

Etabloc 080-065-250 GB 05125768
 ETB 080-065-250-GBSBV11 WSFGO2HHB

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	125,6 m ³ /h	Maximum power input at duty point	40,25 kW
Minimum permissible flow rate	19,44 m ³ /h	Maximum power input / curve	45,82 kW
Maximum permissible flow rate	152,58 m ³ /h	Pump speed	2.964 1/min
Pump unit		Discharge pressure-max.	9,618 bar.r
Head	90,16 m		
Shut-off head	98,27 m		
Efficiency Pump	76,51 %		
NPSH required	3,9 m		

Design data pump

Scope of supply Pump supplied by KSB	Pump + motor	Mains voltage	400 V
Pump standard	EN 733	Mains frequency	50 Hz
Shaft axis position	Horizontal	Minimum efficiency index MEI	0,7
Pump design	Close-coupled	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	260 mm	Casing wear ring design discharge-side	Flat
Impeller type	Radial, closed, multi-channel	Installation chamber Casing cover	Conical (A-type cover)
Free passage	14,3 mm	Bearing bracket size / shaft unit	35
Support foot	No	Pump directive	CE

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Nozzle connections pump

Nominal diameter Suction nozzle	DN 80	Nominal diameter Discharge nozzle	DN 65
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 3/8 Drilled and plugged	1M Pressure gauge Discharge nozzle	Without Without
6D Fluid Filling and venting	G 3/8 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	0,26 bar.r	Mechanical seal type inboard	KSB's choice
		Material Shaft seal inboard	BQEGG DW001

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)	(CRNIMO ST INT)
Material Shaft	C45+N		
Material Impeller (230)	CC480K DW		
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		

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Driver (not included)

Drive concept	Yes	Rated speed Motor	2.960 1/min
Drive standard, mechanical	Electric actuator	Number of motor poles	2
Drive standard electric	IEC	Rated power Motor	45 kW
Motor bearing, insulated	IEC	Motor power reserve determined	11,8 %
Motor bearing, insulated	No	Rated voltage Motor	400 V
Motor manufacturer	KSB's choice	Motor winding	400 / 690 V
Customer supply Drive	No	Rated frequency Motor	50Hz
Motor construction type	IM V15 (IM2011) IEC 60034-7	Motor switching type	Delta
Motor size	225M	Rated current Motor	81,9 A
Efficiency class	IE3 (Premium)	Starting current ratio I_a/I_n	8,1
Material motor housing	JL/LAMELLAR GRAPHITE CAST IRON	Cos phi at 4/4 load	0,85
Enclosure Motor	IP55 (TEFC)	Motor efficiency at 4/4 load	94 %
Enclosure Unit	Without	Limit value Maximum humidity Motor	30 g/m ³
Thermal class	155 (F) nach IEC 60085	Marking according to directive Drive	CE
Temperature sensor motor	3 PTC thermistors		
Terminal box position of motor (looking at the motor shaft)	360 °		
Operation on a frequency inverter permitted	Yes, with KSB frequency inverter		
Sound pressure level Motor	78 dBA		
Type series Motor manufacturer	Acc. to motor manufacturer		

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

Product Carbon Footprint indication (cradle-to-gate) (CO2eq) 3.008 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. ISO 14040/ 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	KS B's choice (A0)

