258000919	•			

¹Use in conjunction with tip adaptor M10 to M6 for GMAW applications.

A2 Wear Parts

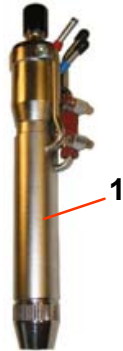
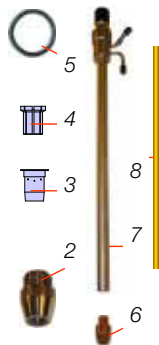

Cont.

Contact Device D20 Complete GMAW

Description	Part Number	GMAW	
1. A2 torch	0030465389	•	
2. Gas nozzle	0145227882	•	
3. Insulating sleeve	0145226001	•	
4. Contact tube	0145534882	•	
5. Plug	0146099001	•	
6. Extension	00409798-03/-04 ¹	•	
7. Guide tube	0415032001	•	
8. O-ring, 22.2x3	0190680405	•	
9. O-ring, 15.3x2.4	0190680313	•	
10. O-ring, 5.3x2.4	0190680303	•	


¹ 158 mm (6.2 in.) and 108 mm (4.3 in.) lengths.

MTW-600 GMAW Torch, 600A


Description	Part Number		
1.1 MTW-600, 200 mm (8 in.)	0457460880		
1.2 MTW-600, 250 mm (10 in.)	0457460881		
1.3 MTW-600, 300 mm (12 in.)	0457460882		
1.4 MTW-600, 400 mm (16 in.)	0457460883		
2. Gas nozzle	0457451001		
3. Splatter protection	0457452001		
4. Centering sleeve	0457453001		
5. O-ring	0457458001		
6. Nozzle adaptor	0808311001		
7.1. Contact tube, 200 mm (8 in.)	0457455005		
7.2. Contact tube, 250 mm (10 in.)	0457455006		
7.3. Contact tube, 300 mm (12 in.)	0457455007		
7.4. Contact tube, 400 mm (16 in.)	0457455008		
8.1. Guide inserts, Steel			
1.0-1.6 (.040-1/16), L = 210 (8.3)	0457454001		
1.0-1.6 (.040-1/16), L = 260 (10.2)	0457454002		
1.0-1.6 (.040-1/16), L = 310 (12.2)	0457454003		
1.0-1.6 (.040-1/16), L = 360 (14)	0457454004		
1.0-1.6 (.040-1/16), L = 410 (16)	0457454005		
8.2. Guide inserts, Brass			
2.0-2.4 (5/64-3/32), L = 208 (8.2)	0457620001		
2.0-2.4 (5/64-3/32), L = 258 (10.1)	0457620002		
2.0-2.4 (5/64-3/32), L = 308 (12.1)	0457620003		
2.0-2.4 (5/64-3/32), L = 408 (16.1)	0457620004		
8.3. Guide inserts, Plastic PTFE			
1.0-1.6 (.040-1/16), L = 400 (16) ¹	0457619001		
2.0-2.4 (5/64-3/32), L = 400 (16) ¹	0457619002		
Contact Nozzle M8, mm (in.)	Fe, SS, CW	Al	
1.0 (.040)	0457625005	0457625005	
1.2 (.045)	0457625006	0457625007	
1.4 (.052)	0457625008	-	
1.6 (1/16)	0457625009	0457625009	
2.0 (5/64)	-	0457625001	
2.4 (3/32)	0457625012	0457625012	

