

ESBE SYSTEM UNITS

CIRCULATION UNIT FLEXI



CIRCULATION UNIT FLEXI 2-5

CIRCULATION UNIT FLEXI 6-9



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CIRCULATION UNIT FLEXI



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2	Series and Function • General/Safety
3	Mounting
4	Hydraulic Installation, Commissioning
5	How to use the information leaflet • Maintenance • Spare parts



1 **i** GENERAL/SAFETY

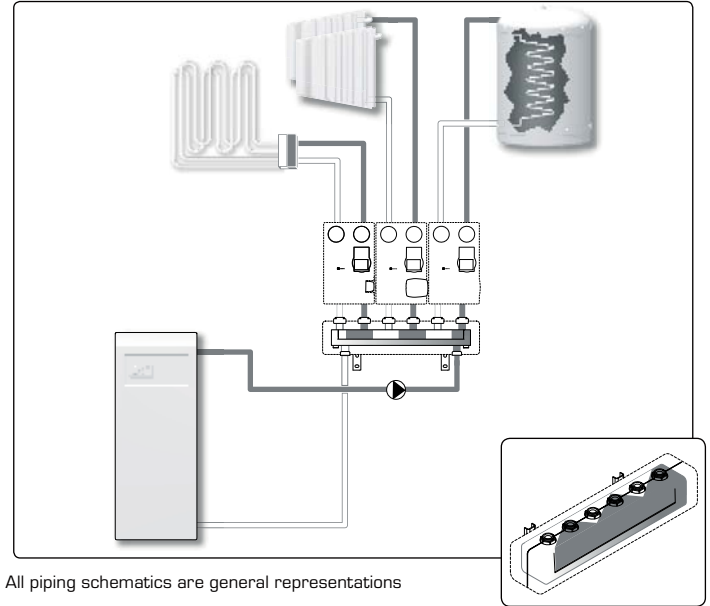
PED 2014/68/EU, article 4.3
Max. operating pressure: PN 6

This instruction manual is an essential component of the product. Read the instructions and the warnings carefully as they contain important information about a safe installation, usage and maintenance.

This product can be used only for the circulation of water and water/glycol in heating installations.

We reserve the right to modify or improve the product, its technical data and literature at any time and without notice.

i INSTALLATION EXAMPLE

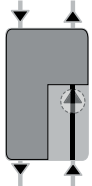
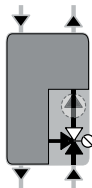
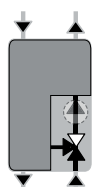
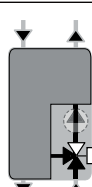


All piping schematics are general representations

The producer won't be responsible for damages caused by wrong usage or disrespect of the instructions given in this manual.

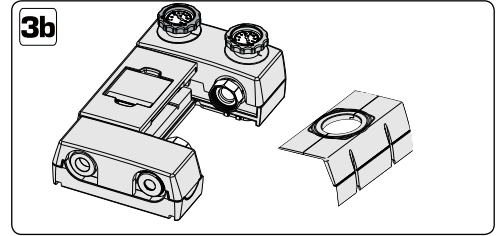
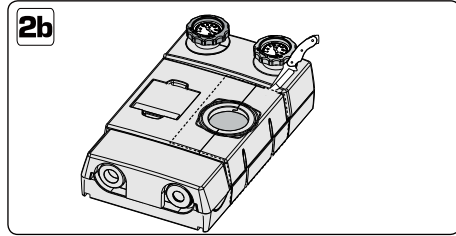
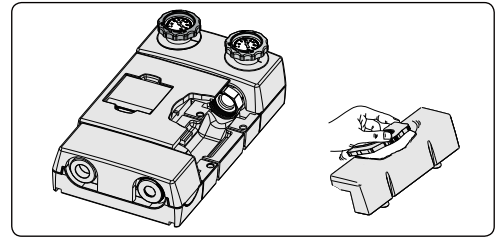
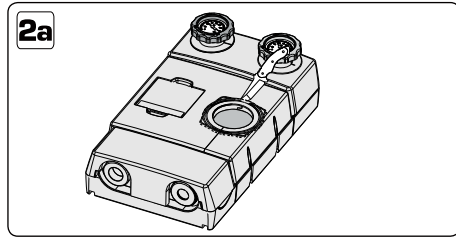
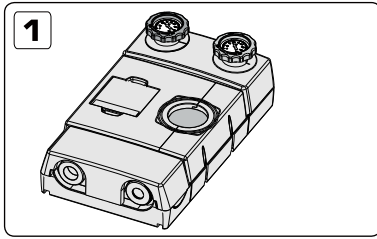
The mounting of the unit must be performed by a qualified professional and in compliance with local/regional laws. This manual refers to standard products. Different versions or functions are available.

At mounting - pay attention and follow common practice and general safety norms for the use of machineries, pressurized equipment and at high temperatures.

