

ETLZ032-032-200 GGSAV11D200114 BKSBI3

Inline pump

Operating data

Requested flow rate		Actual flow rate	8.30 m ³ /h
Pumped medium	Water, heating water Heating water up to 100°C (max.), acc. to VDI 2035	Actual developed head	12.30 m
	Not containing chemical and mechanical substances which affect the materials	Efficiency	41.8 %
Ambient air temperature	20.0 °C	MEI (Minimum Efficiency Index)	= 0.70
Fluid temperature	60.0 °C	Power absorbed	0.65 kW
Fluid density	983 kg/m ³	Pump speed of rotation	1464 rpm
Fluid viscosity	0.48 mm ² /s	NPSH required	1.79 m
Suction pressure max.	0.00 bar.g	Permissible operating pressure	16.00 bar.g
Mass flow rate	2.27 kg/s	Discharge press.	1.19 bar.g
Max. power on curve	0.87 kW	Min. allow. mass flow for continuous stable operation	0.39 kg/s
Min. allow. flow for continuous stable operation	1.42 m ³ /h	Max. allow. mass flow	4.65 kg/s
Shutoff head	14.52 m	Design	Twin system one full duty + one standby pump Tolerances to ISO 9906 Class 3B; below 10 kW acc. to paragraph 4.4.2

Design

Pump standard	Without	Shaft seal code	11
Design	Close coupled twin inline	Sealing plan	Single-acting mechanical seal with vented chamber (A-type casing cover, taper bore)
Orientation	Vertical		
Suction nominal dia.	DN 32		Minimum requirements for hot water quality: treatment acc. to VdTÜV regulation TCH 1466 and solids content up to max. 5 mg/l.
Suction nominal pressure	PN 16	Seal chamber design	Conical seal chamber (A-type cover)
Suction position	180° (down)	Contact guard	With
Suction flange drilled according to standard	EN1092-2	Wear ring	Casing wear ring
Discharge nominal dia.	DN 32	Impeller diameter	204.0 mm
Discharge nominal pressure	PN 16	Free passage size	5.3 mm
Discharge position	top (0°/360°)	Direction of rotation from drive	Clockwise
Discharge flange drilled according to standard	EN1092-2	Bearing bracket construction	Close-coupled
Shaft seal	Single acting mechanical seal	Bearing bracket size	25
Manufacturer	KSB	Bearing type	Anti-friction bearings
Type	1	Lubrication type	Grease
Material code	BQ1EGG-WA	Color	Vermilion (RAL 2002)

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Driver, accessories

Driver type	Electric motor	Motor enclosure	IP55
Drive standard mech.	IEC	Cos phi at 4/4 load	0.83
Model (make)	KSB-Motor	Motor efficiency at 4/4 load	84.1 %
Drive supplied by	Standard motor supplied by KSB - mounted by KSB	Temperature sensor	3 PTC resistors
Motor const. type	V1	Terminal box position	0° same orientation
Motor size	90S		Viewed from the drive
Efficiency class	Efficiency class IE3 acc. to IEC60034-30-1	Motor winding	230 / 400 V
Motor speed	1464 rpm	Number of poles	4
Frequency	50 Hz	Connection mode	Star
Rated voltage	400 V	Motor cooling method	Surface cooling
Rated power P2	1.10 kW	Motor material	Aluminium
Available reserve	67.98 %	Frequency inverter operation allowed	FI allowed
Rated current	2.6 A	Motor noise pressure level	59 dBA
Starting current ratio	8	Motor data can vary from type plate information. Motor data describes KSB's choice functional specification and is used for pump selection.	
Insulation class	F to IEC 34-1		

Materials G**Notes 1**

Unalloyed cast iron components: pH = 9 to 10.5 and O₂ content <= 0.02 mg/kg.

