

Data sheet



Customer pos. no.:
Inquiry date: 2023-05-02
Inquiry no.: Pompe Condens Termoelectrica
Quantity: 1,000

Number: 4005027373 - 419
Line: 000200
Date: 2023-05-02
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MCPK100-065-200 EC L ME 02202A

Version no.: 2

Chemical pump MegaCPK to DIN EN ISO 2858 / ISO 5199

Operating data

Requested flow rate	90.00 m ³ /h	Actual flow rate	90.02 m ³ /h
Requested developed head	55.00 m	Actual developed head	55.03 m
Pumped medium	Water, condensate	Efficiency	73.3 %
	Mode of operation NF	Power absorbed	18.37 kW
Pumped medium details	Not containing chemical and mechanical substances which affect the materials	Pump speed of rotation	2958 rpm
		NPSH required	3.10 m
Max. ambient air temperature	20.0 °C	Permissible operating pressure	25.00 bar.g
Min. ambient air temperature	20.0 °C	Discharge press.	5.39 bar.g
Fluid temperature	20.0 °C		
Fluid density	998 kg/m ³	Shutoff head	59.74 m
Fluid viscosity	1.00 mm ² /s	Min. thermal flow rate	10.76 m ³ /h
Suction pressure max.	0.00 bar.g	Min. allow. flow for continuous stable operation	10.76 m ³ /h
Mass flow rate	24.96 kg/s	Min. allow. mass flow for continuous stable operation	2.98 kg/s
Max. power on curve	22.57 kW	Max. allow. mass flow	37.14 kg/s
Min. thermal mass flow rate	2.98 kg/s		Tolerances to ISO 9906 Class 3B; below 10 kW acc. to paragraph 4.4.2
Max. allow. flow rate	133.99 m ³ /h		

Design

Pump standard	ISO 2858	Shaft seal manufacturer	KSB
Design configuration acc. to standard	Chemical pump to DIN EN ISO 2858 / ISO 5199	Shaft seal type	5A
Design	Baseplate mounted, long-coupled	Material code	AQ1EGG
		Sealing plan	E Single acting mechanical (external circulation)
Orientation	Horizontal	Minimum requirements for hot water quality: treatment acc. to VdTÜV regulation TCH 1466 With SiO ₂ -content up to max. 10 mg/l. Conductivity max. 50 µS/cm for water with low salt content up to 160°C or conductivity max. 250 µS/cm up to 140°C for water with higher salt content Solids content up to max. 5 mg/l and no additives forming a greasy film on the seal faces.	
Shaft execution	Dry		
Pump nominal pressure	PN 25		
Suction nominal dia.	DN 100		
Suction nominal pressure	PN 25	Seal chamber design	Standard seal chamber
Suction position	axial	Contact guard	With
Suction flange dimension according to standard	EN1092-1	Impeller diameter	203.0 mm
Suction flange drilled according to standard	EN1092-1	Free passage size	13.3 mm
Discharge nominal dia.	DN 65	Direction of rotation from drive	Clockwise
Discharge nominal pressure	PN 25	Bearing bracket construction	Chemical standard medium duty
Discharge position	top (0°/360°)	Bearing bracket size	CS50
Discharge flange dimension according to standard.	EN1092-1	Bearing seal	Standard labyrinth ring
Discharge flange drilled according to standard	EN1092-1	Bearing type	Anti-friction bearings
Surface type	Raised face form B1	Lubrication type	Oil
Shaft seal	Single acting mechanical seal	Lubrication monitoring	Constant level oiler
		Bearing bracket cooling	Uncooled
		Color	Ultramarine blue (RAL 5002) KSB-blue

