



ESBE AB
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ESBE System Units
CIRCULATION UNIT DN20



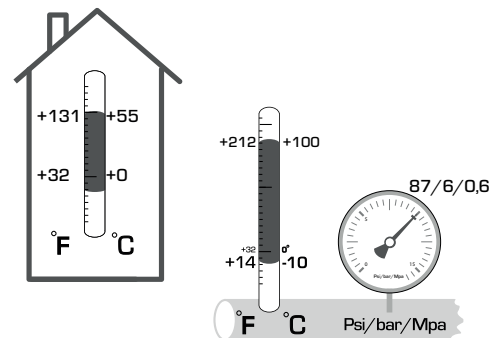
Series GDA311
Series GRA311

Series GFA311



PED 2014/68/EU, article 4.3
EnEV 2014

SI 2016 No. 1105

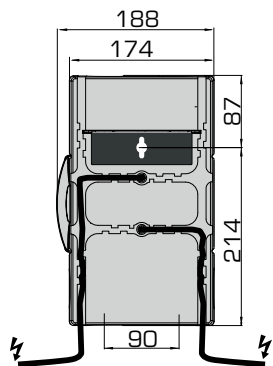


SERIES	FUNCTION
ESBE GDA311	
ESBE GRA311 ARA600	
ESBE GFA311	

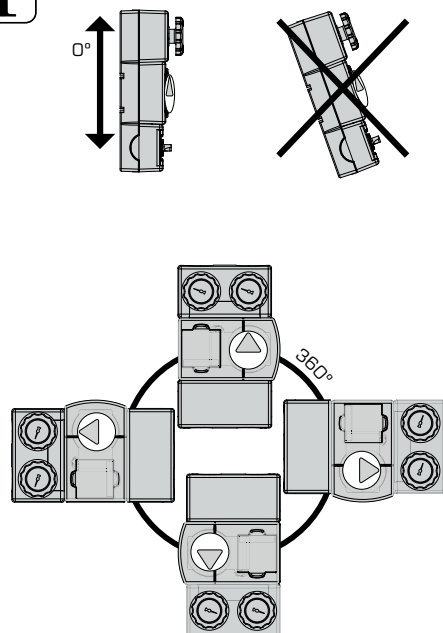
Mtrl.nr: 98141118 • Ritn.nr: 7948 vers. A • Rev. 2023-03-29



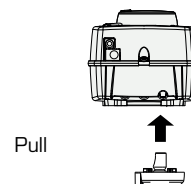
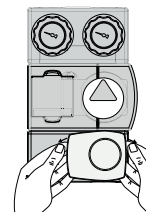
Dimensions • Cabling



