Data sheet

ETLZ065-065-250 GGSAV11D200404 BKSBIE5
Inline pump

Operating data

Requested flow rate	46.20 m³/h	Actual flow rate	46.20 m³/h
Requested developed head	15.86 m	Actual developed head	15.86 m
Pumped medium	Water, heating water	Efficiency	64.0 %
	Heating water up to 100°C (max.), acc. to VDI 2035	MEI (Minimum Efficiency Index)	≥ 0.70
Pumped medium details	Not containing chemical and mechanical substances which affect the materials	Power absorbed	3.11 kW
		Pump speed of rotation	1444 rpm
		NPSH required	2.06 m
Max. ambient air temperature	20.0 °C	Permissible operating pressure	16.00 bar.g
Min. ambient air temperature	20.0 °C		
Fluid temperature	20.0 °C		
Fluid density	998 kg/m³	Discharge press.	1.55 bar.g
Fluid viscosity	1.00 mm²/s	Shutoff head	20.08 m
Suction pressure max.	0.00 bar.g	Min. allow. flow for continuous stable operation	6.76 m³/h
Mass flow rate	46.107 t/h		
Max. power on curve	3.69 kW	Min. allow. mass flow for continuous stable operation	6.749 t/h
Max. allow. mass flow	69.109 t/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
		Yearly energy consumption	3112.44 kWh
		Annual Time Spent at Duty Point	1000.00 h

Design

Pump standard	Without	Material code	BQEGG-DW001
Design	Close coupled twin inline	Shaft seal code	11
Orientation	Vertical	Sealing plan	Single-acting mechanical seal with vented chamber (A-type casing cover, taper bore)
Suction nominal dia.	DN 65		
Suction nominal pressure	PN 16		
Suction position	180° (down)	Minimum requirements for hot water quality: treatment acc. to VdTÜV regulation TCH 1466 and solids content up to max. 5 mg/l.	
Suction flange drilled according to standard	EN1092-2		
Discharge nominal dia.	DN 65	Seal chamber design	Conical seal chamber (A-type cover)
Discharge nominal pressure	PN 16		
Discharge position	top (0°/360°)	Contact guard	With
Discharge flange drilled according to standard	EN1092-2	Wear ring	Casing wear ring
		Impeller diameter	244.0 mm
Surface type	Flat face	Free passage size	10 mm
Flanges DN 65 will be drilled with 4 holes		Direction of rotation from drive	Clockwise
Shaft seal	Single acting mechanical seal	Bearing bracket construction	Close-coupled
		Bearing bracket size	25
Shaft seal manufacturer	KSB's Choice	Bearing type	Anti-friction bearings
Shaft seal type	KSB's Choice	Lubrication type	Grease
		Color	Ultramarine blue (RAL 5002) KSB-blue
		Impeller nut lock diesel drive	Yes

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Driver, accessories

Frequency inverter operation allowed only for rated voltage.

Starting current	
Driver type	Electric motor
Drive standard mech.	IEC
Model (make)	KSB SuPremE®
Type series motor manufacturer	SuPremE C1 (with terminal box)
Drive supplied by	Standard motor supplied by KSB - mounted by KSB
Motor const. type	V1
Motor size	112M
Efficiency class	Efficiency class IE5 acc. IEC/TS 60034-30-2 (2016) – free of magnets.
Frequency	50 Hz
Designed for operation with frequency inverter	Yes
Rated voltage	400 V
Rated power P2	4.00 kW
Available reserve	23.15 %
Rated current	9.6 A
Insulation class	F to IEC 34-1
Motor enclosure	IP55
Cos phi at 4/4 load	0.73
Motor efficiency at 4/4 load	91.2 %
Temperature sensor	3 PTC resistors
Terminal box position	0° same orientation Viewed from the drive
Motor winding	400 V
Connection mode	Star
Motor cooling method	Surface cooling
Motor material	Aluminium
Motor noise pressure level	61 dBa
Earthing connection motor	No
Driver colour	Same as the pump
CE-approval	Yes
EAC Approval	Yes
Ambient temperature	40.0 °C
Max. absolute humidity	30 g/m3
Temp. sensor mtr. bearing	Without
UKCA conformity	Yes