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Driver, accessories

Coupling Manufacturer	Flender	Available reserve	19.79 %
Coupling type	Eupex NH	Rated current	41.2 A
Nominal size	110	Starting current ratio	9
Spacer length	140.0 mm	Insulation class	F to IEC 34-1
Coupling guard type	Tread-proof (ZN3230)	Motor enclosure	IP55
Guard size	A1	Cos phi at 4/4 load	0.85
Guard material	Steel ST	Motor efficiency at 4/4 load	92.7 %
Baseplate type	Cast iron to ISO standard	Temperature sensor	3 PTC resistors
Baseplate size	6G	Terminal box position	0°/360° (top)
Baseplate drain	Drain channel		Viewed towards the suction nozzle
Driver type	Electric motor	Motor winding	400 / 690 V
Drive standard mech.	IEC	Number of poles	2
Model (make)	KSB-Motor	Connection mode	Delta
Drive supplied by	Standard motor supplied by KSB - mounted by KSB	Motor cooling method	Surface cooling
Motor const. type	B3	Motor material	Aluminium
Motor size	180M	Frequency inverter operation allowed	FI allowed
Efficiency class	Efficiency class IE3 acc. to IEC60034-30-1	Motor noise pressure level	77 dBA
Motor speed	2960 rpm	Motor data can vary from type plate information. Motor data describes KSB's choice functional specification and is used for pump selection.	
Frequency	50 Hz	CE-approval	Yes
Rated voltage	400 V	EAC Approval	Yes
Rated power P2	22.00 kW	Ambient temperature	40.0 °C
		Max. absolute humidity	30 %
		Temp. sensor mtr. bearing	Without
		UKCA conformity	Yes

Materials E

Notes 1

Quality NF: pH $\geq$ 6.5 at 25°C and O2 content = 0.05 to 0.25 mg/kg for unalloyed steel or cast steel components.

Volute casing (102)	Steel GP240GH+N/ A216 Gr WCB
Casing cover (161)	Steel GP240GH+N/ A216 Gr WCB
Shaft (210)	Tempered steel C45+N

Packaging

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

Nameplates

Nameplates language	English
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Impeller (230)	Stainless steel 1.4408 / A743 GR CF8M
Bearing bracket (330)	Ductile cast iron EN-GJS-400-18-LT
Joint ring (411)	Thermoplastic PTFE-GF25
Shaft protecting sleeve (524)	CrNiMo steel

