



Customer pos. no.:
 Inquiry date: 2026-02-09
 Inquiry no.: P Circulatie - SI 21555427 TE rev
 Quantity: 2
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Etabloc 065-050-200 GG
 ETB 065-050-200-GGSBV11 WSEEO2HCB

Version No.: 2

Operating point 1 Dimensioning operating point

Operating conditions (purchaser requirements)

Target flow rate	80 m³/h
Target head	45 m
Fluid	Water, heating water
Fluid variant	Heating water up to 100°C (max.), acc. to VDI 2035
Specified fluid temperature	20 °C
Density Fluid handled	998 kg/m³
Kinematic viscosity Fluid handled	1 mm²/s

Vapour pressure determined	0.02337 bar.a
Minimum inlet pressure required	-0.3 bar.r
Specified ambient temperature	20 °C
Installation altitude above sea level	1,000 m

Operating conditions (performance)

Flow rate	80 m³/h
Minimum permissible flow rate	10.57 m³/h
Maximum permissible flow rate	102.28 m³/h
Pump set	
Maximum permissible flow rate	102.28 m³/h
Head	45 m
Maximum pressure determined at duty point	4.404 bar.r
Shut-off head	53.17 m
Efficiency Pump	75.4 %
NPSH required	2.82 m

Maximum power input at duty point	12.98 kW
Maximum power input / curve	14.84 kW
Pump speed	2,557 1/min
Shut-off pressure	5.204 bar.r

Design data pump

Scope of supply supplied by KSB	Pump + motor
Pump standard	EN 733
Shaft axis position	Horizontal
Pump design	Close-coupled
Pump system design	Single-pump system
Pump direction of rotation, viewed from casing side	Counterclockwise
Hydraulic impeller diameter	219 mm
Impeller type	Radial, closed, multi-channel
Free passage	11.9 mm
Support foot	No

Mains voltage	400 V
Mains frequency	50 Hz
Minimum efficiency index MEI	0.7
Minimum permissible fluid temperature	0 °C
Maximum permissible fluid temperature	110 °C
Quantity Stages, single-entry	1
Casing wear ring design suction-side	Casing wear ring flat
Casing wear ring design discharge-side	Casing wear ring flat
Installation chamber Casing cover	Conical (A-type cover)
Bearing bracket size / shaft unit	25
Pump directive	CE

Technical Datasheet



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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

1M Pressure gauge Discharge nozzle	G 1/4 Pressure sensor	5B Venting and drain	G 1/4 Drilled and plugged
1M Pressure gauge Suction nozzle	G 1/4 Pressure sensor		
6B Fluid Drain	G 1/4 Drilled and plugged		
6D Fluid Filling and venting	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 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, asynchronous	Yes	Rated speed Motor	2,945 1/min
Drive concept	Electric actuator	Number of motor poles	2
Drive standard, mechanical	IEC	Rated power Motor	18.5 kW
Drive standard electric	IEC	Motor power reserve determined	20.5 %
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	160L	Rated current Motor	35.6 A
Efficiency class	IE3 (Premium)	Starting current ratio Ia/In	9.5
Material motor housing	AL	Cos phi at 4/4 load	0.77
Enclosure Motor	IP55 (TEFC)	Motor efficiency at 4/4 load	92.4 %
Thermal class	155 (F) according to IEC 60085	Limit value Maximum humidity Motor	30 g/m ³
Temperature sensor motor	3 PTC thermistors	Marking according to directive Drive	CE
Terminal box position of motor (looking at the motor shaft)	360 °	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 housing feet position (looking at the motor shaft)	180° (below)		
Operation on a frequency inverter permitted	Yes (acc to motor manufact)		
Earthing connection 31M Drive	No		
Sound pressure level Motor	74 dBa		
Type series Motor manufacturer	Acc. to motor manufacturer (IEC, IE3)		

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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
Colour Top coat Drive	RAL5002 Ultramarine Blue

Energy cost and Environmental Impact

Result

Estimated Product Carbon Footprint (cradle-to-gate) (CO₂eq) 1,203 kg

*

*is based on the product weight assuming typical material proportions. The conversion rate between product weight and CO₂ emissions is based on several life cycle analyses in acc. with ISO 14040 / 44 of sample products from the same series. The objective and scope of these LCAs was limited to the manufacturing phase (cradle-to-gate). With regard to the 'inputs', all materials, energy and auxiliary materials were taken into account; with regard to the 'outputs', emissions, scrap and waste were considered. The influence of outgoing logistics is not covered. The input variables of the analyses cover at least 95% of the total weight. The analysis focusses on the global warming potential (EF3.0 Climate Change - total).

