# Data sheet

## Hydraulic data

| | |
|---|---|
| **Minimum efficiency index (MEI)** | 0,4 |
| **Maximum operating pressure *PN*** | 10 bar |
| **Min. fluid temperature $T_{min}$** | -20 °C |
| **Max. fluid temperature $T_{max}$** | 120 °C |
| **Min. ambient temperature $T_{min}$** | 0 °C |
| **Max. ambient temperature $T_{max}$** | 40 °C |

## Motor data

| | |
|---|---|
| **Mains connection** | 3~380 V, 50/60 Hz |
| **Motor efficiency class** | IE4 |
| **Rated power $P_2$** | 4 kW |
| **Rated current $I_N$** | 12 A |
| **Rated speed *n*** | 2900 1/min |
| **Max. speed $n_{max}$** | 2900 1/min |
| **Interference emission** | EN 61800-3 |
| **Interference immunity** | EN 61800-3 |
| **Insulation class** | F |
| **Protection class motor** | IP55 |
| **Integrated full motor protection** | - |
| **Threaded cable connection** | 1 x M16x1.5 |

## Materials

| | |
|---|---|
| **Pump housing** | Cast iron |
| **Impeller** | PPE/PS-GF30 |
| **Shaft** | Stainless steel |
| **Shaft seal** | AQ1EGG |
| **Lantern** | Cast iron |

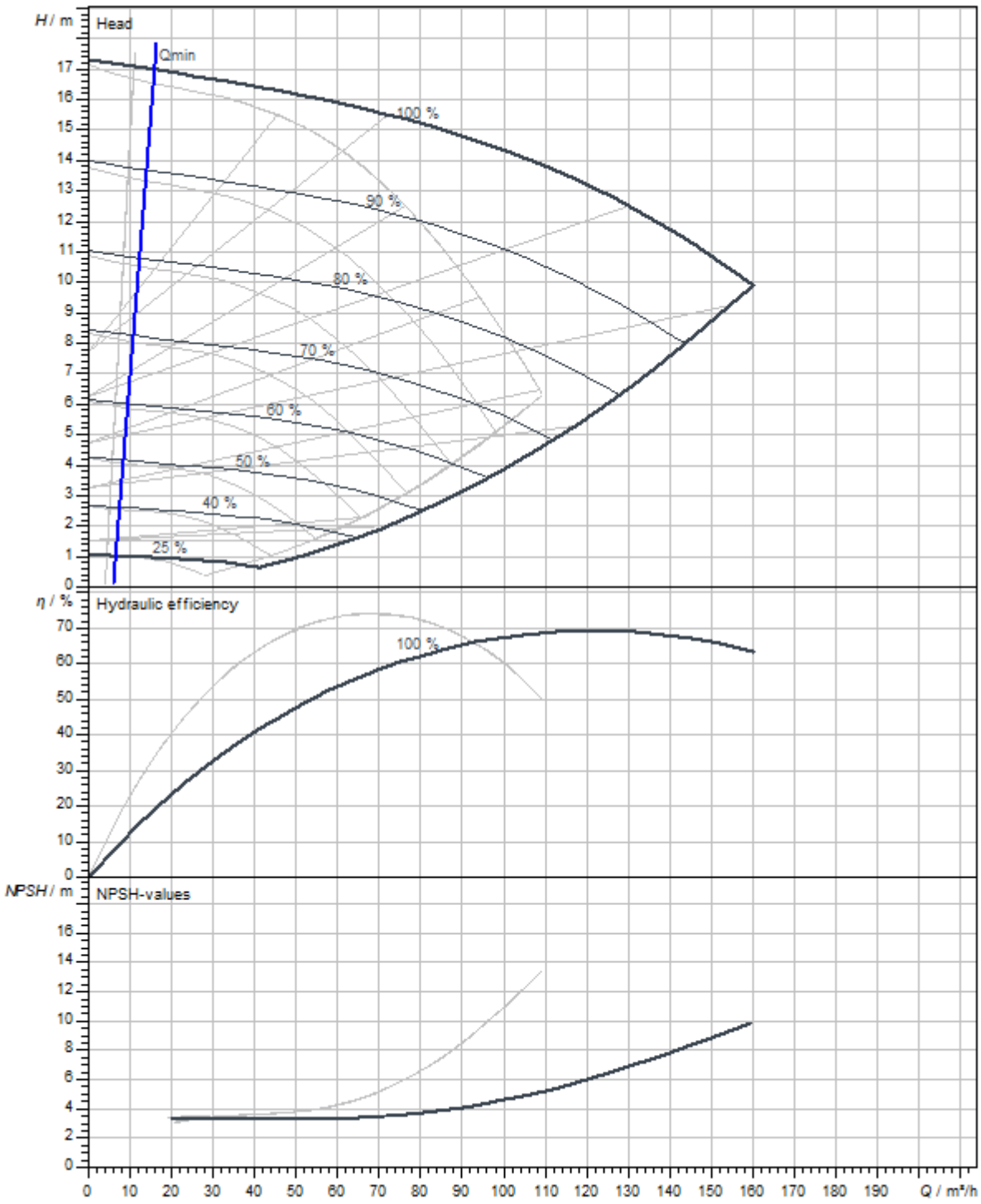
## Approved liquids (other liquids upon request)

