

ETLZ080-080-160 GGS AV11D200224 BKS BIE4 PD2

Inline pump

Operating data

Pumped medium	Water Clean water Not containing chemical and mechanical substances which affect the materials	Actual flow rate	49.24 m ³ /h
		Actual developed head	9.41 m
		Efficiency	65.7 %
		MEI (Minimum Efficiency Index)	≥ 0.70
Max. ambient air temperature	20.0 °C	Power absorbed	1.92 kW
Min. ambient air temperature	20.0 °C	Pump speed of rotation	1500 rpm
Fluid temperature	20.0 °C	NPSH required	1.69 m
Fluid density	998 kg/m ³	Permissible operating pressure	16.00 bar.g
Fluid viscosity	1.00 mm ² /s		
Suction pressure max.	0.00 bar.g	Discharge press.	0.92 bar.g
Mass flow rate	13.65 kg/s	Min. allow. mass flow for continuous stable operation	2.05 kg/s
Max. power on curve	2.30 kW	Max. allow. mass flow	21.42 kg/s
Min. allow. flow for continuous stable operation	7.39 m ³ /h	Design	Twin system one full duty + one standby pump Tolerances to ISO 9906 Class 3B; below 10 kW acc. to paragraph 4.4.2
Shutoff head	11.62 m		

Design

Pump standard	Without	Material code	BQ1EGG-WA
Caution: The overall length from suction to discharge can be different to the previous generation of Etaline.		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	A liquid free of solids is assumed	
Suction nominal dia.	DN 80	Seal chamber design	Conical seal chamber (A-type cover)
Suction nominal pressure	PN 16	Contact guard	With
Suction position	180° (down)	Wear ring	Casing wear ring
Suction flange drilled according to standard	EN1092-2	Impeller diameter	174.0 mm
Discharge nominal dia.	DN 80	Free passage size	12.2 mm
Discharge nominal pressure	PN 16	Direction of rotation from drive	Clockwise
Discharge position	top (0°/360°)	Bearing bracket construction	Close-coupled
Discharge flange drilled according to standard	EN1092-2	Bearing bracket size	25
Surface type	Flat face	Bearing type	Anti-friction bearings
Shaft seal	Single acting mechanical seal	Lubrication type	Grease
Manufacturer	KSB	Color	Vermilion (RAL 2002)
Type	1		

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Driver, accessories

Driver type	Electric motor	Rated current	5.7 A
Drive standard mech.	IEC	Insulation class	F to IEC 34-1
Model (make)	KSB SuPremE®	Motor enclosure	IP55
Type series motor manufacturer	SuPremE C2 (with mounting plate for PumpDrive 2, non removable)	Cos phi at 4/4 load	0.68
Drive supplied by	Standard motor supplied by KSB - mounted by KSB	Motor efficiency at 4/4 load	89.5 %
Motor const. type	V1	Temperature sensor	3 PTC resistors
Motor size	100L	Terminal box position	0° same orientation
Efficiency class	Efficiency class IE4 acc. IEC/TS 60034-30-2 (2016) – free of magnets. The efficiency of the motor for a quadratic torque-speed characteristic is > 95% of the nominal efficiency even at 25% of the nominal power.	Motor winding	Viewed from the drive
		Connection mode	400 V
		Motor cooling method	Star
		Motor material	Surface cooling
		Driver colour	Aluminium
		CE-approval	Same as the pump
			Yes
Motor speed	1500 rpm		
Frequency	50 Hz		
Designed for operation with frequency inverter	Yes		
Rated voltage	400 V		
Rated power P2	2.20 kW		
Available reserve	14.76 %		

