

Etabloc 065-050-200 GG
 ETB 065-050-200-GGSBV10 WSEEO2HHB

Operating point 1

Dimensioning operating point

Operating conditions (purchaser requirements)

| | | | |
|-----------------------------------|------------------------|---------------------------------------|---------------|
| Target flow rate | 64.2 m ³ /h | Vapour pressure determined | -0.9766 bar.r |
| Fluid | Water | Minimum inlet pressure | -0.3 bar.r |
| Fluid variant | Clean water | required | |
| Specified fluid temperature | 20 °C | Specified ambient temperature | 20 °C |
| Density Fluid handled | 998 kg/m ³ | Installation altitude above sea level | 1,000 m |
| Kinematic viscosity Fluid handled | 1 mm ² /s | | |

Operating conditions (performance)

| | | | |
|-------------------------------|-------------------------|-----------------------------------|-------------|
| Flow rate | 64.2 m ³ /h | Maximum power input at duty point | 15.15 kW |
| Minimum permissible flow rate | 12.02 m ³ /h | Maximum power input / curve | 20.52 kW |
| Head | 63.35 m | Pump speed | 2,956 1/min |
| Shut-off head | 67.66 m | Discharge pressure-max. | 6.621 bar.r |
| Efficiency Pump | 72.96 % | | |
| NPSH required | 2.07 m | | |

Design data pump

| | | | |
|---|--|--|------------------------|
| Scope of supply Pump supplied by KSB | Pump + motor | Input voltage and frequency | Without |
| Pump standard | EN 733 | Mains voltage | 400 V |
| Shaft axis position | Horizontal | Mains frequency | 50 Hz |
| Pump design | Close-coupled | Minimum efficiency index MEI | 0.7 |
| Pump system design | Single-pump system | Minimum permissible fluid temperature | 0 °C |
| Specification of wetted parts | Manufactured without paint wetting impairment substances | Maximum permissible fluid temperature | 60 °C |
| Pump direction of rotation, viewed from casing side | Counterclockwise | Quantity Stages, single-entry | 1 |
| Impeller diameter D2 | 212 mm | Casing wear ring design suction-side | Flat |
| Impeller type | Radial, closed, multi-channel | Casing wear ring design discharge-side | Flat |
| Free passage | 11.9 mm | Installation chamber Casing cover | Conical (A-type cover) |
| Support foot | No | Bearing bracket size / shaft unit | 25 |
| | | Pump bearing type, non-drive end | Anti-friction bearing |
| | | Pump bearing type, drive end | Anti-friction bearing |
| | | 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 | SMS A-type cover, vented | 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 | 0.09 bar.r | Mechanical seal type inboard | KSB's choice |
| | | Material Shaft seal inboard | QQXGG |

Special design

Variant shaft seal

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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 | | |
| Material Support foot | WITHOUT | | |

Driver

| | | | |
|---|-----------------------------|--------------------------------------|-------------|
| Electric motor | 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 | 22.1 % |
| 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 | Motor efficiency at 4/4 load | 92.4 % |
| Enclosure Unit | Without | Marking according to directive Drive | CE |
| Thermal class | 155 (F) nach IEC 60085 | | |
| Temperature sensor motor | 3 PTC thermistors | | |
| Terminal box position of motor (looking at the motor shaft) | 360 ° | | |
| Operation on a frequency inverter permitted | Yes (acc to motor manufact) | | |
| Sound pressure level Motor | 74 dBa | | |
| Type series Motor manufacturer | Acc. to motor manufacturer | | |



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Coating

Aggregate

Surface preparation
Properties Primer coat
Thickness Primer coat
Properties Top coat
Thickness Top coat
Colour Top coat

Free from dirt, grease, rust
Hydro dip primer, water-dilutable
60 µm
Acrylate dispersion water-thinned
40 µm
RAL5002 Ultramarine Blue

