

ETL 032-032-160 GGS AV11D200074 BKSBIE3

Inline pump

Operating data

Requested flow rate	10.70 m ³ /h	Actual flow rate	10.69 m ³ /h
Requested developed head	2.70 m	Actual developed head	2.70 m
Pumped medium	Water, heating water Heating water up to 100°C (max.), acc. to VDI 2035 Not containing chemical and mechanical substances which affect the materials	Efficiency	49.6 %
Ambient air temperature	20.0 °C	MEI (Minimum Efficiency Index)	= 0.70
Fluid temperature	80.0 °C	Power absorbed	0.15 kW
Fluid density	972 kg/m ³	Pump speed of rotation	1483 rpm
Fluid viscosity	0.37 mm ² /s	NPSH required	1.59 m
Suction pressure max.	0.00 bar.g	Permissible operating pressure	16.00 bar.g
Mass flow rate	2.89 kg/s	Discharge press.	0.26 bar.g
Max. power on curve	0.16 kW	Min. allow. mass flow for continuous stable operation	0.31 kg/s
Min. allow. flow for continuous stable operation	1.15 m ³ /h	Max. allow. mass flow	3.51 kg/s
Shutoff head	4.77 m	Design	Single system 1 x 100 % Tolerances to ISO 9906 Class 3B; below 10 kW acc. to paragraph 4.4.2

Design

Pump standard	Without	Shaft seal code	11
Caution: The overall length from suction to discharge can be different to the previous generation of Etaline.		Sealing plan	Single-acting mechanical seal with vented chamber (A-type casing cover, taper bore)
Design	Close-coupled in-line	Minimum requirements for hot water quality: treatment acc. to VdTÜV regulation TCH 1466 and solids content up to max. 5 mg/l.	
Orientation	Vertical	Seal chamber design	Conical seal chamber (A-type cover)
Suction nominal dia.	DN 32	Contact guard	With
Suction nominal pressure	PN 16	Wear ring	Casing wear ring
Suction position	180° (down)	Impeller diameter	120.0 mm
Suction flange drilled according to standard	EN1092-2	Free passage size	5.4 mm
Discharge nominal dia.	DN 32	Direction of rotation from drive	Clockwise
Discharge nominal pressure	PN 16	Silicon free pump assembly	Yes
Discharge position	top (0°/360°)	Bearing bracket construction	Close-coupled
Discharge flange drilled according to standard	EN1092-2	Bearing bracket size	25
Shaft seal	Single acting mechanical seal	Bearing type	Anti-friction bearings
Manufacturer	KSB	Lubrication type	Grease
Type	1	Color	Vermilion (RAL 2002)
Material code	BQ1EGG-WA		

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Driver, accessories

Driver type	Electric motor	Insulation class	F to IEC 34-1
Drive standard mech.	IEC	Motor enclosure	IP55
Model (make)	KSB-Motor	Cos phi at 4/4 load	0.81
Drive supplied by	Standard motor supplied by KSB - mounted by KSB	Motor efficiency at 4/4 load	82.5 %
Motor const. type	V1	Temperature sensor	3 PTC resistors
Motor size	080M	Terminal box position	0° same orientation
Efficiency class	Efficiency class IE3 acc. to IEC60034-30-1	Motor winding	230 / 400 V
Motor speed	1484 rpm	Number of poles	4
Frequency	50 Hz	Connection mode	Star
Rated voltage	400 V	Motor cooling method	Surface cooling
Rated power P2	0.75 kW	Motor material	Aluminium
Available reserve	386.99 %	Frequency inverter operation allowed	FI allowed
Rated current	1.9 A	Motor noise pressure level	56 dBa
Starting current ratio	7.5		