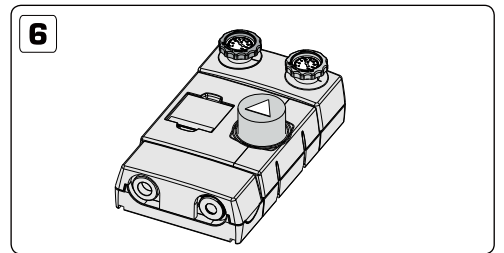
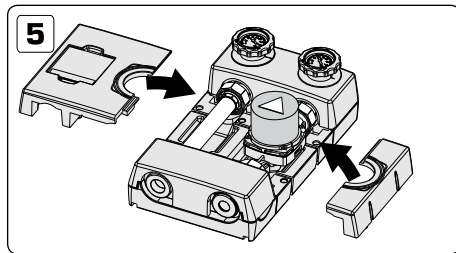
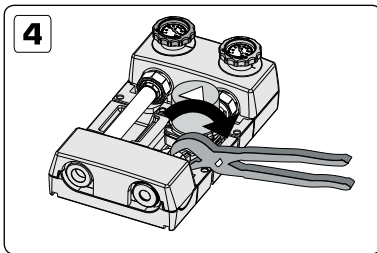
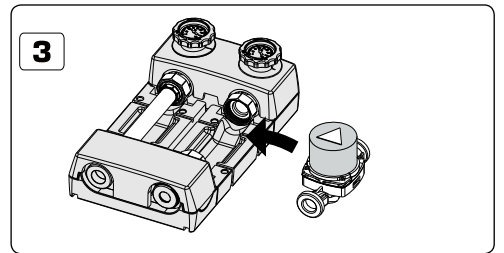
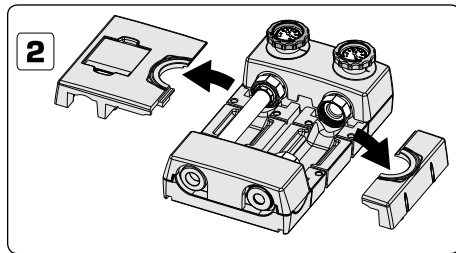
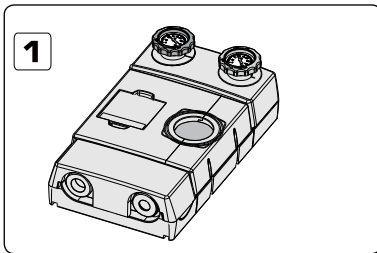
SERIES	FUNCTION
ESBE GDF111	 <p>Direct supply Circulation unit intended for direct supply of heating.</p>
ESBE GFF111	 <p>Fixed temperature With a VTA Thermostatic mixing valve ready and mounted on the Circulation unit.</p>
ESBE GRF111	 <p>Mixing function With Rotary mixingvalve VRG ready and mounted on the Circulation unit.</p>
ESBE GRF121	 <p>Mixing function With Rotary mixingvalve VRG and actuator ARA ready and mounted on the Circulation unit.</p>

2 MOUNTING

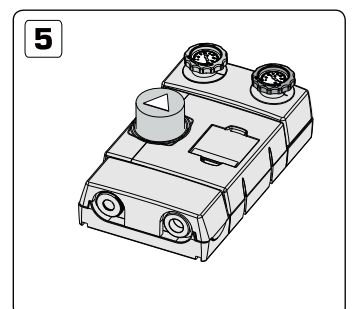
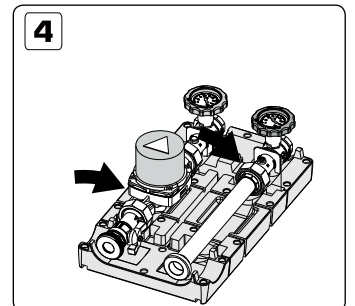
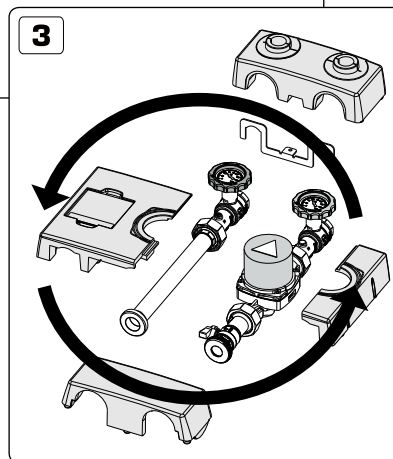
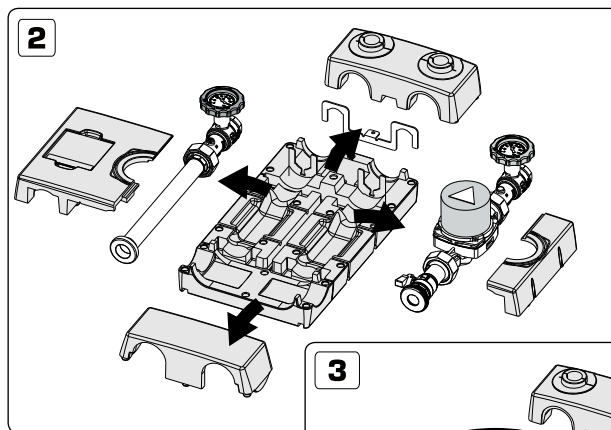
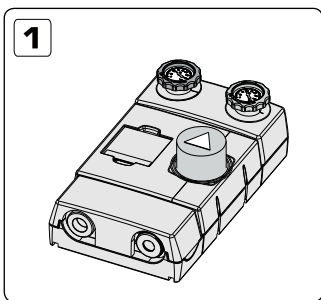
POSSIBLE INSULATION ADJUSTMENTS



EXAMPLE OF PUMP INSTALLATION



LEFT - RIGTH TRANSITION



3 HYDRAULIC INSTALLATION

SINGULAR INSTALLATION ON THE WALL

Install the appliance on a solid wall.

1. Choose the correct position for the piping and drilling by usage of the Mounting template supplied with the package. Drill the holes in the wall for your installation purposes. Take care not to damage any electrical wiring or existing piping.

2. Detach parts of the Circulation Unit's insulation shell.

The actuator/controller might be dismantled from the valve to give more space for the installation tools. Do not change the shaft position of the valve.

