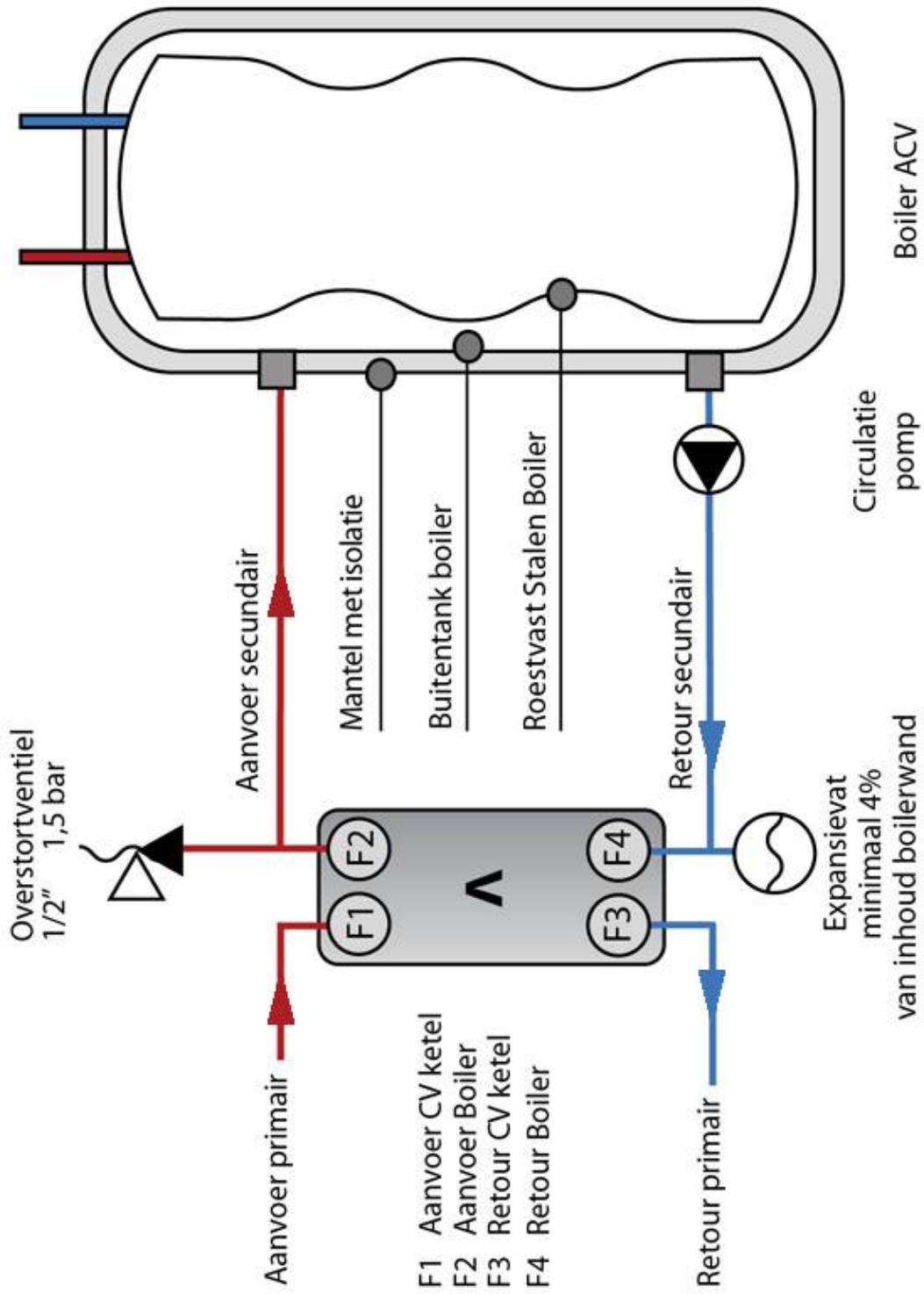


Principe schema ACV boiler met Dubbele Scheiding



Specificatie van SWEP

Klant: Inoxcon
SWEP CBE: B16Hx40/1P-SC-S 4x1 1/4"
Artikelnummer: 12442- 40

Kant 1

Kant 2

Ontwerp gegevens

Medium	:	Water	Water
Intrede temperatuur	:	90 °C	60 °C
Uittrede temperatuur	:	70 °C	80 °C
Massastroom	:	3,529 m³/h	3,514 m³/h