Materials G

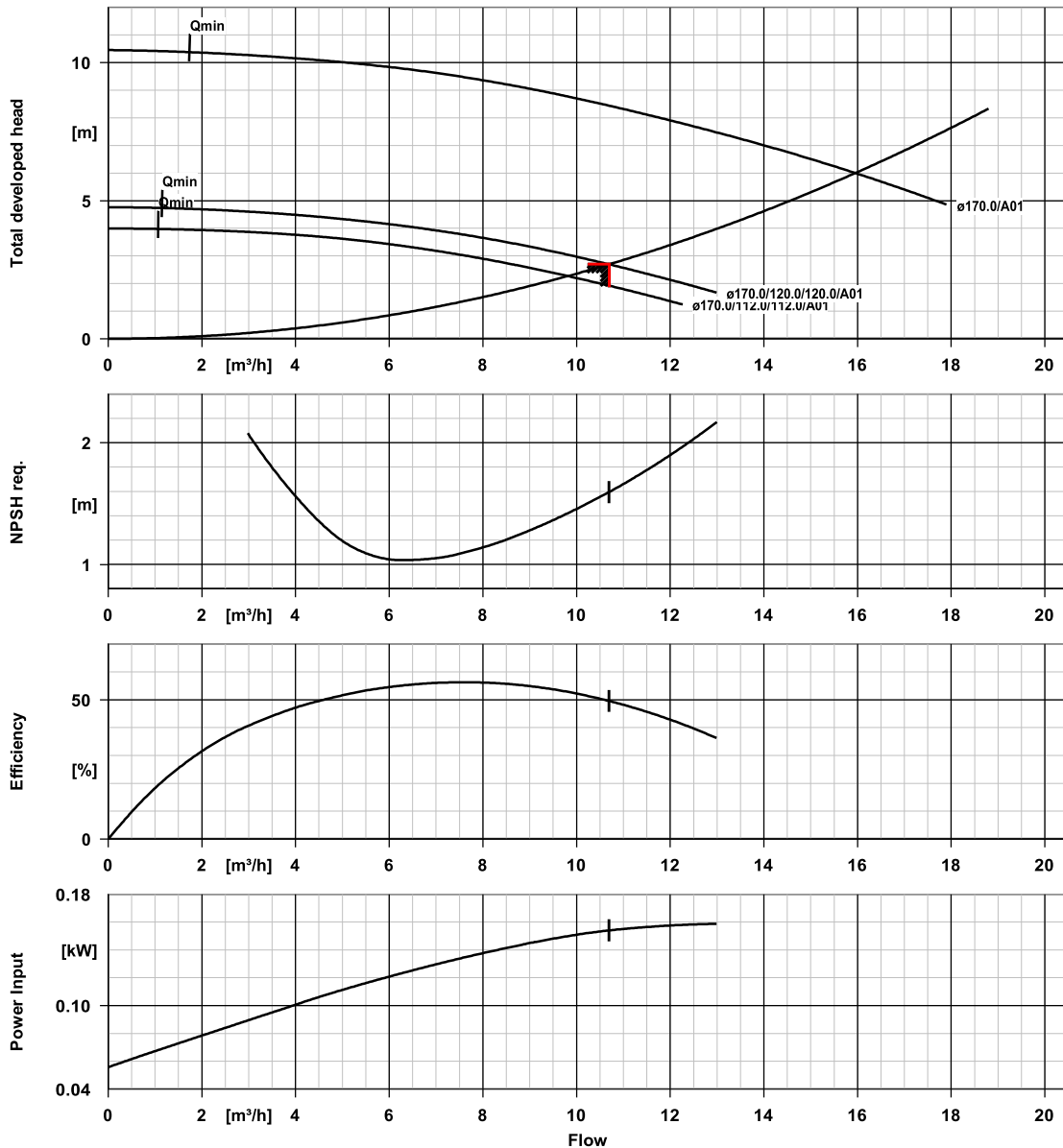
Notes 1

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	Joint ring (411)	Steel ST
Casing cover (161)	Grey cast iron EN-GJL-250/A48CL35B	Casing wear ring (502.1)	Grey cast iron GG/CAST IRON
Shaft (210)	Tempered steel C45+N	Casing wear ring (502.2)	Grey cast iron GG/CAST IRON
Impeller (230)	Grey cast iron EN-GJL-250/A48CL35B	Shaft sleeve (523)	CrNiMo steel
Motor stool (341)	Grey cast iron EN-GJL-250/A48CL35B	Stud (902)	Steel 8.8
Flat gasket (400)	DPAF seal plate asbestos free	Impeller nut (922)	Steel 8
		Key (940)	Steel C45+C / A311 GR 1045 CLASS A

