A6 OPC Flux recovery unit

Instruction manual

0333 125 001 GB 20231106

1 SAFETY

WARNING!

Arc welding and cutting can be injurious to yourself and others. Take precautions when welding and cutting. Ask for your employer's safety practices which should be based on manufacturers' hazard data.

ELECTRIC SHOCK - Can kill

- Install and earth the 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 take fumes and gases away 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 earmuffs 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!

Users of ESAB equipment have the ultimate responsibility for ensuring that anyone who works on or near the equipment observes all the relevant safety precautions. Safety precautions must meet the requirements that apply to this type of equipment. The following recommendations should be observed in addition to the standard regulations that apply to the workplace.

All work must be carried out by trained personnel well-acquainted with the operation of the equipment. Incorrect operation of the equipment may lead to hazardous situations which can result in injury to the operator and damage to the equipment.

1. Anyone who uses the equipment must be familiar with:
   - its operation
   - location of emergency stops
   - its function
   - relevant safety precautions
   - welding and cutting or other applicable operation of the equipment
2. The operator must ensure that:
   - no unauthorised person is stationed within the working area of the equipment when it is started up
   - no-one is unprotected when the arc is struck or work is started with the equipment
3. The workplace must:
   - be suitable for the purpose
   - be free from drafts
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, rings, etc., which could become trapped or cause burns
5. General precautions:
   - Make sure the return cable is connected securely
   - Work on high voltage equipment **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 operation

2 TECHNICAL DESCRIPTION

The OPC flux recovery unit is intended for use on stationary and transportable welding units, where a small, compact flux recovery unit is needed,

Maximum permissible air pressure: 6 kp/cm^2

Air consumption at various pressures:

kp/cm²	4	5	6
liter/min	175	225	250

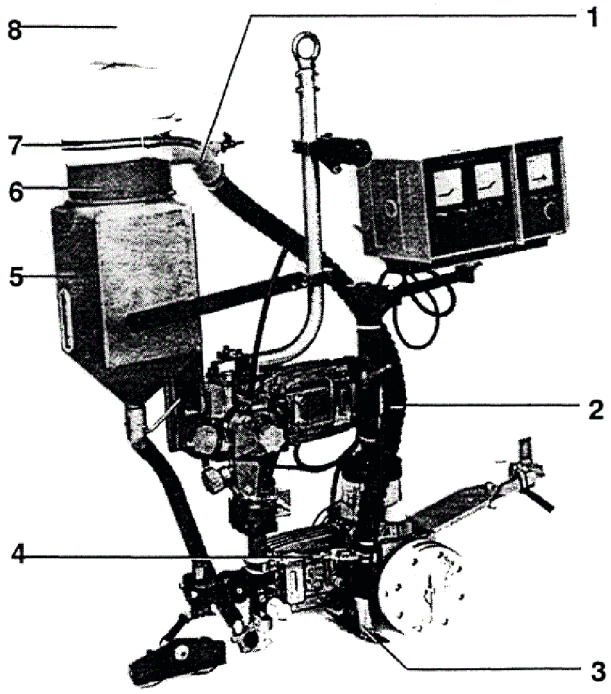
Rubber parts in the flux recovery unit can withstand temperatures encountered when using preheated flux at up to 220 °C and with workpiece temperatures not exceeding 350 °C.

NOTE!
A metal flux hopper must be used.

Suction capacity data can be found in chapter "MAINTENANCE" of this manual.

