

Data sheet



Customer item no.:
Communication dated:
Doc. no.:
Quantity: 1

Number: ES 4024797
Item no.: 200
Date: 08/12/2015
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ETL 065-065-250 GG AV11D200304 BKSBIE3

Version no.: 1

Inline pump

Operating data

Requested flow rate	13.900 l/s	Actual flow rate	13.900 l/s
Requested developed head	14.00 m	Actual developed head	14.00 m
Pumped medium	Water Clean water Not containing chemical and mechanical substances which affect the materials	Efficiency	73.4 %
Ambient air temperature	20.0 °C	MEI (Minimum Efficiency Index)	≥ 0.70
Fluid temperature	20.0 °C	Power absorbed	2.60 kW
Fluid density	998 kg/m ³	Pump speed of rotation	1448 rpm
Fluid viscosity	1.00 mm ² /s	NPSH required	2.32 m
Suction pressure max.	0.00 bar.g	Permissible operating pressure	16.00 bar.g
Mass flow rate	13.87 kg/s	Discharge press.	1.37 bar.g
Max. power on curve	2.96 kW	Min. allow. mass flow for continuous stable operation	2.21 kg/s
Min. allow. flow for continuous stable operation	2.210 l/s	Shutoff head	18.80 m
		Max. allow. mass flow Design	20.27 kg/s Single system 1 x 100 %

Design

Pump standard	Without	Shaft seal code	11
Design	Close-coupled in-line	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 65	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	225.0 mm
Discharge nominal dia.	DN 65	Free passage size	10.0 mm
Discharge nominal 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
Shaft seal	Single acting mechanical seal	Bearing bracket size	25
Manufacturer	KSB	Bearing type	Anti-friction bearings
Type	1	Lubrication type	Grease
Material code	BQ1EGG-WA	Color	Vermilion (RAL 2002)



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 Inline pump

Version no.: 1

Driver, accessories

Driver type	Electric motor	Insulation class	F to IEC 34-1
Drive standard mech.	IEC	Motor enclosure	IP55
Model (make)	KSB-Motor	Cos phi at 4/4 load	0.82
Drive supplied by	Standard motor supplied by KSB - mounted by KSB	Motor efficiency at 4/4 load	87.7 %
Motor const. type	V1	Temperature sensor	3 PTC resistors
Motor size	100L	Terminal box position	0° same orientation
Efficiency class	Efficiency class IE3 acc. to IEC60034-30-1	Motor winding	Viewed from the drive
Motor speed	1448 rpm	Number of poles	400 / 690 V
Frequency	50 Hz	Connection mode	4
Rated voltage	400 V	Motor cooling method	Delta
Rated power P2	3.00 kW	Motor material	Surface cooling
Available reserve	15.59 %	Frequency inverter operation allowed	Aluminium
Rated current	6.2 A	Motor noise pressure level	FI allowed
Starting current ratio	8.2		63 dBa

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	Joint ring (411)	Steel ST
Casing cover (161)	Grey cast iron EN-GJL-250/A48CL35B	Casing wear ring (502.1)	Grey cast iron GG/CAST IRON
Shaft (210)	Tempered steel C45+N	Casing wear ring (502.2)	Grey cast iron GG/CAST IRON
Impeller (230)	Grey cast iron EN-GJL-250/A48CL35B	Shaft sleeve (523)	CrNiMo steel
Motor stool (341)	Grey cast iron EN-GJL-250/A48CL35B	Stud (902)	Steel 8.8
Flat gasket (400)	DPAF seal plate asbestos free	Screwed plug (903)	Steel ST
		Impeller nut (922)	Steel 8
		Key (940)	Steel C45+C / A311 GR 1045 CLASS A