¹ Cut to suitable length

MTW-600 GMAW Feed Roller, Single Wire

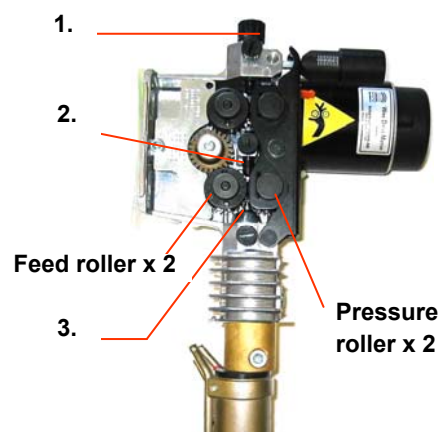
Wire Dimension mm (in.)	Part Number		GMAW	
	Fe, SS	Al		
0.6-0.8 (.023-.030)	0369557001	-	•	
0.8-0.9 (.030-.035)	-	0369557011	•	
0.8-1.0 (.030-.040)	0369557002	-	•	
1.0-1.2 (.040-.045)	0369557003	0369557006	•	
1.2-1.6 (.045-1/16)	0369557007	-	•	
1.4-1.6 (.052-1/16)	0369557013	-	•	
1.6 (1/16)	-	0369557008	•	
2.0 (5/64)	-	0369557009	•	
2x1.2 (2 x .045)	0369557010	-	•	
Pressure roller (flat roller)	0369728001	0369728001	•	

MTW-600 GMAW Feed Roller, Single Wire, Groove, Knurled

Wire Dimension mm (in.)	Part Number Cored Wire	GMAW	
1.0-1.2 (.040-.045)	0369557004	•	
1.4-1.6 (.052-1/16)	0369557005	•	
Pressure roller (knurled roller)	0466262001	•	

MTW-600 Wire Feeder



Description	Part Number
1. Nipple wire conduit	0455049001
2. Intermediate nozzle	0455072001
3.1 Outlet nozzle, Fe	0469837880
3.2 Outlet nozzle, Al	0469837881



A6 Wear Parts

Secure your welding quality and productivity with ESAB original parts

Feed Roller SAW Single Wire

Wire Dimension, mm (in.)	Part Number	
1.6 (1/16)	0218510281	 
2.0 (5/64)	0218510282	
2.4-2.5 (3/32)	0218510283	
3.0-3.2 (.012-1/8)	0218510298	
4.0 (5/32)	0218510286	
5.0 (3/16)	0218510287	
6.0 (1/4)	0218510288	
Pressure roller	0153148880	

Feed Roller SAW Single Wire, Knurled V-Groove

Wire Dimension, mm (in.)	Part Number	
3.0-5.0 (.012-3/16) Pressure roller	0218510299 0153148880	 

Feed Roller SAW Single Wire with 2-Roller Drive, Knurled U-Groove

Wire Dimension, mm (in.)	Part Number	
Feed Roller 0.8-1.6 (.030-1/16) 2.0-4.0 (5/64-5/32)	0146024880 0146024881	 <p>Geared driving feed and pressure roller with knurled groove, eg/ soft, tubular wire</p>
Pressure Roller 0.8-1.6 (.030-1/16) 2.0-4.0 (5/64-5/32) Shaft for pressure roller	0146028880 ¹ 0146025881 ¹ 0212901101	

¹Use with shaft for pressure roller #0212901101.

Feed Roller SAW Twin Wire

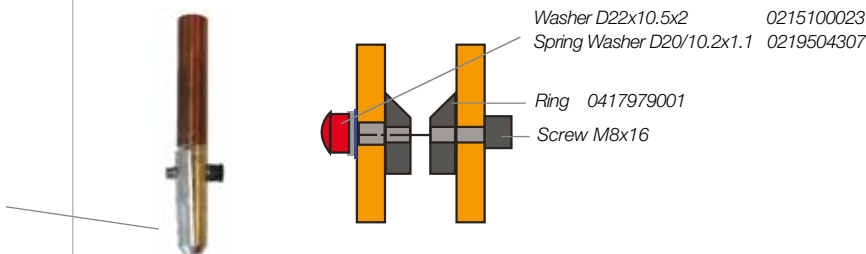
Wire Dimension, mm (in.)	Part Number	
2 x 1.2 (.045) 2 x 1.6 (1/16) 2 x 2.0 (5/64) 2 x 2.4-2.5 (3/32) 2 x 3.0-3.2 (.012-1/8)	0218522486 0218522488 0218522484 0218522480 0218522481	 <p>Spherical idling pressure roller for equally distributed pressure on the two wires</p> <p>Driving feed with grooves for twin wire system</p>

