Technical Datasheet

Etanorm 100-080-200 GG
ETN 100-080-200-GGSAA10 GSFCM4GHB

Operating point 1 Dimensioning operating point

Operating conditions (purchaser requirements)

Target flow rate		Vapour pressure determined	0.02337 bar.a
Target head		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/m³		
Kinematic viscosity Fluid handled	1 mm²/s		

Operating conditions (performance)

Flow rate	74.99 m³/h	Maximum power input at duty point	3.749 kW
Minimum permissible flow rate	14.9 m³/h	Maximum power input / curve	4.803 kW
Maximum permissible flow rate Pump set	85.47 m³/h	Pump speed	1,454 1/min
Head	15 m	Shut-off discharge pressure	1.612 bar.r
Maximum head of characteristic curve	16.47 m		
Shut-off head	16.47 m		
Efficiency Pump	81.55 %		
NPSH required	0.96 m		

Design data pump

Scope of supply Pump supplied by KSB	Back pull-out unit (pump without casing)	Mains frequency	50 Hz
Pump standard	EN 733	Minimum efficiency index MEI	0.7
Shaft axis position	Horizontal	Minimum permissible fluid temperature	0 °C
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 discharge-side	Flat
Hydraulic impeller diameter	214 mm	Installation chamber Casing cover	Conical (A-type cover)
Impeller type	Radial, closed, multi-channel	Bearing bracket size / shaft unit	35
Free passage	15.2 mm	Bearing bracket design	Medium
		Lubrication type	Grease lubrication
		Bearing seal Pump	V-ring
		Pump directive	CE

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Nozzle connections pump

Suction nozzle position	Axial	Discharge nozzle position	0 deg

Auxiliary connections pump

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	-0.21 bar.r	Mechanical seal type inboard	KSB's choice
		Material Shaft seal inboard	QQXGG

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	(ST)
Material Shaft	C45+N		
Material Impeller	EN-GJL-250/A48 CL 35B		
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	1,450 1/min
Drive concept	Electric actuator	Number of motor poles	4
Drive standard, mechanical	IEC	Rated power Motor	4 kW
Drive standard electric	IEC		
Motor construction type	IM B3 (IM1001) IEC 60034-7		
Motor size	112M		

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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

Energy cost and Environmental Impact

Result

Estimated Product Carbon Footprint (cradle-to-gate) (CO_2eq) 140 kg
*

This PCF indication is based on the product mass assuming the typicalsha res of materials in use. The conversion rate between product mass andCO_2 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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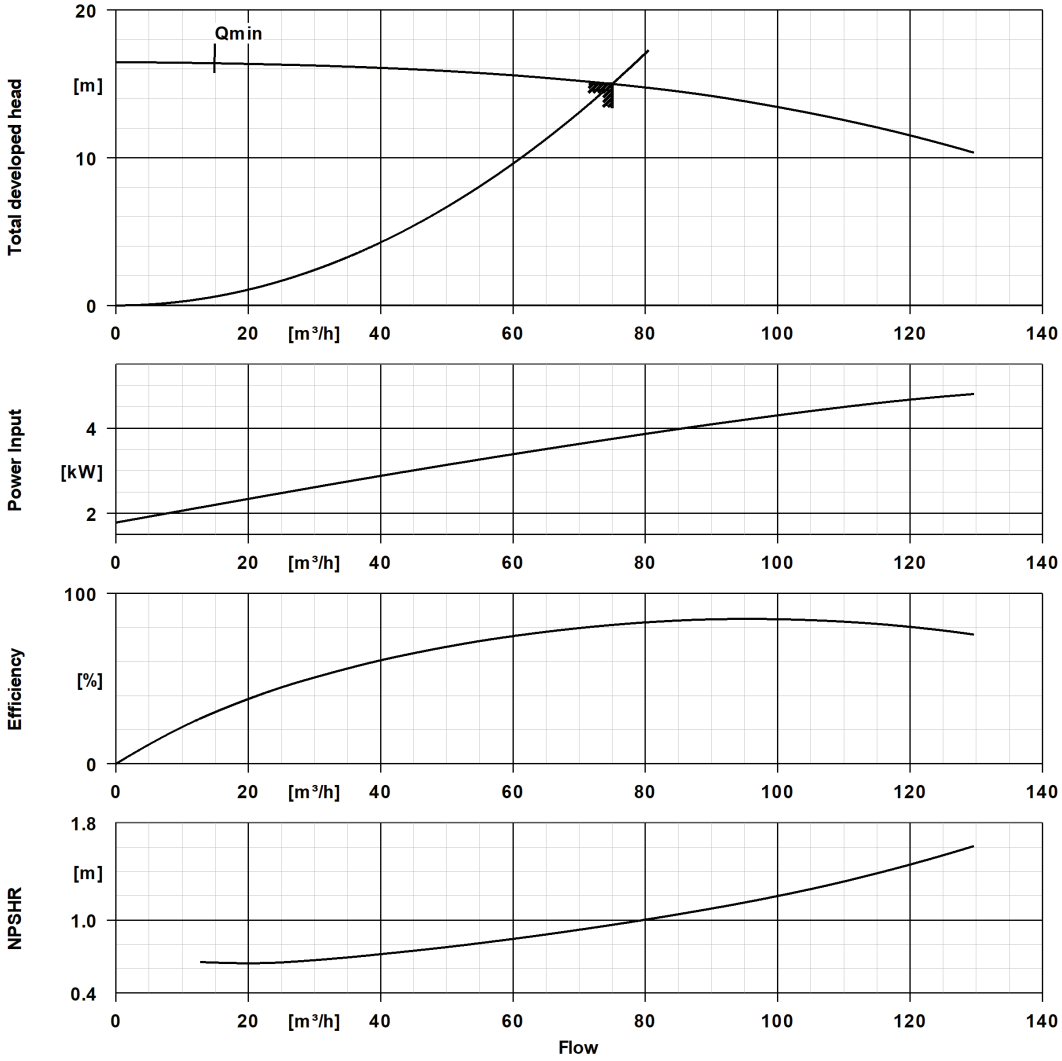