Performance curve

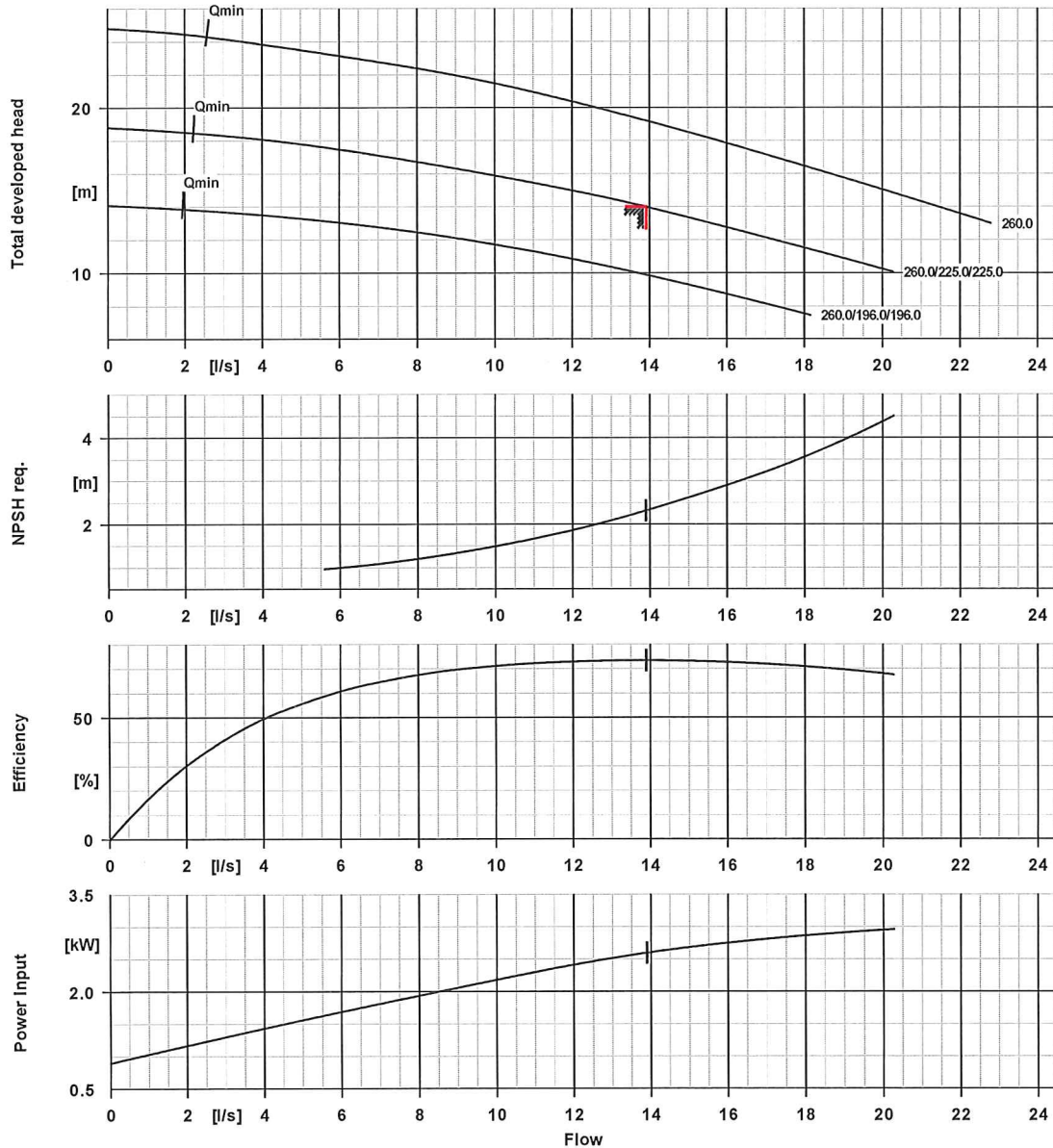


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Curve data

Speed of rotation	1448 rpm	Efficiency	73.4 %
Fluid density	998 kg/m ³	MEI (Minimum Efficiency Index)	≥ 0.70
Viscosity	1.00 mm ² /s	Power absorbed	2.60 kW
Flow rate	13.900 l/s	NPSH required	2.32 m
Requested flow rate	13.900 l/s	Curve number	K1159.454/33
Total developed head	14.00 m	Effective impeller diameter	225.0 mm
Requested developed head	14.00 m	Acceptance standard	Tolerances to ISO 9906 Class 3B; below 10 kW acc. to paragraph 4.4.2

