

Etanorm 125-100-400 GC
 ETN 125-100-400-GCSAA11 GSHFO4AHB

Operating point 1 Dimensioning operating point

Operating conditions (purchaser requirements)

Target flow rate	100 m ³ /h	Vapour pressure determined	-0.9766 bar.a
Target mass flow rate	27.72 kg/s	Minimum inlet pressure required	-0.3 bar
Target head	55 m	Specified ambient temperature	20 °C
Fluid	Water	Installation altitude above sea level	1,000 m
Fluid variant	Clean water		
Specified fluid temperature	20 °C		
Density Fluid handled	998 kg/m ³		
Kinematic viscosity Fluid handled	1 mm ² /s		

Operating conditions (performance)

Flow rate	100.03 m ³ /h	Maximum power input at duty point	23.56 kW
Minimum permissible flow rate	32.63 m ³ /h	Maximum power input / curve	41.85 kW
Head	55.03 m	Pump speed	1,477 1/min
Shut-off head	56.91 m	Discharge pressure-max.	5.57 bar
Efficiency Pump	63.02 %		
NPSH required	1.71 m		

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Design data pump

Scope of supply Pump supplied by KSB	Bare-shaft pump	Mains voltage	400 V
Pump standard	EN 733	Mains frequency	50 Hz
Shaft axis position	Horizontal	Minimum efficiency index MEI	0.5
Pump design	Long-coupled (basepl-mounted)	Minimum permissible fluid temperature	0 °C
Pump system design	Single-pump system	Maximum permissible fluid temperature	60 °C
Specification of wetted parts	Manufactured without paint wetting impairment substances	Quantity Stages, single-entry	1
Pump direction of rotation, viewed from casing side	Counterclockwise	Casing wear ring design suction-side	Flat
Impeller diameter D2	391 mm	Casing wear ring design discharge-side	Flat
Impeller type	Radial, closed, multi-channel	Installation chamber Casing cover	Conical (A-type cover)
Free passage	17.1 mm	Bearing bracket size / shaft unit	55
Nut lock for Impeller	No	Bearing bracket type	Bearing bracket
Swirl break	No	Bearing bracket design	Medium
		Pump bearing type, non-drive end	Anti-friction bearing
		Pump bearing type, drive end	Anti-friction bearing
		Lubrication type	Grease lubrication
		Bearing seal Pump	V-ring
		Pump directive	CE

Nozzle connections pump

Nominal diameter Suction nozzle	DN 125	Nominal diameter Discharge nozzle	DN 100
Nominal pressure Suction nozzle	PN 16	Nominal pressure Discharge nozzle	PN 16
Suction nozzle position	Axial	Discharge nozzle position	0 deg
Suction nozzle design acc.to	EN1092-2	Discharge nozzle design acc.to	EN1092-2
Suction flange bolt hole pattern as per standard	EN1092-2	Discharge flange bolt hole pattern as per standard	EN1092-2
Flange facing type Inlet	Raised face (B,RF)		
Flange facing type Outlet	Raised face (B,RF)		

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Auxiliary connections pump

6B Fluid Drain	G 1/2 Drilled and plugged	1M Pressure gauge	Without
		Discharge nozzle	Without
6D Fluid Filling and venting	G 1/2 Drilled and plugged	1M Pressure gauge Suction nozzle	Without Without
8B Leakage Drain	G 1/2 Drilled		

Shaft sealing

Shaft seal type	SMS A-type cover	Shaft seal code	Code 11
Operating mode of mechanical seal (function)	API plan 03	Shaft seal manufacturer inboard	KSB's choice
Determined pressure Seal chamber	0.51 bar	Mechanical seal type inboard	1
		Material Shaft seal inboard	BQ1EGG-WA

Materials

Material Volute casing	EN-GJL-250/A48 CL 35B	Material Bolts/Screws	8.8
Material Casing cover	EN-GJL-250/A48 CL 35B	Hydraulic casing	
Material Shaft	C45+N	Material Screw plug Hydraulic casing	ST
Material Impeller	1.4408/A743CF8M	Material Static seal Screw plug Volute casing	A4/AISI 316
Material Casing wear ring suction-side	JL/LAMELLAR GRAPHITE CAST IRON	Material Nut Impeller fastening	(CRNIMO ST INT)
Material Casing wear ring discharge-side	JL/LAMELLAR GRAPHITE CAST IRON	Material Key	1.4571+C/A276 TP 316 COND B
Material Shaft protecting sleeve	(CRNIMO ST INT)		
Material Bearing bracket	EN-GJL-250/A48 CL 35B		
Material Static seal Discharge cover	DPAF DW001		

Driver

Electric motor	No	Rated speed Motor	1,470 1/min
Drive concept	With electric actuator	Number of motor poles	4
Drive standard, mechanical	IEC	Rated power Motor	30 kW
Drive standard electric	IEC		
Motor construction type	IM B3 (IM1001) IEC 60034-7		
Motor size	200L		

