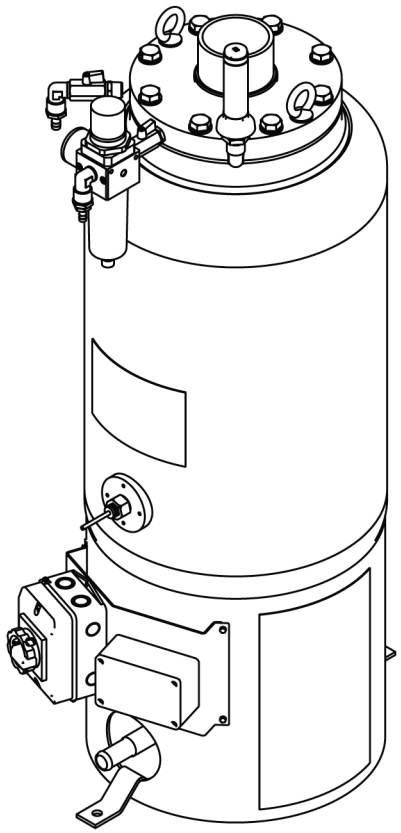
TPC 75



Instruction manual

0443 408 201 GB 20260423

Valid for: Serial number:
LX452-xxxx-xxxx

EU DECLARATION OF CONFORMITY

According to:

The Pressure Equipment Directive 2014/68/EU+AFS 2016:1
The Low Voltage Directive 2014/35/EU
The EMC Directive 2014/30/EU;
The RoHS Directive 2011/65/EU;

Type of equipment

Flux Feeding System, Flux pressure tank with safety valve.
Optionally equipped with a capacitive low-level sensor, cartridge heater with thermostat and temperature sensor.

Type designation

TPC 75
Item no 0912480880, 0912480881,
0912480882, 0912480883 from serial number LX452 YYXX XXXX (2024 w52)

Brand name or trademark

ESAB

Manufacturer or his authorised representative established within the EEA

Name, address, telephone no:

ESAB AB
Lindholmsallén 9, Box 8004, SE-402 77 Göteborg, Sweden
Phone: +46 31 50 90 00

The following harmonised standard in force within the EEA has been used in the design:

EN 13445:2021	Unfired pressure vessels - Part 1: General
EN 60204-1:2018	Safety of machinery - Electrical equipment of machines - Part 1: General requirements
EN 61000-6-2:2019	Electromagnetic compatibility (EMC) - Part 6-2: Generic standards - Immunity standard for industrial environments
EN 61000-6-4:2019	Electromagnetic compatibility (EMC) - Part 6-4: Generic standards - Emission standard for industrial environments

Additional Information: Restrictive use, Class A equipment, intended for use in location other than residential

Approved according to:

Fluid group: **2**

Aggregate: Category II, module A2

Approving 3rd party company:

Kiwa Sweden AB
SE-17007 Solna, Sweden
Phone: +46 (0)10 479 3000
www.kiwa.se
Notified body CE 0409

Statement number: TQ093822-001/BE6D962F

By signing this document, the undersigned declares as manufacturer, or the manufacturer's authorised representative established within the EEA, that the equipment in question complies with the safety and environmental requirements stated above.

CE

Place/Date

Gothenburg
2025-06-10

Signature

Cristiano M. L. Ferreira

Cristiano Ferreira
R&D Director Equipment and Automation

1 SAFETY

1.1 Meaning of symbols

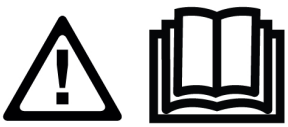
As used throughout this manual: Means Attention! Be Alert!

DANGER!
Means immediate hazards which, if not avoided, will result in immediate, serious personal injury or loss of life.

WARNING!
Means potential hazards which could result in personal injury or loss of life.

CAUTION!
Means hazards which could result in minor personal injury.

WARNING!
Before use, read and understand the instruction manual and follow all labels, employer´s safety practices and Safety Data Sheets (SDSs).



1.2 Safety precautions

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

WARNING!
Wire feeders are intended to be used with power sources in MIG/MAG mode only.

