Technical Datasheet

Etabloc 100-080-315 GG
ETB 100-080-315-GGSBV10 WSFEH4AHB

Operating point 1 Dimensioning operating point

Operating conditions (purchaser requirements)

Target flow rate	110 m³/h	Vapour pressure determined	0.07375 bar.a
Target head	32 m	Minimum inlet pressure required	-0.3 bar.r
Fluid	Water		
Fluid variant	Clean water	Specified ambient temperature	20 °C
Specified fluid temperature	40 °C	Installation altitude above sea level	1,000 m
Density Fluid handled	992 kg/m³		
Kinematic viscosity Fluid handled	0.66 mm²/s		

Operating conditions (performance)

Flow rate	110.02 m³/h	Maximum power input at duty point	12.4 kW
Minimum permissible flow rate	19.91 m³/h	Maximum power input / curve	15.93 kW
Maximum permissible flow rate Pump set	156.49 m³/h	Pump speed	1,467 1/min
Maximum permissible flow rate	175.01 m³/h	Shut-off pressure	3.50232 bar.r
Head	32.01 m		
Maximum pressure determined at duty point	3.11441 bar.r		
Shut-off head	36 m		
Efficiency Pump	76.77 %		
NPSH required	1.29 m		

Design data pump

Scope of supply Pump supplied by KSB	Bare-shaft pump	Input voltage and frequency	Without
		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	Close-coupled		
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	Casing wear ring flat
Hydraulic impeller diameter	312.3 mm	Casing wear ring design discharge-side	Casing wear ring flat
Impeller type	Radial, closed, multi-channel		
Free passage	17.8 mm	Installation chamber Casing cover	Conical (A-type cover)
Support foot	No		
		Bearing bracket size / shaft unit	35
		Pump directive	CE

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Nozzle connections pump

Nominal diameter Suction nozzle	DN 100	Nominal diameter Discharge nozzle	DN 80
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)		

Auxiliary connections pump

1M Pressure gauge	Without	5B Venting and drain	G 1/4 Drilled and plugged
Discharge nozzle	Without		
1M Pressure gauge Suction nozzle	Without Without		
6B Fluid Drain	G 3/8 Drilled and plugged		
6D Fluid Filling and venting	G 3/8 Drilled and plugged		

Shaft sealing

Shaft seal type	Single mechanical seal; seal chamber can be vented (A-type casing cover) - AV	Shaft seal code	Code 10
		Shaft seal manufacturer inboard	KSB's choice
Operating mode of mechanical seal (function)	API plan 03	Mechanical seal type inboard	KSB's choice
Determined pressure Seal chamber	-0.1 bar.r	Material Shaft seal inboard	QQXGG

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Materials

Material Volute casing (102)	EN-GJL-250/A48 CL 35B	Material Bolts/Screws Volute casing (902.01)	8.8
Material Casing cover (161)	EN-GJL-250/A48 CL 35B	Material Nut Impeller fastening (920.95)	(ST)
Material Shaft	C45+N		
Material Impeller (230)	EN-GJL-250/A48 CL 35B		
Material Casing wear ring suction-side (502.01)	JL/LAMELLAR GRAPHITE CAST IRON		
Material Casing wear ring discharge-side (502.02)	JL/LAMELLAR GRAPHITE CAST IRON		
Material Shaft protecting sleeve (523)	(CRNIMO ST INT)		
Material Static seal Discharge cover	DPAF DW001		
Material Drive lantern	EN-GJL-250/A48 CL 35B		

Driver

Electric motor, asynchronous	No	Rated speed Motor	1,460 1/min
Drive concept	Electric actuator	Number of motor poles	4
Drive standard, mechanical	IEC	Rated power Motor	15 kW
Drive standard electric	IEC	The values indicated are regarded as guaranteed values. They are applied to motors with a sinusoidal power supply within the permissible tolerances specified by IEC 60034-1. The values given on the name plate may be different.	
Motor construction type	IM V15 (IM2011) IEC 60034-7		
Motor size	160L		
Enclosure Motor	IP55 (TEFC)		

Coating

Aggregate

Primary coating code	A1 to AN1897
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
Colour Top coat Drive	Without