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 cover (161)	Grey cast iron EN-GJL-250/A48CL35B
Shaft (210)	Tempered steel C45+N
Impeller (230)	Grey cast iron EN-GJL-250/A48CL35B
Motor stool (341)	Grey cast iron EN-GJL-250/A48CL35B
Flat gasket (400)	DPAF DW001
Joint ring (411)	Steel ST
Casing wear ring (502.1)	Grey cast iron GG/CAST IRON
Casing wear ring (502.2)	Grey cast iron GG/CAST IRON
Stud (902)	Steel 8.8
Nut (920.1)	8+A2A/ 8+B633 SC1 TP3
Nut (920.95)	(ST)
Key (940)	Steel C45+C / A311 GR 1045 CLASS A
Pipe line (700)	Steel ST

Packaging

Packaging category	A0 Packing acc. to KSB choice
Packaging for storage	Indoor
Packaging for transport	Truck

Nameplates

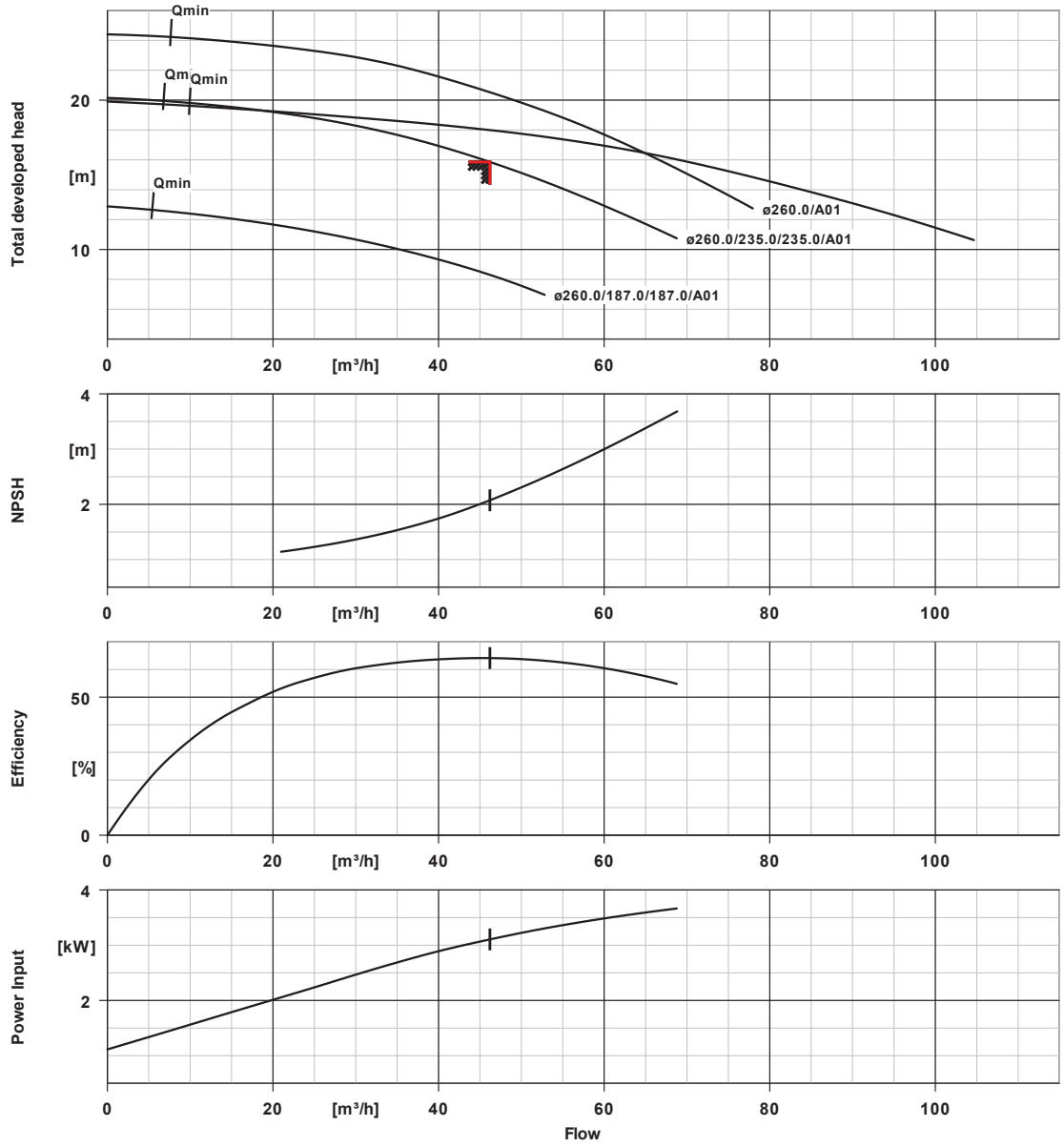
Nameplates language	International
Additional nameplate with QR Code and RFID Chip	Without

