

Etabloc 065-040-200 GG

ETB 065-040-200-GGSBV10 WSEBI4HHB

Operating point 1

Dimensioning operating point

Operating conditions (purchaser requirements)

| | |
|-----------------------------------|-----------------------|
| Fluid | Water |
| Fluid variant | Clean water |
| Specified fluid temperature | 20 °C |
| Density Fluid handled | 998 kg/m ³ |
| Kinematic viscosity Fluid handled | 1 mm ² /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 | 17.93 m ³ /h |
| Minimum permissible flow rate | 2.71 m ³ /h |
| Maximum permissible flow rate | 23.72 m ³ /h |
| Pump set | |
| Head | 9.224 m |
| Shut-off head | 10.76 m |
| Efficiency Pump | 57.81 % |
| NPSH required | 1.29 m |

| | |
|-----------------------------------|-------------|
| Maximum power input at duty point | 0.778 kW |
| Maximum power input / curve | 0.8835 kW |
| Pump speed | 1,472 1/min |
| Discharge pressure-max. | 1.053 bar.r |

Design data pump

| | |
|---|-------------------------------|
| Scope of supply Pump 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 | 175 mm |
| Impeller type | Radial, closed, multi-channel |
| Free passage | 8.9 mm |
| Support foot | Yes |

| | |
|--|------------------------|
| Mains voltage | 400 V |
| Mains frequency | 50 Hz |
| Minimum efficiency index MEI | 0.8 |
| Minimum permissible fluid temperature | 0 °C |
| Maximum permissible fluid temperature | 60 °C |
| Quantity Stages, single-entry | 1 |
| Casing wear ring design suction-side | Flat |
| Casing wear ring design discharge-side | Flat |
| Installation chamber Casing cover | Conical (A-type cover) |
| 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 |
| | | 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 | -0.24 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 | 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 Ia/In | 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/m³ |
| Thermal class | 155 (F) according to IEC 60085 | Marking according to directive | CE |
| Temperature sensor motor | 1 PTC thermistors | Drive | |
| 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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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 |

Energy cost and Environmental Impact

Result

Estimated Product Carbon Footprint (cradle-to-gate) (CO₂eq) 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 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

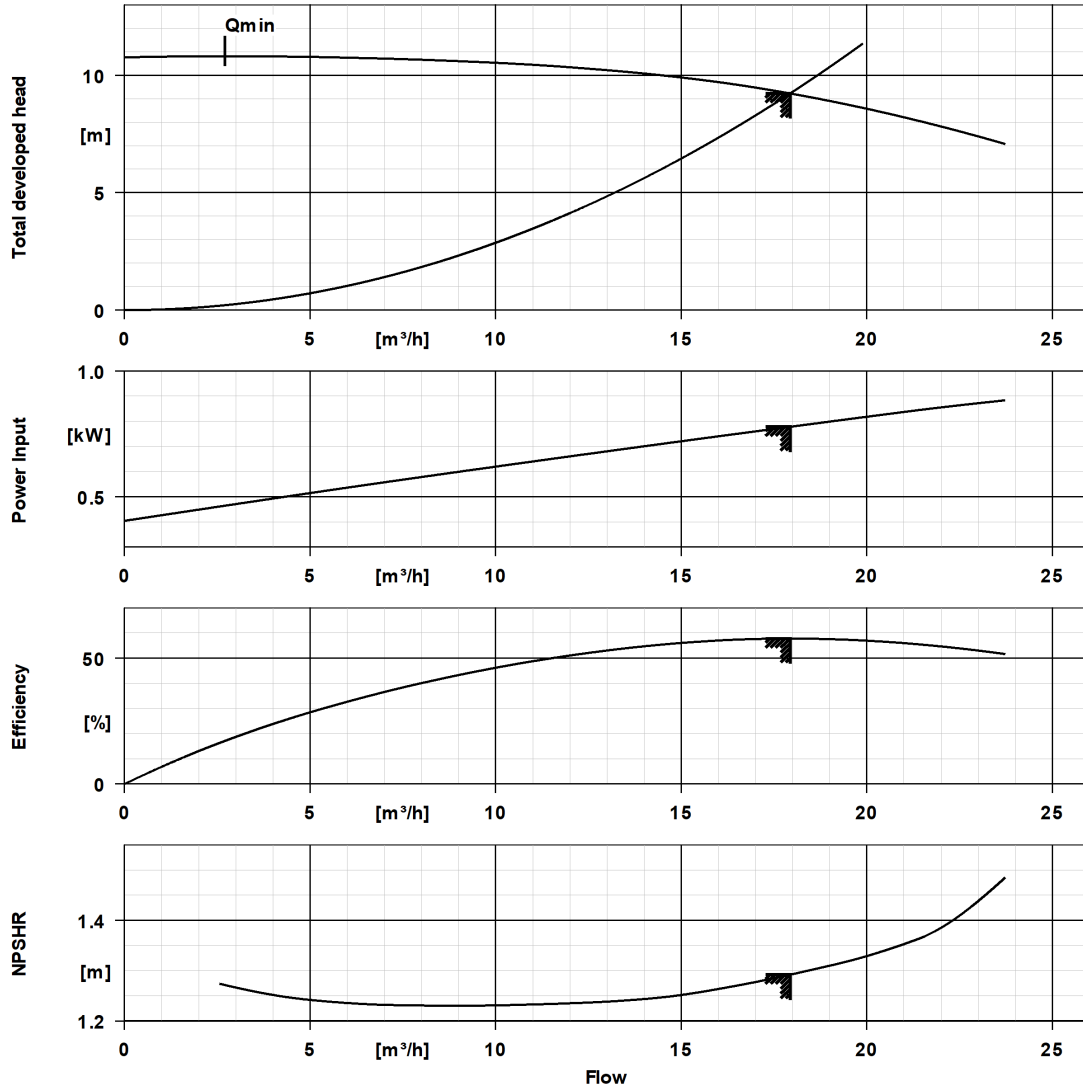
| | |
|------------------------|-------------------|
| Suitable for transport | Truck transport |
| Suitable for storage | Indoor storage |
| Packaging category | KSB's choice (A0) |

