

**Etabloc 065-040-200 GG**  
**ETB 065-040-200-GGSBV10 WSEBI4HHB**

**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/m <sup>3</sup>	Installation altitude above sea level	1,000 m
Kinematic viscosity Fluid handled	1 mm <sup>2</sup> /s		

**Operating conditions (performance)**

Flow rate	17.93 m <sup>3</sup> /h	Maximum power input at duty point	0.778 kW
Minimum permissible flow rate	2.71 m <sup>3</sup> /h	Maximum power input / curve	0.8835 kW
Maximum permissible flow rate	23.72 m <sup>3</sup> /h	Pump speed	1,472 1/min
Pump set		Discharge pressure-max.	1.053 bar.r
Head	9.224 m		
Shut-off head	10.76 m		
Efficiency Pump	57.81 %		
NPSH required	1.29 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	0.8
Pump design	Close-coupled	Minimum permissible fluid temperature	0 °C
Pump system design	Single-pump system	Maximum permissible fluid temperature	60 °C
Pump direction of rotation, viewed from casing side	Counterclockwise	Quantity Stages, single-entry	1
Hydraulic impeller diameter	175 mm	Casing wear ring design suction-side	Flat
Impeller type	Radial, closed, multi-channel	Casing wear ring design discharge-side	Flat
Free passage	8.9 mm	Installation chamber Casing cover	Conical (A-type cover)
Support foot	Yes	Bearing bracket size / shaft unit	25
		Pump directive	CE

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**Nozzle connections pump**

Nominal diameter Suction nozzle	DN 65	Nominal diameter Discharge nozzle	DN 40
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 10
Operating mode of mechanical seal (function)	API plan 03	Shaft seal manufacturer inboard	KSB's choice
Determined pressure Seal chamber	-0.24 bar.r	Mechanical seal type inboard	KSB's choice
		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	Yes	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 power reserve determined	92.8 %
Motor bearing, insulated	No	Rated voltage Motor	400 V
Motor manufacturer	KSB's choice	Motor winding	230 / 400 V
Customer supply Drive	No	Rated frequency Motor	50Hz
Motor construction type	IM V1 (IM3011) IEC 60034-7	Motor switching type	Star
Motor size	90L	Rated current Motor	3.47 A
Efficiency class	IE3 (Premium)	Starting current ratio $I_a/I_n$	7.8
Material motor housing	AL	Cos phi at 4/4 load	0.84
Enclosure Motor	IP55 (TEFC)	Motor efficiency at 4/4 load	85.3 %
Enclosure Unit	Without	Limit value Maximum humidity Motor	30 g/m <sup>3</sup>
Thermal class	155 (F) according to IEC 60085	Marking according to directive Drive	CE
Temperature sensor motor	1 PTC thermistors		
Terminal box position of motor (looking at the motor shaft)	0 °		
Operation on a frequency inverter permitted	Yes (acc to motor manufact)		
Sound pressure level Motor	59 dBA		
Type series Motor manufacturer	Acc. to motor manufacturer (IEC, IE3)		

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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<sub>2</sub>eq) 290 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 CO<sub>2</sub> 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).