Installation plan

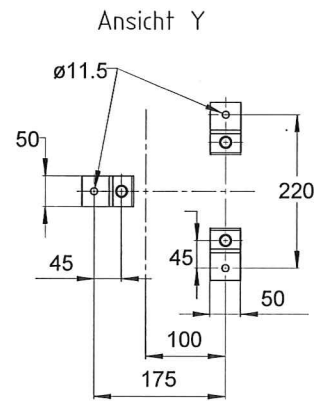
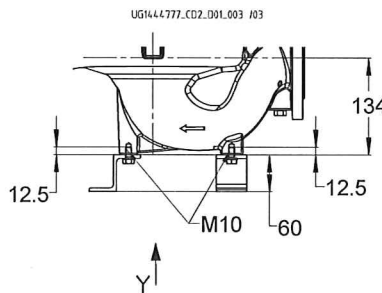
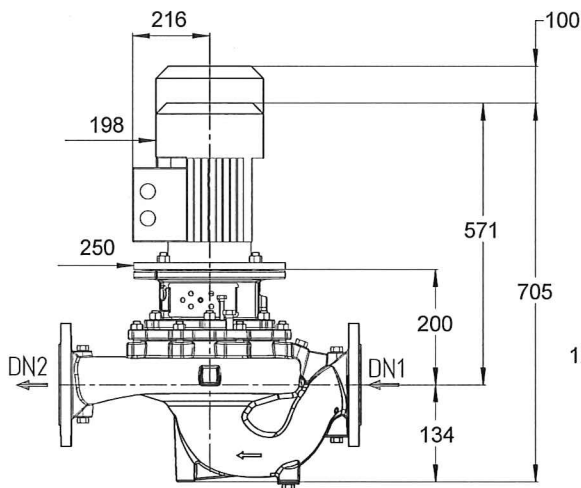
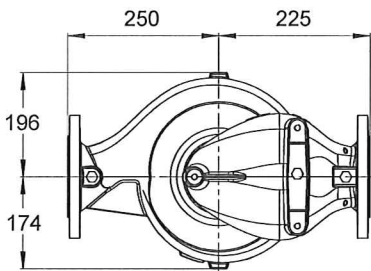


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Drawing is not to scale

Dimensions in mm

Motor

Motor manufacturer	KSB-Motor
Motor size	100L
Motor power	3.00 kW
Number of poles	4
Speed of rotation	1448 rpm
Position of terminal box	0° same orientation Viewed from the drive

Connections

Suction nominal size DN1	DN 65 / EN1092-2
Discharge nominal size DN2	DN 65 / EN1092-2
Nominal pressure suct.	PN 16
Rated pressure disch.	PN 16

Weight net

Pump	43 kg
Motor	34 kg
Total	77 kg

Connect pipes without stress or strain!

For auxiliary connections see separate drawing.

Connection plan

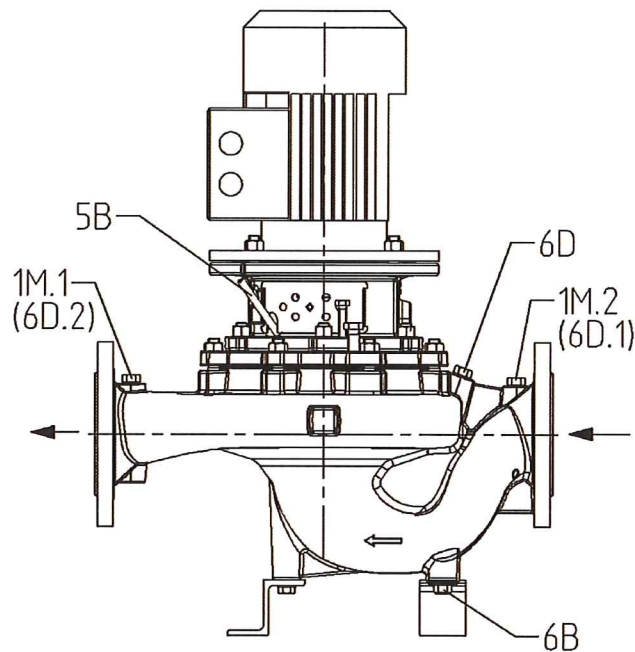


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Connections

Pump casing variant		XX36
1M.1 Pressure gauge connection	Rc 1/4	Drilled and plugged.
1M.2 Pressure gauge connection	Rc 1/4	Drilled and plugged.
6B Pumped liquid drain	Rc 1/4	Drilled and plugged.
6D Pumped medium - filling / venting	Rc 1/4	Drilled and plugged.
5B venting	G 1/4	Closed with venting plug