Data sheet

ETL 040-040-160 GGSAV66D200752 BKSBIE3
Inline pump

Operating data

Requested flow rate			
Pumped medium	Antifreeze on ethylene glycol base, inhibited, closed system, e.g. Antifrogen N or similar products Antifrogen N, concentration 30% Not containing chemical and mechanical substances which affect the materials	Actual flow rate	31.00 m³/h
		Actual developed head	33.44 m
		Efficiency	66.8 %
		MEI (Minimum Efficiency Index)	≥ 0.70
		Power absorbed	4.40 kW
		Pump speed of rotation	2965 rpm
		NPSH required	4.66 m
		Permissible operating pressure	16.00 bar.g
Max. ambient air temperature	20.0 °C		
Min. ambient air temperature	20.0 °C		
Fluid temperature	20.0 °C		
Fluid density	1040 kg/m³		
Fluid viscosity	2.22 mm²/s	Discharge press.	3.41 bar.g
Suction pressure max.	0.00 bar.g	Min. allow. mass flow for continuous stable operation	1.47 kg/s
Mass flow rate	8.96 kg/s		
Max. power on curve	5.65 kW	Max. allow. mass flow	16.47 kg/s
Min. allow. flow for continuous stable operation	5.08 m³/h	Design	Single system 1 x 100 % Tolerances to ISO 9906 Class 3B; below 10 kW acc. to paragraph 4.4.2
Shutoff head	39.77 m		

Design

Pump standard	Without	Material code	Q7Q7EGG
Caution: The overall length from suction to discharge can be different to the previous generation of Etaline.		Shaft seal code	66
		Sealing plan	Single-acting mechanical seal with vented chamber (A-type casing cover, taper bore)
Design	Close-coupled in-line		
Orientation	Vertical		
Suction nominal dia.	DN 40	Seal chamber design	Conical seal chamber (A-type cover)
Suction nominal pressure	PN 16		
Suction position	180° (down)	Contact guard	With
Suction flange drilled according to standard	EN1092-2	Wear ring	Casing wear ring
		Impeller diameter	167.0 mm
Discharge nominal dia.	DN 40	Free passage size	5.8 mm
Discharge norminal pressure	PN 16	Direction of rotation from drive	Clockwise
Discharge position	top (0°/360°)	Silicon free pump assembly	Yes
Discharge flange drilled according to standard	EN1092-2	Bearing bracket construction	Close-coupled
		Bearing bracket size	25
Surface type	Raised face (form B to EN 1092)	Bearing type	Anti-friction bearings
		Lubrication type	Grease
Shaft seal	Single acting mechanical seal	Color	Vermilion (RAL 2002)
Manufacturer	Burgmann		
Type	MG13G6		

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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	90.1 %
Drive supplied by	Standard motor supplied by KSB - mounted by KSB	Temperature sensor	3 PTC resistors
		Terminal box position	0° same orientation Viewed from the drive
Motor const. type	V1		
Motor size	132S	Motor winding	400 / 690 V
Efficiency class	Efficiency class IE3 acc. to IEC60034-30-1	Number of poles	2
		Connection mode	Delta
Motor speed	2965 rpm	Motor cooling method	Surface cooling
Frequency	50 Hz	Motor material	Aluminium
Rated voltage	400 V	Frequency inverter operation	FI allowed
Rated power P2	7.50 kW	allowed	
Available reserve	70.62 %	Motor data can vary from type plate information. Motor data describes KSB´s choice functional specification and is used for pump selection.	
Rated current	14.6 A		
Starting current ratio	8.9		
Insulation class	F to IEC 34-1	CE-approval	Yes
		Condensat drain motor	Yes

Materials G

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	Shaft sleeve (523)	CrNiMo steel
Impeller (230)	Grey cast iron EN-GJL-250/A48CL35B	Stud (902)	Steel 8.8
		Impeller nut (922)	Steel 8
Motor stool (341)	Grey cast iron EN-GJL-250/A48CL35B	Key (940)	Steel C45+C / A311 GR 1045 CLASS A
Flat gasket (400)	DPAF seal plate asbestos free		
Joint ring (411)	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/	Material no 47077960

