

Etabloc 065-050-250 GG
ETB 065-050-250-GGSBV11 WSEBI4AHB

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	-0.3 bar.r
Specified fluid temperature	20 °C	required	
Density Fluid handled	998 kg/m ³	Specified ambient temperature	20 °C
Kinematic viscosity Fluid handled	1 mm ² /s	Installation altitude above sea level	1,000 m

Operating conditions (performance)

Flow rate	20.11 m ³ /h	Maximum power input at duty point	1.47 kW
Minimum permissible flow rate	5.088 m ³ /h	Maximum power input / curve	2.008 kW
Maximum permissible flow rate	21.24 m ³ /h	Pump speed	1,446 1/min
Pump set		Discharge pressure-max.	1.634 bar.r
Head	15.24 m		
Shut-off head	16.69 m		
Efficiency Pump	56.64 %		
NPSH required	0.75 m		

Design data pump

Scope of supply Pump supplied by KSB	Bare-shaft pump	Mains frequency	50 Hz
Pump standard	EN 733	Minimum efficiency index MEI	0.6
Shaft axis position	Horizontal	Minimum permissible fluid temperature	0 °C
Pump design	Close-coupled	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	216 mm	Casing wear ring design discharge-side	Flat
Impeller type	Radial, closed, multi-channel	Installation chamber Casing cover	Conical (A-type cover)
Free passage	10 mm	Bearing bracket size / shaft unit	25
Support foot	Yes	Pump directive	CE

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Nozzle connections pump

Nominal diameter Suction nozzle	DN 65	Nominal diameter Discharge nozzle	DN 50
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

6B Fluid Drain	G 1/4 Drilled and plugged	1M Pressure gauge Discharge nozzle	Without Without
6D Fluid Filling and venting	G 1/4 Drilled and plugged	1M Pressure gauge Suction nozzle	Without Without
5B Venting and drain	G 1/4 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 11
Operating mode of mechanical seal (function)	API plan 03	Shaft seal manufacturer inboard	KSB's choice
Determined pressure Seal chamber	-0.2 bar.r	Mechanical seal type inboard	KSB's choice
		Material Shaft seal inboard	BQEGG DW001

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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	No	Rated speed Motor	1,445 1/min
Drive concept	Electric actuator	Number of motor poles	4
Drive standard, mechanical	IEC	Rated power Motor	1.5 kW
Drive standard electric	IEC		
Motor construction type	IM V1 (IM3011) IEC 60034-7		
Motor size	90L		
Enclosure Unit	Without		

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) 174 kg

This PCF indication is based on the product mass assuming the typical shares of materials in use. The conversion rate between product mass and CO₂ emissions is based on several life cycle assessments acc. to ISO14040 / 14044 of sample products of the same type series. Objective and scope of these LCAs was defined as being limited to the manufacturing phase (cradle-to-gate). With regard to inputs, all materials, energy and auxiliary materials were accounted for, and with regard to outputs, emissions, scrap and waste were accounted for. The impact of outbound logistics is not covered. The assessments' input variables cover at least 95 % of the total product mass. The analysis focuses exclusively on the Global Warming Potential (EF3.0 Climate Change – total).

