

# PSH Centrifugal pumps

## Technical data

- Delivery rate  
 $Q_{\max} = 1000 \text{ l/min}$
- Delivery head  
 $H_{\max} = 54 \text{ m}$
- Temperature range  
 $T = -30^{\circ}\text{C to } +80^{\circ}\text{C}$
- Kinematic viscosity  
 $\nu_{\max} = 30 \text{ mm}^2/\text{s}$



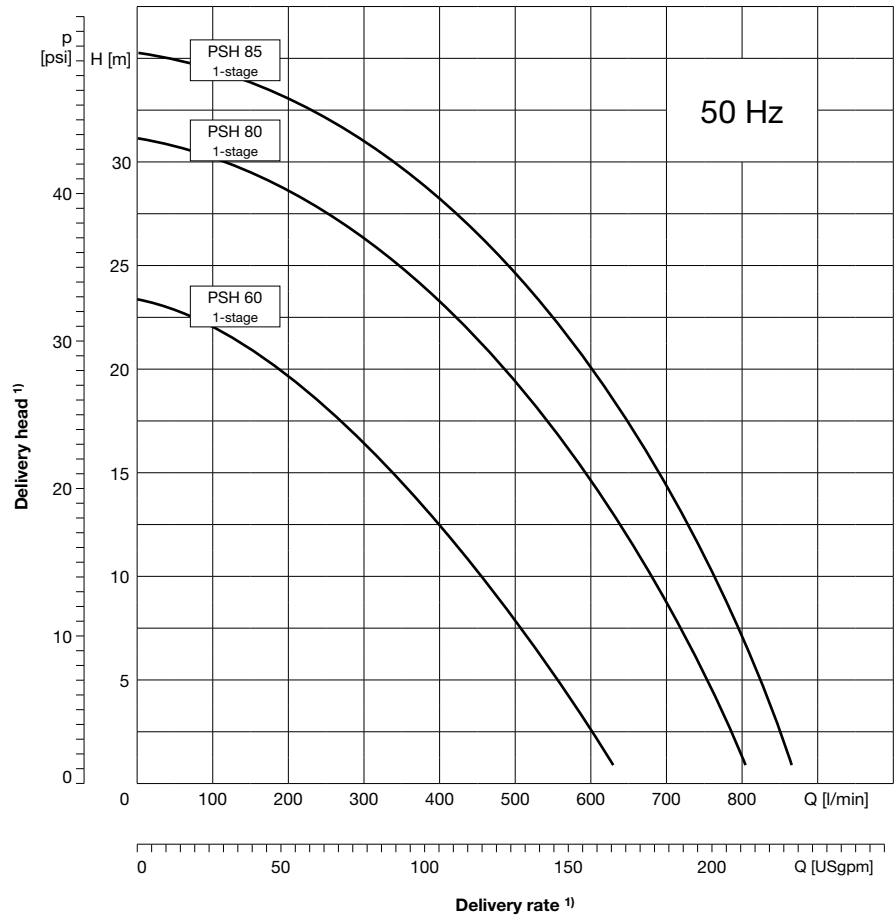
## PSH – Immersion pumps, sealless

### 50 Hz, singlestage, open impellers



#### Features

- Vertical singlestage centrifugal pump
- For delivery of for highly contaminated fluids
- Installation directly into the reservoir
- Pressure port is located above the reservoir plate
- Pressure port is designed with internal thread G1¼ (single stage)