Feed Roller SAW Twin Wire, Knurled U-Groove

Wire Dimension, mm (in.)	Part Number
2 x 2.0-3.2 (5/64-1/8) Pressure roller ¹	0148772880 0218524580

¹Spherical type with shaft

D35 Heavy-Duty System

Length, mm (in.)	Part Number	
D35 Straight Contact Tube		
220 (8.7)	0417959880	 <p>Washer D22x10.5x2 0215100023 Spring Washer D20/10.2x1.1 0219504307</p> <p>Ring 0417979001 Screw M8x16</p>
275 (10.8)	0417959881	
400 (15.7)	0417959882	
500 (19.7)	0417959883	
700 (27.5)	0417959884	
Clamp half	0809342880	

Contact Jaws for Heavy-Duty System

Wire Dimension, mm (in.)		Part Number		
Single Wire, Length 65/58 mm (2.5/2.3 in.)			<p>65 mm (2.5 in.) 0332581880/-881</p> <p>58 mm (2.3 in.) 0265900880/-884</p> <p>Long contact jaws 120 mm (4.7 in.) for improved access to deep joints</p> <p>120 mm (4.7 in.) 0000237320/-321</p>	
2.0 (5/64)		0332581880		
2.4-2.5 (3/32)		0332581881		
3.0 (0.12)		0265900880		
3.2 (1/8)		0265900881		
4.0 (5/32)		0265900882		
5.0 (3/16)		0265900883		
6.0 (1/4)		0265900884		
Single Wire, Length 120 mm (4.7 in.)				
3.0 (0.12)		0000237320		
4.0 (5/32)		0000237321		
Single Wire, Length 75 mm (3 in.)			<p>75 mm (3 in.)</p> <p>Durable contact jaws for all wire dimensions between 1.6-3.0 mm (1/16-.012 in.)</p>	
1.6-3.0 (1/16-.012)		0265901480		
Twin Wire, Length 73 mm (2.9 in.)			<p>75 mm (3 in.)</p>	
2 x 1.6 (1/16)		0265902882		
2 x 2.0 (5/64)		0265902881		
2 x 2.4-2.5 (3/32)		0265902884		
2 x 2.5-3.0 (3/32-.012)		0265902880		
Twin Wire, Length 73 mm (2.9 in.) with Guide Tube Connection			<p>75 mm (3 in.)</p>	
2 x 1.6 (1/16)		0808650882		
2 x 2.0 (5/64)		0808650881		
2 x 2.5-3.0 (3/32-.012)		0808650880		
Twin Wire, Length 120 mm (4.7 in.) with Guide Tube Connection				
2 x 1.6 (1/16)		0816019882	<p>75 mm (3 in.)</p>	
2 x 2.0 (5/64)		0816019881		
2 x 2.4-2.5 (3/32)		0816019883		
2 x 2.5-3.0 (3/32-.012)		0816019880		

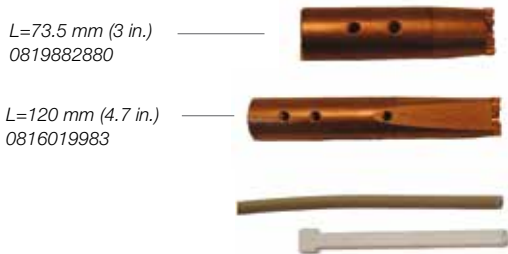

A6 Wear Parts

Cont.

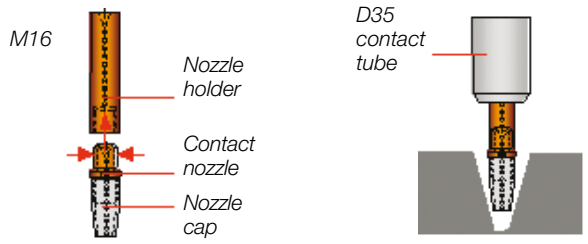
SAW Contact Nozzles for Light-Duty System