Volute casing (102)	Grey cast iron EN-GJL-250/A48CL35B	Casing wear ring (502.1)	Grey cast iron GG/CAST IRON
Casing cover (161)	Grey cast iron EN-GJL-250/A48CL35B	Casing wear ring (502.2)	Grey cast iron GG/CAST IRON
Shaft (210)	Tempered steel C45+N	Disc (550)	Steel ST
Impeller (230)	Grey cast iron EN-GJL-250/A48CL35B	Stud (902)	Steel 8.8
Motor stool (341)	Grey cast iron EN-GJL-250/A48CL35B	Nut (920)	8+A2A/ 8+B633 SC1 TP3
Flat gasket (400)	DPAF seal plate asbestos free	Impeller nut (922)	Steel 8
Joint ring (411)	Steel ST	Key (940)	Steel C45+C / A311 GR 1045 CLASS A
		Pipe line (700)	Steel ST

FOOT 85X 50X 60

3 pump feet with bolts for vertical installation
 Pump foot for vertical installation
 Etaline(Z) 32-160/ up to 100-160/

Pump foot, not for Etaline SY
 Weight : 2,0 kg

Material no

47077960

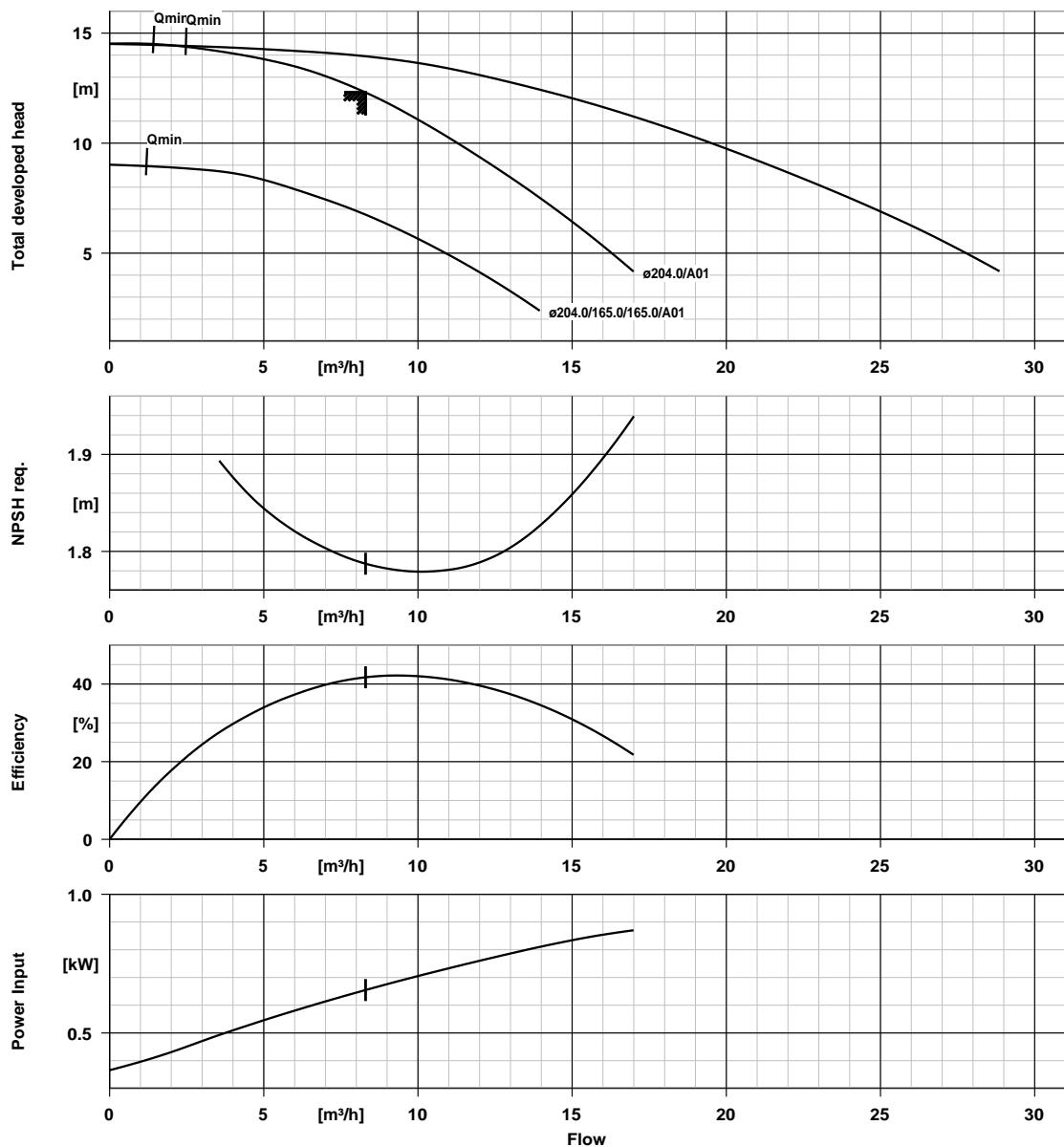
Performance curve



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Curve data

Speed of rotation	1464 rpm	MEI (Minimum Efficiency Index)	= 0.70
Fluid density	983 kg/m^3	Power absorbed	0.65 kW
Viscosity	0.48 mm^2/s	NPSH required	1.79 m
Flow rate	8.30 m^3/h	Curve number	K1161.454/19
Requested flow rate	8.30 m^3/h	Effective impeller diameter	204.0 mm
Total developed head	12.30 m	Acceptance standard	Tolerances to ISO 9906
Efficiency	41.8 %		Class 3B; below 10 kW acc. to paragraph 4.4.2

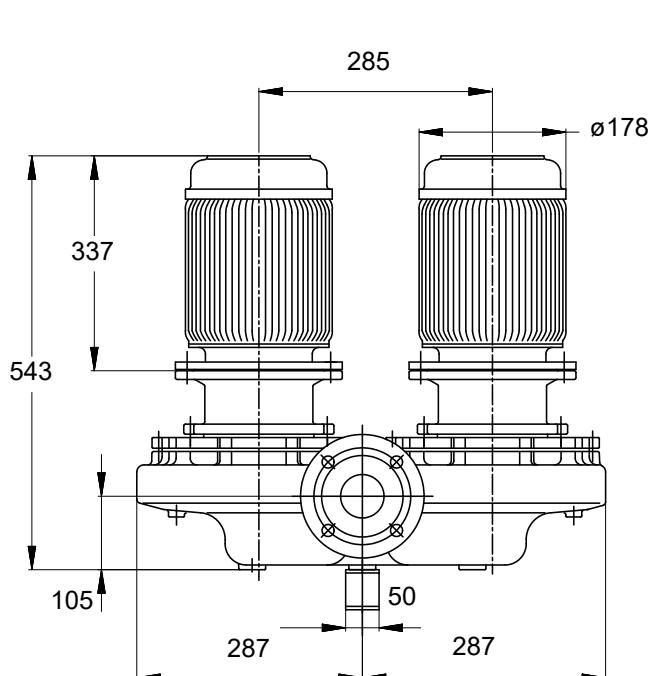
Installation plan



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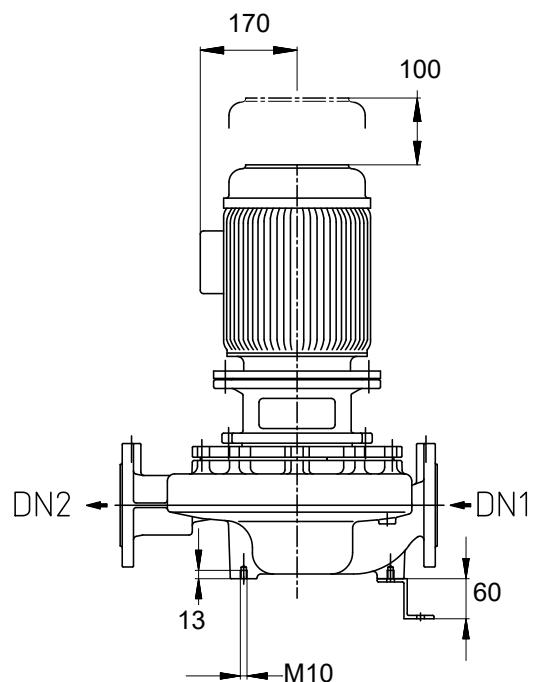
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Foundation fixing elements



