Data sheet

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

Number: ES 3519390
Item no.: 100
Date: 19/03/2015

Omega 125-290 B GB P F

Version no.: 1

Operating data

Operating data determined for maximum inlet pressure

Pumped medium	Water Clean water Not containing chemical and mechanical substances which affect the materials
Ambient air temperature	20.0 °C
Fluid temperature	20.0 °C
Fluid density	998 kg/m³
Fluid viscosity	1.00 mm²/s
Suction pressure max.	0.20 bar.g
Suction pressure min.	0.20 bar.g
NPSH available	11.98 m
Mass flow rate	138.88 kg/s
Max. power on curve	182.28 kW

Actual flow rate	500.95 m³/h
Actual developed head	105.17 m
Efficiency	83.0 %
Power absorbed	172.44 kW
Pump speed of rotation	2985 rpm
NPSH required	11.98 m
NPSH 3%	8.45 m
Discharge press.	10.49 bar.g
Min. allow. flow for continuous stable operation	245.15 m³/h
Min. allow. mass flow for continuous stable operation	67.96 kg/s
Shutoff head	142.00 m
Max. allow. mass flow	171.68 kg/s
Design	Single system 1 x 100 %

Design

Pump standard	KSB axially split volute casing pump
Design	Pump and motor on common Baseframe (3E)
Orientation	Horizontal
Suction flange (AS)	EN 1092-2 / DN 200 / PN 16
drilling+seal face according to	21A / FF
Discharge flange (AD)	EN 1092-2 / DN 125 / PN 16
drilling+seal face according to	21A / FF
Shaft seal	Gland packing
Manufacturer	KSB
Type	RT-P
Sealing plan	PE Gland packing (external circulation)

Clean water operation: Pumped liquid with max. 50 mg/l solids.

Wear ring	Casing wear ring
Wear ring type	Standard design
Impeller diameter	301.0 mm
Minimum impeller diameter	232.0 mm
Full impeller diameter	301.0 mm
Free passage size	12.0 mm
Direction of rotation from drive	Clockwise
Bearing seal driver side	Lip seal
Bearing type driver side	Anti-friction bearings
Lubrication type driver side	Grease
Bearing sealing end side	Lip seal
Bearing type end side	Anti-friction bearings
Bearing lubrication end side	Grease
Temperature measurement tapping	with
Temperature sensor PT100 motor side	Without
Vibration measurement tapping	with
Color	Ultramarine blue (RAL 5002) KSB-blue

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Driver, accessories

Manufacturer	Flender
Coupling type	Eupex N
Nominal size	180
Coupling guard type	Lightweight, not treadproof (ZN79)
Guard size	A251
Guard material	Steel
Baseplate type	Pump and motor on common baseframe (3E) – light execution
Baseplate size	OM3E06
Motorside drill	No

Scope of mounting parts : Baseframe for pump set incl. foundation bolts

Features : Baseframe not suitable for pumpset transport / Without drip pan
Delivery : Pump, Motor and baseframe separately

Driver type	Electric motor
Drive standard mech.	IEC
Drive supplied by	Standard motor supplied by customer - mounted by customer
Motor const. type	B3
Motor size	315L
Frequency	50 Hz
Available reserve	15.98 %
Terminal box position	0°/360° (top) Viewed from the drive
Number of poles	2

Materials GB

Notes
general criteria for a water analysis: pH-value >= 7; chloride content (Cl) <=250 mg/kg. chlorine (Cl2) <=0.6 mg/kg. Ammonium (NH4+) <= 2 mg/kg, free of H2S; Chlorine (Cl2) <=0.6 mg/kg.

