

Data sheet



Customer item no.:
Communication dated: 03/12/2015
Doc. no.: Pigging Pump
Quantity: 1

Number: 4002610364 - 675
Date: 2015-12-03
Date: 22/04/2016
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Version no.: 6

Operating data

Requested flow rate	350.00 m ³ /h	Actual flow rate	350.00 m ³ /h
Requested developed head	367.83 m	Actual developed head	367.87 m
Pumped medium	Water Clean water Not containing chemical and mechanical substances which affect the materials	Efficiency	77.8 %
Solids content max. 50 ppm		Power absorbed	450.27 kW
Ambient air temperature	20.0 °C	Pump speed of rotation	1800 rpm
Fluid temperature	20.0 °C	NPSH required	3.63 m
		Permissible operating pressure	63.00 bar.g
		Discharge press.	36.00 bar.g
Fluid density	998 kg/m ³	Shutoff pressure	41.56 bar.g
Fluid viscosity	1.00 mm ² /s	Min. mass flow for stable curve	39.10 kg/s
Suction pressure max.	0.00 bar.g	Min. allow. mass flow for continuous operation	39.10 kg/s
Vapour pressure	0.02 bar.a	Min. allow. mass flow short term operation	27.93 kg/s
Mass flow rate	97.03 kg/s	Shutoff head	424.63 m
Max. power on curve	545.99 kW	Max. allow. flow rate	517.64 m ³ /h
Minimum flow for stable curve	141.05 m ³ /h	Max. allow. mass flow	143.50 kg/s
Minimum allowable flow for continous operation	141.05 m ³ /h	Design	Single system 1 x 100 %
Min. allow. flow for short term operation	100.75 m ³ /h	Performance test	Yes

Design

Variante	A	Barrier liquid: use suitable water	
Stage number	6	Seal chamber design	Standard seal chamber
Balance drum	with piston	Sealing liquid pressure incl. inlet pressure	6.26 bar.g
Design	Baseplate mounted, long- coupled	Calculated for inlet pressure	0.00 bar.g
Orientation	Horizontal	Sealing liquid quantity	0.06 m ³ /h
Suction nominal dia.	DN 250	Wear ring	Casing wear ring
Suction nominal pressure	PN 25	Impeller diameter	370.0 / 327.0 mm
Suction position	axial	Minimum impeller diameter	344.0 mm
Suction flange drilled according to standard	EN 1092-1	Full impeller diameter	382.0 mm
Discharge nominal dia.	DN 150	Free passage size	26.5 mm
Discharge nominal pressure	PN 63	Direction of rotation from drive	Clockwise
Discharge position	top (0°/360°) Viewed from the drive	Bearing bracket construction	Standard (normal)
Discharge flange drilled according to standard	EN 1092-1	Bearing bracket size	150
Shaft seal	Gland packing	Bearing seal	Thrower
Manufacturer	Latty	Bearing type	Anti-friction bearings
Type	2790	Lubrication type	Grease
Material code	PA/PTFE	Bearing type (inboard)	Plain bearings
Shaft seal code	65	Lubrication type (inboard)	Medium lubricated
Sealing plan	P3 Gland packing, external sealing liquid (Nc)	Temperature sensor PT100	Without
Pumped liquid without abrasive solids		mts	
		Color	Ultramarine blue (RAL 5002) KSB-blue
		Impeller nut lock diesel drive	Yes

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Driver, accessories

Driver type	Combustion engine	Speed control selection	Specified speed
Drive standard mech.	IEC	Available reserve	27.70 %
Drive standard elec.	IEC		