#### Technical Data

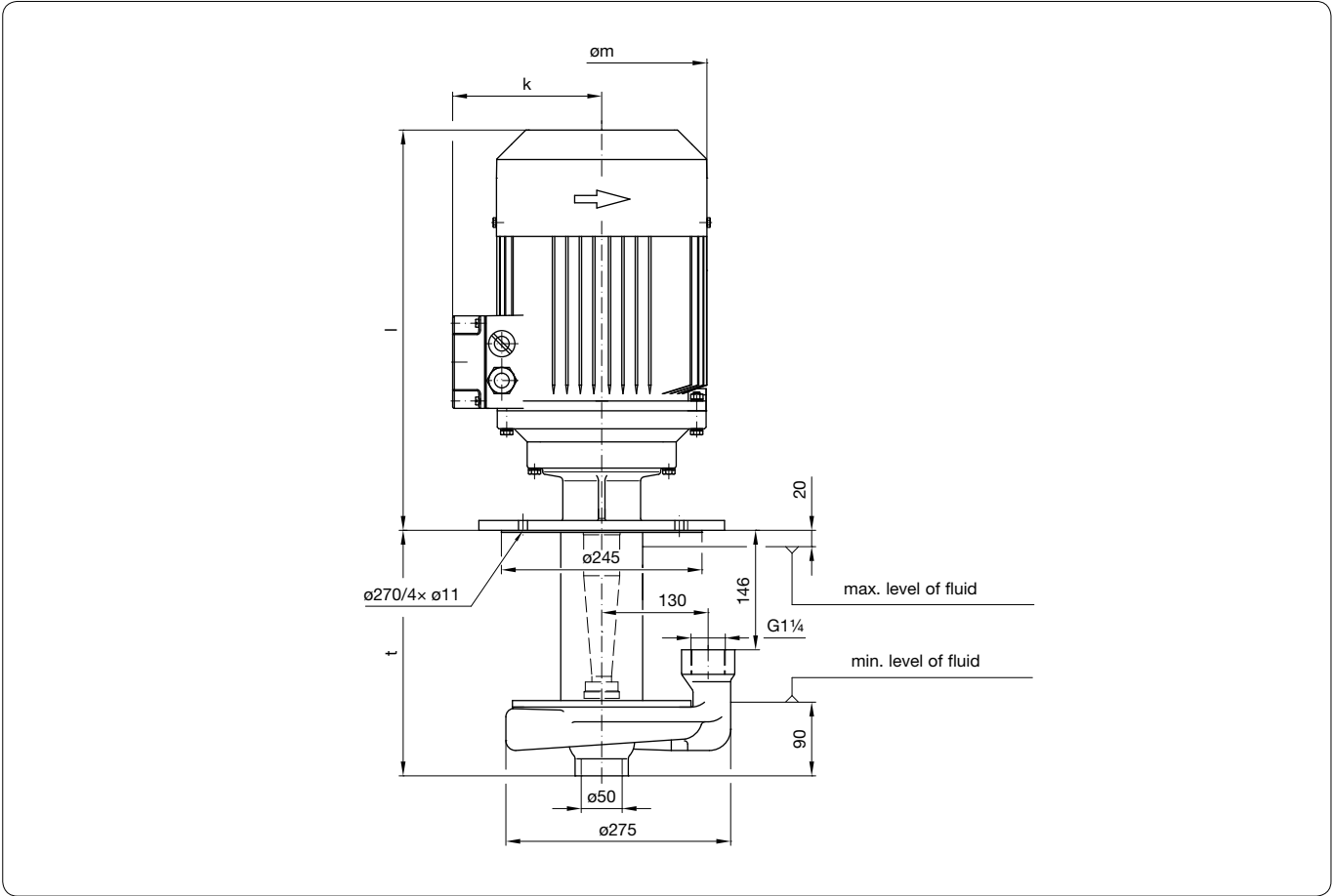
Delivery rate $Q_{max}$	860 l/min
Delivery head $H_{max}$	32 m
Immersion depth $t_{max}$	550 mm
Kinematic viscosity	max. 30 mm <sup>2</sup> /s
Delivery temperature	-30°C to +80°C
Grain size	max. Ø8 mm
Contamination	max. 9,5 kg/m <sup>3</sup>
Direction of rotation	clockwise (as viewed looking down on the motor's ventilation side)
Fluids delivered	Emulsions, cooling and cutting oils, water with antirust additive, heat transfer oils

#### Mechanical design

Component	Material
Flange	EN-GJL-200
Shaft	1.0762
Impeller	EN-GJL-200
Intermediate chamber	EN-GJL-200
Intermediate part	Aluminum (Al Cu Mg Pb F 38)
Pumps bottom	EN-GJL-200
Spray ring	1.0503

<sup>1)</sup> Data for viscosity of ~1 mm<sup>2</sup>/s at a density of ~1 kg/dm<sup>3</sup>. Minimum volumetric flow: 5 to 10 % of nominal delivery rate.

