Technical Datasheet

Customer Item No.:
Inquiry Date: 24/07/2025
Inquiry No.:
Quantity: 1

Quotation:
Item no.: 100
Date: 24/07/2025

Etanorm 200-150-400 GC
ETN 200-150-400-GCSAA10 GSHGY4AHB

Version No.: 0

Operating point 1 Dimensioning operating point

Operating conditions (purchaser requirements)

Fluid	Water	Vapour pressure determined	0.02337 bar.a
Fluid variant	Clean water	Minimum inlet pressure required	-0.3 bar.r
Specified fluid temperature	20 °C	Specified ambient temperature	20 °C
Density Fluid handled	998 kg/m³	Installation altitude above sea level	1,000 m
Kinematic viscosity Fluid handled	1 mm²/s		

Operating conditions (performance)

Flow rate	406.84 m³/h	Maximum power input at duty point	53.07 kW
Minimum permissible flow rate	61.49 m³/h	Maximum power input / curve	59.45 kW
Maximum permissible flow rate Pump set	442.6 m³/h	Pump speed	1,481 1/min
Head	40.46 m	Shut-off discharge pressure	5.015 bar.r
Maximum head of characteristic curve	51.24 m		
Shut-off head	51.24 m		
Efficiency Pump	84.36 %		
NPSH required	2.47 m		

Design data pump

Scope of supply Pump supplied by KSB	Bare-shaft pump	Mains frequency	50 Hz
		Minimum efficiency index MEI	0.6
Pump standard	EN 733	Minimum permissible fluid temperature	0 °C
Shaft axis position	Horizontal		
Pump design	Long-coupled (baseplate-mounted)	Maximum permissible fluid temperature	60 °C
Pump system design	Single-pump system	Quantity Stages, single-entry	1
Pump direction of rotation, viewed from casing side	Counterclockwise	Casing wear ring design suction-side	Flat
Hydraulic impeller diameter	364 mm	Casing wear ring design discharge-side	Flat
Impeller type	Radial, closed, multi-channel		
Free passage	23.8 mm	Installation chamber Casing cover	Conical (A-type cover)
		Bearing bracket size / shaft unit	55
		Bearing bracket design	Medium
		Lubrication type	Grease lubrication
		Bearing seal Pump	V-ring
		Pump directive	CE

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Nozzle connections pump

Nominal diameter Suction nozzle	DN 200	Nominal diameter Discharge nozzle	DN 150
Nominal pressure Suction nozzle	PN 10	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)		

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	Single mechanical seal (A-type cover) - A	Shaft seal code	Code 10
Operating mode of mechanical seal (function)	API plan 03	Shaft seal manufacturer inboard	KSB's choice
Determined pressure Seal chamber	0.43 bar.r	Mechanical seal type inboard	KSB's choice
		Material Shaft seal inboard	QQXGG

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Materials

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

Driver

Asynchronous motors	No	Rated speed Motor	1,480 1/min
Drive concept	Electric actuator	Number of motor poles	4
Drive standard, mechanical	IEC	Rated power Motor	55 kW
Drive standard electric	IEC		
Motor construction type	IM B3 (IM1001) IEC 60034-7		
Motor size	250M		

Coating

	Aggregate
Surface preparation	Free from dirt, grease, rust
Properties Primer coat	Hydro dip primer, water-dilutable
Thickness Primer coat	60 µm
Properties Top coat	Acrylate dispersion water-thinned
Thickness Top coat	40 µm
Colour Top coat	RAL5002 Ultramarine Blue

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Energy cost and Environmental Impact

Result

Estimated Product Carbon Footprint (cradle-to-gate) (CO2eq) 811 kg
*

This PCF indication is based on the product mass assuming the typicalsha res of materials in use. The conversion rate between product mass andCO2 emissions is based on several life cycle assessments acc. to ISO14040 / 14044 of sample products of the same type series. Objective andscope of these LCAs was defined as being limited to the manufacturingphase (crad le-to-gate). With regard to inputs, all materials, energy andauxiliary m aterials were accounted for, and with regard to outputs,emissions, scrap and waste were accounted for. The impact of outboundlogistics is not co vered. The assessments' input variables cover atleast 95 % of the total product mass. The analysis focuses exclusivelyon the Global Warming Pote ntial (EF3.0 Climate Change – total).

