# Technical Datasheet



**Etanorm 150-125-250 GG**
ETN 150-125-250-GGSAA66 GSFEV4AHB

**Operating point** 1 **Dimensioning operating point**

## Operating conditions (purchaser requirements)

| | | | |
|---|---|---|---|
| Target flow rate | 300 m³/h | Vapour pressure determined | -0.9956 bar.a |
| Target head | 20 m | Minimum inlet pressure required | -0.3 bar |
| Fluid | Antifreeze on propylene glycol base, inhibited, closed system, e.g. Antifrogen L or similar products | Specified ambient temperature | 20 °C |
| | | Installation altitude above sea level | 1,000 m |
| Fluid variant | Concentration 30% | | |
| Specified fluid temperature | -8 °C | | |
| Density Fluid handled | 1,041 kg/m³ | | |
| Kinematic viscosity Fluid handled | 11.52 mm²/s | | |

## Operating conditions (performance)

| | | | |
|---|---|---|---|
| Flow rate | 300 m³/h | Maximum power input at duty point | 19.35 kW |
| Minimum permissible flow rate | 45.78 m³/h | Maximum power input / curve | 20.12 kW |
| Head | 20 m | Pump speed | 1,511 1/min |
| Shut-off head | 25.96 m | Discharge pressure-max. | 2.65 bar |
| Efficiency Pump | 87.89 % | | |
| NPSH required | 2.36 m | | |

**Etanorm 150-125-250 GG**
ETN 150-125-250-GGSAA66 GSFEV4AHB

## Design data pump

| | | | |
|---|---|---|---|
| Scope of supply Pump supplied by KSB | Bare-shaft pump | Mains voltage | 400 V |
| | | Mains frequency | 50 Hz |
| Pump standard | EN 733 | Minimum efficiency index MEI | 0.6 |
| Shaft axis position | Horizontal | Minimum permissible fluid temperature | -30 °C |
| Pump design | Long-coupled (basepl-mounted) | Maximum permissible fluid temperature | 120 °C |
| Pump system design | Single-pump system | | |
| Specification of wetted parts | Manufactured without paint wetting impairment substances | Quantity Stages, single-entry | 1 |
| | | Casing wear ring design suction-side | Flat |
| Pump direction of rotation, viewed from casing side | Counterclockwise | Casing wear ring design discharge-side | Flat |
| Impeller diameter D2 | 269 mm | | |
| Impeller type | Radial, closed, multi-channel | Installation chamber Casing cover | Conical (A-type cover) |
| Free passage | 22.4 mm | | |
| Nut lock for Impeller | No | Bearing bracket size / shaft unit | 35 |
| Swirl break | No | Bearing bracket type | Bearing bracket |
| | | Bearing bracket design | Medium |
| | | Pump bearing type, non-drive end | Anti-friction bearing |
| | | Pump bearing type, drive end | Anti-friction bearing |
| | | Lubrication type | Grease lubrication |
| | | Bearing seal Pump | V-ring |
| | | Pump directive | CE |

## Nozzle connections pump

| | | | |
|---|---|---|---|
| Nominal diameter Suction nozzle | DN 150 | Nominal diameter Discharge nozzle | DN 125 |
| 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) | | |

**Etanorm 150-125-250 GG**
ETN 150-125-250-GGSAA66 GSFEV4AHB

## Auxiliary connections pump

| | | | |
|---|---|---|---|
| 6B Fluid Drain | G 1/2<br>Drilled and plugged | 1M Pressure gauge<br>Discharge nozzle | Without<br>Without |
| 6D Fluid Filling and venting | G 1/2<br>Drilled and plugged | 1M Pressure gauge Suction nozzle | Without<br>Without |
| 8B Leakage Drain | G 1/2<br>Drilled | | |

## Shaft sealing

| | | | |
|---|---|---|---|
| Shaft seal type | SMS A-type cover | Shaft seal code | Code 66 |
| Operating mode of mechanical seal (function) | API plan 03 | Shaft seal manufacturer inboard | BURGMANN |
| Determined pressure Seal chamber | -0.14 bar | Mechanical seal type inboard | MG13G6 |
| | | Material Shaft seal inboard | Q7Q7EGG |