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FOOT 85X 50X 60

3 Pump feet 85X50X60 ST+lacquered with screws for foundation installation f ETALINE 032-032-160 to 100-100-125 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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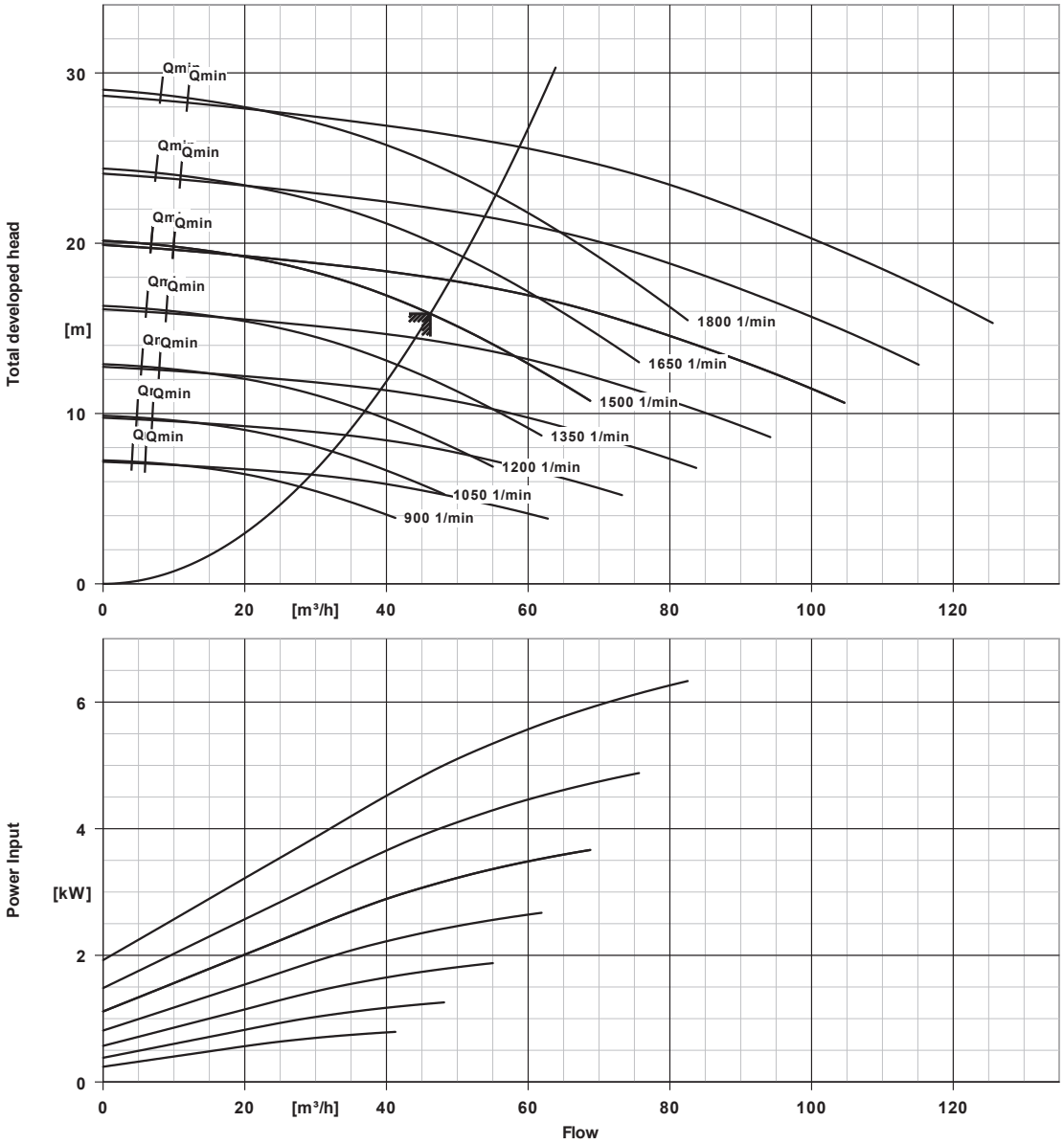