Packaging

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

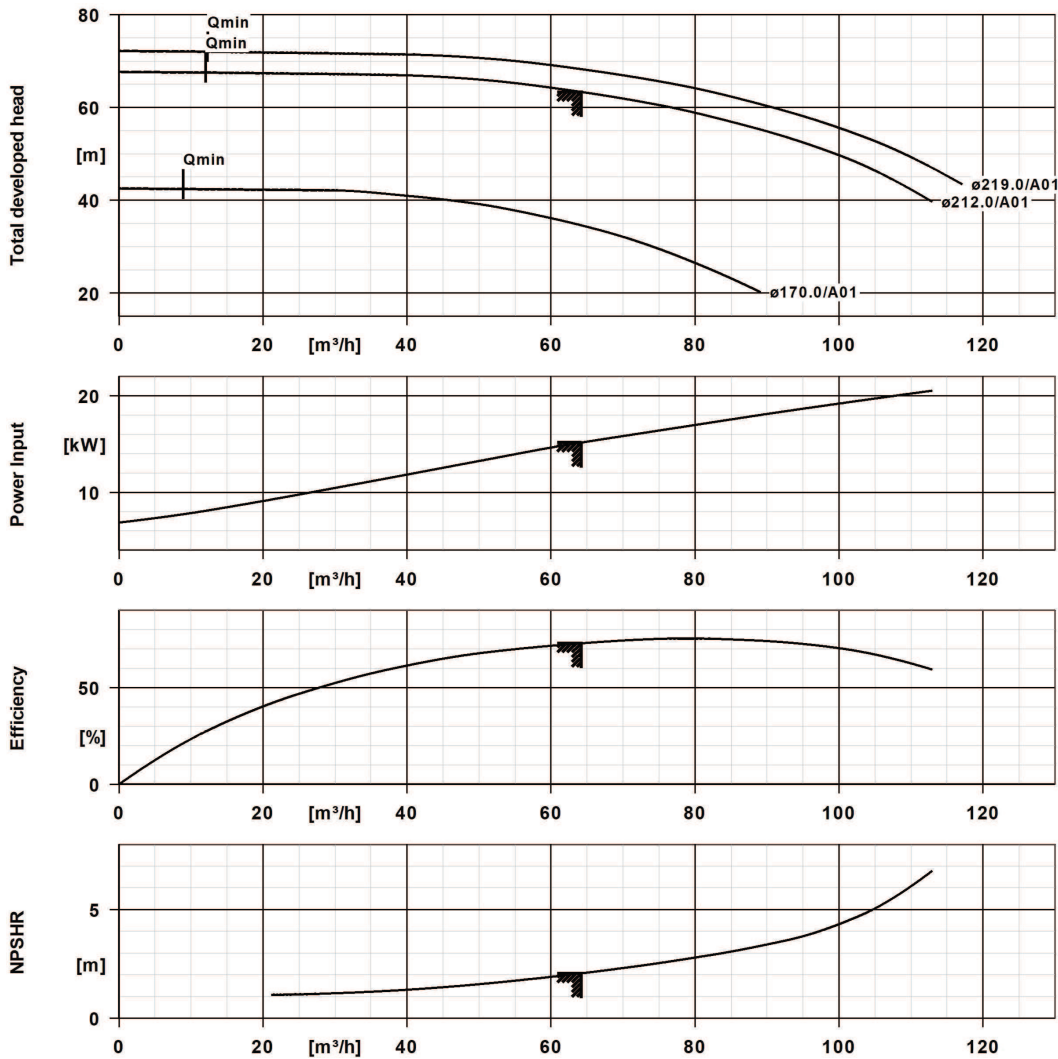
Nameplates

| | |
|----------------------|----|
| Duplicate name plate | No |
|----------------------|----|

Performance Curve (Pump)



