

## Data sheet



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

Number: ES 3519390  
Item no.: 100  
Date: 19/03/2015  
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### Omega 125-290 A GB P F

Version no.: 1

#### Operating data

Operating data determined for maximum inlet pressure		Actual flow rate	551.34 m <sup>3</sup> /h
Pumped medium	Water	Actual developed head	114.05 m
	Clean water	Efficiency	84.1 %
	Not containing chemical and mechanical substances which affect the materials	Power absorbed	203.15 kW
Ambient air temperature	20.0 °C	Pump speed of rotation	2989 rpm
Fluid temperature	20.0 °C	NPSH required	11.92 m
Fluid density	998 kg/m <sup>3</sup>	NPSH 3%	8.05 m
Fluid viscosity	1.00 mm <sup>2</sup> /s	Discharge press.	11.35 bar.g
Suction pressure max.	0.19 bar.g	Min. allow. flow for continuous stable operation	288.87 m <sup>3</sup> /h
Suction pressure min.	0.19 bar.g	Min. allow. mass flow for continuous stable operation	80.08 kg/s
NPSH available	11.93 m	Shutoff head	143.43 m
Mass flow rate	152.84 kg/s	Max. allow. mass flow	191.45 kg/s
Max. power on curve	222.23 kW	Design	Single system 1 x 100 %

#### Design

Pump standard	KSB axially split volute casing pump	Full impeller diameter	301.0 mm
Design	Pump and motor on common Baseframe (3E)	Free passage size	19.0 mm
Orientation	Horizontal	Direction of rotation from drive	Clockwise
Suction flange (AS) drilling+seal face according to	EN 1092-2 / DN 200 / PN 16 21A / FF	Bearing seal driver side	Lip seal
Discharge flange (AD) drilling+seal face according to	EN 1092-2 / DN 125 / PN 16 21A / FF	Bearing type driver side	Anti-friction bearings
Shaft seal	Gland packing	Lubrication type driver side	Grease
Manufacturer	KSB	Bearing sealing end side	Lip seal
Type	RT-P	Bearing type end side	Anti-friction bearings
Sealing plan	PE Gland packing (external circulation)	Bearing lubrication end side	Grease
Clean water operation: Pumped liquid with max. 50 mg/l solids.		Temperature measurement tapping	with
Wear ring	Casing wear ring	Temperature sensor PT100 motor side	Without
Wear ring type	Standard design	Vibration measurement tapping	with
Impeller diameter	301.0 mm	Color	Ultramarine blue (RAL 5002) KSB-blue
Minimum impeller diameter	232.0 mm		

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**Driver, accessories**

Manufacturer	Flender	Features : Baseframe not suitable for pumpset transport / Without drip pan
Coupling type	Eupex N	Delivery : Pump, Motor and baseframe separately
Nominal size	180	Driver type
Coupling guard type	Lightweight, not treadproof (ZN79)	Drive standard mech.
Guard size	A251	Drive supplied by
Guard material	Steel	Motor const. type
Baseplate type	Pump and motor on common baseframe (3E) – light execution	Motor size
Baseplate size	OM3E06	Frequency
Motorside drill	No	Available reserve
Scope of mounting parts : Baseframe for pump set incl. foundation bolts		Terminal box position
		Number of poles

**Materials GB**

Notes		Shaft seal housing (441)	Grey cast iron EN-GJL-250
general criteria for a water analysis: pH-value >= 7; chloride content (Cl) <=250 mg/kg. chlorine (Cl2) <=0.6 mg/kg.		Gland (452)	S235JR
Ammonium (NH4+) <= 2 mg/kg, free of H2S; Chlorine (Cl2) <=0.6 mg/kg.		Stuffing box insert (455)	Tin Bronze CC493K
Volute casing (102)	Grey cast iron EN-GJL-250	Neck ring (457)	Tin Bronze CC493K
Pump shaft (211)	Chrome steel 1.4021+QT800	Lantern ring (458)	Tin Bronze CC493K
Double-entry impeller (234)	Tin bronze CC480K-GS	Casing wear ring (502)	Tin Bronze CC493K
Bearing housing (350.1)	Grey cast iron EN-GJL-250	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	18.50 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