Materials 17

Notes		Bearing cartridge (381)	Ceramic SSiC
General criteria for a water analysis: pH-value \geq 7; chloride content (Cl) \leq 250 mg/kg. Chlorine (Cl ₂) \leq 0.6 mg/kg.		O-Ring (412)	Fluor caoutchouc FPM
Suction casing (106)	Carbon steel GP240GH+N	Shaft seal housing (441)	Grey cast iron EN-GJL-250
Discharge casing (107)	Carbon steel GP240GH+N	Casing wear ring (502.1)	Grey cast iron EN-GJL-250
Stage casing (108)	Grey cast iron EN-GJL-250	Casing wear ring (502.2)	Grey cast iron EN-GJL-250
Diffuser (171)	Grey cast iron EN-GJL-250	Shaft protecting sleeve (524)	Chrome steel 1.4122+QT750
Shaft (210)	Tempered steel C45+N	Bearing sleeve (529)	Ceramic SSiC
Impeller (230)	Grey cast iron EN-GJL-250	Bush (540)	Grey cast iron EN-GJL-250
Impeller, suction stage (231)	Grey cast iron EN-GJL-250	Piston (59-4)	Chrome steel 1.4021QT700+SR
Bearing housing (350)	Grey cast iron EN-GJL-250	Tie bolt (905)	30NCD16

Certifications

Hydraulic performance test

Acceptance standard	ISO 9906 class 3B
Quantity meas. points Q-H	5
Certificate	Inspection cert. 3.1 to EN 10204
Test participation	Non-witnessed
Quantity, non-witnessed	1

Quantity, witnessed 0
The performance test will be performed at reduced speed.

Material certificates: Suction casing, Discharge casing, Stage casing, Shaft seal hous, Tie bolt (106, 107, 108, 441, 905)

Certificate Test report 2.2 to EN 10204

Material certificates: Shaft, impellers (210, 230)