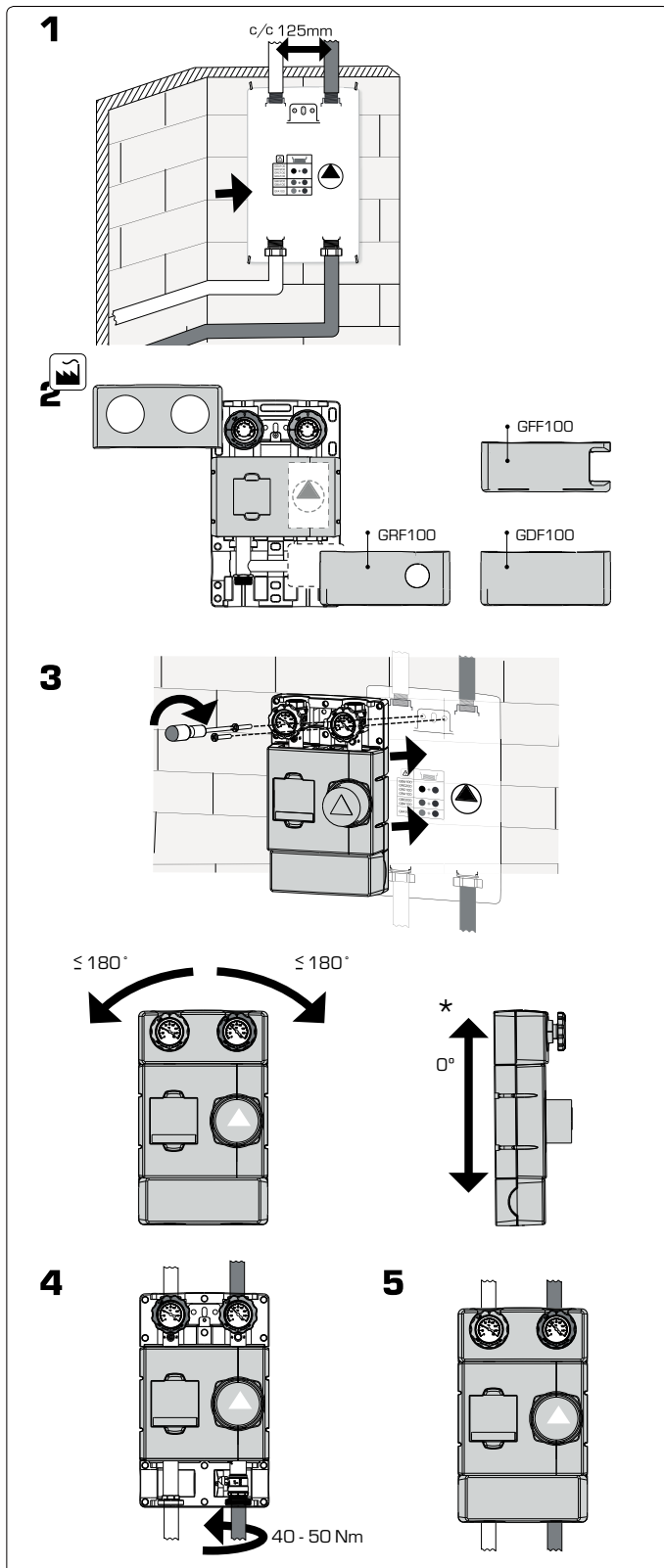
3. Mount the Circulation Unit on the wall with the supplied screws and plugs. Ensure that the pipes are completely in line and lock them firmly. *Please note that to achieve best performance there should be no tilt at all.

⚠ WARNING! For all installations, verify that the plugs are suitable for the kind of wall chosen. Otherwise replace them with a special model. To value the suitability of the plugs please consider the structure of the wall, all the units connected and the weight of the water.

4. Connect the pipings.

⚠ WARNING! Equipment might be damaged when incorrect usage of tools.

5. Remount the insulation shell parts (and actuator/controller).



MULTIPLE INSTALLATIONS OF CIRCULATION UNITS ON THE WALL

If more than one Circulation Unit should be used we recommend the use of Serie ESBE GMA manifold, with or without hydraulic separator.

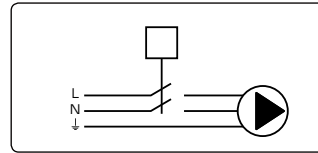
When no storage tank or other components performing a hydraulic separation are used, then manifold series GMA2XX should be installed.

4 ELECTRIC INSTALLATION

Electric connection of the Circulation Unit depends both on the circulation pump, actuator and /or controller.

CIRCULATION PUMP 230 VAC, 50HZ:

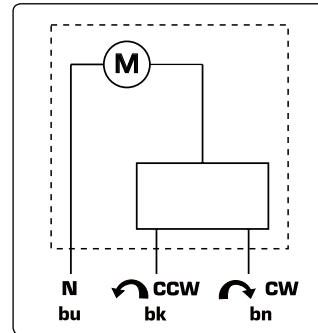
The circulation pump should be preceded by a multi-pole contact breaker in the fixed installation. Earth-connection should not be broken.



You find more information about the circulation pump on www.esbe.eu.

ACTUATOR:

Actuators supplied with 230 VAC should be preceded by a multipole contact breaker in the fixed installation.



You find more information about the actuator on www.esbe.eu.

IF USING LARGER SYSTEMS/CENTRAL REGULATING

Read each product's instruction manual.

5 COMMISSIONING CIRCULATION UNIT

⚠ WARNING! Before any intervention disconnect the electric mains through the external mounted switch and depressurise!

⚠ WARNING! Depending on the operating status of the circulation pump or system (fluid temperature), the entire Circulation Unit can become very hot.

Both primary and secondary loops have to be washed in order to remove any possible mounting residuals.

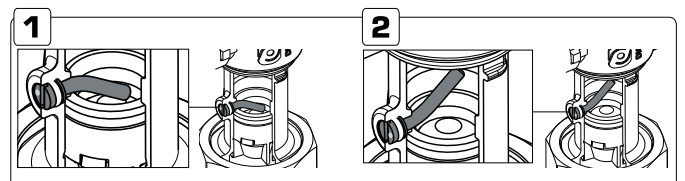
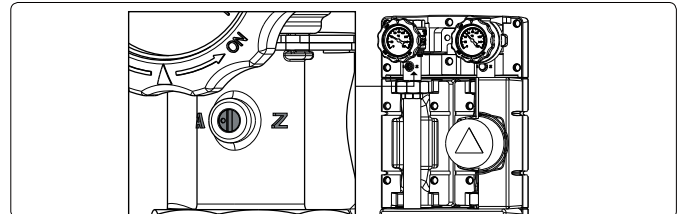
Check that all connections are fully tightened: it's important to check all connections before filling the system in order to avoid leakages or sprays which may be dangerous for the electric components. Open all shut-off valves and fill the primary and secondary loop following the instructions for the tank, boiler etc. During the filling phase recheck that all connections are tightened.

