Circulator / High-efficiency Drinking Water Pump

CalioTherm S

Type Series Booklet

KSB

Legal information/Copyright

Type Series Booklet CalioTherm S

All rights reserved. The contents provided herein must neither be distributed, copied, reproduced, edited or processed for any other purpose, nor otherwise transmitted, published or made available to a third party without the manufacturer's express written consent.

Subject to technical modification without prior notice.

© KSB SE & Co. KGaA, Frankenthal 27/06/2022

Contents

Building Services: Heating **4**
Drinking Water Circulator Pumps 4
CalioTherm S 4
Main applications 4
Fluids handled 4
Operating data 4
Design details 4
Designation 5
Materials 5
Product benefits 5
Product information 5
Selection information 5
Technical data 5
Characteristic curves 6
Dimensions 7
Installation information 8
Scope of supply 8
Accessories 8

Building Services: Heating

Drinking Water Circulator Pumps

CalioTherm S

Main applications

- Drinking water circulation systems to DVGW-W551

Fluids handled

- Drinking water and water for the food and beverage industry, as per German TrinkwV 2001 drinking water regulations

Operating data

Table 1: Operating properties

Characteristic		Value
Flow rate	Q [m³/h]	≤ 0,7
	Q [l/s]	≤ 0,19
Head	H [m]	≤ 1,4
Fluid temperature	T [°C]	≥ +5
		≤ +65
Hardness of fluid handled	[°dH]	≤ 20
Ambient temperature	T [°C]	≥ 0
		≤ +40
Operating pressure	p [bar]	≤ 10
Average sound pressure level	[dB (A)]	≤ 40
Screw-ended	Rp	1/2
Screw-ended with screw-on set (accessory)	G	1

Design details

Design

- Maintenance-free high-efficiency wet rotor pump (glandless)

Drive

- High-efficiency permanent magnet synchronous motor, brushless, self-cooling
- 1~230 V AC +/- 10%
- Frequency 50 Hz
- Enclosure IP44
- Thermal class F
- Temperature class TF 60
- Interference emissions EN 55014-1
- Interference immunity EN 55014-2

Bearings

- Product-lubricated special plain bearing

Connections

- Screw-ended

Operating modes

- Open-loop control via setpoint setting

Automatic functions

- Detection of pump rotor blockages
- Soft start (limitation of starting current)
- Full motor protection with integrated trip electronics

Manual functions

- Setting the speed level

Signalling functions and display functions

- LED indicators for speed level and error codes (3 flashing LEDs)

1157.563/01-EN

Designation

Example: CalioTherm S

Table 2: Designation key

Code	Description
CalioTherm S	Type series

Materials

Table 3: Overview of available materials

Part No.	Description	Material
102	Volute casing	Brass CW612N
210	Shaft	Ceramics
230	Impeller	Glass fibre reinforced plastics
310	Bearing	Ceramics / carbon
817	Can	Glass fibre reinforced plastics

Casing parts which are in contact with the atmosphere and with the fluid handled are free from paint-wetting impairment materials.

All wetted components are DVGW-approved for use in drinking water circulation systems.

Product benefits

- No tools required for connection
- Easy to operate; operating status displayed
- High-efficiency pump for maximum energy savings
- Three speed levels for optimum adaptation to the system

Product information

Product information as per Regulation No. 1907/2006 (REACH)

For information as per chemicals Regulation (EC) No. 1907/2006 (REACH), see https://www.ksb.com/ksb-en/About-KSB/Corporate-responsibility/reach/ .

Selection information

Minimum inlet pressure

The indicated values are applicable up to 300 m above sea level. For installation at altitudes > 300 m, an allowance of 0.01 bar / 100 m must be added.

The minimum inlet pressure is 0.4 bar.

