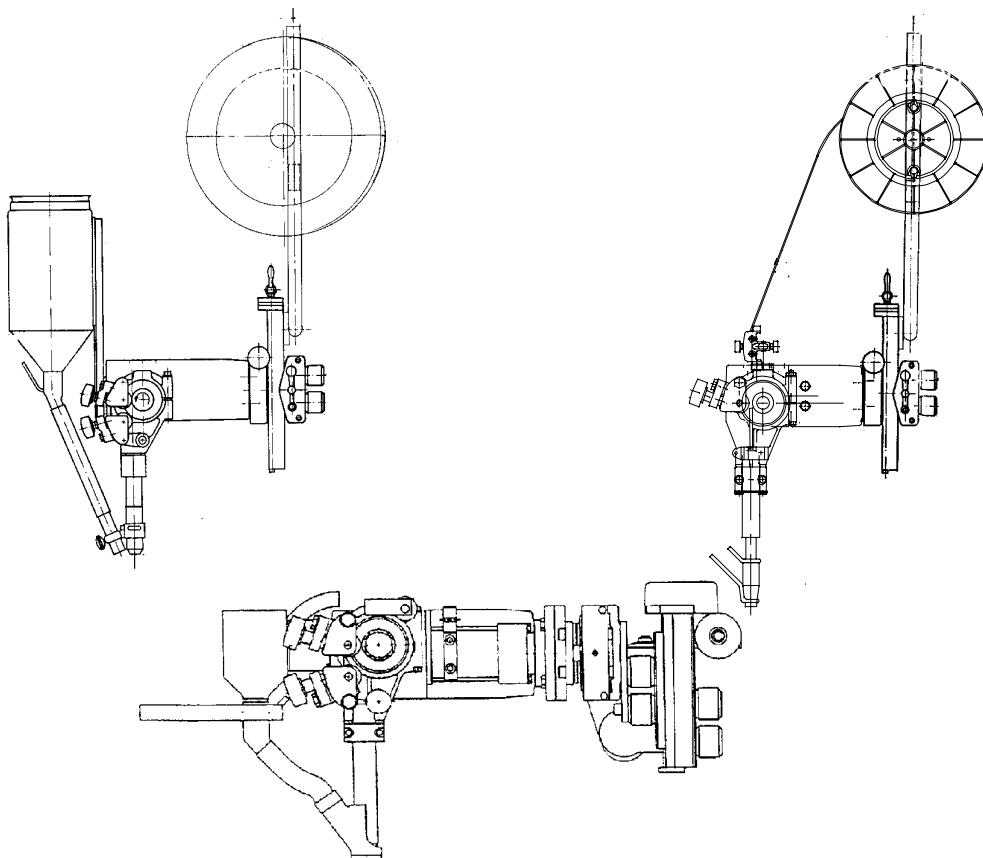




A6 S Arc Master
A6 S G Master
A6 S Compact 500
A6 SFE1 / A6 SFE2 /
A6 SGE1/ A6 SFE1C



Bruksanvisning
Brugsanvisning
Bruksanvisning
Käyttöohjeet
Instruction manual
Betriebsanweisung

Manuel d'instructions
Gebruiksaanwijzing
Instrucciones de uso
Istruzioni per l'uso
Manual de instruções
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Rätt till ändring av specifikationer utan avisering förbehålles.
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1 DIRECTIVE

DECLARATION OF CONFORMITY

Esab Welding Equipment AB, 695 81 Laxå, Sweden, gives its unreserved guarantee that automatic welding machine A6 SFE1 / A6 SFE2 / A6 SGE1/ A6 SFE1C from serial number 740 complies with standard EN 60292, in accordance with the requirements of directive (89/392/EEA) and addendum.

Laxå 97-11-19



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2 SAFETY

Users of ESAB automatic welding machines have ultimate responsibility for ensuring that anyone who works on or near the equipment observes all the relevant safety precautions.

The following recommendations should be observed in addition to the standard regulations that apply to the work place.

All work must be carried out according to the specified instructions by personnel who are thoroughly familiar with the operation of the welding machine.

Incorrect or unintentional operation of the equipment may lead to a hazardous situation which can result in injury to the operator and damage to the equipment.

1. Anyone who uses the automatic welding machine must be familiar with:
 - its operation
 - the location of emergency stops
 - its function
 - relevant safety precautions
2. The operator must ensure that:
 - no unauthorized person is stationed within the working area of the machine when it is started up.
 - that no-one is in a hazardous position when the carriage or slide mechanisms are operated.
3. The work place must:
 - be clear of mechanical components, tools, or other obstructions that could prevent the operator from moving freely within the working area.
 - be organized so that there is free access to the emergency stop.
4. Personal safety equipment
 - Always wear recommended personal safety equipment, such as safety glasses, flame-proof clothing, safety gloves.
 - Do not wear loose-fitting items, such as scarves, bracelets, etc., which could become trapped.
5. General precautions

Live electrical components are normally shielded from accidental contact.

 - Make sure the return cable is connected securely.
 - Work on high voltage components may **only be carried out by a qualified electrician.**
 - Appropriate fire extinguishing equipment must be clearly marked and close at hand.
 - Lubrication and maintenance must not be carried out on the equipment during its operation.



WARNING



ARC WELDING AND CUTTING CAN BE INJURIOUS TO YOURSELF AND OTHERS. TAKE PRECAUTIONS WHEN WELDING. ASK FOR YOUR EMPLOYER'S SAFETY PRACTICES WHICH SHOULD BE BASED ON MANUFACTURERS' HAZARD DATA.

ELECTRIC SHOCK - Can kill

- Install and earth the welding unit in accordance with applicable standards.
- Do not touch live electrical parts or electrodes with bare skin, wet gloves or wet clothing.
- Insulate yourself from earth and the workpiece.
- Ensure your working stance is safe.

FUMES AND GASES - Can be dangerous to health

- Keep your head out of the fumes.
- Use ventilation, extraction at the arc, or both, to keep fumes and gases from your breathing zone and the general area.

ARC RAYS - Can injure eyes and burn skin.

- Protect your eyes and body. Use the correct welding screen and filter lens and wear protective clothing.
- Protect bystanders with suitable screens or curtains.

FIRE HAZARD

- Sparks (spatter) can cause fire. Make sure therefore that there are no inflammable materials nearby.

NOISE - Excessive noise can damage hearing

- Protect your ears. Use ear defenders or other hearing protection.
- Warn bystanders of the risk.

MALFUNCTION - Call for expert assistance in the event of malfunction.

READ AND UNDERSTAND THE INSTRUCTION MANUAL BEFORE INSTALLING OR OPERATING.

PROTECT YOURSELF AND OTHERS!

3 INTRODUCTION

3.1 General

All the automatic welding machines included in this instruction manual are designed for SAW and MIG/MAG welding of butt and fillet joints.

ESAB's welding heads are of the **A6 S** type and are intended for use in combination with A2-A6 Process Controller and ESAB's welding power sources LAF and TAF.

The welding head can be positioned horizontally and vertically with the linear slides. The angular position is adjusted with the angular slide.

3.2 Definitions

SAW welding	The weld bead is protected by a cover of flux during the welding.
SAW Heavy duty	Permits welding with high current load and thick wire.
SAW Light duty	Permits welding with low current load and thin wire.
MIG/MAG welding	The weld bead is protected by shielding gas during welding.
Tandem welding	Welding with two welding heads.
Twinarc welding	Welding with two wires in the same welding head.

3.3 Technical data

	A6 SFE1	A6 SFE1	A6 SFE2	A6 SGE1	A6 SFE1C	
	UP	UP	UP	MIG/MAG	UP	
	LD D20	HD D35	HD D35			
Rated load	100% 60 %	800 A 1000 A AC/DC	1500 A - AC/DC	1500 A - AC/DC	600 A - AC/DC	1500 A - AC/DC
Wire dimensions:						
solid single wire	1.6-4.0 mm	3.0-6.0 mm	3.0-6.0 mm	0.8-2.5 mm	- 4.0 mm	
flux-cored wire	1.6-4.0 mm	3.0-4.0 mm	-	1.2-3.2 mm	-	
twin wire	2x1.2-2.0 mm	2x2.0-3.0mm	2x2.0-3.0mm	-	-	
Wire feed speed	0.2-4.0 m/min	0.2-4.0 m/min	0.2-4.0 m/min	0.2-15 m/min	0.2-4.0 m/min	
Brake drum braking torque	1.5 Nm	1.5 Nm	1.5 Nm	1.5 Nm	1.5 Nm	
Max weight, wire	2x30 kg	2x30 kg	4x30 kg	30 kg	2x30 kg	
Flux hopper capacity (Must not be filled with preheated flux)	10 l	10 l	10 l	-	1 l	
Weight (flux and wire excluded)	50 kg	50 kg	100 kg	15 kg	50 kg	
Sideways tilt, max.	25°	25°	25°	25°	25°	
Setting length of slide *						
manual	210 mm	210 mm	210 mm	210 mm		
motor-driven (with ball bearings)	300 mm	300 mm	300 mm	300 mm	60 mm	
Continuous A-weighted noise pressure	68 dB	68 dB	68 dB	83 dB	68 dB	

*) NB! Other lengths on request.

3.4 Welding method

Submerged arc welding (SAW)

For SAW welding the **A6 SF** welding head is always used. It is available in the following designs:

- **Submerged-arc Light duty**

Submerged-arc light duty, with a \varnothing 20 mm connector, which permits a load of up to 800 A (100%) or 1000 A (60%).

- **Submerged-arc Heavy duty**

Submerged-arc heavy duty, with a \varnothing 35 mm connector, which permits a load of up to 1500 A.

Both versions can be equipped with feed rollers for single or twin wire welding (twin-arc). A special knurled feed roller is available for flux-cored wire, which guarantees even wire feed without the risk of deformation due to high feed pressure.

For work in confined spaces, (smaller than 50 cm), a special welding head of type **A6 SFE1C** is available, which can be installed on the Mastertrac as required.

Tandem welding (submerged-arc)

For tandem welding, a welding head of type **A6 SFE2** is always used, which must be connected to 2 welding power sources and 2 control boxes of type A2-A6 Process Controller.

The tandem welding head includes 2 single welding heads (A6 SF), each with its own contact tip. Each contact tip has a maximum rated load of 1500 A.

MIG/MAG welding

For MIG/MAG welding the **A6 SG** welding head is always used, permitting a max. load of 600 A. The welding head is water-cooled, with the cooling water supplied by hoses from connections intended for the purpose.

3.5 Equipment

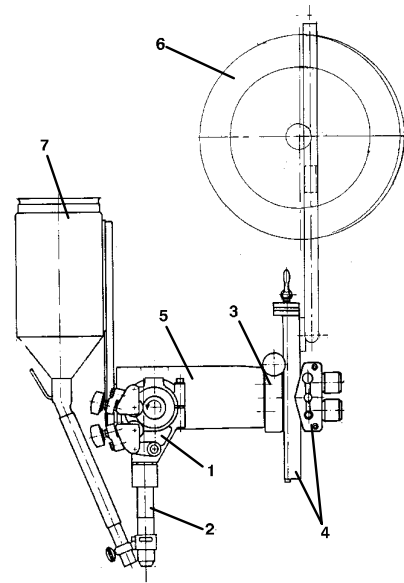
Included in a complete welding head are a feed motor (A6 VEC) to feed in the wire and contact equipment which supplies current to the wire and provides a good contact.

Contact equipment is available in several different versions.

- A6 SF is used for submerged-arc welding.
- A6 SG is used for MIG/MAG welding.

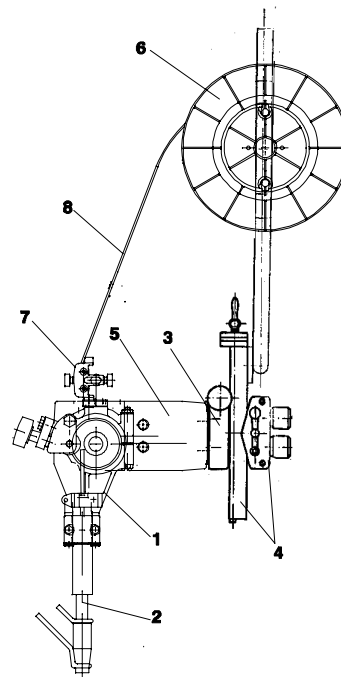
Example - A6 SFE1 and A6 SFE2

- 1 Straightener.
- 2 Contact equipment which consists of a contact tip, connector and flux tube.
- 3 Angular slide
- 4 Slide (motor-driven or manually operated)
- 5 Motor and gearbox (A6 VEC)
- 6 Wire drum
- 7 Flux hopper (may be fitted with a cyclone)



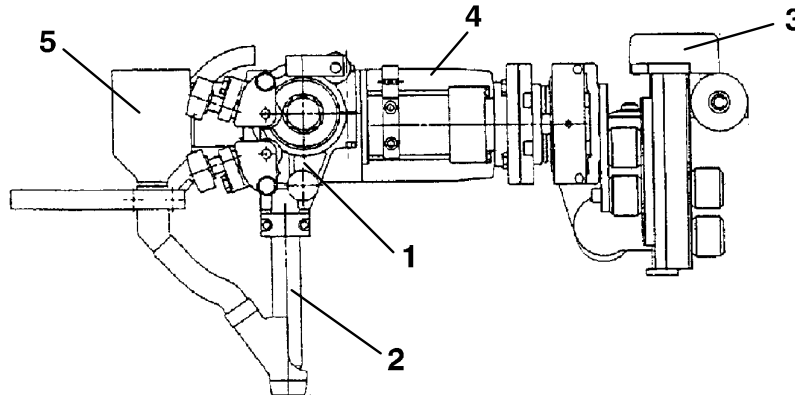
Example - A6 SGE1

- 1 Straightener.
- 2 Contact equipment which consists of a connector, gas nozzle and water hoses.
- 3 Angular slide.
- 4 Slide (motor-driven or manually operated)
- 5 Motor and gearbox (A6 VEC).
- 6 Wire drum.
- 7 Fine-wire straightener (Accessories).
- 8 Wire guide.



Example of the A6 SFE1C

- 1 Straightener.
- 2 Contact equipment, which consists of a contact tip, connector and flux tube.
- 3 Slide (motor-driven).
- 4 Motor and gearbox (A6 VEC).
- 5 Flux hopper (1 l).


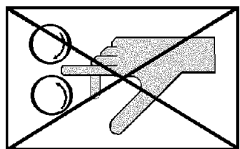


Connection instructions for SAW and MIG/MAG welding appear from the system diagram on page 73.

4 INSTALLATION

4.1 General

Installation shall only be performed by qualified personnel.

 <p>WARNING!</p>	<p>Rotating parts can cause injury, take great care.</p>	
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4.2 Mounting

The automatic welding machines can easily be fitted with 4 screws M10x40 on a rail-borne carriage or on a column and boom unit.

4.3 Connections

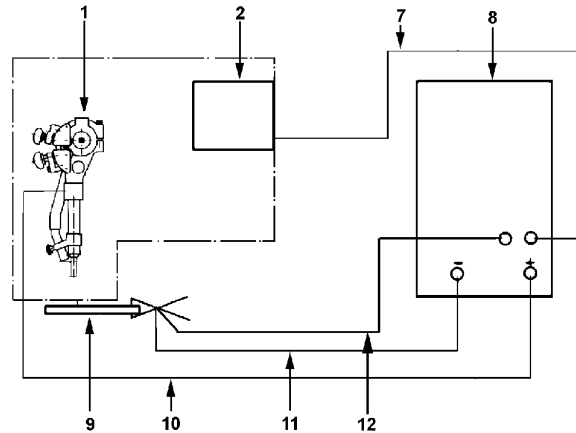
- 1. The connection of the A2-A6 Process Controller (PEH) to the welding machine shall be done according to the connection instructions in the A2-A6 Process Controller (PEH) service manual.

For further information, see instruction manual for the A2-A6 Process Controller (PEH).

2. Connect the A6 welding heads as follows:

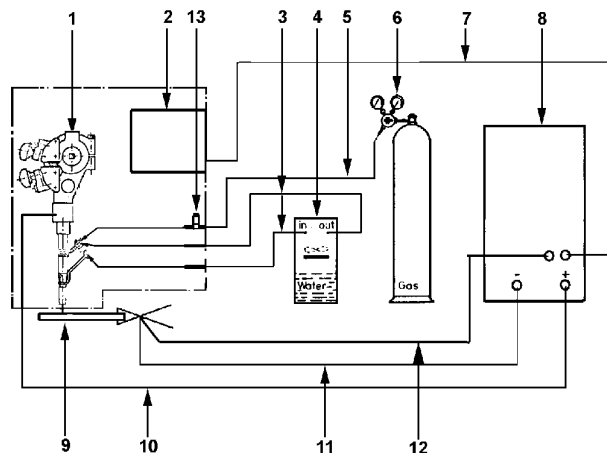
SUBMERGED ARC WELDING (SAW)

- Connect the control cable (7) between the welding power source (8) and the A2-A6 Process Controller (PEH) (2).
- Connect the return cable (11) between the welding power source (8) and the work piece (9).
- Connect the welding cable (10) between the welding power source (8) and the automatic welding machine (1).
- Connect the measuring cable (12) between the welding power source (8) and the work piece (9).



GAS METAL ARC WELDING (MIG/MAG)

- Connect the control cable (7) between the welding power source (8) and the A2-A6 Process Controller (PEH) (2).
- Connect the return cable (11) between the welding power source (8) and the work piece (9).
- Connect the welding cable (10) between the welding power source (8) and the automatic welding machine (1).
- Connect the gas hose (5) between the reduction valve (6) and the gas valve on the automatic welding machine (13).
- Connect the hoses for cooling water (3) between the cooling unit (4) and the automatic welding machine (1).
- Connect the measuring cable (12) between the welding power source (8) and the work piece (9).



5 OPERATION

5.1 General

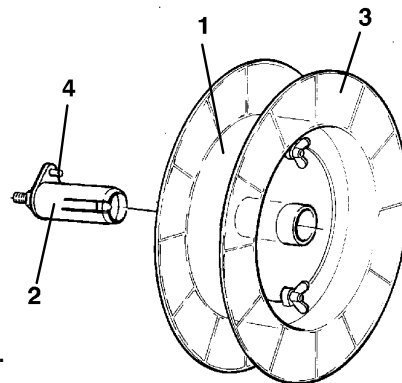
General safety regulations for the handling of the equipment appear from page 68. Read through before you start using the equipment!

- Select wire type and flux or shielding gas so that the weld material is as close as possible to the analysis of the base metal. Select wire size and welding data in accordance with the values recommended by the welding materials supplier.
- Thorough preparation of the weld surfaces is necessary to achieve a good weld. **NOTE!** The width of the weld joint gap must be uniform.
- To minimise the risk of heat crack formation, the width of the weld must be greater than the penetration depth.
- Always carry out a test weld with the same joint type and sheet thickness as the production work piece.
- For control and adjustment of the automatic welding machine and welding power supply, see the instruction manual for the A2-A6 Process Controller (PEH).
- For replacement of wear parts, see table on page 196.