Curve data

Speed of rotation	1444 rpm	Efficiency	64.0 %
Fluid density	998 kg/m³	MEI (Minimum Efficiency Index)	≥ 0.70
Viscosity	1.00 mm²/s		
Flow rate	46.20 m³/h	Power absorbed	3.11 kW
Requested flow rate	46.20 m³/h	NPSHR	2.06 m
Total developed head	15.86 m	Curve number	K1161.454/33
Requested developed head	15.86 m	Effective impeller diameter	244.0 mm
		Acceptance standard	Tolerances to ISO 9906 Class 3B; below 10 kW acc. to paragraph 4.4.2

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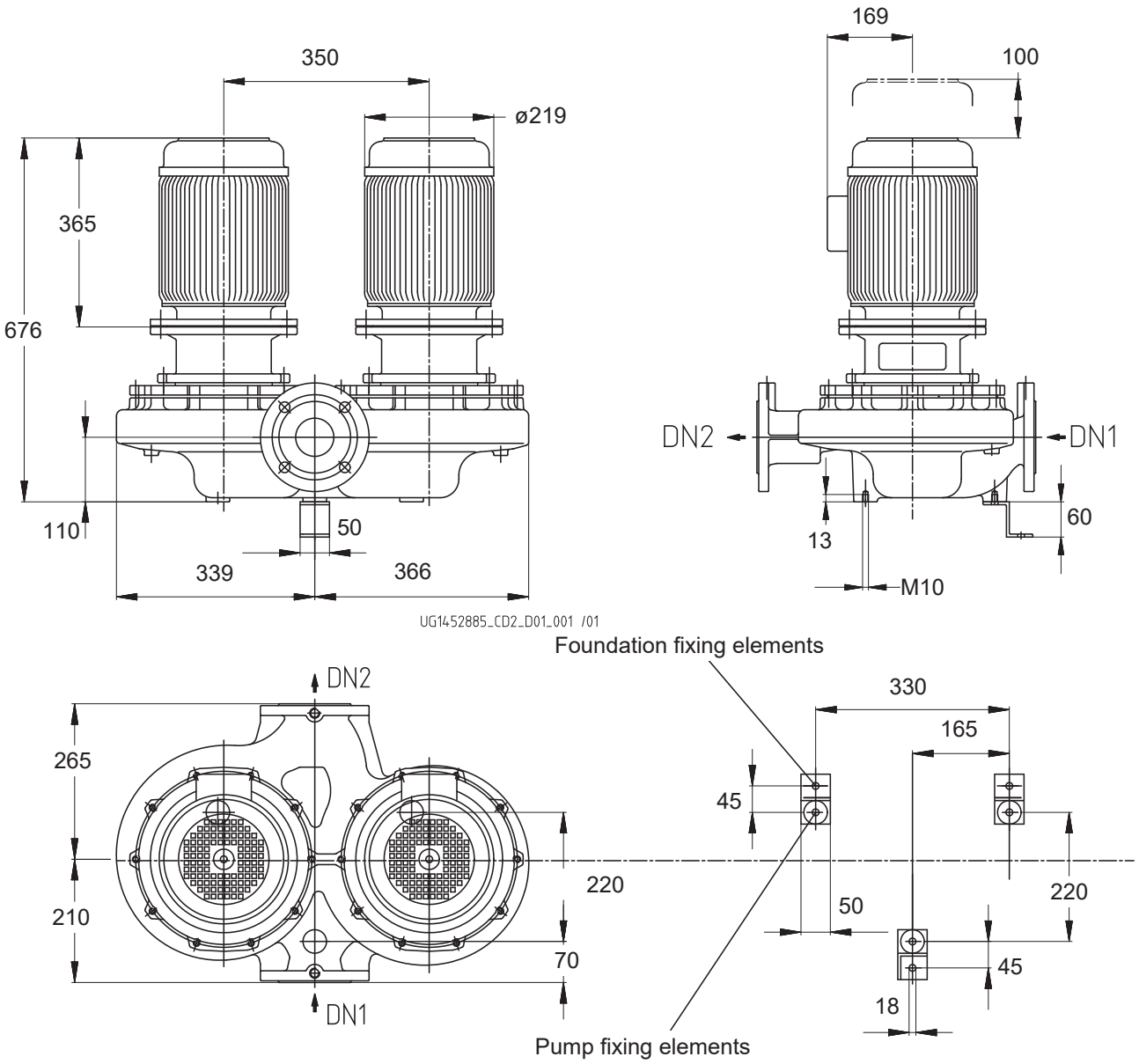


