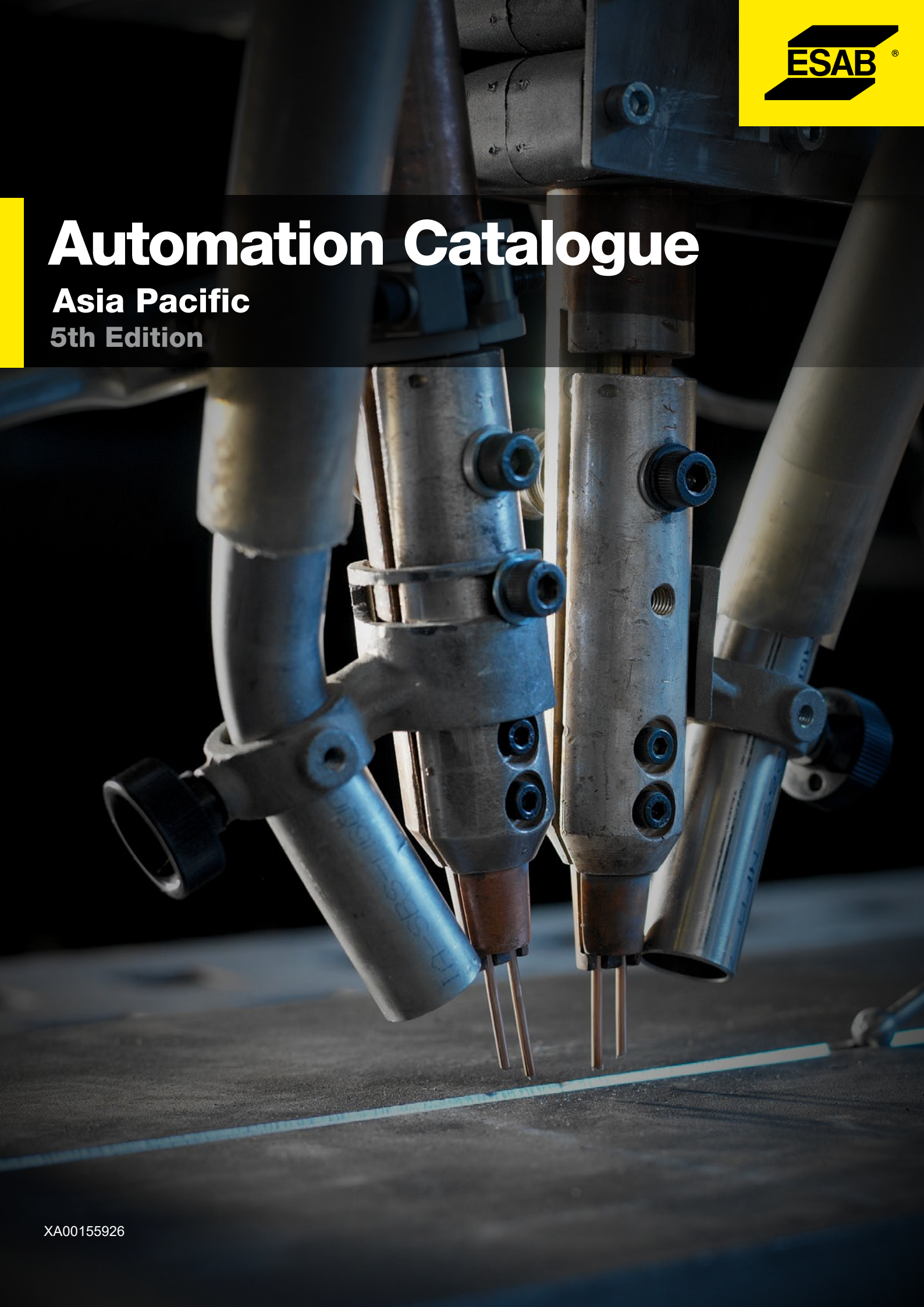


Automation Catalogue

Asia Pacific

5th Edition

XA00155926

Contents

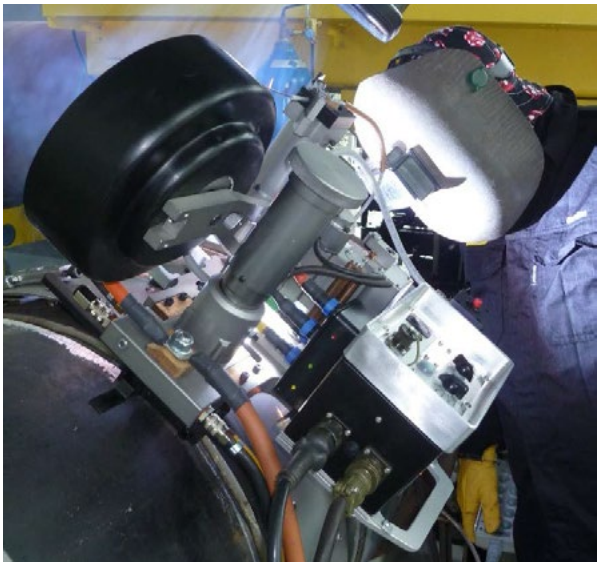
Flexible
Automation

Pipeweld Orbiter

Orbital pipe welding system

The Pipeweld Orbiter is a light weight bug for orbital welding of pipes and pipelines allowing the use of one system for diameters of 8” and above, without the need to swap the drive train. The Pipeweld Orbiter can weld both sides of the joint and does not have to pertain to a particular side. The unit has its own wire feed system and torch, eliminating the need for secondary feeders, torch hose packs and cables. Accurate and precise electrode positioning and unrestricting travel require only (manual) control, power, gas.

- The machine is of lightweight construction to ensure ease of handling by the operator
- Pipeweld Orbiter’s 360 degrees of freedom enables one machine to complete a weld joint via a rocker switch controlling the welding direction (up or down)
- The on-board control box enables a wide range of welding parameters to be stored which are programmed and downloaded from hand held programming unit (HPU)
- The motor, gearboxes, lead screws, and bearings are designed for heavy duty long life
- All of the software for the HPU and controller can be upgraded on-site or in-house via e-mail



Technical Data

Pipe diameters, mm (in.)	200 (8) to flat plate
Wire diameter solid wire, mm	0.8-1.2 2.7 kg / 5 kg
Wire diameter flux cored, mm	1.2 5 kg
Max. spool diameter, mm	200
Wire spool capacity, kg	5
Travel speed, cm/min	15-150
Wire speed, m/min	5-15
Max. oscillation width pendulum action, mm	26
Oscillation dwell independent dwells, ms	0-250
Burn back time, s	0-5
Crater fill time, s	0-2
Gas pre-flow, s	0-20
Gas post-flow, s	0-20
Welding torch control, mm	Electronic 50 vertical, 55 horizontal
Weight (without wire and cables), kg	16

Ordering Information

Pipeweld Orbiter Bug	0459 990 380

Options & Accessories

Warrior Adapter Box	0464 562 880
Pipeweld Orbiter Prog Kit*	0459 990 381
Pipeweld Orbiter Tool Kit**	0459 990 382
8″ Orbiter Travel Band w/Extensions	0459 990 525
10.75″ Orbiter Travel Band	0459 990 383
12.75″ Orbiter Travel Band	0459 990 384
14″ Orbiter Travel Band	0459 990 385
16″ Orbiter Travel Band	0459 990 386
18″ Orbiter Travel Band	0459 990 387
20″ Orbiter Travel Band	0459 990 388
22″ Orbiter Travel Band	0459 990 389
24″ Orbiter Travel Band	0459 990 390
26″ Orbiter Travel Band	0459 990 391
28″ Orbiter Travel Band	0459 990 392
30″ Orbiter Travel Band	0459 990 393
32″ Orbiter Travel Band	0459 990 394
34″ Orbiter Travel Band	0459 990 395
36″ Orbiter Travel Band	0459 990 396
38″ Orbiter Travel Band	0459 990 397
40″ Orbiter Travel Band	0459 990 398
42″ Orbiter Travel Band	0459 990 399
44″ Orbiter Travel Band	0459 990 400
48″ Orbiter Travel Band	0459 990 401

* Prog kit content: programming unit, data transfer box and USB memory storage.

** Tool kit content: 15 mm ring spanner, adjustable spanner, flat screw-driver, posi-drive screwdriver, electrical screwdriver, metric allen key set (loose), metric allen key set (glove type), pliers, circlip pliers internal, circlip pliers external, rubber mallet and bandspacing tool.

Miggytrac B501

Multi-purpose system for welding and cutting

The Miggytrac B501 is a super battery driven alternative if you wish to automate your GMAW process in an easy way.

The Miggytrac is ideal for use with ESAB's semi-automatic power sources and feed units.

The small and compact battery driven tractor is supplied with new technology and controlled by a stepper motor, from which a standard ESAB welding torch can be attached quickly.

The high friction wheels using 4-wheel drive guarantees a stable movement. An "easy fit" magnet kit is an option if the workpiece is bent or angled. The carriage follows the joint using guide wheels, which can be adjusted to allow:

- 18V battery (not included in delivery)
- 8 hour operating time
- Stepper motor technology
- a.) 25 (Kpa or N) Horizontal tensile force
  b.) Horizontal tensile force without magnet: (25 Kpa or N)
- Maximum angle 45°
- Vertical tensile force at 45° with magnet 11 Kpa

Ordering Information

Miggytrac B501 package	0457 357 882
Battery charger Makita DC18RC	0457 468 072

Local purchase 5AH Li-ion battery BL1840

Options & Accessories

Magnet kit for front and rear	0457 357 131
Battery + battery charger	0457 468 073
Battery	0457 468 070
Battery charger	0457 468 072

Or buy it locally:
Battery BL1840, Makita
Battery charger, DC18RC 14.4V - 18V, Makita

Technical Data (Basic components)

Battery voltage, V DC (battery not included)	18
Operating time, h	8
Weight, kg	12
Motor type	Stepper motor
Travel speed, mm/min	100-1300
Horizontal tolerance slide adjustment, mm	± 32
Vertical tolerance slide adjustment, mm	± 40
High friction rubber wheel, 4-wheel drive, mm	75x20
Horizontal tensile force without magnet, Kpa	12
Horizontal tensile force with magnet, kg	25
Max. angle, degrees	45
Vertical tensile force at 45° with magnet, kg	11
Dimensions (LxWxH), mm	310x290x250
Weight, kg	12

Miggytrac B5001

Programmable compact, operated tractor

The Miggytrac 5001 is a NON weaving tractor that easily mechanize your GMAW process and thermal cutting applications utilizing a 42V AC power source or battery. It is compact and programmable and can be used for continuous and intermittent welding.

Miggytrac is equipped with a color TFT display for more detailed and graphic information for the operator. It is easy to operate and programmable.

You can easily set and program welding speed, on or off intermittent welding, welding length, space between welds, crater fill, backfill length and preheat.

When connected to an ESAB wire feeder with adaptor you can set the voltage and wirefeed speed in percentages or ratios directly from the unit.

Miggytrac's true 4-wheel drive combined with high-friction wheels guarantees stable movement and operation of the tractor. An optional "easy fit" magnet kit enables you to weld on bent and inclined surfaces up to 45°.

The carriage follows the joint using guide wheels, which can be adjusted to allow the unit to drive itself against the workpiece.

The latest stepper motor technology guarantee a steady travel, operation speed and extended operation time to reduce down time.

Ideal for use with ESAB's GMAW power sources and feeders. A standard ESAB welding torch can be quickly attached to the unit.

- Quick set up and easy to use
- Forward and backward movement
- Programmable constant travel speed
- Compatible and rechargeable 18V Li-ion battery pack (interchangeable with common Makita power tools)
- Color TFT Display with high visibility in strong light conditions
- Intermittent stitch welds with programmable length and spacing
- End of weld crater and backfill function
- Six hours operating time
- Capable of welding on inclined surfaces

Ordering Information

Miggytrac™ 5001 (battery not included)	0459 990 645

Options & Accessories

Control Cable Miggytrac/Railtrac 5 m	0457 360 880
Connection Cable Universal(only w. 12-pin)	0457 360 886
Remote Adapter Kit Miggytrac/Railtrac	0465 451 881
Remote Adapter Kit	
RA 23 CAN Miggytrac/Railtrac	0459 681 880
Transformer kit 230 VAC	0457 467 880
Transformer kit 115 VAC	0457 467 882
Magnet kit for front and rear	0457 357 131
Battery + battery charger	0457 468 073
Battery	0457 468 070
Battery charger	0457 468 072

Or buy it locally:
Battery BL1840, Makita
Battery charger, DC18RC 14.4V - 18V, Makita

Technical Data

Battery voltage (battery not included), V	Li-ion 18
Operating time Battery, h	6
Motor type	Stepper motor
Travel speed, mm/min	10-1600
Horizontal slide adjustment, mm	± 32
Vertical slide adjustment, mm	± 40
Adjusting steering arms, mm	± 40
High friction rubber wheel, 4-wheel drive, mm	75 x 20
Working temperature, wheels (standing still), °C	70
Working temperature, wheels (moving), °C	150
Horizontal tensile force without magnet, kpa	12
Horizontal tensile force with magnet, kpa	25
Max. angle, degrees	45 °
Vertical tensile force at 45° with magnet, kpa	11 kg
Dimensions, L x W x H, mm	310x290x250
Weight, kg	13

Railtrac B42V

System configuration

Railtrac B42V is a welding tractor comprised of components that can be configured to create optimal solutions for your merchandised welding applications. To minimise down time associated with harsh environments. Most mechanical parts are constructed in aluminium or stainless steel to minimize down time associated with harsh environments.
The system can be easily connected to most ESAB wire feeders with no major modification. Remote adapters mounted in feeders Aristo® Feed 3004/4804 and Warrior™ Feed 304 give seamless control. Railtrac B42V also features:

- 42V AC supplied from power source or battery driven with standard Makita® 18 V system.
- Program a specific welding length and auto return to start position.
- Stepper motors have extremely high precision for drive and weaving functions. The single unit has a wide speed range.
- Remote is programmable for weave patterns, dwell, travel speed and is capable of controlling voltage and wire feed speed in up to 5 standard programs when connected to a suitable ESAB feeder.
- The B42V unit can also be programmed and ran directly from the controls on the Railtrac machine if the remote control is lost, damaged or not preferred.

Technical Data (Basic components)

Supply voltage, v	24 –70 DC, 20 –50 AC, 18 Battery (optional)
Battery running time, h	3 –4 (5A/h)
Max. battery power consumption , w	50
Bending diameter rail min, mm	Ø 1600
Height adjustment slide, mm	± 45
Max. speed, mm/s	30 (25 with battery)
Max. load, kg	10 (5 with battery)
Max. temperature magnet / vaccum, °C	70 / 90
Enclosure class	IP44
Approvals	CE
Safety class	DIN40050
Dimensions, mm	210 x 360 x 270
Weight, kg	8

Railtrac B42V

Ordering and accessories

Ordering Information

Railtrac B42V package	0398 146 016
Flexible Aluminium rail with 8 magnets	0398 146 112
Battery charger Makita BL1850	0457 468 072

Local purchase 5AH Li-ion battery DC18RC

Options & Accessories

Battery 18V, 5Ah Li-ion, Makita® *	0457 468 074
Battery Charger 230 VAC Makita® *	0457 468 072
Control Cable Miggytrac/Railtrac 5 m	0457 360 880
Connection Cable Universal (only w. 12-pin)	0457 360 886
Remote Adapter Kit Miggytrac/Railtrac	0465 451 881
Remote Adapter Kit RA 23 CAN Miggytrac/Railtrac	0459 681 880
Quick-extension bracket for flexible rail	0398 146 120
Transformer kit 230 VAC	0457 467 880
Transformer kit 115 VAC	0457 467 882
Floating Head for Torch	0398 145 211
Turning Bracket B42V	0398 145 203
Tilt Brachet Railtrac B42V	0398 145 202
Torch Holder Universal Ø15-30mm	0398 145 106
Torch Holder for PSF	0398 145 101
Flexible Alu Rail, 2.5 m (8 ft.)	0398 146 115
Flexible Alu Rail, 5 m (16 ft.)	0398 146 119
Flexible Alu Rail, 2.5 m (8 ft.), 8 magnets	0398 146 112
Flexible Alu Rail, 2.5 m (8 ft.), 4 vacuum attachments	0398 146 113
Stiffener Bar, 2.5 m (8 ft.)	0398 146 116
Flip Magnetic Attachment	0398 146 100
Vacuum Attachment, 90°	0398 146 104
Vacuum Attachment, 200°	0398 146 105
Screw Attachment for stiffened rail	0398 146 114

* Makita® Battery 5Ah Li-ion DC18RC (196673-6) and Battery Changer BL1850 (195585-0) can be bought locally in hardware store.

Railtrac BV2000

Programmable equipment for hardfacing and repair of rail profiles

Railtrac BV2000 is a welding tractor system that can be configured to create the optimal solution for your mechanized rail welding applications.
Railtrac BV2000 is designed for horizontal use and covers most proven and globally-applied welding patterns for repair of rail and rail components in all steel types and casting grades.
To minimize problems associated with harsh environments, most mechanical parts are constructed in aluminium or stainless steel.
This lightweight, user-friendly system is quick and easy to set-up and can be connected to most ESAB wire feeders with no major modification.
Remote adapters are available for the Aristo® Feed 3004/4804 and Warrior™ Feed 304 wire feeders. Railtrac BV2000 features different torch holders for torches and applications.