If used in any other welding mode, such as MMA, the welding cable between wire feeder and power source must be disconnected, or else the wire feeder becomes live or energized.

If equipped with ESAB cooler
Use ESAB approved coolant only. Non-approved coolant might damage the equipment and jeopardize product safety. In case of such damage, all warranty undertakings from ESAB cease to apply.

Recommended ESAB coolant ordering number: 0465 720 002.

For ordering information, see the "ACCESSORIES" chapter in the instruction manual.

WARNING!
Arc welding and cutting can be injurious to yourself and others. Take precautions when welding and cutting.

ELECTRIC SHOCK - Can kill

- Install and ground the unit in accordance with instruction manual.
- Do not touch live electrical parts or electrodes with bare skin, wet gloves or wet clothing
- Insulate yourself from work and ground.
- Ensure your working position is safe

ELECTRIC AND MAGNETIC FIELDS - Can be dangerous to health

- Welders having pacemakers should consult their physician before welding. EMF may interfere with some pacemakers.
- Exposure to EMF may have other health effects which are unknown.
- Welders should use the following procedures to minimize exposure to EMF:
  - Route the electrode and work cables together on the same side of your body. Secure them with tape when possible. Do not place your body between the torch and work cables. Never coil the torch or work cable around your body. Keep welding power source and cables as far away from your body as possible.
  - Connect the work cable to the workpiece as close as possible to the area being welded.

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

NOISE - Excessive noise can damage hearing

Protect your ears. Use earmuffs or other hearing protection.

MOVING PARTS - Can cause injuries

- Keep all doors, panels and covers closed and securely in place. Have only qualified people remove covers for maintenance and troubleshooting as necessary. Reinstall panels or covers and close doors when service is finished and before starting engine.

- Stop engine before installing or connecting unit.
- Keep hands, hair, loose clothing and tools away from moving parts.

FIRE HAZARD

- Sparks (spatter) can cause fire. Make sure therefore that there are no inflammable materials nearby
- Do not use on closed containers.

HOT SURFACE - Parts can burn

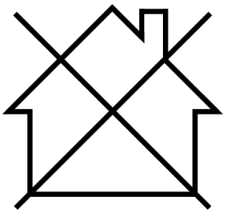
- Do not touch parts bare handed.
- Allow cooling period before working on equipment.
- To handle hot parts, use proper tools and/or insulated welding gloves to prevent burns.

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

PROTECT YOURSELF AND OTHERS!

CAUTION!
This product is solely intended for arc welding.

CAUTION!
Class A equipment is not intended for use in residential locations where the electrical power is provided by the public low-voltage supply system. There may be potential difficulties in ensuring electromagnetic compatibility of class A equipment in those locations, due to conducted as well as radiated disturbances.

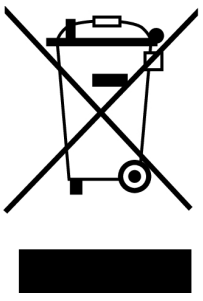


NOTE!
Dispose of electronic equipment at the recycling facility!

In observance of European Directive 2012/19/EC on Waste Electrical and Electronic Equipment and its implementation in accordance with national law, electrical and/or electronic equipment that has reached the end of its life must be disposed of at a recycling facility.

As the person responsible for the equipment, it is your responsibility to obtain information on approved collection stations.

For further information contact the nearest ESAB dealer.



ESAB has an assortment of welding accessories and personal protection equipment for purchase. For ordering information contact your local ESAB dealer or visit us on our website.

