

Etanorm 150-125-315 GC
 ETN 150-125-315-GCSAA22 GSHGO4AHB

Operating point 1 Dimensioning operating point

Operating conditions (purchaser requirements)

Target flow rate	275 m ³ /h	Vapour pressure determined	-0.977 bar.r
Target head	40 m	Minimum inlet pressure required	-0.3 bar.r
Fluid	Water	Specified ambient temperature	20 °C
Fluid variant	Clean water	Installation altitude above sea level	1,000 m
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	274.95 m ³ /h	Maximum power input at duty point	37.1 kW
Minimum permissible flow rate	45.68 m ³ /h	Maximum power input / curve	42.6 kW
Head	39.99 m	Pump speed	1,753 1/min
Shut-off head	46.21 m	Discharge pressure-max.	4.52 bar.r
Efficiency Pump	80.6 %		
NPSH required	3.11 m		

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Design data pump

Scope of supply Pump supplied by KSB	Bare-shaft pump	Mains voltage	460 V
Pump standard	EN 733	Mains frequency	60 Hz
Shaft axis position	Horizontal	Minimum efficiency index MEI	0.4
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	300 mm	Casing wear ring design discharge-side	Flat
Impeller type	Radial, closed, multi-channel	Installation chamber Casing cover	Conical (A-type cover)
Free passage	22.6 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	NPS 6	Nominal diameter Discharge nozzle	NPS 5
Nominal pressure Suction nozzle	CL 125	Nominal pressure Discharge nozzle	CL 125
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	ASME B 16.1	Discharge flange bolt hole pattern as per standard	ASME B 16.1
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 Discharge nozzle	Without 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 22
Operating mode of mechanical seal (function)	API plan 03	Shaft seal manufacturer inboard	BURGMANN
Determined pressure Seal chamber	0.36 bar.r	Mechanical seal type inboard	M32N69
		Material Shaft seal inboard	AQ1EGG

Materials

Material Volute casing (102)	EN-GJL-250/A48 CL 35B	Material Bolts/Screws	A4-70/A193 GR B8M CL2
Material Casing cover (161)	EN-GJL-250/A48 CL 35B	Hydraulic casing (902.01)	
Material Shaft	C45+N	Material Screw plug Hydraulic casing	A4/AISI 316
Material Impeller (230)	1.4408/A743CF8M	Material Static seal Screw plug Volute casing	A4/AISI 316
Material Casing wear ring suction-side (502.01)	JL/LAMELLAR GRAPHITE CAST IRON	Material Nut Impeller fastening (920.95)	(CRNIMO ST INT)
Material Casing wear ring discharge-side (502.02)	JL/LAMELLAR GRAPHITE CAST IRON	Material Key	1.4571+C/A276 TP 316 COND B
Material Shaft protecting sleeve (523)	(CRNIMO ST INT)		
Material Bearing bracket (330)	EN-GJL-250/A48 CL 35B		
Material Static seal Discharge cover	DPAF DW001		

Driver

Electric motor	No	Rated speed Motor	1,750 1/min
Drive concept	With electric actuator	Number of motor poles	4
Drive standard, mechanical	IEC	Rated power Motor	45 kW
Drive standard electric	IEC		
Motor construction type	IM B3 (IM1001) IEC 60034-7		
Motor size	225M		

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Coating

Aggregate

Surface preparation

Properties Primer coat

Thickness Primer coat

Properties Top coat

Thickness Top coat

Colour Top coat

Free from dirt, grease, rust

Hydro dip primer, water-dilutable

60 µm

Acrylate dispersion water-thin

40 µm

RAL5002 Ultramarine Blue

Packaging

Suitable for transport

Suitable for storage

Packaging category

IPPC Standard ISPM 15

Truck transport

Indoor storage

Wooden crate (A07)