FILLING AND VENTING

Fill the buffer tank and the primary loop with an appropriated liquid, according to the system instructions, respecting the limits of the components used. While filling the device, open any vents situated in the circuit. Watch the system until it reaches its correct operation condition. If pressure is not enough, adjust the pressure by repeating the above procedure.

To avoid problems with cavitation, fill up the system to get sufficient pressure head on the suction side of the circulation pump. The minimum pressure needed depends on the temperature of the fluid. Recommended min pressure head at fluid temperatures 50/95/110°C is 0,5/4,5/11 m respectively.

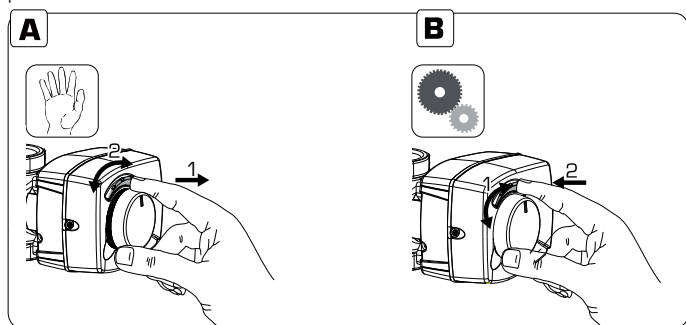
To make the filling and venting of the system easier it's possible to force the check valve on the return side of the unit, to an open position (default), see Fig. 1.



After a complete filling and venting, turn the screw on the check valve back to its normal operating position, picture 2 and set the circulation pump operation to recommended position.

COMMISSIONING ACTUATOR:

During commissioning it might be useful to turn the valve manually by pulling the knob, picture A. Reset to operation mode by pushing and adjusting the knob back, picture B.

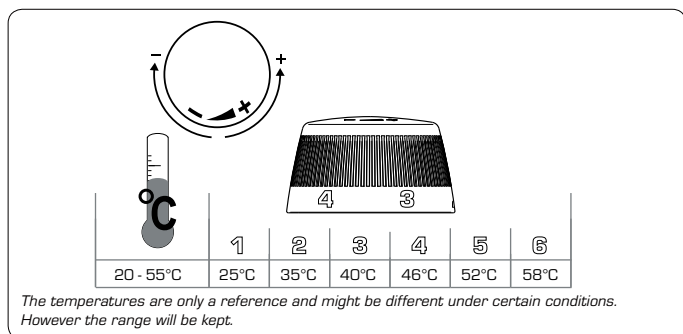


COMMISSIONING IF USING LARGER SYSTEMS/CENTRAL REGULATING

Please read each product's instruction manual.

COMMISSIONING FIXED TEMPERATURE OPERATION

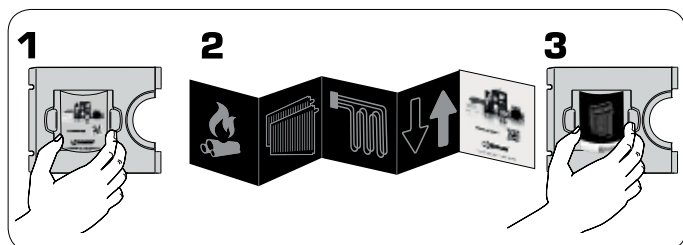
To set the mixed water temperature, see recommendations in the table below. All temperature settings must be measured at suitable location with a thermometer to have the correct mixing temperature of the valve.



6 HOW TO USE THE INFORMATION LEAFLET

The Circulation Unit is equipped with an information display containing a leaflet that graphically explains what kind of application the unit is controlling. It gives you also the possibility to write in notes and leave your business card behind.

Just remove the display glass and select the suitable information.



7 MAINTENANCE

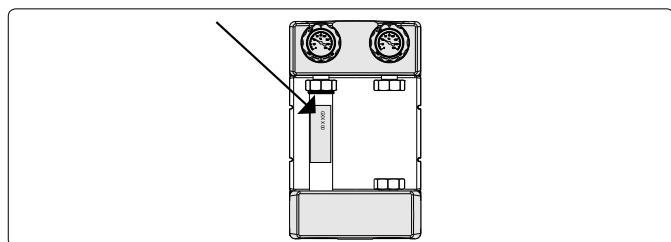
The circulation unit does not require any specific maintenance under normal conditions. Although it is important to annually check the entire system. Pay special attention to all threaded or soldered connections and the potential occurrence of limestone sedimentation.

⚠ WARNING Switch off the electric supply before any operation. Pay attention to the hot water contained.

8 i SPARE PARTS

Spare parts are ordered via ESBE customer service.