Wire Dimension, mm (in.)	Part Number	
SAW Contact Nozzle M6 for Twin Wire		
2 x 1.2 (.045)	0153501005	 <p>M6</p> <p>Guide tube, L=358, D6/4 0415032001</p> <p>Guide tube, L=750, D6/4 0415032002</p> <p>Spiral insert, L=366, D3.5/1.5 0334279001</p> <p>Nozzle holder 0333772001</p> <p>Contact nozzle x2</p>
2 x 1.6 (1/16)	0153501007	
2 x 2.0 (5/64)	0153501009	
2 x 2.4-2.5 (3/32)	0153501010	



SAW Contact Jaws for ICE™

Description	Part Number	
Contact jaw, 2.5 mm (3/32) Contact jaw, 2.4-2.5 mm (3/32) Wire guide Ceramic sleeve	0819882880 0816019983 0824038001 0819883001	 <p>L=73.5 mm (3 in.) 0819882880</p> <p>L=120 mm (4.7 in.) 0816019983</p>
ICE Wear Kit 3 pcs contact jaw, 2.5 mm 3 pcs ceramic sleeve 1 pc feed roller, 2.5 mm	0824376880	

Insulated Contact Nozzle with Nozzle Cap for Narrow V-Joints

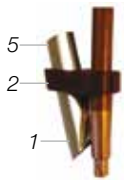

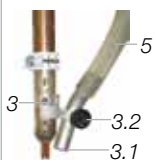

Description	Part Number	
Nozzle holder Nozzle with cap: 2.0 (5/64) 2.5 (3/32) 3.0 (0.12) 3.2 (1/8) 4.0 (5/32) Nozzle cap	0000237415 0000237329 0000237328 0000237330 0000237332 0000237327 0000237331	 <p>M16</p> <p>Nozzle holder</p> <p>Contact nozzle</p> <p>Nozzle cap</p> <p>D35 contact tube</p>

Guide Tubes

Length, mm (in.)	Part Number	
Single/Twin Wire, max 3.2 mm (1/8 in.)		
358 (14), D6/4 750 (29.5), D6/4 Clamp	0415032001 ¹ 0415032002 ² 0218514001	 

¹Twin Wire: eg/ 2 x 358 mm (14 in.) for 275 mm (10.8 in.) contact tube. ²Guide tube 750 mm (29.5 in.) to be cut to suit the length of the contact tube.

Flux Nozzle

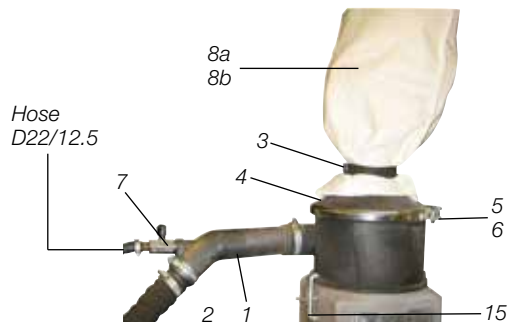
Description	Part Number	Description	Part Number
D20 Contact Tube			
1. Tube 2. Clamp 5. Flux hose 0.5 m (1.6 ft.) 5.1. Flux hose free length/m (ft.)	0332948001 0333094880 0443383002 0443383001		2. Flux funnel complete 2.1 Insulated sleeve 5. Flux hose 0.5 m (1.6 ft.) 5.1. Flux hose free length/m (ft.) 0145221881 0333667001 0443383002 0443383001 
D35 Contact Tube			
3. Flux nozzle complete 3.1. Tube bent 3.2. Tube holder 5. Flux hose 0.5 m (1.6 ft.) 5.1. Flux hose free length/m (ft.)	0153299880 0153296001 0153290002 0443383002 0443383001		4. Flux funnel complete 4.1. Insert, 36 mm (1.4 in.) 4.2. Insert, 24 mm (0.9 in.) 5. Flux hose 0.5 m (1.6 ft.) 5.1. Flux hose free length/m (ft.) 0254900880 0254900301 0254900302 0443383002 0443383001 

Contact Jaws for A6 SAW Cladding Head Assembly

Description	Part Number	
Contact jaws 12 pcs required for complete assembly	0148325001	  

OPC Flux Recovery System Wear Parts

Secure your welding quality and productivity with ESAB original parts.



