

**ETLZ080-080-250 GGS AV11D300304 BKSBIE3**

Inline pump

**Operating data**

Requested flow rate		Actual flow rate	57.46 m <sup>3</sup> /h
Requested developed head		Actual developed head	10.00 m
Pumped medium	Water	Efficiency	57.8 %
	Clean water	MEI (Minimum Efficiency Index)	≥ 0.70
	Not containing chemical and mechanical substances which affect the materials	Power absorbed	2.71 kW
Ambient air temperature	20.0 °C	Pump speed of rotation	1446 rpm
Fluid temperature	20.0 °C	NPSH required	1.85 m
Fluid density	998 kg/m <sup>3</sup>	Permissible operating pressure	16.00 bar.g
Fluid viscosity	1.00 mm <sup>2</sup> /s	Discharge press.	0.98 bar.g
Suction pressure max.	0.00 bar.g	Min. allow. mass flow for continuous stable operation	2.03 kg/s
Mass flow rate	15.93 kg/s	Max. allow. mass flow	22.25 kg/s
Max. power on curve	3.09 kW	Design	Twin system one full duty + one standby pump
Min. allow. flow for continuous stable operation	7.31 m <sup>3</sup> /h		Tolerances to ISO 9906 Class 3B; below 10 kW acc. to paragraph 4.4.2
Shutoff head	14.74 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	Vertical		
Suction nominal dia.	DN 80	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 80	Impeller diameter	204.0 mm
Discharge nominal pressure	PN 16	Free passage size	14.3 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	0.82
Model (make)	KSB-Motor	Motor efficiency at 4/4 load	87.7 %
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 Viewed from the drive
Motor size	100L	Motor winding	400 / 690 V
Efficiency class	Efficiency class IE3 acc. to IEC60034-30-1	Number of poles	4
Motor speed	1450 rpm	Connection mode	Delta
Frequency	50 Hz	Motor cooling method	Surface cooling
Rated voltage	400 V	Motor material	Aluminium
Rated power P2	3.00 kW	Frequency inverter operation	FI allowed
Available reserve	10.88 %	allowed	
Rated current	6.2 A	Motor noise pressure level	63 dBa
Starting current ratio	8.2	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  $\geq 7$ ; chloride content (Cl)  $\leq 250$  mg/kg. Chlorine (Cl<sub>2</sub>)  $\leq 0.6$  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