In order to avoid queries and incorrect orders, all data on the name plate should be submitted for each order.



www.esbe.eu

SISTEMSKÉ ENOTE ESBE

ČRPALČNI SKLOP FLEXI



STRAN	VSEBINA
2	Izvedbe in funkcije Splošno/Varnost
3	Montaža
4	Hidravlična inštalacija, zagon
5	Uporaba informacijskega letaka • Vzdrževanje • Rezervni deli

SI

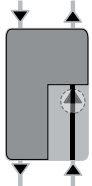
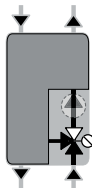
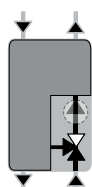
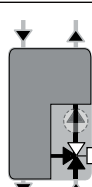
1 i SPLOŠNO/VARNOST

PED 2014/68/EU, article 4.3
Max. obratovalni tlak: PN 6

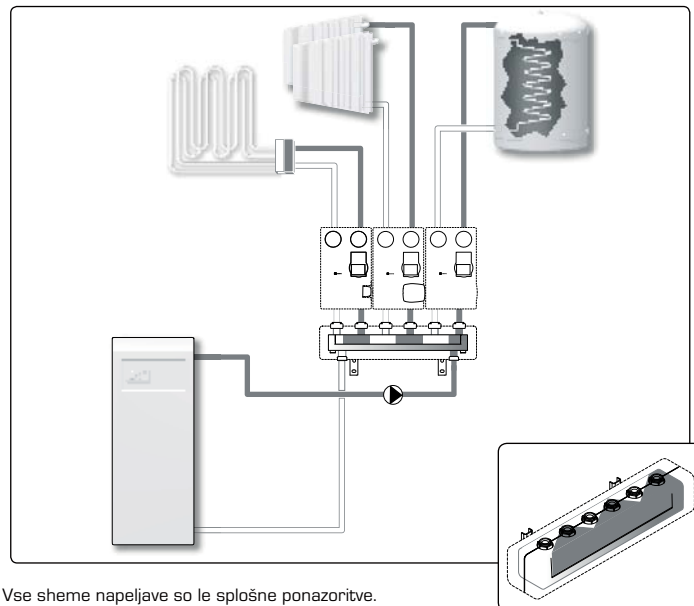
Ta navodila so sestavni del izdelka. Pazljivo jih preberite, ker vsebujejo pomembne informacije o varnem priključu, uporabi in vzdrževanju.

Ta izdelek se lahko uporablja le za kroženje vode v ogrevalnih sistemih z vodo/glikolom.

Pridržujemo si pravico do sprememb aliboljšav izdelka ali tehničnih podatkov brez predhodnega obvestila.

SERIJA	DELOVANJE
ESBE GDF111	 <p>Direktni set Črpalčni sklop za direktno oskrbo ogrevalnega sistema.</p>
ESBE GFF111	 <p>Set z fiksno temperaturo vsebuje vgrajen VTA termostatski mešalni ventil.</p>
ESBE GRF111	 <p>Mešalni set vsebuje vgrajen VRG mešalni ventil.</p>
ESBE GRF121	 <p>Mešalni set vsebuje vgrajen VRG mešalni ventil in aktuator ARA.</p>

i PRIMER VGRADNJE



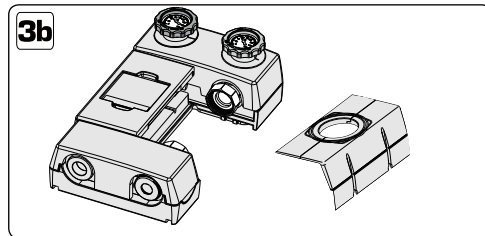
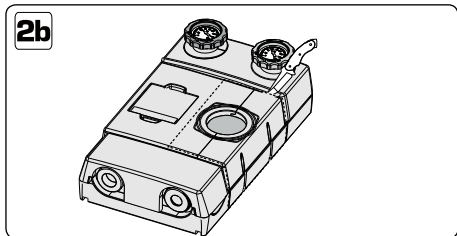
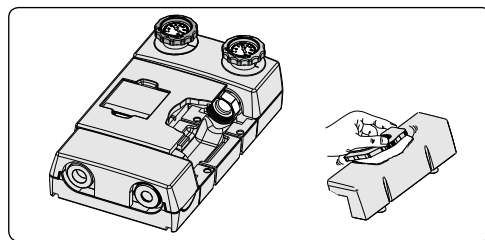
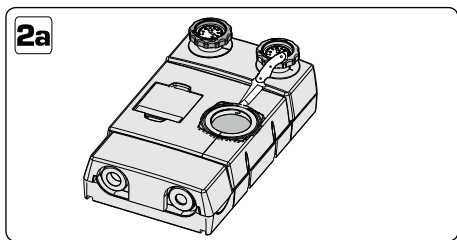
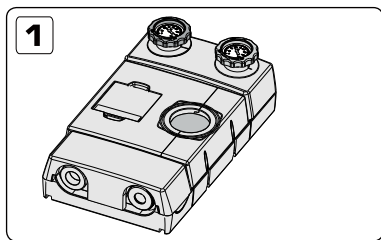
Vse sheme napeljave so le splošne ponazoritve.

Proizvajalec ne prevzema nobene odgovornosti za škodo, ki nastane zaradi neustrezne uporabe ali neupoštevanja teh navodil.

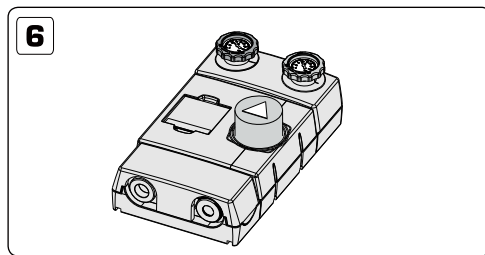
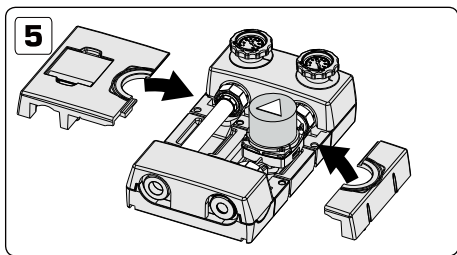
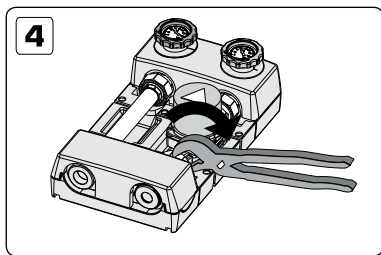
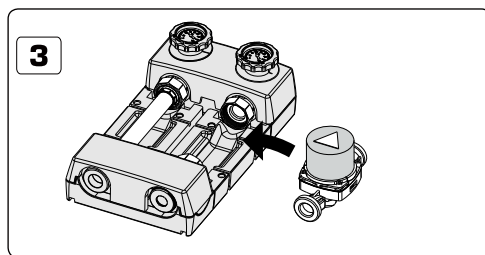
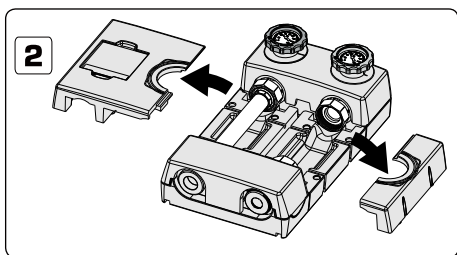
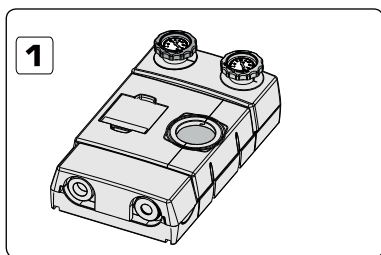
Vgradnjo mora opraviti kvalificiran inštalater v skladu z veljavno zakonodajo. Ta navodila veljajo le za standardne izdelke. Možne so tudi druge izvedbe/funkcije.