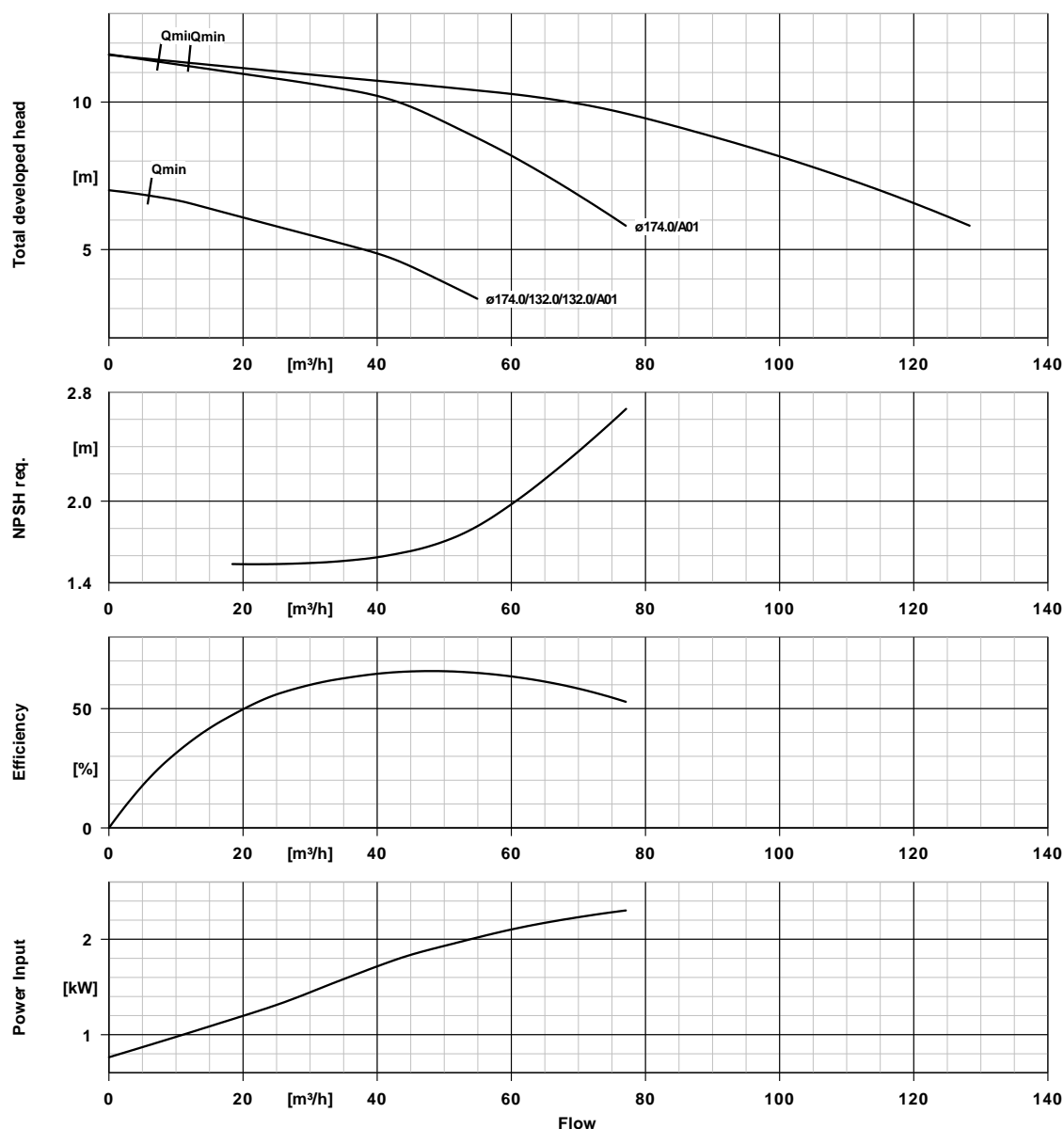
Materials G**Notes 1**

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	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
		Pipe line (700)	CLASS A
			Steel ST

