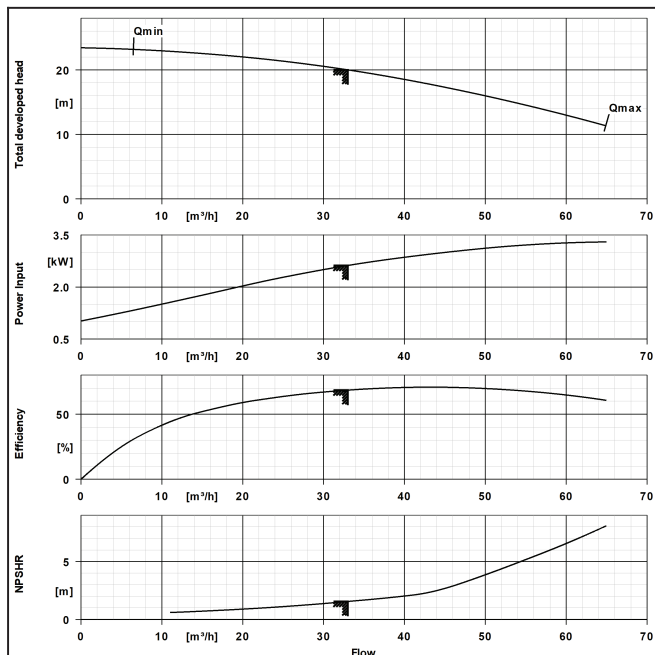


Etaline 050-050-160 GG

ETL 050-050-160-GGSCV11 WSEDN4HBB

Version No.: 2

**Design data pump**

Pump standard	EN 733
Pump design	Close-coupled
Nominal diameter Suction nozzle	DN 50
Suction nozzle design acc.to	EN1092-2
Suction flange bolt hole pattern as per standard	EN1092-2
Nominal diameter Discharge nozzle	DN 50
Discharge nozzle design acc.to	EN1092-2
Discharge flange bolt hole pattern as per standard	EN1092-2
Nominal pressure Suction nozzle	PN 16
Nominal pressure Discharge nozzle	PN 16
Shaft/Stem seal	Inboard single mechanical seal
Material Shaft seal inboard	BQEGG DW001
Shaft seal code	Code 11
Hydraulic impeller diameter	150 mm
Free passage	11,5 mm
Specification of wetted parts	Manufactured without paint wetting impairment substances

Materials

Material Volute casing	EN-GJL-250/A48 CL 35B
Material Casing cover	EN-GJL-250/A48 CL 35B
Material Support foot	WITHOUT
Material Shaft	C45+N
Material Impeller	EN-GJL-250/A48 CL 35B

