

Thermal Oil / Hot Water Pump

## Etanorm SYT

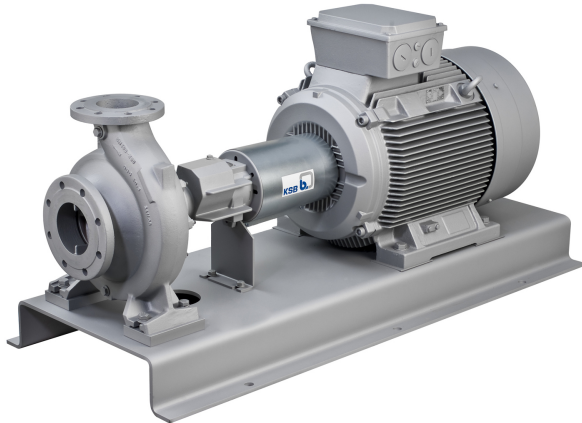
### Type Series Booklet



## Centrifugal Pumps with Shaft Seal

### Thermal Oil Pumps / Hot Water Pumps

# Etanorm SYT



#### Main applications

- Heat transfer systems
- Hot water circulation

#### Fluids handled

- High-temperature hot water
- Thermal oil

#### Further information on fluids handled

(⇒ Page 7)

#### Operating data

##### Operating properties

Characteristic		Value	
		50 Hz	60 Hz
Flow rate	Q [m <sup>3</sup> /h]	≤ 625	≤ 754
Head	H [m]	≤ 102	≤ 100
Fluid temperature	T [°C]	≥ -30	≥ -30
Thermal oil		≤ +350	≤ +350
Fluid temperature		≤ +180	≤ +180
Hot water			
Operating pressure	p [bar]	≤ 16	≤ 16

#### Materials per country

- A = Europe, Middle East, North Africa
  - A1 = Default material variant
  - A2 = Optional material variant
- B = India
  - B1 = Default material variant
  - B2 = Optional material variant

1) For fluid temperatures ≤ 140°C only

2) For fluid temperatures > 140°C only

#### Design details

##### Design

- Volute casing pump
- Horizontal installation
- Back pull-out design
- Single-stage
- Dimensions and ratings to EN 733

##### Pump casing

- Radially split volute casing
- Volute casing with integrally cast pump feet
- Replaceable casing wear rings

##### Shaft seal

- Reinforced single mechanical seal
- Reinforced double mechanical seal
- To EN 12756

##### Impeller type

- Closed radial impeller with multiply curved vanes

##### Bearings

- Various application-oriented bearings (⇒ Page 8)

##### Drive end:

- Grease-packed deep groove ball bearing

##### Pump end:

- Carbon bearing / SiC/SiC bearing lubricated by fluid handled

##### Automation

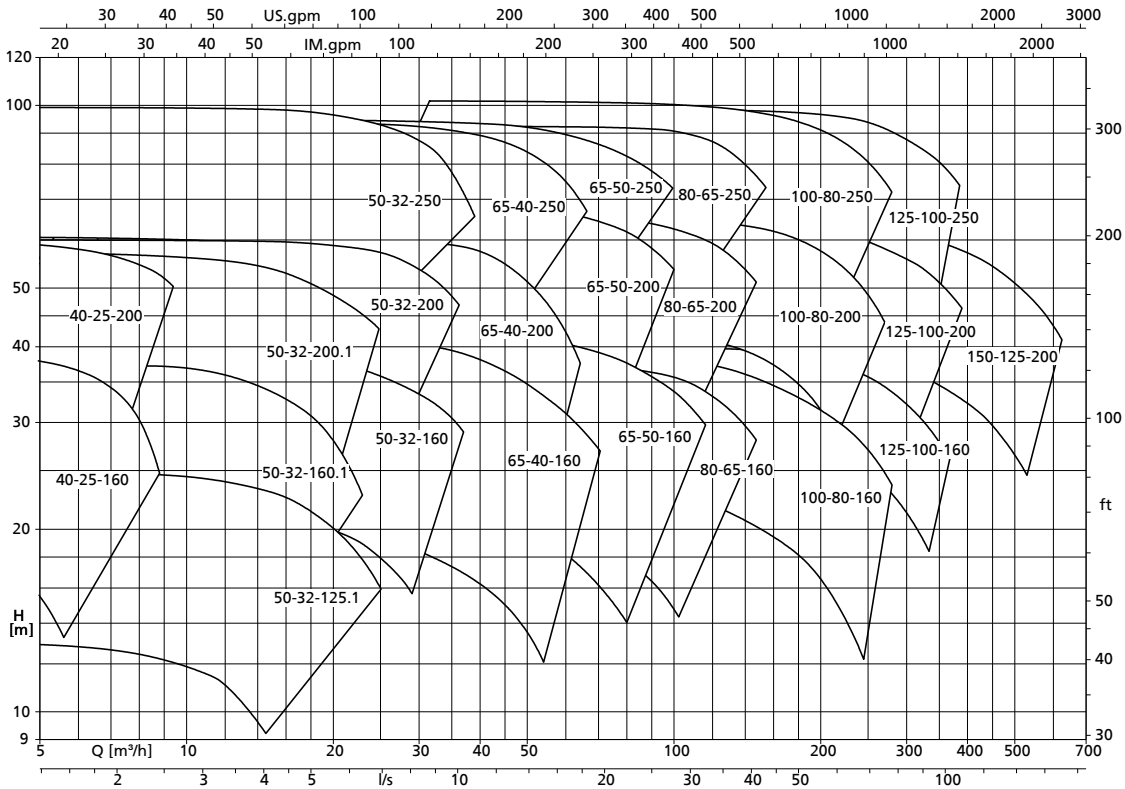
##### Applies to region A only!