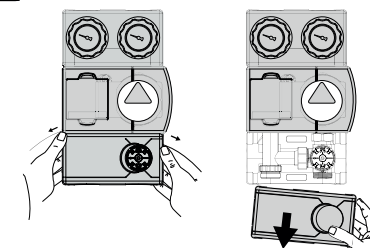
Mounting position



Remove actuator
Series GRA311

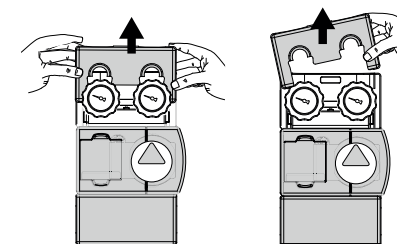


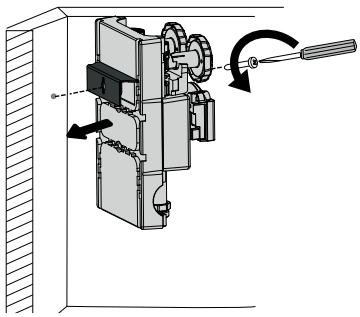
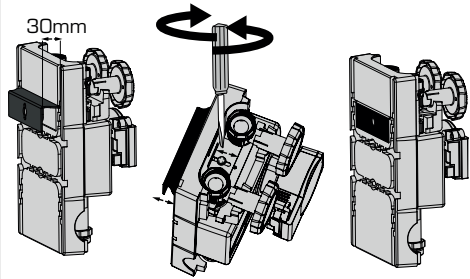
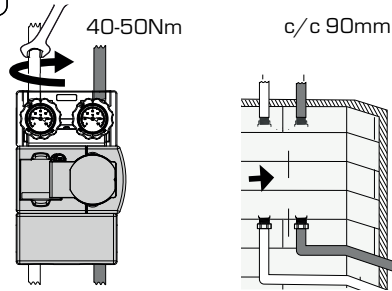
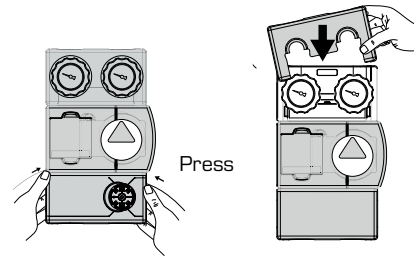
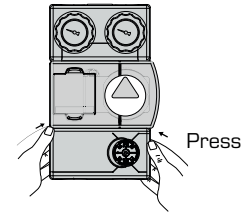
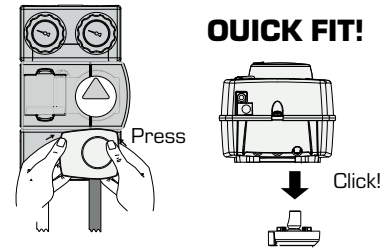
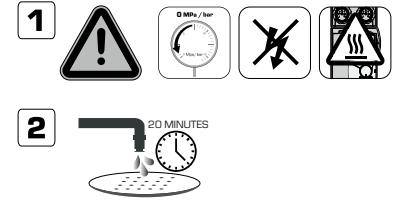
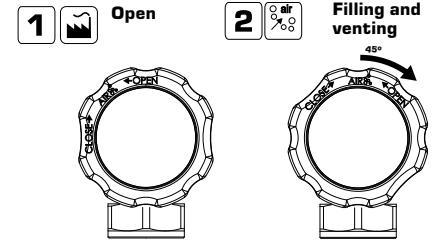
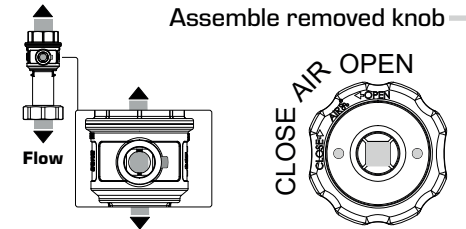
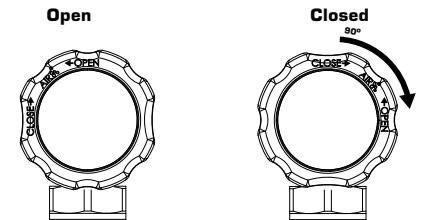
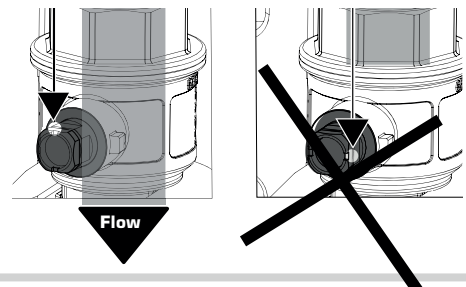
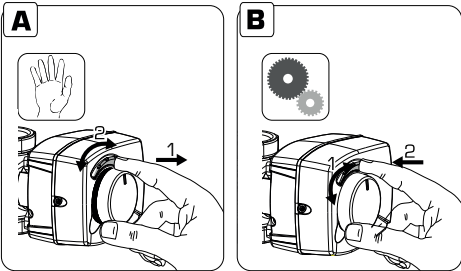
Remove insulation



Pull up
insulation 7mm

Remove

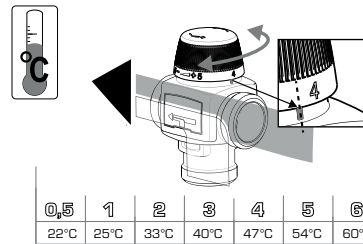


3**Assembling on wall****Adjust wallbracket****4****Fit supply pipes****Assemble insulation****5****Assemble lower insulation****Assemble actuator**
Series GRA311**i****Commissioning****Preparation****Filling and venting****Assemble removed knob****Checkvalve position****White mark, indicate check valve position****i****Commissioning actuator**

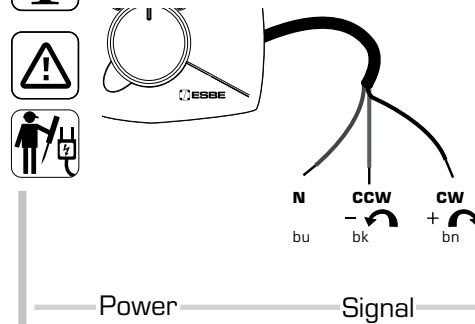
<https://esbe.eu/group/products/rotary-actuators>

