

ETLZ032-032-200 GGS AV11D200114 BKS BIE3

Inline pump

Operating data

Requested flow rate		Actual flow rate	8.30 m³/h
Pumped medium	Water, heating water	Actual developed head	12.30 m
	Heating water up to 100°C	Efficiency	41.8 %
	(max.), acc. to VDI 2035	MEI (Minimum Efficiency Index)	= 0.70
	Not containing chemical and mechanical substances which affect the materials	Power absorbed	0.65 kW
Ambient air temperature	20.0 °C	Pump speed of rotation	1464 rpm
Fluid temperature	60.0 °C	NPSH required	1.79 m
Fluid density	983 kg/m³	Permissible operating pressure	16.00 bar.g
Fluid viscosity	0.48 mm²/s		
Suction pressure max.	0.00 bar.g	Discharge press.	1.19 bar.g
Mass flow rate	2.27 kg/s	Min. allow. mass flow for continuous stable operation	0.39 kg/s
Max. power on curve	0.87 kW	Max. allow. mass flow	4.65 kg/s
Min. allow. flow for continuous stable operation	1.42 m³/h	Design	Twin system one full duty + one standby pump
Shutoff head	14.52 m		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	Minimum requirements for hot water quality: treatment acc. to VdTÜV regulation TCH 1466 and solids content up to max. 5 mg/l.	
Suction nominal dia.	DN 32	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	204.0 mm
Discharge nominal dia.	DN 32	Free passage size	5.3 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
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	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/