##### Automation options:

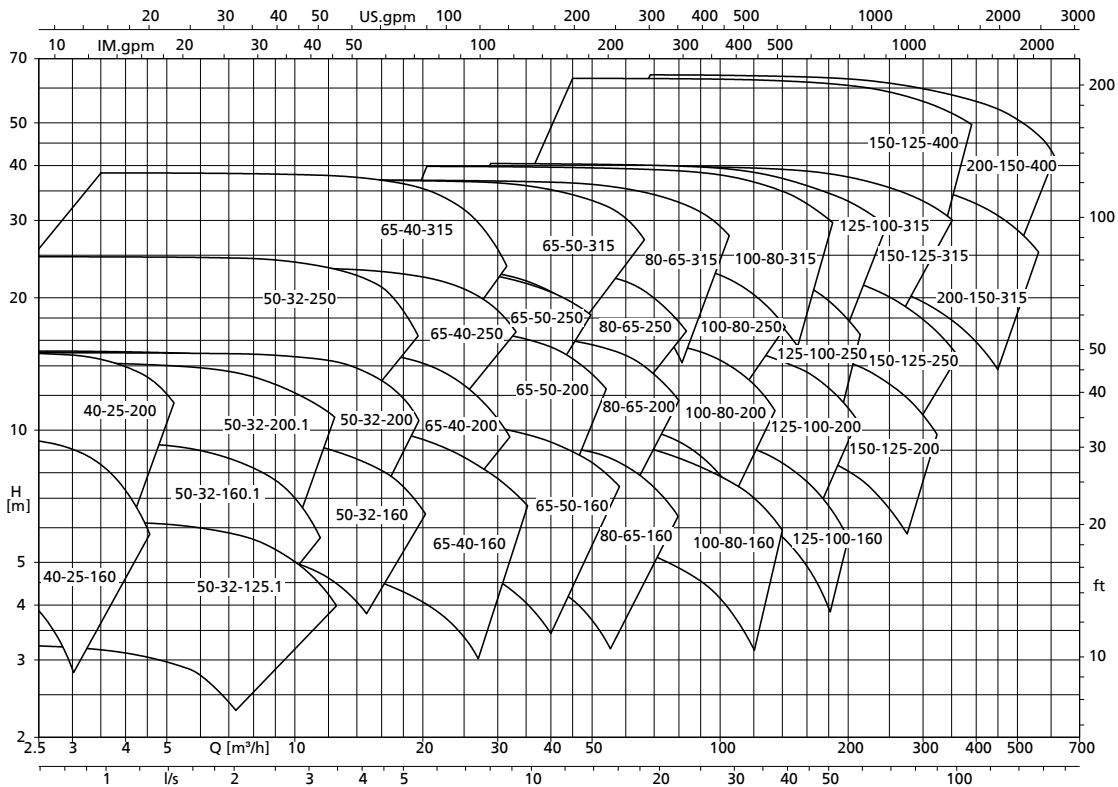
- PumpDrive (motor-mounted model)<sup>1)</sup>
- PumpDrive (wall-mounted, cabinet mounted)<sup>2)</sup>
- KSB SuPremE