Performance curve



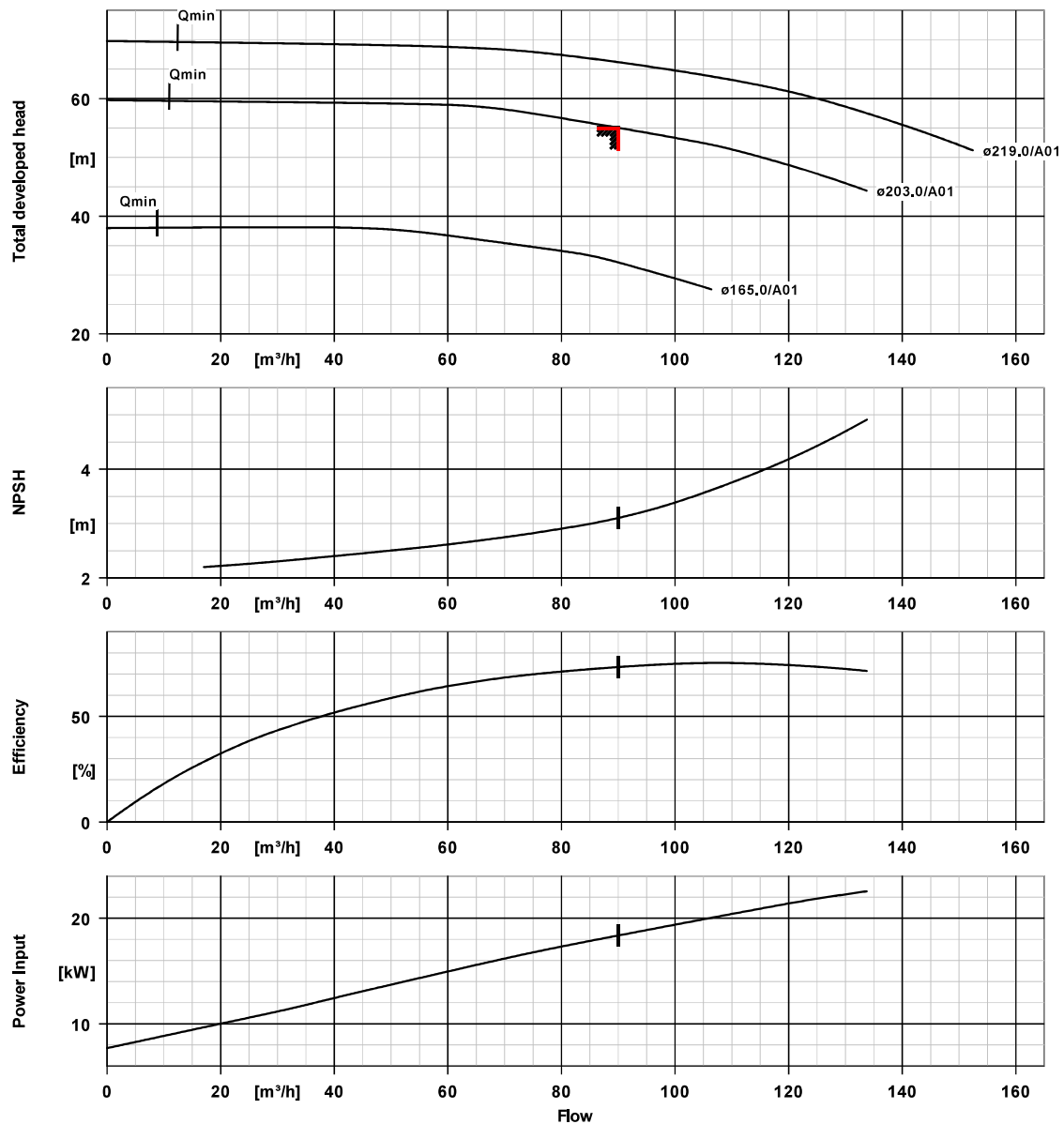
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Curve data

Speed of rotation	2958 rpm	Requested developed head	55.00 m
Fluid density	998 kg/m ³	Efficiency	73.3 %
Viscosity	1.00 mm ² /s	Power absorbed	18.37 kW
Flow rate	90.02 m ³ /h	NPSHR	3.10 m
Requested flow rate	90.00 m ³ /h	Curve number	KGP.452/37
Total developed head	55.03 m	Effective impeller diameter	203.0 mm

Installation plan



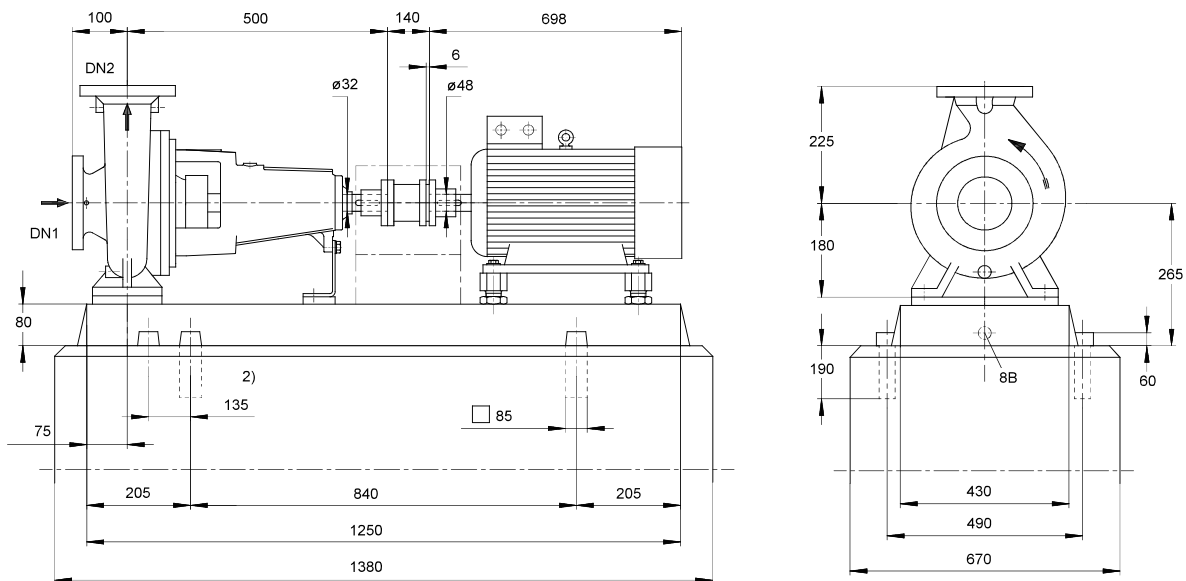
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Drawing is not to scale