- 42V AC powered from power source or battery driven with standard Makita® 18V system.
- Programmable welding length with automatic return to start position.
- Precision stepper motors both for drive and weaving functions for smooth and accurate motion.
- Wide speed range available in a single unit.
- Unit can be programmed control for setting weave patterns and travel speeds and for controlling voltage and wire feed speed in up to 6 standard programs.
- Operator can program directly from the controls on the Railtrac machine or from the optional remote control.
- Programs available for repair and maintenance of: Worn rail ends, Plain rail defects, Worn turn-out tips, Worn wing rails, Worn stock rails, Stainless zig-zag pattern for electrical conductivity.

Technical Data

Supply voltage, v	24 –70 DC, 20 –50 AC, 18 Battery (optional)
Battery running time, h	3 –4 (5Ah)
Max. battery power consumption, w	50
Rail length, m	2,5
Max. speed, mm/s	30 (25 with battery)
Max. load, kg	10 (5 with battery)
Opperating temperature, °C	-10< T < 40
Enclosure class	IP44
Approvals	CE / CSA
Certification mark (standards)	DIN40050
Dimensions LxWxH, mm	210 x 360 x 270
Weight, kg	10
Industry standard programs	6

Railtrac BV2000

Programmable equipment for hardfacing and repair of rail profiles

Ordering Information

Railtrac BV2000	0459 990 644

Options & Accessories

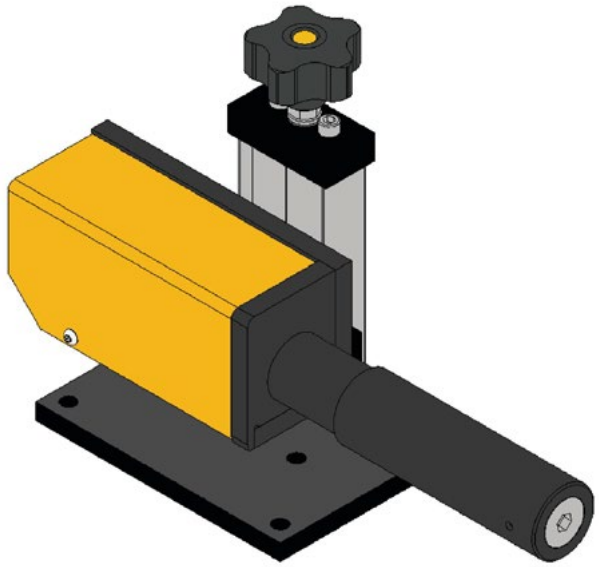
Remote Control BV2000	0398 146 480
Battery 18V, 5Ah Li-ion, Makita®*	0457 468 074
Battery Charger 230V AC Makita®*	0457 468 072
Control Cable Miggytrac/Railtrac 5m	0457 360 880
Connection Cable Universal (only w. 12-pin)	0457 360 886
Remote Adapter Kit Miggytrac/Railtrac	0465 451 881
Remote Adapter Kit RA 23 CAN Miggytrac/Railtrac	0459 681 880
Transformer kit 230V AC	0457 467 880
Transformer kit 115V AC	0457 467 882
Torch Holder Universal Ø15-30mm	0398 145 106
Torch Holder for PSF	0398 145 101
Flexible AluRail, 2.5m (8ft.)	0398 146 115
Flexible AluRail, 5m (16ft.)	0398 146 119
Flexible AluRail, 2.5m (8ft.), 8 magnets	0398 146 112
Flexible AluRail, 2.5m (8ft.), 4 vacuum attachments	0398 146 113
Stiffener Bar, 2.5m (8ft.)	0398 146 116
Flip Magnetic Attachment	0398 146 100
Vacuum Attachment, 90°	0398 146 104
Vacuum Attachment, 200°	0398 146 105

* Makita® Battery 5Ah Li-ion BL1850 (196673-6) and Battery Changer DC18RC (195585-0) can be bought locally in hardware store.

Weaving unit W8000

Multi-purpose system for welding and cutting

The Weaving unit W8000 can be used to mechanize your GMAW and SAW processes. It can be used for weaving, gap bridging, filling and capping. You can store: weaving speed, width, hold time out, hold time in and preheat. The Weaving unit W8000 has a maximum weaving width of 60 mm. Control unit is included.



Ordering Information

Weaving unit	0459 990 646
Service manual	0463 723 001
Spare parts list	0463 724 001

Options & Accessories

Tilt bracket（0 - 45 degree）	0398 145 202
Turning bracket（+/- 30 degree）	0398 145 203
Torch clamp（Ø20 - 30 degree）	0398 145 106
Transformer	0457 467 880
Control cable 12 - 23 pin，L = 5m	0457 360 880
Control panel 12 pin，L = 5m	0457 360 881

Technical Data

Supply	20 - 49 V AC 24 - 70 V DC
Power	30 W
Weight weaving unit (incl. bracket and slide)	4 kg
Motor type	Stepper motor
Weaving speed	1 - 40 mm/s
Weaving width	0 - 60 mm
Hold time (left and right position)	0.0 - 5.0 s
Horizontal electrical adjustment	Joystick
Horizontal mechanical adjustment	80 mm
Slide adjustment vertical	+/- 40 mm
Maximum load weaving arm	5 kg
External start / stop input	24 V DC

Welding
Tractors

Versotrac with Process Controller EAC 10

Designed to conquer your jobsite

- Modularised system where the tractor can be disassembled into smaller units, carried separately and easily transported.
- Robust wire feed mechanism that can weld mild steel wire up to 5 mm up to 1000A @ 100%.
- The automatic weld head detection and setup lets you change between SAW, GMAW and gouging in no time.
- Intuitive user interface with real-time heat input - keeps you in control of the weld.
- Introducing an all new ergonomic handling system for welding wire spools, making wire changes easy.
- Tool-less interaction makes it easy to change weld point position and switch between butt and fillet welding.
- Re-buildable between three and four wheel versions to suit your needs.

Ordering Information

Versotrac EWT 1000 (SAW), EAC 10	0904 200 880
Sales Literature	XA00200120
Sales Literature Brochure	XA00201020

Options & Accessories

EWH 1000 (SAW) Welding Head	0904 520 880
EWH 1000 (Twin SAW) Welding Head	0904 520 884
EWH 600 (GMAW) Welding Head	0904 520 885
Guide wheel bogie	0413 542 880
Idlling roller	0333 164 880
Guide bar 3 m (10 ft.)	0154 203 880
V-wheeltrack in steel	0443 682 881
Lamp kit (2x27W)	0904 273 880
3-wheel kit	0904 557 880
Flat fillet kit	0904 586 880
Twin Kit EWH 1000 (SAW)	0446 110 880

Technical Data	Single SAW	Twin SAW	GMAW with MTW 600
Wire diameters, mm (in.) - Steel - Stainless steel - Cored wire - Aluminium	 1.6-5.0 (1/16-3/16) 1.6-4.0 (1/16-5/32) 1.6-5.0 (1/16-3/16) -	 - - - 2x1.2-1.6 (2x(0.45x1/16)) *	 0.8-2.5 (.030-3/32) 0.8-1.6 (.040-1/16) 1.2-3.2 (.045-1/8) -
Max. wire feed speed, m/min (ipm)	9 (354)	16 (354)	16 (630)
Wire reel weight, kg (lbs.)	30 (66)	2x30 (2x66)	30 (66)
Flux hopper capacity, l (gal.)	6 (1.4)	6 (1.4)	-
Weight, excl. wire and flux, kg (lbs.)	65 (143)	67 (148)	64.5 (142)
Permissible load 100%, A	1000	1000	600
Control voltage, V AC	42	42	42
Travel speed, m/min (ipm)	0.1-2.0 (4-79)	0.1-2.0 (4-79)	0.1-2.0 (4-79)
Linear slides stroke length, mm (in.)	90 (3.5)	90 (3.5)	90 (3.5)
Rotary slide setting angle	360°	360°	360°

** Optional twin kit 0446 110 880 is needed.*

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 methods.
- 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 speeds.
- Digital control panel allows exact pre-set and control of welding parameters.
- The A2 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	0461 234 881
Sales Literature SAW	XA00143 220
Sales Literature GMAW	XA00143 320

Typical welding package for single wire application

A2 Multitrac	0461 233 880 x 1
Plastic wire reel	0153 872 880 x 1
Welding rectifier LAF 1001 DC	0460 513 880 x 1
4 mm contact tip	0154 623 003 x 5
4 mm feed roller	0218 510 286 x 1
Welding cable 95 mm^2 x 15 m	0413 768 899 x 2
Return cable 95 mm^2 x 10 m	0413 768 898 x 2
Control cable x 15 m	0460 910 881 x 1
Reference cable 6 mm^2 x 10 m	0262 613 304 x 1

Options & Accessories

Guide wheel bogie	0413 542 880
Idlling roller	0333 164 880
Guide bar 3 m (10 ft.)	0154 203 880
V-guide wheel	0333 098 881
V-wheel track in steel	0443 682 881
Loop for connection of two tractors	0334 680 881
Pilot lamp, laser diode	0821 440 880
Steel wire reel spring loaded	7803 615 000

Technical Data	Single SAW	Twin SAW	Single GMAW	GMAW with MTW 600
Wire diameters, mm (in.) - Steel - Stainless steel - Cored wire - Aluminium	 1.6-4.0 (1/16-5/32) 1.6-4.0 (1/16-5/32) 1.6-4.0 (1/16-5/32) -	 2x1.2-2.5 (2x(0.45x3/32)) 2x1.2-2.5 (2x(0.45x3/32)) - -	 0.8-1.6 (.030-1/16) 0.8-1.6 (.040-1/16) 1.2-2.4 (.045-3/32) 1.2-1.6 (.045-1/16)	 1.0-1.6 (.039-1/16) 1.0-1.6 (.039-1/16) 1.0-2.4 (.039-3/32) 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 slide stroke length, mm (in.)	90 (3.5)	90 (3.5)	90 (3.5)	90 (3.5)
Rotary slide setting angle	360°	360°	360°	360°

A2TG & GMH

Multitrac

A2 Multitrac
The A2 Multitrac is a self propelled four wheel driven automatic welding machine.

A2TG Multitrac is designed to put your MIG/SAW operation on the right track to increase both the productivity and quality. Combining GMH joint tracking controller and PEK controller makes it easy for any welder.

GMH
The GMH system minimises repair welding and adjustments post welding. The arc is always in the optimal position via a sensor and two motor slides. The GMH system can track edges, fillets both left and right hand, V groove, height control only and many more.

The quality will increase and the operator is free to supervise the whole process not just the wire position during welding. A simple pendant is supplied for the operator to select what is needed then drive to the joint to be tracked then the system takes over automatically.

Ordering Information

A2 Multitrac A2TG (GMAW)	0461 234 880
GMH with remote control	0460 698 880
LAF 631 power source	0460 512 880

Technical Data

Wire dimensions, mm	
- Steel	0.8-1.6
- Stainless	0.8-1.6
- Cored wire	1.2-2.4
Max. wire feed speed, m/min	16
Electrode weight, kg	30
Weight excl. wire, kg	43
Permissible load 100%, A	600
Control voltage, V	42
Travel speed, m/min	0.1-1.7
Linear slide setting length, mm	90
Rotary slide setting angle, °	360

Options & Accessories

Contact nozzle Ø	
M6	
0.8 mm	0153 501 002
1.0 mm	0153 501 004
1.2 mm	0153 501 005
1.6 mm	0153 501 007
M10	
1.6 mm	0258 000 909
2.0 mm	0258 000 910
2.4 mm	0258 000 911
3.2 mm	0258 000 915
Adapter M6/M10	0147 333 001
Feed rollers Ø	
0.8 mm	0145 538 881
1.0 mm	0145 538 882
1.2 mm	0145 538 883
1.6 mm	0218 510 281
Knurled feed rollers for cored wire Ø	
0.8-1.6 mm	0146 024 880
2.0-4.0 mm	0146 024 881
Knurled pressure rollers Ø	
0.8-1.6 mm	0146 025 880
2.0-4.0 mm	0146 025 881
Shaft for knurled pressure roller	0212 901 101
Auxiliary guiding equipment	
Guide wheel bogie	0413 542 880
Idling roller	0333 164 880
V-guide wheel	0333 098 881
Guide bar 3 m	0154 203 880
V-wheel track in steel	0443 682 881
Loop for connection of two automats	0334 680 881
Pilot lamp, laser diode	0821 440 880
Gas handling equipment	
Cooling unit OCE2, 220V, 50/60 Hz	0414 191 881
Hose (gas) *	0190 270 101
Hose (cooling water) *	0190 315 105
* Number of meters to be specified	
Arc shield	0334 689 880

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 stainless solid or cored wire by modifying an A6 Single Mastertrac with an easy conversion kit for gas metal arc welding (GMAW).
- Preset 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

Options & Accessories

Contact equipment heavy Twin Arc, compl.	0334 291 889
Wire reel, plastic 30 kg (66 lbs.)	0153 872 880
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	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
Steel reel spring loaded	7803 615 000
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
Permissible load 100%, A	1500	600	1500
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)
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)
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)
Control voltage, V AC	42	42	42
Wire reel weight, kg (lbs.)	30 (66)	30 (66)	2x30 (2x66)
Flux hopper capacity, l (gal.)	10 (2.6)	-	10 (2.6)
Weight excl. wire and flux, kg (lbs.)	110 (242.5)	100 (220.5)	110 (242.5)

A6 Mastertrac A6TF (Tandem)

For high deposition Submerged Arc Welding

The A6 Mastertrac is a self-propelled, four-wheel drive automatic welding machine. Fully mobile, the Mastertrac is easily moved from one welding station to another and it can be quickly set-up for different workpieces.

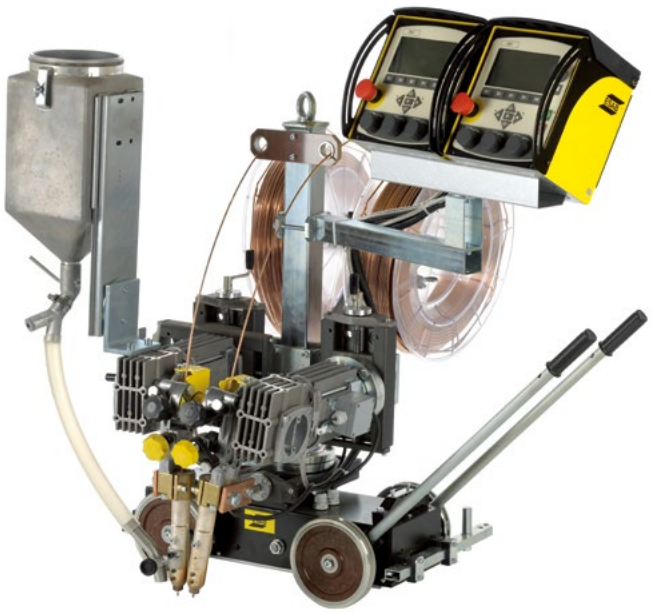
The Mastertrac has ample capacity for heavy production welding and can take up to 6 mm wire using 1500 A direct or alternating current. It is designed to be used together with LAF or TAF power sources.

The welding automat is equipped with two A6 heads for either DC/DC, DC/AC or AC/AC welding.

Direct current (DC) provides good penetra- tion, whereas alternating current (AC) se- cures a high deposition rate with maximum productivity and welding characteristics.

The Mastertrac Tandem is delivered as Tandem. To be able to increase the profitability there are a number of accessories:

- Strip cladding kit
- Arc-air gouging kit
- Flux funnel for any type of butt joint
- Pilot lamp which projects a light spot onto the joint
- Extra idler rollers
- Flux recovery unit opc
- Extra guide wheels
- Guide rail with magnetic fasteners when there is no guiding edge available



Tandem - multi-electrode system
With a multi-electrode system, you can increase productivity considerably - thanks to the high deposition rate. By selecting different combinations of direct and alternating currents, the A6 Tandem Mastertrac can handle any type of welding work with increased profitability as a result.

Programmed precision with ESAB's A2-A6 Process Controller
The digital electronic control equipment with a digital display makes fast programming and control of all welding parameters possible. 255 different weld sets can be stored in the controller. No running-in period is necessary. Adjustments can be made during welding.