Dimensioning operating point

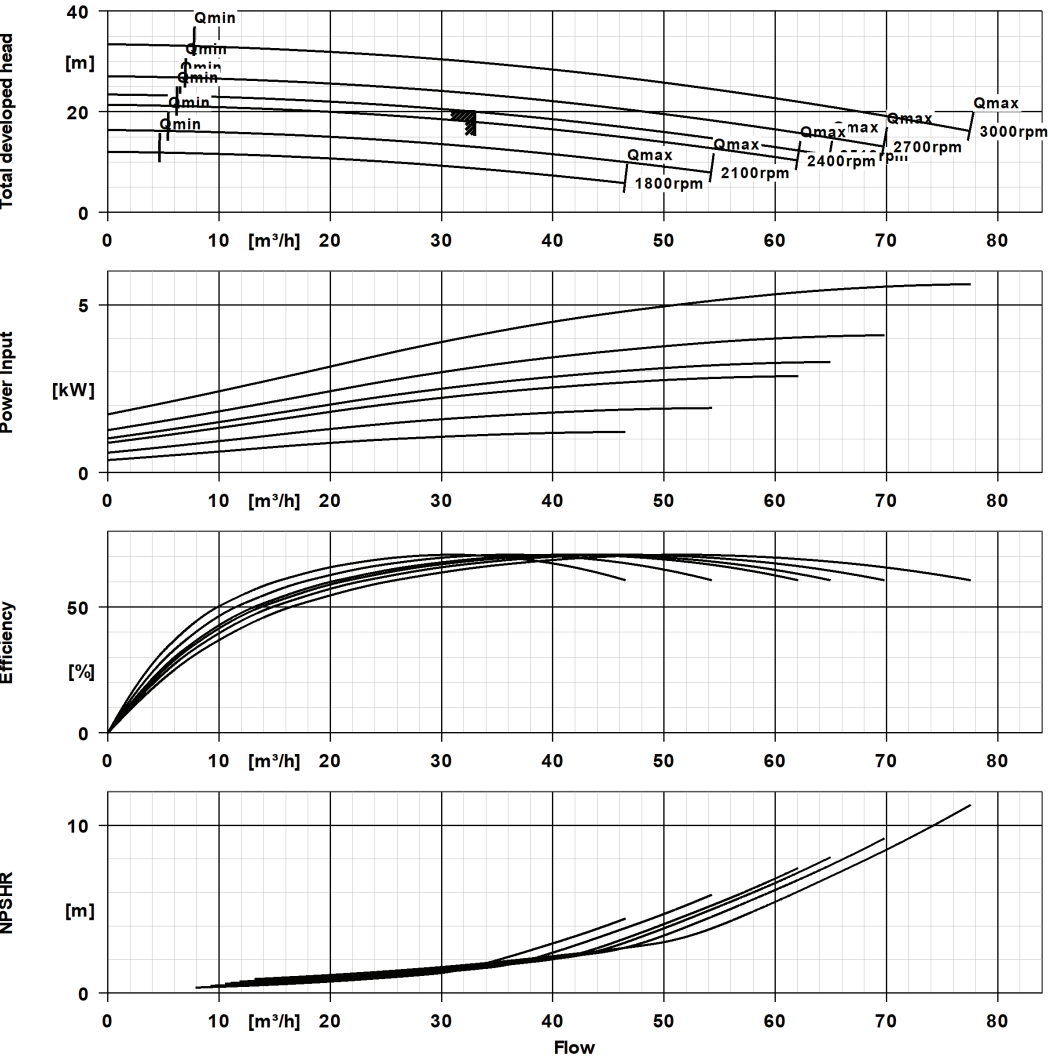
Fluid	Water
Fluid variant	Clean water
Specified ambient temperature	20 °C
Specified fluid temperature	20 °C
Flow rate	33 m³/h
Head	20 m
Efficiency Pump	68,5 %
Minimum efficiency index MEI	0,7
Maximum power input at duty point	2,621 kW

Pump speed	2.512 1/min
Pump system design	Single-pump system
NPSH required	1,56 m

Driver

Drive concept	Electric actuator
Drive standard, mechanical	IEC
Drive standard electric	IEC
Efficiency class	IE5 (Ultra Premium)
Rated speed Motor	3.000 1/min
Rated frequency Motor	100Hz
Rated voltage Motor	400 V
Rated power Motor	7,5 kW
Motor power reserve determined	138 %
Rated current Motor	16,7 A
Thermal class	155 (F) nach IEC 60085
Enclosure Motor	IP55 (TEFC)
Temperature sensor motor	3 PTC thermistors
Mains voltage	400 V
Motor switching type	Star
Operation on a frequency inverter permitted	Required by design
Terminal box position of motor (looking at the motor shaft)	360 °

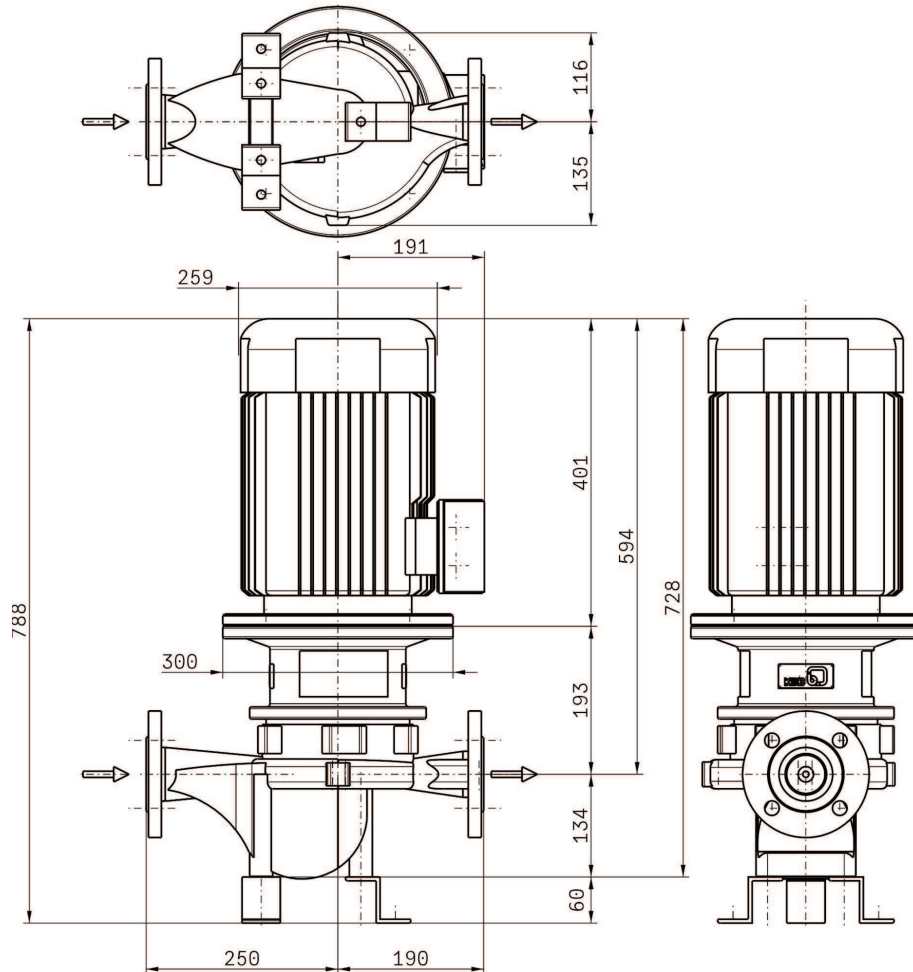
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Curve Data