5.2 Starting work

Loading the welding wire

- Remove the wire drum (1) from the brake hub (2) and take off the side plate (3).
- Locate the wire reel on the wire drum (1).
- Cut off the binding wires from around the wire reel.
- Fit the side plate (3).
- Fit the wire drum (1) on the brake hub (2).
Check that the carrier (4) is in the correct position.

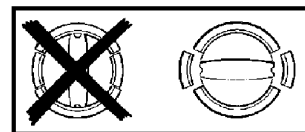


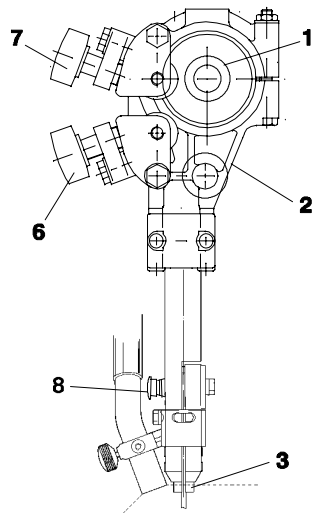
NOTE! The maximum angle for the wire bobbin is 25°. At extreme angles, wear will occur on the brake hub locking mechanism and the wire bobbin will slide off the brake hub.



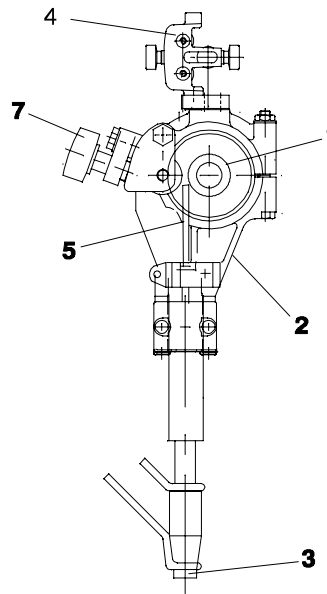
IMPORTANT!

To prevent the reel sliding off the hub: Lock the reel in place by turning the red knob as shown on the warning label attached next to the hub.






SAW



MIG/MAG

- Check that the feed roller (1) and contact jaw or contact tip (3) are of the correct dimension for the selected wire size.
- Pull the end of the wire through the straightener (2). For a wire diameter greater than 2 mm; straighten out 0.5 m of wire and feed it by hand down through the straightener.
- Locate the end of the wire in the feed roller (1) groove.
- Set the wire tension on the feed roller with the knob (7). **Note!** Do not tension more than is required to achieve an even feed.
- The pressure screw (8) must not be dismantled. (Applies to Submerged-arc Heavy duty).
- Feed the wire forward 30 mm by pressing  on the control box A2-A6 Process Controller.
- Direct the wire by adjusting the knob (6).

For fine wire, the special fine wire straightener (4) is used for both single and twin wire.

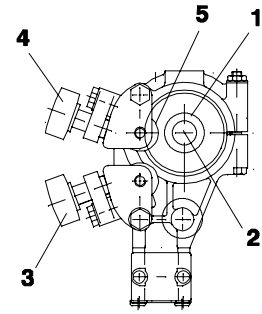
Ensure that the straightener is correctly adjusted so that the wire emerges straight out through the contact jaws or contact tip.

Always use a guide tube (5) to ensure even feeding of fine wire (1.6 - 2.5 mm).

For MIG/MAG welding with wire sizes < 1.6 mm, use a guide spiral, which is inserted in the guide tube (5).

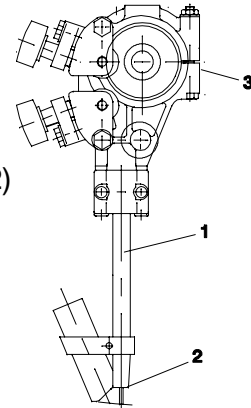
Changing the feed roller

- **Single wire**
 - Release the knobs (3) and (4).
 - Release the hand wheel (2).
 - Change the feed roller (1). The rollers are marked with their respective wire sizes.
- **Twin wire (Twin-arc)**
 - Change the feed roller (1) with twin grooves in the same way as for single wire.
 - **NOTE!** The pressure roller (5) must also be changed. A special spherical pressure roller for twin wire replaces the standard pressure roller for single wire.
 - Assemble the pressure roller with special stub shaft (order no. 146 253-001).
- **Flux-cored wire** (for knurled rollers)
 - Change the feed roller (1) and pressure roller (5) in pairs for the wire size to be used.
 - NOTE!** A special stub shaft is required for the pressure roller (order no. 0212 901 101).
 - Tighten the pressure screw (4) with moderate pressure to ensure that the flux-cored wire does not deform.

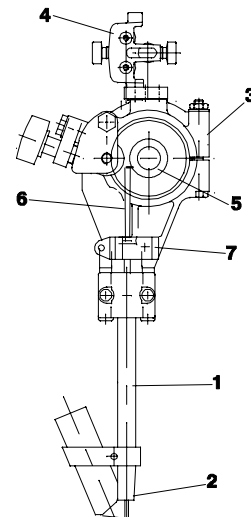


Contact equipment for submerged-arc welding

- **For single wire 3.0 - 4.0 mm. Light duty (D20)**
Use the straightener (3), connector (1) D20 with contact tip (2) (M12 thread).
 - Tighten the contact tip (2) with a key in order to ensure that a good contact is achieved.



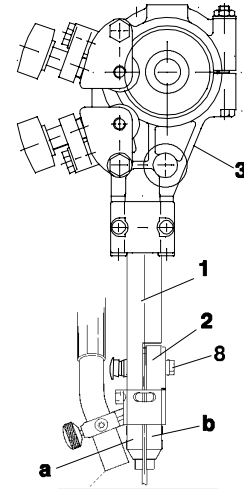
- **For single wire 1.6 - 2.5 mm Submerged-arc. Light duty (D20)**
Use the straightener (3), connector (1) D20 with contact tip (2) (M12 thread) and separate fine wire straightener (4) with guide tube (6).
 - Fit the clamp (7) with guide tube (6) in the M12 hole on the straightener (3). The guide tube (6) should bottom on the contact tip (2).
 - If necessary, cut the guide tube (6) to length so that the feed roller (5) runs freely.
 - Fit the fine wire straightener (4) on the upper side of the clamp for the straightener (3).



- **For single wire 3.0 - 6.0 mm. Heavy duty (D35)**

Use the straightener (3), connector (1) D35 with contact jaws (2).

- Fit one of the contact jaws with the M5 bolts provided, in the fixed contact tip (a).
- Fit the other contact jaw in the free half of the two-piece connector (b) under the bolt (8) and tighten down hard to ensure that a good contact is achieved between the contact jaws and the wire.



- **For flux-cored wire 1.6 mm - 4.0 mm (D20 and D35) (Accessories)**

If contact jaws (D35) are used, the contact jaws must not be tightened too hard in order that the flux-cored wire is not deformed. Ensure that good contact is achieved with the wire.

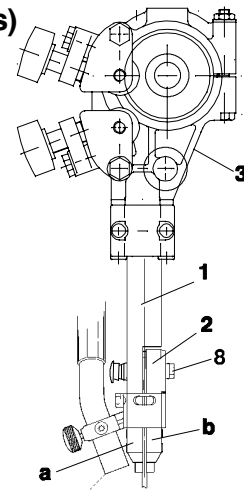
- **Adjustment of the wire for tandem welding**

- The distance between the first and second wire must not be so great that the slag gets time to solidify between the wires.
- Ensure that good flux coverage is achieved between the first and second wires.

- **For twin wires 2 x 2.0 - 3.0 Heavy Twin (D35) (Accessories)**

Use the straightener (3), connector (1) D35 with contact jaws (2).

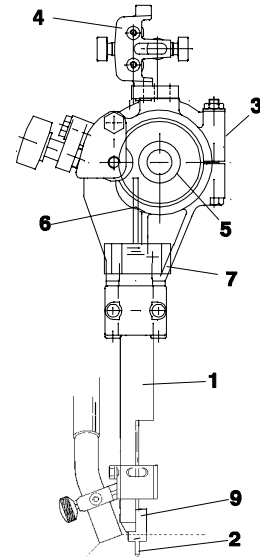
- Fit the first contact jaw with the M5 bolts supplied, in the fixed connector (a).
- Fit the other contact jaw in the free half of the two-piece connector (b) under the bolt (8) and tighten down hard to ensure that a good contact is achieved between the contact jaws and the wire.



• **For twin wire 2 x 1.2 - 2.0 mm, Light Twin (D35) (Accessories)**

Use the straightener (3), connector (1) D35 with twin adapter (9) and 2 contact tips (2) (M6 threads) and separate fine wire straightener (4) with two guide tubes (6). For twin wire < 1.6 mm, insert a guide spiral into each guide tube.

- Fit the twin adapter (9) for M6 contact tips (2) with the M5 bolts in the fixed half of the two-piece connector (1).
- Fit the clamp (7) with guide tube (6) in the M12 hole on the standard straightener (3). The guide tube should bottom on the twin adapter (9) for the contact tip (2).
- Tighten the contact tip (2) with a key to ensure that a good contact is achieved.
- If necessary, cut the guide tube (6) to length so that the feed roller (5) runs freely.



• **Adjustment of the wires for Twin-arc welding:**

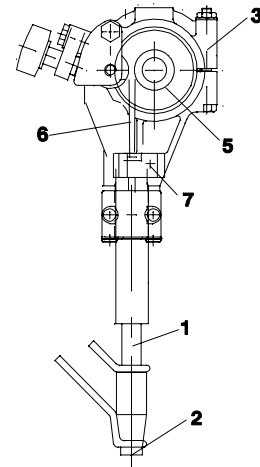
- Position the wires in the joint so as to achieve optimal weld quality by rotating the connector. The two wires can be rotated so that they are positioned one after the other along the line of the joint, or in any position up to 90° across the joint, i.e. one wire on each side of the joint.

Contact equipment for MIG/MAG welding.

• **For single wire 1.6 - 2.5 mm (D35)**

Use the straightener (3), connector (1) D35 with contact tip (2) (M10 thread).

- Tighten the contact tip (2) with a key to ensure that a good contact is achieved.
- Fit the clamp (7) with guide tube (6) in the M12 hole on the standard straightener (3). The guide tube (6) should bottom on the contact tip (2).
- If necessary, cut the guide tube (6) to length so that the feed roller (5) runs freely.

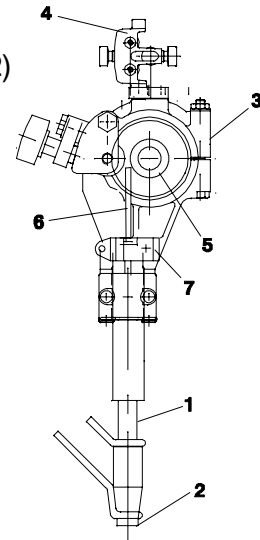


- **For single wire < 1.6 mm (D35)**

Use the straightener (3), connector (1) D35 with contact tip (2) (M12 thread), fine wire straightener (4) with guide tube (6) and guide spiral, which is inserted in the guide tube (6).

- Fit the clamp (7) with guide tube (6) in the M12 hole on the standard straightener (3). The guide tube (6) should bottom on the contact tip (2).
- If necessary, cut the guide tube (6) to length so that the feed roller (5) runs freely.
- Fit the fine wire straightener (4) on the upper side of the clamp for the straightener (3).

- Connect the cooling water and gas (MIG/MAG welding).



Filling of flux (Submerged arc welding)

- Close the flux valve on the flux hopper.
- Remove the cyclone on the flux recovery unit, if fitted.
- Fill with flux . **NOTE!** The flux must be dry. If possible, avoid using agglomerating flux outdoors and in a damp environment.
- Position the flux tube so that the flux hose does not become kinked.
- Adjust the height of the flux nozzle above the weld so that the correct amount of flux is delivered.
The flux coverage should be high enough to prevent the arc from burning through.

5.3 Conversion of A6 SFE1 (Submerged arc welding) to MIG/MAG welding

Assemble the conversion kit according to the instructions provided.

5.4 Conversion of A6 SFE1 / A6 SFE2 (Submerged arc welding) to Twin-arc

Assemble the conversion kit according to the instructions provided.

6 MAINTENANCE

6.1 General

NB! Before doing any kind of maintenance work, make sure the mains is disconnected.

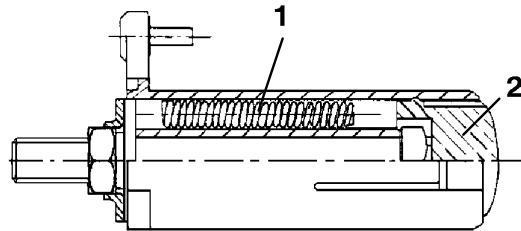
For the maintenance of the A2-A6 Process Controller (PEH), see the instruction manual.

6.2 Daily

- Clean flux and dirt off moving parts of the welding machine.
- Check that the contact tip and all electric cables are connected.
- Check that all bolted joints are tight and that guides and drive rollers are not worn or damaged.
- Check the brake hub braking torque. It should not be so low, that the wire reel continues to rotate when wire feed is stopped, and it should not be so great that the feed rollers slip. As a guide, the braking torque for a 30 kg wire reel should be 1.5 Nm.

Adjusting the braking torque:

- Set the locking button (2) to the locked position.
- Insert a screwdriver into the hub springs.
- Turning the springs (1) clockwise reduces the braking torque.
- Turning the springs anticlockwise increases the torque.



NOTE! Turn the springs by the same amount.

6.3 Regularly

- Check the carbon brushes of the wire feed motor every three months. Replace when they are worn down to 6 mm.
- Check the slides and lubricate if they bind.
- Check the wire guides, drive rollers and contact tip of the wire feed unit. Replace any worn or damaged components, (see spare parts list on page 199).

7 FAULT TRACING

- Equipment**
- Instruction manual for control box A2–A6 Process Controller.
 - Operating manual for motor with gear A6 VEC, order no. 0443 393.
- Check**
- that the power source is connected for the correct mains supply
 - that all three phases are live (phase sequence is not important)
 - that welding cables and connections are not damaged
 - that the controls are correctly set
 - that the mains supply is disconnected before starting repairs

POSSIBLE FAULTS

1. Symptom Current and voltage readings show large fluctuations

Cause 1.1 Contact jaws or nozzle are worn or wrong size.

Action Replace contact jaws or nozzle.

Cause 1.2 Feed roller pressure is too low.

Action Increase pressure on feed rollers.

2. Symptom Wire feed is irregular

Cause 2.1 Feed roller pressure not correct.

Action Change the feed roller pressure.

Cause 2.2 Feed rollers wrong size.

Action Replace feed rollers.

Cause 2.3 Grooves in feed rollers are worn.

Action Replace feed rollers.

3. Symptom Welding cables overheating

Cause 3.1 Poor electrical connection.

Action Clean and tighten all electrical connections.

Cause 3.2 Cross-section of welding cables too small.

Action Use cables with a larger cross-section or use parallel cables.

8 ACCESSORIES

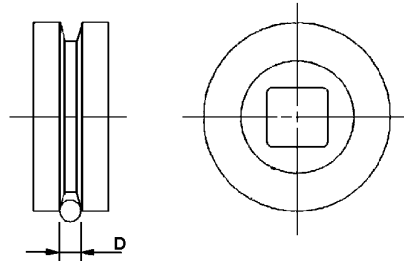
Manually operated slide	0154 465 xxx
Motor-driven slide	0334 333 xxx
Angular slide	0671 171 580
Contact equipment for twin wire 2x1.2 - 2x2.0 Light duty	0333 852 881
Contact equipment for twin wire 2x2.0 - 2x2.5-3.0 Heavy duty	0417 959 881
Fine-wire straightener for single wire	0332 565 880
Conversion kit A6 SFE1 to MIG/MAG welding	0334 299 890
Conversion kit A6 SFE1/A6 SFE2 to Twin with fine-wire straightener (LD) ...	0334 291 888
Conversion kit A6 SFE1/A6 SFE2 to Twin (HD)	0334 291 889
Pilot lamp (D20)	0153 143 885
Adapter M6/M10	0147 333 001

9 ORDERING OF SPARE PARTS

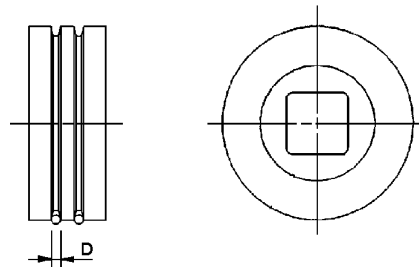
Spare parts are ordered through your nearest ESAB representative, see back cover. When ordering spare parts, please state machine type and number as well as designation and spare part number as shown in the spare parts list on page 199. This will simplify dispatch and ensure you get the right part.