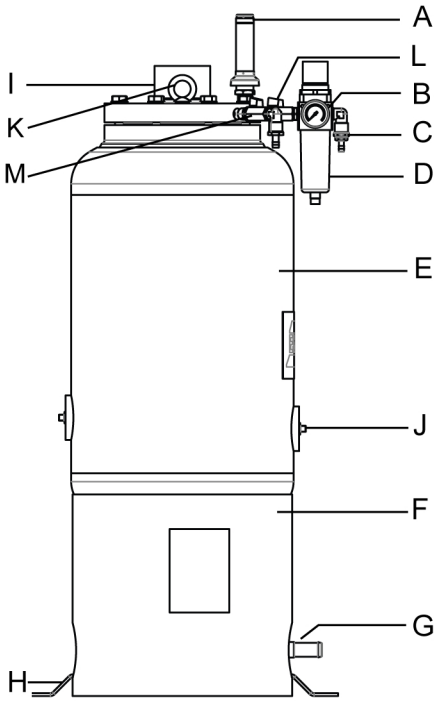
2 INTRODUCTION

The TPC 75 pressurised flux tank is used to supply flux to welding equipment that requires a large amount of flux, or to compact welding equipment designed for use in restricted spaces.

The pressurised flux tank can be used as a free--standing floor unit or be mounted on a stand or column and boom using a support bracket. It is part of ESAB's range of flux equipment which includes flux vacuum systems and other flux handling equipment.

2.1 Equipment

The TPC 75 pressurised flux tank comprises the items presented in the graphic.