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Inline pump

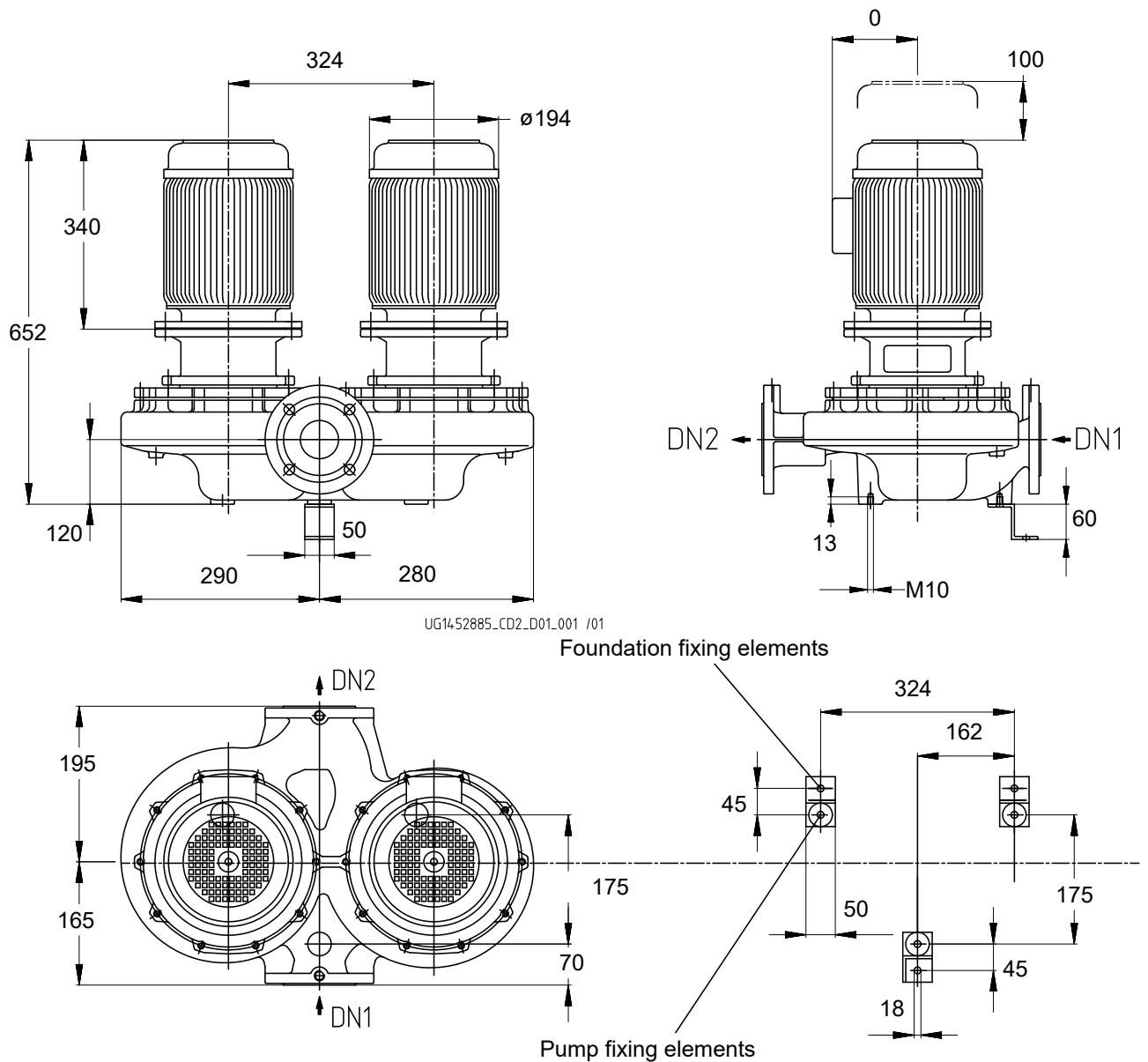


Curve data

Speed of rotation 1500 rpm
 Fluid density 998 kg/m³
 Viscosity 1.00 mm²/s
 Flow rate 49.24 m³/h
 Total developed head 9.41 m
 Efficiency 65.7 %

MEI (Minimum Efficiency Index) ≥ 0.70
 Power absorbed 1.92 kW
 NPSH required 1.69 m
 Curve number K1161.454/36
 Effective impeller diameter 174.0 mm
 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 size	100L
Motor power	2.20 kW
Number of poles	4
Speed of rotation	1500 rpm
Position of terminal box	0° same orientation Viewed from the drive

Connections

Suction nominal size DN1	DN 80 / EN1092-2
Discharge nominal size DN2	DN 80 / EN1092-2
Nominal pressure suct.	PN 16
Rated pressure disch.	PN 16