Packaging

Suitable for transport	Truck transport
Suitable for storage	Indoor storage
Packaging category	KSB's choice (A0)

Performance Curve (Pump)

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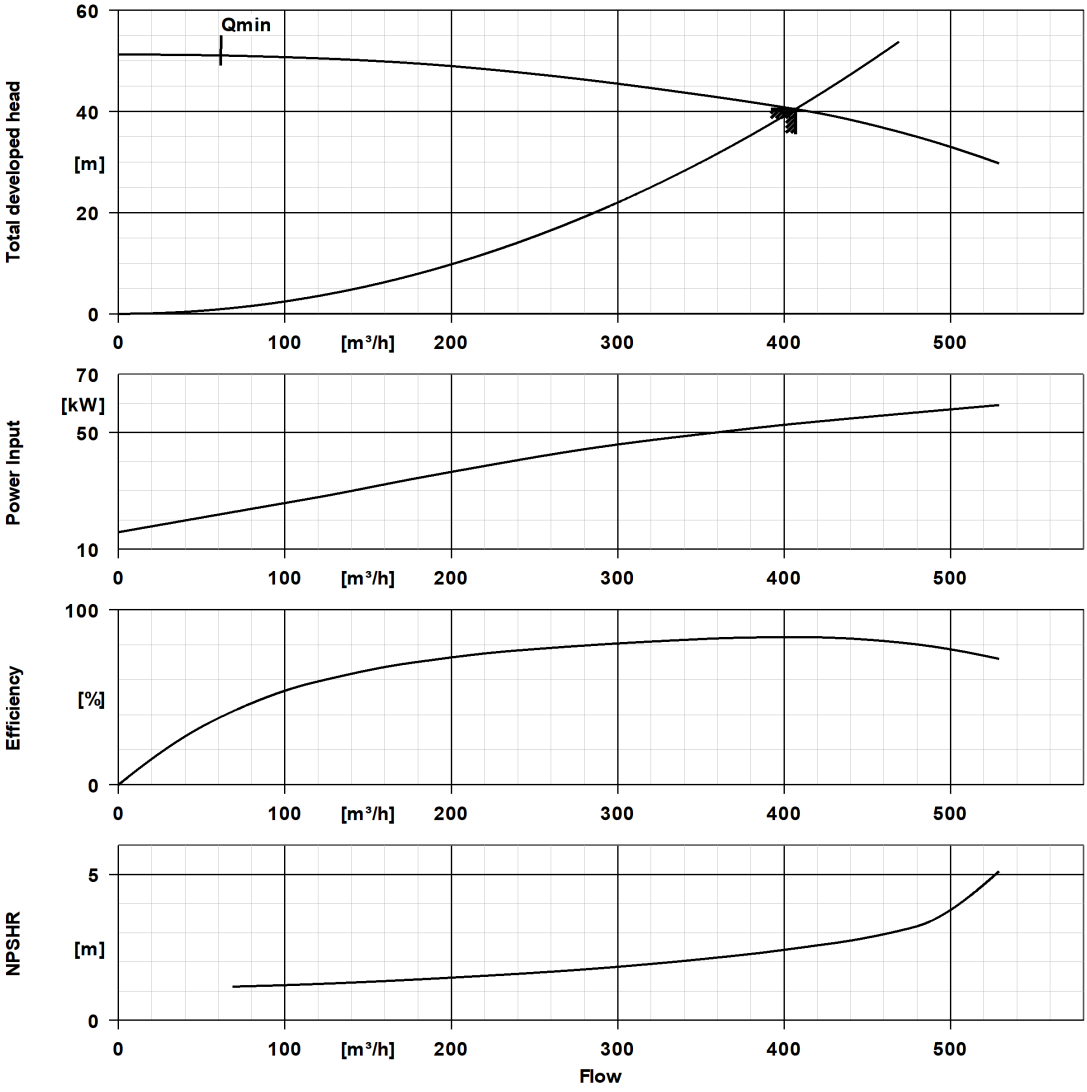

Curve Data

Pump speed	1,481 1/min	Efficiency Pump	84.4 %
Density Fluid handled	998 kg/m³	Minimum efficiency index MEI	0.6
Kinematic viscosity Fluid handled	1 mm²/s	Maximum power input at duty point	53.1 kW
Flow rate	407 m³/h	NPSH required	2.47 m
Head	40.5 m	Hydraulic impeller diameter	364 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)