Certificate Test report 2.2 to EN 10204

Performance curve

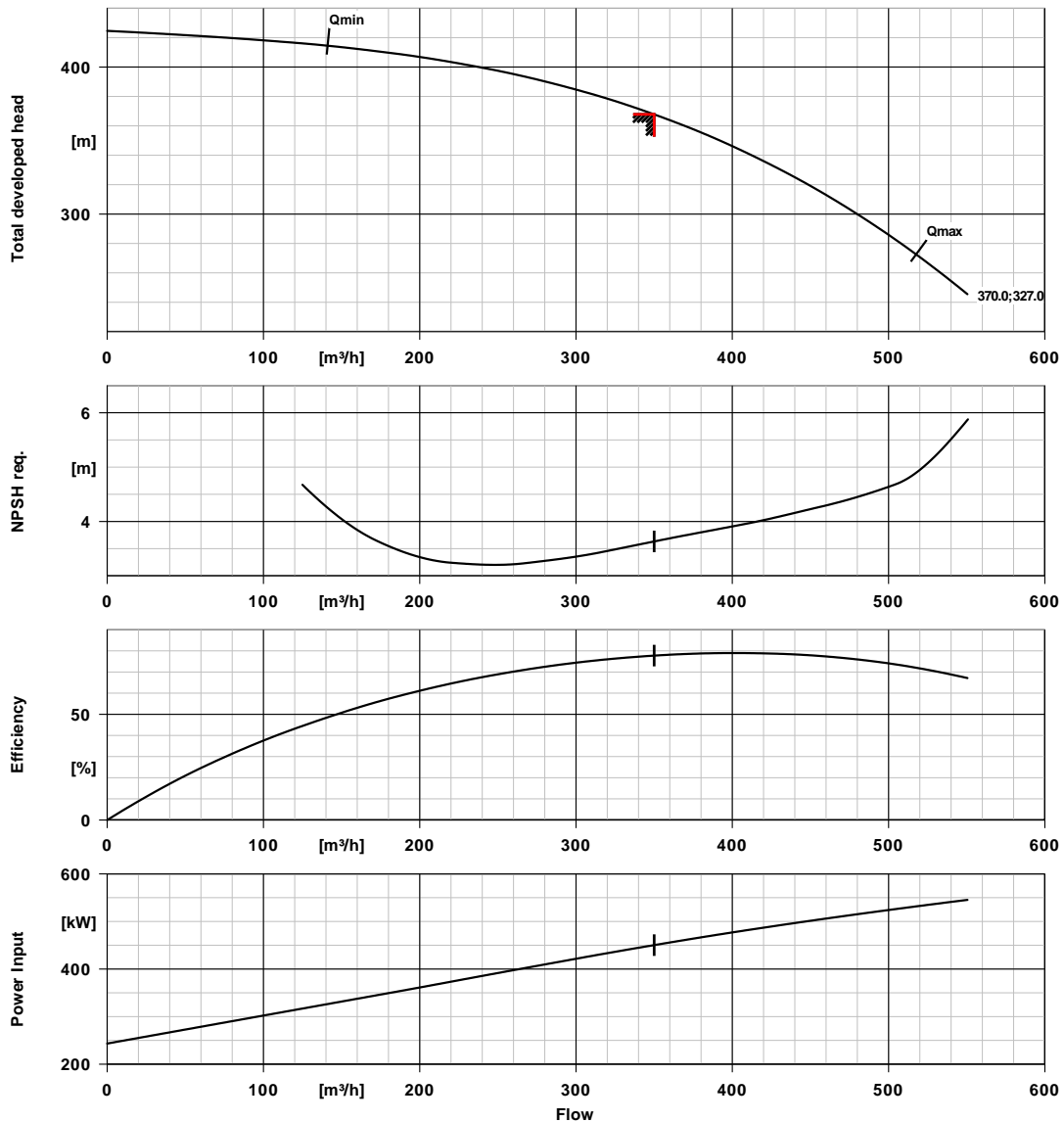


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Curve data

Speed of rotation	1800 rpm	Efficiency	77.8 %
Fluid density	998 kg/m³	Power absorbed	450.27 kW
Viscosity	1.00 mm²/s	NPSH required	3.63 m
Flow rate	350.00 m³/h	Curve number	5 * 1777.407541/14 GG 1 *
Requested flow rate	350.00 m³/h		1777.407541/15 GG
Total developed head	367.87 m	Impeller diameter	370.0 / 327.0 mm
Requested developed head	367.83 m	Acceptance standard	ISO 9906 class 3B