Weight net

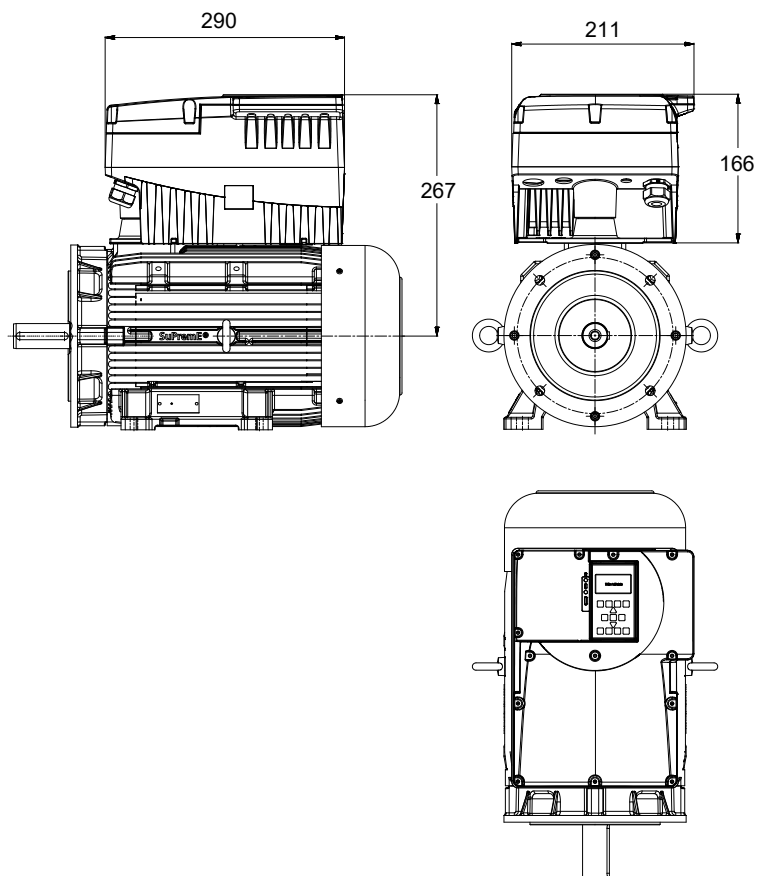
Pump	82 kg
Motor	48 kg
Total	130 kg

Connect pipes without stress or strain!

**For auxiliary connections see
separate drawing.**

Supplementary drawing for PumpDrive

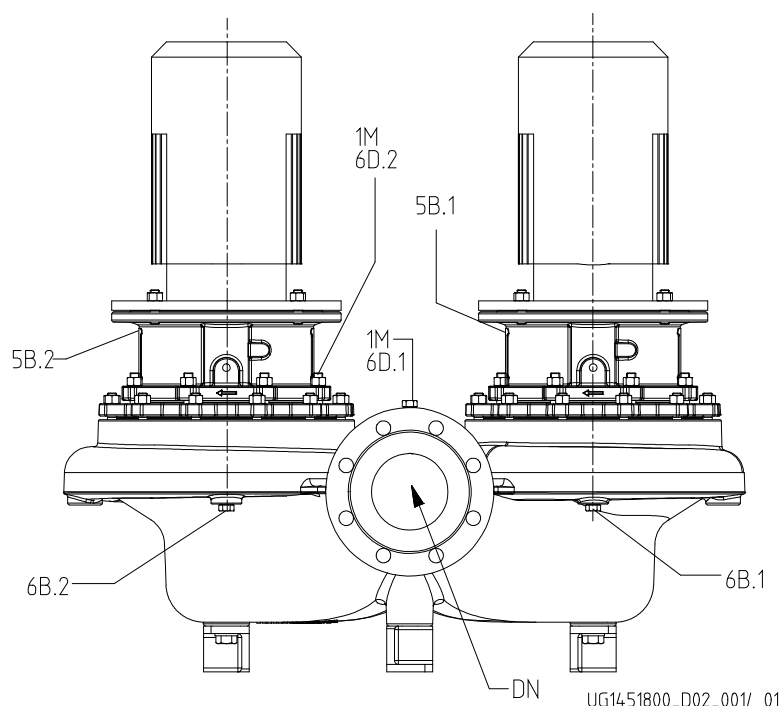
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Connections

Pump casing variant

1M.1 Pressure gauge connection

G 3/8

1M.2 Pressure gauge connection

G 3/8

6B.1 Pumped liquid drain

G 3/8

6B.2 Pumped liquid drain

G 3/8

6D.1 Pumped medium - filling/venting

G 3/8

6D.2 Pumped medium - filling / venting

G 3/8

5B.1 venting

G 1/4

5B.2 venting

G 1/4

XX46

Not executed

Not executed

Drilled and plugged.

Drilled and plugged.

Drilled and plugged.

Drilled and plugged.

Closed with venting plug

Closed with venting plug