Platenwarmtewisselaar

Capaciteit	:	80,00 kW	
Totaal warmtewisselend opp.	:	1,52 m²	
Gem. temp. verschil	:	10 K	
Berekende drukval	:	11 kPa	9,9 kPa
Kanalen	:	19	20
Aantal platen	:	40	
Warmteoverdrachtscoëff.	:	6100/5260 W/m²,°C	
Overdimensionering	:	16 %	

Aansluiting

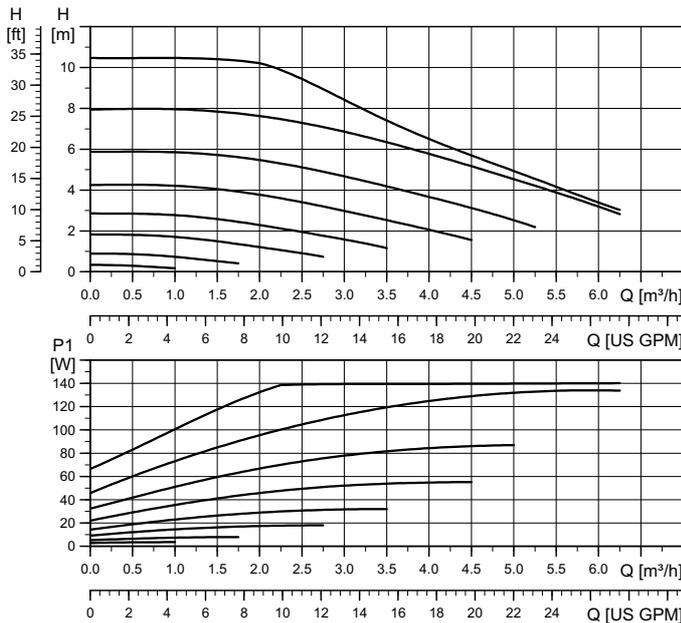
Standaard aansluiting	F1 45696 ISO-G 1 1/4" A	P1	
	F2 45696 ISO-G 1 1/4" A	P2	
	F3 45696 ISO-G 1 1/4" A	P3	
	F4 45696 ISO-G 1 1/4" A	P4	
	F5	P5	
	F6	P6	
Plaats aansluiting in/uit	:	F3 / F1	F2 / F4

Technische omschrijving

Plaatmateriaal	:	AISI 316	
Hardsoldeermateriaal	:	Koper	
Testdruk	:	50 bar	
Maximum werkdruk	:	31/27 / 31/27 bar	
Maximum werktemperatuur	:	155 / 225 °C	
Volume inwendig	:	1,56 dm³	1,64 dm³
Dikte platenpakket	:	99,6 mm	
Breedte	:	119 mm	
Hoogte	:	376 mm	
Gewicht - leeg	:	6,06 kg	
Gewicht - in bedrijf	:	9,18 kg	

Comment:

UPML 15-105 130, 25-105 130, 25-105 180 (N), 32-105 180 (GFJNB)



High Efficiency

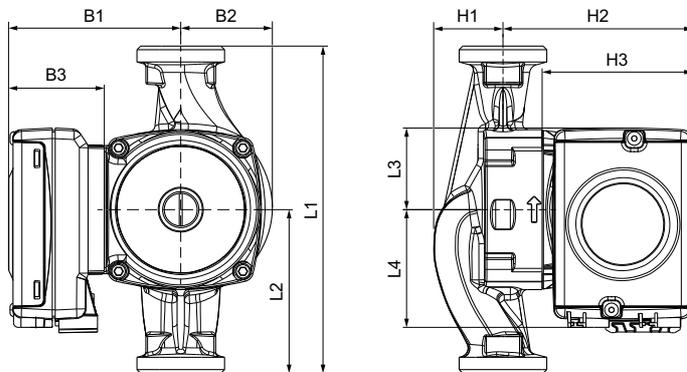
$E_{EE} \leq 0.23$ Part 3
 $P_{L, avg} \leq 58$ W