Feed rollers

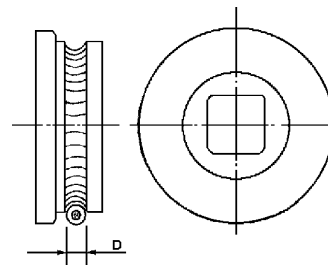
SAW and MIG/MAG	
Part no	D (mm)
0218 510 281	1,6
0218 510 282	2,0
0218 510 283	2,5
0218 510 286	4,0
0218 510 287	5,0
0218 510 288	6,0



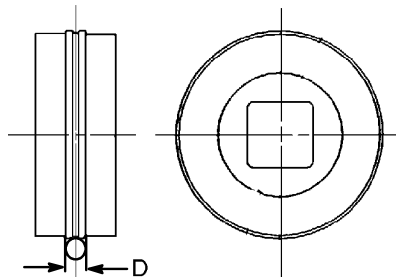
SAW Twin (D35)	
Part no	D (mm)
0218 522 480	2,5
0218 522 481	3-3,2
0218 522 484	2,0
0218 522 486	1,2
0218 522 487	1,0
0218 522 488	1,6



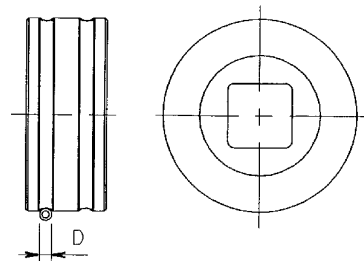
SAW and MIG/MAG tubular wire	
Part no	D (mm)
0146 024 880	0,8-1,6
0146 024 881	2,0-4,0



MIG/MAG	
Part no	D (mm)
0145 538 880	0,6
0145 538 881	0,8
0145 538 882	1,0
0145 538 883	1,2

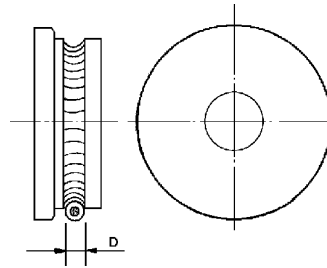


	D (mm)
148 772-880	2,0-3,0

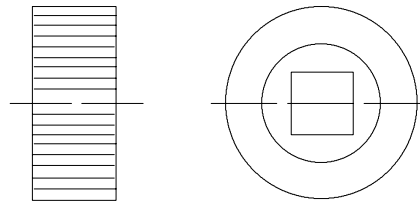


Pressure rollers

SAW and MIG/MAG tubular wire	
Part no	D (mm)
0146 025 880	0,8-1,6
0146 025 881	2,0-4,0
0146 025 882	5,0-7,0

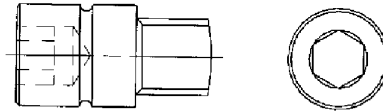


SAW Twin	
Part no	
0218 524 580	
0146 253 001	Stub shaft
0144 953 001	Spherical ball bearing
0190 452 178	Washer



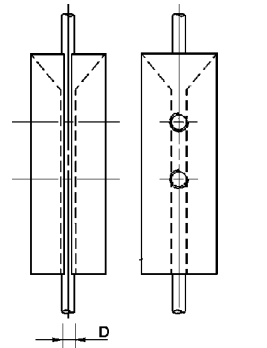
Stub shaft for pressure roller

SAW tubular wire
Part no
0212 901 101

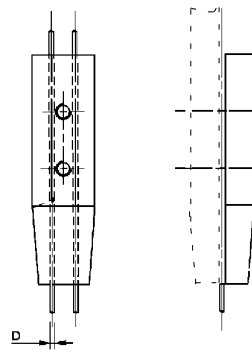


Contact jaws

SAW HD (D35)	
Part no	D (mm)
0265 900 880	3,0
0265 900 881	3,2
0265 900 882	4,0
0265 900 883	5,0
0265 900 884	6,0

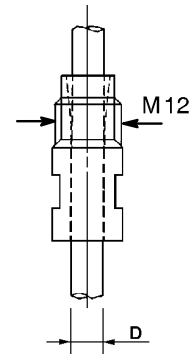


SAW Twin HD	
Part no	D (mm)
0265 902 880	2,5-3,0
0265 902 881	2,0
0265 902 882	1,6
0265 902 883	4,0

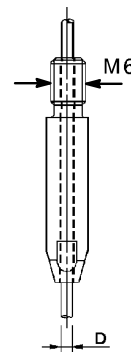


Contact tip

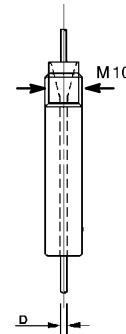
SAW LD (D20)	
Part no	D (mm)
0154 623 003	4,0
0154 623 004	3,2
0154 623 005	3,0
0154 623 006	2,5
0154 623 007	2,0
0154 623 008	1,6



MIG/MAG and SAW Twin LD (D35)	
Part no	D (mm)
0153 501 002	0,8
0153 501 004	1,0
0153 501 005	1,2
0153 501 007	1,6
0153 501 009	2,0
0153 501 010	2,4-2,5

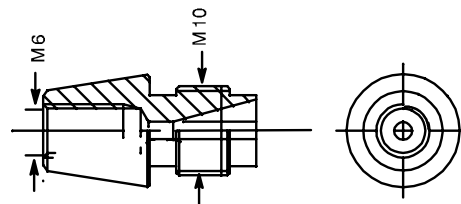


MIG/MAG (D35)	
Part no	D (mm)
0258 000 908	1,2
0258 000 909	1,6
0258 000 910	2,0
0258 000 911	2,4
0258 000 913	1,0
0258 000 914	0,8
0258 000 915	3,2



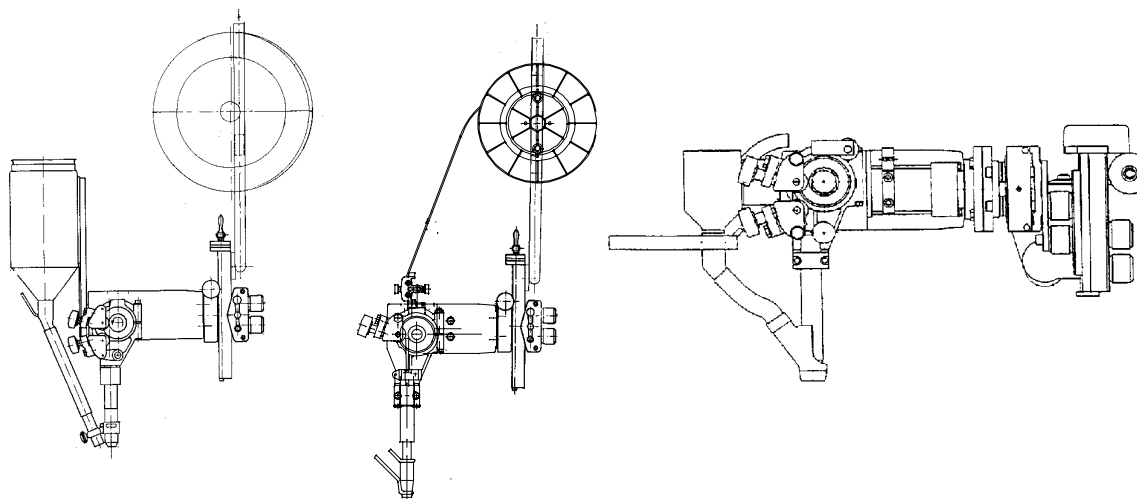
Adapter for contact tip

SAW and MIG/MAG (D35)	
Part no	D (mm)
0147 333 001	M6 / M 10



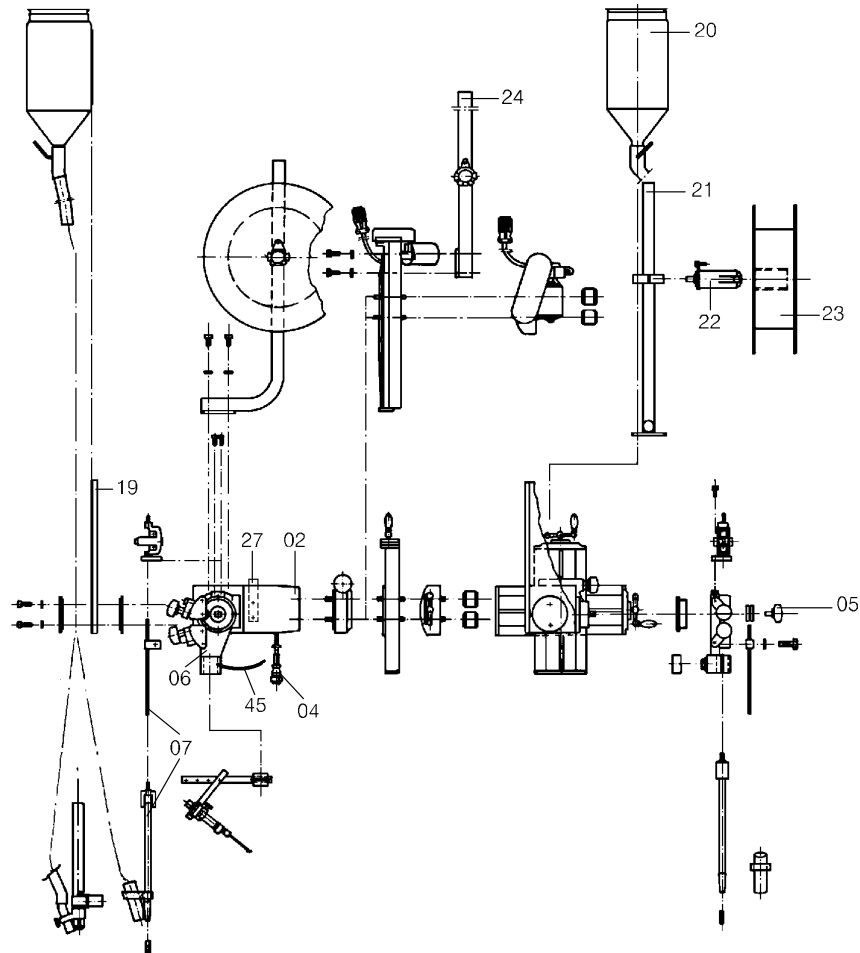
Reservdelsförteckning Reservdelsfortegnelse Reservdelsliste
 Varaosaluettelo Spare parts list Ersatzteilliste Liste de pièces détachées
 Reserveonderdelenlijst Lista de repuestos Elenco ricambi Lista de peças
 sobressalentes Πίνακας ανταλλακτικών μερών

Edition 000229

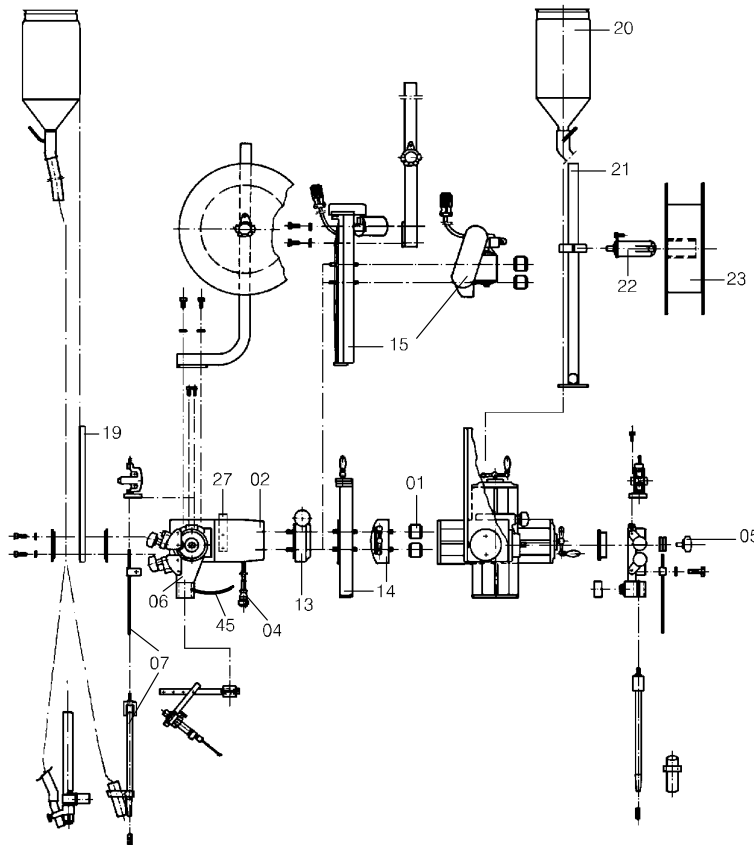


Ordering no.	Denomination	Notes
0456 560 880 → 0456 560 892	A6 SFE1	LD, Without control box PEH
0456 560 900 → 0456 560 912	A6 SFE1	HD, Without control box PEH
0456 565 880 → 0456 565 893	A6 SFE1	LD, With control box PEH
0456 565 900 → 0456 565 913	A6 SFE1	HD, With control box PEH
0457 720 883 → 0457 720 884	A6 SFE2	Without control box PEH
0457 720 885, 0457 720 887	A6 SFE2	With control box PEH
0457 720 880, 0457 720 889	A6 SFE2	With control box PEH and A6 PAK
0457 720 891, 0457 720 893	A6 SFE2	With control box PEH and A6 GMD
0456 563 880 → 0456 563 889	A6 SGE1	Without control box PEH
0456 564 880 → 0456 564 887	A6 SGE1	With control box PEH
0416 967 880	A6 SFE1C	

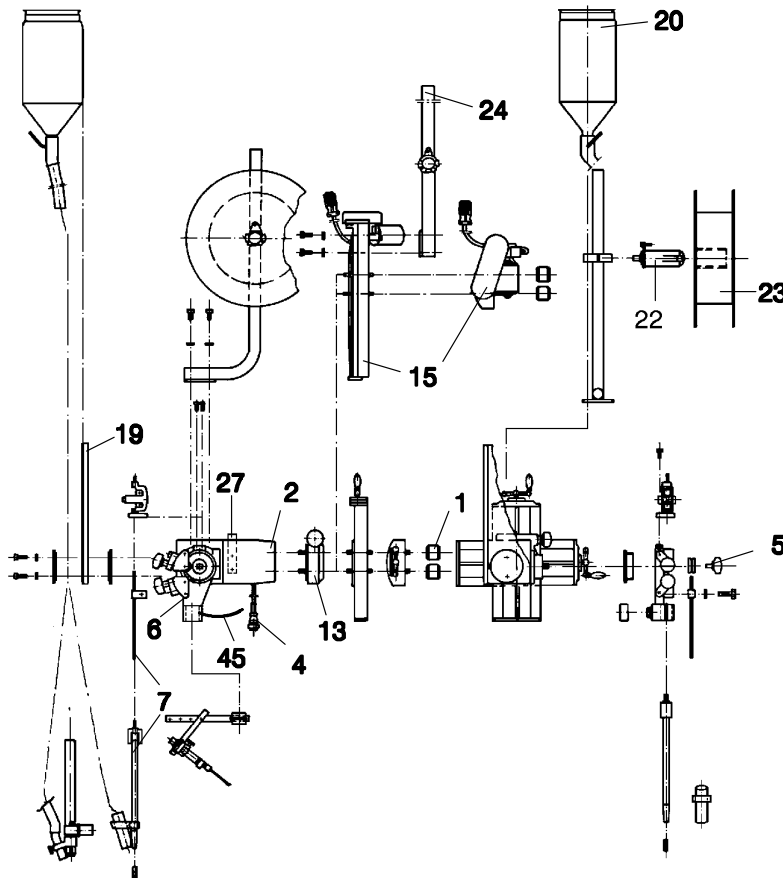
Item no.	Qty	Qty	Qty	Qty	Ordering no.	Denomination	Notes
			X	X	0456 560 880	Automatic welding machine without control box PEH	A6 SFE1, LD
			X	X	0456 560 881	Automatic welding machine without control box PEH	A6 SFE1, LD
		X			0456 560 882	Automatic welding machine without control box PEH	A6 SFE1, LD
		X			0456 560 883	Automatic welding machine without control box PEH	A6 SFE1, LD
02	1	1	1	1	0145 063 907	Motor with gear	74:1
04	1	1	1	1	0456 490 882	Cable	L=2000 mm
05	1	1	1	1	0218 810 183	Handwheel	
06	1	1	1	1	0147 639 880	Straightener	Right
07	1	1	1	1	0334 289 880	Contact equipment	D20
19	1	1	1		0148 487 881	Holder	
20	1	1	1		0147 649 881	Flux hopper	10 l
21		1			0443 510 880	Reel holder	
22	1	1			0146 967 880	Brake hub	
23	1	1			0153 872 880	Wire reel	
24	1				0334 318 880	Reel holder, straight	
27	1	1	1	1	0148 493 001	Cable clamp	
45	1	1	1	1	0456 504 883	Cable	
80	1	1	1	1	0457 713 001	Bar	



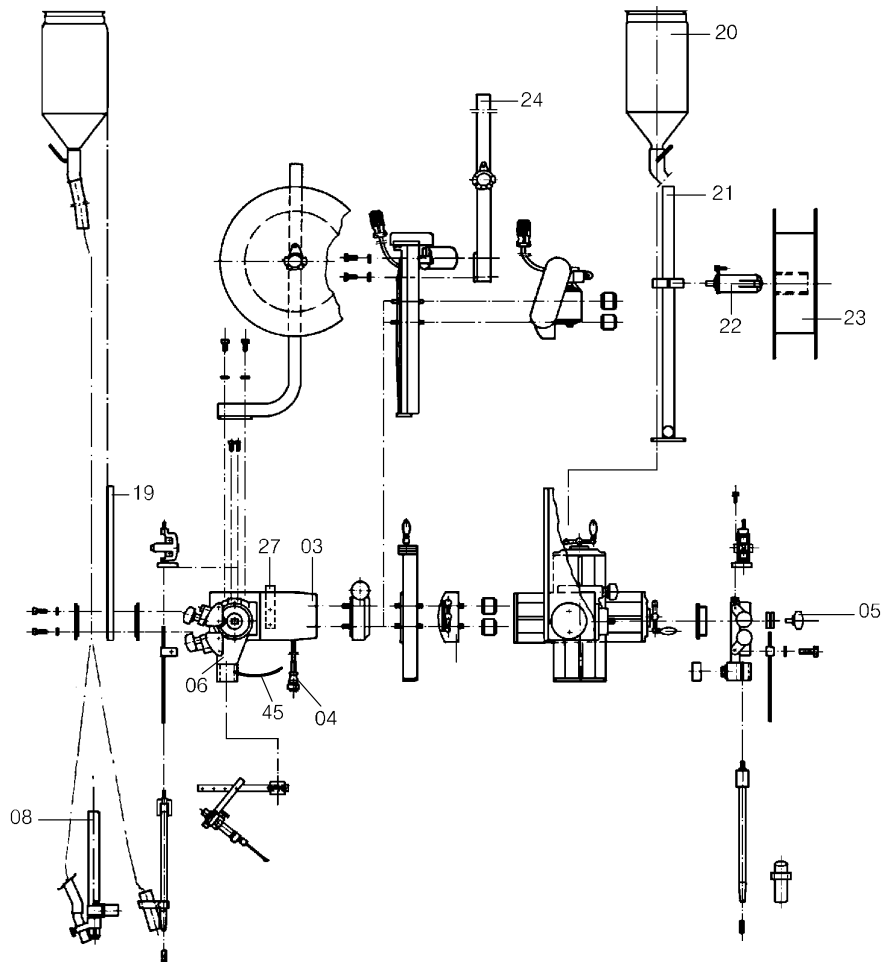
Item no.	Qty	Qty	Qty	Qty	Qty	Ordering no.	Denomination	Notes
					X	0456 560 884	Automatic welding machine without control box PEH	A6 SFE1, LD
				X		0456 560 885	Automatic welding machine without control box PEH	A6 SFE1, LD
			X			0456 560 886	Automatic welding machine without control box PEH	A6 SFE1, LD
		X				0456 560 887	Automatic welding machine without control box PEH	A6 SFE1, LD
	X					0456 560 888	Automatic welding machine without control box PEH	A6 SFE1, LD
01	4	4	4	4	4	0278 300 180	Insulator	2000 V
02	1	1	1	1	1	0145 063 907	Motor with gear	74:1
04	1	1	1	1	1	0456 490 882	Cable	L=2000 mm
05	1	1	1	1	1	0218 810 183	Handwheel	
06	1	1	1	1	1	0147 639 880	Straightener	Right
07	1	1	1	1	1	0334 289 880	Contact equipment	D20
13	1	1	1	1	1	0671 171 580	Angular slide	
14			2	2	2	0154 465 881	Slide, manually operated	L=210
15	2	2				0334 333 884	Slide, with linear ball bearings	L=300
19	1		1	1		0148 487 881	Holder	
20	1		1	1		0147 649 881	Flux hopper	10 l
21			1			0443 510 880	Reel holder	
22			1			0146 967 880	Brake hub	
23			1			0153 872 880	Wire reel	
27	1	1	1	1	1	0148 493 001	Cable clamp	
45	1	1	1	1	1	0456 504 883	Cable	
80	1	1	1	1	1	0457 713 001	Bar	