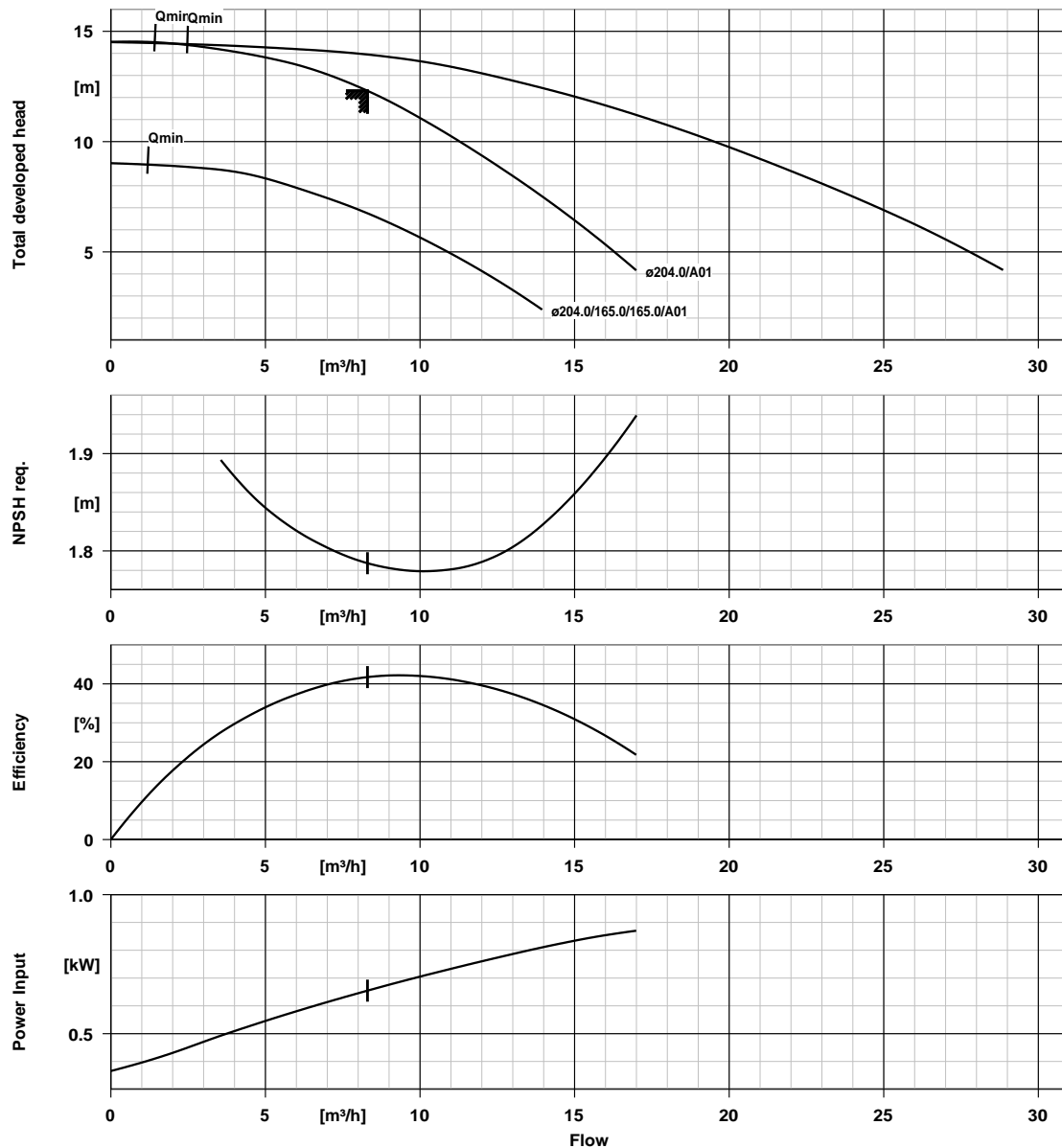
Pump foot, not for Etaline SY

Weight : 2,0 kg

Material no 47077960

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Inline pump

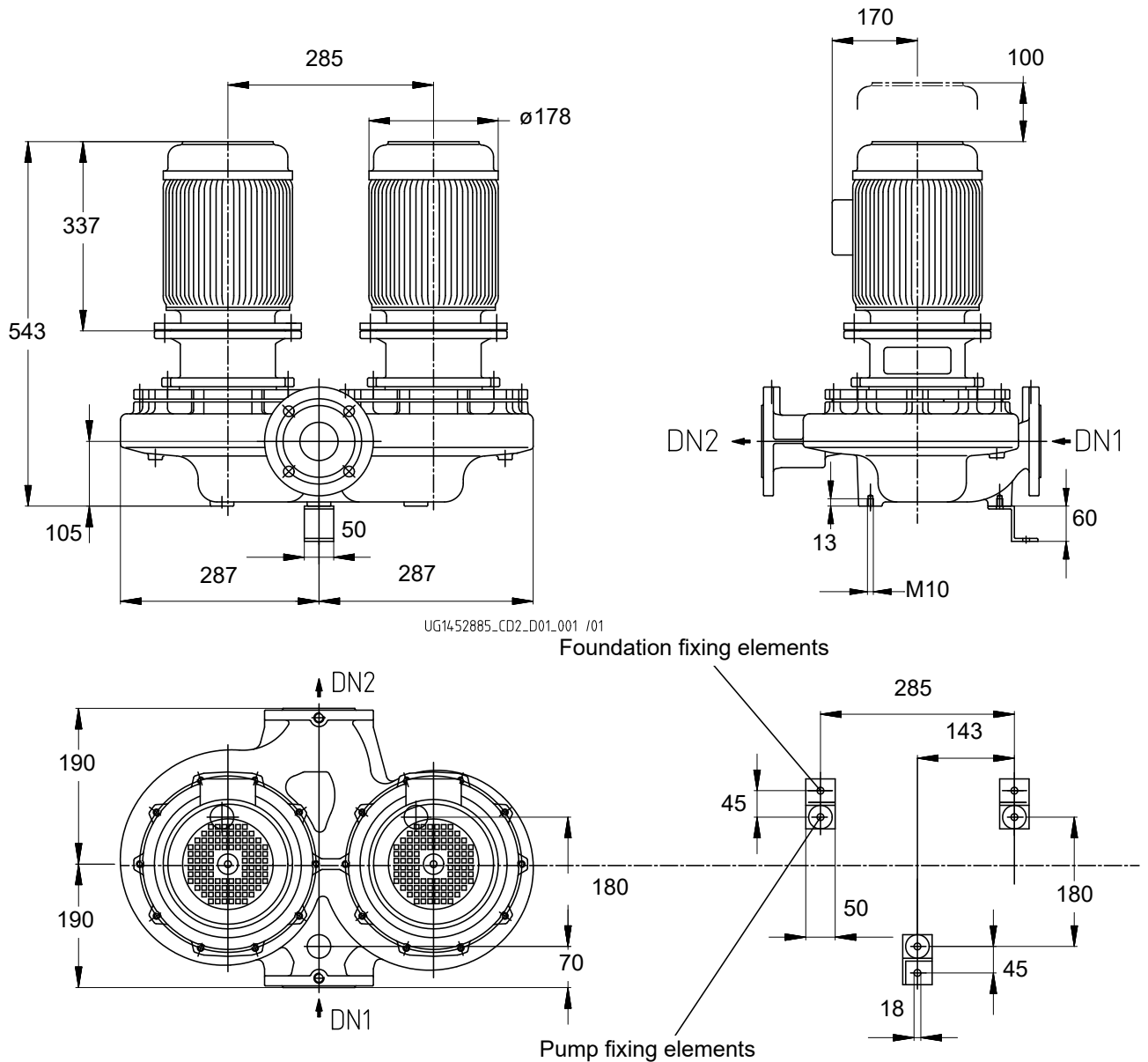


Curve data

Speed of rotation	1464 rpm	MEI (Minimum Efficiency Index)	= 0.70
Fluid density	983 kg/m³	Power absorbed	0.65 kW
Viscosity	0.48 mm²/s	NPSH required	1.79 m
Flow rate	8.30 m³/h	Curve number	K1161.454/19
Requested flow rate	8.30 m³/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

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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