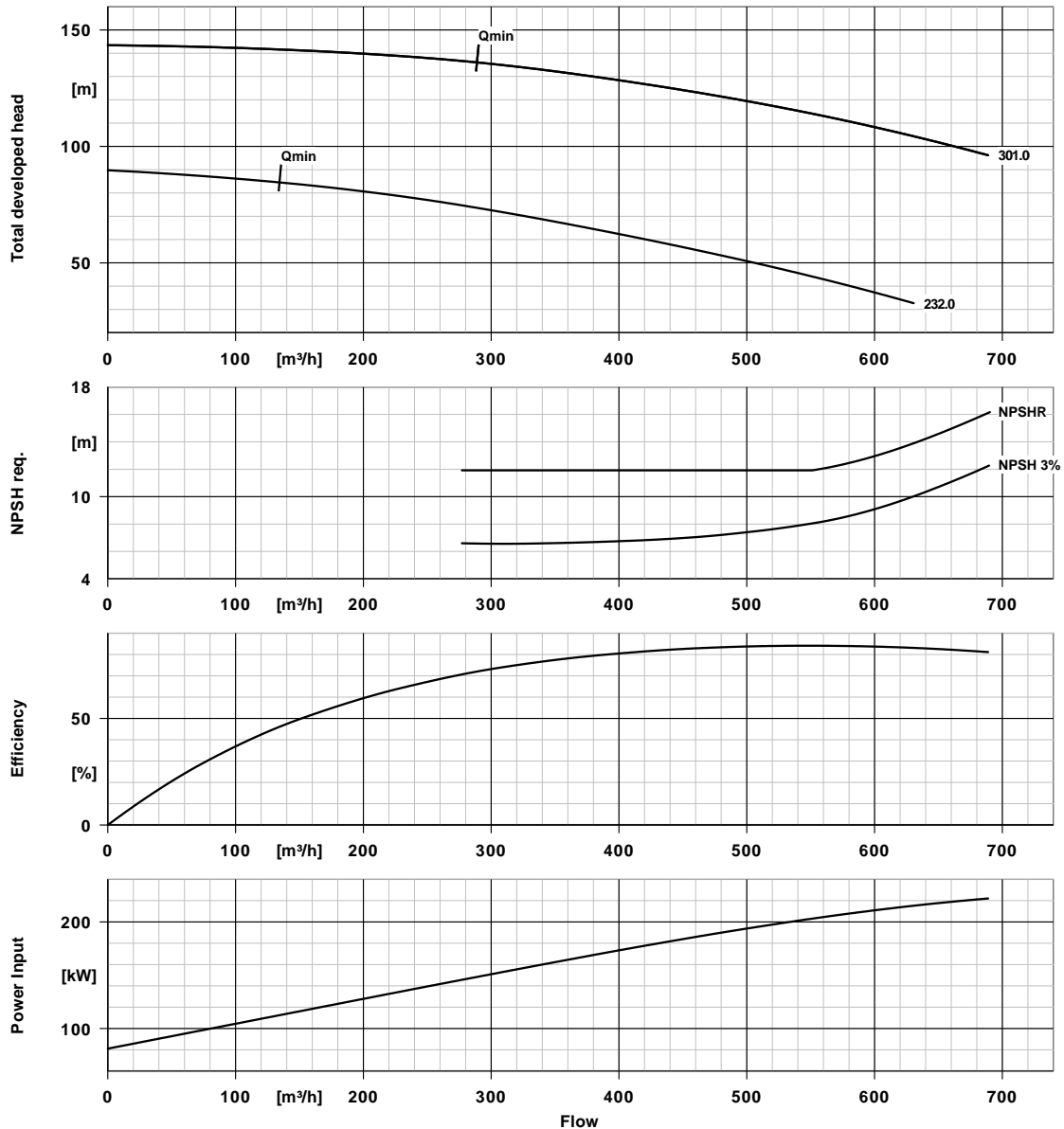


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### Curve data

Speed of rotation	2989 rpm	Power absorbed	203.15 kW
Fluid density	998 kg/m³	NPSH required	11.92 m
Viscosity	1.00 mm²/s	NPSH 3%	8.05 m
Flow rate	551.34 m³/h	Curve number	K42782
Total developed head	114.05 m	Effective impeller diameter	301.0 mm
Efficiency	84.1 %	Acceptance standard	tolerances to ISO 9906 class 2B; below 10 kW acc. to paragraph 4.4.2