TM06 8326 0817

Electrical data, 1 x 230 V, 50/60 Hz

Speed	P_1 [W]	$I_{1/1}$ [A]
Min.	3	0.04
Max.	140	1.1

Dimensions



TM07 2013 2518

Pump type	Dimensions [mm]									Connections	Net weight [kg]	
	L1	L2	L3	L4	B1	B2	B3	H1	H2			H3
UPML 15-105 130	130	65	45	65	94	50	52	38	104	82	G 1	2.3
UPML 25-105 130	130	65	45	65	94	50	52	38	104	82	G 1 1/2	2.4
UPML 25-105 (N) 180	180	90	45	65	94	50	52	38	104	82	G 1 1/2	2.5
UPML 32-105 180	180	90	45	65	94	50	52	38	104	82	G 2	2.7

Technical data

System pressure:	Max. 1.0 MPa (10 bar)	Enclosure class:	IPX2D
Minimum inlet pressure:	0.01 MPa (0.10 bar) at 95 °C liquid temperature	Insulation class:	H
Liquid temperature:	-10 °C to +95 °C (TF 95)	Equipment class:	I
Motor protection:	Overload protection	Approval and marking:	VDE, CE

Mechanical installation



Mechanical installation must be carried out by trained persons in accordance with local regulations.



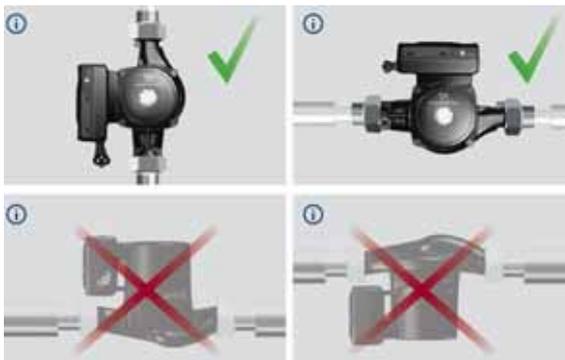
The pump must always be installed with horizontal motor shaft within $\pm 5^\circ$.



Arrows on the pump housing indicate the liquid flow direction through the pump. The pump is designed to be installed with horizontal shaft pumping upwards, downwards or horizontally.

For mounting dimensions see the data sheets.

- The pump must be installed in the system in such a way that no major amount of air flowing through or gathering in the pump housing affects the pump when it is out of operation.
- If an additional non-return valve is installed in the flow pipe, there is a high risk of dry-running, because the air cannot pass the valve.
- It must be possible to vent the system at the highest part of each system segment.
- Permanent venting is recommended.



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Fig. 34 Control box positions

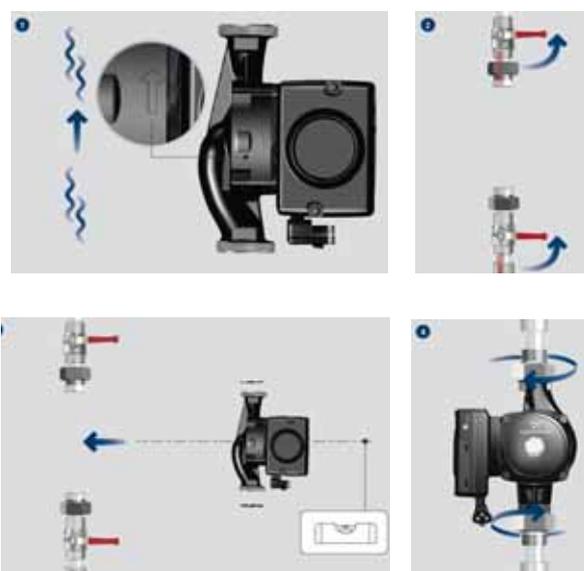


Fig. 35 Mechanical installation

Control box positions

Control box positions in a non-condensing environment



Fig. 36 Allowed control box positions

Control box positions in a condensing environment

In condensing environments the cables on the control box must point downwards.