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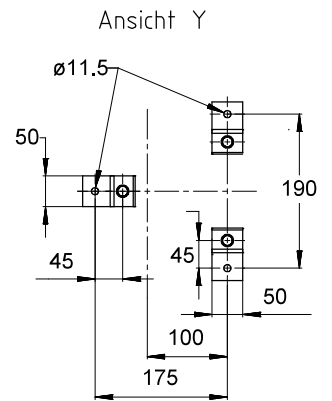
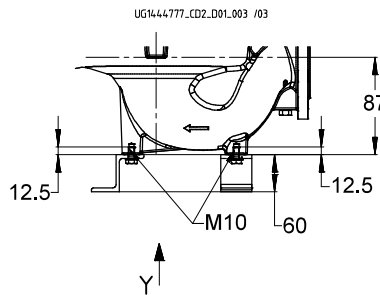
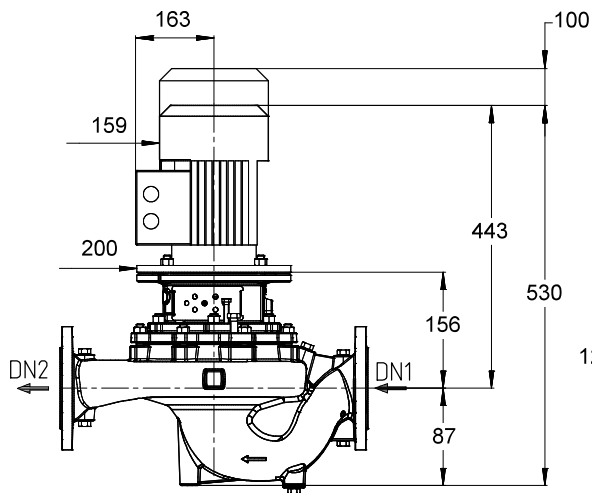
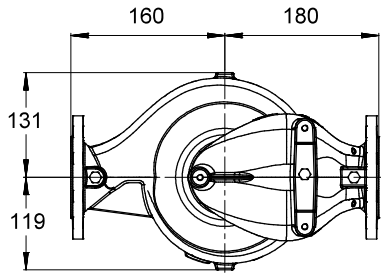
Inline pump



Curve data

Speed of rotation	1483 rpm	Efficiency	49.6 %
Fluid density	972 kg/m^3	MEI (Minimum Efficiency Index)	= 0.70
Viscosity	0.37 mm^2/s	Power absorbed	0.15 kW
Flow rate	10.69 m^3/h	NPSH required	1.59 m
Requested flow rate	10.70 m^3/h	Curve number	K1159.454/18
Total developed head	2.70 m	Effective impeller diameter	120.0 mm
Requested developed head	2.70 m	Acceptance standard	Tolerances to ISO 9906 Class 3B; below 10 kW acc. to paragraph 4.4.2

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Drawing is not to scale

Dimensions in mm

Motor

Motor manufacturer	KSB-Motor
Motor size	080M
Motor power	0.75 kW
Number of poles	4
Speed of rotation	1484 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

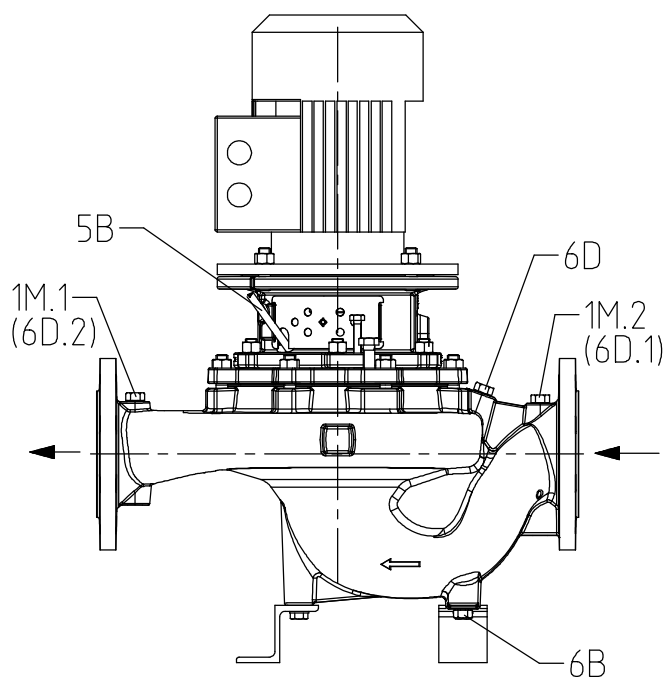
Pump	20 kg
Motor	15 kg
Total	35 kg

Connect pipes without stress or strain!

For auxiliary connections see separate drawing.

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UG1444722_D01_003/ 02

Connections

Pump casing variant

1M.1 Pressure gauge connection

1M.2 Pressure gauge connection

6B Pumped liquid drain

6D Pumped medium - filling / venting

5B venting

G 1/4

G 1/4

G 1/4

G 1/4

G 1/4

XX46

Drilled and plugged.

Drilled and plugged.

Drilled and plugged.

Drilled and plugged.

Closed with venting plug