Installation plan

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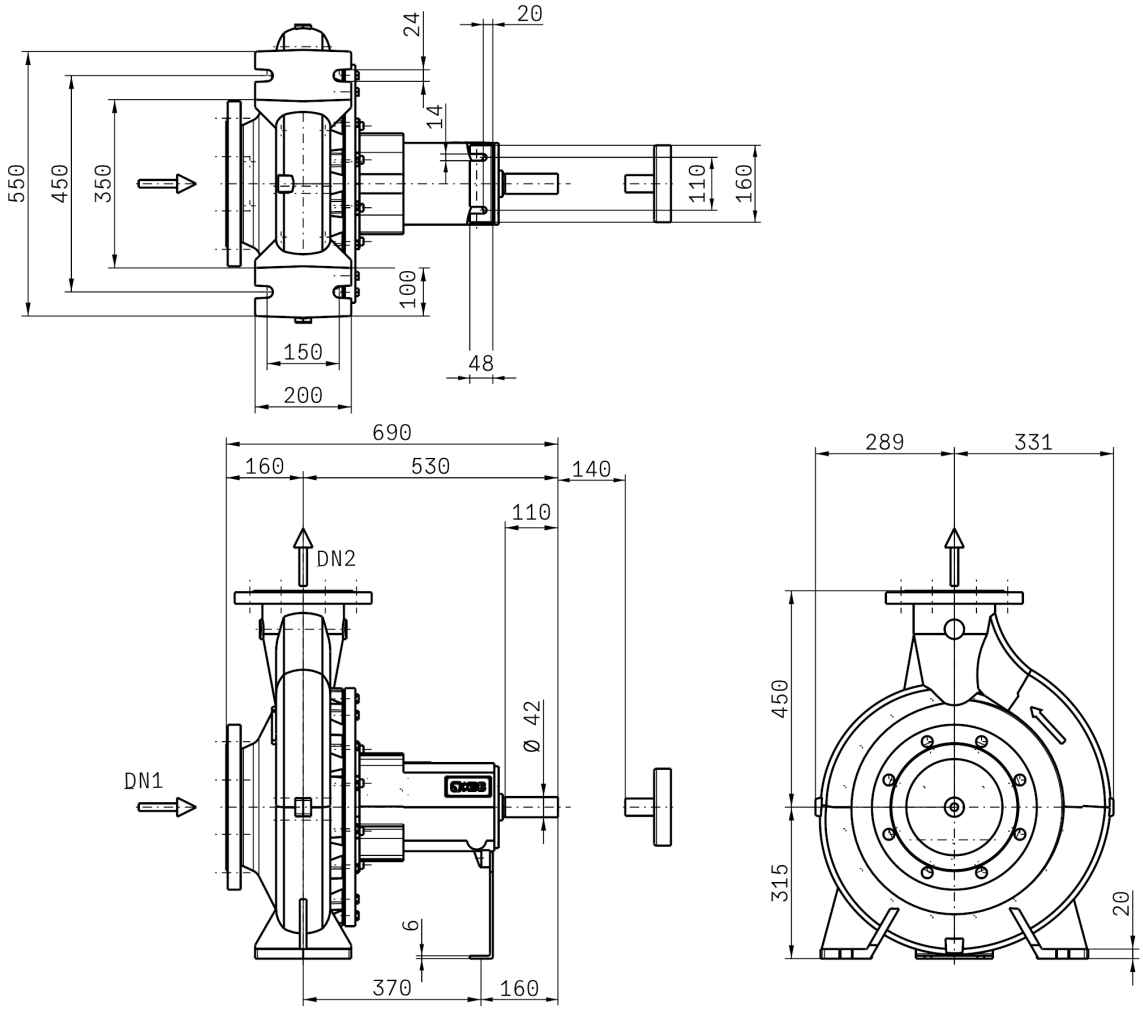

Drawing is not to scale.

Dimensions are given in mm

Motor

Motor size	250M
Rated power Motor	55 kW
Number of motor poles	4

Connections

Nominal diameter Suction nozzle	DN 200
Suction flange bolt hole pattern as per standard	EN1092-2
Nominal diameter Discharge nozzle	DN 150
Discharge flange bolt hole pattern as per standard	EN1092-2
Nominal pressure Suction nozzle	PN 10
Nominal pressure Discharge nozzle	PN 16

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Net weight
Total weight Pump 213.5 kg

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