Yes

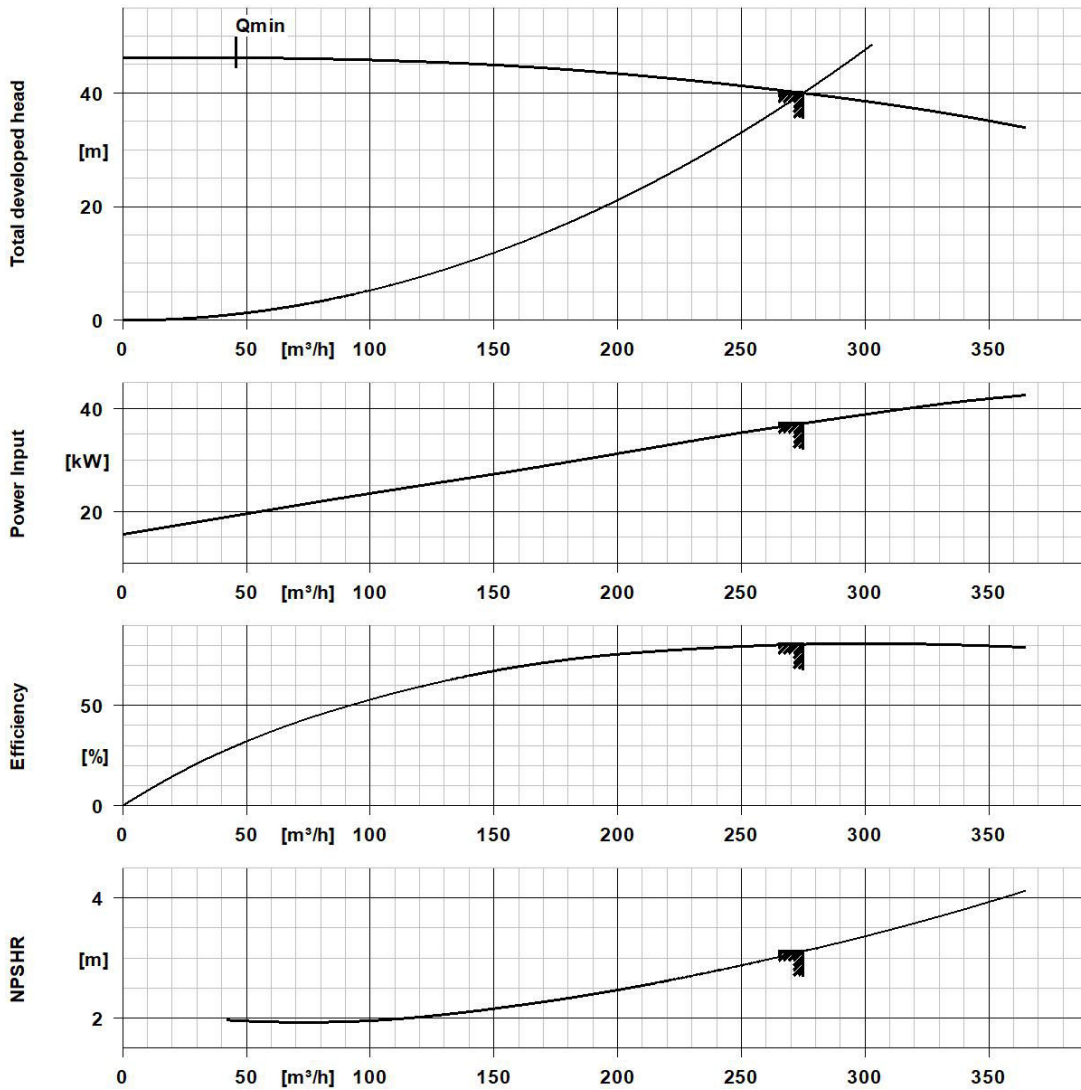
Nameplates

Duplicate name plate No

Performance Curve (Pump)