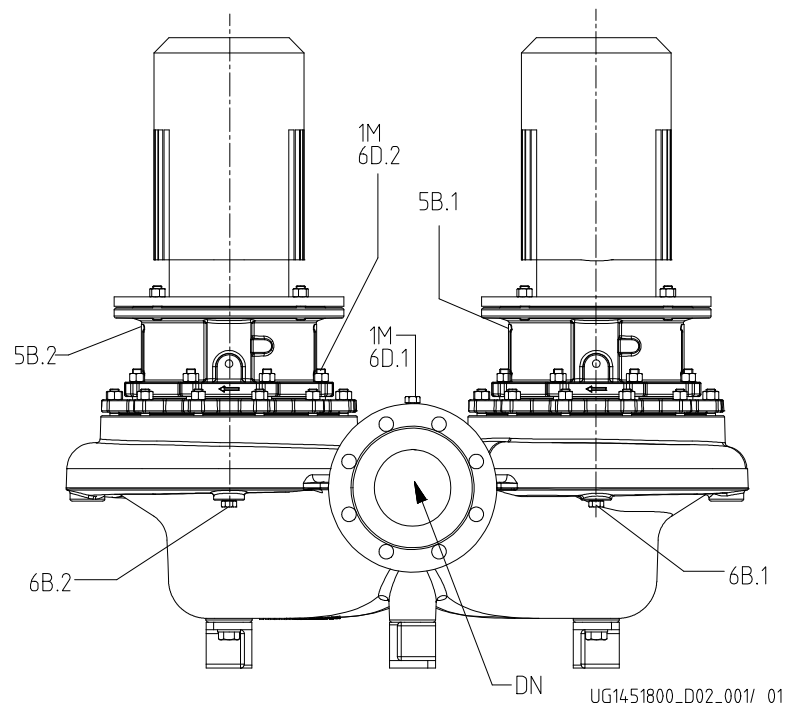
Pump	77 kg
Motor	23 kg
Other accessories	2 kg
Total	101 kg

Connect pipes without stress or strain!

**For auxiliary connections see
separate drawing.**

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Connections

Pump casing variant

1M.1 Pressure gauge connection

1M.2 Pressure gauge connection

6B.1 Pumped liquid drain

6B.2 Pumped liquid drain

6D.1 Pumped medium - filling/venting

6D.2 Pumped medium - filling / venting

5B.1 venting

5B.2 venting

G 1/4

G 1/4

G 1/4

G 1/4

G 1/4

G 1/4

G 1/4

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