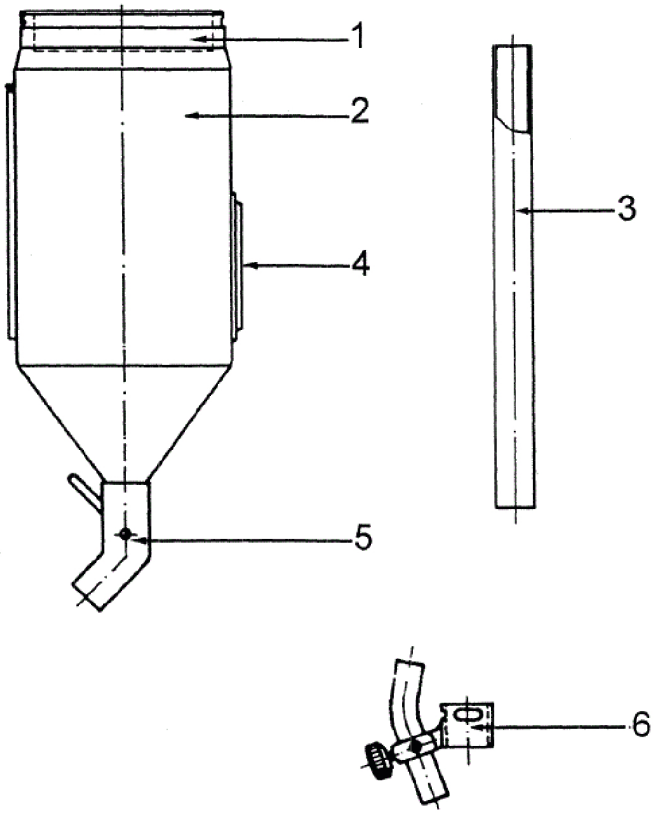
The OPC flux recovery unit consists of:

1. Ejector, powered by compressed air.
   The side of the ejector intended for connection to the cyclone is fitted with a flange.
   Connections are provided on the other side of the ejector for the suction hose and compressed air hose 1/4 ".
2. Suction hose, connects the recovery unit to the suction nozzle.
3. Suction nozzle, available in four versions:
   - for normal butt welds
   - for larger butt welds
   - for fillet welds, left
   - for fillet welds, right
4. Nozzle bracket, holds the flux recovery nozzle in position above the weld.
5. Flux hopper, optional accessories.
6. Cyclone, for separating the recovered flux from the air and returning it to the flux hopper.
   Fitted above the flux hopper.
7. Securing strap
8. Filter bag



The flux hopper consists of:

1. Flux strainer, separates slag from flux
2. Flux hopper (10 l)
3. Flux hose, 1" × 500 mm
4. Inspection window, for checking flux level
5. Manual flux valve
6. Adjustable flux outlet nozzle, for fitting to the welding head