Curve data

Fluid density	998 kg/m³	Total developed head	15.86 m
Viscosity	1.00 mm²/s	Requested developed head	15.86 m
Flow rate	46.20 m³/h	MEI (Minimum Efficiency Index)	≥ 0.70
Requested flow rate	46.20 m³/h	Effective impeller diameter	244.0 mm

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Drawing is not to scale

Dimensions in mm

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Motor

Motor manufacturer	KSB
Motor size	112M
Motor power	4.00 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 65 / EN1092-2
Discharge nominal size DN2	DN 65 / EN1092-2
Nominal pressure suct.	PN 16
Rated pressure disch.	PN 16

Flanges DN 65 will be drilled with 4 holes

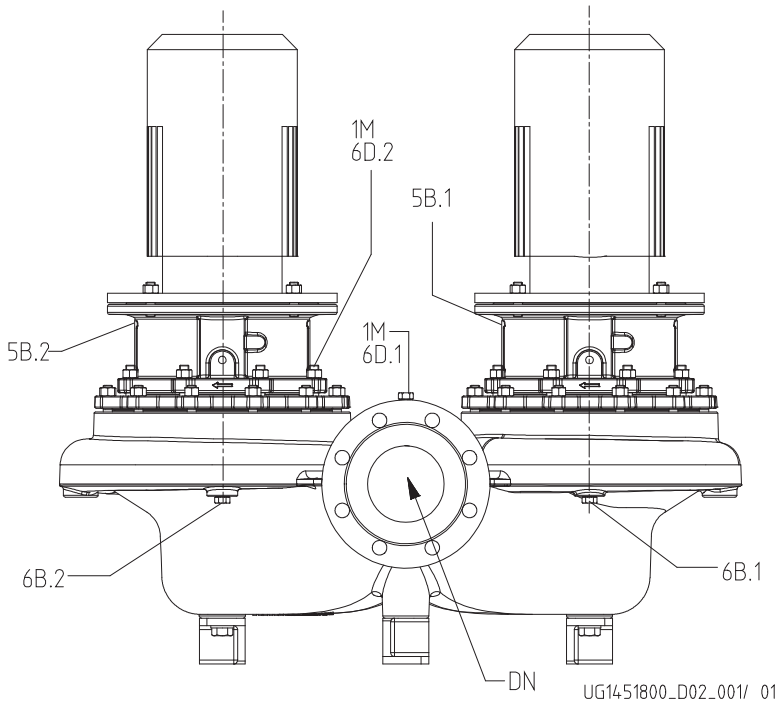
Weight net

Pump	115 kg
Motor	74 kg
Other accessories	2 kg
Total	190 kg

Connect pipes without stress or strain!

For auxiliary connections see separate drawing.

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Connections

Pump casing variant		XX46
1M.1 Pressure gauge connection	G 1/4	Drilled and plugged.
1M.2 Pressure gauge connection	G 1/4	Drilled and plugged.
6B.1 Pumped liquid drain	G 1/4	Drilled and plugged.
6B.2 Pumped liquid drain	G 1/4	Drilled and plugged.
6D.1 Pumped medium - filling/venting	G 1/4	Drilled and plugged.
6D.2 Pumped medium - filling / venting	G 1/4	Drilled and plugged.
5B.1 venting	G 1/4	Closed with venting plug
5B.2 venting	G 1/4	Closed with venting plug