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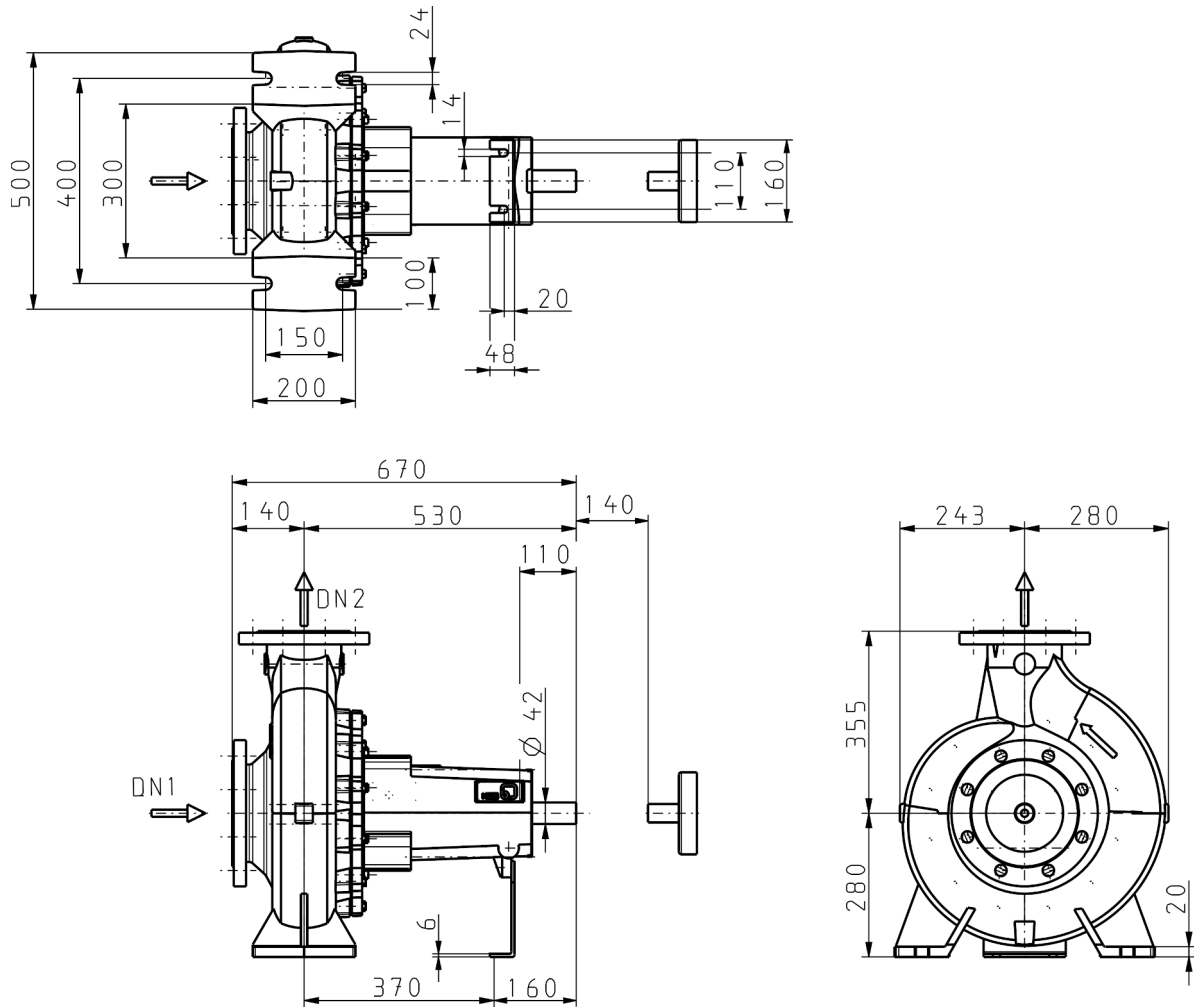


Curve Data

Pump speed	1,753 1/min	Efficiency Pump	80.6 %
Density Fluid handled	998 kg/m ³	Minimum efficiency index MEI	0.4
Kinematic viscosity Fluid handled	1 mm ² /s	Maximum power input at duty point	37.1 kW
Flow rate	274.95 m ³ /h	NPSH required	3.11 m
Head	39.99 m	Hydraulic impeller diameter	300 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	45 kW
Rated speed Motor	1,750 1/min

Connections

Nominal diameter Suction nozzle	NPS 6
Suction flange bolt hole pattern as per standard	ASME B 16.1
Nominal diameter Discharge nozzle	NPS 5
Discharge flange bolt hole pattern as per standard	ASME B 16.1
Nominal pressure Suction nozzle	CL 125
Nominal pressure Discharge nozzle	CL 125

Net weight

Total weight Pump	160.8 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