Nameplates

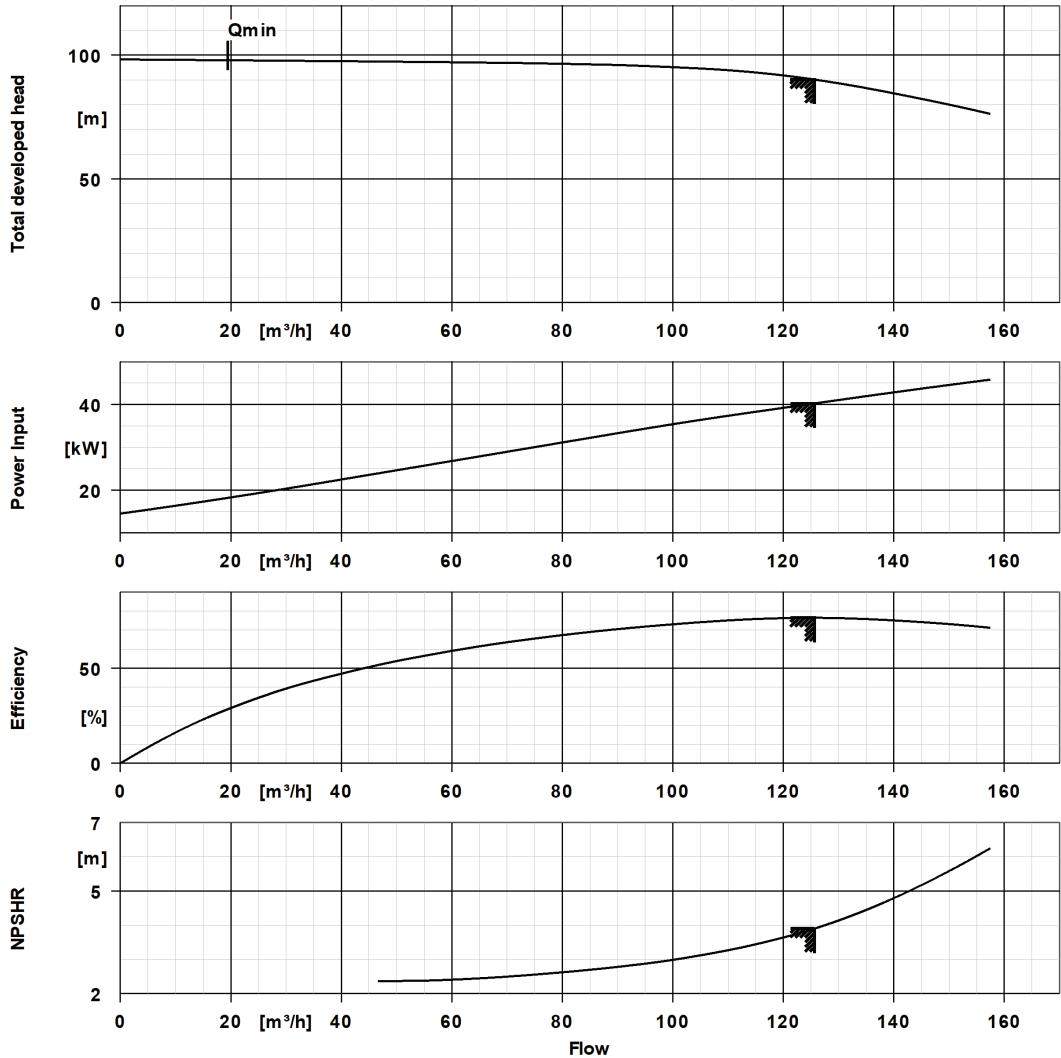
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Performance Curve (Pump)