i**Commissioning fixed temperature**

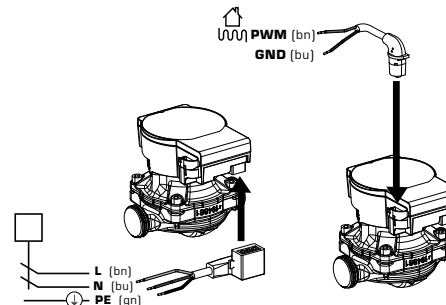
Series GFA311



<https://www.esbe.eu/global/en/products/thermostatic-mixing-valves>

i**Electric installation**

Power Signal



i www.esbe.eu



Display

NORMAL OPERATION

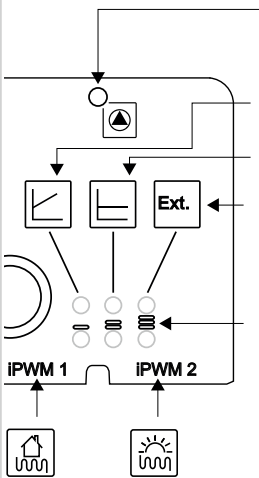


CONTROL MODE
Variable differential pressure - $\Delta p-v$

Constant differential pressure - $\Delta p-c$

External signal (PWM)

PUMP CURVE
I, II, III



Recommended pump settings

Applications

I, II, III	I, II, III	iPWM 1/ iPWM 2

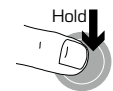
Factory setting



= Factory settings



Pump Settings



LED display

Status

			Locked
			Unlocked
			Venting
			Manual restart
			Factory setting

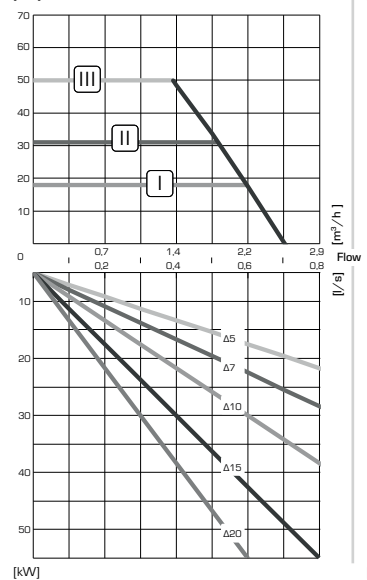


Circulation Unit Performance

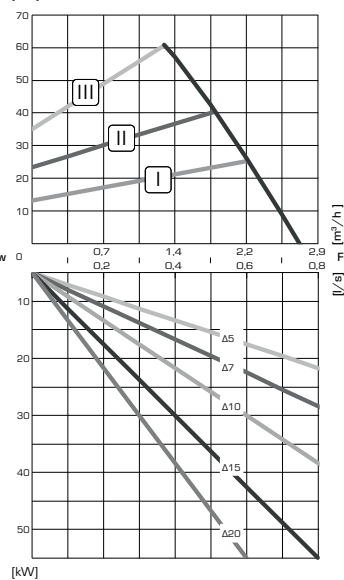
Heating output **GDA311** DIRECT SUPPLY



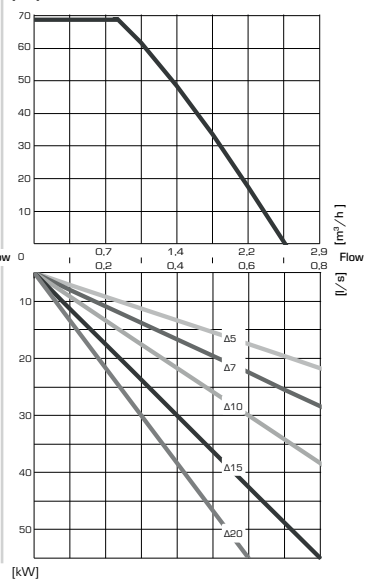
Constant differential pressure



Variable differential pressure



Ext iPWM 1/ iPWM 2

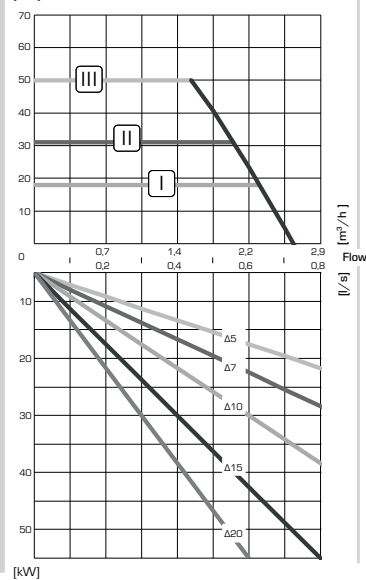


Circulation Unit Performance

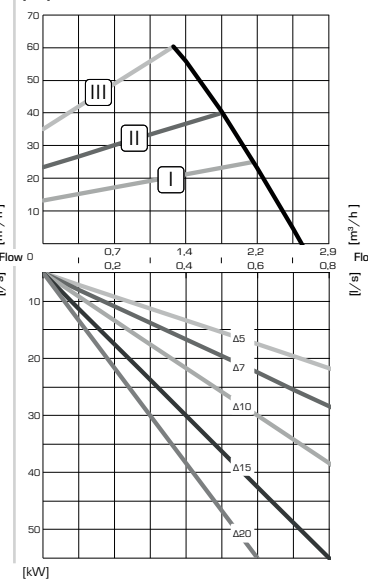
Heating output **GRA311** MIXING FUNCTION