Pri montaži upoštevajte splošne prakse in varnostne standarde za delo s stroji in napravami pod tlakom pri visokih temperaturah.

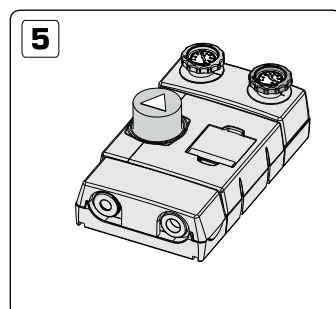
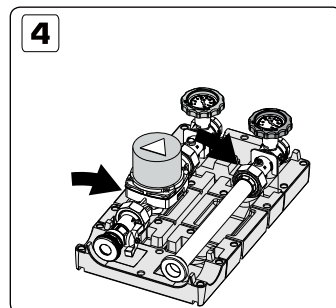
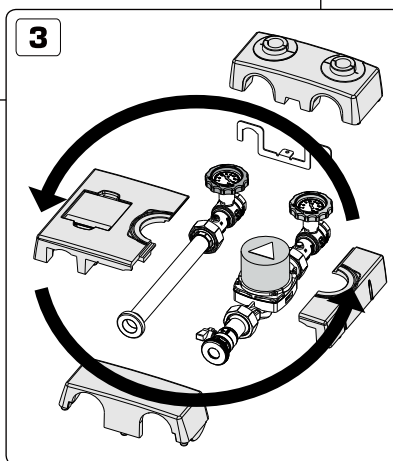
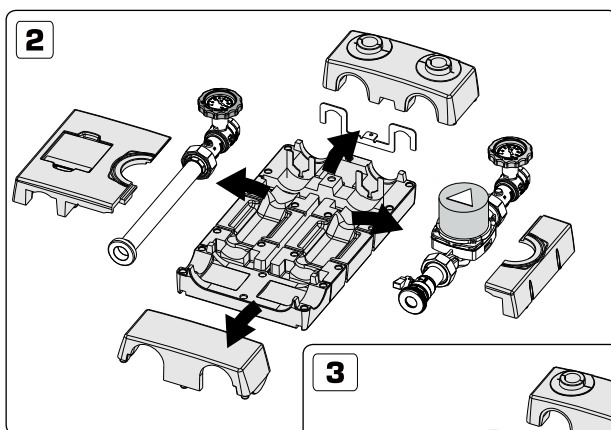
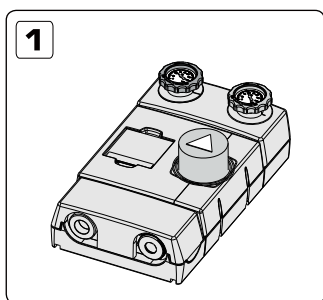
2  **MONTAŽA**
PRILAGODITEV IZOLACIJE



PRIMER VGRAJEVANJA OBTOČNE ČRPALKE



MENJAVA DOVODA (LEVO/DESNO)





HIDRAVLIČNA INŠTALACIJA

MONTAŽA ENEGA ČRPALČNEGA SKLOPA NA STENO

Montirajte na trdno steno, ki ni podvržena vibracijam.

1. Pri določanju pravičnega položaja cevi in izvrtin v steni uporabite priloženo šablono črpalčnega sklopa. Pred vrtanjem preverite mesto električne napeljave ali obstoječih vodov.

2. S črpalčnega sklopa delno odstranite izolacijo.

Aktuator se lahko odstrani iz ventila, da se zagotovi več prostora. Ne spreminjajte položaja osi ventila.