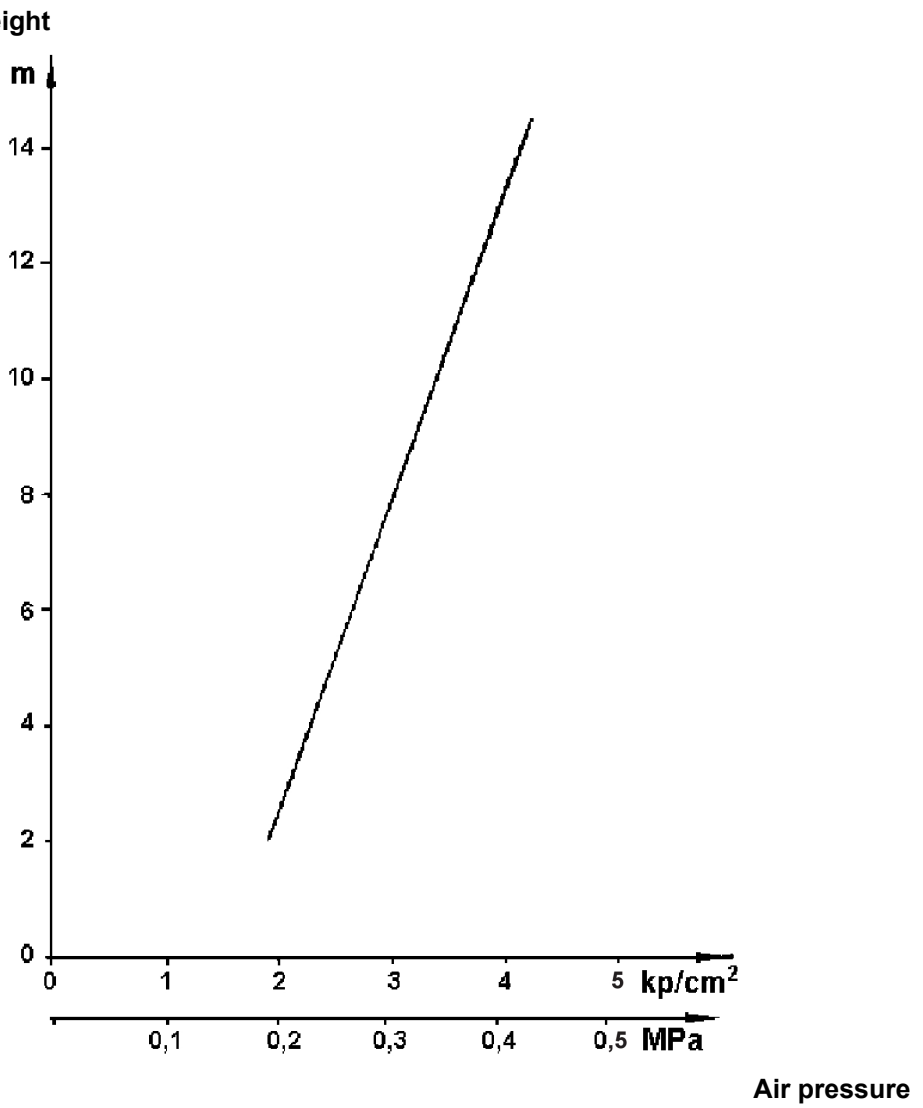


A. Safety valve which opens if pressure in tank exceeds 0.6 MPa
B. Gauge for monitoring pressure in tank
C. Connection for compressed air hose 3/8"
D. Water trap with valve in base for draining condensed water from compressed air
E. Pressurised flux tank
F. Stand
G. Connection for flux hose 1"
H. Fasteners
I. Valve which closes if air pressure exceeds 0.15 MPa
J. Attachment for level sensor (optional accessory)
K. Lifting points for use during installation
L. Air inlet valve
M. Vent valve

TPC 75:

- The valve closes if air pressure exceeds 0.15 MPa.
- Equipped with:
  - Filter regulator
  - Safety valve
  - Decompression ball valve
  - Hose clamp (4 pcs)
  - Clamps for fastening TPC 75 to the ground (2 pcs, 25-40 mm)

2.2 Flux feed rate



Flux feed height as a function of air pressure, for flux supplied at a rate of 2 l/min through a 40 m long 1” plastic hose

3 SETTING THE SENSIBILITY OF THE SENSOR

1. Selector switch *Open/Closed* (Open/Closed)