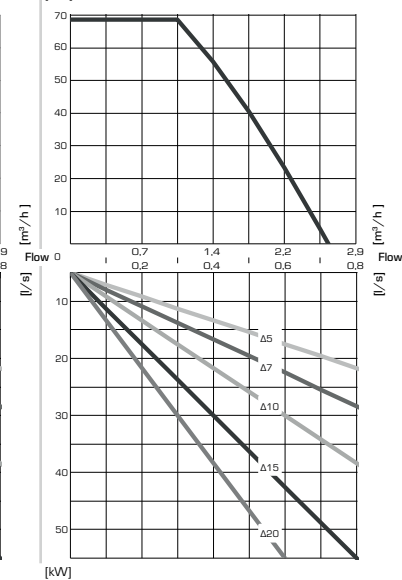
Constant differential pressure



Variable differential pressure



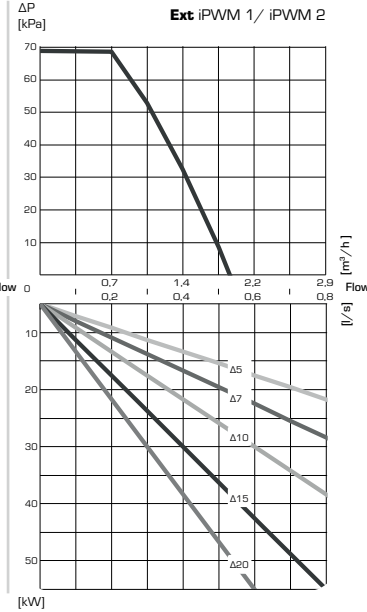
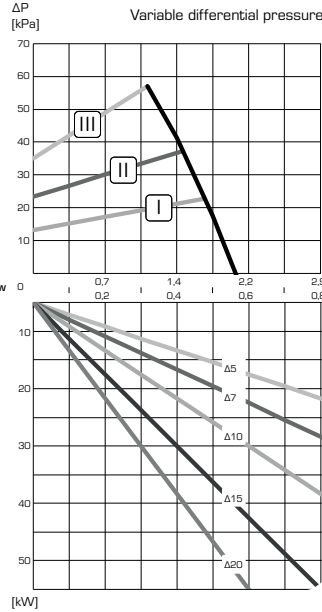
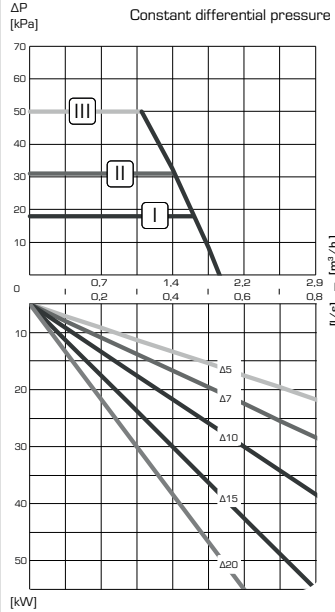
Ext iPWM 1/ iPWM 2





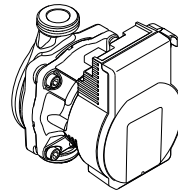
Circulation Unit Performance

Heating output **GFA311** FIXED TEMPERATURE



WILO - Faults, Causes and Remedies

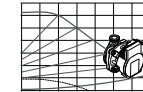
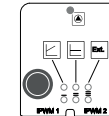
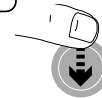
LED	Faults	Cause	Remedy
Lights up red	Blocking	Rotor blocked	Activate manual restart or contact customer service
	Contacting/ winding	Winding defective	
Flashes red	Under/ overvoltage	Power supply too low/high on mains side	Check mains voltage and operating conditions, and request customer service
	Excessive module temperature	Module interior too warm	
	Short-circuit	Motor current too high	
Flashes red/ green	Generator operation	Water is flowing through the pump hydraulics, but there is no mains voltage at the pump	Check the mains voltage, water quantity/pressure and the ambient conditions
	Dry run	Air in the pump	
	Overload	Sluggish motor, pump is operated outside of its specifications (e.g. high module temperature). The speed is lower than during normal operation	



http://www.esbe.eu/global/en/products/circulation_units



Pump Settings



Application

Click

LED display

Control mode

Pump setting

Recommended Alternative

1		III	
2		II	
3		I	
4		iPWM 1	
5		iPWM 2	
6		III	
7		II	
8		I	



Expose application info using leaflet