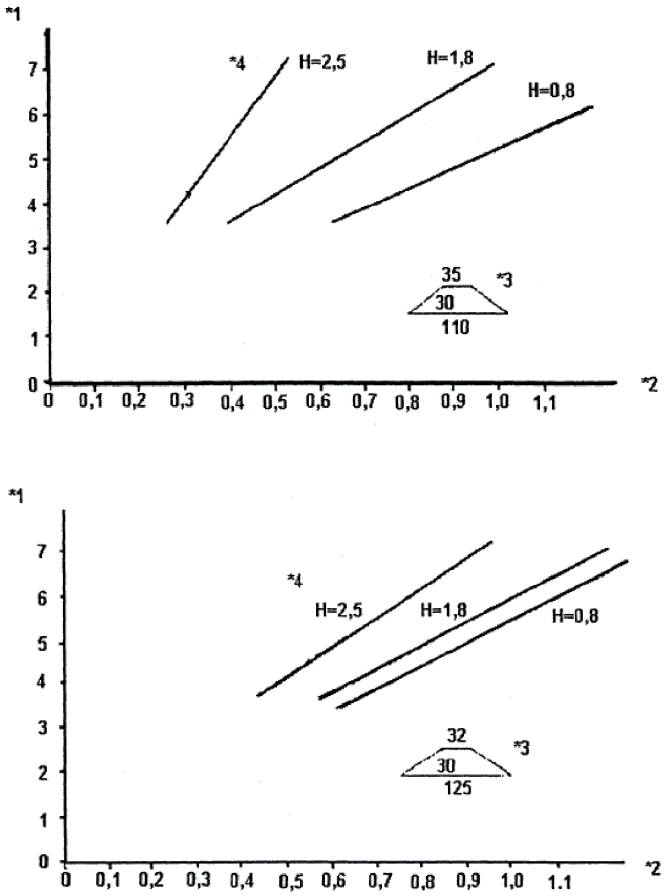


3 OPERATION

1. Check that the equipment is properly installed and that all hoses are secured.
2. Check that the flux valve is closed.
3. Fill the flux hopper with flux.
4. Open the flux valve, allowing the flux to run down on to the weld joint through the supply nozzle.
5. Start welding and the suction unit at the same time. Unused flux will be sucked up through the suction nozzle and hose into the cyclone, where the flux will be separated from the slag. The flux falls through the strainer into the flux hopper, while the dust-laden air is cleaned by the filter bag before being discharged.
6. Dimension drawing can be found in chapter "DIMENSION DRAWING" of this manual.

4 MAINTENANCE

1. Check that the rubber lining of the cyclone is undamaged, and replace it if necessary.
2. Check that all gaskets and joints are sealing properly.
3. Replace the filter bag when indicated by suction effect falling off after about 3-5 working hours. Performance can be improved by shaking the filter bag clean between replacements.



*1 Air pressure (bar)

*2 Welding speed (m/min)

*3 Flux area (mm)

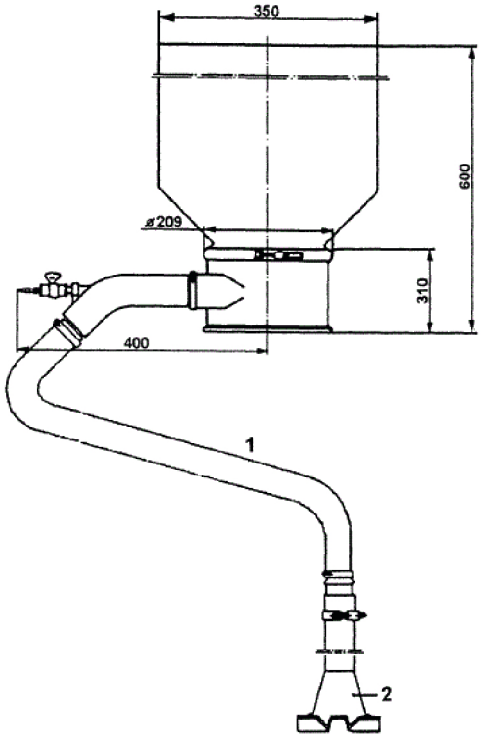
*4 H=Height of lift in m

At a suction height of 0.8 m, welding speed is not affected by the type of flux used.

Air pressure (kp/cm^2)	Suction height (m)	Max welding speed (m/h)
6	0.8	70
5	0.8	60
4	0.8	45