## Materials

| | | | |
|---|---|---|---|
| Material Volute casing | EN-GJL-250/A48 CL 35B | Material Bolts/Screws Hydraulic casing | 8.8 |
| Material Casing cover | EN-GJL-250/A48 CL 35B | Material Screw plug Hydraulic casing | ST |
| Material Shaft | C45+N | Material Static seal Screw plug Volute casing | A4/AISI 316 |
| Material Impeller | EN-GJL-250/A48 CL 35B | Material Nut Impeller fastening | (ST) |
| Material Casing wear ring suction-side | JL/LAMELLAR GRAPHITE CAST IRON | Material Key | C45+C/A311 GR 1045 CLASS A |
| Material Casing wear ring discharge-side | JL/LAMELLAR GRAPHITE CAST IRON | | |
| Material Shaft protecting sleeve | (CRNIMO ST INT) | | |
| Material Bearing bracket | EN-GJL-250/A48 CL 35B | | |
| Material Static seal Discharge cover | DPAF DW001 | | |

## 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-thin |
| Thickness Top coat | 40 µm |
| Colour Top coat | RAL5002 Ultramarine Blue |
| Colour Top coat Drive | RAL5002 Ultramarine Blue |

**Etanorm 150-125-250 GG**
ETN 150-125-250-GGSAA66 GSFEV4AHB