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Coating

Aggregate

Surface preparation

Properties Primer coat

Thickness Primer coat

Properties Top coat

Thickness Top coat

Colour Top coat

Colour Top coat Drive

Free from dirt, grease, rust

Hydro dip primer, water-dilutable

60 µm

Acrylate dispersion water-thin

40 µm

RAL5002 Ultramarine Blue

RAL5002 Ultramarine Blue

Packaging

Suitable for transport

Truck transport

Suitable for storage

Indoor storage

Packaging category

KSB's choice (A0)

Nameplates

Product properties

Specification of wetted parts

Manufactured without paint wetting impairment substances

Standard Test of specification of wetted parts

KSB documentation

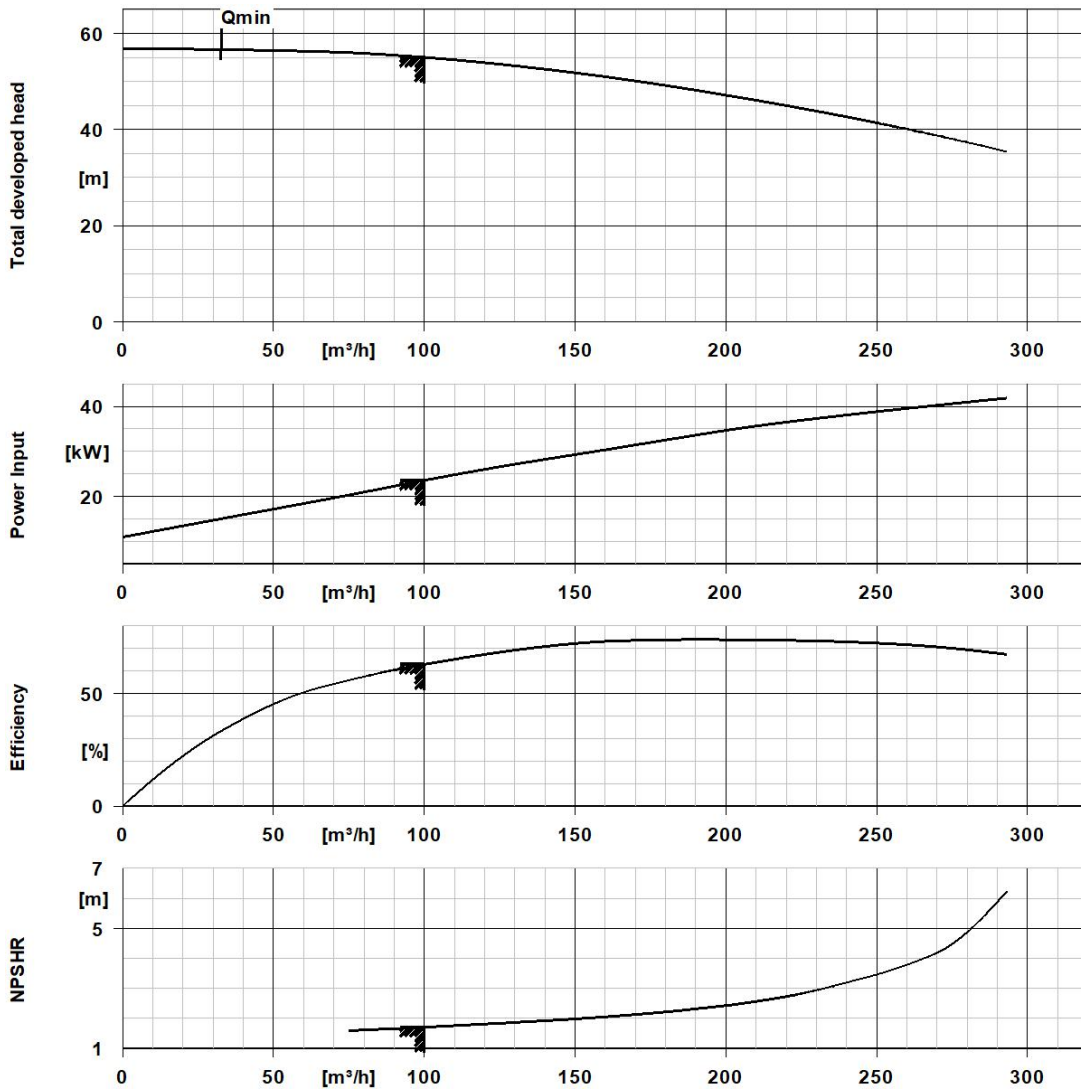
Certificate Check of specification of wetted parts

Without

Performance Curve (Pump)