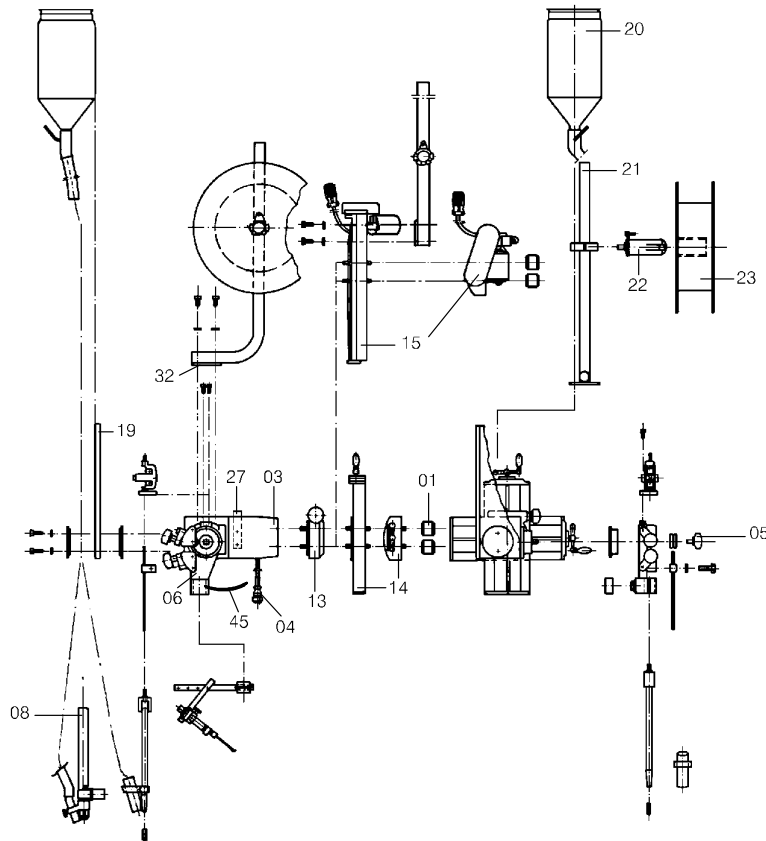
Item no.	Qty	Qty	Qty	Qty	Ordering no.	Denomination	Notes
				X	0456 560 889	Automatic welding machine without control box PEH	A6 SFE1, LD
			X		0456 560 890	Automatic welding machine without control box PEH	A6 SFE1, LD
	X				0456 560 891	Automatic welding machine without control box PEH	A6 SFE1, LD
		X			0456 560 892	Automatic welding machine without control box PEH	A6 SFE1, LD
01	4	4	4	4	0278 300 180	Insulator	2000 V
02	1	1	1	1	0145 063 907	Motor with gear	74:1
04	1	1	1	1	0456 490 882	Cable	L=2000 mm
05	1	1	1	1	0218 810 183	Handwheel	
06	1	1	1	1	0147 639 880	Straightener	Right
07	1	1	1	1	0334 289 880	Contact equipment	D20
13	1	1	1	1	0671 171 580	Angular slide	
15	2	2	2	2	0334 333 884	Slide, with linear ball bearings	L=300
19	1	1		1	0148 487 881	Holder	
20	1	1		1	0147 649 881	Flux hopper	10 l
22	1			1	0146 967 880	Brake hub	
23	1			1	0153 872 880	Wire reel	
24	1			1	0334 318 880	Reel holder, straight	
27	1	1	1	1	0148 493 001	Cable clamp	
45	1	1	1	1	0456 504 883	Cable	
80	1	1	1	1	0457 713 001	Bar	



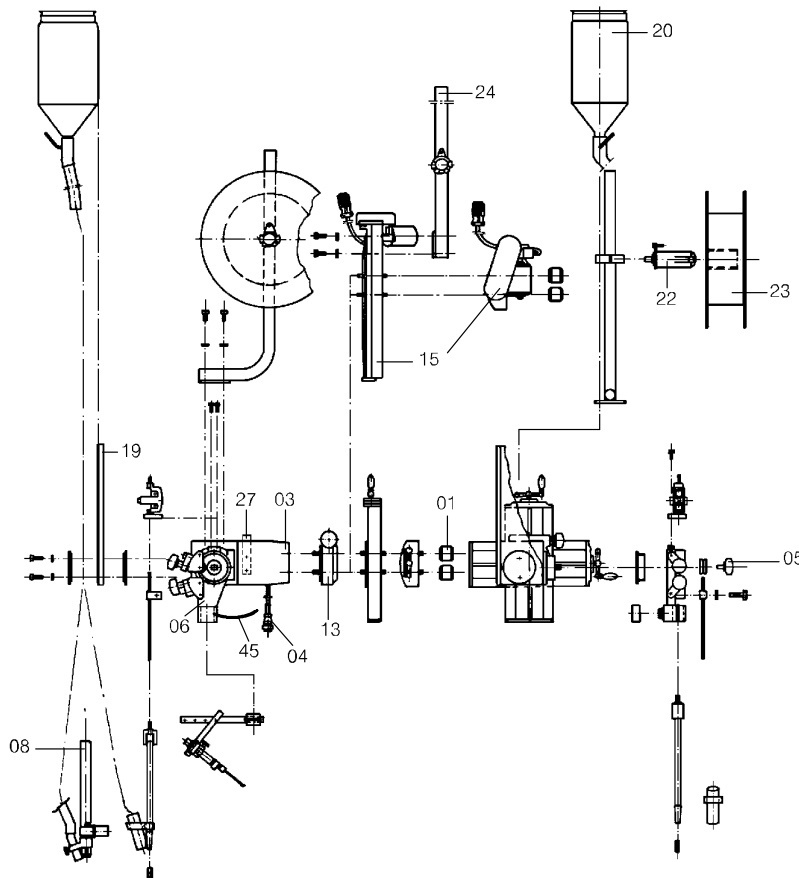
Item no.	Qty	Qty	Qty	Qty	Ordering no.	Denomination	Notes
			X	X	0456 560 900	Automatic welding machine without control box PEH	A6 SFE1, HD
			X	X	0456 560 901	Automatic welding machine without control box PEH	A6 SFE1, HD
		X			0456 560 902	Automatic welding machine without control box PEH	A6 SFE1, HD
	X				0456 560 903	Automatic welding machine without control box PEH	A6 SFE1, HD
03	1	1	1	1	0145 063 906	Motor with gear	156:1
04	1	1	1	1	0456 490 882	Cable	L=2000 mm
05	1	1	1	1	0218 810 183	Handwheel	
06	1	1	1	1	0147 639 880	Straightener	Right
08	1	1	1	1	0334 290 882	Contact equipment	D35
19	1	1	1		0148 487 881	Holder	
20	1	1	1		0147 649 881	Flux hopper	10 l
21		1			0443 510 880	Reel holder	
22	1	1			0146 967 880	Brake hub	
23	1	1			0153 872 880	Wire reel	
24	1				0334 318 880	Reel holder, straight	
27	1	1	1	1	0148 493 001	Cable clamp	
45	1	1	1	1	0456 504 883	Cable	
80	1	1	1	1	0457 713 001	Bar	



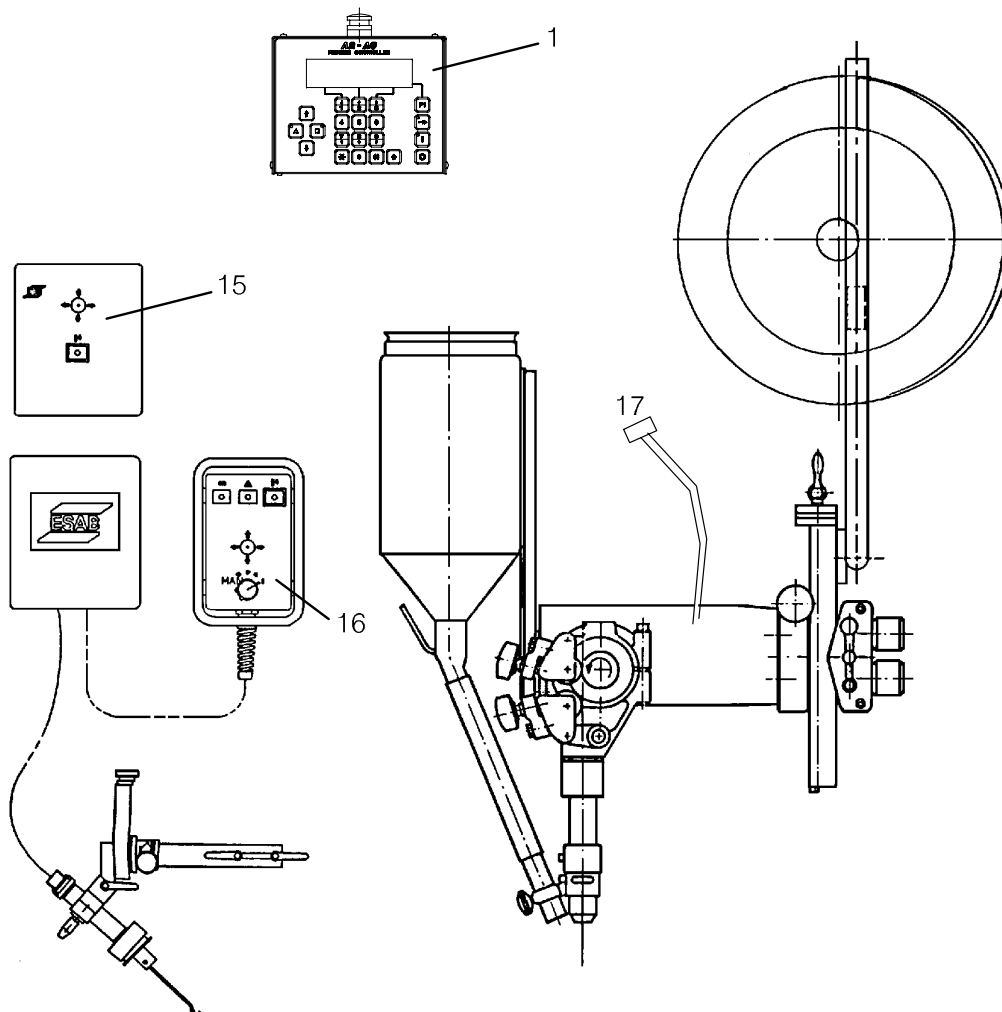
Item no.	Qty	Qty	Qty	Qty	Ordering no.	Denomination	Notes
				X	0456 560 904	Automatic welding machine without control box PEH	A6 SFE1, HD
			X		0456 560 905	Automatic welding machine without control box PEH	A6 SFE1, HD
		X			0456 560 906	Automatic welding machine without control box PEH	A6 SFE1, HD
	X				0456 560 907	Automatic welding machine without control box PEH	A6 SFE1, HD
01	4	4	4	4	0278 300 180	Insulator	2000 V
03	1	1	1	1	0145 063 906	Motor with gear	156:1
04	1	1	1	1	0456 490 882	Cable	L=2000 mm
05	1	1	1	1	0218 810 183	Handwheel	
06	1	1	1	1	0147 639 880	Straightener	Right
08	1	1	1	1	0334 290 882	Contact equipment	D35
13	1	1	1	1	0671 171 580	Angular slide	
14		2	2	2	0154 465 881	Slide, manually operated	L=210
15	2				0334 333 884	Slide, with linear ball bearings	L=300
19		1	1		0148 487 881	Holder	
20		1	1		0147 649 881	Flux hopper	10 l
21		1			0443 510 880	Reel holder	
22		1			0146 967 880	Brake hub	
23		1			0153 872 880	Wire reel	
27	1	1	1	1	0148 493 001	Cable clamp	
32	4				0212 904 109	Drive screw	
45	1	1	1	1	0456 504 883	Cable	
80	1	1	1	1	0457 713 001	Bar	



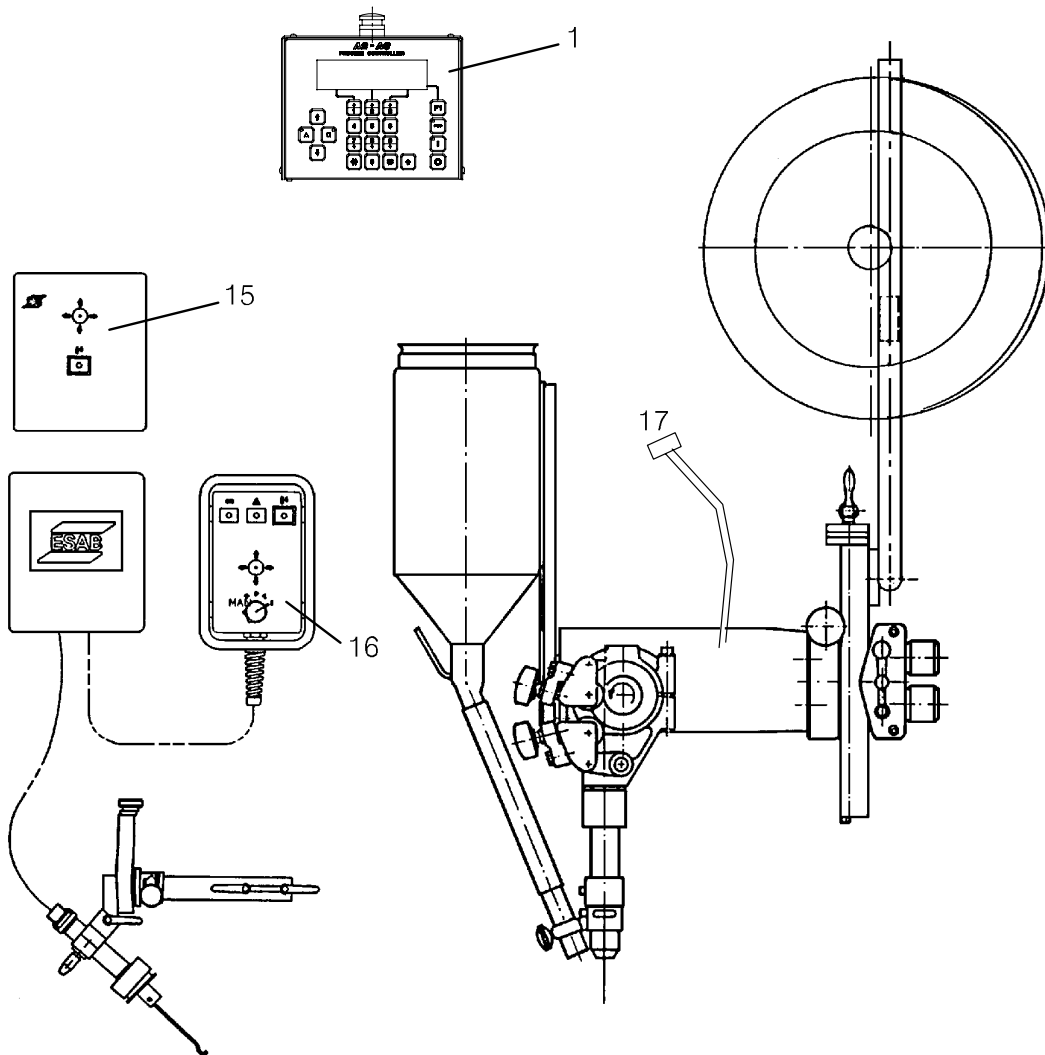
Item no.	Qty	Qty	Qty	Qty	Qty	Ordering no.	Denomination	Notes
					X	0456 560 908	Automatic welding machine without control box PEH	A6 SFE1, HD
				X		0456 560 909	Automatic welding machine without control box PEH	A6 SFE1, HD
			X			0456 560 910	Automatic welding machine without control box PEH	A6 SFE1, HD
	X					0456 560 911	Automatic welding machine without control box PEH	A6 SFE1, HD
		X				0456 560 912	Automatic welding machine without control box PEH	A6 SFE1, HD
01	4	4	4	4	4	0278 300 180	Insulator	2000 V
03	1	1	1	1	1	0145 063 906	Motor with gear	156:1
04	1	1	1	1	1	0456 490 882	Cable	L=2000 mm
05	1	1	1	1	1	0218 810 183	Handwheel	
06	1	1	1	1	1	0147 639 880	Straightener	Right
08	1	1	1	1	1	0334 290 882	Contact equipment	D35
13	1	1	1	1	1	0671 171 580	Angular slide	
15	2	2	2	2	2	0334 333 884	Slide, with linear ball bearings	L=300
19	1	1		1	1	0148 487 881	Holder	
20	1	1		1	1	0147 649 881	Flux hopper	10 l
22	1			1		0146 967 880	Brake hub	
23	1			1		0153 872 880	Wire reel	
24	1			1		0334 318 880	Reel holder, straight	
27	1	1	1	1	1	0148 493 001	Cable clamp	
45	1	1	1	1	1	0456 504 883	Cable	
80	1	1	1	1	1	0457 713 001	Bar	



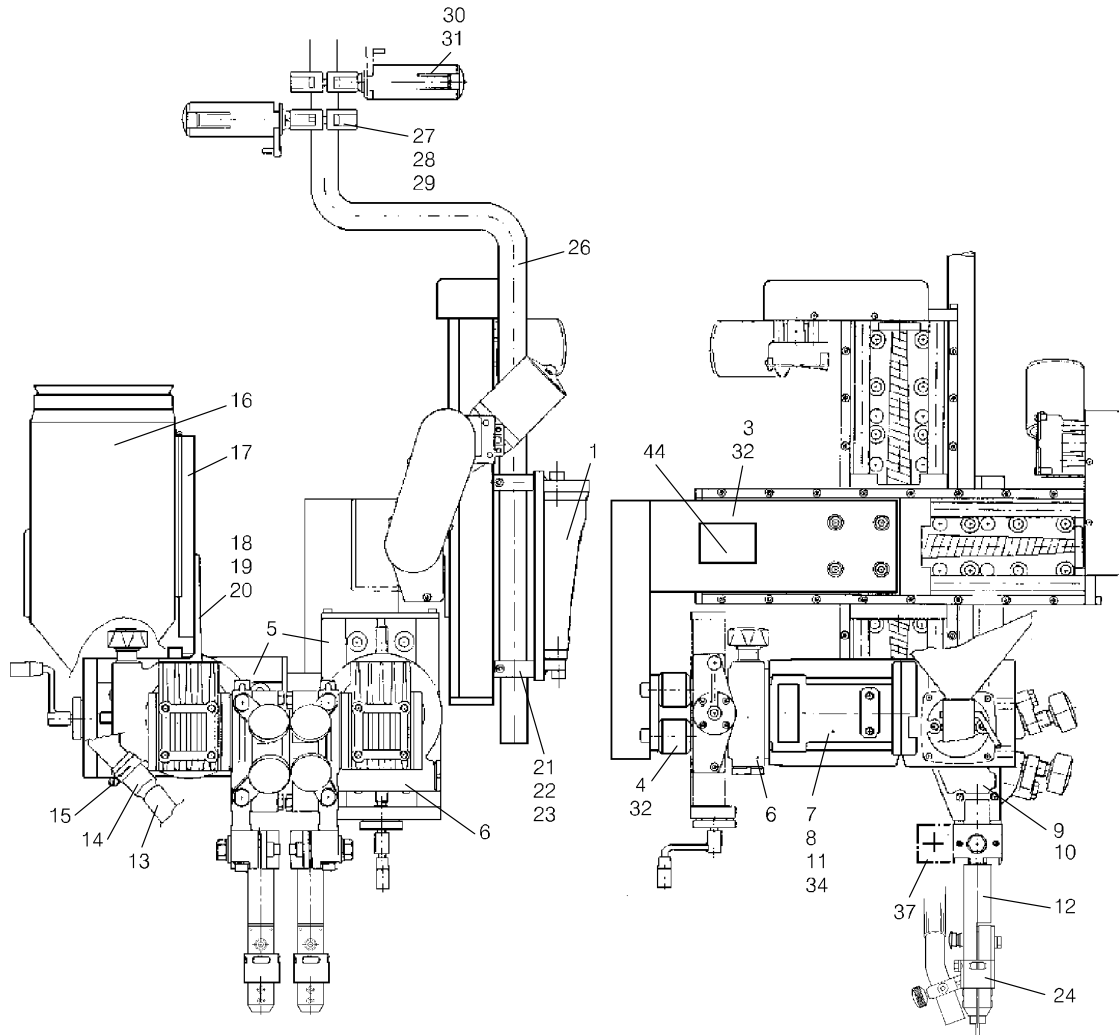
Item no.	Qty	Qty	Qty	Ordering no.	Denomination	Notes	
1	1	1	1	X X X X X X	0456 565 880 0456 565 882 0456 565 884 0456 565 885 0456 565 886 0456 565 887	Automatic welding machine with control box PEH	A6 SFE1, LD
				X X X	0456 565 888 0456 565 889 0456 565 890	Automatic welding machine with control box PEH	A6 SFE1, LD
				X X X	0456 565 891 0456 565 892 0456 565 893	Automatic welding machine with control box PEH	A6 SFE1, LD
					0443 741 880	Control box	PEH
					0456 560 881 ↓ 0456 560 892	Automatic welding machine without control box PEH	
					0417 587 880	Joint-tracking unit	A6 PAK
					0417 142 880	Joint-tracking unit	A6 GMD
					0417 310 887	Motor cable	