Technical Data	Tandem SAW
Permissible load 100%, A	2x1500
Wire diameter, mm	2x3.0-6.0
Wire feed speed, m/min	0.2-4.0
Wire feed speed high, m/min	-
Travel speed, m/min	0.1-2.0
Control voltage, V AC	42
Wire reel weight, kg	2x30
Flux hopper capacity, l	10
Weight excl. wire and flux, kg	158

Ordering Information

A6 Mastertrac Tandem A6TF F2 (SAW, DC/AC 1500)	0461 232 882

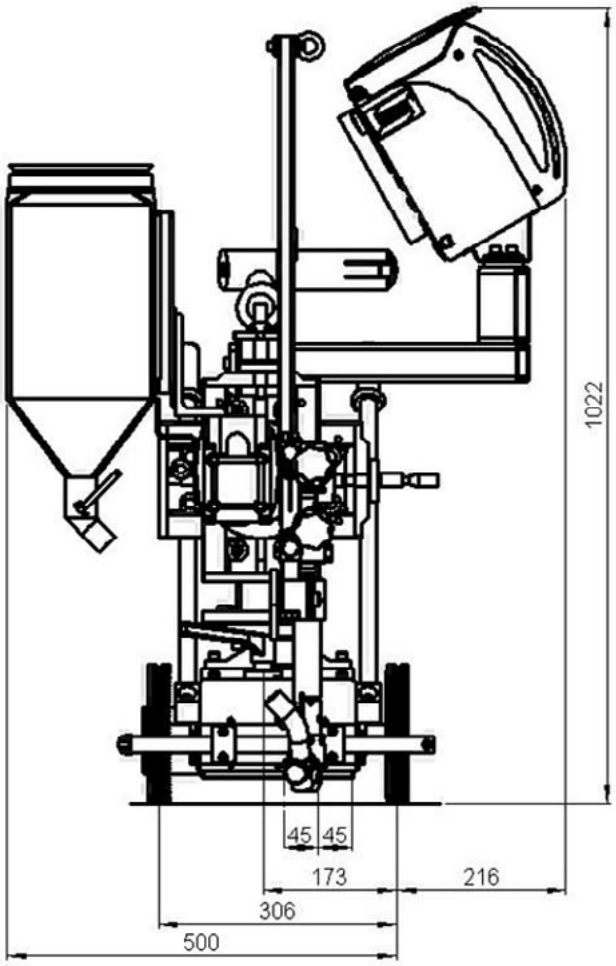
Typical package

Mastertrac Tandem F2 (SAW DC/AC)	0461 232 882 x1
Jaw 4.0mm	0265 900 882 x5
Feed roll 4.0mm	0218 510 286 x2
Wire reel plastic	0153 872 880 x2
Angular slide	0671 171 580 x1
LAF 1251	0460 514 880 x1
TAF 1251	0460 517 880 x1
Control cable 25m	0460 910 882 x2
Reference cable 6.0mm 15m	0820 129 882 x2
120mm Sq. welding cable 24m	0413 768 889 x4
120mm Sq. return cable 15m	0413 768 896 x4
Option to replace LAF and TAF Aristo 1000 DC/AC x2	0462 100 880 x2

Options & Accessories

Wire reel, plastic, 30 kg	0153 872 880
Wire reel, steel, 30 kg	0416 492 880
Wire reel steel, flexible width	0449 125 880
Brake hub extra	0146 967 880
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
Magnetic guide rail, 3 m	0154 203 880
Contact jaw D35, Ø	
3.0 mm	0265 900 880
4.0 mm	0265 900 882
5.0 mm	0265 900 883
6.0 mm	0265 900 884
Feed rollers Ø	
2.4-2.5 mm	0218 510 283
3.0-3.2 mm	0218 510 298
4.0 mm	0218 510 286
5.0 mm	0218 510 287
6.0 mm	0218 510 288
Knurled feed rollers tubular wire Ø	
2.0-4.0 mm	0146 024 881
Knurled pressure rollers tubular wire Ø	
1.2-1.6 mm	0146 025 880
2.0-4.0 0146 025 881	
Shaft for knurled pressure rollers	0212 901 101

*Please contact your local ESAB office for additional details.



A6 Mastertrac Single

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 controller.
- Accurate, easy joint tracking with manual or motorised slide system via 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 flux hopper

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

A2S Mini Master GMAW MTW (4WD) Systems

Incl. A2-A6 Process controller PEK and gas solenoid

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

Typical 3.2mm wire DC welding package

A2S Mini Master + PEK controller	0449 170 900 x 1
Flux funnel	0145 221 881 x 1
Welding rectifier LAF 1001 DC	0460 513 880 x 1
Welding cable, 95 mm^2 x 15 m	0413 768 899 x 2
Return cable, 95 mm^2 x 10 m	0413 768 898 x 2
Control cable, 15 m	0460 910 881 x 1
Reference cable, 6 mm^2 x 10	0820 129 881 x 1
Steel reel spring loaded	7803 615 000 x 1
Contact nozzle, 3.2 mm	0154 632 004 x 5
Feed roller, 3.2 mm	0218 510 286 x 1

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:

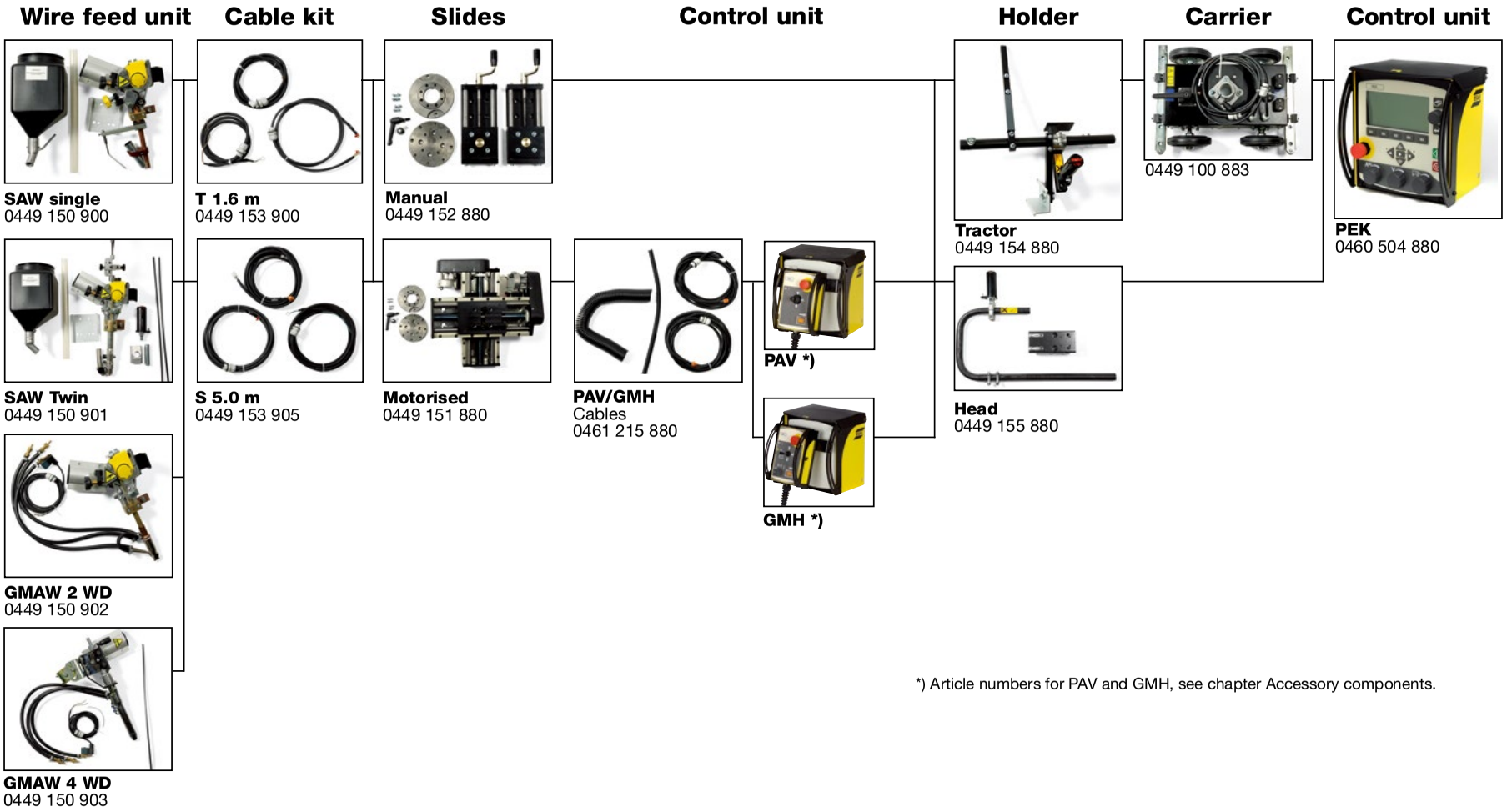
Flux recovery unit OPC	0148 140 880
Flux container, silumin alloy	0413 315 881
Concentric flux funnel	0145 221 881
Contact tube, bent	0413 511 001
Wire reel, plastic, 30 kg (66 lbs.)	0153 872 880
Wire reel, steel, 30 kg (66 lbs.)	0416 492 880
Wire reel, steel, flexible width	0449 125 880

For PEK:

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

Technical Data	Single wire SAW	Twin wire SAW	GMAW	GMAW MTW 600w
Wire diameter, mm (in.) - Steel - Stainless Steel - Cored wire - Aluminium	 1.6-4.0 (1/16-5/32) 1.6-4.0 (1/16-5/32) 1.6-4.0 (1/16-5/32)	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

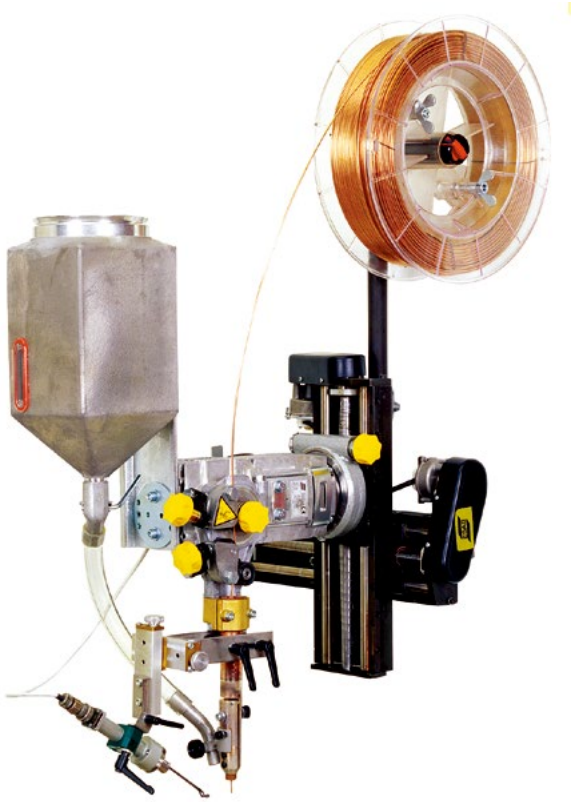


*) Article numbers for PAV and GMH, see chapter Accessory components.

A6S Arc master

Flexibility as standard

- Flexibility, reliability and superior performance capability.
- Comprehensive component and module system make process customisation 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 with optional accessories.
- Uses A2-A6 PEK process controller for fast, accurate presetting 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 motorised slides 300x300 mm and PAV	0449 270 901
With motorised 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)

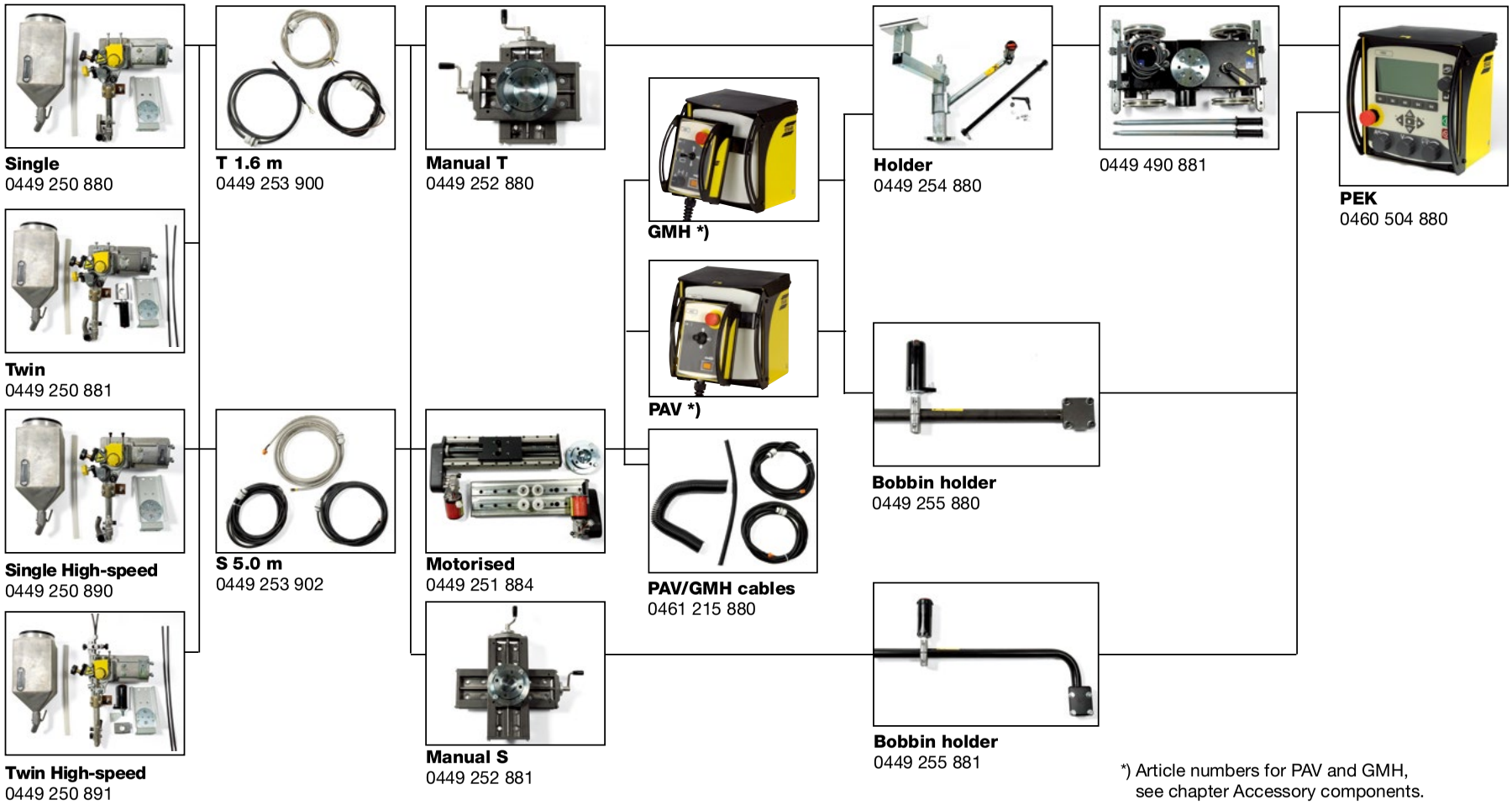
With manual slides 210x210 mm	0449 271 910
With motorized slides 300x300 mm and PAV	0449 271 911
With motorized slides 300x300 mm and GMH	0449 271 912
Sales Literature	XA00088 920

Typical 4mm wire DC welding package

A6 SF, Master 156:1 + PEK	0449 270 900 x 1
OPC basic	0148 140 880 x 1
Plastic wire spool, 30 kg	0153 872 880 x 1
Flux funnel	0254 900 880 x 1
Welding rectifier LAF 1251 DC	0460 514 880 x 1
Welding cables, 120 mm^2 x 15 m	0413 768 896 x 2
Return cables, 120 mm^2 x 10 m	0413 768 895 x 2
Control cable, 15 m	0460 910 881 x 1
Reference cable, 6 mm^2 x 10 m	0820 129 881 x 1
Feed roller, 4 mm	0218 510 286 x 1
Contact jaw, 4 mm	0265 900 882 x 5

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 straightener, degrees.	 ± 180° ± 45°	 ± 180° ± 45°
Max. permissible load, 100%, A	1500	1500

A6 Component system modularization



*) 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 as sembly 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 ration 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

All sales literature can be downloaded at **assets.esab.com**

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

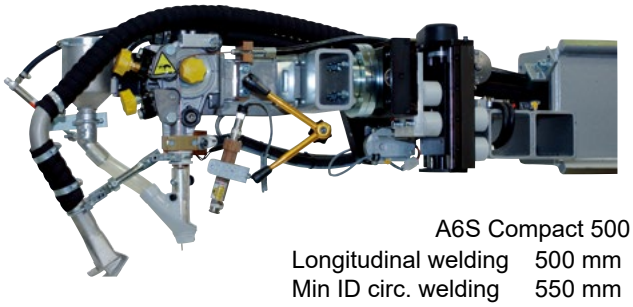
Technical Data (Basic components)	A6S Tandem Master	A6S Tandem Master
A6 feed unit HD type for wire 3-6 mm (1/8-1/4 in.)	2 pcs	2 pcs
Horizontal motorized slide with double runners L=355 mm (14 in.)	1 pc	1 pc
Vertical motorized slide with double runners L=595 mm (23.4 in.)	1 pc	1 pc
PEK, process controller	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	-
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 A6 circular slide Insulators	 1 pc (0154 465 880) 1 pc (0671 171 580) 4 pcs (0278 300 180)	 1 pc (0154 465 880) 1 pc (0671 171 580) 4 pcs (0278 300 180)
Total weight (excl. PEK, wire and flux) approx. kg (lbs)	190 (419)	190 (419)

A6S Compact welding heads for internal welding

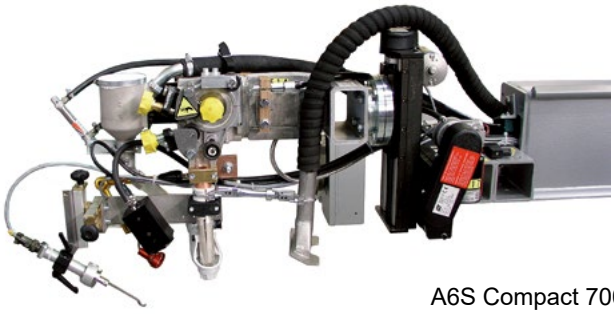
For excellent welding results

- 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 2000/3000 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



A6S Compact 700
Longitudinal welding 700 mm
Min ID circ. welding 750 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	XA00124 620

Technical Data

	Compact 300
Wire diameters, mm (in.) - Steel - Stainless steel	 3.0-4.0 (1/8-5/32) 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 slide 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.

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

For Compact 500 & 700, please include contact jaws.