Curve Data

Pump speed	1,454 1/min	Efficiency Pump	81.6 %
Density Fluid handled	998 kg/m³	Minimum efficiency index MEI	0.7
Kinematic viscosity Fluid handled	1 mm²/s	Maximum power input at duty point	3.75 kW
Flow rate	75 m³/h	NPSH required	0.96 m
Head	15 m	Hydraulic impeller diameter	214 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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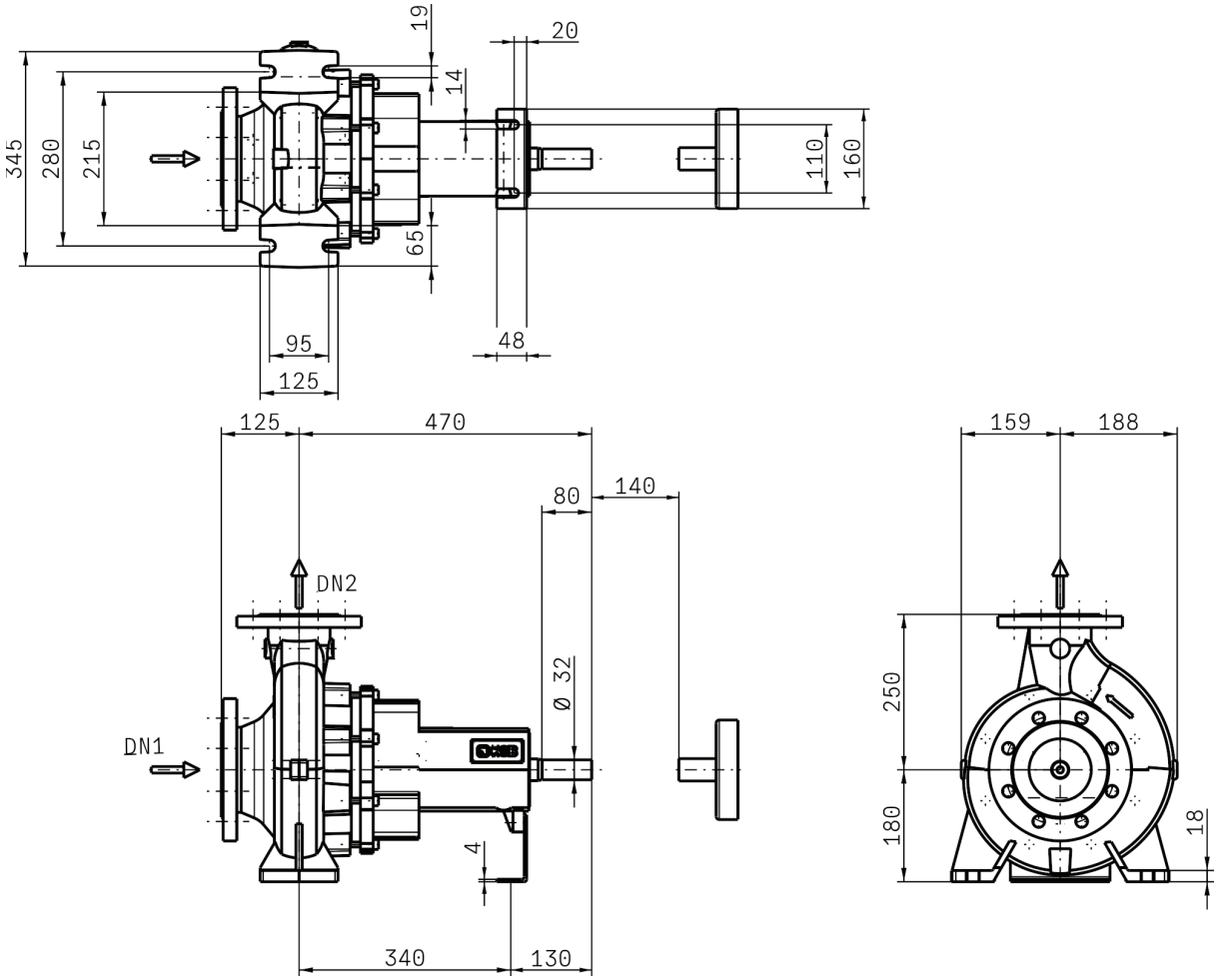

Drawing is not to scale.

Dimensions are given in mm

Motor

Motor size	112M
Rated power Motor	4 kW
Number of motor poles	4

Net weight

Total weight Pump	36.83 kg
Total weight Pump set	36.83 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