Density Fluid handled	998 kg/m ³	Minimum efficiency index MEI	0,7
Kinematic viscosity Fluid handled	1 mm ² /s	Hydraulic impeller diameter	150 mm
Flow rate	33 m ³ /h	Head	20 m

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Drawing is not to scale.

Dimensions are given in mm

Motor

Electric motor	No
Rated power Motor	7,5 kW
Rated speed Motor	3.000 1/min
Material Installation part Pump	WITHOUT

Connections

Nominal diameter Suction nozzle	DN 50
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



Etaline 050-050-160 GG

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Net weight

Total weight Pump	35,56 kg
Total weight Drive	56 kg
Total weight Pump set	93,09 kg
Total weight Assembly/transport aids	6,12 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

PumpMeter

Design

Explosion protection type Monitoring unit	Without
Length Connection cable Monitoring unit	5 m

General description

PumpMeter

Intelligent pressure transmitter PumpMeter with on-site display of operating point

General description:

PumpMeter is an intelligent pressure transmitter with on-site display of measured values and pump operating data. It is supplied completely assembled and parameterised for the individual pump. PumpMeter is ready for operation as soon as the M12 plug connector is plugged in. PumpMeter records the load profile of the pump during operation in order to indicate any potential for optimising the energy efficiency and availability of your pumping system.

Display unit:

Backlit display for on-site display of measured values and pump operating data in a straightforward manner based on international symbols, rotatable in steps of 90°.

Values displayed:

Suction pressure, pressure at pump inlet in bar(g)
Discharge pressure, pressure at pump outlet in bar(g)
Differential pressure between pump inlet and outlet in bar
Qualitative indication of the operating point

Connection of display unit via M12 x 1 5-pin connector, for power supply and utilisation of communication interfaces. Data options available: measured discharge pressure or calculated differential pressure of the pump via analog 4 - 20 mA signal or serial interface RS 485 (Modbus RTU).

Communication via RS232 service interface for parameterisation. Parameters factory-set for the individual pump.

Ambient conditions:

Enclosure: IP65

Ambient temperature

-30°C ... 80°C (transport, storage)

-10°C ... 60°C (operation)

Fluid temperature: -30°C to 140°C

Material resistance:

UV-resistant (suitable for outdoor installation)

Resistant to most commonly used cleaning agents

Resistant to oil mist

Silicone-free:

Manufactured without paint wetting impairment substances

Electrical data:

Power supply:

24V DC \pm 10%, min. 140 mA

Interfaces, alternatives: 4 - 20 mA, 3-wire (discharge pressure or differential pressure)

RS485, Modbus RTU (Slave)

Service interface: RS232

EMC:

EN 61326-1 (interference immunity for industrial environments, interference emission for residential environments)

Sensors:

Two gauge pressure sensors - one sensor factory-mounted at the pump inlet and outlet, respectively, and connected to the analysing unit by plug-type connector.

Measuring accuracy (sum of all errors relative to the measuring range):

±1% for a fluid temperature of -10 to 100 °C

±2.5% for a fluid temperature of -30 to -10 °C and 100 to 140 °C

Measuring cell material: stainless steel (sealless)

Available measuring ranges:

-1 ...10 bar (gauge pressure)

-1 ...10 bar (gauge pressure)