2. Potentiometer *Hysteresis* (Hysteresis)
3. Potentiometer *Adjustment* (Adjustment), increase or decrease the sensibility
4. Diode output

Perform the following steps to set the sensibility of the sensor. This instruction is to be used when the flux container is empty.

1) Turn the selector switch to position *NC* (Closed).

2) Remove the white plastic screw in order to turn the potentiometer *Adjustment* (Adjustment) clockwise until the diode is lit. After adjustment, remount the plastic screw.

3) Remove the white plastic screw in order to turn the potentiometer *Adjustment* (Adjustment) anti-clockwise until the diode goes out, then turn one additional turn. After adjustment, remount the plastic screw.

4) Fill the flux container with flux. The diode will light up. If not:
   - Turn the potentiometer *Adjustment* (Adjustment) clockwise until the diode lights up.

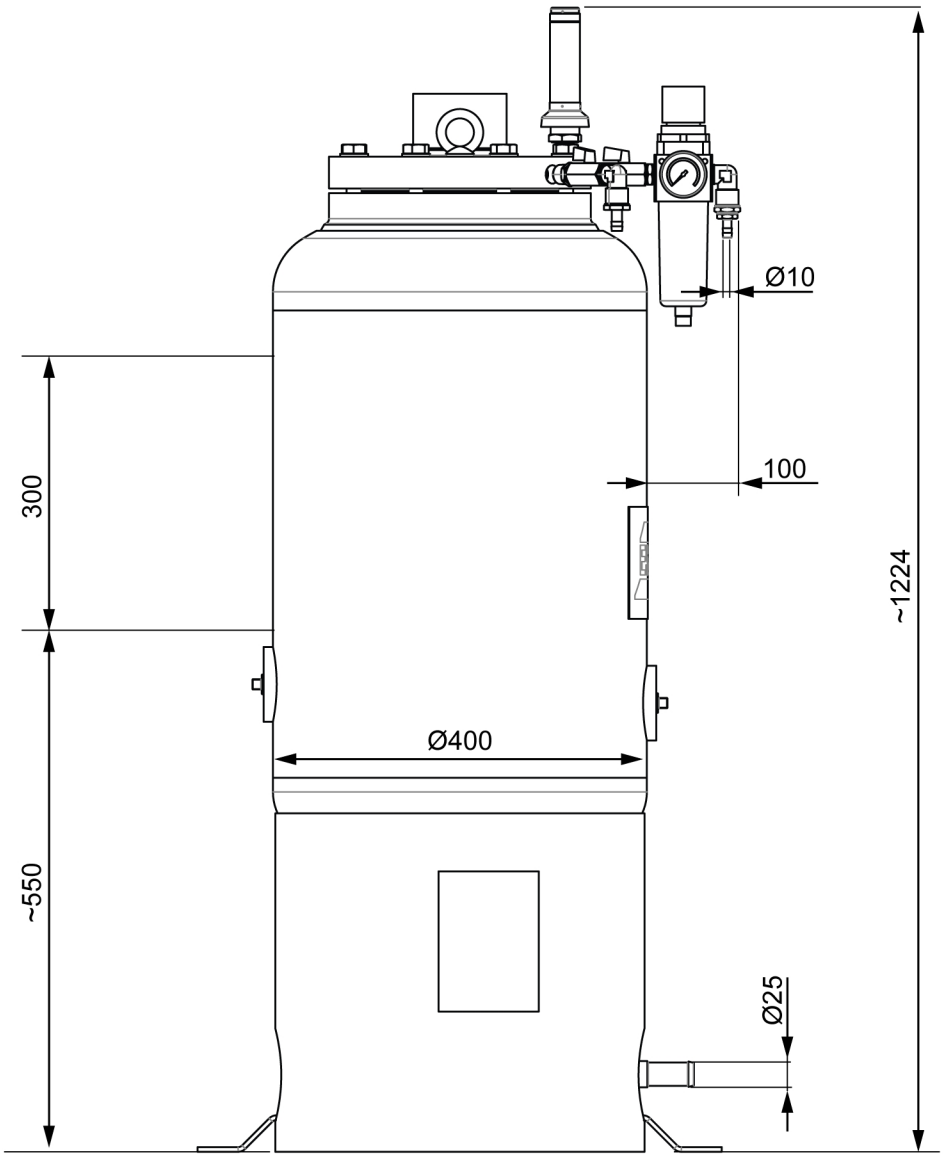
5) Empty the flux container from flux and check that the diode goes out. If not:
   - Repeat the instruction from step 3.