Fig. 37 Allowed control box positions

Changing the control box position

1. Remove the screws that hold the pump head.
2. Turn the control box into the desired position.
3. Fit the screws.
4. Tighten the new screws securely.
 - The nameplate position cannot be changed.



Before dismantling the pump, drain the system, or close the isolating valves on either side of the pump.

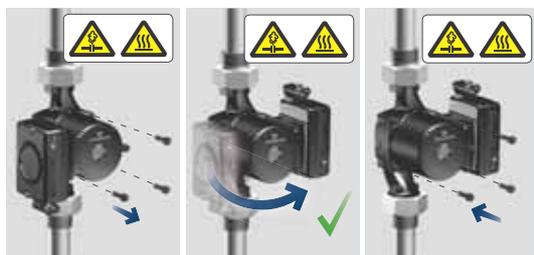


Fig. 38 Changing the control box position

Insulation

When insulating the pump, the control box (especially the cooling cover) must not be covered to allow cooling by the surrounding air.

If the pump is installed in a cabinet or fitted with insulation shells, the inside air temperature must not be higher than 55 °C during operation.

Diffusion-tight, cold-water insulation cannot be supplied by Grundfos. It must not cover the pump head. The drain holes located in the stator housing must always be free and one must point downwards.

Mechanical specifications

Ambient temperature

The ambient temperature must not exceed 55 °C (near the pump surface).

Relative humidity

The relative humidity inside control box must not exceed 95 %. Condensation is acceptable if the cables on the control box point downwards. See [Control box positions in a condensing environment](#), page 25.

Liquid temperature

- Max. 95 °C at 55 °C ambient temperature (continuously)
- Max. 110 °C for short periods or at low load
- Min. -10 °C (see validated temperature profile)

Note: For further lifetime evaluation, the temperature profile must be defined.

System pressure

Max. 1.0 MPa (10 bar) with cast iron or stainless steel housings.

Minimum inlet pressure

To avoid cavitation noise and damage to the pump bearings, the following minimum pressures are required at the inlet port.

Liquid temperature	75 °C	95 °C	110 °C
Minimum inlet pressure	0.01 MPa 0.10 bar	0.05 MPa 0.50 bar	0.10 MPa 1.00 bar

For further specifications, see [Technical data](#) and [13. Data sheets](#).

TM07 2006 2518

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TM07 2007 2518

Technical data

Feature	Specification
Nominal supply voltage	EU: 1 x 230 V + 10 %/- 15 %, 50/60 Hz
Minimum supply voltage	160 VAC (runs with reduced performance)
Motor protection	The motor is protected by the electronics in the control box and requires no external motor protection.
Enclosure class	IPX2D (with drain holes)
Equipment class	I (EN 60335-1)
Insulation class	F (EN 60335-1)
Temperature class	TF95 (EN 60335-2-51)
High voltage protection	EN 60335-1 1000 VAC / 2500 VAC
Maximum ambient temperature	55 °C (near pump surface)
Maximum media temperature	95 °C
Minimum media temperature	-10 °C (see validated temperature profile)
Storage temperature	-40 to +70 °C
Maximum system pressure	1 MPa (10 bar) (depending on the housing material)
Minimum inlet pressure	0.01 MPa (0.10 bar) at 75 °C liquid temperature 0.05 MPa (0.50 bar) at 95 °C liquid temperature
Flow estimation	Available on demand, based on cast-iron inline housing (25 x 180 mm), accuracy: see PWM and LIN specification
Drinking water approvals (ACS, WRAS, UPBA, KTW, DVGW W270)	All pump head components are compliant. Specific compliant N pump housing is available.
Deblocking device	Manual deblocking device, access from front side
Dry run ability - first start	3 x 20 seconds (5 minutes interval), all pumps are lubricated with glycerine
Dry run ability - during operation	Rotor can must be filled with water: fulfils EN 60335-2-51
Expected lifetime	> 80,000 h (with specified load profile)
Minimum switching time power on/off	1 minute.
Inrush current	7.5...11.5 A (reg. VDMA Einheitsblatt 24225) (depending on the variant)
Maximum leakage current	≤ 3.5 mA (EN 60335-1)
Relative humidity	Condensation at the motor surface is acceptable, if the drain holes are free.
Standby power consumption	< 3 W
Acoustic sound pressure level	≤ 38 dB(A)
Maximum altitude of installation	2000 m above sea level