Selection Charts

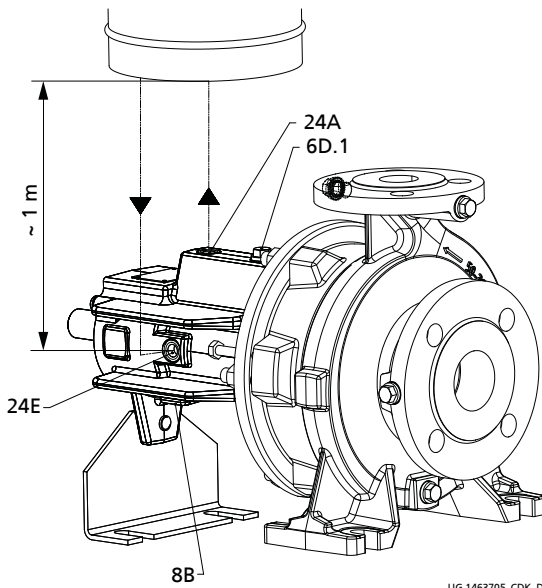
Etanorm SYT, n = 2900 rpm



Etanorm SYT, n = 1450 rpm



Auxiliary connections for double mechanical seal



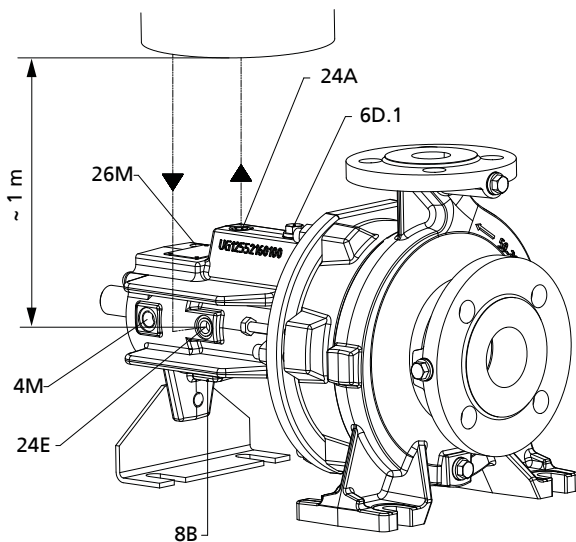
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Fig. 6: Connections for double mechanical seal

Overview

Connection	Design
6D.1	Fluid priming and venting
8B	Leakage drain
24A	Quench fluid outlet
24E	Quench fluid inlet

Auxiliary connections for double mechanical seal and monitoring equipment



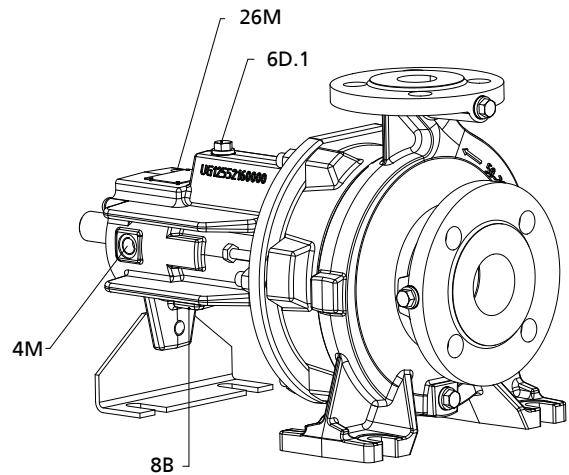
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Fig. 7: Connections for double mechanical seal and monitoring equipment

Overview

Connection	Description
4M	Temperature measurement
6D.1	Fluid priming and venting
8B	Leakage drain
24A	Quench liquid outlet
24E	Quench liquid inlet
26M	Shock pulse measurement

Auxiliary connections for single mechanical seal and monitoring equipment



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Fig. 8: Connections for single mechanical seal and monitoring equipment

Overview

Connection	Description
4M	Temperature measurement
6D.1	Fluid priming and venting
8B	Leakage drain
26M	Shock pulse measurement

Scope of supply

Depending on the model, the following items are included in the scope of supply:

Scope of supply

Scope of supply	Region
Pump	A, B
Baseplate	A, B
Coupling	A, B
Coupling guard	A, B
Drive	A, B
Quench pot with pipework (optional)	A
Special accessories as required	A