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

Performance curve

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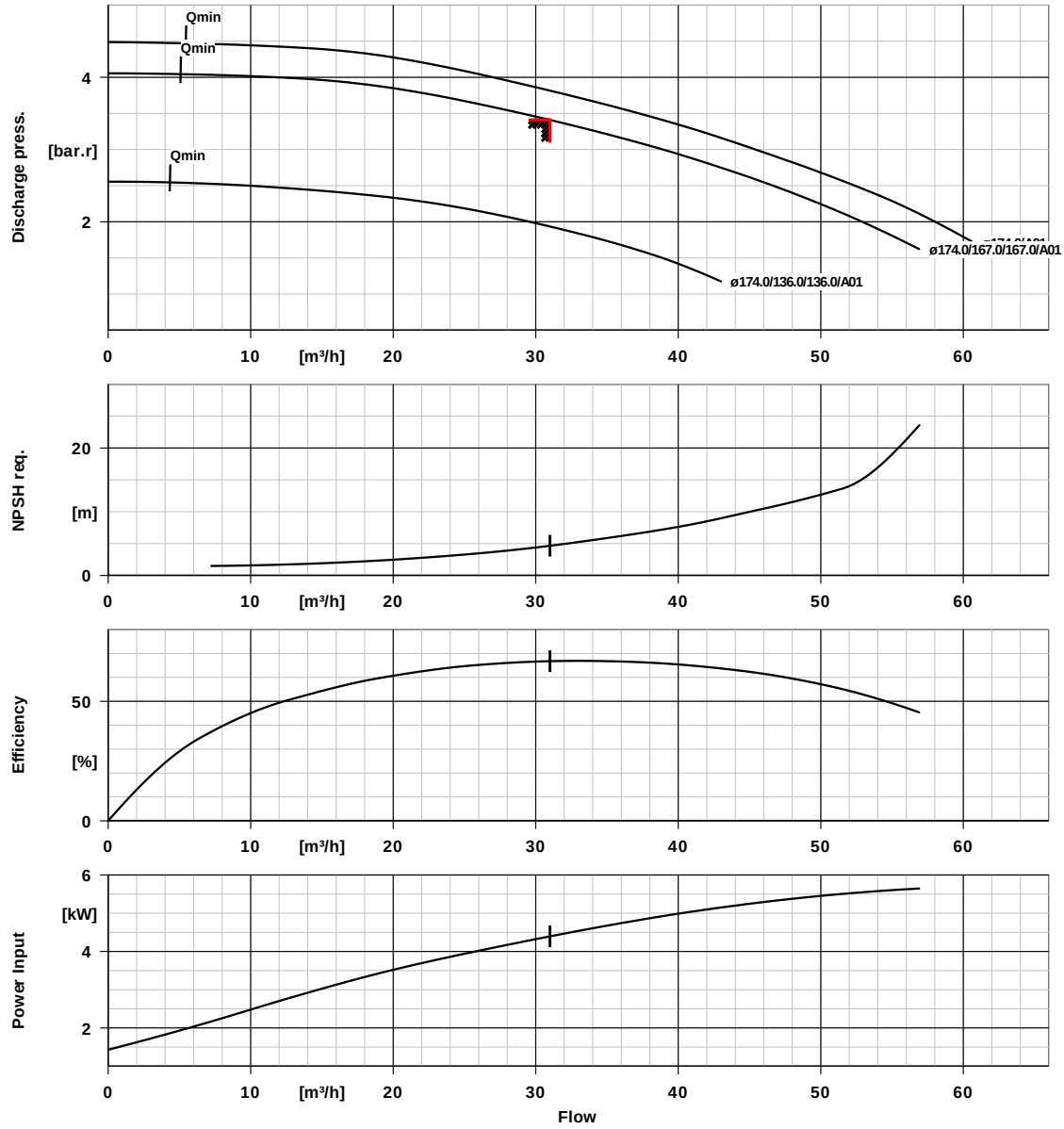

Curve data

Speed of rotation	2965 rpm	Efficiency	66.8 %
Fluid density	1040 kg/m³	MEI (Minimum Efficiency Index)	≥ 0.70
Viscosity	2.22 mm²/s		
Flow rate	31.00 m³/h	Power absorbed	4.40 kW
Requested flow rate	31.00 m³/h	NPSH required	4.66 m
Total developed head	33.44 m	Curve number	K1159.452/22
Requested discharge pressure	3.41 bar.g	Effective impeller diameter	167.0 mm
		Acceptance standard	Tolerances to ISO 9906 Class 3B; below 10 kW acc. to paragraph 4.4.2