Packaging

Suitable for transport	Truck transport
Suitable for storage	Indoor storage
Packaging category	Wooden crate (A07)
IPPC Standard ISPM 15	Yes

Order related documents

Detail drawing Mechanical seal	No
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Performance Curve (Pump)

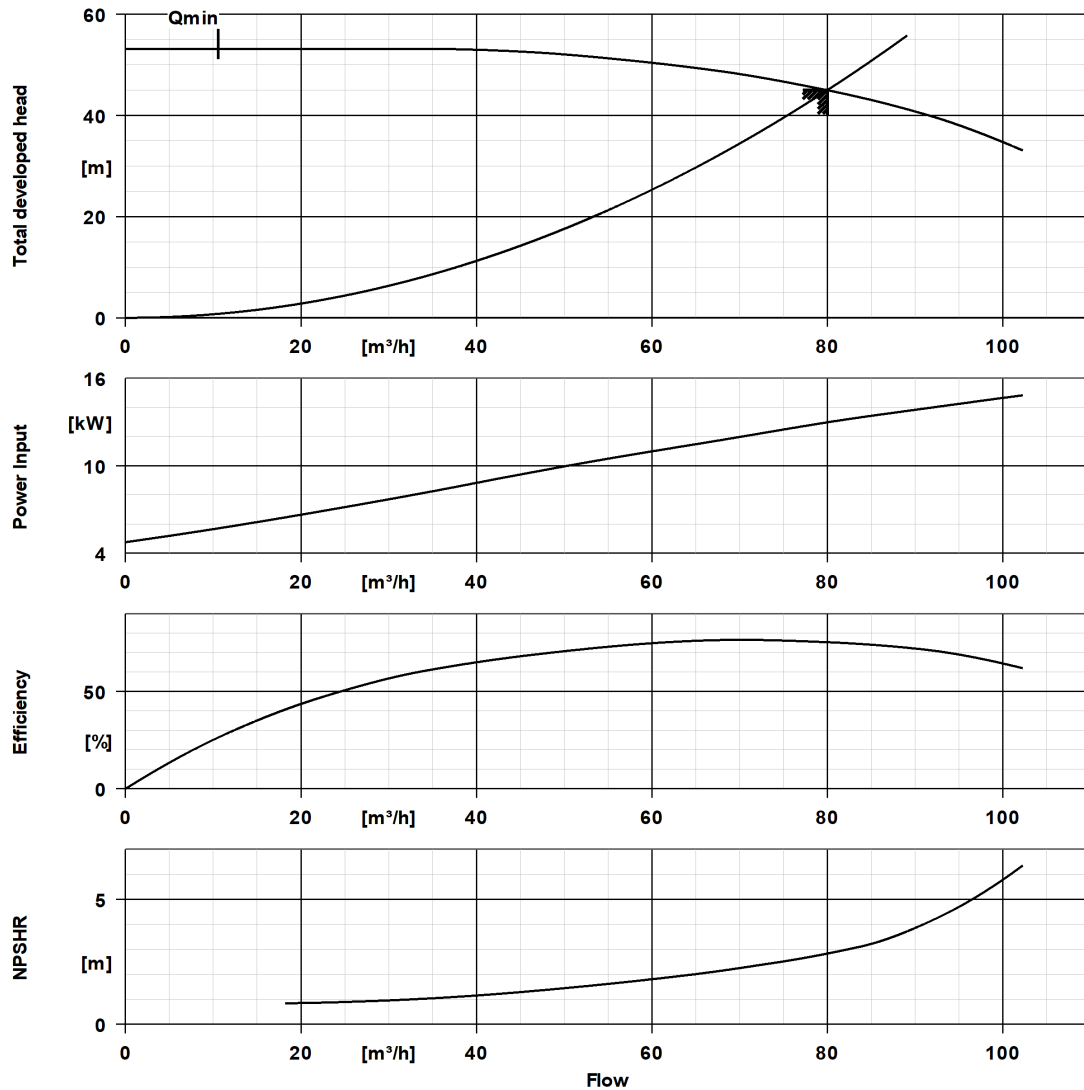


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Curve Data

Pump speed	2,557 1/min	Efficiency Pump	75.4 %
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	13 kW
Flow rate	80 m³/h	NPSH required	2.82 m
Maximum permissible flow rate	102 m³/h	Hydraulic impeller diameter	219 mm
Head	45 m	Hydraulic values according to	EN ISO 9906
Maximum pressure determined at duty point	4.4 bar.r		Class 3B