## Packaging

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

## Nameplates

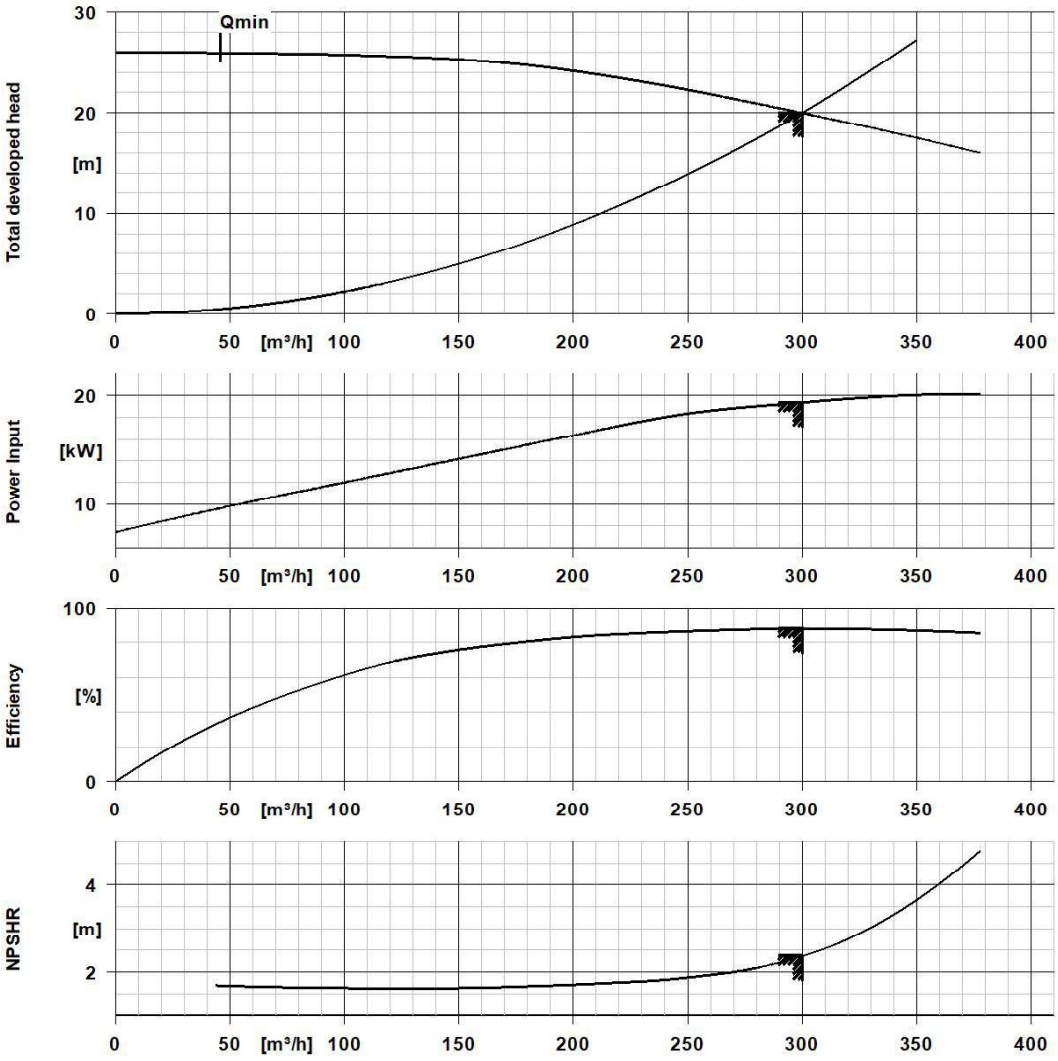
## Product properties

| | |
|---|---|
| Specification of wetted parts | Manufactured without paint wetting impairment substances |
| Standard Test of specification of wetted parts | KSB documentation |
| Certificate Check of specification of wetted parts | Without |

## Performance Curve (Pump)



**Etanorm 150-125-250 GG**
ETN 150-125-250-GGSAA66 GSFEV4AHB




### Curve Data

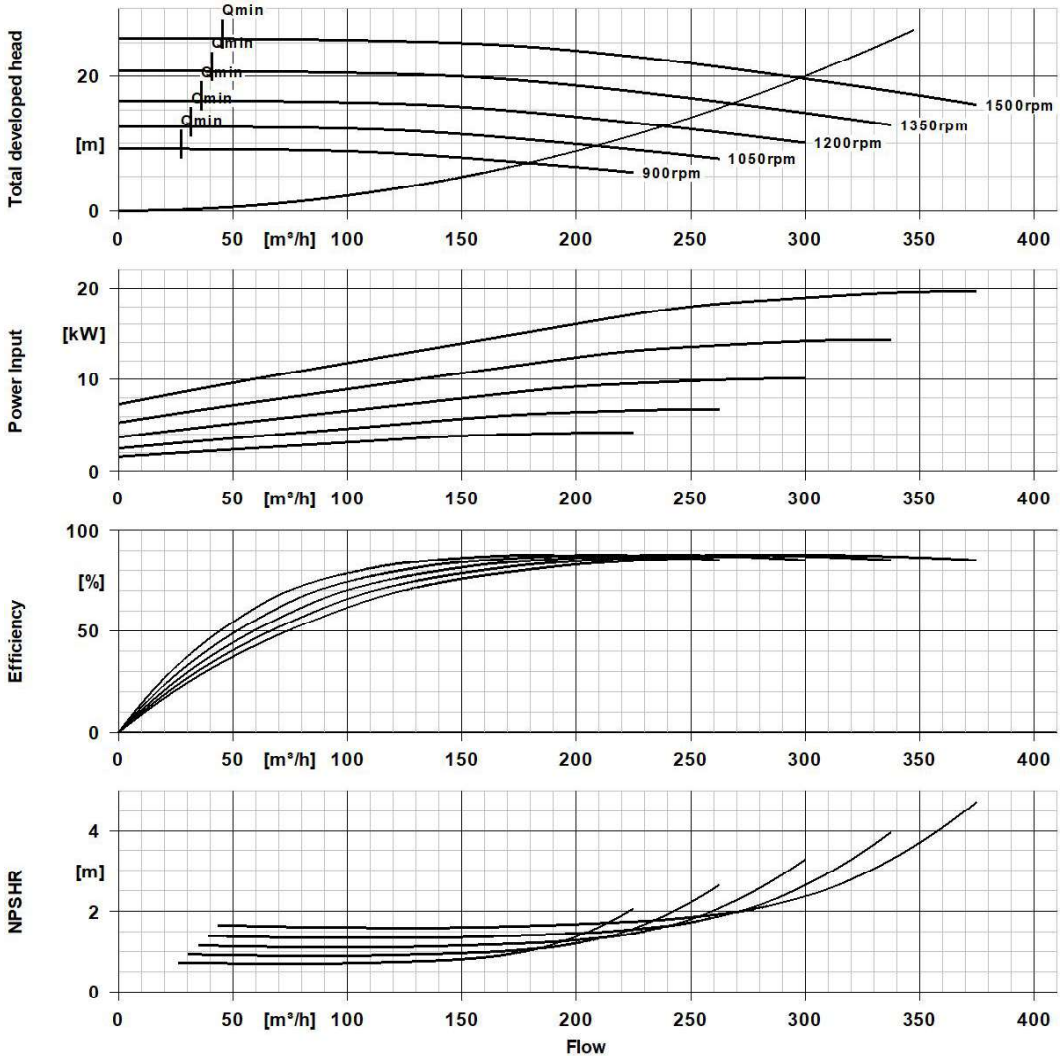
| | | | |
|---|---|---|---|
| Pump speed | 1,511 1/min | Efficiency Pump | 87.9 % |
| Density Fluid handled | 1,041 kg/m³ | Minimum efficiency index MEI | 0.6 |
| Kinematic viscosity Fluid handled | 11.5 mm²/s | Maximum power input at duty point | 19.4 kW |
| | | NPSH required | 2.36 m |
| Flow rate | 300 m³/h | Hydraulic impeller diameter | 269 mm |
| Head | 20 m | Hydraulic calculation according to standard/ class | EN ISO 9906 Class 3B |