| | |
|---|---|
| **Heating water (as per VDI 2035)** | yes |
| **Heat carrier oil** | Special version at additional charge |
| **Cooling and cold water circulation systems** | yes |
| **Water-glycol mixtures (at 20 – 40 vol. % glycol and fluid temperature ≤ 40 °C)** | yes |

## Installation dimensions

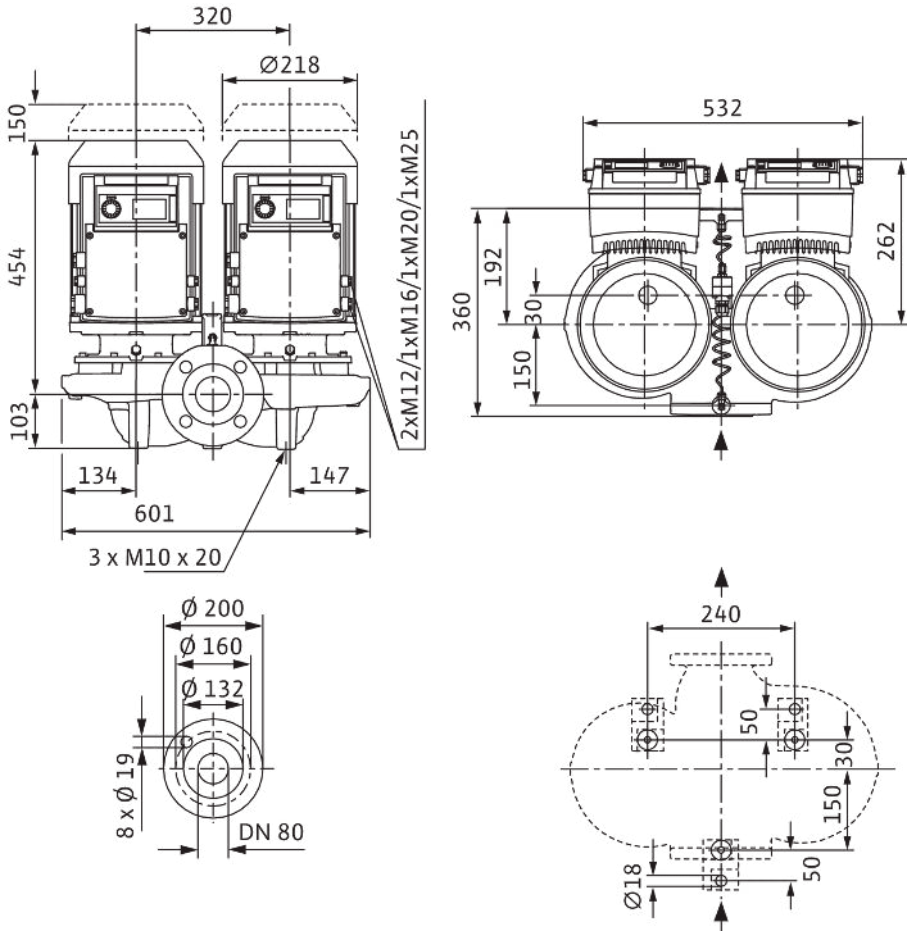
| | |
|---|---|
| **Port-to-port length *L0*** | 360 mm |
| **Pipe connection on the suction side *DNs*** | DN 80 |
| **Pipe connection on the pressure side *DNd*** | DN 80 |