General Assembly Drawings

Etanorm SYT, bearing bracket WS\_25\_LS

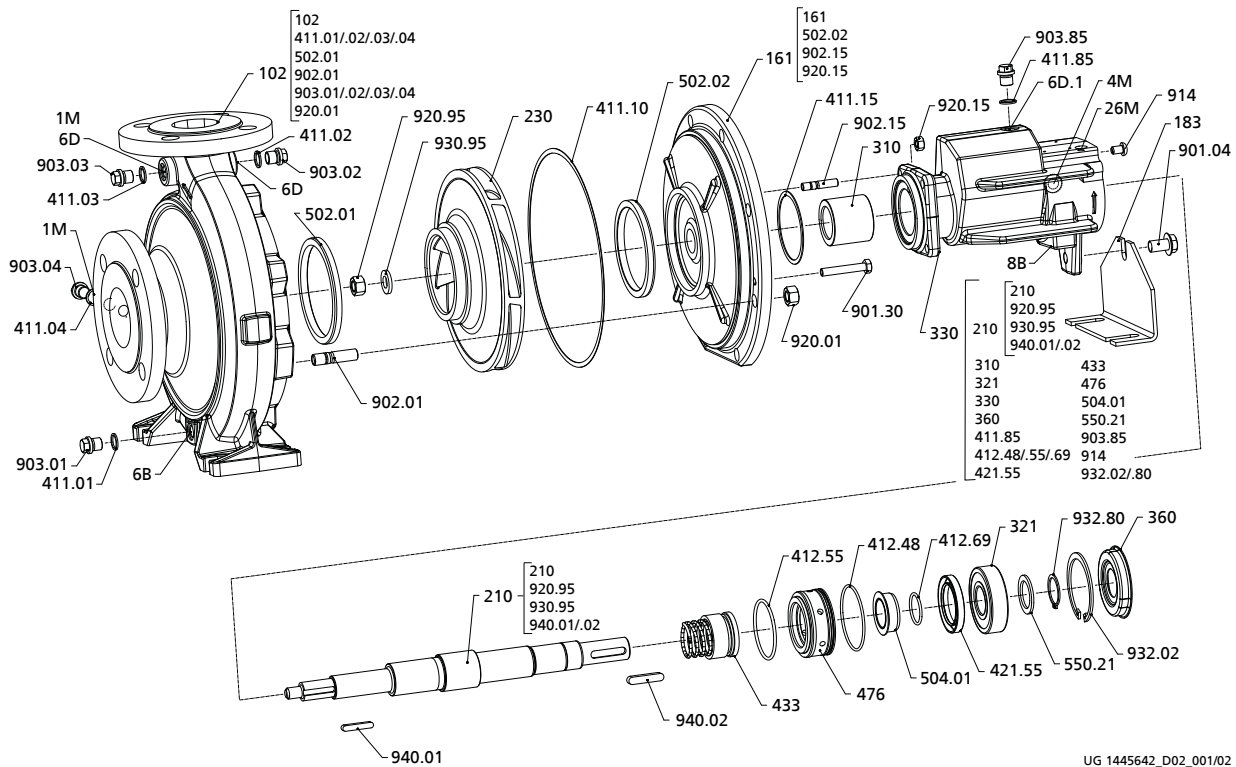


Fig. 9: Exploded view of an Etanorm SYT, bearing bracket WS\_25\_LS

List of components

Part No.	Description	Part No.	Description
102	Volute casing	476	Mating ring carrier
161	Casing cover	502.01/.02 <sup>10)</sup>	Casing wear ring
183	Support foot	504.01	Spacer ring
210	Shaft	550.21	Disc
230	Impeller	901.04/.30	Hexagon head bolt
310	Plain bearing	902.01/.15	Stud
321	Radial ball bearing	903.01/.02/.03/.04/.85	Screw plug
330	Bearing bracket	914	Pan head screw
360	Bearing cover	920.01/.15/.95	Nut
411.01/.02/.03/.04/.10/.15/.85	Joint ring	930.95	Safety device
412.48/.55/.69	O-ring	932.02/.80	Circlip
421.55	Lip seal	940.01/.02	Key
433	Mechanical seal		

10) 502.02 not fitted on sizes 040-025-160, 050-032-125.1, 050-032-160, 050-032-160.1



**KSB SE & Co. KGaA**  
Johann-Klein-Straße 9 • 67227 Frankenthal (Germany)  
Tel. +49 6233 86-0  
[www.ksb.com](http://www.ksb.com)