Dimensions in mm

2) Mounting of baseplate is also possible in the casing feet area. Contact KSB if required

Motor

Motor manufacturer	KSB-Motor
Motor size	180M
Motor power	22.00 kW
Number of poles	2
Speed of rotation	2960 rpm
Position of terminal box	0°/360° (top)
	Viewed towards the suction nozzle

Connections

Suction nominal size DN1	DN 100 / EN1092-1
Discharge nominal size DN2	DN 65 / EN1092-1
Nominal pressure suct.	PN 25
Rated pressure disch.	PN 25
Surface type	Raised face form B1

Baseplate

Design	Cast iron to ISO standard
Size	6G
Material	Grey cast iron EN-GJL-250
Leakage drain baseplate (8B)	Rp1, Drain channel
Baseplate drain piping execution	Without
Foundation bolts	M20x250 (required but not scope of supply)

Coupling

Coupling manufacturer	Flender
Coupling type	Eupex NH
Coupling size	110
Spacer	140.0 mm

Weight net

Pump	98 kg
Baseplate	81 kg
Coupling	6 kg
Coupling guard	4 kg
Motor	164 kg
Total	353 kg

Connect pipes without stress or strain!

For auxiliary connections see separate drawing.

Connection plan

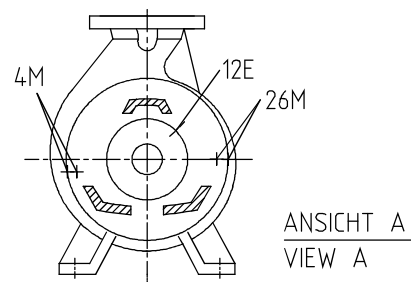
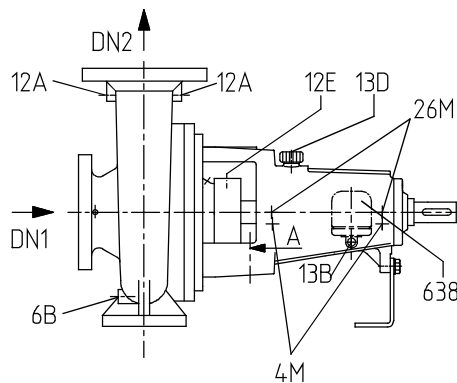


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Connections

Pump casing variant	
1M.1 Pressure gauge connection	G 3/8
1M.2 Pressure gauge connection	G 3/8
6B Pumped liquid drain	G 3/8
12A Circulation out	G 3/8
12E Circulation in	G 1/4
13B Oil drain	G 3/8
13D Refill / venting	Dia. 20
638 Constant level oiler	Rp 1/4

26M Shock pulse measurement connection	M 8
4M Temperature measurement connection	G 1/4
7E.2/A.2 Cooling liquid in/out	G 1

XX18
Drilled and plugged.
Drilled and plugged.
Drilled and plugged.
Circulation line mounted by KSB
Circulation line mounted by KSB
Drilled and plugged.
Closed with venting plug
Supplied unassembled with main equipment, to be installed by customer in acc. with operating instructions
Not executed
Not executed
Not executed