

ETLZ100-100-250 GGS AV11D300754 BKS BIE3

Inline pump

Operating data

Requested flow rate		Actual flow rate	68.00 m ³ /h
Requested developed head		Actual developed head	20.00 m
Pumped medium	Water Clean water Not containing chemical and mechanical substances which affect the materials	Efficiency	68.2 %
		MEI (Minimum Efficiency Index)	= 0.70
Ambient air temperature	20.0 °C	Power absorbed	5.42 kW
Fluid temperature	7.0 °C	Pump speed of rotation	1476 rpm
Fluid density	1000 kg/m ³	NPSH required	2.71 m
		Permissible operating pressure	16.00 bar.g
Fluid viscosity	1.45 mm ² /s	Discharge press.	1.96 bar.g
Suction pressure max.	0.00 bar.g	Min. allow. mass flow for continuous stable operation	3.53 kg/s
Mass flow rate	18.88 kg/s	Max. allow. mass flow Design	45.12 kg/s Twin system one full duty + one standby pump
Max. power on curve	7.91 kW		Tolerances to ISO 9906 Class 3B; below 10 kW acc. to paragraph 4.4.2
Min. allow. flow for continuous stable operation	12.70 m ³ /h		
Shutoff head	22.42 m		

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	Horizontal		
Suction nominal dia.	DN 100	A liquid free of solids is assumed	
Suction nominal pressure	PN 16	Seal chamber design	Conical seal chamber (A-type cover)
Suction position	180° (down)	Contact guard	With
Suction flange drilled according to standard	EN1092-2	Wear ring	Casing wear ring
Discharge nominal dia.	DN 100	Impeller diameter	246.0 mm
Discharge nominal pressure	PN 16	Free passage size	15.8 mm
Discharge position	top (0°/360°)	Direction of rotation from drive	Clockwise
Discharge flange drilled according to standard	EN1092-2	Bearing bracket construction	Close-coupled
Shaft seal	Single acting mechanical seal	Bearing bracket size	35
Manufacturer	KSB	Bearing type	Anti-friction bearings
Type	1	Lubrication type	Grease
Material code	BQ1EGG-WA	Color	Vermilion (RAL 2002)

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Driver, accessories

Driver type	Electric motor	Motor enclosure	IP55
Drive standard mech.	IEC	Cos phi at 4/4 load	0.80
Model (make)	KSB-Motor	Motor efficiency at 4/4 load	90.4 %
Drive supplied by	Standard motor supplied by KSB - mounted by KSB	Temperature sensor	3 PTC resistors
Motor const. type	V1	Terminal box position	0°/360° (top) Viewed from the drive
Motor size	132M	Motor winding	400 / 690 V
Efficiency class	Efficiency class IE3 acc. to IEC60034-30-1	Number of poles	4
Motor speed	1476 rpm	Connection mode	Delta
Frequency	50 Hz	Motor cooling method	Surface cooling
Rated voltage	400 V	Motor material	Aluminium
Rated power P2	7.50 kW	Frequency inverter operation	FI allowed
Available reserve	38.44 %	allowed	
Rated current	15.0 A	Motor noise pressure level	67 dBa
Starting current ratio	8.9	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		

