

ETL 040-040-160 GGS AV11D200054 BKSBIE1

Inline pump

Operating data

Requested flow rate		Actual flow rate	12.99 m ³ /h
Requested developed head		Actual developed head	6.49 m
Pumped medium	Water	Efficiency	62.6 %
	Clean water	MEI (Minimum Efficiency Index)	= 0.70
	Not containing chemical and mechanical substances which affect the materials	Power absorbed	0.37 kW
Ambient air temperature	20.0 °C	Pump speed of rotation	1424 rpm
Fluid temperature	20.0 °C	NPSH required	1.37 m
Fluid density	998 kg/m ³	Permissible operating pressure	16.00 bar.g
Fluid viscosity	1.00 mm ² /s	Discharge press.	0.64 bar.g
Suction pressure max.	0.00 bar.g	Min. allow. mass flow for continuous stable operation	0.65 kg/s
Mass flow rate	3.60 kg/s	Max. allow. mass flow	6.63 kg/s
Max. power on curve	0.46 kW	Design	Single system 1 x 100 %
Min. allow. flow for continuous stable operation	2.33 m ³ /h		Tolerances to ISO 9906 Class 3B; below 10 kW acc. to paragraph 4.4.2
Shutoff head	7.82 m		

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	A liquid free of solids is assumed	
Orientation	Vertical	Seal chamber design	Conical seal chamber (A-type cover)
Suction nominal dia.	DN 40	Contact guard	With
Suction nominal pressure	PN 16	Wear ring	Casing wear ring
Suction position	180° (down)	Impeller diameter	153.0 mm
Suction flange drilled according to standard	EN1092-2	Free passage size	5.8 mm
Discharge nominal dia.	DN 40	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	0.79
Drive supplied by	Standard motor supplied by KSB - mounted by KSB	Motor efficiency at 4/4 load	70.0 %
Motor const. type	V1	Temperature sensor	1 PTC resistor
Motor size	080M	Terminal box position	0° same orientation
Efficiency class	Efficiency class IE1 acc. to IEC60034-30-1	Motor winding	230 / 400 V
Motor speed	1424 rpm	Number of poles	4
Frequency	50 Hz	Connection mode	Star
Rated voltage	400 V	Motor cooling method	Surface cooling
Rated power P2	0.55 kW	Motor material	Aluminium
Available reserve	50.25 %	Motor noise pressure level	55 dBa
Rated current	1.4 A	Frequency inverter operation allowed	FI possible (but required power reserve not considered in this motor selection)
Starting current ratio	3.7		