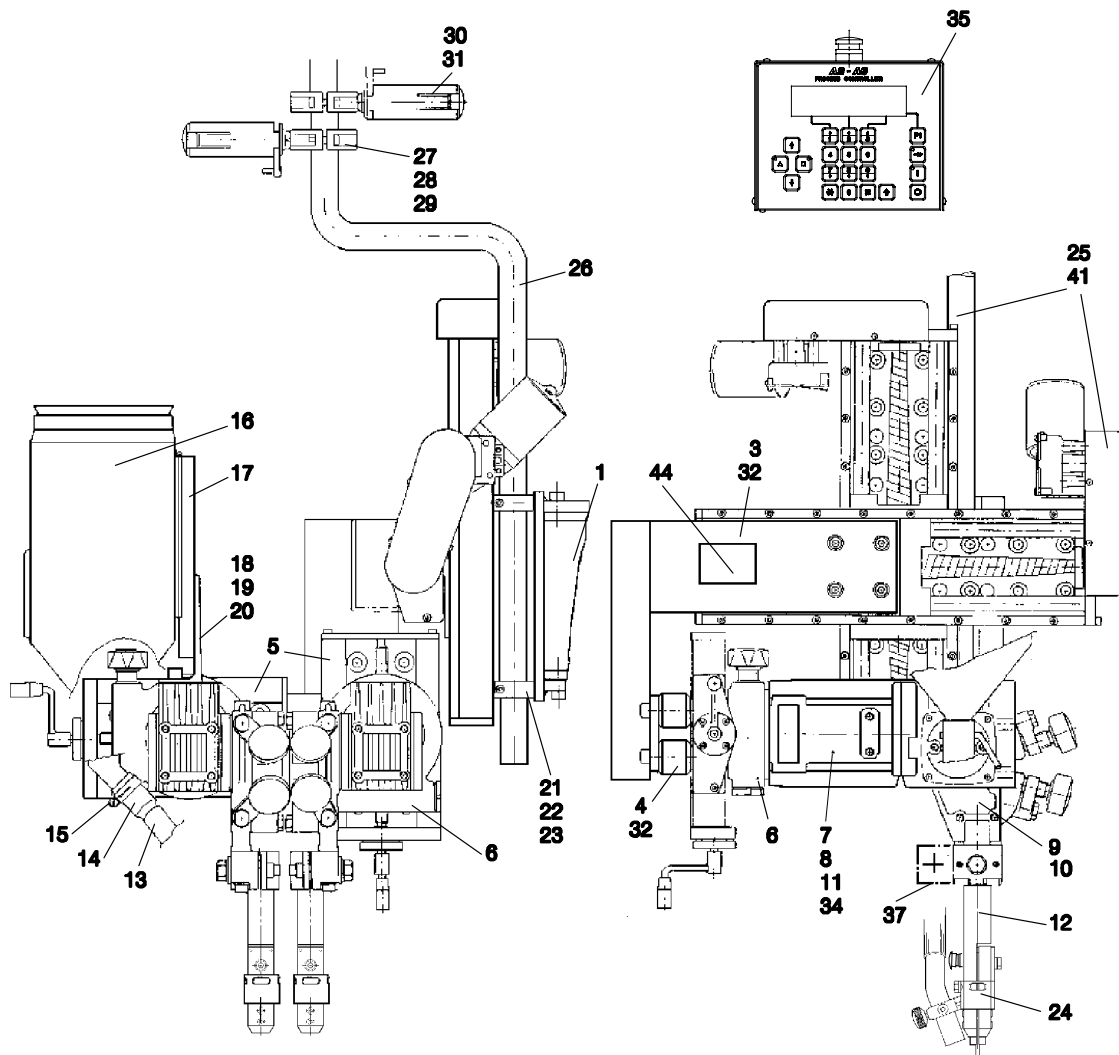
Item no.	Qty	Qty	Qty	Ordering no.	Denomination	Notes	
1			X	0456 565 900	Automatic welding machine with control box PEH	A6 SFE1, HD	
			X	0456 565 902			
			X	0456 565 904			
			X	0456 565 905			
			X	0456 565 906			
			X	0456 565 907			
	X	X	X		0456 565 908	Automatic welding machine with control box PEH	A6 SFE1, HD
					0456 565 909		
					0456 565 910		
	X	X	X		0456 565 911	Automatic welding machine with control box PEH	A6 SFE1, HD
					0456 565 912		
					0456 565 913		
	1	1	1	1	0443 741 880	Control box	PEH
	1	1	1	0456 560 901	Automatic welding machine without control box PEH		
				↓			
				0456 560 913			
15			1	0417 587 880	Joint-tracking unit	A6 PAK	
16	1			0417 142 880	Joint-tracking unit	A6 GMD	
17	2	2		0417 310 887	Motor cable		



Item no.	Qty	Qty	Ordering no.	Denomination	Notes
		X	0457 720 883	Automatic welding machine without control box PEH	A6 SFE2
	X		0457 720 884	Automatic welding machine without control box PEH	A6 SFE2
1	1	1	0334 549 880	Swivel bracket	
3	1	1	0334 557 880	Mounting bracket	
4	8	8	0278 300 180	Insulator	
5	2	2	0154 465 880	Slide manually operated	
6	2	2	0671 171 580	Circular slide	
7	1	1	0145 063 906	Motor with gear	A6 VEC
8	1	1	0145 063 896	Motor with gear	A6 VEC
9	1	1	0147 639 880	Wire straightener	
10	1	1	0147 639 880	Wire straightener	
11	2	2	0218 810 183	Insulated hand wheel	
12	2	2	0334 290 880	Contact Equipment	D35
13	1	1	0333645 880	Flux hose	L = 1,000
14	1		0153 491 001	Branching Tube	
15	1		0252 900 407	Hose clamp	
16	1		0147 649 881	Flux hopper	10 l
17	1		0148 487 880	Holder	
18	1		0334 294 001	Bracket	
19	2			Screw	MC6S, M10x20
20	2			Screw	MC6S, M10x16
21	2		0334 693 001	Clamp	
22	4			Screw	MC6S, M12x70
23	2			Screw	MC6S, M6x40
24	1		0153 299 880	Flux nozzle	
26	1		0334 694 001	Pipe bend	
27	4		0154 734 001	Clamp	
28	4			Screw	MC6S, M6x60
29	4			Nut	M6
30	2		0146 967 880	Brake hub	
31	2		0153 872 880	Wire reel holder	25 kg
32	12	12		Screw	MC6S, M12x25
34	2	2	0456 490 882	Motor cable	3 m
37	2	2	0456 504 883	Cable	
44	4	4		Screw	B6x9,5
80	1	1	0457 713 001	Bar	
81	1	1		Screw	M6S, M16x30
82	1	1		Washer	BRB 30/17x3
83	1	1		Screw	M6S, M10x40
84	2	2		Washer	M6S, 22/10,5x22
85	1	1		Nut	M10

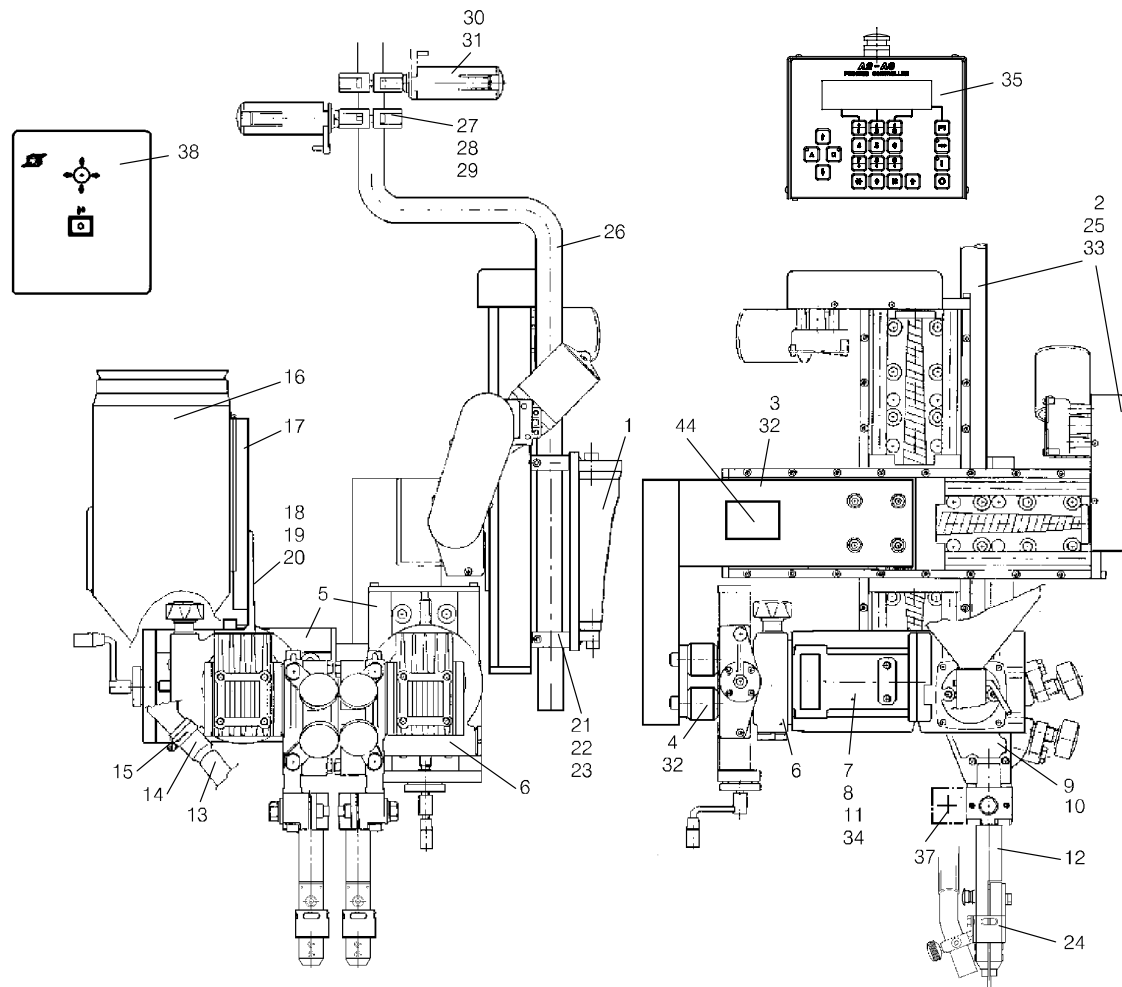


Item no.	Qty	Qty	Ordering no.	Denomination	Notes
		X	0457 720 885	Automatic welding machine with control box PEH	A6 SFE2
	X		0457 720 887	Automatic welding machine with control box PEH	A6 SFE2
1	1	1	0334 549 880	Swivel bracket	
3	1	1	0334 557 880	Mounting bracket	
4	8	8	0278 300 180	Insulator	
5	2	2	0154 465 880	Slide manually operated	
6	2	2	0671 171 580	Circular slide	
7	1	1	0145 063 906	Motor with gear	A6 VEC
8	1	1	0145 063 896	Motor with gear	A6 VEC
9	1	1	0147 639 880	Wire straightener	
10	1	1	0147 639 880	Wire straightener	
11	2	2	0218 810 183	Insulated hand wheel	
12	2	2	0334 290 880	Contact Equipment	D35
13	1	1	0333 645 880	Flux hose	L = 1,000
14	1	1	0153 491 001	Branching Tube	
15	1	1	0252 900 407	Hose clamp	
16	1	1	0147 649 881	Flux hopper	10 l
17	1	1	0148487 880	Holder	
18	1	1	0334 294 001	Bracket	
19	2	2		Screw MC6S	MC6S, M10x20
20	2	2		Screw MC6S	MC6S, M10x16
21	2	2	0334 693 001	Clamp	
22	4	4		Screw	MC6S, M12x70
23	2	2		Screw	MC6S, M6x40
24	1	1	0153 299 880	Flux nozzle	
25	4		0192 238 532	Screw	MC6S, M12x20
26	1	1	0334 694 001	Pipe bend	
27	4	4	0154 734 001	Clamp	
28	4	4		Screw	MC6S, M6x60
29	4	4		Nut	M6
30	2	2	0146 967 880	Brake hub	
31	2	2	0153 872 880	Wire reel holder	25 kg
32	12	12		Screw	MC6S, M12x25
34	2	2	0456 490 882	Motor cable	3 m
35	2	2	0443 741 880	Control box	PEH
37	2	2	0456 504 883	Cable	
41	2		0154465881	Slide	
44	4	4		Screw	B6x9,5
80	1	1	0457 713 001	Bar	
81	1	1		Screw	M6S, M16x30
82	1	1		Washer	BRB 30/17x3
83	1	1		Screw	M6S, M10x40
84	2	2		Washer	BRB 22/10,5x2
85	1	1		Nut	M10



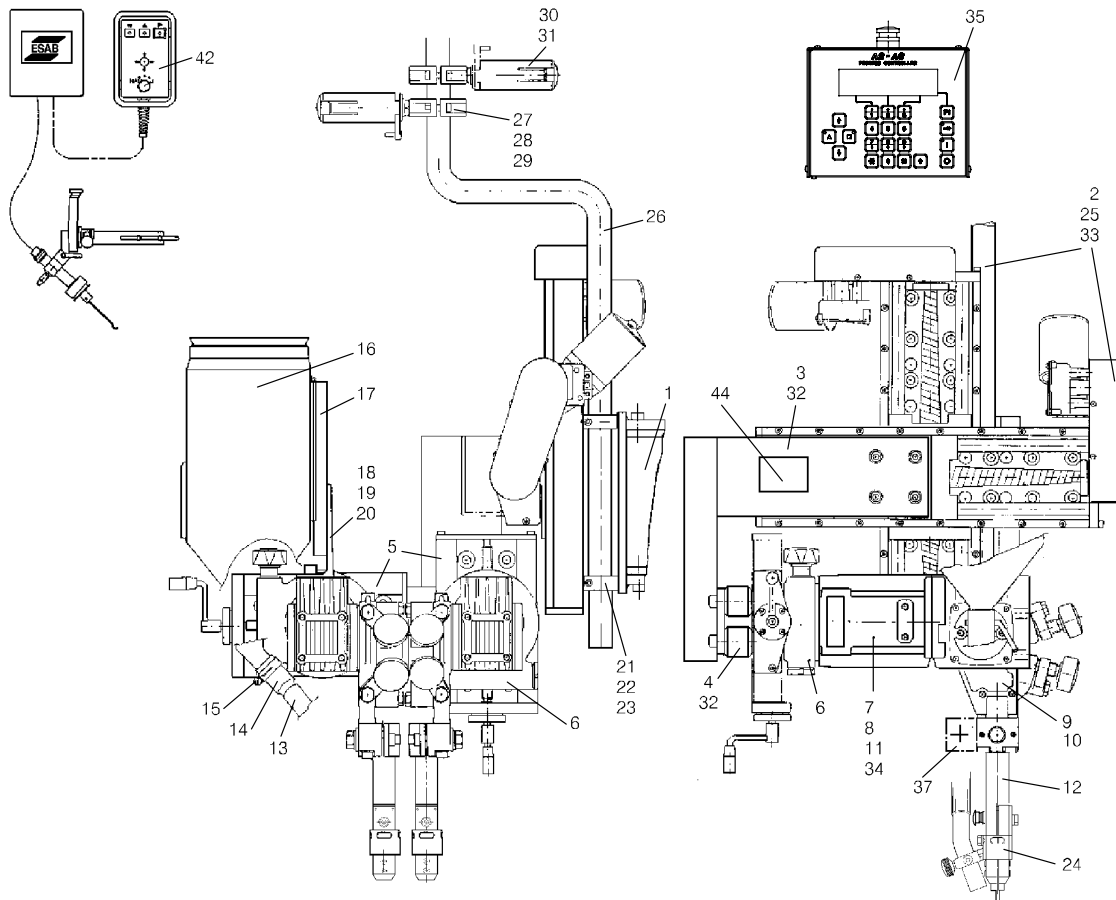
Item no.	Qty	Qty	Ordering no.	Denomination	Notes
		X	0457 720 880	Automatic welding machine with control box PEH and Joint-tracking unit A6 PAK	A6 SFE2
	X		0457 720 889	Automatic welding machine with control box PEH and Joint-tracking unit A6 PAK	A6 SFE2
1	1	1	0334 549 880	Swivel Bracket	
2	2	2	0334 333 884	Motorised Slide	300 mm
3	1	1	0334 557 880	Mounting bracket	
4	8	8	0278 300 180	Insulator	200 V
5	2	2	0154 465 880	Slide manually operated	
6	2	2	0671 171 580	Circular slide	
7	1	1	0145 063 906	Motor with gear	A6 VEC
8	1	1	0145 063 896	Motor with gear	A6 VEC
9	1	1	0147 639 880	Wire straightener	
10	1	1	0147 639 880	Wire straightener	
11	2	2	0218 810 183	Insulated hand wheel	
12	2	2	0334 290 880	Contact Equipment	D35
13		1	0333 645 880	Flux hose	L = 1,000
14		1	0153 491 001	Branching Tube	
15		1	0252 900 407	Hose clamp	
16		1	0147 649 881	Flux hopper	10 l
17		1	0148 487 880	Holder	
18		1	0334 294 001	Bracket	
19		2		Screw MC6S	M10x20
20		2		Screw MC6S	10x16
21		2	0334 693 001	Clamp	
22		4		Screw	M12x70
23		2		Screw	M6x40
24		1	0153 299 880	Flux nozzle	
25	8	4	0192 238 532	Screw	M12x20
26		1	0334 694 001	Pipe bend	
27		4	0154 734 001	Clamp	
28		4		Screw	M6x60
29		4		Nut	M6
30		2	0146 967 880	Brake hub	
31		2	0153 872 880	Wire reel holder	25 kg
32	12	12		Screw	MC6S, M12x25
33	2	2	0417 310 887	Engine cable	
34	2	2	0456 490 882	Motor cable	3 m
35	2	2	0443 741 880	Control box	PEH
37	2	2	0456 504 883	Cable	
38	1	1	0417 587 880	Joint-tracking unit	A6 PAK
44	4	4		Screw	B6x9,5
80	1		0457 713 001	Bar	
81	1			Screw	M6S, M16x30
82	1			Washer	BRB 30/17x3