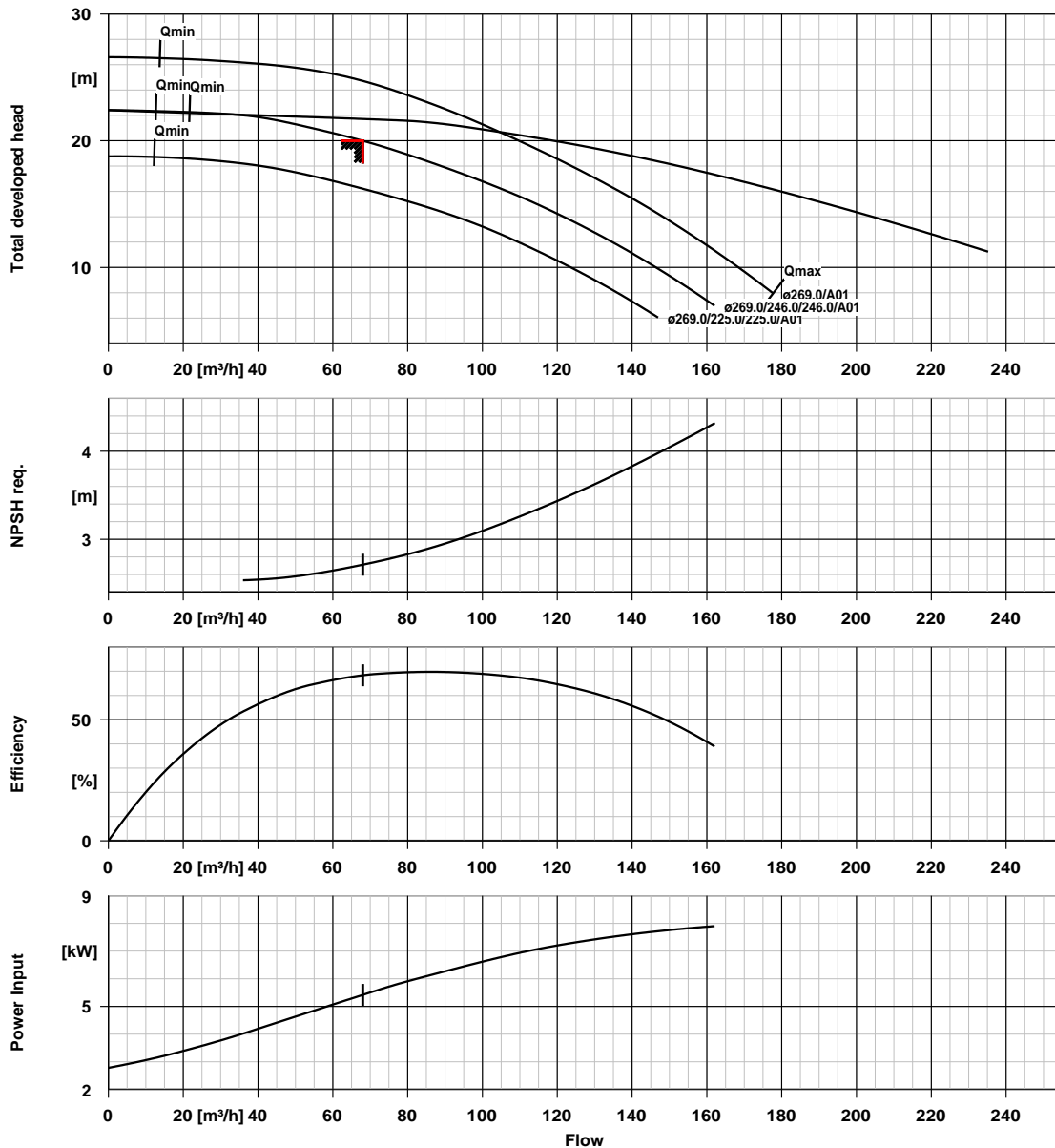
Materials G**Notes 1**

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 CLASS A
		Pipe line (700)	Steel ST

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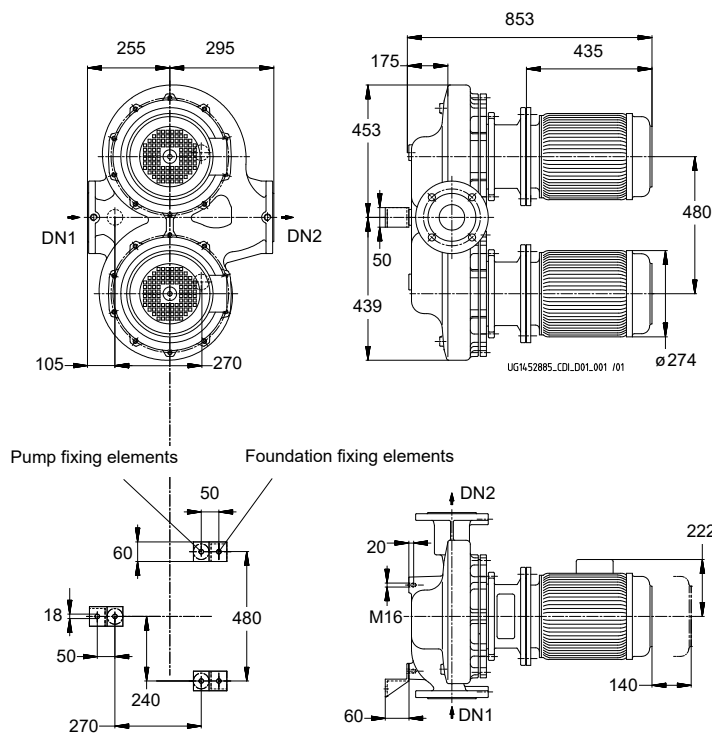


Curve data

Speed of rotation	1476 rpm	Efficiency	68.2 %
Fluid density	1000 kg/m^3	MEI (Minimum Efficiency Index)	= 0.70
Viscosity	1.45 mm^2/s	Power absorbed	5.42 kW
Flow rate	68.00 m^3/h	NPSH required	2.71 m
Requested flow rate	68.00 m^3/h	Curve number	K1161.454/42
Total developed head	20.00 m	Effective impeller diameter	246.0 mm
Requested developed head	20.00 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	132M
Motor power	7.50 kW
Number of poles	4
Speed of rotation	1476 rpm
Position of terminal box	0°/360° (top) Viewed from the drive

Connections

Suction nominal size DN1	DN 100 / EN1092-2
Discharge nominal size DN2	DN 100 / EN1092-2
Nominal pressure suct.	PN 16
Rated pressure disch.	PN 16

Weight net

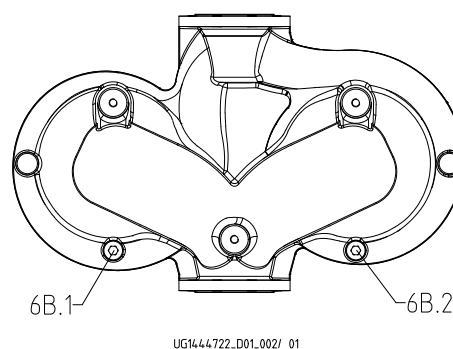
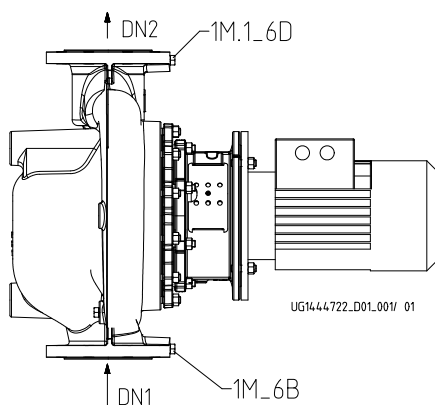
Pump	207 kg
Motor	68 kg
Total	275 kg

Connect pipes without stress or strain!

For auxiliary connections see separate drawing.

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Connections

Pump casing variant

1M.1 / 6D Pressure gauge or filling/venting connection G 3/8

1M / 6B Pumped medium filling/venting (Discharge nozzle, bottom side) G 3/8

6B.1 Pumped liquid drain G 3/8

6B.2 Pumped liquid drain G 3/8

XX46

Not executed

Not executed

Drilled and plugged.

Drilled and plugged.