9. Startup

Before you start the Medium UPM pump:

1. Mount the pump in the right way (see [8. Installation](#)).
2. Check that the unions are tightened.
3. Check that the valves are opened.
4. Fill the system and vent it above the pump.
5. Check if the required minimum inlet pressure is available at the pump inlet.
6. Switch on the power supply.
7. If the pump is externally controlled: Check if the external controller sends a signal that controls the speed or that might have stopped the pump.
8. If the pump is internally controlled: The pump starts with factory pre-setting (e.g. proportional pressure curve 2). Change the setting if necessary (see [User interface](#)).



Do not start the pump, until the system has been filled with liquid and vented.



Medium UPM pumps are self-venting and do not have to be vented before startup. Air inside the pump is transported by the liquid into the system shortly after startup.

Hint for installers:

- Heating systems must be flushed according to local standards, such as DIN EN 14336 or VOB ATV C DIN 18380, before startup. After filling the system for the first time, the pump must run for approx. 1 hour before a long-term stop.
- Inhibitors and additives increase the risk of malfunction of the pump.
- If filters are installed, they must be monitored and maintained thoroughly.

Warning: This appliance can be used by children aged from 8 years and above and persons with reduced physical, sensory or mental capabilities or lack of experience and knowledge, if they have been given supervision or instruction concerning use of the appliance in a safe way and understand the hazards involved. Children shall not play with the appliance. Cleaning and user maintenance shall not be made by children without supervision.

Hint for OEM customers: This warning must be available in the local language when placing the product on the market. It is part of the Quick Guides.

10. Service



DANGER

Electric shock

- ▲ Death or serious personal injury
- ▶ Before starting any work at the pump, switch off the power supply. Make sure that the power supply cannot be switched on accidentally.
- ▶ Be aware that capacitors will be live up to 30 seconds after the power supply has been switched off.



DANGER

Electric shock

- ▲ Death or serious personal injury
- ▶ Before dismantling the complete pump set, switch off the power supply at least 5 minutes prior to commencing work and ensure that it cannot be switched on again unintentionally.



DANGER

Electric shock

- ▲ Death or serious personal injury
- ▶ When running in reverse, the pump acts as a generator and creates hazardous induction voltage at the motor terminals.
- ▶ Prevent the fluid from flowing back by closing the shut-off valves.



WARNING

Strong magnetic field in the rotor area

- ▲ Danger of death for persons with pacemaker.
- ▶ Keep a safety distance of at least 0.3 m during disassembly.



WARNING

Toxic material

- ▲ Death or serious personal injury
- ▶ Decontaminate pumps which handle fluids posing a health hazard.



CAUTION

Hot surface

- ▲ Minor or moderate personal injury
- ▶ Before starting to work on the pump, let the pump casing cool down to ambient temperature.



All service work must be carried out by an instructed service technician.



Before dismantling the pump, drain the system, or close the isolating valves on either side of the pump.

Maintenance

Medium UPM pumps are maintenance-free. However, it might be necessary to deblock or to open the pump, for example if it is blocked by impurities.

Deblocking is possible by opening the deblocking screw at the front.

1. Unscrew the deblocking screw at the front of the pump head.
 - Be aware of splashing hot water.
2. Dblock the pump with a screwdriver.