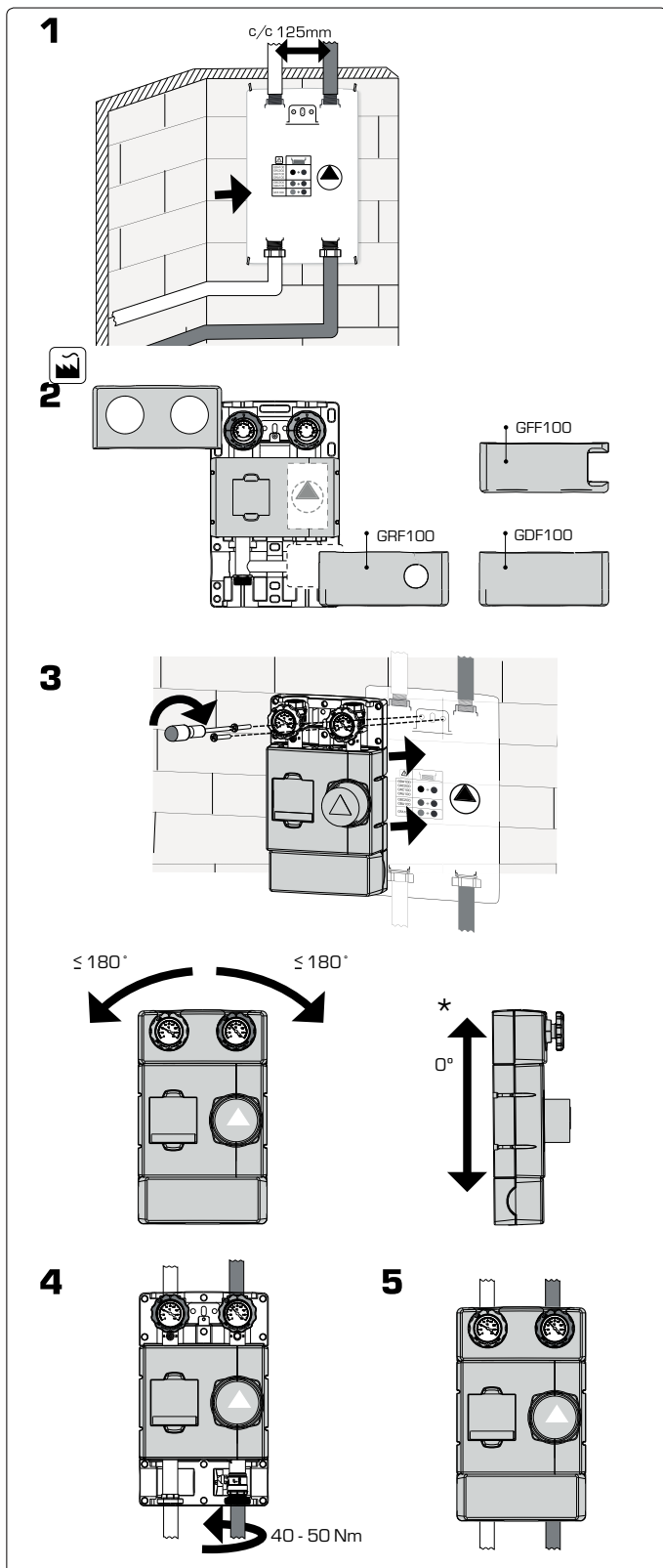
3. Črpalčni sklop previdno montirajte na steno s priloženimi vijaki in zidnimi vložki. Zagotovite, da so cevi ustrezno poravnane in jih trdno priključite. *Za najboljšo učinkovitost ne smejo biti niti malo nagnjene.

⚠ OPOZORILO! Stenski vložki morajo ustrezati tipu stene. Po potrebi uporabite specialne vložke. Pri ocenjevanju primernosti vložkov upoštevajte strukturo stene ter težo vseh priključenih enot in vode.

4. Sklop povežite z napeljavo.

⚠ OPOZORILO! Če ne uporabljate ustreznega orodja, lahko poškodujete napravo.

5. Znova namestite izolacijo napeljave (in aktivator/krmilnik).



MONTAŽA VEČ ČRPALČNIH SKLOPOV NA STENO

V tovrstnih primerih priporočamo uporabo razdelilnika serije SEBE GMA z vgrajenim hidravličnim ločevalnikom ali brez njega.

Če v sistemu ni vgrajenega zalogovnika ali drugih komponent za hidravlično ločevanje, priporočamo vgradnjo razdelilnika serije GMA2xx.

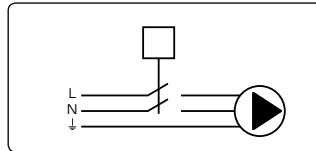


ELEKTRIČNA INŠTALACIJA

Električni priklop sklopa je odvisen od obtočne črpalke, pogona in/ali regulatorja.

OBTOČNA ČRPALKA 230V, 50HZ :

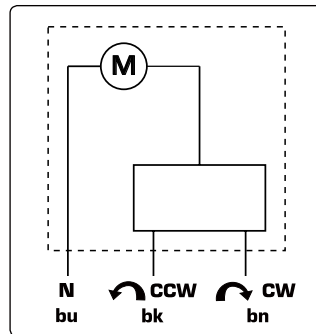
priklop je potrebno izvesti preko preklopnega vtiča v fiksno vtičnico. Ozemljitev ne sme biti poškodovana.



Več informacij o obtočni črpalki na www.esbe.eu

MOTORNÍ POGON :

Priklop je potrebno izvesti preko preklopnega vtiča v fiksno vtičnico.



Več informacij o motornem pogonu na www.esbe.eu

ČE UPORABLJAJTE VELIKE SISTEME / CENTRALNO REGULACIJO

Preberite navodila za uporabo vsakega izdelka.



ZAGON ČRPALČNEGA SKLOPA

⚠ OPOZORILO! Pred vsakim posegom v sklop odklopite električno napeljavo z zunanjim stikalom in sprostite tlak iz sistema.

⚠ OPOZORILO! Odvisno od stanja delovanja črpalke za kroženje ali sistema (temperatura tekočine) se lahko celoten črpalčni sklop močno segreje.

Primarni in sekundarni krog napeljave morate sprati, da odstranite nečistoče zaradi montaže.

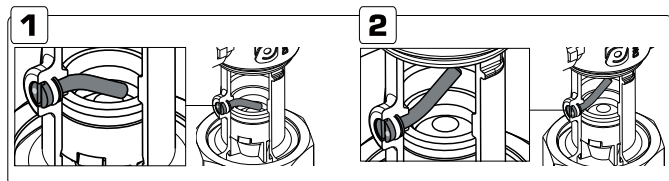
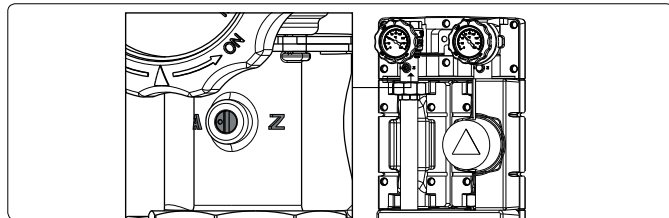
Prepričajte se, da so vsi spoji ustrezno zatesnjeni, da ne bo pozneje prišlo do puščanja ali pršenja v sklopu, kar je lahko nevarno zaradi električne napeljave. Odprite vse zaporne ventile ter napolnite primarni in sekundarni krogotok. Med polnjenjem znova preverite, da so vsi spoji ustrezno zatesnjeni.