Installation plan

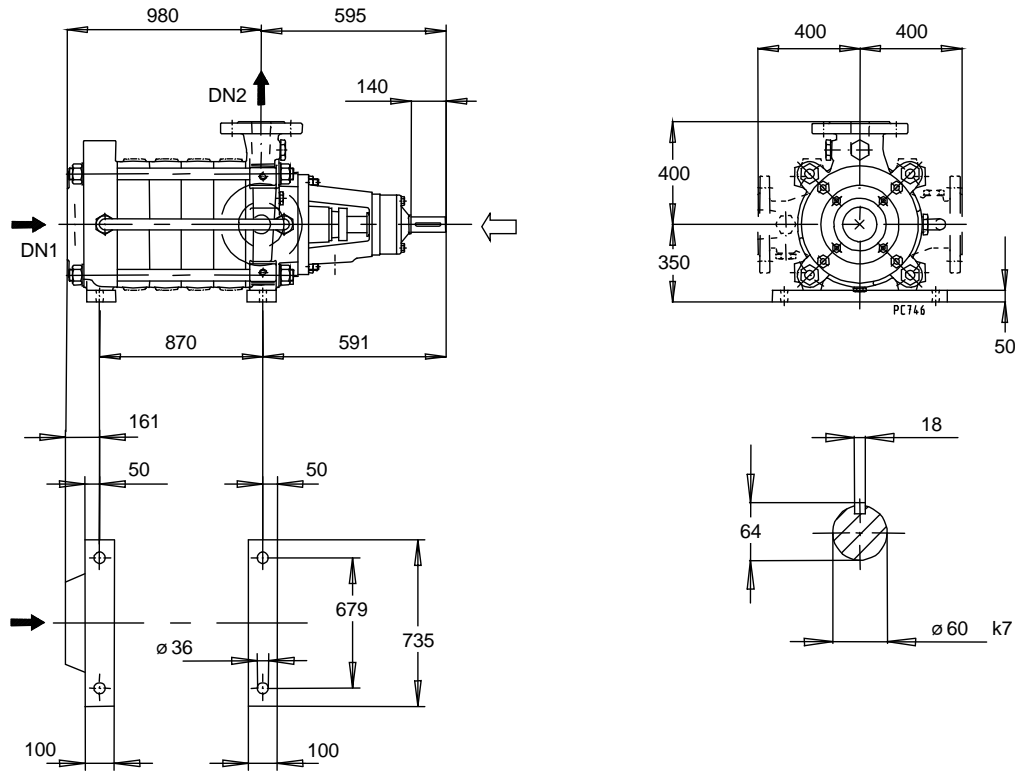


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Drawing is not to scale

Dimensions in mm

Motor

Not in scope of supply
 Number of poles 4

Connections

Suction nominal size DN1	DN 250 / EN 1092-1
Discharge nominal size DN2	DN 150 / EN 1092-1
Nominal pressure suct.	PN 25
Rated pressure disch.	PN 63

Weight net

Pump	985 kg
Total	985 kg

Connect pipes without stress or strain!

Dimensional tolerances for shaft axis height:
 Dimensions without tolerances, middle tolerances to:
 Connection dimensions for pumps:
 Dimensions without tolerances - welded parts:
 Dimensions without tolerances - gray cast iron parts:

DIN 747
 ISO 2768-m
 EN735
 ISO 13920-B
 ISO 8062-CT9

For auxiliary connections see separate drawing.

Connection plan

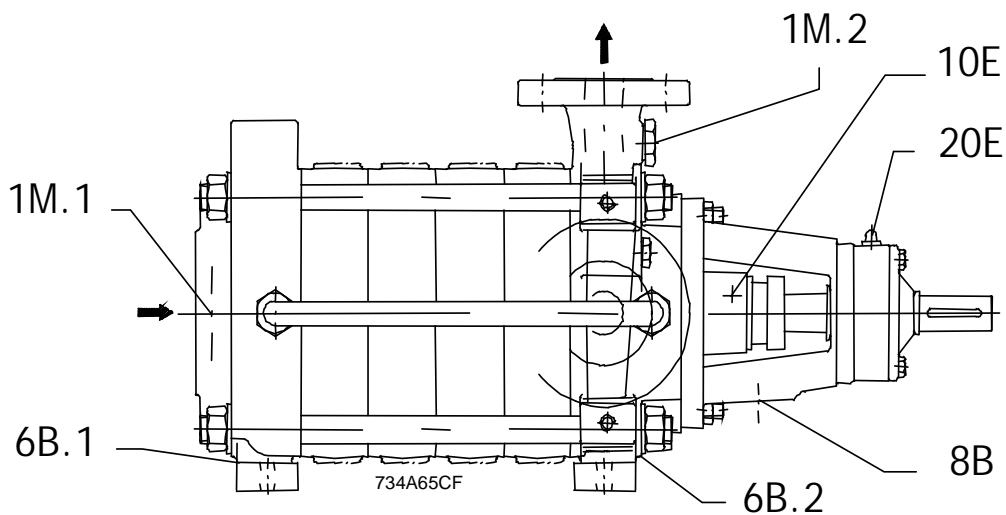


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Connections

1M.1 Pressure gauge connection	G 1	Drilled and plugged.
1M.2 Pressure gauge connection	G 1/2	Drilled and plugged.
6B.1 Pumped liquid drain	G 1/2	Drilled and plugged.
6B.2 Pumped liquid drain	G 1/2	Drilled and plugged.
8B Leakage drain	Rp 3/8	Drilled
10E Sealing liquid in	G 1/4	To be connected by customer.
20E Grease nipple		Mounted at the factory