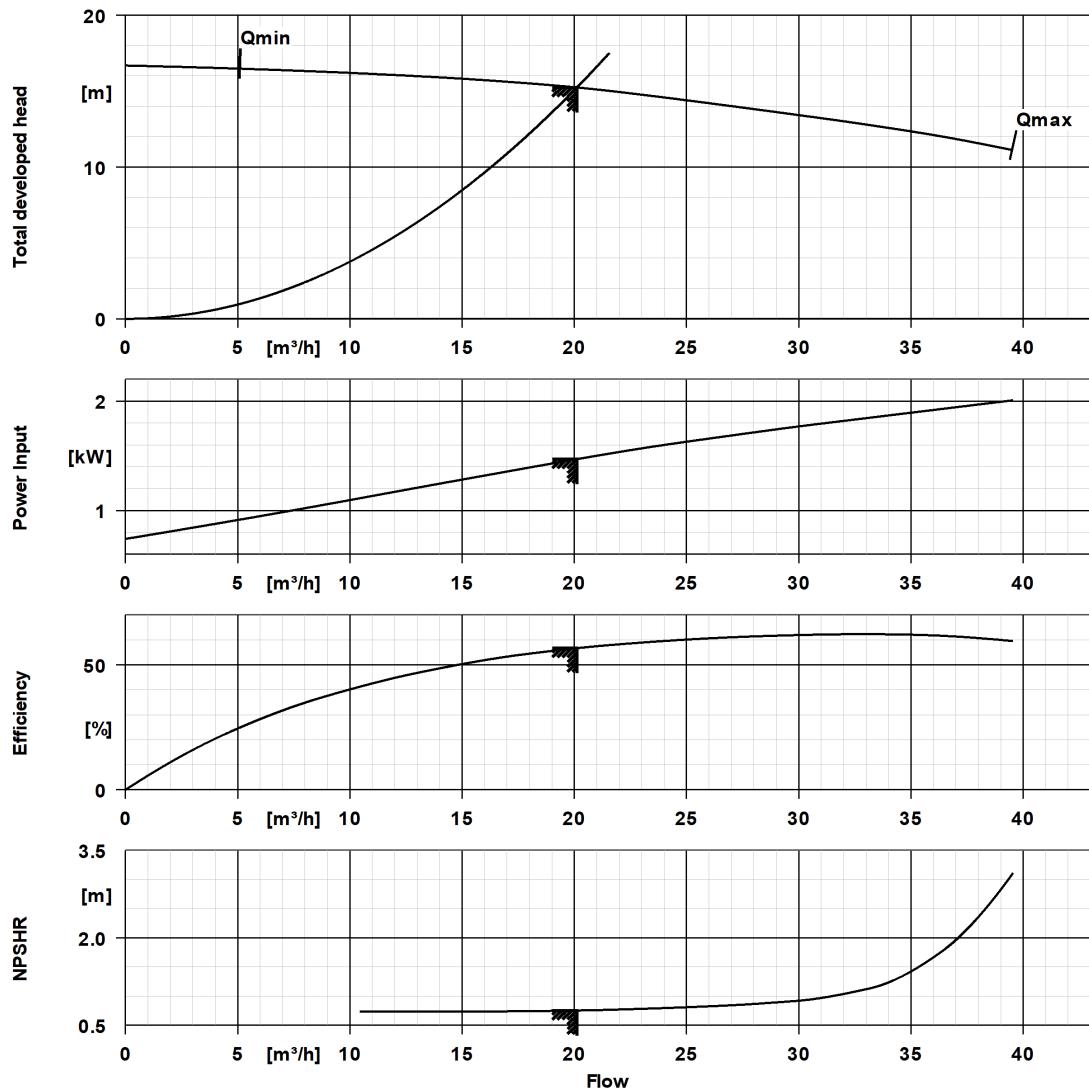
Packaging

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

Performance Curve (Pump)