OPC Basic

1	Ejector	0147640880
2	Spiral hose D47.0/38.1	0191813801
3	Tension band	0192855002
4	Cone ¹	0148143001
5	Tension ring ¹	0148144001
6	O-ring, 189.3x5.7	0215201353
7	Ball valve	0145824881
8a	Filter, paper	0155966001
8b	Filter, cotton ¹	0332448001
9	Funnel	0148142001
10	Rubber lining	0145565001
11	O-ring 149.2x5.7	0215201345
12	Cyclone	0148141001
13	Rubber lining	0145073001
14	Tension spring	0145815001
16	Strainer	0020301780

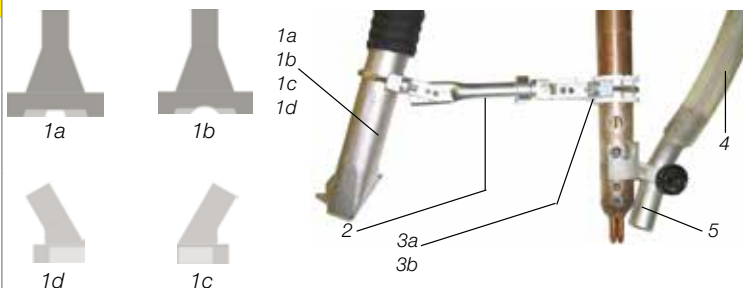


OPC Super

1	Ejector	0339720001
2	Spiral hose D47.0/38.1	0191813801
3	Tension band	0192855002
4	Cone	0332279001
5	Tension ring	0148144001
6	O-ring, 189.3x5.7	0215201353
7	Ball valve	0333625001
8a	Filter, paper	0155966001
8b	Filter, cotton ¹	0332448001
9	Funnel	0332280001
10	Rubber lining	0332282001
11	O-ring 149.2x5.7	0215201345
12	Cyclone	0332281001
13	Rubber lining	0332283001
14	Tension spring	0145815002
15	Clamp	0340612001
16	Strainer	0020301780

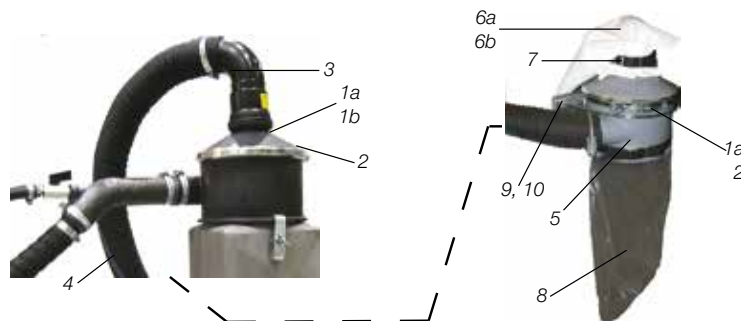
Suction Nozzle

1a	Butt weld 1	0145501001
1b	Butt weld 2	0145502001
1c	Fillet weld left	0145504001
1d	Fillet weld right	0145505001
2	Nozzle bracket	0147384881
3a	Insulator D20	0145131004
3b	Insulator D35	0145131002
4	Flux hose, D32.0/25.0, free length, m	0443383001
	0.5 m (1.6 ft.)	0443383002
5	Pipe bent	0153296001



Cyclone Filter

1a	Cone basic	0148143001
1b	Cone super	0332279001
2	Tension ring	0148144001
3	Bend	0413576001
4	Spiral hose D67.2/63	0193125003
5	Cyclone	0148141001
6a	Filter, paper	0155966001
6b	Filter, cotton ¹	0332448001
7	Tension band	0192855002
8	Plastic bag	0190665004
9	U-screw	0379600001
10	Bracket	0379599880



¹Optional item.

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XA00155920 2014/07



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Las- & Gastechnik bvba
Aarschotsebaan 312 • 2590 Berlaar

T 03 482 43 65 • F 03 482 35 72
sales@lgtechniek.be

www.lgtechniek.be