Speed Curve

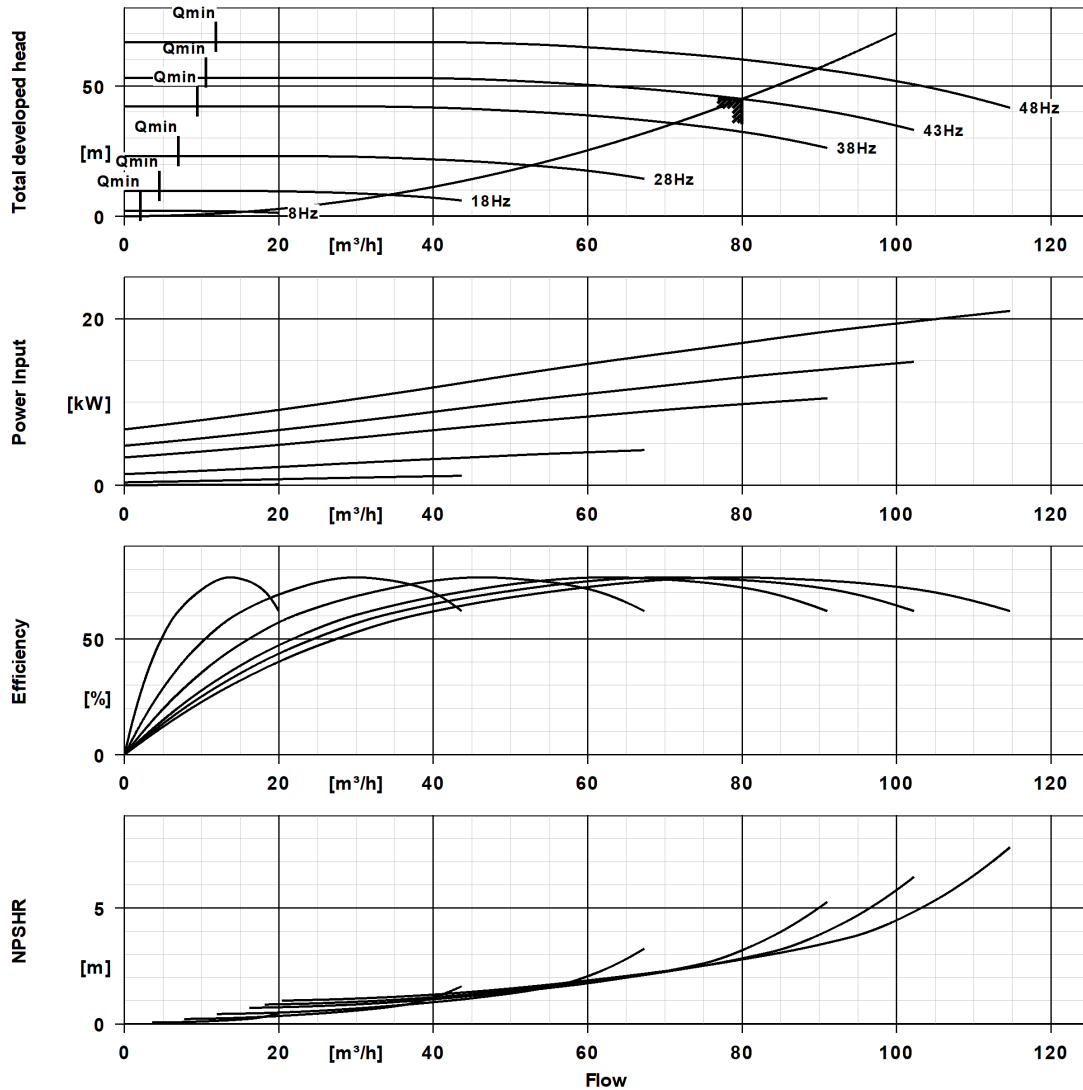


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Curve Data

Density Fluid handled	998 kg/m^3	Head	45 m
Kinematic viscosity Fluid handled	1 mm^2/s	Minimum efficiency index MEI	0.7
Flow rate	80 m^3/h	Hydraulic impeller diameter	219 mm