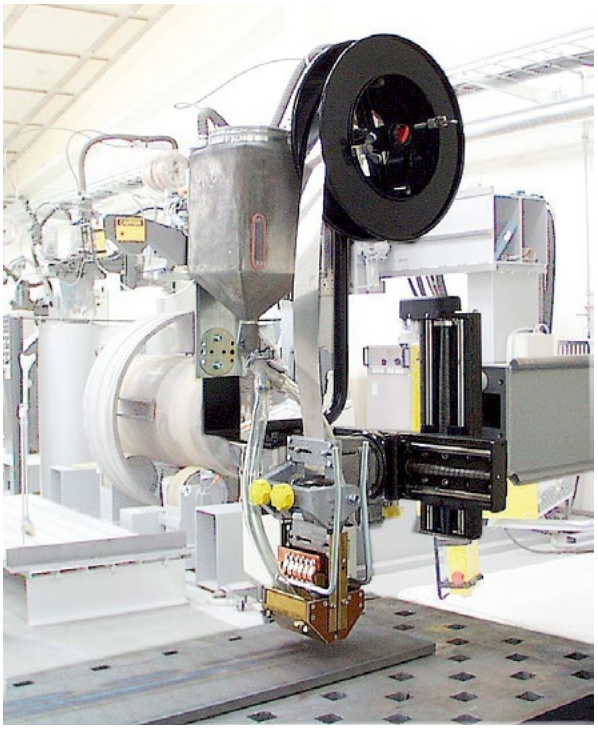
Feed rollers, wire size

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

A6S SAW strip cladding head

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).

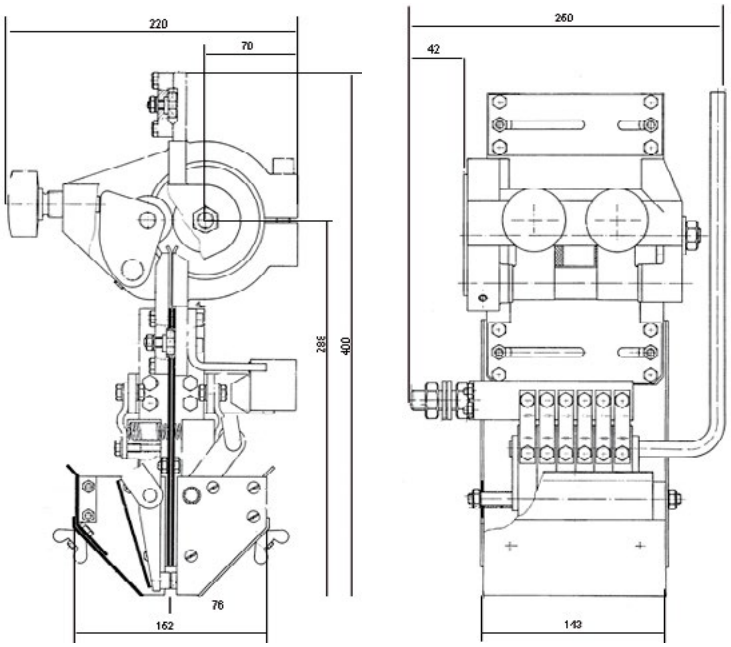


Ordering Information

Strip cladding kit (for use with A6T SAW Tractor or A6S Arc Master HD)	0155 972 880
Sales Literature	XA00101 020

Options & Accessories

Reel holder (not to be used with motor-operated cross slide)	0417 636 880
Wire reel, steel	0416 492 880
Suction nozzle, flux	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.

Controllers &
Power Sources

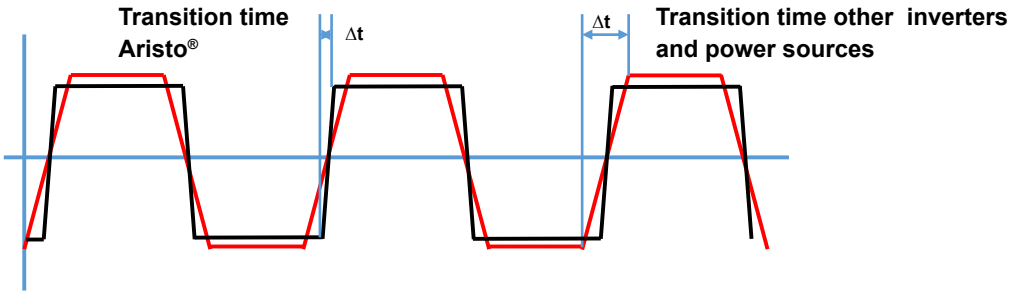
Aristo 1000 AC/DC

True Square Wave Technology™ for AC Welding.

The limiting factor in AC SAW welding has traditionally been process stability and the time it takes to transition from positive to negative polarity. This lag through the zero crossing, called commutation, can cause arc instability, penetration and deposition problems in certain applications.

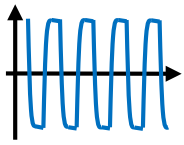
With the Aristo® 1000 AC/DC True Square Wave Technology™ the commutation is faster than any other inverter power source, resulting in:

- Increased process stability for AC welding
- Increased parameter window

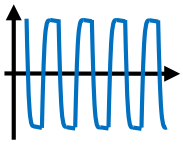


Cableboost™– what you set is what you get

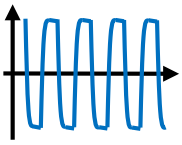
Aristo® parameters set and voltage measured at terminals



Aristo® voltage at the arc 50m cable loop length



Aristo® voltage at the arc 100m cable loop length

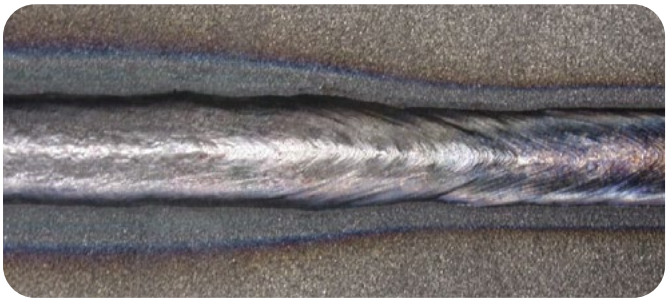


CableBoost™

Non-stop Root to Cap Welding - DC to AC on the fly.

Aristo® 1000 AC/DC allows the user to change between DC and AC welding just by pressing a button. No need to stop when welding circular objects.

- Increased productivity
- Increased quality
- Increased degree of automation



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"**. Minimise downtime and weld defects by the push of a button with the patent pending "on the fly" function.
- **Long welding cables.** The patent pending Cable Boost™ technology stores energy and instantly delivers up to 450% additional energy when required. Cable Boost extends the maximum usable weld cable length with more than a factor two, without compromising the weld result.
- **Cable Boost™** is also an energy saver. The inductive energy generated in the welding cables is re-used in the welding process instead of being wasted as heat and power losses.
- Designed for uninterrupted welding production. There are no connectors or cables at any exposed positions. All cables are connected behind a door in the front of the machine. Easily accessible for service and well protected against damage.

Ordering Information

Aristo® 1000 AC/DC SAW	0462 100 880
Sales literature, fact sheet	XA00153 220
Sales literature, process brochure	XA00155 520

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

Technical Data

Mains supply, 3 ph, V, Hz	380-575, 50/60
Mains current (DC load), A / V	86 / 380 82 / 400 79 / 415 74 / 440 71 / 460 66 / 500 59 / 550 57 / 575
Mains fuse (slow), A / V	100 / 380 100 / 400 80 / 415 80 / 440 80 / 460 80 / 500 63 / 550 63 / 575
Maximum load at 100% duty cycle, A / V	1000 / 44
Open circuit voltage, V	130
Open circuit power, W	240
Efficiency at Max. rating	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	ETL, CCC, Ghost-R

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 and TAF 801/1251,Aristo 1000 AC/DC.
- 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.
- Documentation of used welding parameters on PC or through WeldCloud™.
- Eight Soft Keys can be configured according to operator preferences.

Adjustable sun shield for better visibility for outdoor use

Ordering Information

A2-A6 process controller PEK	0460 504 880
Sales Literature	XA00143 720

Options & Accessories

I/O-Module	0462 080 001
Set of connectors for I/O module	0462 119 880
Cable restraining bracket	0460 861 880
Control cable, 15 m	0460 910 881
Control cable, 25 m	0460 910 882
Control cable, 35 m	0460 910 883
Control cable, 50 m	0460 910 884

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

Process Controller EAC 10

For use with CAN- and Analogue controlled power sources and motors

- Intuitive user interface with real-time heat input keeping you in control of the weld.
- Detachable remote control interface lets you control the system from a comfortable position.
- The automatic weld head detection and setup lets you change between SAW, GMAW and gouging in no time.
- Digital and analoge interface to the power source - works with all current ESAB SAW power sources as well as most analoge power sources on the market including old LAF.
- Closed loop encoder based control system for precise wire feed and travel speed control.

Ordering Information

A4 process controller EAC 10	0446 225 880
Sales Literature	XA00200320

All sales literature can be downloaded at **assets.esab.com**

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
Control cable, 77 m (246 ft.)	0460 910 885
Control cable, 100 m (328 ft.)	0460 910 886

Technical Data

Connection voltage from the power source	60V DC or 42V AC, 50/60 Hz
Connection power	Max. 900 VA
Motor connection adjusted for ESABs motors	Connection of two motors, 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. transport speed, m/min (ipm)	2.0 (79)
Consumable wire feed speed, m/min (ipm)	0.3-25 (12-984) depending on wire feed unit
Connection to power source	Burndy contact, 12 poles
Inputs	For connection of sensors or limit switches
Max. humidity (of air)	95%
Operating temperature, °C (°F)	-10 - +40 (14-104)
Weight complete control unit, kg (lbs.)	6.8 (15)
Weight control pendant, kg (lbs.)	1.25 (2.8)
Dimensions complete control unit LxWxH, mm (in.)	275×300×165 (10.8×11.8×6.5)
Dimensions control pendant LxWxH, mm (in.)	245×225×50 (9.7×8.9×2.0)
Enclosure class	IP23

PAB Fieldbus Interface

For use with ESAB CAN-controlled power sources

- PA universal fieldbus interface offering unlimited control from a PLC, PC or any general control unit.
- Standard HMI.
- Control the welding application from the same communication panel in a multifunctional automation system.
- The dual DC-motor drive unit named FAA is designed for seamless use with the Fieldbus interface.

Technical Data

External accessible communication interfaces	Fieldbus (Profibus DIN 19245 Part 1) for welding commands and data Ethernet for FTP and Web server

Ordering Information

PAB Fieldbus interface	0449 535 881
User manual (or digital at www.esab.com)	0465 589 001
Sales literature	XA00169820

All sales literature can be downloaded at **assets.esab.com**

Options & Accessories

FAA Dual motor drive	0460 505 880

WeldScanner

Multi-talented recording device

The WeldScanner is a multipurpose measuring device, usable as data logger, oscilloscope and for validation - designed by welding experts.

- Documentation of welding seams
- Easily find the root cause of errors
- Cooling time measurement for T 8/5
- Convenient data export
- Interactive touch screen with curve progression that shows all welding parameters
- Rugged system made to withstand use in rough conditions for daily use
- Easy to operate and simple to connect to any welding power source

Ordering Information

WeldScanner S3 Base Device	HKS 000 1433

WeldQAS

Multi-talented recording device

WeldQAS is an automatic welding monitoring system. By monitoring welding parameters during the welding process, immediate error response is possible, averting consequential damage.

WeldQAS acquires real-time data from welding production, reveals inefficiencies and enables action to optimise the production process.

Cabinet version for SAW

Compact version for GMAW and GTAW

- Records welding parameters such as welding current, welding voltage, gas flow rate, wire feed speed during the welding process online without an additional accessory added on the welding torch
- Based on a new technology of recording high-resolution digital data and intelligent data processing in a signal processor
- Uses patented algorithms and welding parameters, WeldQAS allows detection of pores, burn-through, wire defects (MSG) and other welding irregularities
- Data are stored in databases and provide an overview for optimising and stabilising the welding production. WeldQAS is network compatible and the data are automatically stored on a central server
- The WeldQAS series consist of a compact version and a cabinet version to which sensors can be connected to record process variables. Process variables can also be recorded using industrial fieldbus systems or power source-specific buses

Ordering Information

WeldQAS Compact version 2K-S3	HKS 000 1421
WeldQAS Cabinet version with wheels	HKS 000 2362

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).
- 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 PEH).
- Welding current range can be extended by connecting two power sources in parallel for the most demanding applications.
- Power source prepared for communication using most standard protocols like TCP/IP (LAN), CAN or even straight communication with a PLC. Optional communication modules might be needed depending on types of used protocol.
- 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.

LAF 631 in combination with MechTrac and GMH

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	XA00143 820

Options & Accessories

LAF to 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
LAF paralleling kit	0808 573 882
75m or 100m control cable on request	

Reference Cable LAF to workpiece

Cable 6 mm^2 x 10 m	0820 129 881
Cable 6 mm^2 x 15 m	0820 129 882
Cable 6 mm^2 x 24 m	0820 129 885
Cable 6 mm^2 x 34 m	0820 129 888
Cable 6 mm^2 x 50 m	0820 129 892

Welding cable + Return cable

Cable 95 mm^2 x 10 m	0413 768 898
Cable 95 mm^2 x 15 m	0413 768 899
Cable 95 mm^2 x 24 m	0413 768 882
Cable 95 mm^2 x 34 m	0413 768 885
Cable 95 mm^2 x 45 m	0413 768 904
Cable 120 mm^2 x 10 m	0413 768 895
Cable 120 mm^2 x 15 m	0413 768 896
Cable 120 mm^2 x 24 m	0413 768 889
Cable 120 mm^2 x 34 m	0413 768 892
Cable 120 mm^2 x 45 m	0413 768 901

Power sources LAF 631, 1001, 1251 and 1601

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 80% duty cycle, A/V 60% duty cycle, A/V	 630/44 - 800/44	 800/44 - 1000/44	 1250/44 - -	 1600/44 - -
Setting range, A/V GMAW SAW	 50/17-630/44 30/21-800/44	 50/17-1000/45 40/22-1000/45	 60/17-1250/44 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.

Note: GMAW with LAF 631 and LAF 1001 recommended.

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.
- Presetting of arc voltage.
- Reliable square wave striking.
- Arc voltage or current feed back.
- Optimised 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 Controller (PEK).
- Power source prepared for communication using most standard protocols like TCP/IP (LAN), CAN or even straight communication with a PLC. Optional communication modules might be needed depending on types of used protocol.

Ordering Information

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

Options & Accessories

LAF to PEK controller

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

75m or 100m control cable on request

Reference Cable LAF to workpiece

Control cable, 6 mm^2 x 10 m	0820 129 881
Control cable, 6 mm^2 x 15 m	0820 129 882
Control cable, 6 mm^2 x 24 m	0820 129 885
Control cable, 6 mm^2 x 34 m	0820 129 888
Control cable, 6 mm^2 x 50 m	0820 129 892

Technical Data

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 60% duty cycle, A/V	 800/44 1000/44	 1250/44 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	S	S

Upgrade LAF with PEK

Increase the functionality dramatically by using the new top of the range weld controller PEK with older power sources.

The previous generation of LAF and TAF using the PEH weld controller can now be upgraded to the latest technology. The upgrade kit includes everything needed to make the power source compatible with the latest generation of weld controller, the PEK. The upgrade kit includes also a number of improvements made to extend the life time of the power sources even further.

What is included in the upgrade kit?

Included in the kit are following components: A new cable harness, a new auxiliary transformer, a new main

pc-board, all mounting details, an additional rating plate to be mounted beside the existing one and an instruction how to do the actual upgrade.

What power sources can be upgraded?

Only power sources with a CE mark, manufactured from February 8th 1995 or later and in good working conditions can be upgraded without any complex approval procedure. The CE mark guarantees that the power source was designed to meet existing standards from 1995 and can be upgraded with our kit to meet the standards of today.

A complete CE approval process is required for older power sources without the CE mark. This approval process is far more costly than a new power source.

What is the delivery time for an upgrade kit?

The expected delivery time for the upgrade kit is in the range of 2-3 weeks in the initial stage.

Who is allowed to do the upgrade?

Any trained ESAB service engineer and third party service company authorized to perform service on ESAB equipment are approved to install the upgrade kit.

What advantages do you get on top of the new functionality using the PEK?

The power source will be upgraded to the latest design where important improvements have been made. A new type of contactors is used with better protection against dust. The life time of contactors will be extended.

Electrical filters and ferrite cores are installed to minimize disturbances and also to better protect electronic components and extend their life time.

Is an upgraded power source safe and approved to be used everywhere?

As long as the kit is installed by an authorized person, the kit is installed in an already CE marked power source and the installation is made according to the instructions, it is safe to use the power source. The power source will also fulfill valid norms and standards.

There is no general approval process for North America. (USA and Canada).The only way to get an approval in North America is to run a local approval process for each individual power source.

Upgraded LAF 1000

PEK

Ordering Information

PEK process controller	0460 504 880
Upgrade kit for LAF 1000	0461 300 880
Upgrade kit for LAF 1250/1600	0461 300 881
Upgrade kit for TAF 800	0461 300 882
Upgrade kit for TAF 1250	0461 300 883

Please contact ESAB service for a complete list of spares to suit your rebuild.

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	XA00091 920

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	

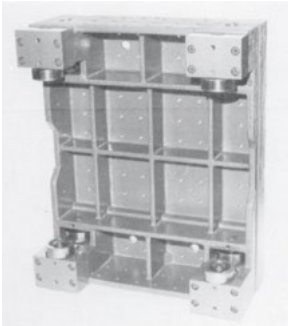
Technical Data

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	XA00105 120

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

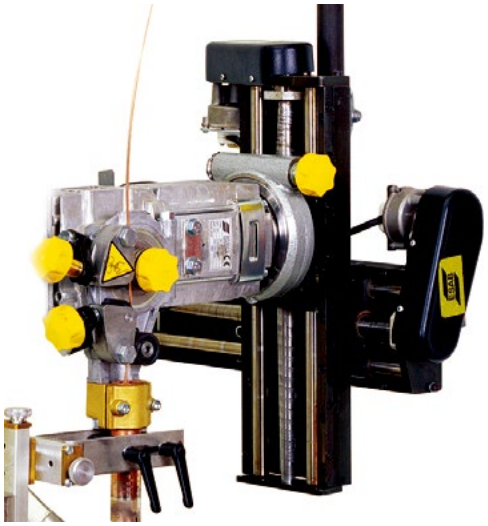
Technical Data

	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

Motorised 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.).