Installation plan

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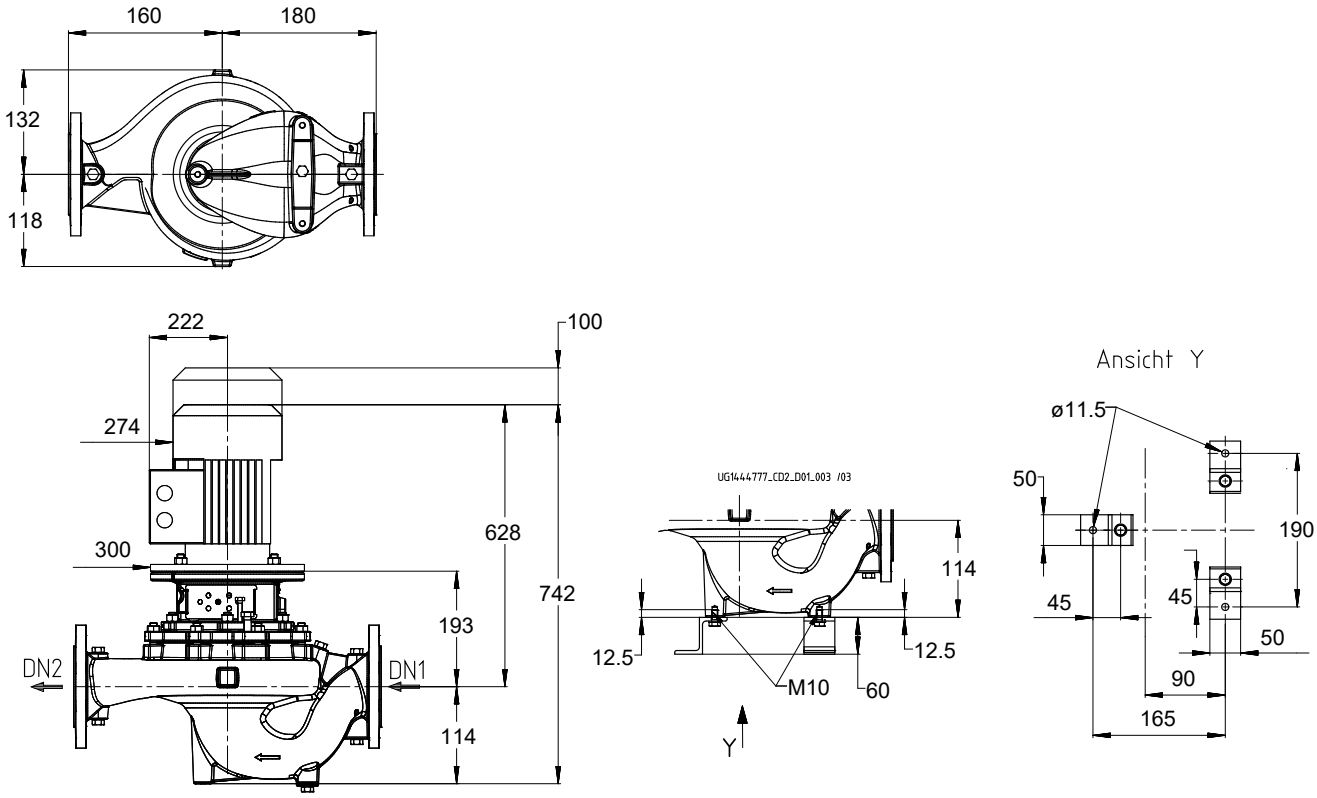
Inline pump



Drawing is not to scale

Dimensions in mm

Motor

Motor manufacturer	KSB-Motor
Motor size	132S
Motor power	7.50 kW
Number of poles	2
Speed of rotation	2965 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	63 kg
Other accessories	2 kg
Total	85 kg

Connect pipes without stress or strain!

For auxiliary connections see separate drawing.

Connection plan

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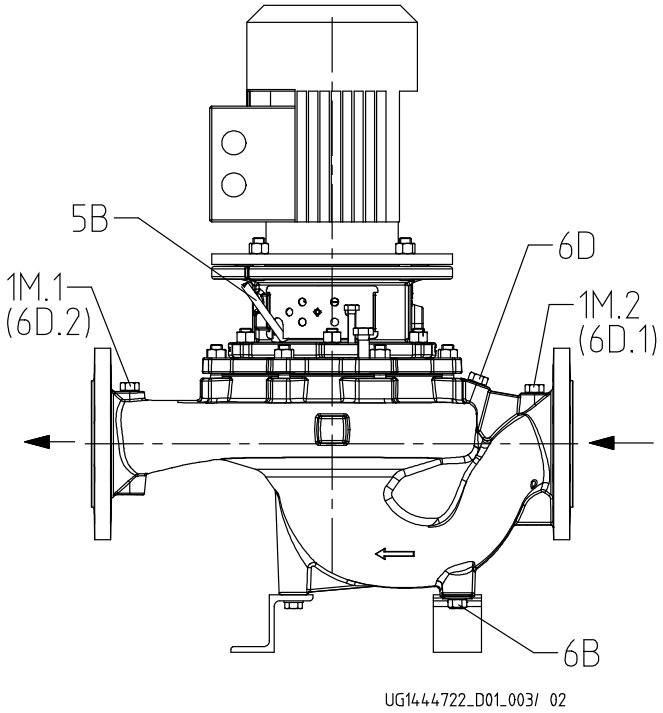

Connections

Pump casing variant		XX46
1M.1 Pressure gauge connection	G 1/4	Drilled and plugged.
1M.2 Pressure gauge connection	G 1/4	Drilled and plugged.
6B Pumped liquid drain	G 1/4	Drilled and plugged.
6D Pumped medium - filling / venting	G 1/4	Drilled and plugged.
5B venting	G 1/4	Closed with venting plug