NOTE!
If adjustment of potentiometer *Adjustment* (Adjustment) is not enough, adjust potentiometer *Hysteresis*(Hysteresis) and repeat the instruction from step 1.

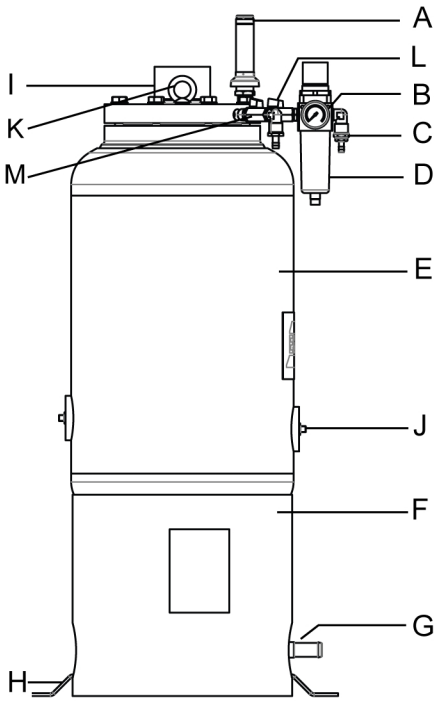
4 TECHNICAL DATA

TPC 75	
Working pressure	1.5-4 barg
Max. air consumption (max. working pressure)	300 l/min
Max. permissible air pressure	6 barg
Material classification	P265 GH
Compressed air hose (internal diameter)	Ø10 mm
Tank capacity	81 l (fill with max 75 l)
Weight without flux	100 kg
Weight with flux	215 kg
Dimensions	See the "DIMENSIONS" appendix.
Corrosion allowance	1 mm
Module	A2
Fluid group	2
Fluid media	Air welding flux, max density 1.4 kg/dm^3
Category according to PED	II
Design temperature	200 °C
Rule	AFS 2016:1 PED 2014/68/EU
Exhaustion strength	Number of load cycles must not exceed 9000
Operating temperature *)	0 °C-190 °C
Inlet pressure	Max 11 barg

*) Setting temperature of heater, **not** temperature of flux



5 INSTALLATION AND OPERATION



1. See dimensions in the "DIMENSIONS" appendix.
2. The flux tank has two lifting holes (K) (M12) in the top flange for use during installation. If the flux tank is used on mobile welding equipment it must be fixed securely using the support bracket (H). Permanent installation is also recommended in stationary applications.
3. Connect the 1” flux hose (G) and compressed air hose (C) to the pressure regulator using double hose clamps to ensure secure connection.