A technical drawing of a double-flange bearing assembly. The drawing shows two large outer rings with internal gear teeth. Between the rings are two smaller inner rings. The assembly is mounted on a central shaft. Dimension lines indicate the following measurements: the width of the assembly is 180, the height of the outer rings is 190, and the height of the inner rings is 70. The top flange is labeled DN2 and the bottom flange is labeled DN1.

Pump fixing elements

Drawing is not to scale

Dimensions in mm

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Motor

Motor manufacturer	KSB-Motor
Motor size	90S
Motor power	1.10 kW
Number of poles	4
Speed of rotation	1464 rpm
Position of terminal box	0° same orientation Viewed from the drive

Connections

Suction nominal size DN1	DN 32 / EN1092-2
Discharge nominal size DN2	DN 32 / EN1092-2
Nominal pressure suct.	PN 16
Rated pressure disch.	PN 16

Weight net

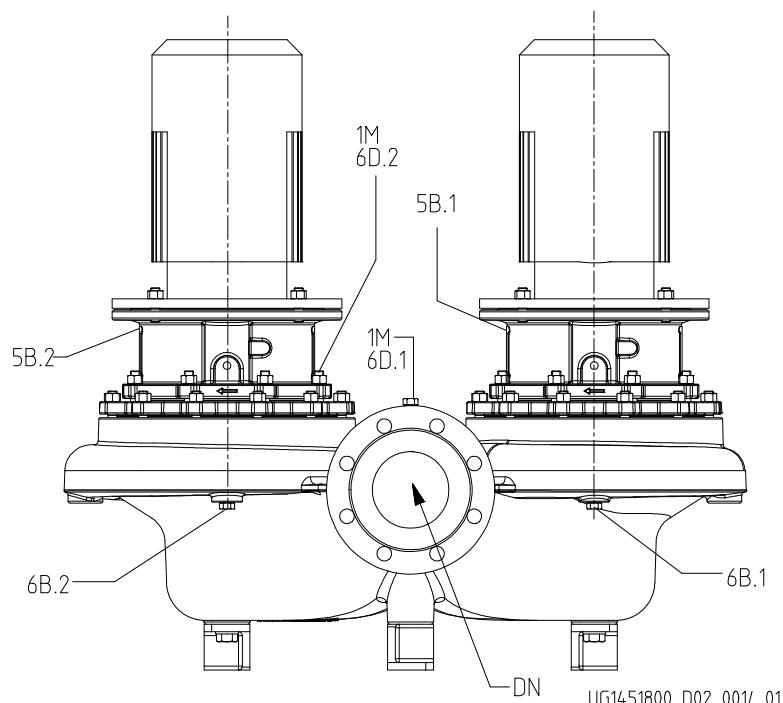
Pump	77 kg
Motor	23 kg
Other accessories	2 kg
Total	101 kg

For auxiliary connections see
separate drawing.

Connect pipes without stress or strain!

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Connections

Pump casing variant

1M.1 Pressure gauge connection	G 1/4	XX46
1M.2 Pressure gauge connection	G 1/4	Not executed
6B.1 Pumped liquid drain	G 1/4	Not executed
6B.2 Pumped liquid drain	G 1/4	Drilled and plugged.
6D.1 Pumped medium - filling/venting	G 1/4	Drilled and plugged.
6D.2 Pumped medium - filling / venting	G 1/4	Drilled and plugged.
5B.1 venting	G 1/4	Closed with venting plug
5B.2 venting	G 1/4	Closed with venting plug