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Energy cost and Environmental Impact

Result

Estimated Product Carbon Footprint (cradle-to-gate) (CO2eq) 341 kg
*

* based on product weight and assuming typical material proportions. The conversion rate between product weight and CO2 emissions is based onseve ral life cycle analyses in acc. with ISO 14040 / 44 of sampleproducts fr om the same series. The objective and scope of these LCAs waslimited to the manufacturing phase (cradle-to-gate). With regard toinputs, all mate rials, energy and auxiliary materials were taken intoaccount; with regar d to outputs, emissions, scrap and waste wereconsidered. The influence o f outgoing logistics is not covered. Theinput variables of the analyses cover at least 95% of the total weight.The analysis focuses on the globa l warming potential (EF3.0 ClimateChange – total).

Packaging

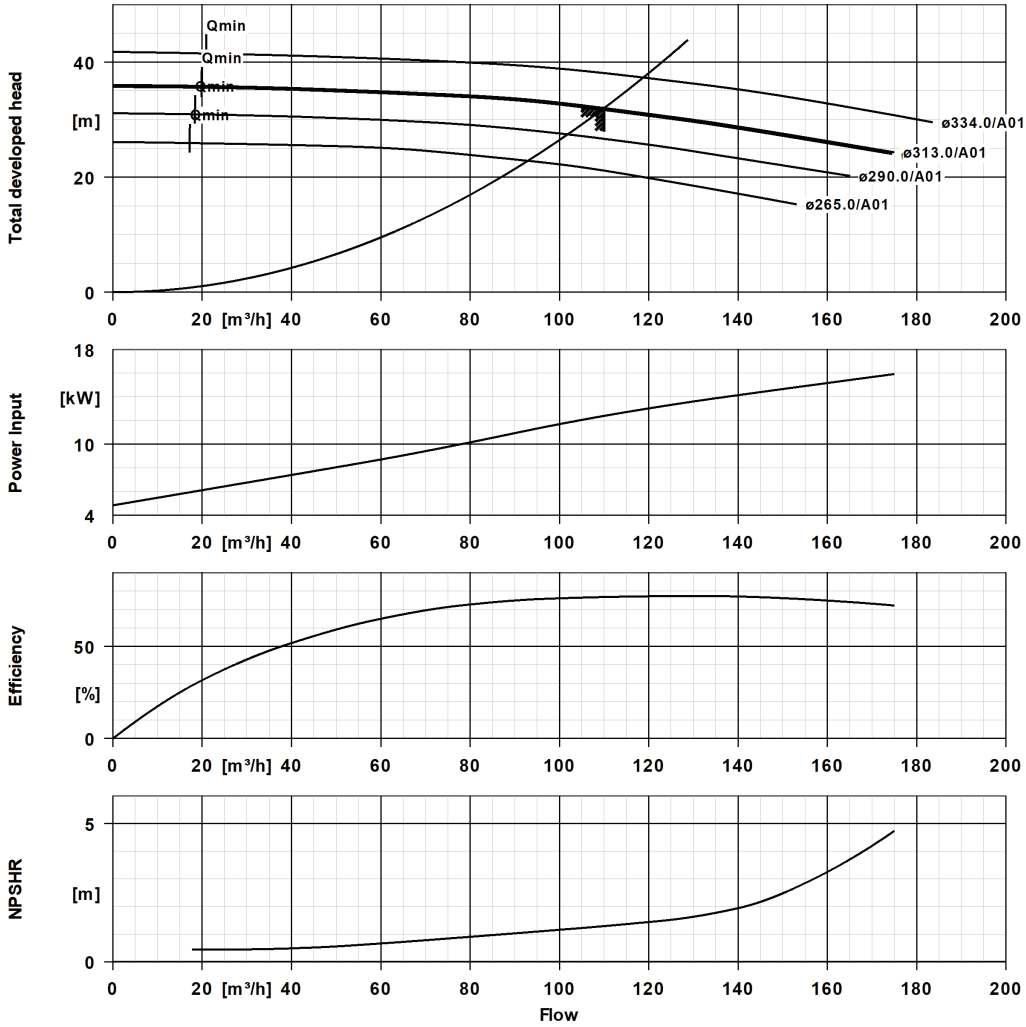
Suitable for transport	Truck transport
Suitable for storage	Indoor storage
Packaging category	KSB's choice (A0)