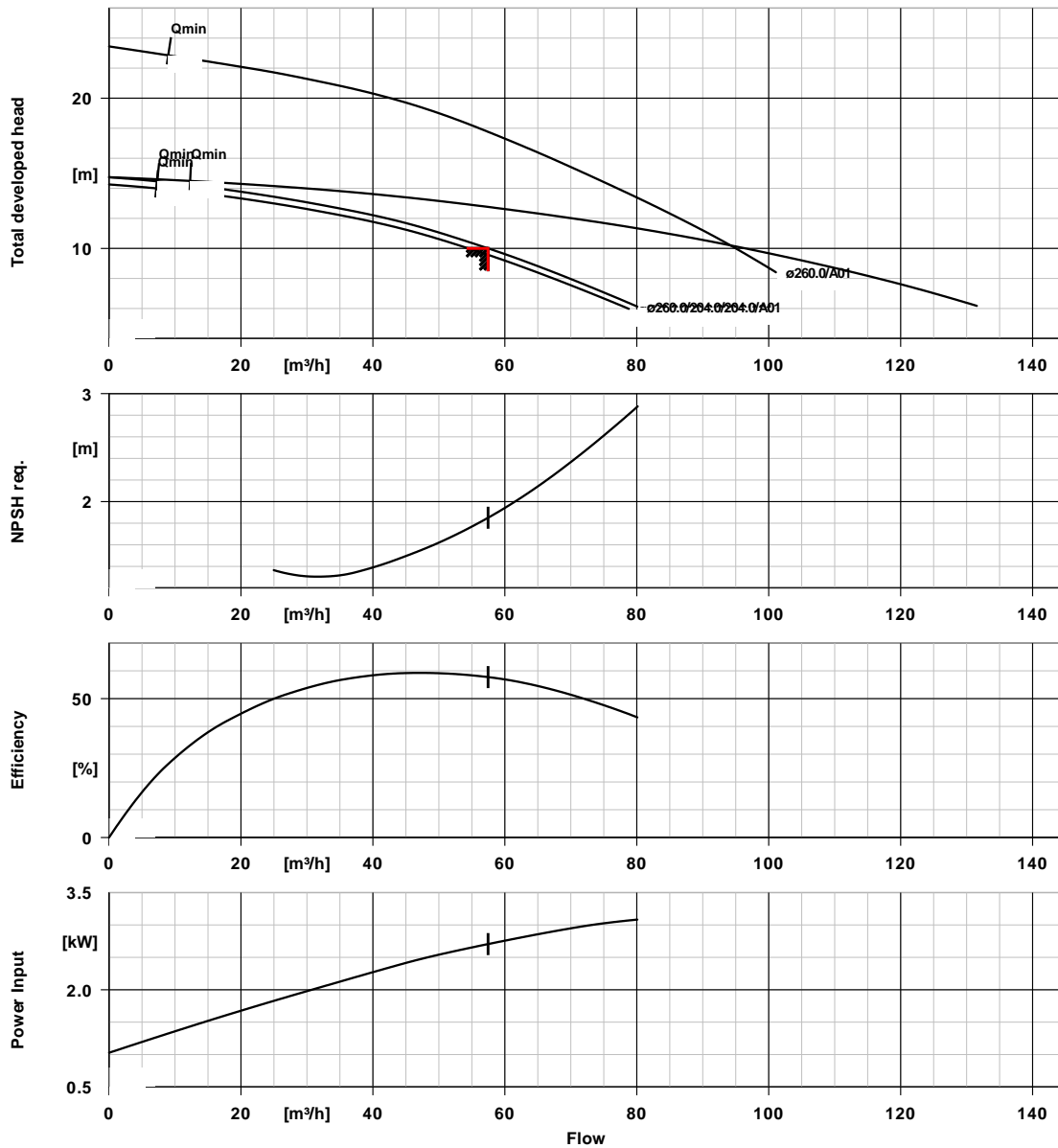
**FOOT 85X 50X 60**

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

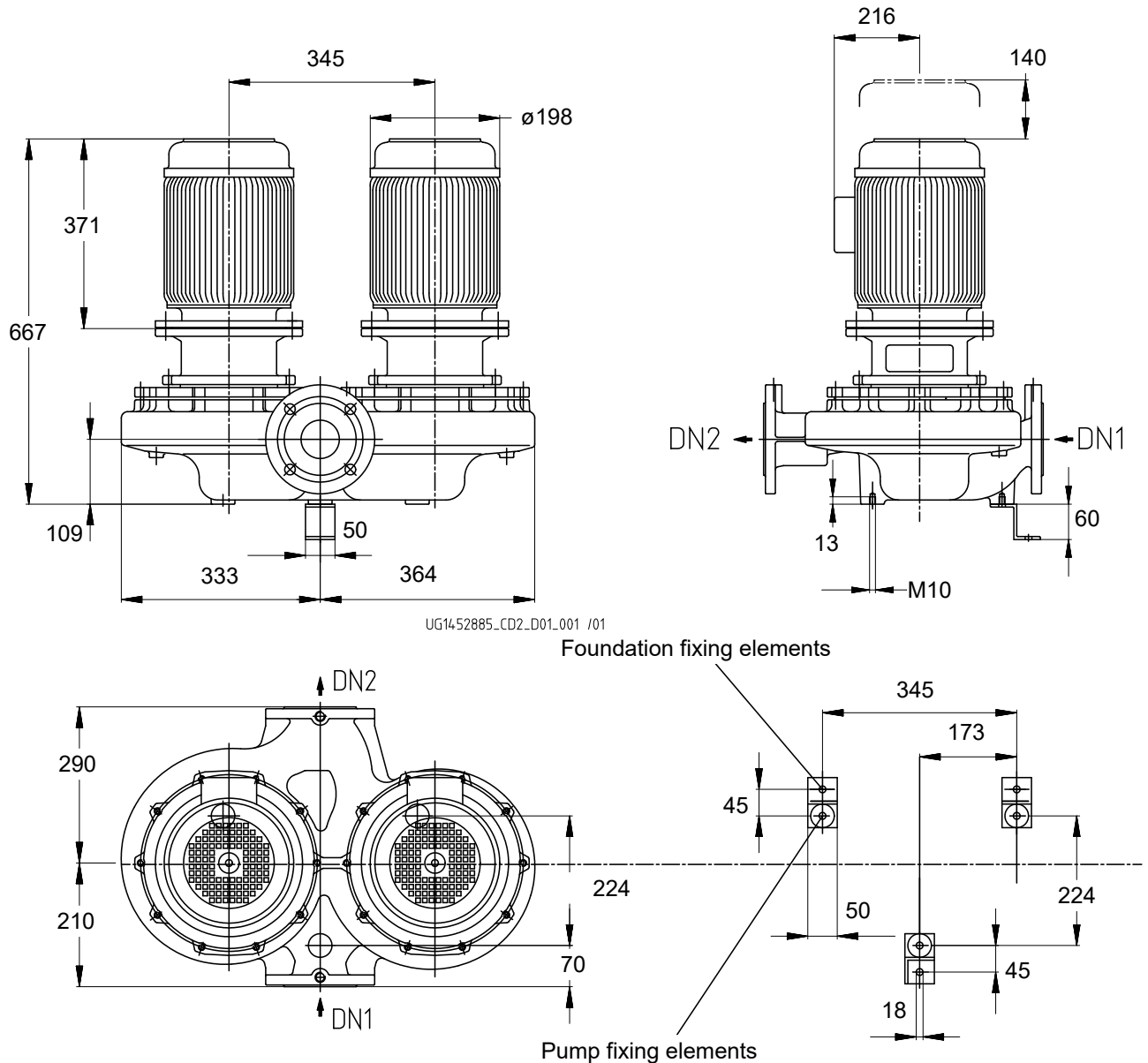
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**Curve data**