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	XA00032 720

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	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 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)
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)								

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.
- Motorised servo slides guarantee reliable and accurate joint tracking.
- 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.

GMH with and without remote control

PAV with and without remote control

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, LxWxH, mm (inch)	246x235x273 (9.7x9.3x10.7)
Weight, kg (lbs.)	6 (13)
Enclosure class	IP23

Ordering Information

GMH System, complete **0460 884 880**

GMH with remote control, sensor with finger, sensor cable, mini cross saddle + sensor support

Sales Literature PAV	XA00139 420
Sales Literature GMH	XA00139 320

Typical package stand alone - PAV

PAV positioning system with remote control	0460 697 880 x 1
Isolation transformer	0148 636 002 x 1
Motorised slide 300 mm	0334 333 884 x 2
Motor cable 10 m	0460 745 882 x 2

Recommended option

Mounting insulator	0278 300 180 x 4

Typical package stand alone - GMH

GMH with remote control, Sensor with finger, Sensor cable,

Mini cross saddle + sensor support	0460 884 880 x 1
Isolation transformer	0148 636 002 x 1
Motorised slide 300 mm	0334 333 884 x 2
Motor cable 10 m	0460 745 882 x 2

Recommended option

Mounting insulator	0278 300 180 x 4

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

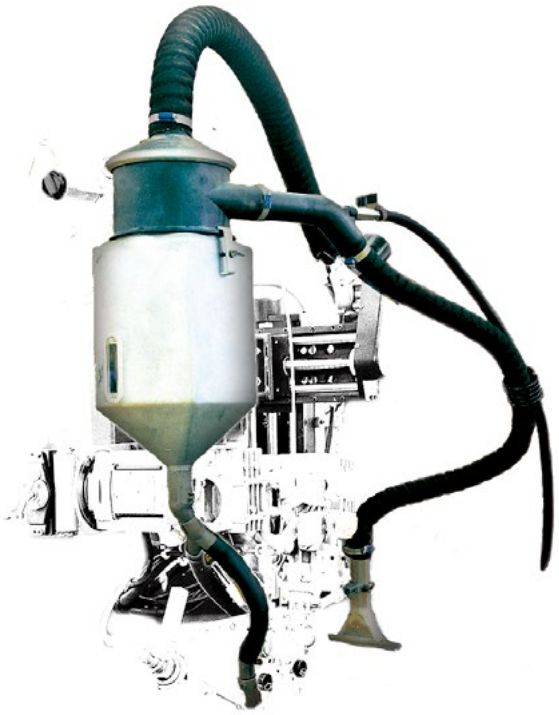
For GMH only:

Sensor cable, L = 5.0 m	0416 749 988
Sensor cable, L = 9.0 m	0416 749 989
Sensor cable, L = 19.0 m	0416 749 980
Sensor with finger	0416 688 881
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

OPC Basic and super

Sturdy compact flux recovery systems

- Robust and compact design.
- Easy to operate and practically maintenance free.
- Integated 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.

OPC Super Flux Recovery System

- Similar to basic system but with stronger ejector and cyclone - provides increased suction.
- Can also be used with pre-heated flux.

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.*

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	XA00105 020
Sales Literature Wear parts OPC	XA00126 420

*) *Excl. hose, nozzles and filter*

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 pressurised 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 3000

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.

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 2000 systems include 25 m 1/2" air pressure hose, 25 m flux feed hose from TPC to hopper (20 m for heated systems) 12 m flux suction hose, suction hose between the primary separator and the vacuum unit (2020 = 2 m, 3000 = 5 m), bent inlet for flux hopper and flux recovery nozzles.

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	XA00104 820
Sales Literature FFRS 2000 & 3000	XA00104 920

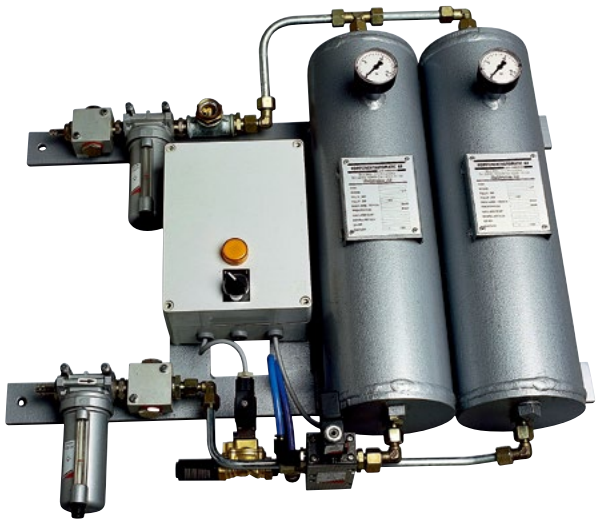
Technical Data

	FFRS 2000	FFRS 3000
Weight without flux, kg (lbs.)	320 (705)	400 (882)
Dimensions, LxWxH, mm	1100x800x2210	750x450x2210
Primary separator		
Volume, l (gal.)	50 (13)	50 (13)
Dimensions, LxW, mm (in.)	450x700 (18x28)	450x900 (18x35)
Suction unit		
Type	P30	E-PAK 150
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, m^3/h	240	270
Sound level, dB	71	63
Filter area, m^2	3	3
Filtration efficiency, %	99.95	99.95
Life-span of filter, work hours	4000-6000	4000-6000
Weight, kg	74	194
Dimensions, LxWxH, mm	950x640x1200	1200x690x2000

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 pressurised 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

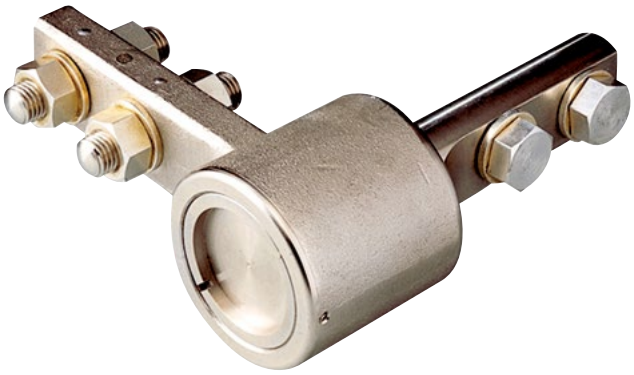
Options & Accessories

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.) Normal pore size, Ångström Particle size, mm (in.) Density, kg/m^3 ($lbs/in.^3$)	 10 (22) 4 2.5-5.0 (0.01-0.20) 720 (0.023)	 16 (35) 4 2.5-5.0 (0.01-0.20) 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

- Used for a good connection to the workpiece for 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.



Rotating ground coupling NKK

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

Return clamps for rotating workpieces

- K2 or PZ3 can be mounted directly on to the rotatable earth coupling to create a good contact between the work piece and the return cable.
- Used together with the GA 800 to form a complete earth clamp that can handle high current welding on non-rotating work pieces.

K2 clamp head for NKK 800/1200

GA 800 handle connection for K2

PZ3 polo clamp for NKK 2000

Ordering Information

GA 800 - handle connection for K2	0700 004 005
K2 - clamp head for NKK 800 or 1200	0700 004 004
PZ3 - pole clamp for NKK 2000	0700 004 006

For more welding accessories, please refer to ESAB Standard equipment product catalogue.

Camera system

For Submerged and Open Arc Welding

These camera systems will substantially facilitate the operation of your welding stations. Together with a laser or pilot lamp you can control your welding process from wherever you find it convenient.

The system basically consists of a purposeful designed camera with built-in crosshair generator to provide a continuous and distinct joint scanning.

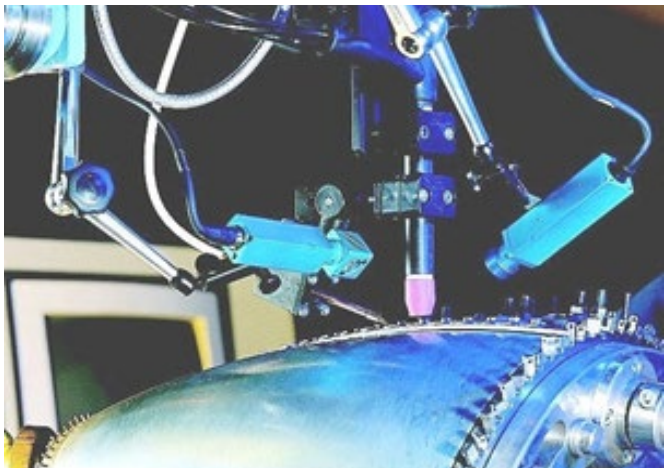
In combination with the flat screen it becomes a unit for excellent control and tracking of the joint.

As soon as you start welding, the camera switches over to viewing the pool, facilitating the supervision of the process.

Optional overview camera
As an option to the system there is an overview camera to reproduce a picture of the welded joint in order to get an immediate inspection of the welding quality. At the same time you can supervise the environment around your set-up.

Productivity
The SAW-camera system gives you the possibility to combine the monitoring of the machine with other work around your production station.

Optional overview camera
You no longer need to be close to the arc to monitor it and you do not need to climb voluminous workpieces to find your seam.



SAW Camera / GMAW Camera / SAWC Compact Camera

Ordering Information

Camera system for:

A2/A6 SAW with cooling unit	0811 412 880
A2/A6 SAW without cooling unit	0811 412 881

For the systems above, the following is included: Camera for SAW, housing to camera, monitor, cross hair generator, camera mounting bracket, work light, work light bracket, and necessary cables.

SAW Compact Basic/Overview	0811 413 880

For the systems above, the following is included: Camera for SAW, housing to camera, monitor, cross hair generator, camera mounting bracket, work light, work light bracket, and necessary cables.

SAW Compact with cooling unit	0811 413 900
SAW Compact without cooling unit	0811 413 901

For the systems above, the following is included: Camera for SAW compact, housing to camera, monitor, cross hair generator, Camera control unit, Camera mounting bracket, work light, work light bracket and necessary cables.

GMAW with cooling unit	0811 414 880
GMAW without cooling unit	0811 414 881

For the systems above, the following is included: Camera for GMAW, housing to camera, monitor, cross hair generator, Camera mounting bracket, Camera control unit, work light, work light bracket, and necessary cables.

Options & Accessories

SAW Camera	0810 092 880
GMAW Camera	0811 380 880
GMAW Camera (prep for cooling)	0811 380 881
SAW Compact Camera	0811 381 880
SAW Compact Camera (prep for cooling)	0811 381 881
SAW Compact Basic/Overview	0810 517 880
Monitor incl. cross hair generator	0811 383 880

Housing is included in the cameras and monitor above

Technical Data	SAW Camera	GMAW Camera SAW Compact Camera*	SAW Compact Camera Basic / Overview**	Monitor
TV Standard	PAL/NTSC	PAL/NTSC	PAL/NTSC	-
Temperature range	Operating: -5°C - +50°C (PCB)	Operating: -10°C - +50°C (PCB) Cooled version: ~300 °C	-	Operating: -5°C - +35°C
Dimensions, mm	60x60x105	145x24x24	25x25x126+lens (d)	-
Weight, gram	Approx. 460	Approx. 460	Approx. 160	-
Panel Type	-	-	-	LCD 15” with protective glass

**) GMAW and SAW compact camera has the same specification, but GMAW camera system is made for open arc light which is not possible for SAW compact camera system.*

***) SAW Compact Basic is a simpler alternative to SAW Compact Camera and can be used as an overview camera*

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./min).

Ordering Information

Cooling unit OCE-2H	0414 191 881
Flow guard for OCE-2H	0414 231 880
Sales Literature	XA00043 120

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, bar	3
60 Hz 410 kPa, bar	4.1

Technical Data Cooler

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

Carriers & Gantries

Mechtrac 1730/2100/2500/3000

For mechanised gantry automation

- Fast and flexible way to increase productivity.
- Equipped with A2-A6 PEK process controller and A2 welding equipment for mechanised 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

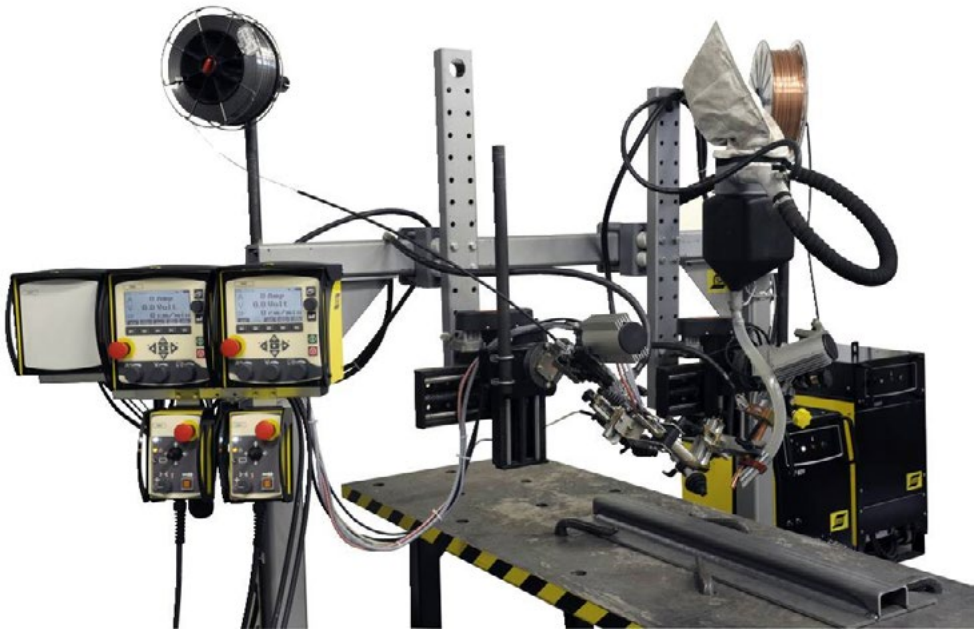
Mechtrac 1730, dual drive	0809 670 881
Mechtrac 2100, dual drive	0809 670 882
Mechtrac 2500, dual drive	0809 670 883
Mechtrac 3000, dual drive	0809 670 884
Sales Literature	XA00101 220

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 stabilised manipulation of welding torches with optimised 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 both sides for motorised 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 axis.
- Submerged arc welding is the ideal method for the applications intended for this station.
- Flux consumption is reduced and the workplace is kept clean 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 axis 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

- Primarily used for production of various beam structures such as I/H, box beams of tapered and non symmetric design, stiffener sections and the process of joining 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 axis permit flexible welding production.

Tank welder Circotech

A series of mechanized compact girth welders

Circotech is a series of self-propelled 3 o'clock welding equipment primarily developed for on-site erection of large storage tanks, silos, blast furnaces and similar cylindrical objects. It is available as a single-side version and a double-side version. Usually it is designed to travel on the top edge of the tank shell. As there are different ways of building tanks, one machine in the series is designed to travel on a rail which is temporarily fixed to the shell or on a stand-alone ring outside the shell.

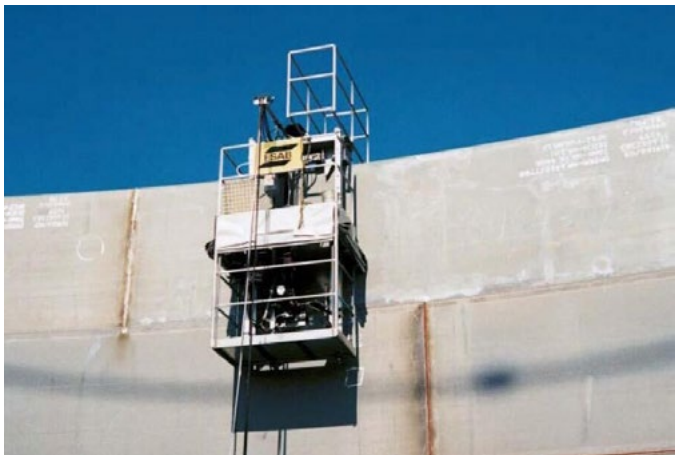
Operator safety - CE approved

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

Submerged-arc welding

The machine is usually equipped for SAW with single wire. SAW with twin wires is, upon request, available as an alternative. The flux is supplied from a flux hopper and supported in the welding position by an endless rubber belt from where it may be collected/ sucked up after welding and re-circulated. A flux recovery unit can be included.



Technical Data

Height, mm (in.)	1000-3000 (39-118)
Thickness, mm (in.)	8-35 (5/16-1.4)
Min. Shell curvature, radius, mm (in.)	4000 (157)

Economic benefits

The investment in a Circotech installation contributes to a consistent weld quality, which means low defect rate. The consumption of welding consumables is low because of efficient joint preparation. All in all this means good return on investment.

Circotech design

The Circotech is built up of modules to satisfy a variety of customer requirements. The very basic machine can be equipped with a carriage which travels on the top edge of the plates of a tank, or it can be supplied with a carriage made to travel on a separate rail or ring. In this shape the machine can also be controlled by an operator walking along with it on a built-up cat-walk.

However, the machine is usually supplied with a cabin in the form of a safety cage with curtains for protection against rain and wind.

It is easy to adjust the machine for different plate heights, because of the telescopic design of the frame. The design also makes it easy to transport.