Permissible fluid temperature

Table 4: Temperature limits of the fluid handled

Permissible fluid temperature	Value
Maximum	+65 °C
Minimum	+5 °C

Technical data

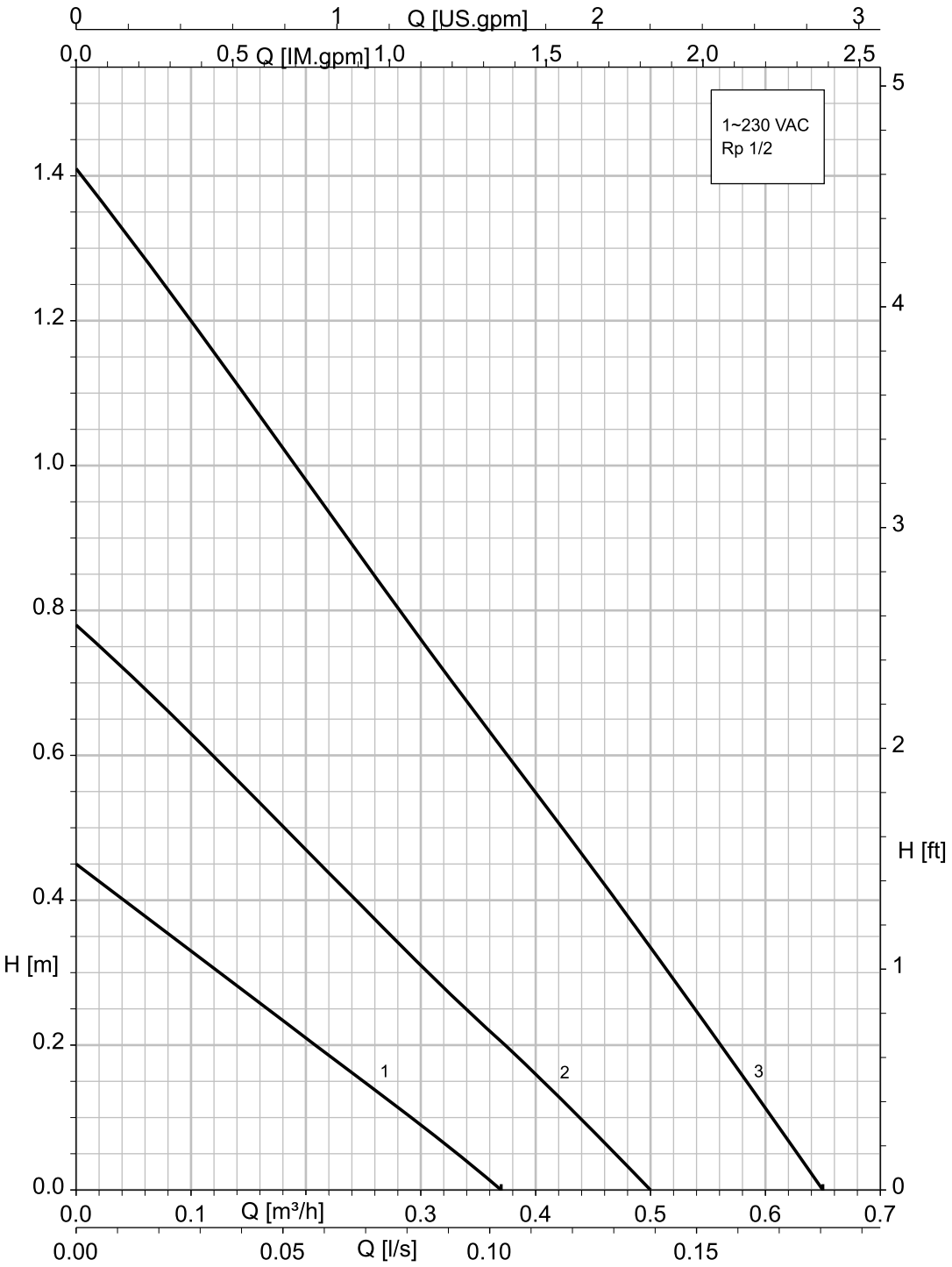
CalioTherm S

Table 5: Technical data

Size	Connection		Speed levels	P_1	I_N	Mat. No.	[kg]
	Pump	Screw-on set (accessory)		[W]	1~230 V AC, 50 Hz [A]		
CalioTherm S	Rp 1/2	G 1	3	2,5 - 7,0	0,05 - 0,07	05160277	1,3

Characteristic curves

CalioTherm S



1157.563/01-EN

Dimensions

Pump set

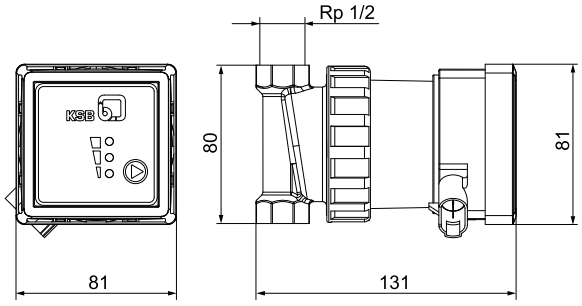


Fig. 1: Pump set [mm]

Pump set with screw-on set (accessory)

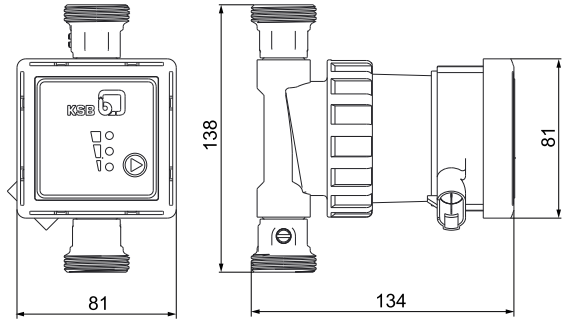


Fig. 2: Pump set with screw-on set (accessory) [mm]

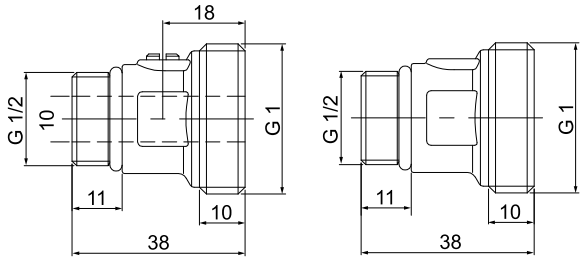


Fig. 3: Screw-on set with integrated lift check valve and shut-off valve [mm]

Installation information

Permissible installation positions

Fig. 4: Permissible installation positions

Scope of supply

Depending on the model, the following items are included in the scope of supply:

- Pump set
- Thermal insulation shell
- 2 fitted plugs preventing the ingress of foreign matter
- Plug-type connector to power supply
- Installation/operating manual

Accessories

Electrical accessories

Table 6: Electrical accessories

	Description	Mat. No.	[kg]
	Timer	01143799	0,2

Pipe unions / fittings

Table 7: Pipe unions / fittings

	Description	Mat. No.	[kg]
	Screw-on set with integrated lift check valve and shut-off valve Material: brass (for drinking water applications) External thread G 1/2 to G 1	05171668	0,195

1157.563/01-EN

27/06/2022

1157.563/01-EN

KSB SE & Co. KGaA
Johann-Klein-Straße 9 • 67227 Frankenthal (Germany)
Tel. +49 6233 86-0
www.ksb.com