Installation plan

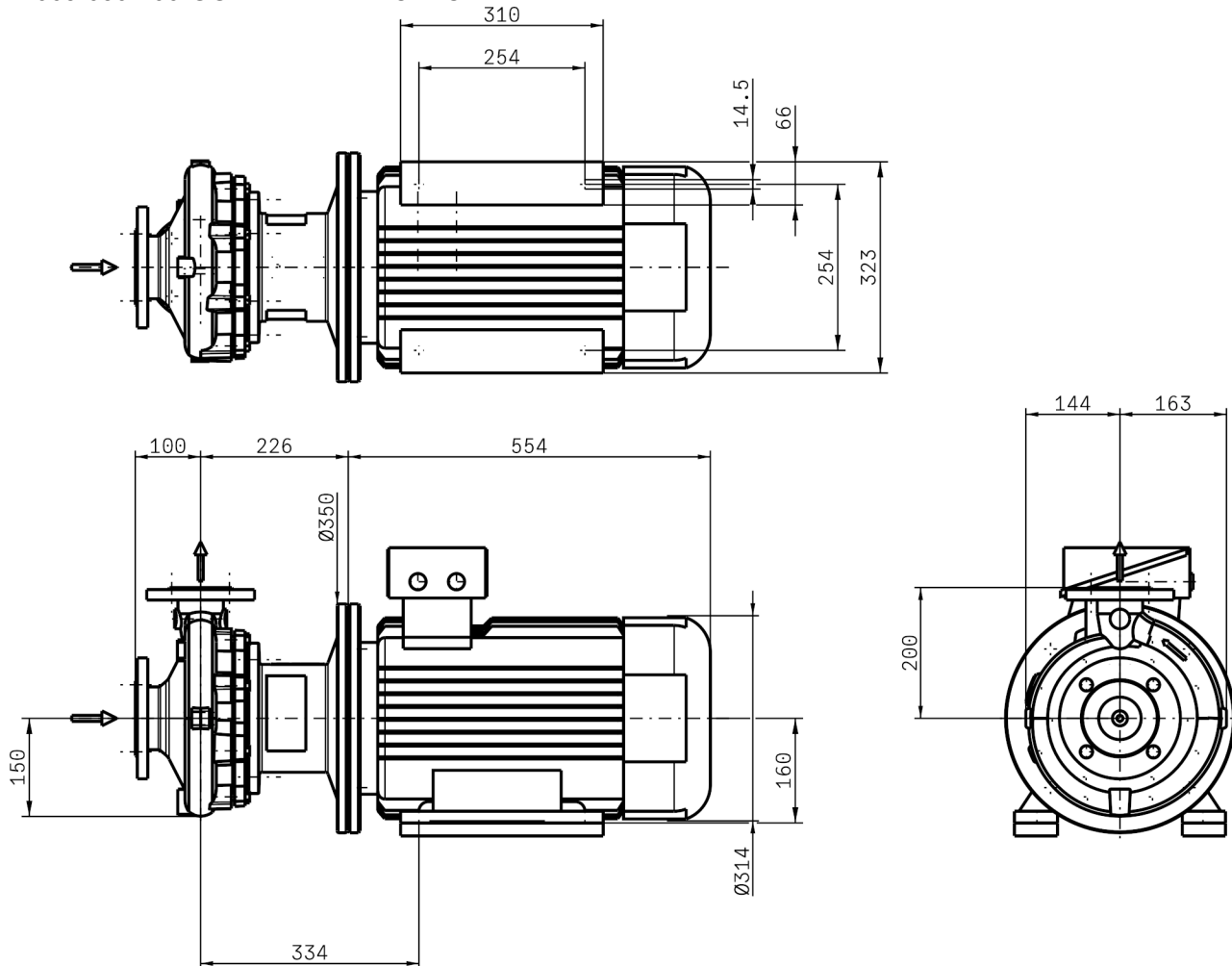


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Drawing is not to scale.

Dimensions are given in mm

Motor

Motor manufacturer	KSB's choice
Motor size	160L
Rated power Motor	18.5 kW
Number of motor poles	2
Rated speed Motor	2,945 1/min
Terminal box position of motor (looking at the motor shaft)	360 °
Motor housing feet position (looking at the motor shaft)	180° (below)

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

Installation plan



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Net weight

Total weight Pump	47.76 kg
Total weight Drive	124 kg
Total weight Control unit	37.23 kg
Total weight Pump set	210.6 kg
Total weight Assembly/transport aids	3.4 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