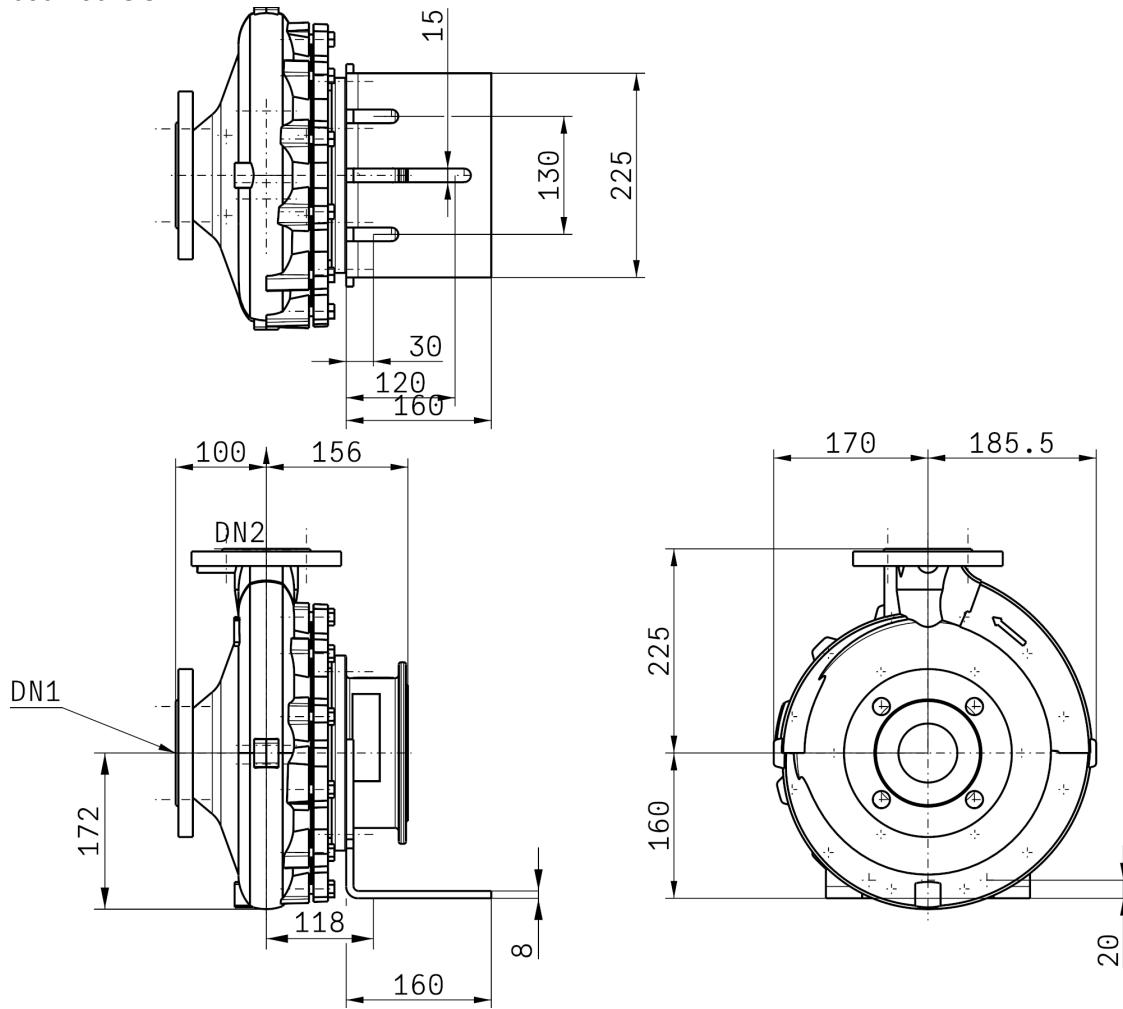
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Curve Data

Pump speed	1,446 1/min	Efficiency Pump	56.6 %
Density Fluid handled	998 kg/m^3	Minimum efficiency index MEI	0.6
Kinematic viscosity Fluid handled	1 mm^2/s	Maximum power input at duty point	1.47 kW
Flow rate	20.1 m^3/h	NPSH required	0.75 m
Head	15.2 m	Hydraulic impeller diameter	216 mm
		Hydraulic calculation according to standard/ class	EN ISO 9906 Class 3B

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Drawing is not to scale.

Dimensions are given in mm

Motor

Electric motor	No	DN 65
Rated power Motor	1.5 kW	EN1092-2
Rated speed Motor	1,445 1/min	

Connections

Nominal diameter Suction nozzle	DN 65
Suction flange bolt hole pattern as per standard	EN1092-2
Nominal diameter Discharge nozzle	DN 50
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	45.78 kg
Total weight Pump set	45.78 kg

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Connect pipelines stress-free

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

Plan for additional connections see extra drawing