**According to EN ISO 9906, §4.4.2 (pump input power below 10 kW)**

## Speed Curve



**Etanorm 150-125-250 GG**
ETN 150-125-250-GGSAA66 GSFEV4AHB



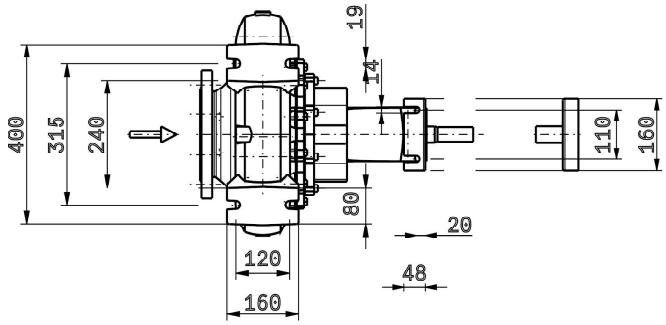

### Curve Data

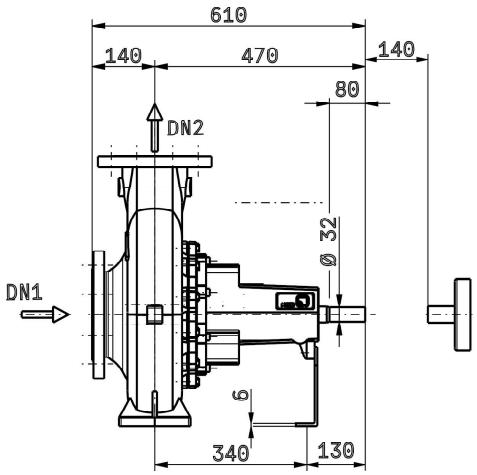
| | | | |
|---|---|---|---|
| Density Fluid handled | 1,041 kg/m³ | Minimum efficiency index MEI | 0.6 |
| Kinematic viscosity Fluid handled | 11.5 mm²/s | Hydraulic impeller diameter | 269 mm |
| Flow rate | 300 m³/h | Head | 20 m |

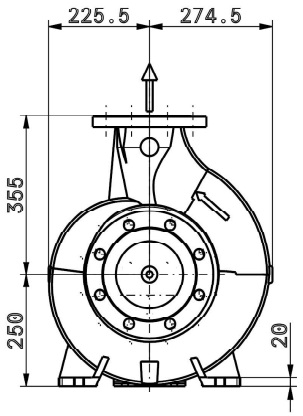
# Installation plan



**Etanorm 150-125-250 GG**
ETN 150-125-250-GGSAA66 GSFEV4AHB




Drawing is not to scale.

Dimensions are given in mm

## Motor

| | |
|---|---|
| Rated power Motor | 22 kW |
| Rated speed Motor | 1,500 1/min |

## Connections

| | |
|---|---|
| Nominal diameter Suction nozzle | DN 150 |
| Suction flange bolt hole pattern as per standard | EN1092-2 |
| Nominal diameter Discharge nozzle | DN 125 |
| 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 | 124.4 kg |

# Installation plan



**Etanorm 150-125-250 GG**
ETN 150-125-250-GGSAA66 GSFEV4AHB

**Connect pipelines stress-free**

**Plan for additional connections see extra drawing**

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