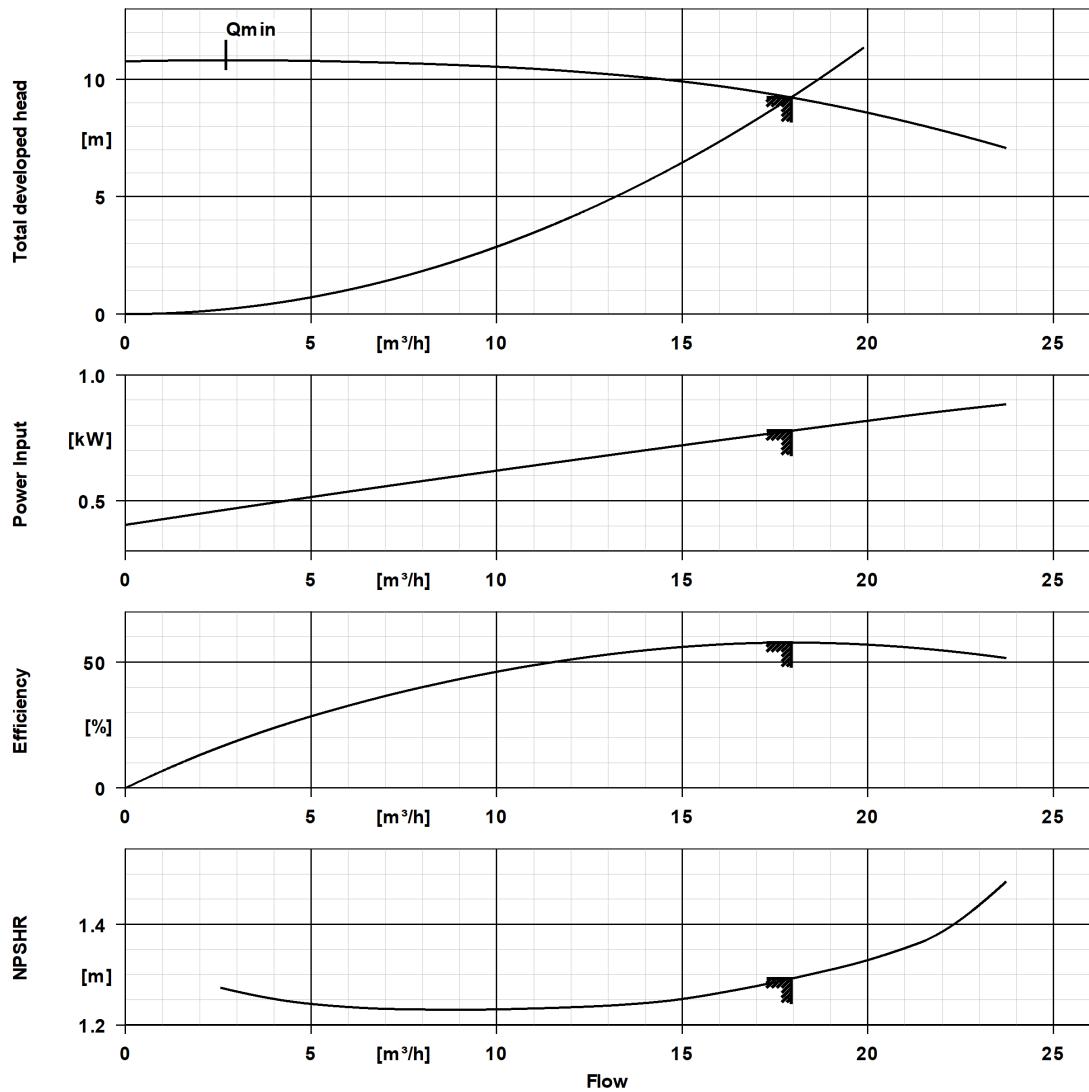
**Packaging**

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

# Performance Curve (Pump)



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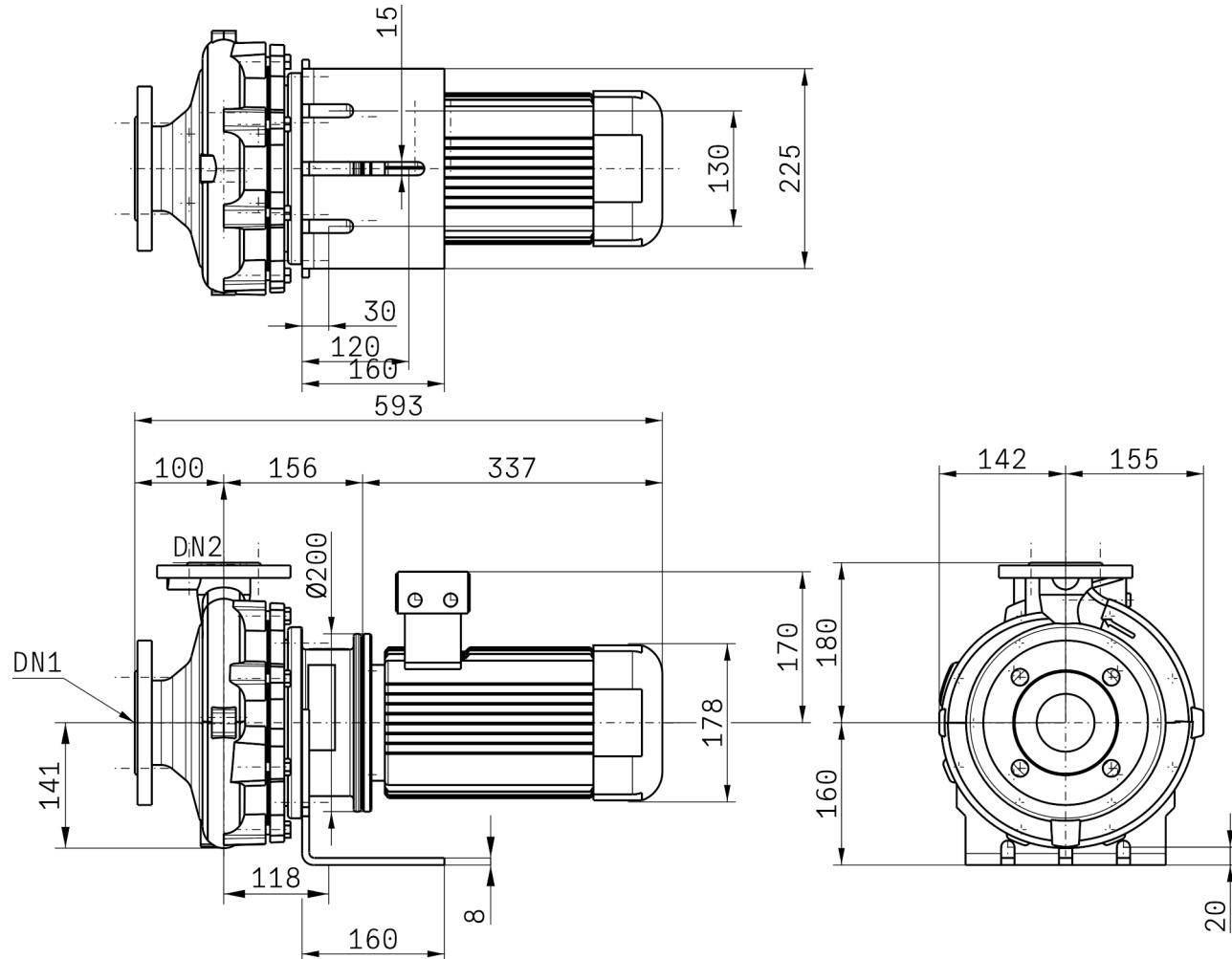


## Curve Data

Pump speed	1,472 1/min	Efficiency Pump	57.8 %
Density Fluid handled	998 kg/m <sup>3</sup>	Minimum efficiency index MEI	0.8
Kinematic viscosity Fluid handled	1 mm <sup>2</sup> /s	Maximum power input at duty point	0.78 kW
Flow rate	17.9 m <sup>3</sup> /h	NPSH required	1.29 m
Head	9.22 m	Hydraulic impeller diameter	175 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	Yes
Motor manufacturer	KSB's choice
Motor size	90L
Rated power Motor	1.5 kW
Number of motor poles	4
Rated speed Motor	1,445 1/min
Terminal box position of motor (looking at the motor shaft)	0 °

**Connections**

Nominal diameter Suction nozzle	DN 65
Suction flange bolt hole pattern as per standard	EN1092-2
Nominal diameter Discharge nozzle	DN 40
Discharge flange bolt hole pattern as per standard	EN1092-2
Nominal pressure Suction nozzle	PN 16
Nominal pressure Discharge nozzle	PN 16

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**Net weight**

Total weight Pump	39.14 kg
Total weight Drive	22 kg
Total weight Pump set	61.14 kg

**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**