Performance Curve (Pump)



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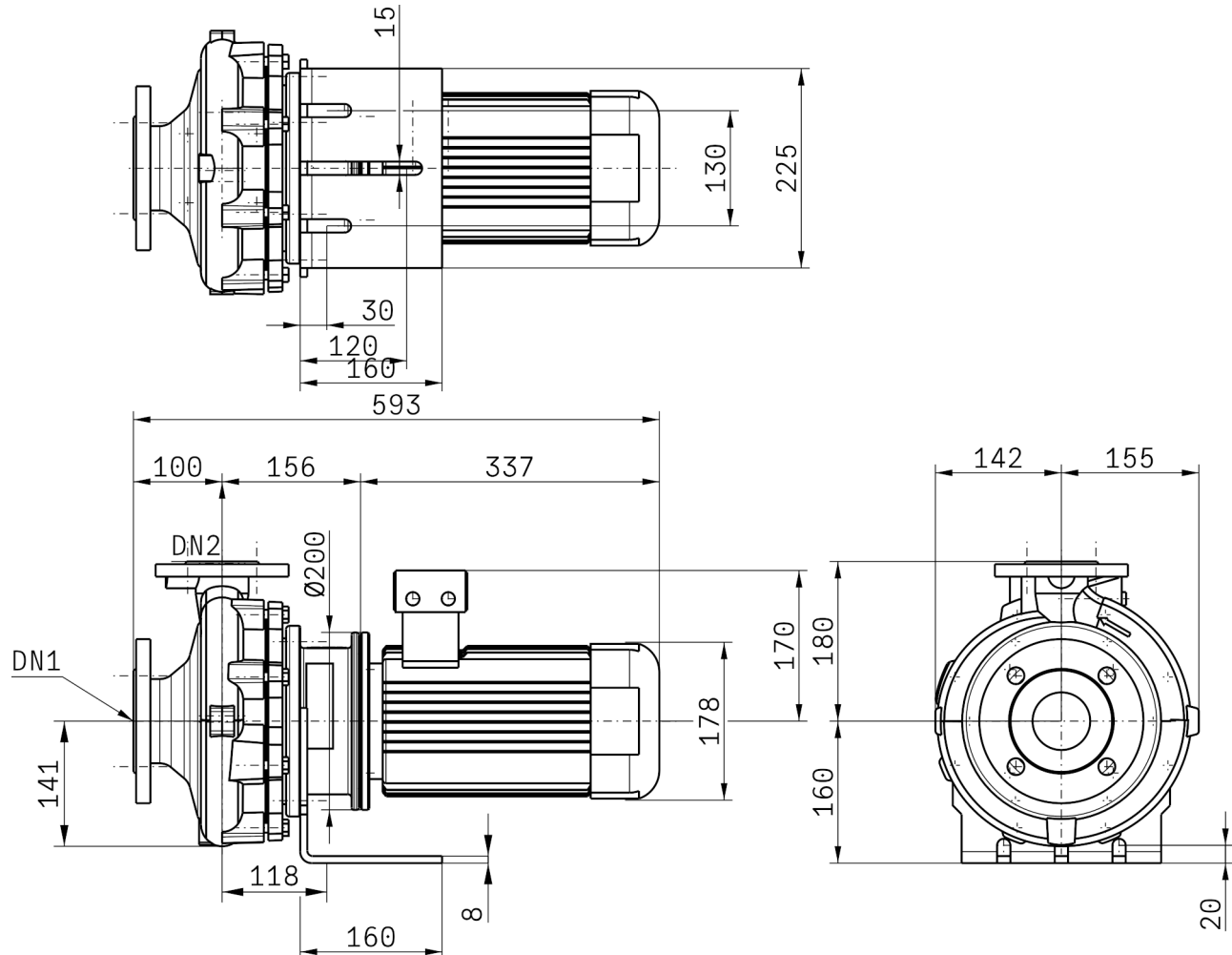


Curve Data

| | | | |
|-----------------------------------|------------------------|---|----------------------|
| Pump speed | 1,472 1/min | Efficiency Pump | 57.8 % |
| Density Fluid handled | 998 kg/m ³ | Minimum efficiency index MEI | 0.8 |
| Kinematic viscosity Fluid handled | 1 mm ² /s | Maximum power input at duty point | 0.78 kW |
| Flow rate | 17.9 m ³ /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