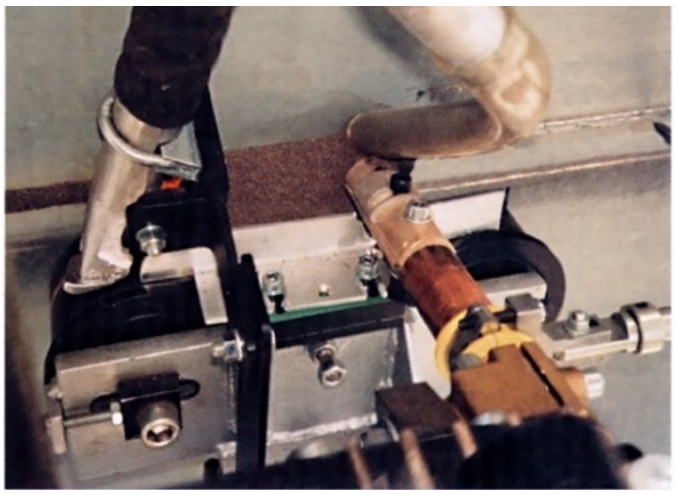
For environmental and safety reasons, tanks are nowadays often built with double shells with a space between shells of around 2 m. Circotech is designed to operate also in this space.

Double-side Circotech being lifted onto the job

Package content

- Ready to weld ESAB subarc welding machine type A6 with manual adjustment slides
- Pre-set control box
- Weather-shielded safety cabin
- ESAB power source LAF 1001
- Flux hopper, 6 l and flux support
- 50 m control cable
- Welding and return cables

A single-side Circotech can be specified for welding either in right-hand or in left-hand direction.



Close-up of the welding head

Ordering information

- Single side or double side equipment
- A6 system for SAW with single wire or twin wire
- Top of plate travelling or rail travelling

For ordering information, please contact your nearest ESAB representative.

Options & Accessories

- Preheating and joint-cleaning oxy-acetylene device, (complete incl. hoses)
- Lighting equipment
- Extension cables
- Twin-arc kit
- Motorized slide

Handling
Equipment

Telbo™ 6500 and 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 adjustment 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.*

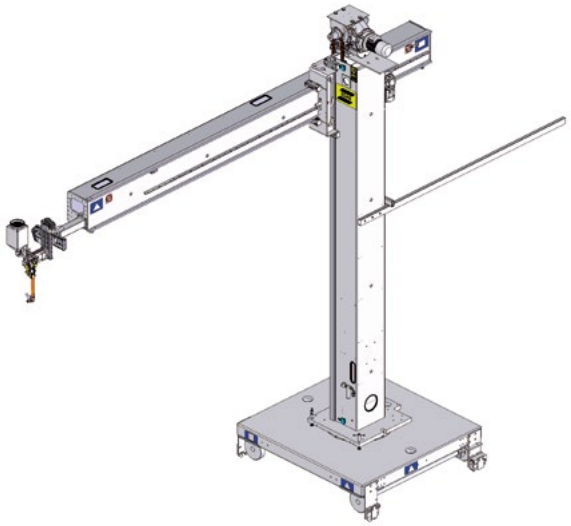
CaB Systems

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.



Basic Station 1 - Standard format

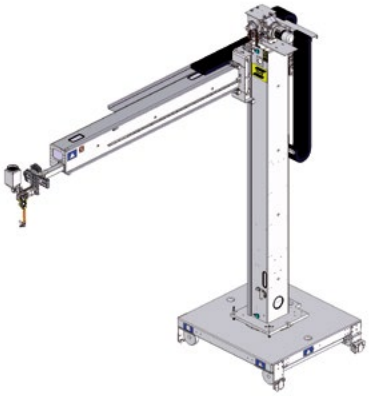
Conventional Column and boom, with a movable boom and welding head at boom end. Welding equipment can be positioned along four axes.

CaB Systems

Cont.

CaB 300M / 460M / 600M
Modular format - extended functionality

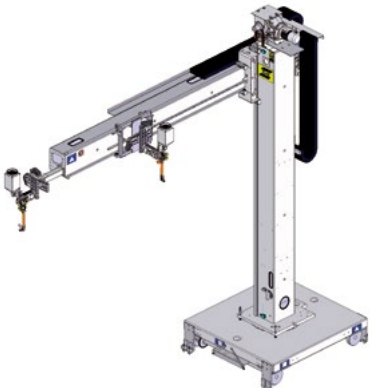
- A modular range of column and booms, available in three load sizes.
- Standard mechanical performance, including cable chains for the boom motions.
- The welding head is mounted at the front end of the boom.
- More than 20 options fully integrated, such as tandem welding, shift function, transport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



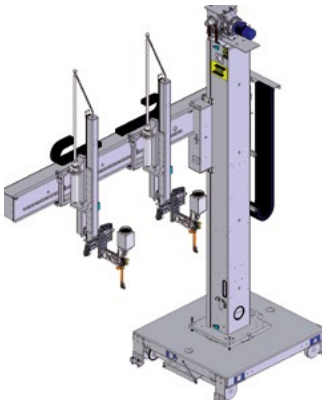
Basic Station 1 - Modular and Custom format
Conventional Column and boom, with a movable boom and welding head at boom end. Welding equipment can be positioned along four axes. Cable chains are included.

CaB 300C / 460C / 600C
Custom format - special capabilities

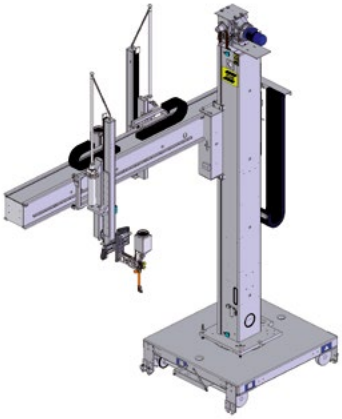
- A customized range of welding column and booms for different customer requirements and applications.
- Loading capacities and working strokes for utmost accessibility to the welding joints.
- Based on the modular CaB range, solutions to meet the most demanding request can be achieved.
- Welding methods as TIG, MIG and SAW cladding as well as Narrow 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 wel- ding 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 track- ing systems, on separate tracks. Ideal for transversal double-fillet welding of stiffeners.

Robot
Package

Aristo® robot package

New projects

Developments in the field of welding robots progresses very rapidly with new procedures and new materials being introduced all the time. They all require new functions and new software to be able to be utilized fully and to show their performance advantages. The Aristo® components are fitted by using quick-connectors. Recalibration is not required during the installation or replacement of components in welding machines. The ESAB TrueArcVoltage™ technology measures the actual welding voltage at the arc and guarantees its reproducibility. Wire feed hoses of various lengths allow efficient transport of the wire from the MarathonPac™ container to the wire feed device. This greatly increases the flexibility of the unit.

Retrofit

There's nothing retro about our robot retrofit welding kit, it firmly focuses on future productivity.. It also optimizes previous installed robot capacity. It will extend robot life and boost welding performance at the same time! Increase your productivity by upgrading your robots with new welding technology.

Welding technology

Aristo® Mig 5000i The Aristo® Mig 5000i(w) is the ideal partner in the production or prefabrication of high alloyed materials that demand exceptional welding performance. Typical application areas include robotic welding, advanced mild and stainless steel fabrication, advanced aluminium fabrication, shipbuilding and yellow goods.

Aristo® $U8_2$ Plus & $W8_2$ Fieldbus Light, easy to use and very robust, the Aristo® $U8_2$ offers the ultimate in man-machine communication for advanced applications. It is the standard operational pendant for Aristo® robot packages and together with the $W8_2$ Fieldbus it connects to various robot controllers with a DeviceNet, Profibus, CanOpen interface.

I/O box This interface, which fits onto the Aristo® Mig 5000i(w) power source, connects ESAB equipment with all available robot controllers with I/O boards (straight polarity). This retrofit I/O comes as standard with a module enabling recall of 15 weld data sets stored in the Aristo® $U8_2$ pendant. An optional additional module provides access to all 255 weld data sets in the $U8_2$.

Aristo® $W8_2$ - Integrated The Aristo® $W8_2$ is an interface unit for direct communication with ABB's IRC5 controller. Welding data can be changed during welding from the ABB flexpendant. It gives direct access to the wire feed speed and arc voltage and other relevant signals as there are anti- collision signal, welding process active, arc confirmation, multilevel event information wire feed, reversing of wire feed direction, protective gas monitoring, cleaning gas monitoring and two level safety shop.

RoboFeed Aristo® RoboFeed 3004w ELP 12p is a fully enclosed wire feeding unit, comprising the drive control system and operational functions, including gas purge and wire inching, forward and reverse. This wire feeder has been specially developed to the meet the stringent requirements of ESAB's SuperPulse™ .

SuperPulse™ Combines the advantages of the various types of arc. The pulsed / short arc combination inputs the least amount of heat. A spray arc combined with a pulse provides high welding speed and weld penetration with minimum distortion, you can use two pulsed arcs of different frequencies, for example, when welding aluminium with a TIG look.

A Robot Package for Every Task

Package contents

Power source package

Power source: Aristo Mig 5000i, 4004i
Water cooler if required
Flow guard if required
Aristo W8$_2$ Interface
Connection cable W8$_2$ to power source
Aristo RoboFeed 3004W or 3004HW
Feed box & cable pack (only required for 3004HW)
Aristo U8$_2$ controller
Extension cable for U8$_2$, 7.5 m
Interconnection cable W8$_2$ to robot cabinet, 10m

Robot dress package

Feeder bracket kit specific to robot model
Torch cable assembly
Adapter flange
Collision sensor

Torch package

Torch swan neck, 22° *
Torch mount, 23° (not required for HW robots) *
Torch starter kit

** Other torch necks & torch mounts are available and can be ordered separately.*

Aristo W8$_2$ Interface

Aristo U8$_2$ controller

Aristo RT 62

Aristo RT 2

Aristo RT NG

Available for ABB, KUKA, Fanuc and Yaskawa (Motoman) for both standard arm and hollow wrist robots.

Swift Arc Transfer™

MAG welding at very high travel speed

SAT is a high productivity MIG process using AristoRod™ non-copper coated wires with advanced surface characteristics at travel speeds well beyond the limits of normal spray arc welding. The advantage with AristoRod non-copper-coated wire over copper-coated wires is that it does not quickly contaminate the feed system with copper particles. SAT is developed for robotic, automated and mechanized welding and suited for fillet and overlap welds in thin to thick plate, in down hand positions. The process uses ESAB power sources together with the RoboFeed for wire feed speeds up to 30m/min in conjunction with $U8_2$ controller.

ESAB SAT™ brings following user benefits:

- A stable process at very high welding speed.
- Excellent weld appearance.
- A good weld penetration.
- Low heat input and low deformation.
- Less post weld labour, due to limited spatter and deformation.
- Suited for thin up to thick materials with a single parameter setting.
- Easy to implement - common torch positions, normal stickout length.
- Very low amount of silicates.

SAT™ for industrial applications:

- Transport (Automotive, Railway, Mobile machinery, Shipbuilding)
- General steel fabrication
- Bridge building, fabrication of large beams
- Tank- and vessel building
- Container- and equipment construction

Process is especially suited for:
Mechanised- and robotic applications

JetStream

Torch cleaning station

Innovative cleaning principle of contact tips, tip holders, insulators and the gas nozzle.

For prismatic, round and elliptical gas nozzles and inside cleaning of conical nozzles. Leaves a clean and smooth surface, enhances laminar gas flow in the torch.

- Longer life of all consumables
- Enhances cleanliness of the welding area
- No mechanical damage to the torch
- The torch head is blasted with a particle jet
- Limitations of the Reamer cleaning are overcome

Ordering Information

JetStream RT cleaning station 24V	0459 990 215
Power supply for ESAB JetStreamRT, 115~230 VAC, 50~60 Hz	0459 990 216
Granulate for JetStream	0700 300 399
RT Anti spatter liquid 5L	0700 300 400

Options & Accessories

Rubber seal OD/ID 24/23mm for JetStream*	0700 300 412
Rubber seal OD/ID 20/19mm for JetStream*	0700 300 419
Rubber seal elliptical for JetStream*	0700300413
Rubber seal for Tandem torch RT22 for Jetstream	0700 300 415

* Suitable for torch model RT62, RT72, RT82. For further information, please contact your ESAB robotic specialist.

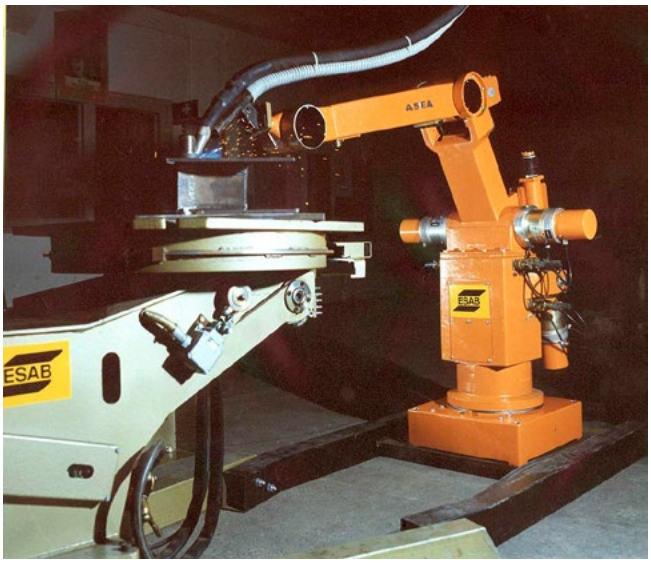
Before **After**

Aristo® Mig for retrofitting existing robot installations

Extend robot life expectancy!

Almost 40 years ago, in 1974, ESAB and ASEA (today's ABB) parented the world's first electric welding robot.

Since then, radical developments in robotic welding technology have transformed the industry - many pioneered by or in collaboration with ESAB. For example, Dual stations and robot travel tracks (1976), hanging robots and travelling gantries (1978), free programmable positioners (1981), fully flexible manufacturing systems for arc welding (1984) and many more.



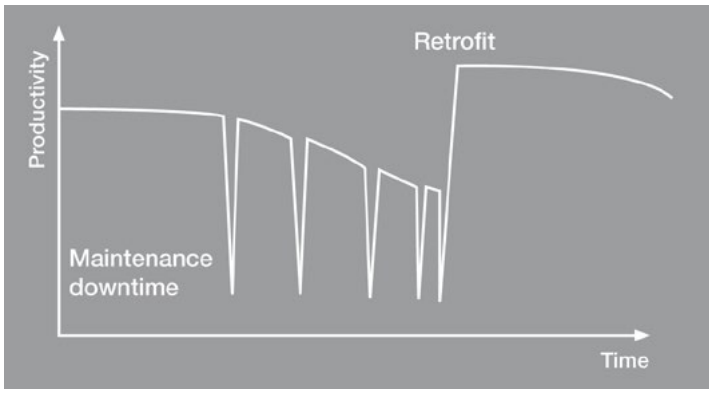
As the pace of change accelerates, demands on speed, quality and cost efficiency increase. To stay competitive in heavy engineering, the latest welding technology is essential. Scrap all those reliable, durable industrial robots that don't perform to the standard. The initial investment may seem to be a substantial and a daunting option. ESAB has the solution for your needs.

ESAB cost efficient robot retrofit kit can inject new life in your production line. Extend its life by retrofitting the latest welding technology for dazzling performance. Not just 'good as new' - forget facelifts - our retrofit technology will boost performance beyond your robots original specifications. Too good to be true? Trust us - our pedigree goes way back. After all, we introduced the concept in the first place.

Inject new life in proven technology

The adjacent diagram indicates the failure of wear parts,extended downtime for increased maintenance and an overall decline in welding performance which can have a cumulative negative impact on productivity.

The dramatic boost offered by an ESAB retrofit kit can do more than just extend useful robot life. It can actually enhance originally specified performance.



Special
Applications

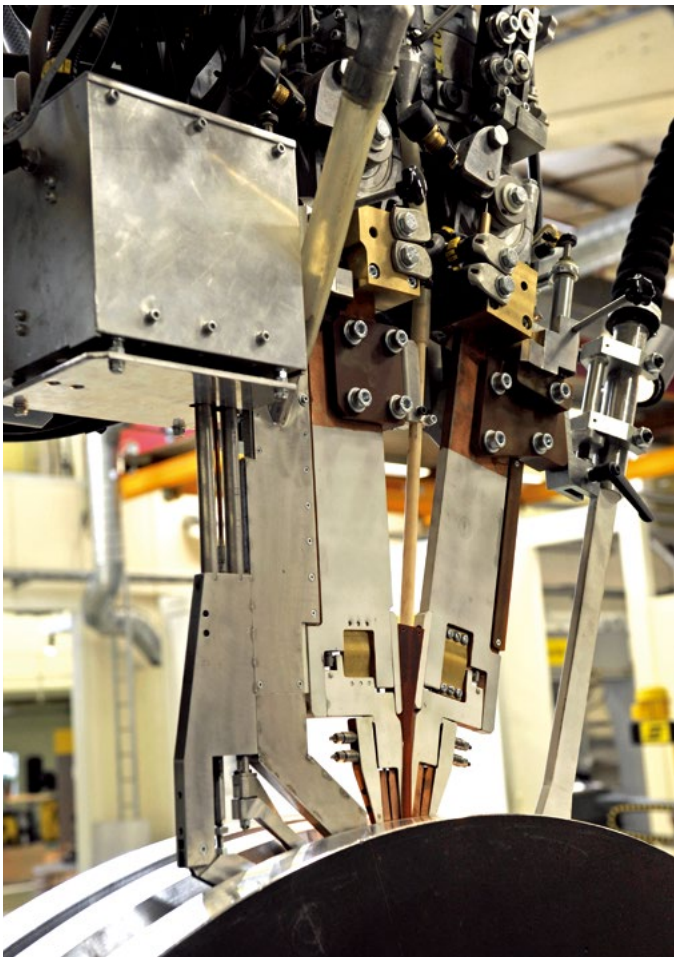
HNG Multi

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.) - Circumferential, Ø mm (in.)	 1500 (59.06) 1500 (59.06)
Weight, kg (lbs.)	140/165 (309/364) (Single/Tandem)



Ordering Information

For more information, please contact your nearest ESAB representative.