Item no.	Qty	Qty	Ordering no.	Denomination	Notes
83	1			Screw	M6S, M10x40
84	2			Washer	BRB 22/10,5x2
85	1			Nut	

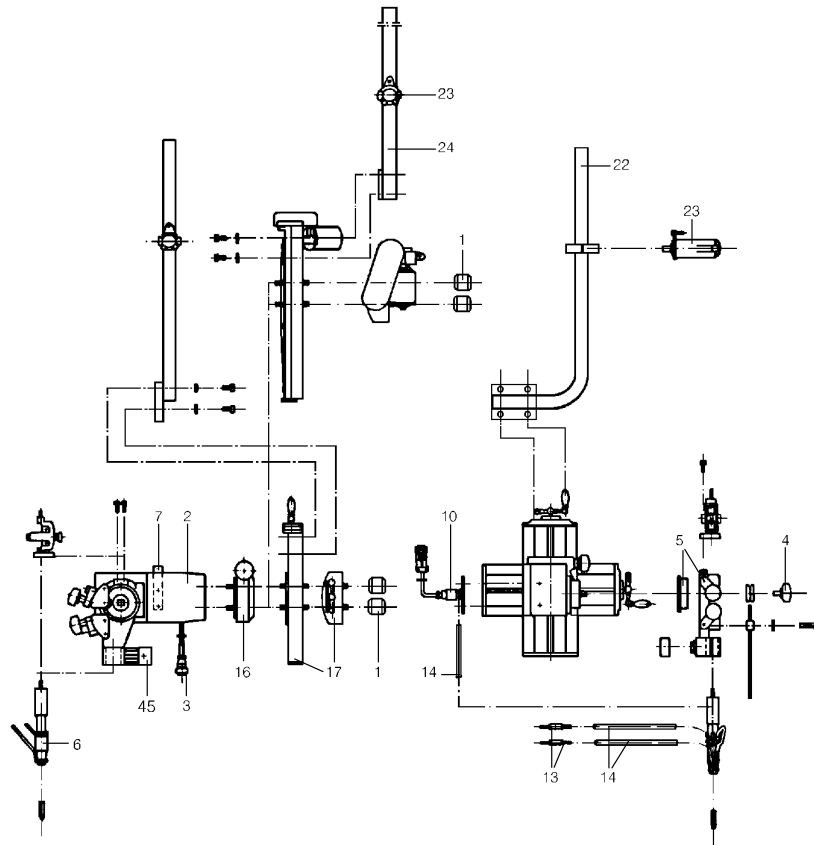


Item no.	Qty	Qty	Ordering no.	Denomination	Notes
		X	0457 720 891	Automatic welding machine with control box PEH and Joint tracking equipment A6 GMD	A6 SFE2
	X		0457 720 893	Automatic welding machine with control box PEH and Joint tracking equipment A6 GMD	A6 SFE2
1	1	1	0334 549 880	Swivel bracket	
2	2	2	0334 333 884	Motorised Slide	300 mm
3	1	1	0334 557 880	Mounting bracket	
4	8	8	0278 300 180	Insulator	200 V
5	2	2	0154 465 880	Slide manually operated	
6	2	2	0671 171 580	Circular slide	
7	1	1	0145 063 906	Motor with gear	A6 VEC
8	1	1	0145 063 896	Motor with gear	A6 VEC
9	1	1	0147 639 880	Wire straightener	
10	1	1	0147 639 880	Wire straightener	
11	2	2	0218 810 183	Insulated hand wheel	
12	2	2	0334 290 880	Contact Equipment	D35
13	1		0333 645 880	Flux hose	L = 1,000
14	1		0153 491 001	Branching Tube	
15	1		0252 900 407	Hose clamp	
16	1		0147 649 881	Flux hopper	10 l
17	1		0148 487 880	Holder	
18	1		0334 294 001	Bracket	
19	2			Screw MC6S	M10x20
20	2			Screw MC6S	M10x16
21	2		0334 693 001	Clamp	
22	4			Screw	M12x70
23	2			Screw	M6x40
24	1		0153 299 880	Flux nozzle	
25	4	8	0192 238 532	Screw	M12x20
26	1		0334 694 001	Pipe bend	
27	4		0154 734 001	Clamp	
28	4			Screw	M6x60
29	4			Nut	M6
30	2		0146 967 880	Brake hub	
31	2		0153 872 880	Wire reel holder	25 kg
32	12	12		Screw	MC6S, M12x25
33	2	2	0417 310 887	Engine cable	
34	2	2	0456 490 882	Motor cable	3 m
35	2	2	0443 741 880	Control box PEH	
37	2	2	0456 504 883	Cable	
42	1	1	0417 142 880	Joint tracking equipment	A6 GMD
44	4	4		Screw	B6x9,5
80	1	1	0457 713 001	Bar	
81	1	1		Screw	M16X30
82	1	1		Washer	BRB 30/17x3

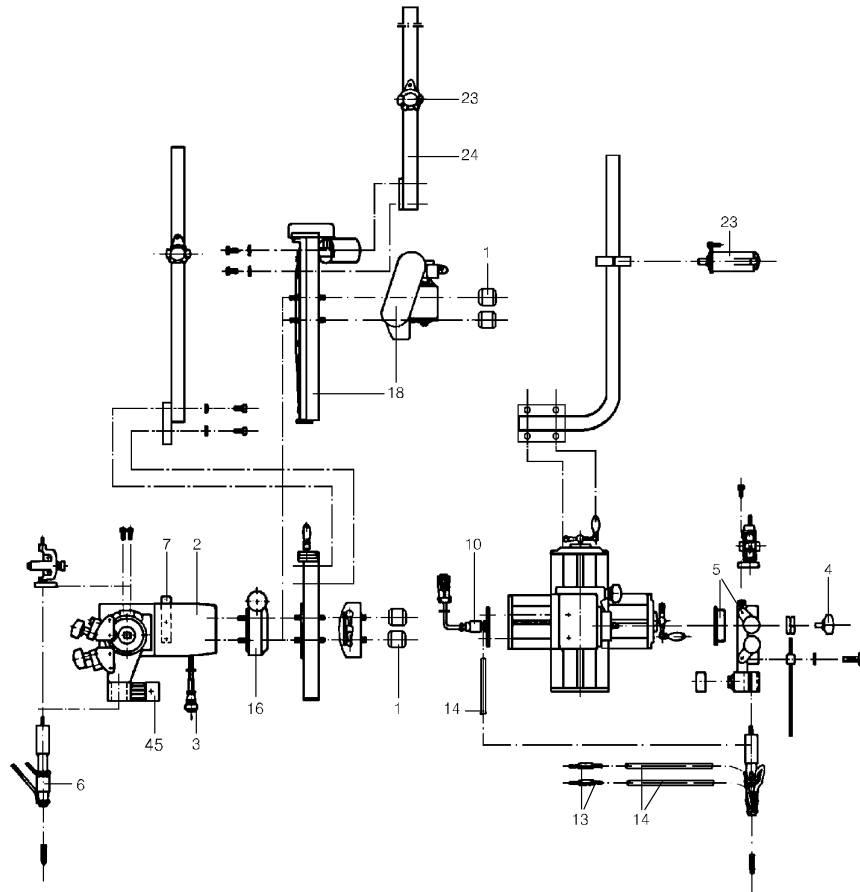
Item no.	Qty	Qty	Ordering no.	Denomination	Notes
83	1	1		Screw	M10X40
84	2	2		Washer	BRB 22/10,5x2
85	1	1		Nut	M10



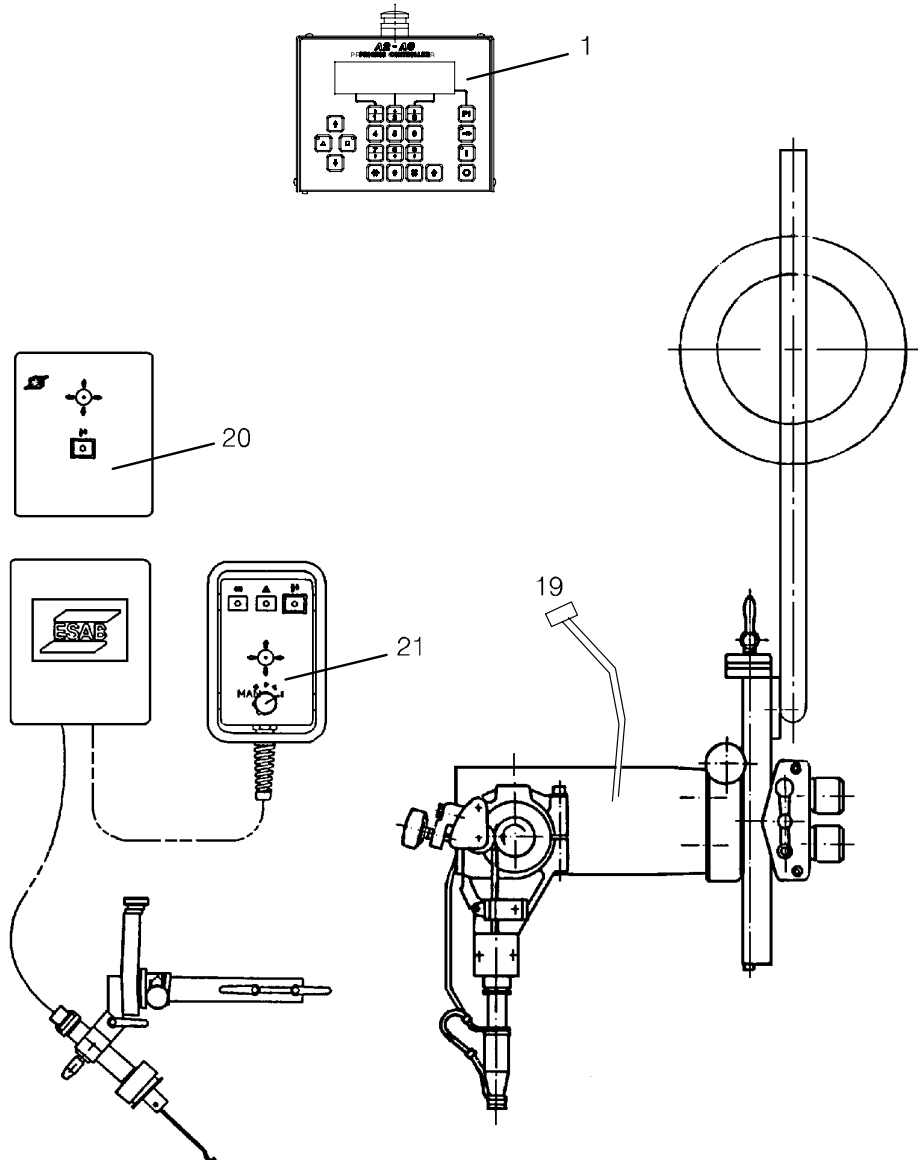
Item no.	Qty	Qty	Qty	Qty	Qty	Ordering no.	Denomination	Notes
					X	0456 563 880	Automatic welding machine without control box PEH	A6 SGE1
				X		0456 563 881	Automatic welding machine without control box PEH	A6 SGE1
		X				0456 563 882	Automatic welding machine without control box PEH	A6 SGE1
	X					0456 563 883	Automatic welding machine without control box PEH	A6 SGE1
						0456 563 884	Automatic welding machine without control box PEH	A6 SGE1
1	4	4				0278 300 180	Insulator	2000 V
2	1	1	1	1	1	0145 063 909	Motor with gear	76:1
3	1	1	1	1	1	0456 490 882	Cable	L= 3 m
4	1	1	1	1	1	0218 810 183	Handwheel	
5	1	1	1	1	1	0147 639 880	Wire straightener (right)	
6	1	1	1	1	1	0030 465 385	Welding nozzle	D35
7	1	1	1	1	1	0148 493 001	Cable clamp	
10	1	1	1	1	1	0456 494 882	Solenoid valve with cable	
13	2	2	2	2	2	0147 336 880	Hose clutch	
14	6	6	6	6	6	0193 761 002	Hose clamp	
16	1	1				0671 171 580	Angular slide	
17	2	2				0154 465 881	Slide, manually operated	L=210
22	1			1		0443 510 880	Reel holder	
23	1		1	1		0146 967 880	Brake hub	
24			1			0334 318 880	Reel holder, straight	
45	1	1	1	1	1	0456 504 883	Cable	
80	1	1	1	1	1	0457 713 001	Bar	



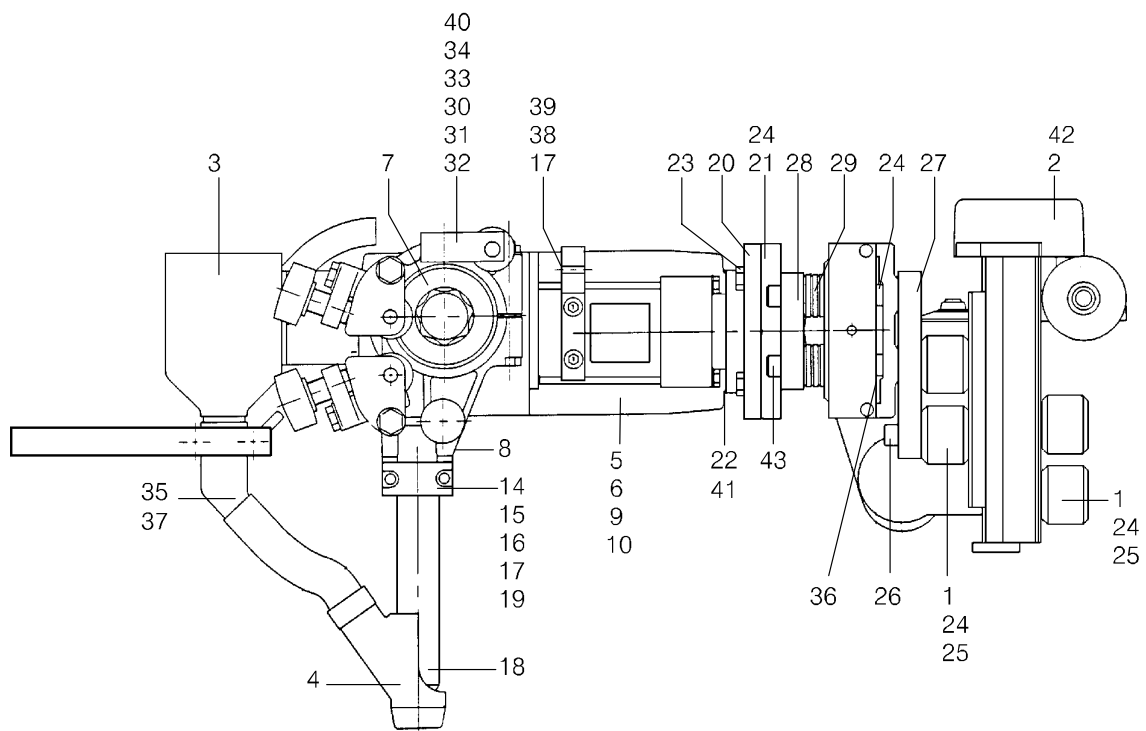
Item no.	Qty	Qty	Qty	Qty	Ordering no.	Denomination	Notes
				X	0456 563 885	Automatic welding machine without control box PEH	A6 SGE1
			X		0456 563 886	Automatic welding machine without control box PEH	A6 SGE1
		X			0456 563 887	Automatic welding machine without control box PEH	A6 SGE1
	X				0456 563 888	Automatic welding machine without control box PEH	A6 SGE1
1	4	4	4	4	0278 300 180	Insulator	2000 V
2	1	1	1	1	0145 063 909	Motor with gear	76:1
3	1	1	1	1	0456 490 882	Cable	L= 3 m
4	1	1	1	1	0218 810 183	Handwheel	
5	1	1	1	1	0147 639 880	Wire straightener	Right
6	1	1	1	1	0030 465 385	Welding nozzle	D35
7	1	1	1	1	0148 493 001	Cable clamp	
10	1	1	1	1	0456 494 882	Solenoid valve with cable	
13	2	2	2	2	0147 336 880	Hose clutch	
14	6	6	6	6	0193 761 002	Hose clamp	
16	1	1	1	1	0671 171 580	Angular slide	
18	2	2	2	2	0334 333 884	Slide, with linear ball bearings	L=300
23	1		1		0146 967 880	Brake hub	
24	1		1		0334 318 880	Reel holder, straight	
45	1	1	1	1	0456 504 883	Cable	
80	1	1	1	1	0457 713 001	Bar	



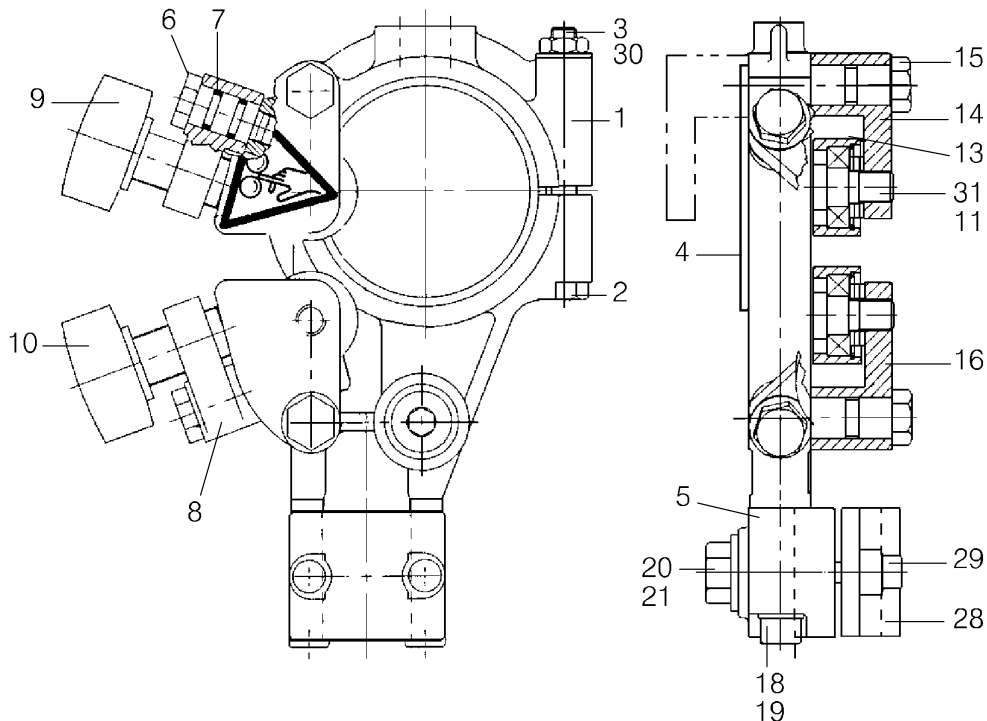
Item no.	Qty	Qty	Qty	Ordering no.	Denomination	Notes
			X X X X	0456 564 880 0456 564 881 0456 564 882 0456 564 883	Automatic welding machine with control box PEH	A6 SGE1
		X X		0456 564 884 0456 564 885	Automatic welding machine with control box PEH	A6 SGE1
	X X			0456 564 886 0456 564 887	Automatic welding machine with control box PEH	A6 SGE1
1	1	1	1	0443 741 880	Control box	PEH
	1	1	1	0456 563 881 ↓ 0456 563 888	Automatic welding machine without control box PEH	
19	2	2		0417 310 887	Motor cable	
20		1		0417 587 880	Joint-tracking unit	A6 PAK
21	1			0417 142 880	Joint-tracking equipment	A6 GMD