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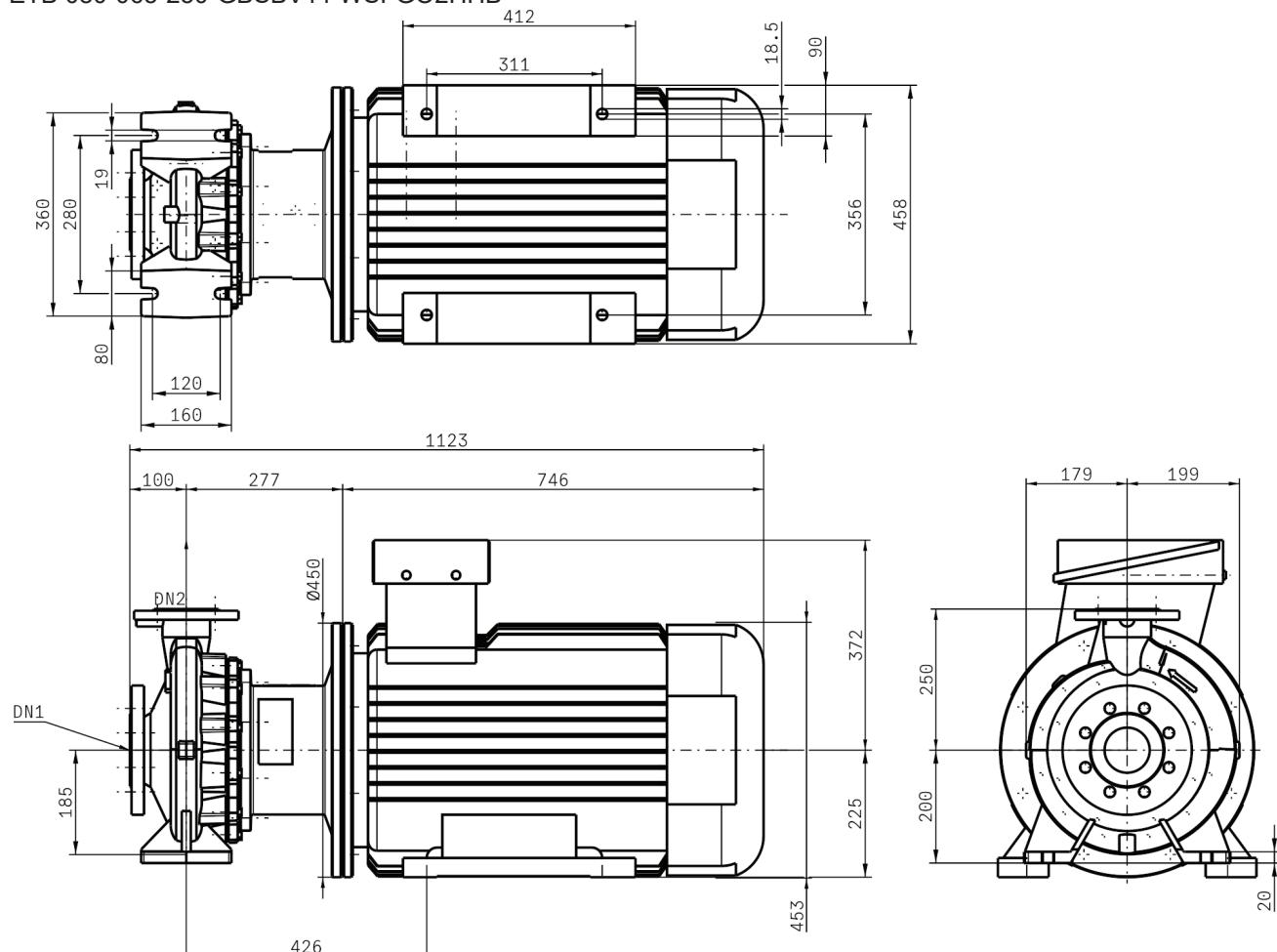
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Curve Data

Pump speed	2.964 1/min	Efficiency Pump	76,5 %
Density Fluid handled	998 kg/m^3	Minimum efficiency index MEI	0,7
Kinematic viscosity Fluid handled	1 mm^2/s	Maximum power input at duty point	40,3 kW
Flow rate	126 m^3/h	NPSH required	3,9 m
Head	90,2 m	Hydraulic impeller diameter	260 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 (not included)

Motor manufacturer	Yes
Motor size	KSb's choice
Rated power Motor	225M
Number of motor poles	45 kW
Rated speed Motor	2
Terminal box position of motor (looking at the motor shaft)	2.960 1/min
Material Installation part Pump	360 °

WITHOUT

Connections

Nominal diameter Suction nozzle	DN 80
Suction flange bolt hole pattern as per standard	EN1092-2
Nominal diameter Discharge nozzle	DN 65
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	86,62 kg
Total weight Drive	
Total weight Pump set	

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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