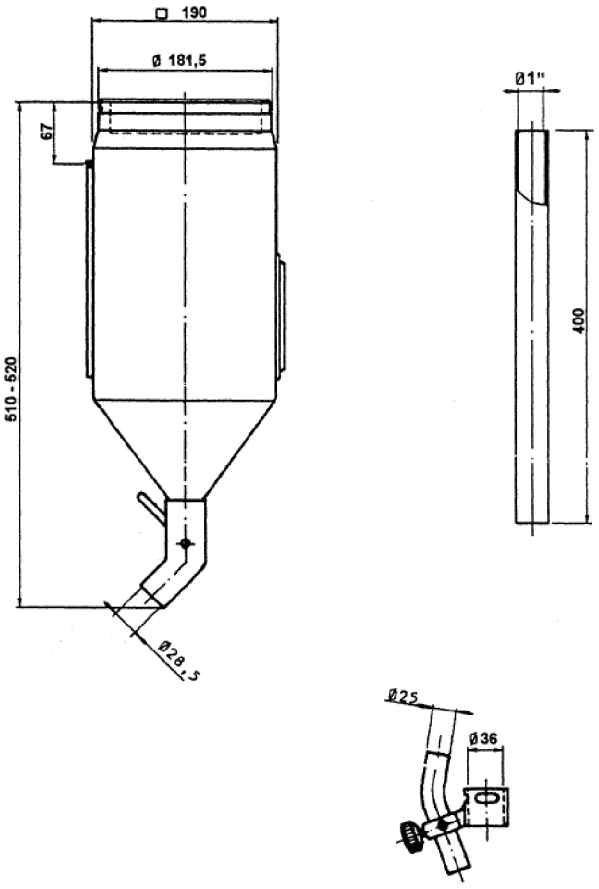
DIMENSION DRAWING

Flux recovery unit



1. Hose length 1000 mm
2. Nozzle length 210 mm

Flux hopper



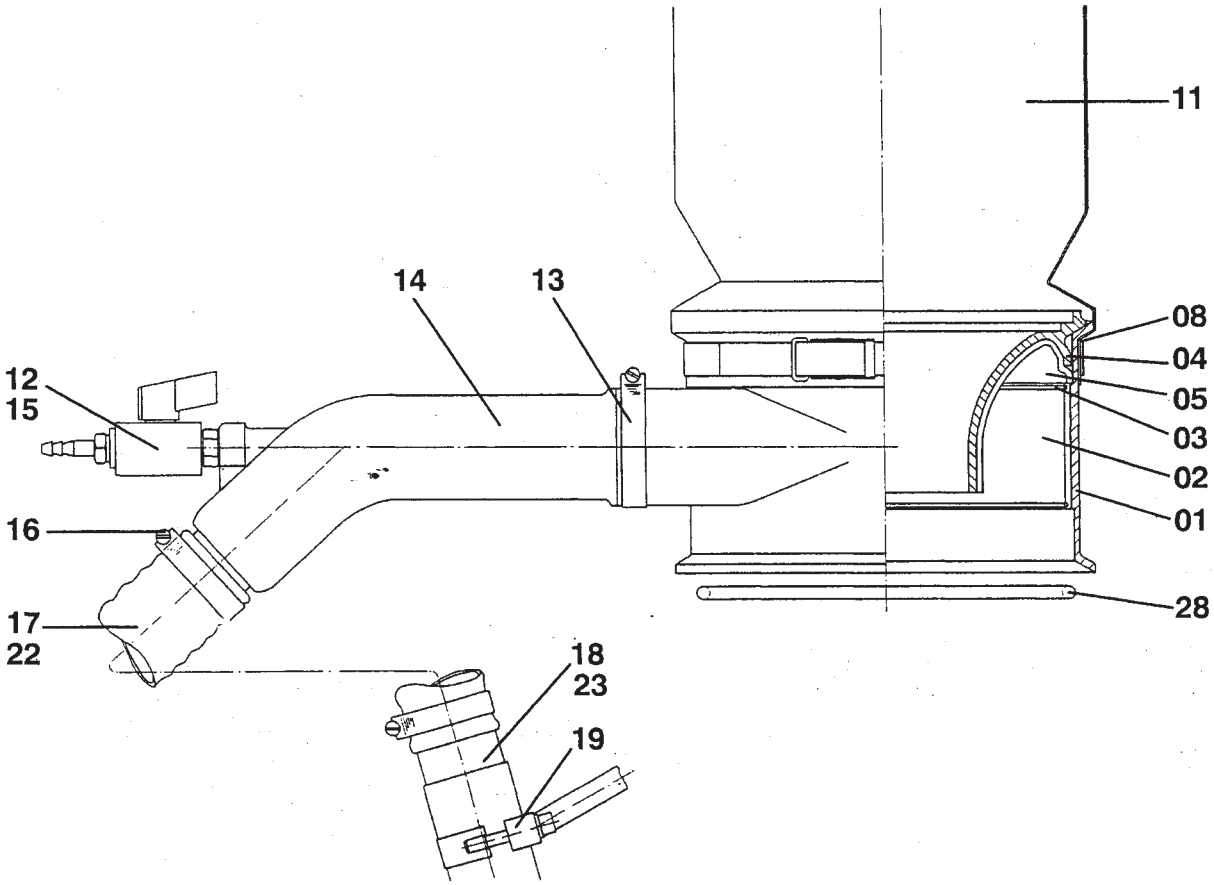
SPARE PARTS

Spare parts may be ordered through your nearest ESAB dealer, see esab.com. When ordering, please state product type, serial number, denominations and ordering numbers according to the spare parts list. This facilitates dispatch and ensures correct delivery.