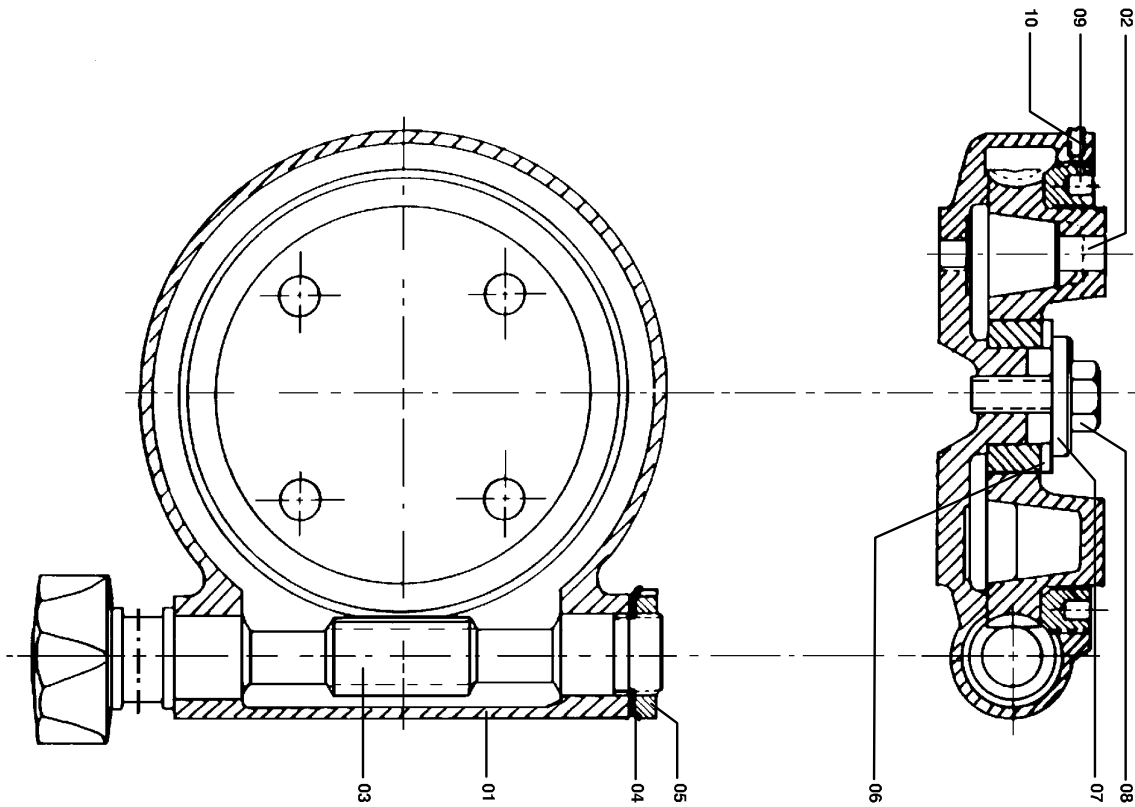
Item no.	Qty	Ordering no.	Denomination	Notes
		0416 967 880	Automatic welding machine	A6 SFE1C
1	8	0278 300 180	Insulator	
2	2	0334 333 880	Motorized slide	
3	1	0153 856 882	Flux hopper	
4	1	0254 900 880	Flux funnel	
5	1	0145 063 897	Motor with gear	74:1
6	1	0456 490 882	Motor cable	3 m
7	1	0218 810 183	Hand wheel (insulated)	
8	1	0147 639 883	Straightener	
9	1	0190 313 105	Spiral, plastic	L = 0.14 m
10	1	0190 313 111	Spiral, plastic	L = 0.50 m
14	1	0416 956 001	Contact clamp	D35
15	1		Allen screw	M16x40
16	1		Washer	D30/17x3
17	4		Allen screw	M10x40
18	1	0417 959 880	Contact equipment	L = 220
19	2		Allen screw	M8x25
20	1	0334 170 001	Tensioning ring	
21	1	0334 171 001	Plate	
22	1	0334 172 001	Gear mount	
23	4		Screw	M10x25
24	10		Allen screw	M12x20
25	4		Stop screw	SK6SS M12x30
26	2		Allen screw	M12x30
27	1	0411 408 001	Mounting plate	
28	1	0411 407 001	Mounting plate	
29	12		Washer	D36/13x6
30	1	0416 955 001	Attachment, roller	
31	1	0153 148 880	Roller	
32	1	0332 411 880	Shaft journal with washer	
33	2		Allen screw	M8x20
34	2		Washer	D16/8.4x1.5
35	1	0413 936 881	Flux valve set	
36	2		Allen screw	M12x40
37	1	0443 383 001	Flux hose	L = 0.250 m, 1"
38	1	0416 957 001	Wire conduit mount	
39	2		Washer	D22/10.5x2
40	1		Nut	M12
41	4		Screw	M10x30
42	2	0417 310 887	Motor cable	
43	4		Screw	M12x50
80	1	0457 713 001	Bar	



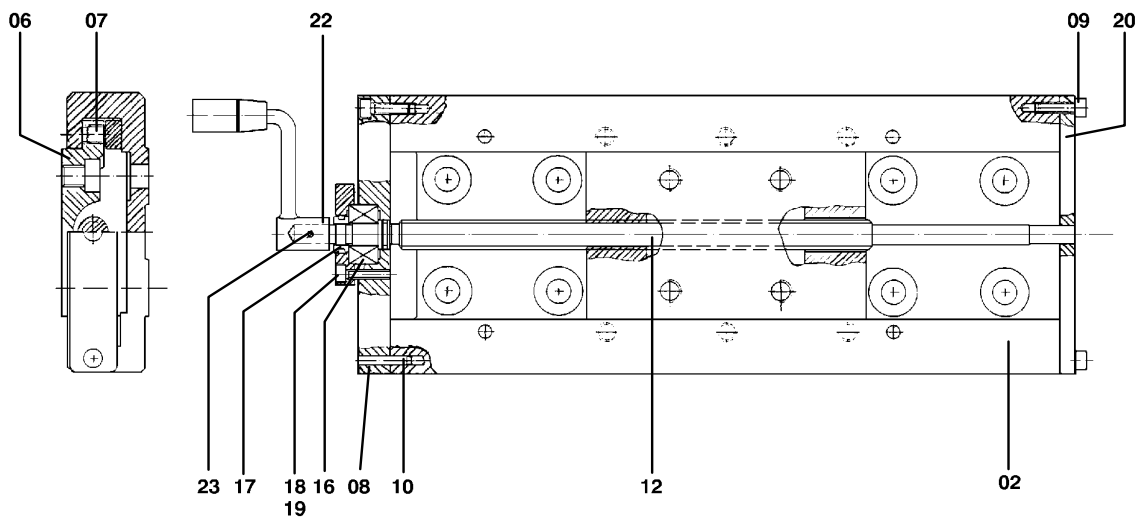
Item no.	Qty	Ordering no.	Denomination	Notes
		0147 639 880	Straightener (right)	
1	1	0156 449 001	Clamp	
2	1		Screw	M10x100
3	1		Washer	D22/10.5x2
4	1	0215 503 601	Insulating sleeve	
5	1	0156 530 001	Clamp half	
6	2	0212 900 001	Spacer screw	
7	4	0215 201 209	O-ring	D11.3x2.4
8	2	0218 400 801	Pressure roller arm	
9	1	0218 810 181	Handwheel	
10	1	0218 810 182	Handwheel	
11	3	0332 408 001	Stub shaft	
13	3	0153 148 880	Roller	
14	1	0415 498 001	Thrust roller carrier	
15	2	0212 902 601	Spacer screw	
16	1	0415 499 001	Thrust roller carrier	
18	2		Screw	M10x60
19	2		Spring washer	D18.1/10.2
20	1		Screw	M16x50
21	1		Washer	D30/17x3
28	1	0156 531 001	Clamp half	
29	2		Screw	M8x30
30	1		Nut	M10
31	9		Washer	D22/13x2



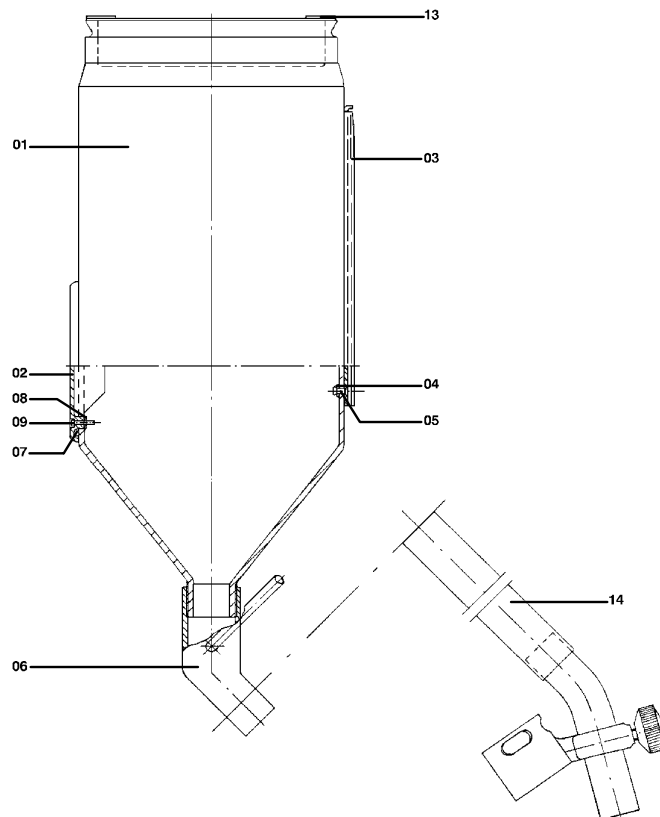
Item no.	Qty	Ordering no.	Denomination	Notes
		0671 171 580	Angular slide	
01	1	0232 601 901	Housing (casing)	
02	1	0232 303 101	Worm wheel	
03	1	0040 644 080	Worm screw	
04	1	0215 401 206	Locking washer	D25
05	1	0215 401 306	Nut	
06	1	0218 522 301	Eccentric bushing	
07	1	0215 100 204	Washer	D36/13x6
08	1	0212 101 628	Screw	M12x30
09	1	0212 911 101	Screw	
10	1	0212 204 346	Stop screw	M5x12



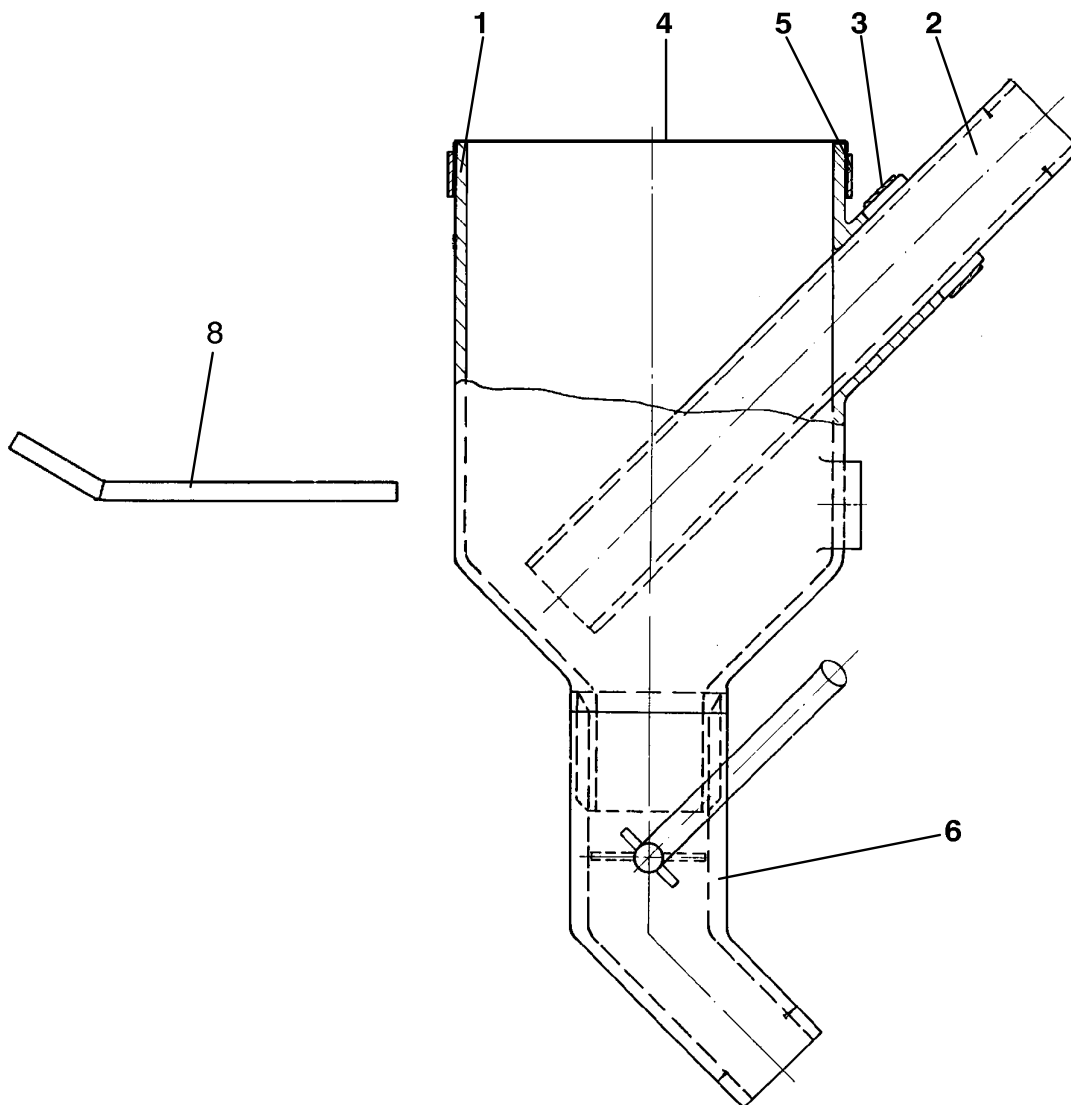
Item no.	Qty	Ordering no.	Denomination	Notes
		0154 465 881	Slide, manually operated	
02	1	0154 464 002	Slide frame	
06	1	0154 463 880	Carrlage with slide rails	
07	6	0190 509 485	Stop screw	M10x10
08	1	0154 458 001	End piece	
09	4		Screw	M6x20
10	2	0211 102 957	Roll pin	D5x20
12	1	0154 461 002	Lead screw	
16	1	0190 531 201	Ball bearing	SKF 3201
17	1	0154 456 001	Locknut	
18	1	0154 457 001	Ball bearing cap	
19	4		Screw	M5x16
20	1	0154 459 001	End washer	
22	1	0334 537 001	Crank	
23	1	0211 102 938	Roll pin	D3x20



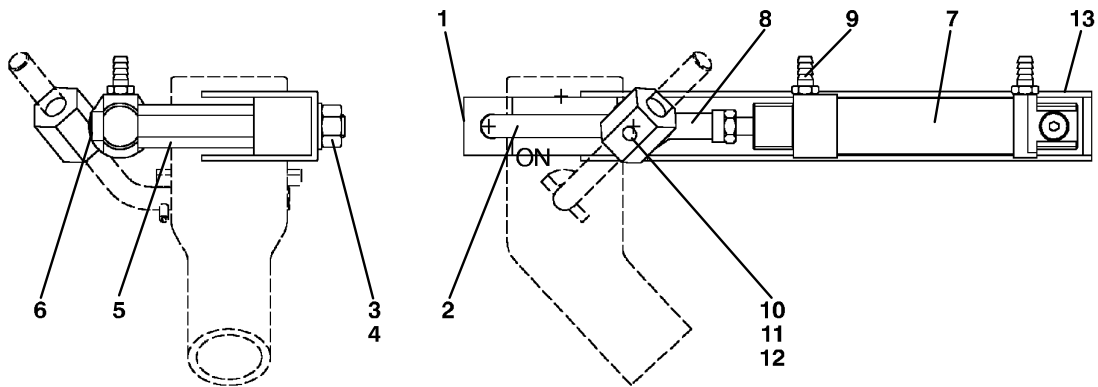
Item no.	Qty	Ordering no.	Denomination	Notes
		0147 649 881	Flux hopper compl	10 I
01	1	0154 007 001	Hopper for flux	
02	1	0148 837 001	Window	
03	1	0147 645 001	Fitting	
04	4		Washer	D8/4.3x0.8
05	4	0191 898 108	Rivet	
06	1	0153 347 880	Flux valve	
07	1	2152 012 32	O-ring	
08	2	0148 799 001	Washer	
09	2		Screw	M3x16
13	1	0020 301 780	Flux strainer	
14	1	0443 383 002	Flux hose </td <td>L=500</td>	L=500



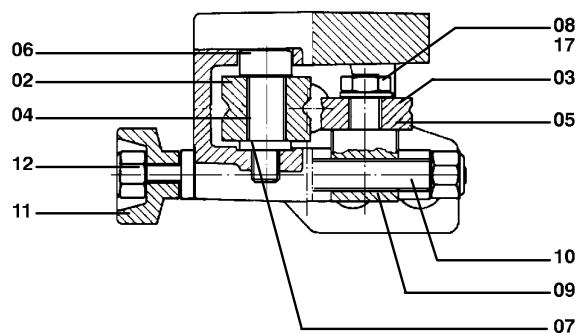
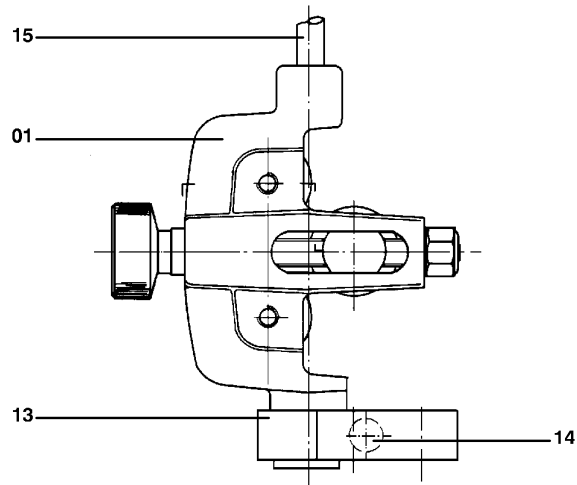
Item no.	Qty	Ordering no.	Denomination	Notes
		0153 856 882	Flux hopper	1 L
1	1	0153 853 001	Flux container	
2	1	0153 854 001	Pipe	
3	1	0252 900 408	Hose clamp	
4	1	0153 855 001	Filter	
5	1	0252 900 416	Hose clamp	
6	1	0153 347 880	Flux valve	
8	1	0416 970 001	Holder	