POLNENJE IN ODZRAČEVANJE

Zalogovnik in primarni krogotok napolnite ustreznim medijem po navodilih proizvajalca, pri čemer upoštevajte omejitve uporabljenih delov. Med polnjenjem odprite vse odzračevalne naprave v tokokrogu. Opazujte sistem, dokler ne doseže predpisanega tlaka. Če ne more doseči ustreznega tlaka, ponovite zgoraj opisani postopek.

Če se želite izogniti težavam s kavitacijo, napolnite sistem tako, da bo zagotovljen ustrezen vlek črpalke. Minimalni tlak je odvisen od temperature medija. Priporočen minimalni tlak pri temperaturi 50/95/110 °C je 0,5/4,5/11 m.

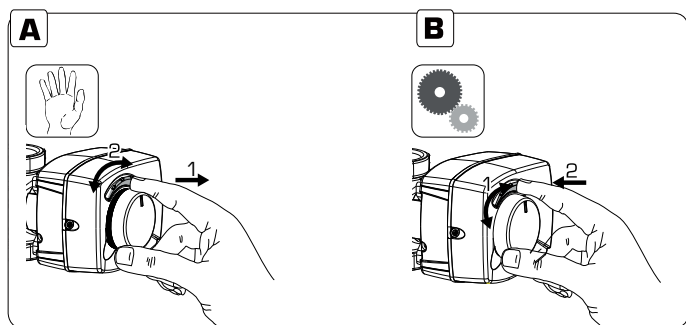
Za lažje polnjenje in odzračevanje sistema lahko obrnete nepovratni ventil na povratni strani enote v položaj odprto (privzeto). Glejte sliko 1.



Po končanem polnjenju in odzračevanju obrnite vijak na nepovratnem ventilu nazaj v normalen delovni položaj (slika 2) in nastavite delovanje črpalke na priporočen položaj.

ZAGON AKTUATORJA:

Med zagonom priporočamo da ventil zavrtite z povlekm gumba, slika A. Nato ponastavite na način delovanja z pritiskom gumba nazaj, slika B.



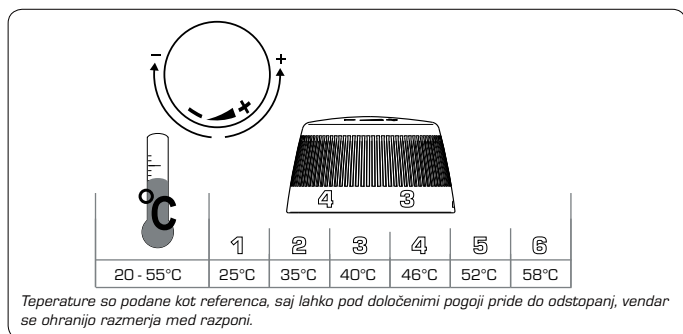
ZAGON VEČJIH SISTEMOV / CENTRALNA REGULACIJA

Preberite ločena navodila za uporabo.

ZAGON SKLOPA Z FIKSNO TEMPERATURO

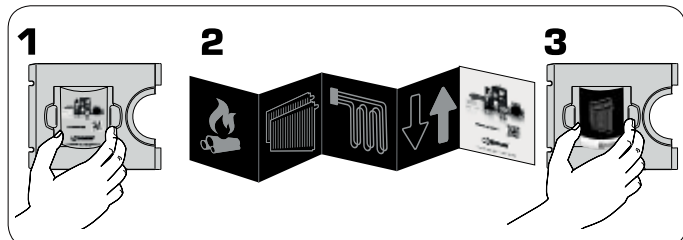
Nastavitev želene temperature izvedite glede na priporočila v spodnji tabeli.

Nastavljene vrednosti temperature preverite s termometrom na primernih mestih, da zagotovite točno mešalno temperaturo ventila.



6 UPORABA INFORMACIJSKEGA LETAKA

Na črpalčni sklop je nameščena knjižica z grafičnim prikazom inštalacije, ki jo sklop krmili. V knjižico lahko zapišete pomembne informacije ali pa priložite svojo vizitko. Odstranite zaščitno steklo in izberite ustrezno sliko.



7 VZDRŽEVANJE

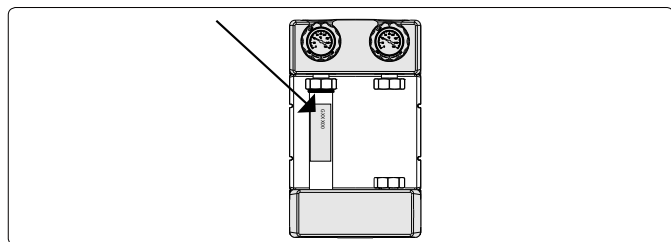
Črpalčni sklop pri normalnem obratovanju ne potrebuje vzdrževanja. Vseeno vsako leto preglejte enoto. Bodite še posebej pozorni na zvarjene spoje in obloge vodnega kamna.

⚠ OPOZORILO! Pred posegi izklopite električno napajanje. Bodite pazljivi, saj je sistem napolnjen z vročo vodo.

8 i REZERVNI DELI

So na voljo pri vašem prodajalcu.

Če se želite izogniti dodatnim vprašanjem in nepravilnim naročilom, pri vsakem naročilu vključite vse podatke s tipske ploščice.



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NO.1 IN HYDRONIC SYSTEM CONTROL

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