Cleaning

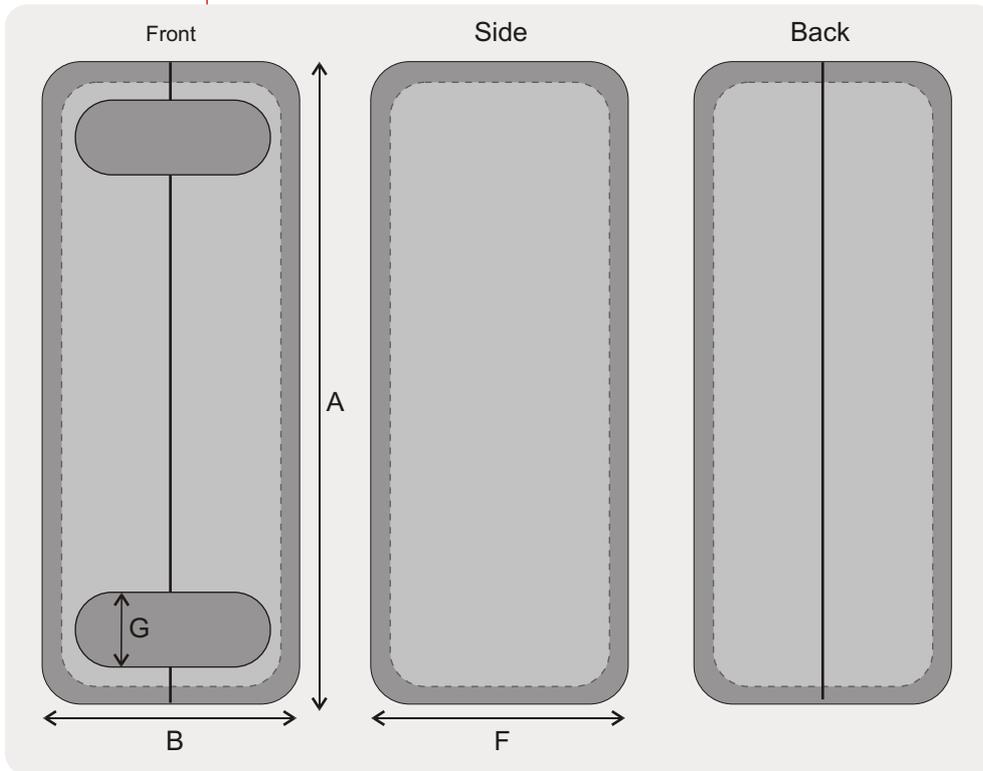
If the impeller or pump housing has to be cleaned from impurities, proceed as follows:

1. Drain the system or close the isolating valves.
 - Be aware of hot water.
2. Remove the screws that hold the pump head.
3. Check impeller and pump housing and remove the impurities.
4. Place the pump head in the desired position, fit the screws and tighten the screws securely.

EPP | **Insulation**



This insulation for heating applications consists of 2 half-shells and is made of expanded polypropylene. Due to the half-shell system, the assembly on the already installed heat exchanger is possible.



Only available for units with all connections on one side.

SWEP accessories meet the same high standards as the company's BPHEs. They are produced according to SWEP's specification by rigorously selected suppliers. The high quality materials are carefully chosen for compatibility, while the accurate dimensions save you time and money on installation.

With SWEP accessories you have the assurance that everything will fit and perform the way the design engineers intended.

Technical data

Max operating temperature	+110°C
Thermal conductivity	0.035 W/mK
Fire properties	B2 in accordance with DIN4102
Material	Expanded Polypropylene
Specific gravity	40 kg/m ³

Dimensions

Size	5T	8T	15	10T/12	16/26	25T/28/80
NoP	20/40	20/30/40	20/40	20/40/60/80	40/60/80/100	20/30/40/60/80/100
A mm	252	376	524	350	437	587
B mm	136	136	132	179	179	179
F mm	117/163	117/140/163	118/163	121/168/215/263	160/206/250/296	118/137/165/212/260/306
G mm	40	40	40	50	50	50
Thickness mm	29	29	29	29	29	29