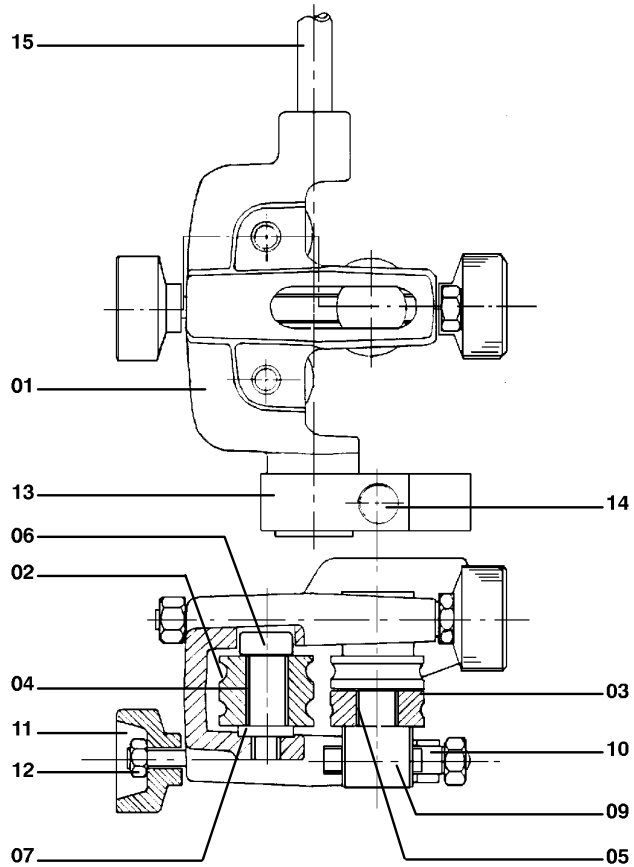
Item no.	Qty	Ordering no.	Denomination	Notes
		0413 936 881	Flux valve set	
1	1	0413 759 880	Arm	
2	1	0156 442 002	Screw	R21, M8
3	2		Nut	M8
4	2		Washer	D16/8.4 x 1.5
5	1	0413 991 001	Stud screw	M6/M5 x 40
6	1	0333 642 002	Tight-fitting screw	M5x12
7	1	0413 937 001	Cylinder	D16, Stroke 50
8	1	0413 937 002	Ball joint coupling	
9	2	0367 675 001	Nipple	
10	1	0413 836 880	Fixation	
11	1	0212 204 545	Stop screw	M5x6
12	1	0215 702 706	Locking washer	
13	1	0413 935 001	Insulating sleeve	



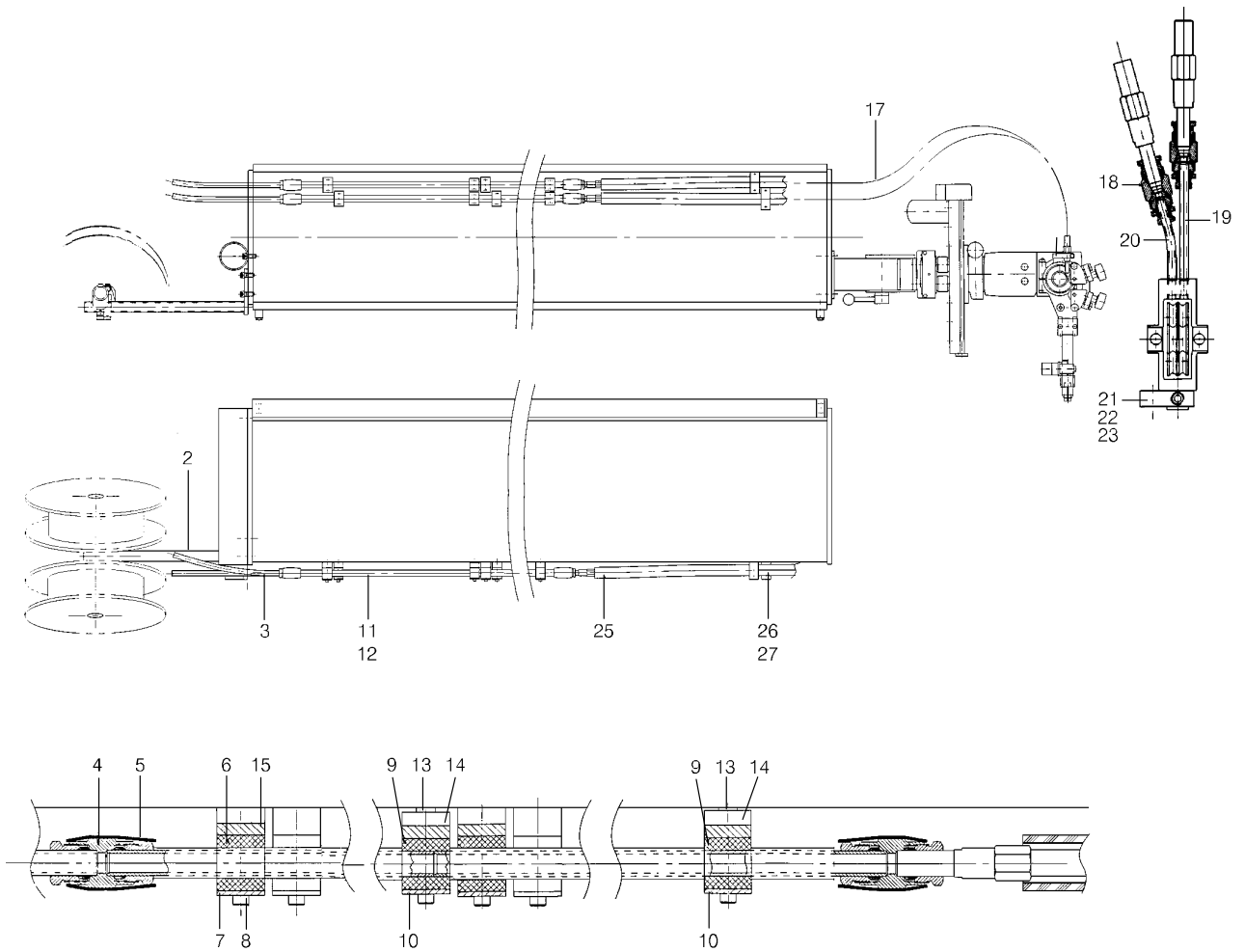
Item no.	Qty	Ordering no.	Denomination	Notes
		0332 565 880	Fine wire straightener for single wire	Accessorie
1	1	0332 604 001	Housing (casing)	
2	2	0332 619 001	Roller	
3	1	0332 621 001	Roller	
4	2	0145 791 001	Bearing bushing	
5	1	0190 240 103	Bearing bushing	D12/10
6	2	0145 792 001	Screw	
7	2		Washer	D16/8.4x3
8	1		Washer	D16/8.4x1.5
9	1	0332 620 001	Runner	
10	1	0145 796 002	Screw	
11	1	0145 794 001	Knob	
12	2		Nut	M8
13	1	0145 795 001	Link	
14	1		Screw	M8x25
15	1	0151 287 001	Hose	L=300
17	1		Nut	M8



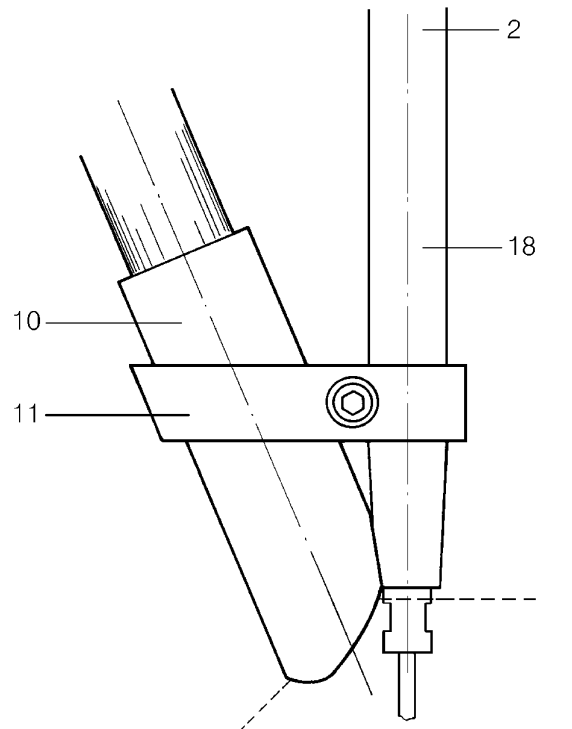
Item no.	Qty	Ordering no.	Denomination	Notes
		0145 787 880	Fine wire straightener for twin wire	Included in conversion kit A6 SFE1/A6 SFE2 to Twin with fine-wire straightener (LD)
1	1	0145 788 001	Case	
2	2	0145 789 001	Roller	
3	2	0145 790 001	Roller	
4	2	0145 791 001	Searing bushing	
5	2	0190 240 103	Bearing bushing	D12/10
6	2	0145 792 001	Screw	
7	2		Washer	D16/8.4x3
9	2	0145 793 001	Runner	
10	2	0145 796 002	Screw	
11	2	0145 794 001	Knob	
12	4		Nut	M8
13	1	0145 795 001	Link	
14	1		Screw	M8x25
15	1	0151 287 001	Hose	L=600



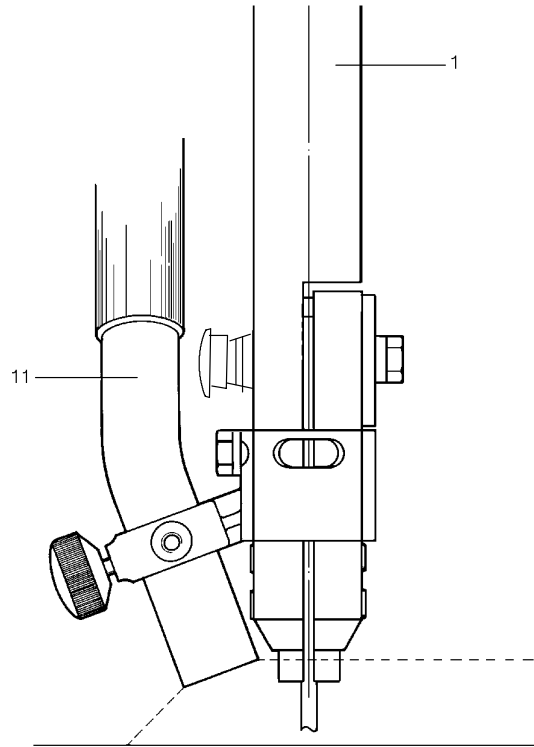
Item no.	Qty	Ordering no.	Denomination	Notes
		0415 154 883	Wire reel	
2	1	0415 153 881	Holder, wire reel	
3	1	0190 513 122	Pipe, nylon	L = 0.700 m
4	4	0193 755 008	Pipe coupling	
5	1	0190 304 119	Shrinking hose	L = 0.500 m
6	8	0191 309 320	Clamp, plastic	
7	4	0191 498 002	Cover plate	
8	24		Allen screw	M6x60
9	4	0191 309 107	Clamp, plastic	
10	8	0191 498 002	Cover plate	
11	15	0193 622 102	Pipe, PVC	L = 15 m
12	18	0190 395 243	Pipe, steel	L = 18 m
13	8	0215 100 013	Washer	
14	2	0191 498 107	Clamp and cover plate	
15	4	0191 498 109	Clamp and cover plate	
17	2	0415 157 880	Wire conduit	
18	2	0193 756 015	Pipe coupling	
19	1	0415 158 001	Pipe	
20	1	0415 159 001	Pipe	
21	1	0415 155 001	Clamp	
22	2		Screw	M8x25
23	1		Screw	M12x12
25		0190 315 109	Hose	
26	2	0191 309 115	Clamp, plastic	
27	4		Screw	M6x60



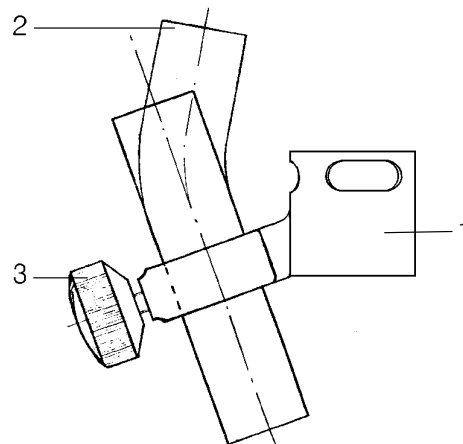
Item no.	Qty	Orderingno.	Denomination	Notes
		0334 289 880	Contact equipment single wire	D20
1	1	156 907-001	Cartridge	
2	1	154 381-001	Contact tube	D20
10	1	332 948-001	Flux tube	
11	1	333 094-880	Clamp	
18	1	334 278-880	Guide insert	



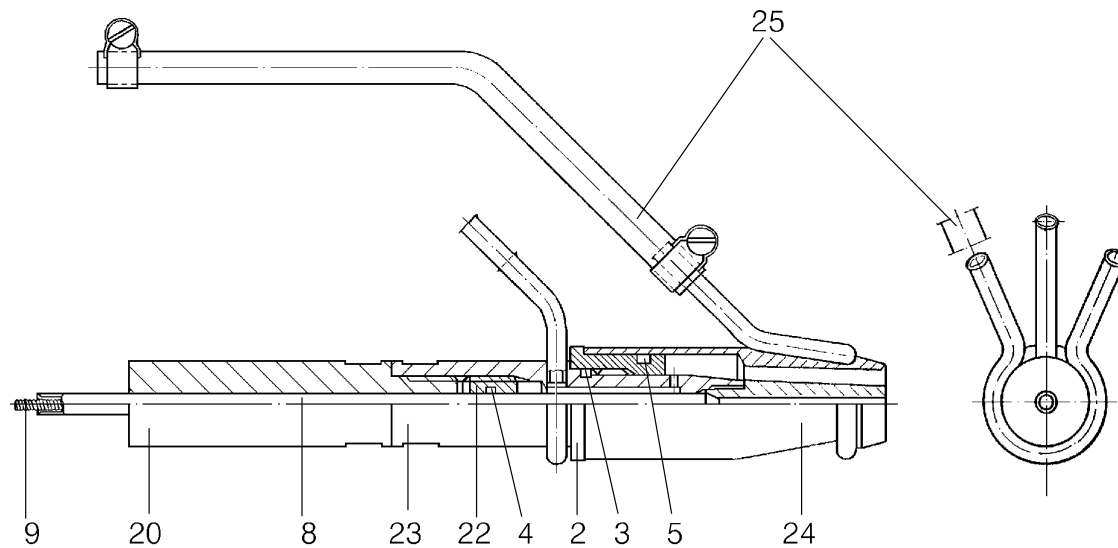
Item no.	Qty	Ordering no.	Denomination	Notes
1	1	0334 290 880	Contact equipment single wire	D35
		417 959-880	Contact equipment	L=220
11	1	153 299-880	Flux nozzle	



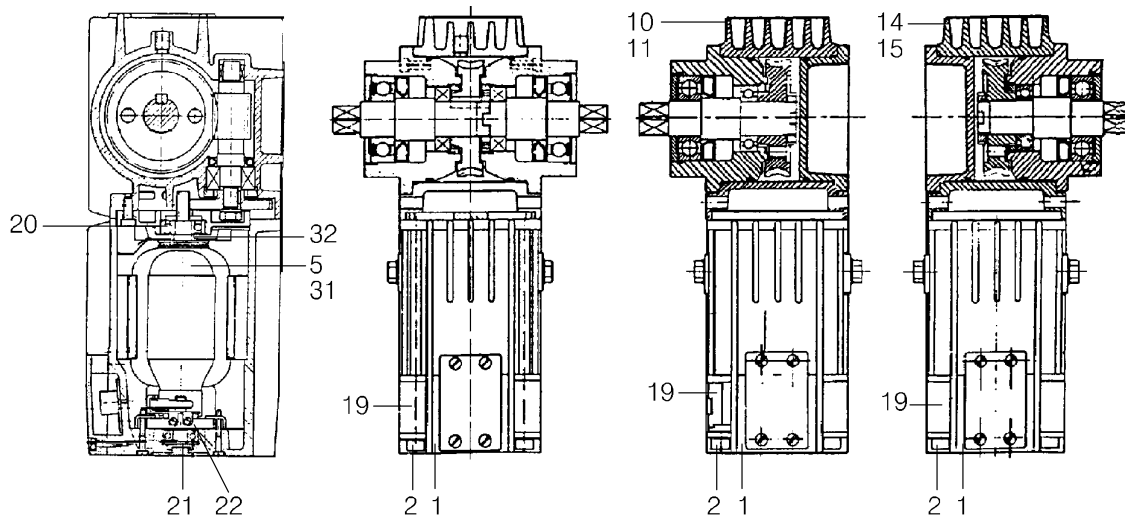
Item no.	Qty	Orderingno.	Denomination	Notes
		0153 299 880	Flux nozzle	
1	1	153 290-002	Pipe holder	
2	1	153 296-001	Pipe bend	
3	1	153 425-001	Wheel	



Item no.	Qty.	Ordering no.	Denomination	Notes
		0030 465 385	Nozzle	
2	1	0145 226 001	Insulator	
3	1	0190 680 313	O-ring	15,3x2,4
4	1	0190 680 303	O-ring	5,3x2,4
5	1	0190 680 405	O-ring	22,2x3
8	1	0334 278 880	Guide tube insert	
9	1	0334 279 001	Spiral wire guide	
20	1	0146 094 001	Extension	
22	1	0146 099 001	Plug	
23	1	0145 534 882	Torch body	
24	1	0145 227 882	Gas nozzle	
25	1	0144 998 882	Hose set	



Item no.	Qty	Qty	Qty	Qty	Qty	Ordering no.	Denomination	Notes
					X	0145 063 896	Motor with gear	
				X		0145 063 897	Motor with gear	
			X			0145 063 906	Motor with gear	
		X				0145 063 907	Motor with gear	
	X					0145 063 909	Motor with gear	
1	1	1	1	1	1	0147 019 880	Stator frame	
2	4	4	4	4	4		Screw	
5		1	1	1	1	0147 020 005	Armature	
10				1		0147 013 880	Worm gear	
11					1	0147 013 881	Worm gear	
14	1	1				0147 014 880	Worm gear	
15			1			0147 014 881	Worm gear	
19	2	2	2	1	2	0146 869 001	Cover plate	
20	1	1	1	1	1	0190 725 201	Bearing	
21	1	1	1	1	1	0219 504 707	Bearing washer	
22	1	1	1	1	1	0221 302 033	Bearing	
31	1					0147 020 009	Rotor	
32	1	1	1	1	1	0193 564 198	Washer	



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