> **NOTE!**
> Do not release compressed air from an empty flux tank. Remnants of flux may be blasted out of the flux outlet. The same applies if the flux hose comes loose. Escaping air can cause dust in the air. Minimise exposure to dust by regular cleaning.

4. Pour the flux into the funnel, which is fitted with a sieve (optional accessory). Recommended maximum capacity is about 10 cm below the level of the connection flange.

> **NOTE!**
> The self-sealing valve (I) closes at a pressure of 0.15 MPa.

5. Open the compressed air valve (L).
6. Adjust to a suitable working pressure of 0.15–0.4 MPa using the pressure regulator, and read the pressure at the gauge (B).

> **NOTE!**
> Pressure should be no higher than necessary to obtain satisfactory operation with the welding equipment in use.

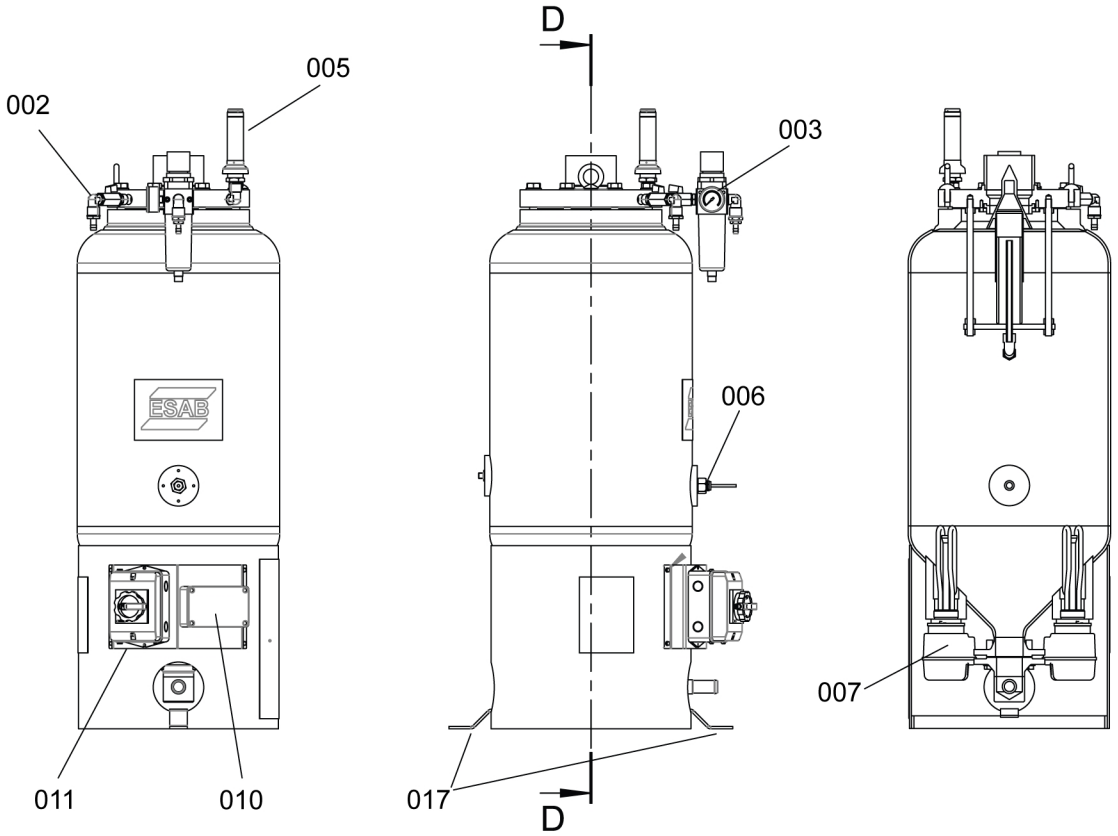
6 MAINTENANCE

- Empty all flux from the flux tank when not being used for welding. Flux absorbs moisture from the air.
- When emptying the tank use the minimum air pressure necessary to avoid blasting flux out of the tank.
- Keep the work area free from dust and flux by cleaning regularly.
- Replace the flux hose when it becomes worn.
- Check the water trap daily to monitor compressed air quality. If water is present it may be necessary to install a dehumidifier.