Speed of rotation	1446 rpm	Efficiency	57.8 %
Fluid density	998 kg/m³	MEI (Minimum Efficiency Index)	≥ 0.70
Viscosity	1.00 mm²/s	Power absorbed	2.71 kW
Flow rate	57.46 m³/h	NPSH required	1.85 m
Requested flow rate	57.45 m³/h	Curve number	K1161.454/38
Total developed head	10.00 m	Effective impeller diameter	204.0 mm
Requested developed head	10.00 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

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**Motor**

Motor manufacturer	KSB-Motor
Motor size	100L
Motor power	3.00 kW
Number of poles	4
Speed of rotation	1450 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**

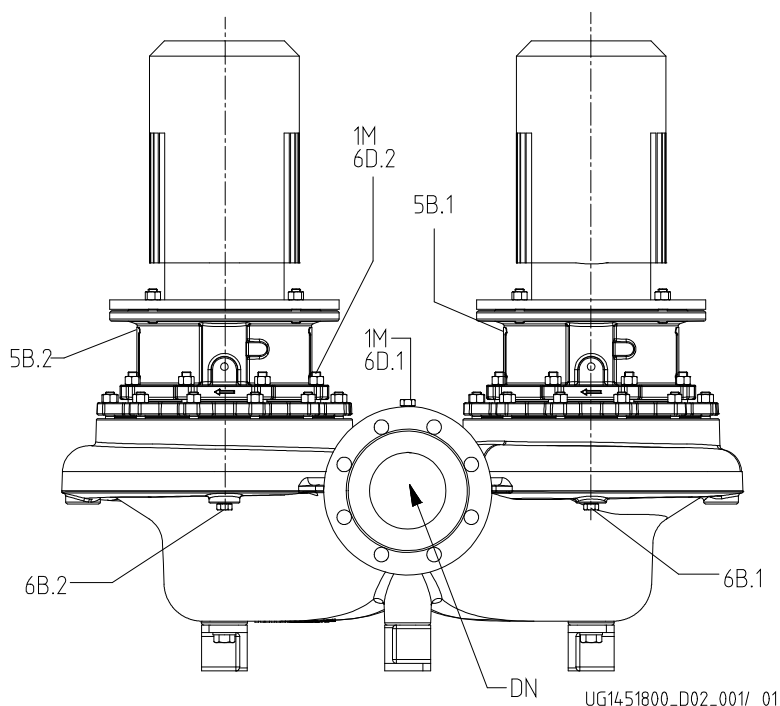
Pump	141 kg
Motor	68 kg
Other accessories	2 kg
Total	210 kg

**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	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