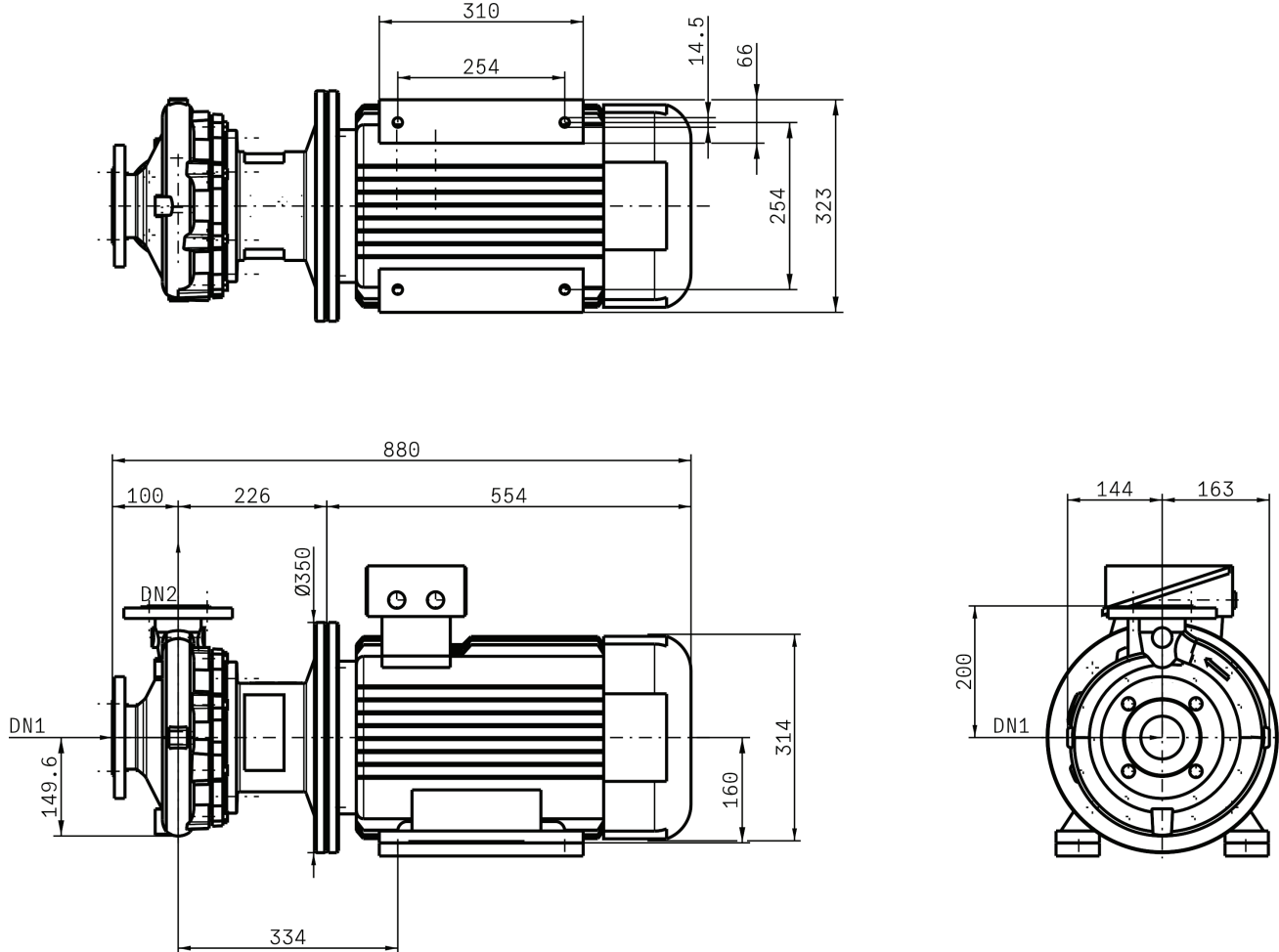
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Curve Data

| | | | |
|-----------------------------------|------------------------|---|----------------------|
| Pump speed | 2,956 1/min | Efficiency Pump | 73 % |
| 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 | 15.2 kW |
| Flow rate | 64.2 m ³ /h | NPSH required | 2.07 m |
| Head | 63.4 m | Hydraulic impeller diameter | 212 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

| | |
|--|--------------|
| 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 ° |

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 |



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Net weight

| | |
|---|----------|
| Total weight Pump | 47.75 kg |
| Total weight Drive | 108 kg |
| Total weight Pump set | 159.2 kg |
| Total weight of assembly/transport aids | 3.4 |

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