# Installation plan

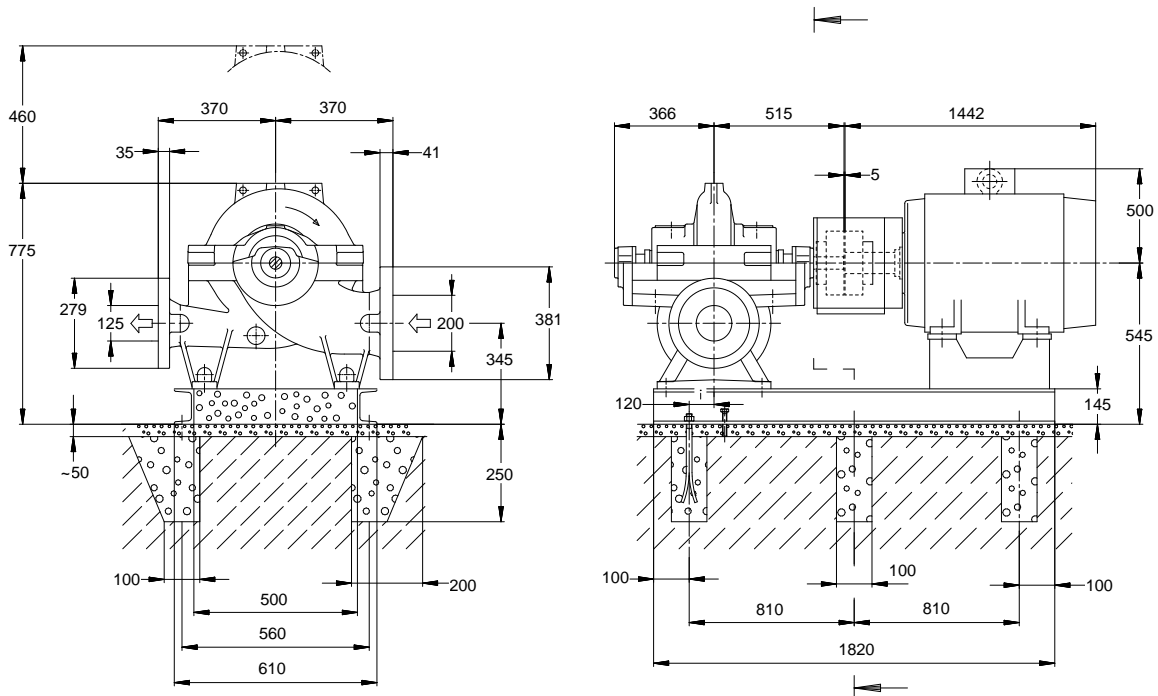


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Drawing is not to scale

Dimensions in mm

### Motor

Not in scope of supply  
 Motor manufacturer Siemens  
 Motor size 315L  
 Motor power 250.00 kW  
 Number of poles 2  
 Speed of rotation 2989 rpm

### Baseplate

Design Pump and motor on common baseframe (3E) – light execution  
 Size OM3E06  
 Material S235JR  
 Leakage drain baseplate Rp1, Without (8B)  
 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 1280 kg  
 Total 1727 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.**

## Installation plan



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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

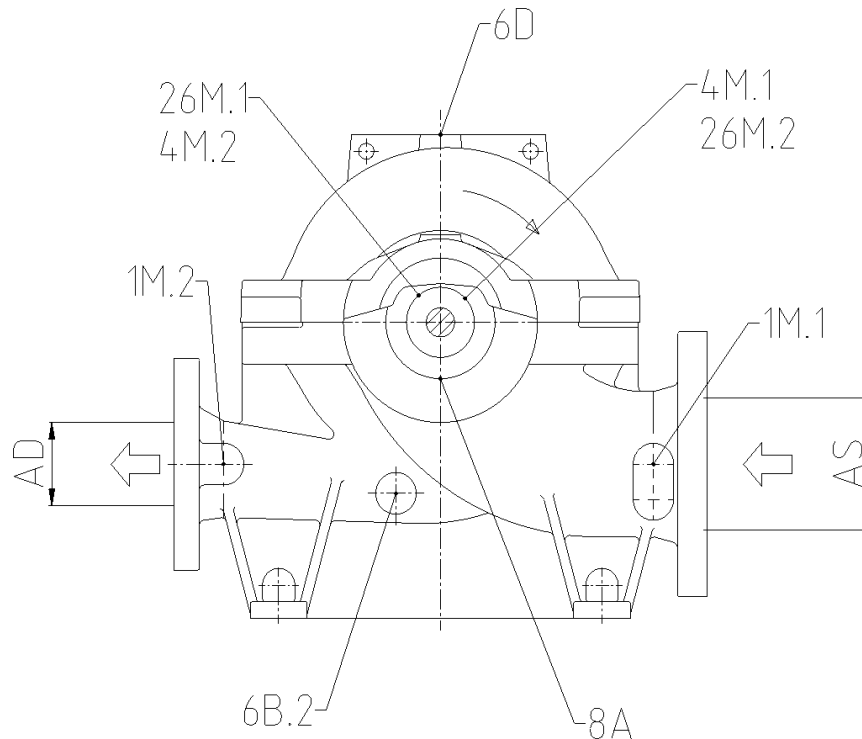


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### Connections

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.