## Pump curves


H / m
Head
Qmin
100 %
90 %
80 %
70 %
60 %
50 %
40 %
25 %
η / %
Hydraulic efficiency
100 %
NPSH / m
NPSH-values
Q / m³/h

## Dimensions and dimensions drawings

### VeroTwin-DP-E 80/110-4/2-R1

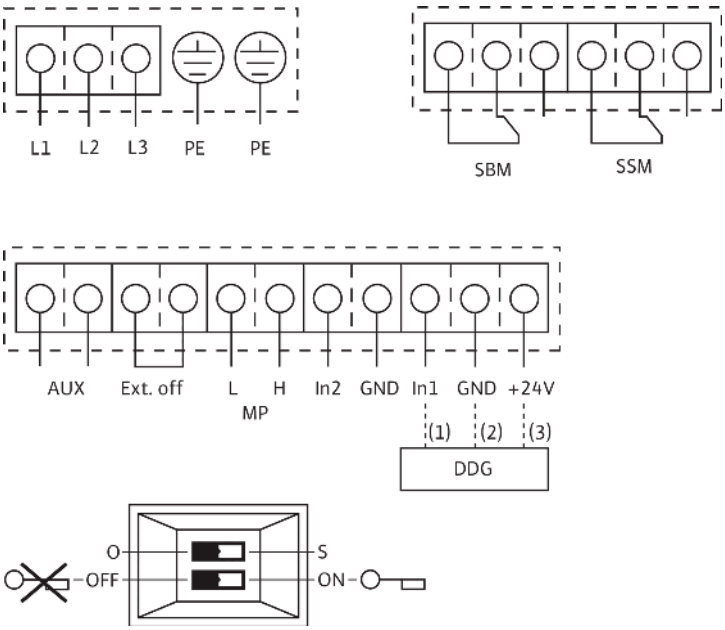



**Note:**

Housing with feet for installation on a base and drilled holes M10, brackets on request.

## Wiring diagram

### IL-E




| | |
|---|---|
| L1, L2, L3: | Mains connection: 3~440 V ±10%, 50/60 Hz; 3~400 V ±10%, 50/60 Hz; 3~380 V -5%/+10%, 50/60 Hz |
| PE: | Protective conductor connection |
| DDG: | Connection for differential pressure sensor |
| In1 (1): | Actual value input 0-10 V/0-20 mA; 2-10 V/4-20 mA |
| GND (2): | Ground connection for In1 and In2 |
| + 24 V (3): | DC voltage output for an external consumer/sensor. Max load 60 mA |
| In2: | Setpoint input 0-10 V/0-20 mA; 2-10 V/4-20 mA |
| MP: | Multi-pump, interface for dual pump management |
| Ext. off: | Control input “Overriding Off”The pump can be switched on or off via an external, potential-free contact (24 V DC/10 mA). |
| SBM:* | Potential-free collective run signal (changeover contact according to VDI 3814) |
| SSM:* | Potential-free collective fault signal (changeover contact according to VDI 3814) |
| aux: | External pump cycling (only with dual pump operation). Pump cycling can be performed using an external, potential-free contact (24 VDC/10 mA) |
| DIP switch: | 1: Switchover between operation (O) and service mode (S)2: Activate/deactivate the menu for access disable |
| Optional: | IF-Modules for connection to the building automation |

* Load capacity of contacts for SBM and SSM:

min.: 12 V DC/10 mA

max.: 250 V AC/1 A