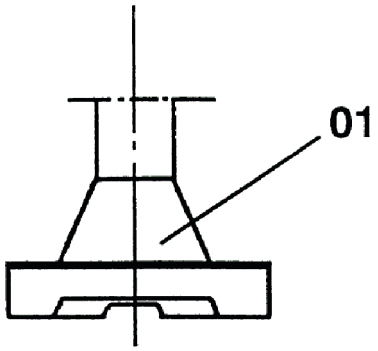
Maintenance and repair work should be performed by an experienced person, and electrical work only by a trained electrician. Use only recommended spare parts.

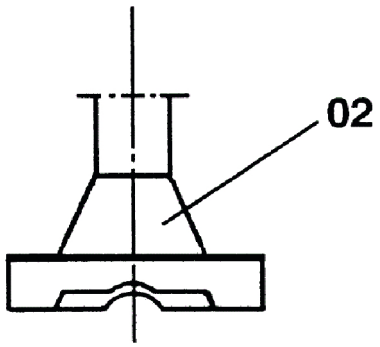
C = Component designation in the circuit diagram

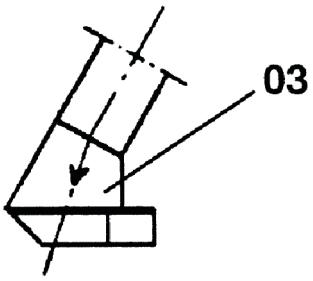
Item	Qty	Ordering no.	Denomination	Notes	C
		0148140880	**Flux recovery unit**		
1	1	0148141001	Cyclone		
2	1	0145073001	Rubber lining (cyclone)		
3	2	0145815001	Locking ring		
4	1	0148142001	Funnel		
5	1	0145565001	Rubber lining		
8	1	0192855002	Securing strap		
11	2	0332448001	Filter bag		
13	1	0252900411	Hose clamp		
14	1	0147640880	Ejector		
15	1	0145824881	Valve		
16	2	0252900410	Hose clamp		
17	1	0191813801	Hose		
18	1	0145740880	Suction nozzle		
19	1	0147384881	Nozzle holder		
28	1	0215201345	0-ring		

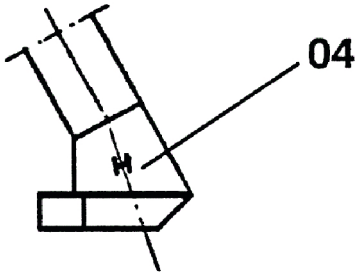


Item	Qty	Ordering no.	Denomination	Notes	C
		0145740880	**Flux recovery unit**		
1	1	0145501001	Suction nozzle		
2	1	0145502001	Suction nozzle		
3	1	0145504001	Suction nozzle		
4	1	0145505001	Suction nozzle		