Product properties

Specification of wetted parts	Manufactured without paint wetting impairment substances

Performance Curve (Pump)

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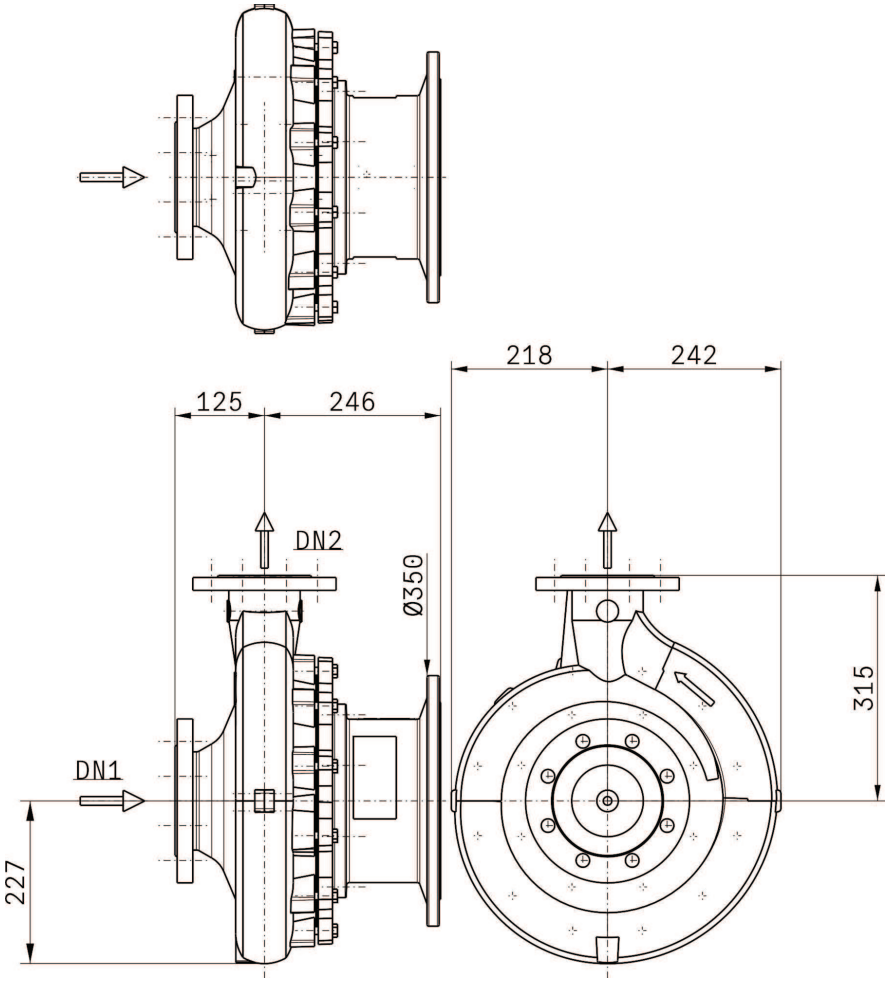


Curve Data

Pump speed	1,467 1/min	Maximum permissible flow rate	175 m³/h
Density Fluid handled	992 kg/m³	Efficiency Pump	76.8 %
Kinematic viscosity Fluid handled	0.66 mm²/s	Minimum efficiency index MEI	0.7
Flow rate	110 m³/h	Maximum power input at duty point	12.4 kW
Head	32 m	NPSH required	1.29 m
Maximum pressure determined at duty point	3.11 bar.r	Hydraulic impeller diameter	312.3 mm
		Hydraulic values according to	EN ISO 9906 Class 3B

Installation plan

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Drawing is not to scale.

Dimensions are given in mm

Motor

Motor size	160L
Rated power Motor	15 kW
Number of motor poles	4

Connections

Nominal diameter Suction nozzle	DN 100
Suction flange bolt hole pattern as per standard	EN1092-2
Nominal diameter Discharge nozzle	DN 80
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	89.84 kg
Total weight Pump set	89.84 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