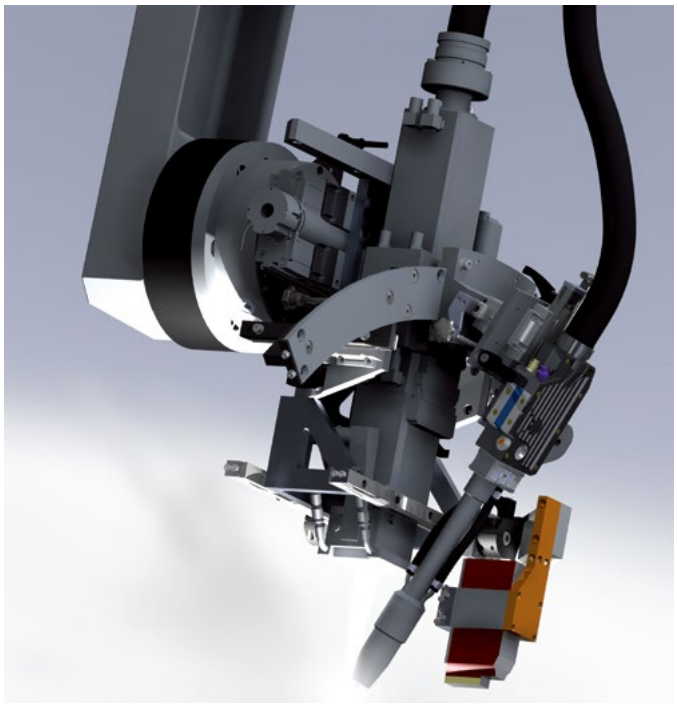
Sales Literature XA00141620

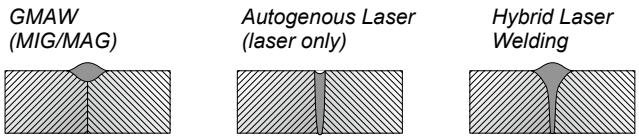
Double-sided joint tracking

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.

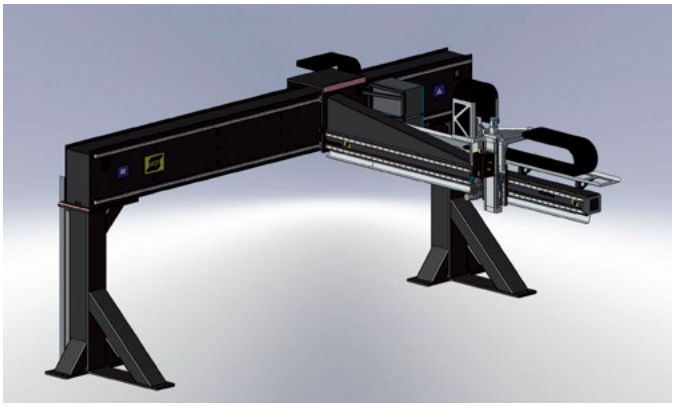




Graphic illustrating differences between GMAW, Laser and Hybrid Laser Welding weld profiles

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.



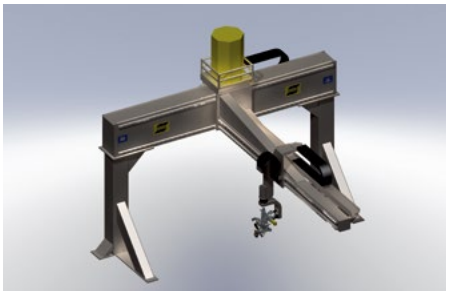
Ordering Information

For more information, please contact your nearest ESAB representative.

Sales Literature	XA00153 320

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 envelopees 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.

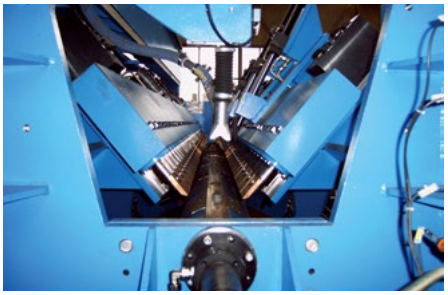


Hybrio™ Beam

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.

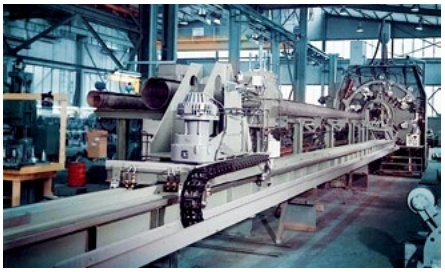
Hybrio™ Seam

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.



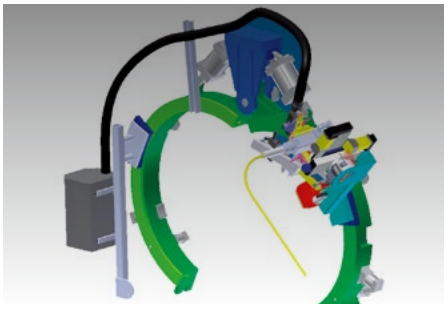
Hybrio™ Tube

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. It then adapts 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.

ICE™

Revolutionary SAW technology for enhanced productivity

ICE™ technology is as simple as it is brilliant. ICE™ exploits the excess heat generated by the welding process to melt an additional non-powered welding electrode - the **Integrated Cold Electrode**. This yields significant productivity benefits without increasing heat input.

- **Up to 50% higher deposition rate with same heat input**
- **Up to 35% increase in welding speed**
- **Up to 20% reduction in flux consumption**
- **Energy savings**
- **Reduced heat input and distortion**
- **Flat Cap Control™**
- **High Deposition Root™**

Q: Is welding a critical part of your production process and does it cause a bottleneck?
A: If so, ICE™ is the solution.

Q: Want to increase capacity within your existing production footprint?
A: ICE™ can boost output significantly without need for expensive investment in new welding systems and extra capacity. No need for additional skilled welders.

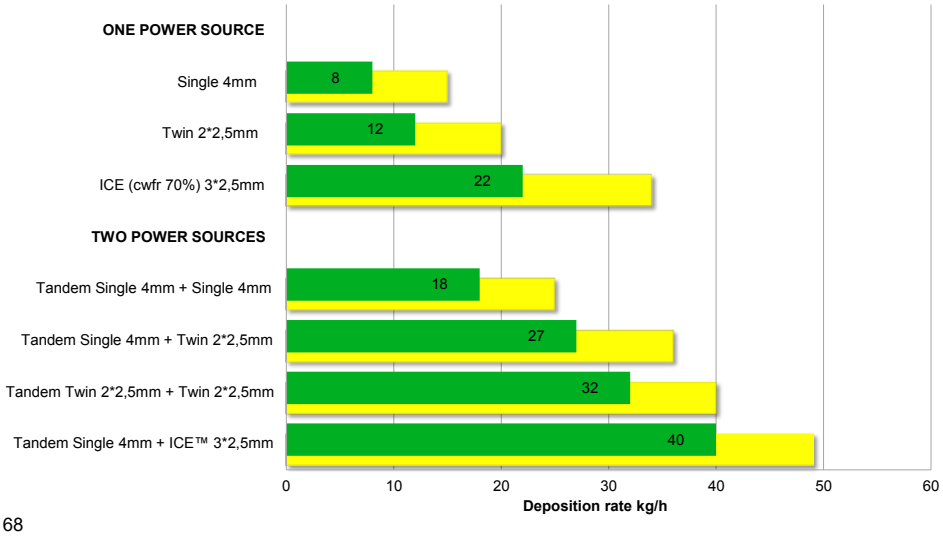
Q: Need to invest in new production systems?
A: Look no further. The combination of ESAB's ICE™ technology, welding consumables and know-how offers the optimum welding solution.
Enjoy the increased productivity from shorter production times and the most cost-efficient Submerged Arc Welding. The market is yours for the taking!

Q: ICE™ saves energy and the environment?
A: ICE™ reduces your energy requirement, to ensure a smaller carbon footprint, greener production and lower costs. Unlike conventional SAW methods.

Applications
Some of the many applications that can beneift from ICE™ technology are:

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

Maximum deposition rate comparison



Green = Comfort parameters
Yellow = Process limit

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

Note: The comparison is made welding at approximately the same heat input.

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

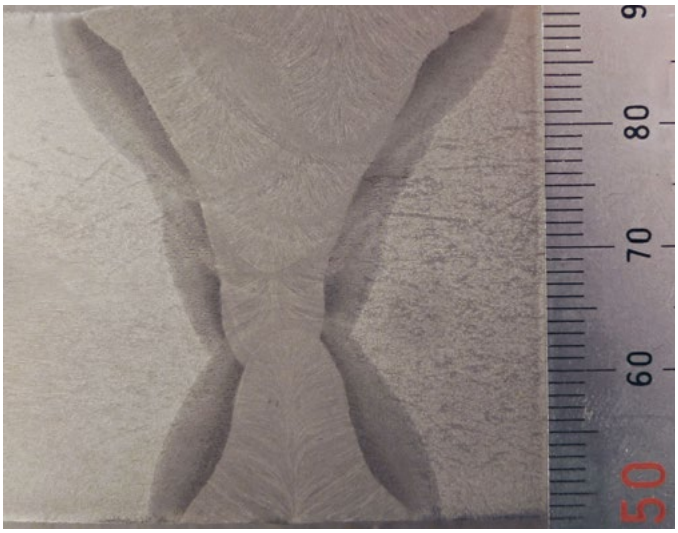
Two power source and welding-head solutions (tandem welding)

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™
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.

For more information, please contact your nearest ESAB representative for a ICE™ HIT team member.

ESAB Retrofit

Modernization and upgrading

Upgrade ESAB A2, A6 & A6S Submerged Arc Welding head to the latest generation

Why upgrade?
Technology is always improving and higher productivity is needed with traceability of welding.
Older generations of welding controls become obsolete (generally due to electronic components that sub suppliers no longer support or manufacture). In these cases the availability of spare parts can seriously effect your production. New digital data processes are handled faster and more accurately with the addition of data logging for Quality Assurance.

Do I have to buy a complete New system?
Not always, ESAB SAW (Submerged Arc Welding) systems with PEH analog controllers can be upgraded to PEK digital systems in 1 day.
The upgrade kit includes everything needed to make the power source compatible with the latest generation of weld controller PEK. The upgrade kit includes a number of improvements made to extend the life time of the power sources even further. So what this means is replace the old controller, upgrade the power source, add the encoders to both travel and wire feed motors.
In practise this will be between 30% to 50% less than a new replacement welding system.

What is included?
Included in the kit are following components: A new cable harness, a new auxiliary transformer, a new main pc-board, all mounting details, an additional rating plate to be mounted beside the existing one and an instruction how to do the actual upgrade (must be done by qualified ESAB technician).

What power sources can be upgraded?
Only power sources (LAF 1000, LAF 1250, LAF1600, TAF 800 and TAF 1600) with a CE mark, manufactured from February 8th 1995 or later and in good working conditions can be upgraded without any complex approval procedure. The CE mark guarantees that the power source was designed to meet existing standards from 1995 and can be upgraded with our kit to meet the standards of today.

Who can make the upgrade?
Any trained ESAB service engineer and third party service company authorized to perform service on ESAB equipment are approved to install the upgrade kit.

Advantages of upgrading
The power source will be upgraded to the latest design where important improvements have been made. A new type of contactors is used with better protection against dust. The life time of contactors will be extended. Electrical filters and ferrite cores are installed to minimize disturbances and also to better protect electronic components and extend their life time. PEK data collection and all of the latest functions including 255 program memory.

General points
- Big increase in features
- Very low investment cost
- Very high return on investment
- Spares are available for a long time
- Better control of wire feed motor
- Software upgrades available via USB
- Bigger display screen
- Easy to use
- Large memory
- Easy to service

NEW Digital A2TF, A6TF or A6S Submerged arc tractor

A2TF

A6TF

For a complete list of PEK process controller features please ask for the separate fact sheet.
Note: 1- pictures for reference only.
2- Freight to suitable ESAB authorised workshop is at customer cost.

Upgrade ESAB A2 or A6 TF Submerged Arc Welding tractor to the latest generation Versotrac™

Why upgrade?
Technology is always improving and higher productivity is needed with traceability of welding.
Older generations of welding controls become obsolete (generally due to electronic components that sub suppliers no longer support or manufacture). In these cases the availability of spare parts can seriously effect your production. New digital data processes are handled faster and more accurately with the addition of data logging for Quality Assurance.

Do I have to buy a complete New system?
Not always, ESAB SAW (Submerged Arc Welding) systems with LAF analog and digital power sources can be upgraded to re use the old power source and add the new Versotrac™ systems in less than a 1 day.
The upgrade includes everything needed to replace your old A2 or A6 tractor using PEH but keeping the existing power source. Versotrac™ upgrade includes a number of improvements made to extend the life time of the welding package even further. So what this means is replace the old tractor, control cable and 2x OKC95 welding cable connectors..
In practise this will be between 30% to 40% less than a new replacement welding system

What is included?
Included in the kit are following components: New welding cable connectors, New Versotrac™ tractor complete. All contact tips and feed rolls are the same as your existing items.
What ESAB Power sources can be used
Power sources LAF 1000, LAF 1250, LAF1600, TAF 800 and TAF 1600, LAF 631, LAF 1001, LAF 1251, LAF1601, TAF 801 and TAF 1601 with a CE mark, manufactured from February 8th 1995 or later and in good working conditions can be used as standard without any modifications.

Who can make the upgrade?
Any ESAB service engineer and third party service company authorized to perform service on ESAB equipment are approved to install the upgrade.

Advantages of upgrading
The tractor is ESAB's latest design where features and improvements have been made.
Modularized system where the tractor can be disassembled into smaller units that can be transported and easily be carried into confined spaces.

- Four and three wheel versions available - for stability on any surface
- Robust wire feed can weld single wire up to 5 mm up to 1000A @ 100%
- Adapted for both inverter based power sources and conventional DC and AC power sources
- Easy to change weld point position and weld process - with tool less interaction and manual scales on all major settings
- Easy and simple user interface with real time heat input display with EAC10 process controller
- New revolutionary wire spool handling system

General points

- The Big increase in features
- Low investment cost
- Very high return on investment
- Spares are available for a long time
- Large heavy duty wire feed motor
- Software upgrades available via USB
- Big display screen (EAC10)
- Easy to use
- Large memory
- Easy to service
- LED flood lights option for dark work areas

NEW Digital A2TF Submerged arc tractor

For a complete list of Versotrac™ and EAC10 process controller features please ask for the separate fact sheet.
Note: 1- pictures for reference only.

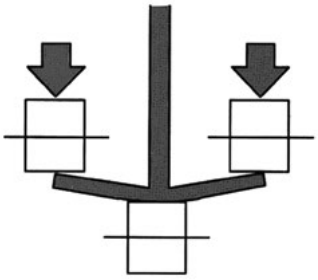
Beam welding - pull through welders

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 H-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.

Beam welder IT-258

Straightening principle:

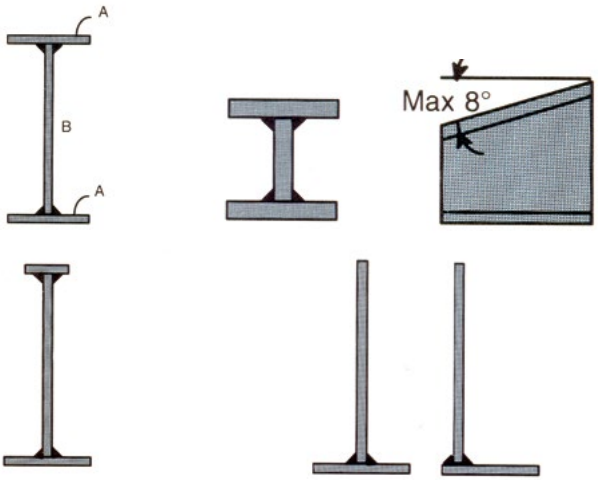


Alternative: H Beam Welder

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 that 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.

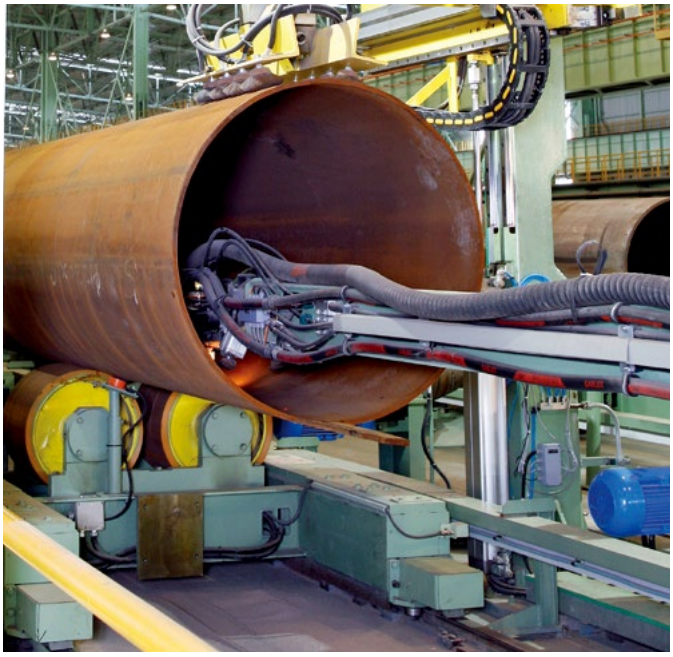
Precise, high-speed longitudinal welding
Our concept for longitudinal submerged-arc welding is suitable for pipes in a normal diameter range of 20-64", a normal wall thickness of 6-40 mm (0.24-1.57 in.) and a length of up to 18 m (708.66 in.).