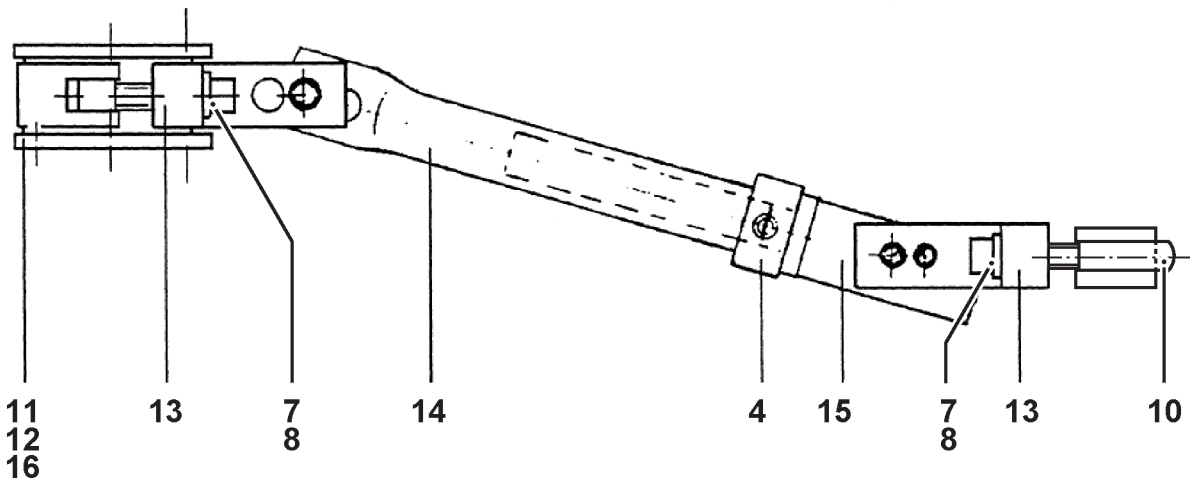




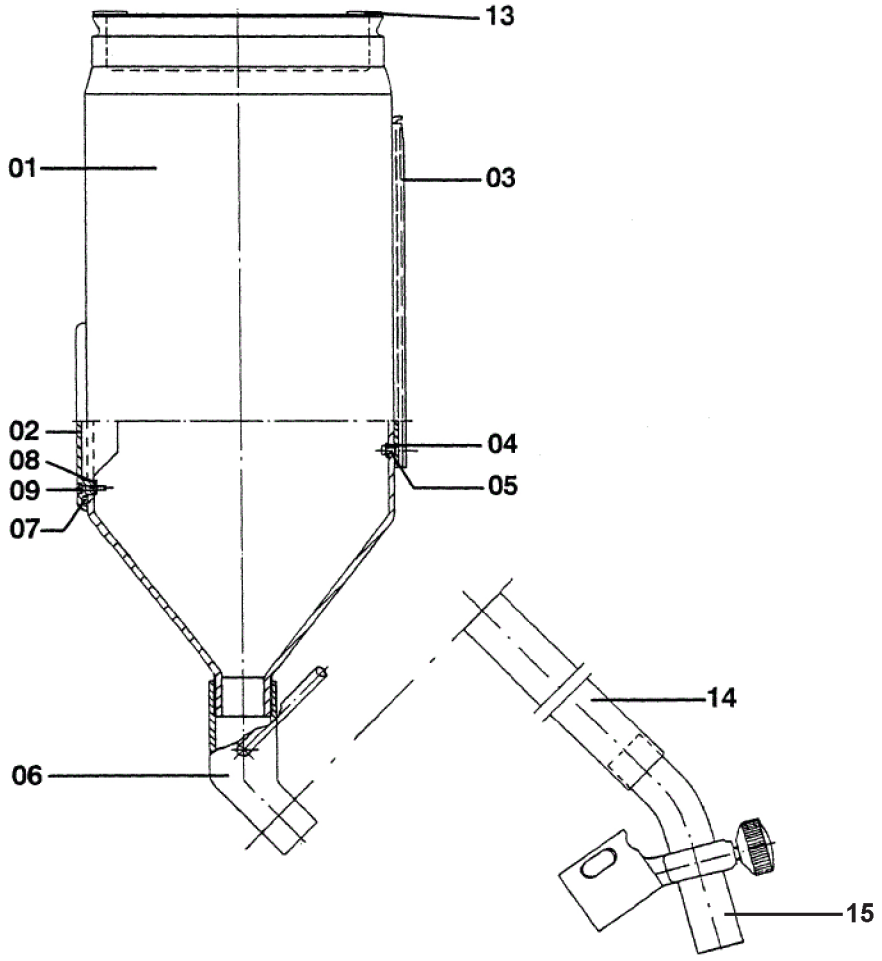




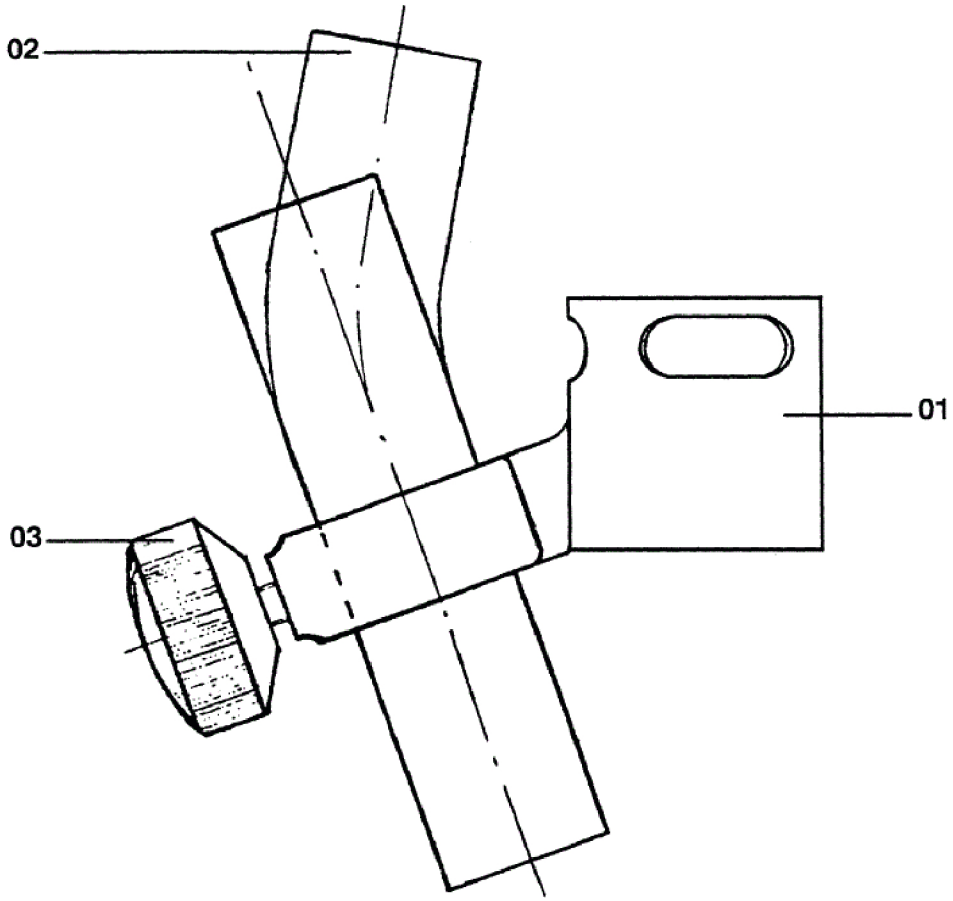
Item	Qty	Ordering no.	Denomination	Notes	C
		0147384881	**Nozzle holder kit**		
4	1	0193733012	Stop ring		
7	4		Nut	M6	
8	4		Washer	12×6.4 T=1.5	
10	2	0456601001	Clamp		
11	1	0145131002	Insulating sleeve		
12	1	0145131003	Insulating sleeve		
13	2	0154739001	Attachment		
14	1	0154738001	Boom		
15	1	0154737001	Boom		
16	1	0145131004	Insulating sleeve	Inner diameter 20 mm	



Item	Qty	Ordering no.	Denomination	Notes	C
		0147649881	**Flux hopper compl.**	**Optional equipment (OPC)**	
01	1	0154007001	Hopper for flux		
02	1	0146837001	Window		
03	1	0147645001	Fitting		
04	4		Washer	D8/4.3×0.8	
05	4	0191898108	Rivet		
06	1	0153347880	Flux valve		
07	1	0148823001	Seal		
08	2	0148799001	Washer		
09	2		Screw	M3×16	
13	1	0020301780	Flux strainer		
14	1	0443383002	Flux hose	L=500	
15	1	0153299880	Flux nozzle	More information on next page	



Item	Qty	Ordering no.	Denomination	Notes	C
		0153299880	**Flux nozzle**	**Optional equipment (OPC)**	
01	1	0153290002	Pipe holder		
02	1	0153296001	Pipe bend		
03	1	0153425001	Wheel		



A **WORLD** OF **PRODUCTS** AND **SOLUTIONS.**

For contact information visit esab.com

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