Volute casing (102)	Grey cast iron EN-GJL-250
Pump shaft (211)	Chrome steel 1.4021+QT800
Double-entry impeller (234)	Tin bronze CC480K-GS
Bearing housing (350.1)	Grey cast iron EN-GJL-250
Shaft seal housing (441)	Grey cast iron EN-GJL-250
Gland (452)	S235JR
Stuffing box insert (455)	Tin Bronze CC493K
Neck ring (457)	Tin Bronze CC493K
Lantern ring (458)	Tin Bronze CC493K
Casing wear ring (502)	Tin Bronze CC493K
Shaft protecting sleeve (524.1)	GX120CRMO29-2 1.4138

Certifications

Tests acc. to QCP-Plan

Test standard	QCP to ZN56555-1A

Acceptance standard: None; tolerances to ISO 9906 class 2

Test pressure	18.32 bar.g
Test time	10.0 min
Certificate	Without
Test participation	Non-witnessed
Quantity, non-witnessed	1
Quantity, witnessed	0

Balancing test

Balancing grade	G 6,3
Part	Impeller
Certificate	Without
Test participation	Non-witnessed
Quantity, non-witnessed	1
Quantity, witnessed	0

Final visual inspection

Certificate	Without
Test participation	Non-witnessed
Quantity, non-witnessed	1
Quantity, witnessed	0

Hydrostatic test (room temp.)

Range	Complete pump with shaft seal

Performance curve

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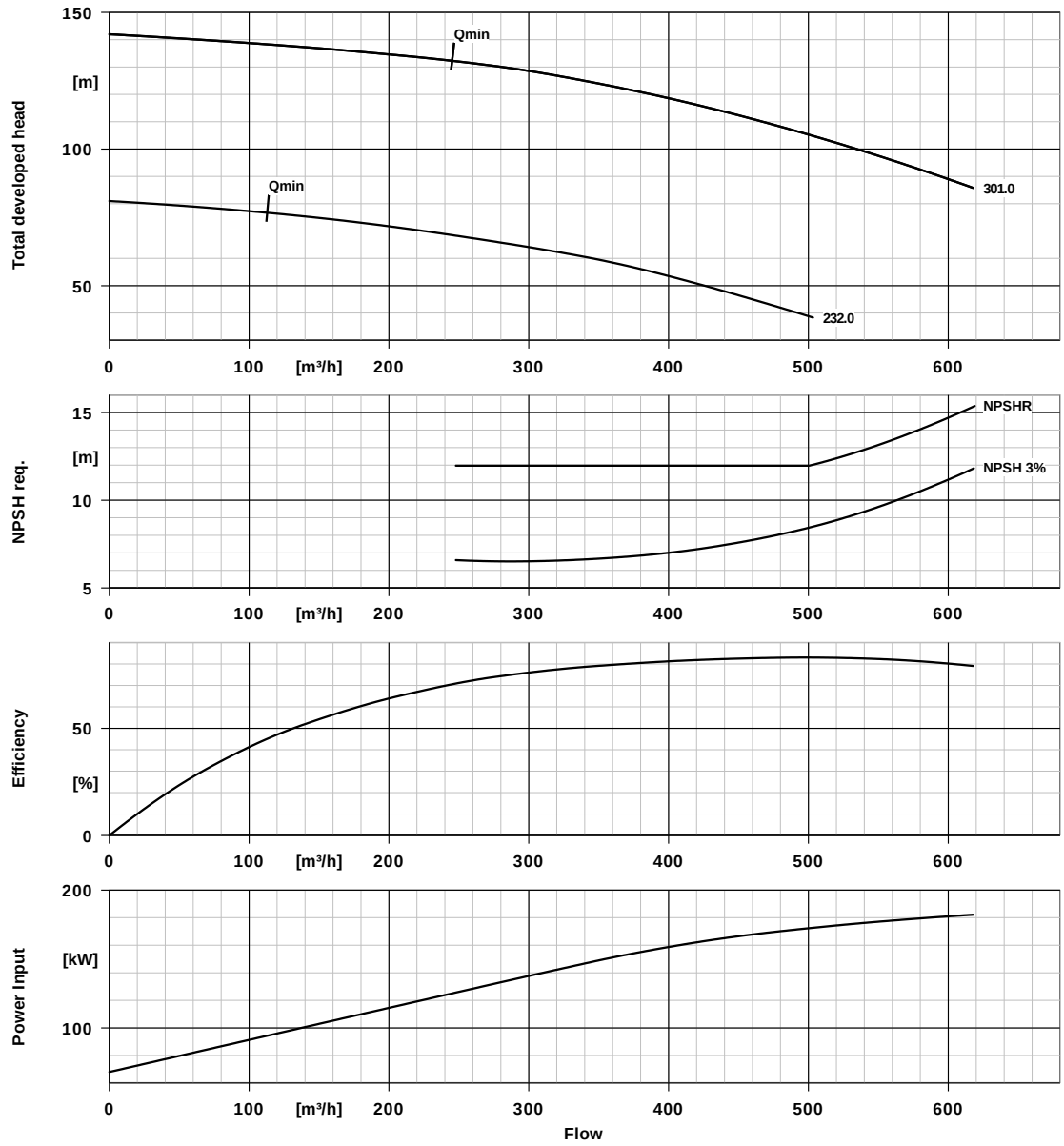