NOTE!
Pressure vessels used for flux distrubution should be inspected for renewed approval every 4th year.

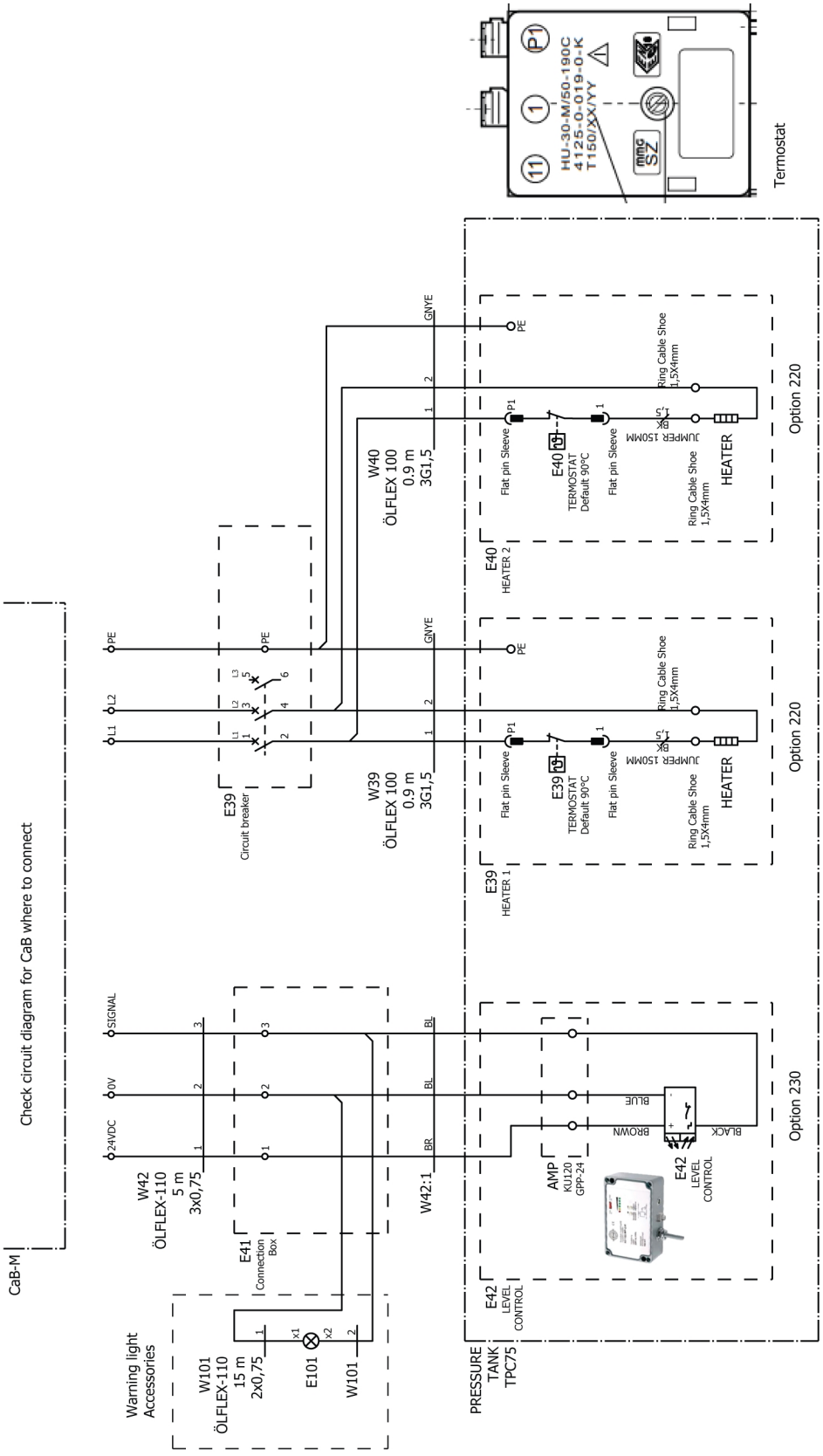
7 SPARE PARTS LIST

Item	Qty	Ordering no.	Denomination	Notes
002	1	0156 806 880	Vent valve	
003	1	0157 467 881	Filter regulator	
005	1	0912 126 001	Safety valve	813mGK-1/2"
006	1	0379 513 008	Level sensor	
007	2	0416 679 002	Heating cartridge	with thermostat
010	1	0379 513 007	Amplifier, KU 120 GPP	24V DC, Z01077
011	1	0908 800 003	Switch disconnecter, 3P 16 A	main switch, 3-pole, Iu: 1,rotary operating mechanism, black
017	2	0417 508 001	Fasteners	

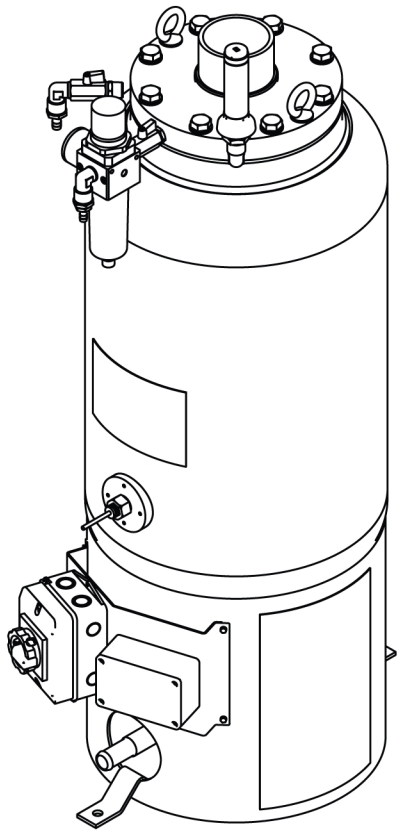


APPENDIX

WIRING DIAGRAM

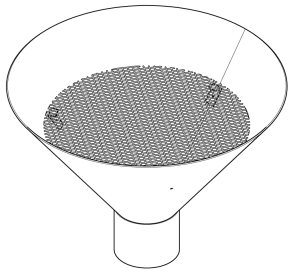
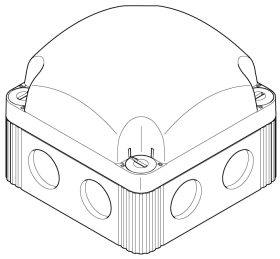
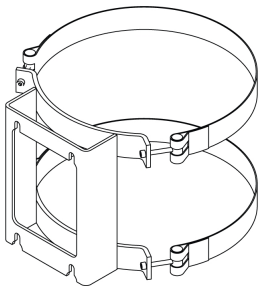
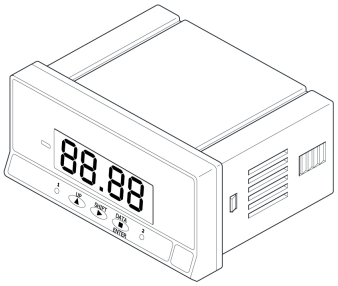


ORDERING NUMBERS



Ordering no.	Denomination	Notes
0912 480-880	Flux pressure tank TPC 75	
0912 480-881	Flux pressure tank TPC 75 with heater	
0912 480-882	Flux pressure tank TPC 75 with heater and level sensor	
0912 480-883	Flux pressure tank TPC 75 with level sensor	

ACCESSORIES

0156 252 880	Funnel with slag mesh	
0190 315 209	Flux feed hose, 25 m, D35/25.4 mm for TPC 75 without heater, temperature range -20 to +70 °C	
0395 986 012	Flux feed hose, 25 m, D35/25.4 mm for TPC 75 with heater, temperature range -30 to +80 °C	
0452 048 881	Warning light for low level sensor	
0433 865 880	Suspension device	
0803 291 100	Temperature sensor	
0803 291 110	Digital display **NOTE!** 24 VDC power supply required (not included).	

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