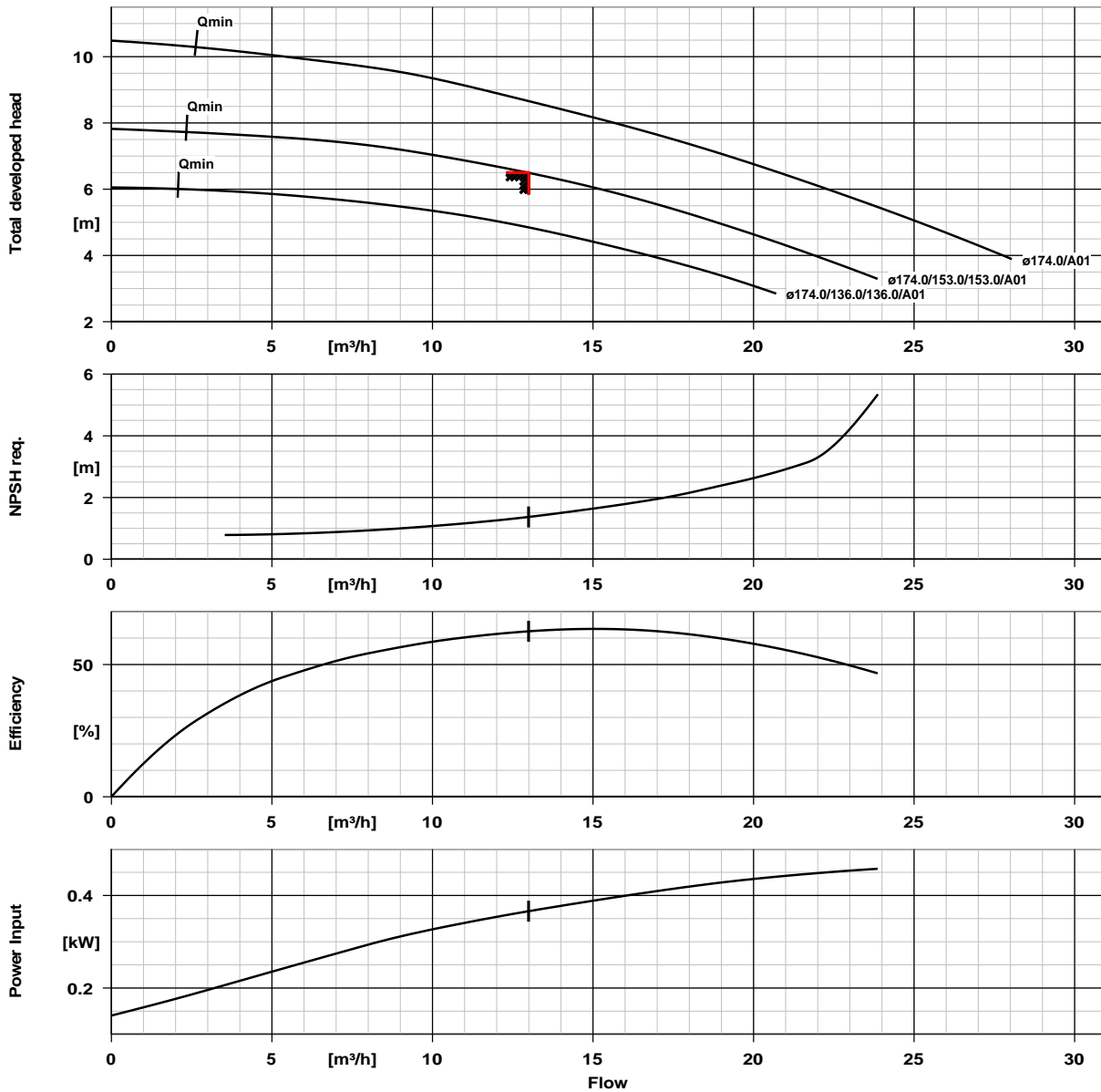
Materials G**Notes 1**

General criteria for a water analysis: pH-value ≥ 7 ; chloride content (Cl) ≤ 250 mg/kg. Chlorine (Cl₂) ≤ 0.6 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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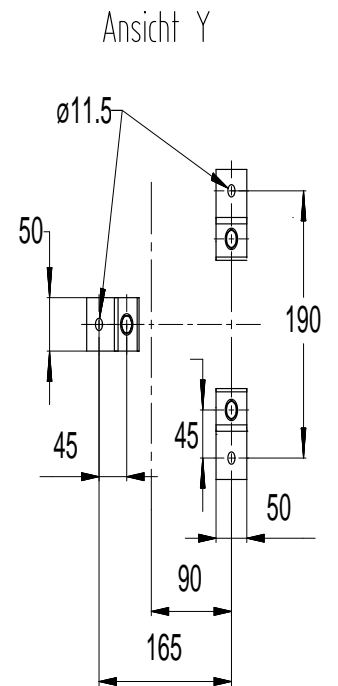
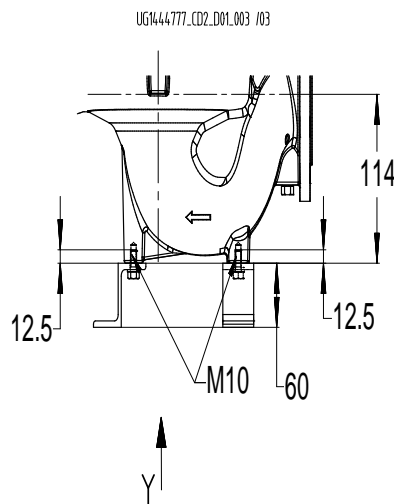
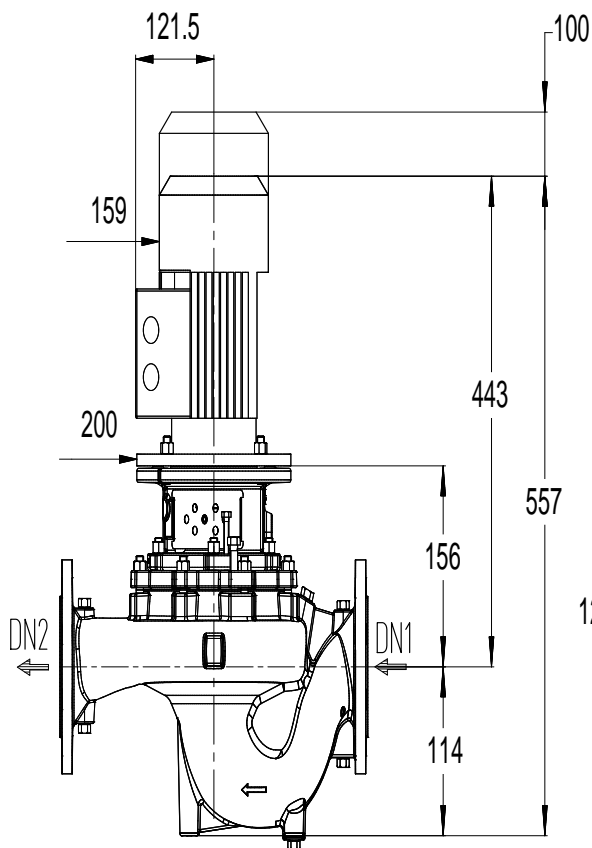
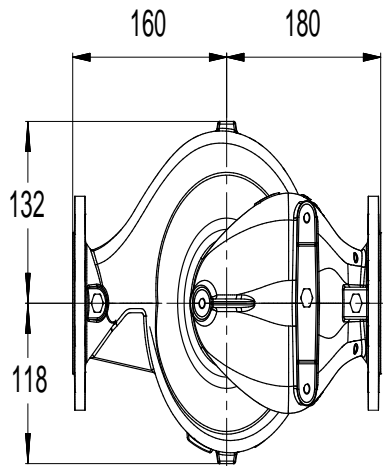
Inline pump