Curve data

Speed of rotation	2985 rpm	Power absorbed	172.44 kW
Fluid density	998 kg/m³	NPSH required	11.98 m
Viscosity	1.00 mm²/s	NPSH 3%	8.45 m
Flow rate	500.95 m³/h	Curve number	K42816
Total developed head	105.17 m	Effective impeller diameter	301.0 mm
Efficiency	83.0 %	Acceptance standard	tolerances to ISO 9906 class 2B; below 10 kW acc. to paragraph 4.4.2

Installation plan

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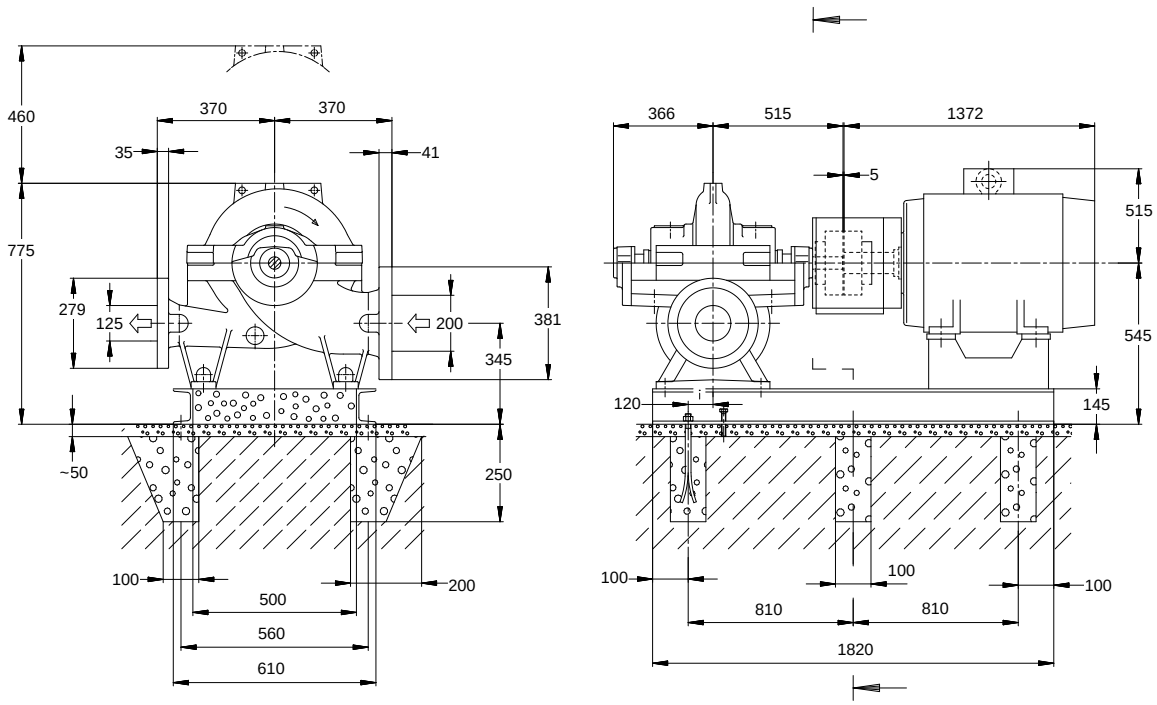

Drawing is not to scale

Dimensions in mm

Motor

Not in scope of supply

Motor manufacturer	Siemens
Motor size	315L
Motor power	200.00 kW
Number of poles	2
Speed of rotation	2985 rpm

Baseplate

Design	Pump and motor on common baseframe (3E) – light execution
Size	OM3E06
Material	S235JR
Leakage drain baseplate (8B)	Rp1, Without
Foundation bolts	M16x250

Connections

Suction flange (AS)	EN 1092-2 / DN 200 / PN
drilling+seal face according to	16 21A / FF
Discharge flange (AD)	EN 1092-2 / DN 125 / PN
drilling+seal face according to	16 21A / FF

Coupling

Coupling manufacturer	Flender
Coupling type	Eupex N
Coupling size	180
Spacer	0.0 mm

Weight net

Pump	275 kg
Baseplate	155 kg
Coupling	14 kg
Coupling guard	3 kg
Motor	1180 kg
Total	1627 kg

Connect pipes without stress or strain!