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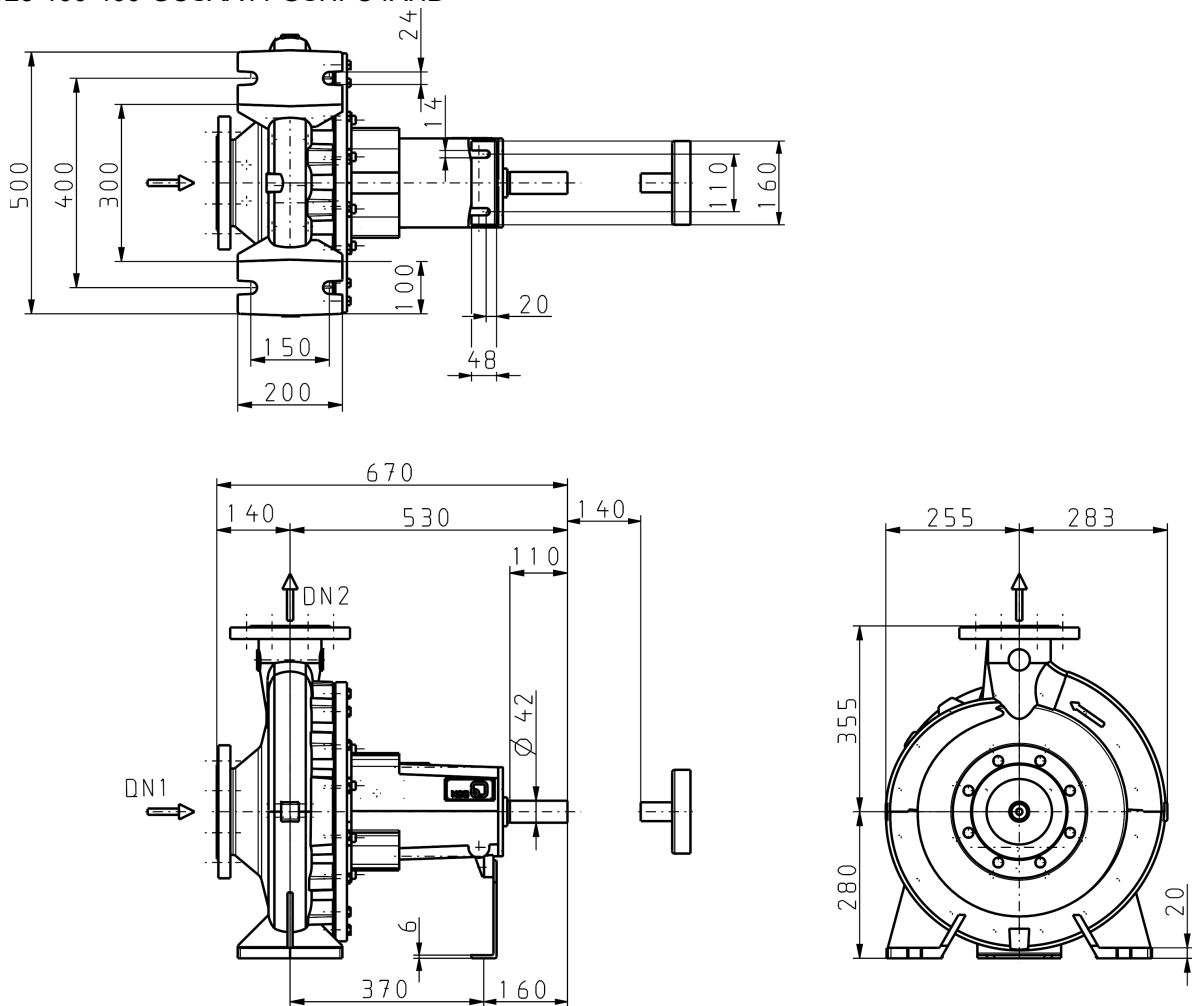


Curve Data

Pump speed	1,477 1/min	Efficiency Pump	63 %
Density Fluid handled	998 kg/m ³	Minimum efficiency index MEI	0.5
Kinematic viscosity Fluid handled	1 mm ² /s	Maximum power input at duty point	23.6 kW
Flow rate	100 m ³ /h	NPSH required	1.71 m
Head	55 m	Hydraulic impeller diameter	390.1 mm
		Hydraulic calculation according to standard/class	EN ISO 9906 Class 3B

According to EN ISO 9906, §4.4.2 (pump input power below 10 kW)

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Drawing is not to scale.

Dimensions are given in mm

Motor

Rated power Motor 30 kW
 Rated speed Motor 1,470 1/min

Connections

Nominal diameter Suction nozzle DN 125
 Suction flange bolt hole pattern as per standard EN1092-2
 Nominal diameter Discharge nozzle DN 100
 Discharge flange bolt hole pattern as per standard EN1092-2
 Nominal pressure Suction nozzle PN 16
 Nominal pressure Discharge nozzle PN 16

Net weight

Total weight Pump 173 kg

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Connect pipelines stress-free

Plan for additional connections see extra drawing

Dimensional tolerances for shaft axis height: DIN 747

Dimensions without tolerances, middle tolerances to: ISO 2768-m

Connection dimensions for pumps: EN735

Dimensions without tolerances - welded parts: ISO 13920-B

Dimensions without tolerances - gray cast iron parts: ISO 8062-CT9