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 straightforward 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.



Internal welding

External welding

Ordering Information

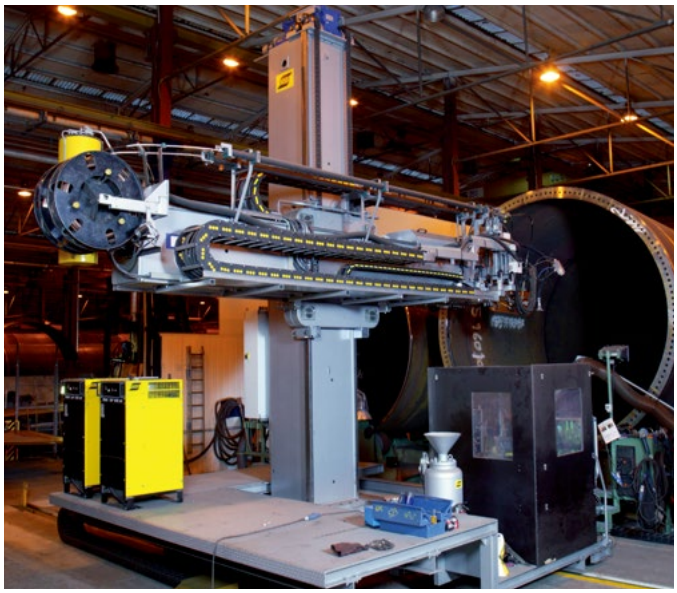
For more information, please contact your nearest ESAB representative.

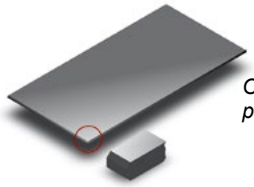
Sales Literature	XA00136520

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.

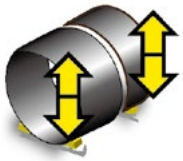




Oxy-fuel or plasma cutting of plate and seam preparation

Submerged-arc welding of flanges and supports

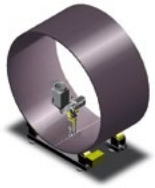
Rolling, forming and tack welding of the shell



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.

External longitudinal submerged-arc welding using a column and boom

Automatic welding of the door frame.



Internal longitudinal submerged-arc welding using a column and boom

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

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	•	

A2 Wear parts

Cont.

Feed Roller Grooved and Knurled

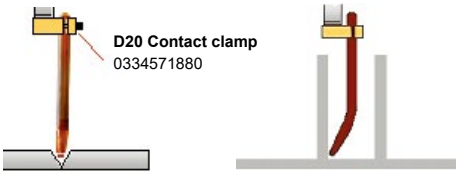
Wire Dimension Cored Wire, mm (in.)	Part Number	SAW Single	GMAW	
0.8-1.6 (.030-1/16)	0146024880	●	●	
2.0-4.0 (5/64-5/32)	0146024881	●	●	

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	●	●	

[1]*Use 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

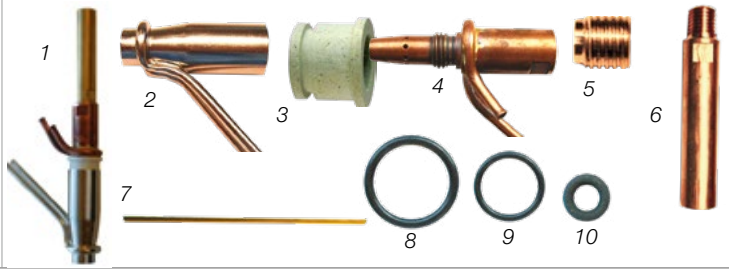
Wire Dimension mm (in.)	Part Number	SAW Single	GMAW	SAW Twin	
M12					
1.6 (1/16)	0154623008	●			
2.0 (5/64)	0154623007	●			
2.5 (3/32)	0154623006	●			
3.0 (0.12)	0154623005	●			
3.2 (1/8)	0154623004	●			
4.0 (5/32)	0154623003	●			
M6					
0.8 (.030)	0153501002[1]		●		
1.0 (.035)	0153501004[1]		●		
1.2 (.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	●			

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

A2 Wear parts

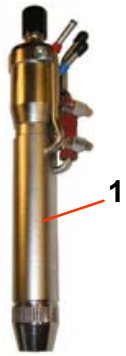
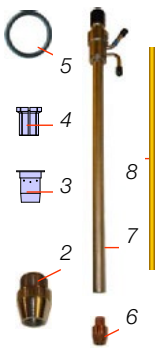
Cont.

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*

A2 Wear parts

Cont.

MTW-600 GMAW Feed Roller, Single Wire

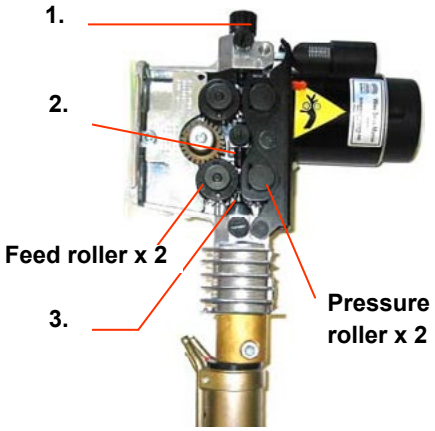
Wire Dimension mm (in.)	Part Number		GMAW	
	Fe, SS	Al		
0.6-0.8 (.023-.030)	0369557001	-	●	
0.8-0.9 (.030-.035)	-	0369557011	●	
0.8-1.0 (.030-.040)	0369557002	-	●	
1.0-1.2 (.040-.045)	0369557003	0369557006	●	
1.2-1.6 (.045-1/16)	0369557007	-	●	
1.4-1.6 (.052-1/16)	0369557013	-	●	
1.6 (1/16)	-	0369557008	●	
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

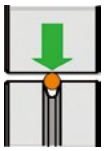
Description	Part Number
1. Nipple wire conduit	0455049001
2. Intermediate nozzle	0455072001
3.1 Outlet nozzle, Fe	0469837880
3.2 Outlet nozzle, Al	0469837881



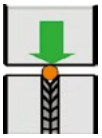
A6 Wear parts

Secure your welding quality and productivity with ESAB original parts

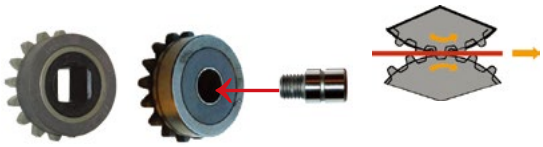
Feed Roller SAW Single Wire

Wire Dimension, mm (in.)	Part Number	
1.6 (1/16)	0218510281	  *Idling pressure roller* *Driving feed roller with groove*
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

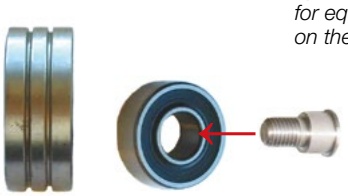
Wire Dimension, mm (in.)	Part Number	
3.0-5.0 (.012-3/16)	0218510299	  *Idling pressure roller* *Driving feed roller with knurled groove*
Pressure roller	0153148880	

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

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

[1]*Use with shaft for pressure roller #0212901101.*

Feed Roller SAW Twin Wire

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

Feed Roller SAW Twin Wire, Knurled U-Groove

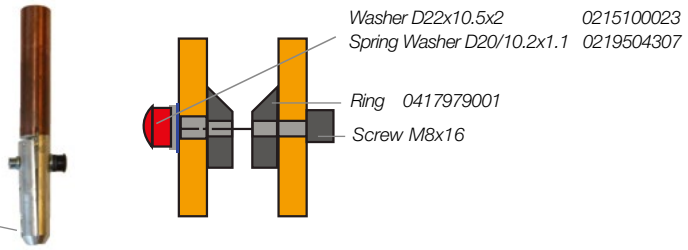
Wire Dimension, mm (in.)	Part Number
2 x 2.0-3.2 (5/64-1/8)	0148772880
Pressure roller[1]	0218524580

[1]*Spherical type with shaft*

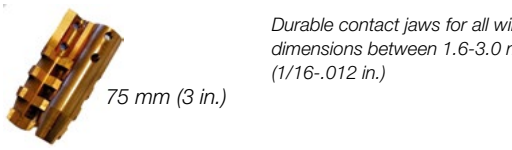
A6 Wear parts

Cont.

D35 Heavy-Duty System

Length, mm (in.)	Part Number	
D35 Straight Contact Tube		
220 (8.7) 275 (10.8) 400 (15.7) 500 (19.7) 700 (27.5) Clamp half	0417959880 0417959881 0417959882 0417959883 0417959884 0809342880	

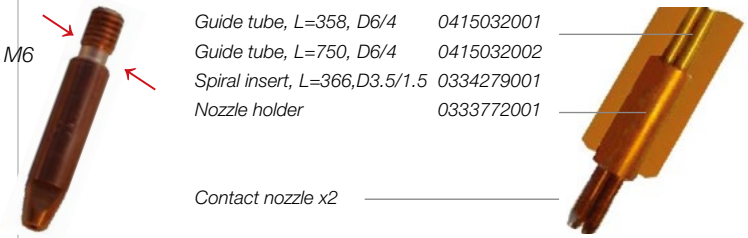
Contact Jaws for Heavy-Duty System

Wire Dimension, mm (in.)	Part Number	
Single Wire, Length 65/58 mm (2.5/2.3 in.)		
2.0 (5/64) 2.4-2.5 (3/32) 3.0 (0.12) 3.2 (1/8) 4.0 (5/32) 5.0 (3/16) 6.0 (1/4)	0332581880 0332581881 0265900880 0265900881 0265900882 0265900883 0265900884	
Single Wire, Length 120 mm (4.7 in.)		
3.0 (0.12) 4.0 (5/32)	0000237320 0000237321	
Single Wire, Length 75 mm (3 in.)		
1.6-3.0 (1/16-.012)	0265901480	
Twin Wire, Length 73 mm (2.9 in.)		
2 x 1.6 (1/16) 2 x 2.0 (5/64) 2 x 2.4-2.5 (3/32) 2 x 2.5-3.0 (3/32-.012)	0265902882 0265902881 0265902884 0265902880	
Twin Wire, Length 73 mm (2.9 in.) with Guide Tube Connection		
2 x 1.6 (1/16) 2 x 2.0 (5/64) 2 x 2.5-3.0 (3/32-.012)	0808650882 0808650881 0808650880	
Twin Wire, Length 120 mm (4.7 in.) with Guide Tube Connection		
2 x 1.6 (1/16) 2 x 2.0 (5/64) 2 x 2.4-2.5 (3/32) 2 x 2.5-3.0 (3/32-.012)	0816019882 0816019881 0816019883 0816019880	

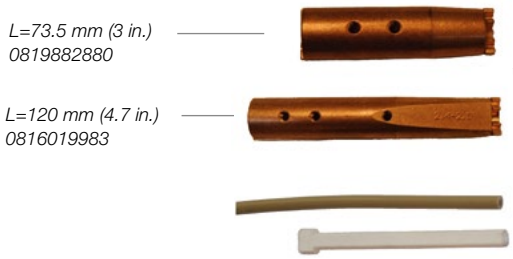
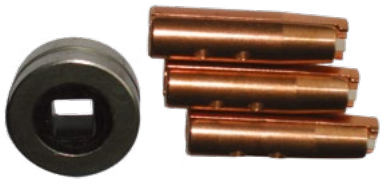
A6 Wear parts

Cont.

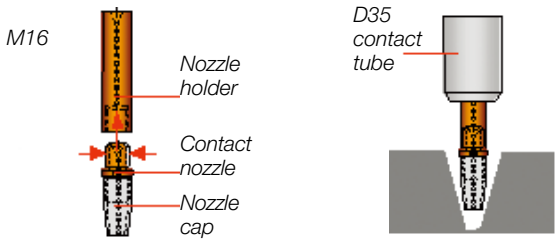
SAW Contact Nozzles for Light-Duty System

Wire Dimension, mm (in.)	Part Number	
SAW Contact Nozzle M6 for Twin Wire		
2 x 1.2 (.045) 2 x 1.6 (1/16) 2 x 2.0 (5/64) 2 x 2.4-2.5 (3/32)	0153501005 0153501007 0153501009 0153501010	

SAW Contact Jaws for ICE™

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

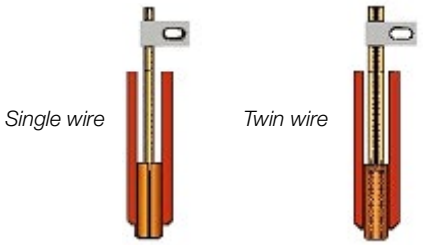
Insulated Contact Nozzle with Nozzle Cap for Narrow V-Joints

Description	Part Number	
Nozzle holder Nozzle with cap: 2.0mm (5/64 in.) 2.5mm (3/32 in.) 3.0mm (0.12 in.) 3.2mm (1/8 in.) 4.0mm (5/32 in.) Nozzle cap	0000237415 0000237329 0000237328 0000237330 0000237332 0000237327 0000237331	

A6 Wear parts

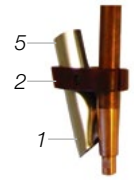
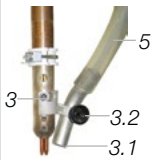
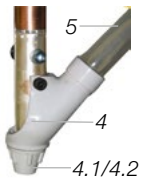
Cont.

Guide Tubes

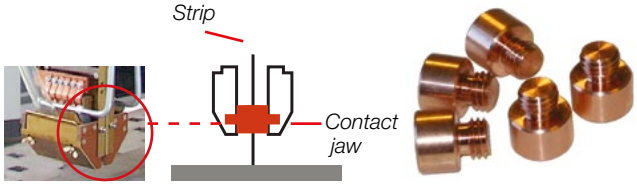
Length, mm (in.)	Part Number	
Single/Twin Wire, max. 3.2 mm (1/8 in.)		
358 (14), D6/4 750 (29.5), D6/4 Clamp	0415032001[1] 0415032002[2] 0218514001	

[1]*Twin Wire: eg/ 2 x 358 mm (14 in.) for 275 mm (10.8 in.) contact tube.* [2]*Guide 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

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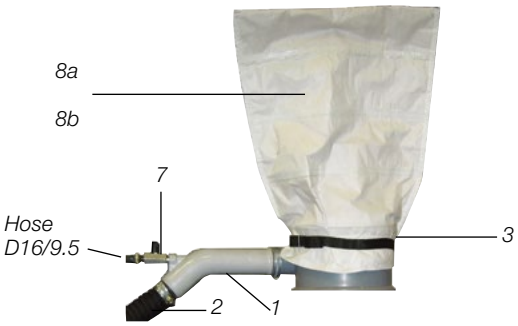
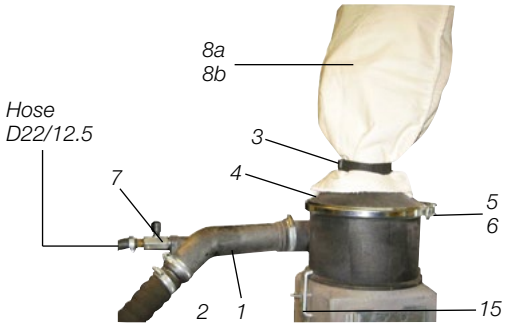
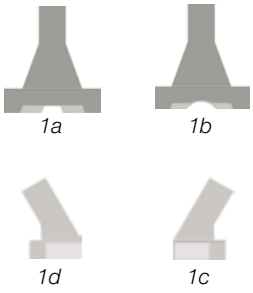


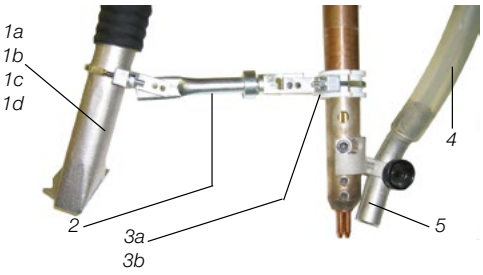


OPC Basic		
1	Ejector	0147640880
2	Spiral hose D47.0/38.1	0191813801
3	Tension band	0192855002
4	Cone[1]	0148143001
5	Tension ring[1]	0148144001
6	O-ring, 189.3x5.7	0215201353
7	Ball valve	0145824881
8a	Filter, paper	0155966001
8b	Filter, cotton[1]	0332448001
9	Funnel	0148142001
10	Rubber lining	0145565001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

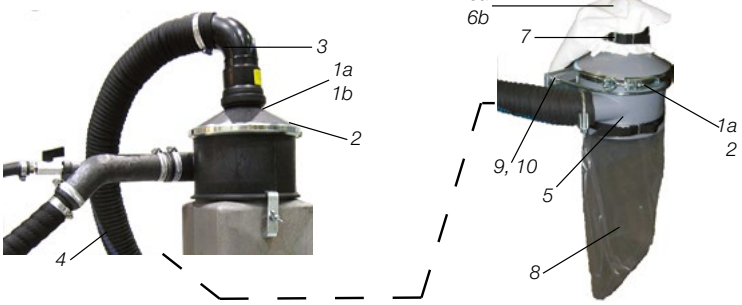
OPC Super		
1	Ejector	0339720001
2	Spiral hose D47.0/38.1	0191813801
3	Tension band	0192855002
4	Cone	0332279001
5	Tension ring	0148144001
6	O-ring, 189.3x5.7	0215201353
7	Ball valve	0333625001
8a	Filter, paper	0155966001
8b	Filter, cotton[1]	0332448001
9	Funnel	0332280001
10	Rubber lining	0332282001
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



[1]*Optional item.*

Note

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