Notes for dimensions:
Drawing is not to scale.
Admissible tolerances for shaft height: DIN 747
Dimensions without tolerance indication: ISO 2768 CK

For auxiliary connections see separate drawing.

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Dimensions without tolerance indication – Welded parts: ISO 13920 – B/F
Dimensions without tolerance indication – Cast parts: ISO 8062 – CT13 – RMA(H)

General notes:
Piping must be connected free of stress. The pump must not be used as support for the piping (The pump is not an anchor point for the piping). The piping must be fixed in such a way that no forces, vibrations or the weight of the piping is transferred to the pump. Restrictions for forces and moments on suction and pressure nozzle must be considered. Connection by means of unrestrained expansion joints is not permitted!!

Connection plan

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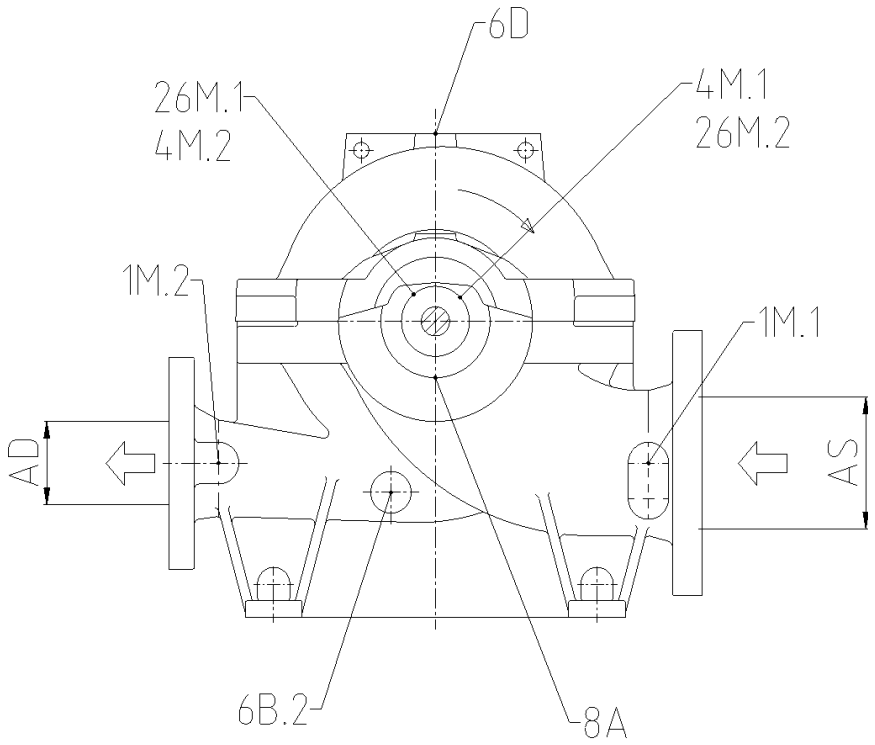

Connections

1M.1 Pressure gauge connection	G 1/2	Drilled and plugged.
1M.2 Pressure gauge connection	G 1/2	Drilled and plugged.
4M.1 Temperature gauge connection (Suction side)	G 1/2	Drilled and plugged.
4M.2 Temperature gauge connection (Pressure side)	G 1/2	Drilled and plugged.
6B.2 Pumped liquid drain	G 1/2	Drilled and plugged.
6D Pumped medium - filling / venting		Flexible pipe with four way connector and vent plugged
8A Leakage drain	G 3/4	Drilled and plugged.
26M.1 SPM sensor connection (driver side)	M 8	Drilled and plugged.
26M.2 SPM sensor connection (non-driver side)	M 8	Drilled and plugged.