Curve data

Speed of rotation	1424 rpm	Efficiency	62.6 %
Fluid density	998 kg/m^3	MEI (Minimum Efficiency Index)	= 0.70
Viscosity	1.00 mm^2/s	Power absorbed	0.37 kW
Flow rate	12.99 m^3/h	NPSH required	1.37 m
Requested flow rate	13.00 m^3/h	Curve number	K1159.454/22
Total developed head	6.49 m	Effective impeller diameter	153.0 mm
Requested developed head	6.50 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

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Motor

Motor manufacturer	KSB-Motor
Motor size	080M
Motor power	0.55 kW
Number of poles	4
Speed of rotation	1424 rpm
Position of terminal box	0° same orientation Viewed from the drive

Connections

Suction nominal size DN1	DN 40 / EN1092-2
Discharge nominal size DN2	DN 40 / EN1092-2
Nominal pressure suct.	PN 16
Rated pressure disch.	PN 16

Weight net

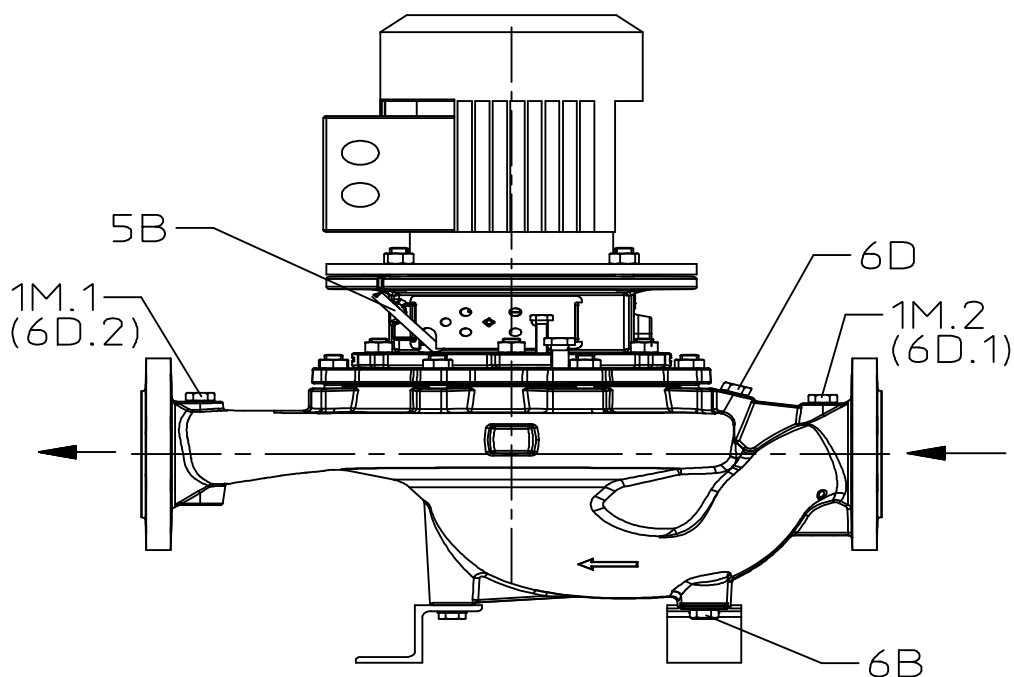
Pump	21 kg
Motor	9 kg
Total	30 kg

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