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**Electrical data, dimensions and weights at 50 Hz**

Type of pump			Immer- sion depth t [mm]	Rated motor values					Dimensions [mm]			Weight [kg]	Sonic pressure [dBA]	Pressure port (DIN ISO 228)
Series	Frame size	Stages		Voltage $\Delta/Y$ U [V]	Motor index	Output P <sub>N</sub> [kW]	Current $\Delta/Y$ I <sub>N</sub> [A]	Speed n <sub>N</sub> [min <sup>-1</sup> ]	$\varnothing m$	k	l			
PSH	60	01	300	230/400	L	3,0	10,0/5,75	2885	196	155	392	42,5	68-74	G1 $\frac{1}{4}$
			550									55,5		
	80	01	300	$\Delta$ 400	N	5,5	$\Delta$ 11,2	2900	257	182	488	65,2	68-75	G1 $\frac{1}{4}$
			550									78,2		
	85	01	300	$\Delta$ 400	N	5,5	$\Delta$ 11,2	2900	257	182	488	65,2	68-75	G1 $\frac{1}{4}$
			550									78,2		

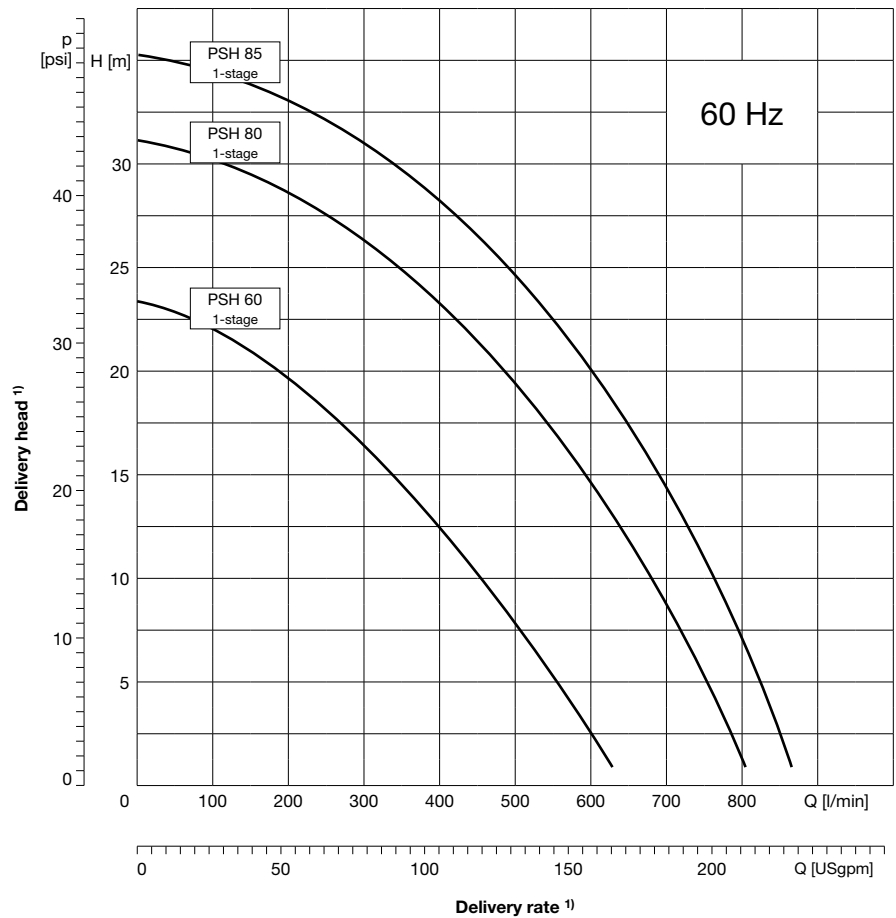
## PSH – Immersion pumps, sealless

### 60 Hz, singlestage, open impellers



#### Features

- Vertical singlestage centrifugal pump
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- Installation directly into the reservoir
- Pressure port is located above the reservoir plate
- Pressure port is designed with internal thread G1¼ (single stage)



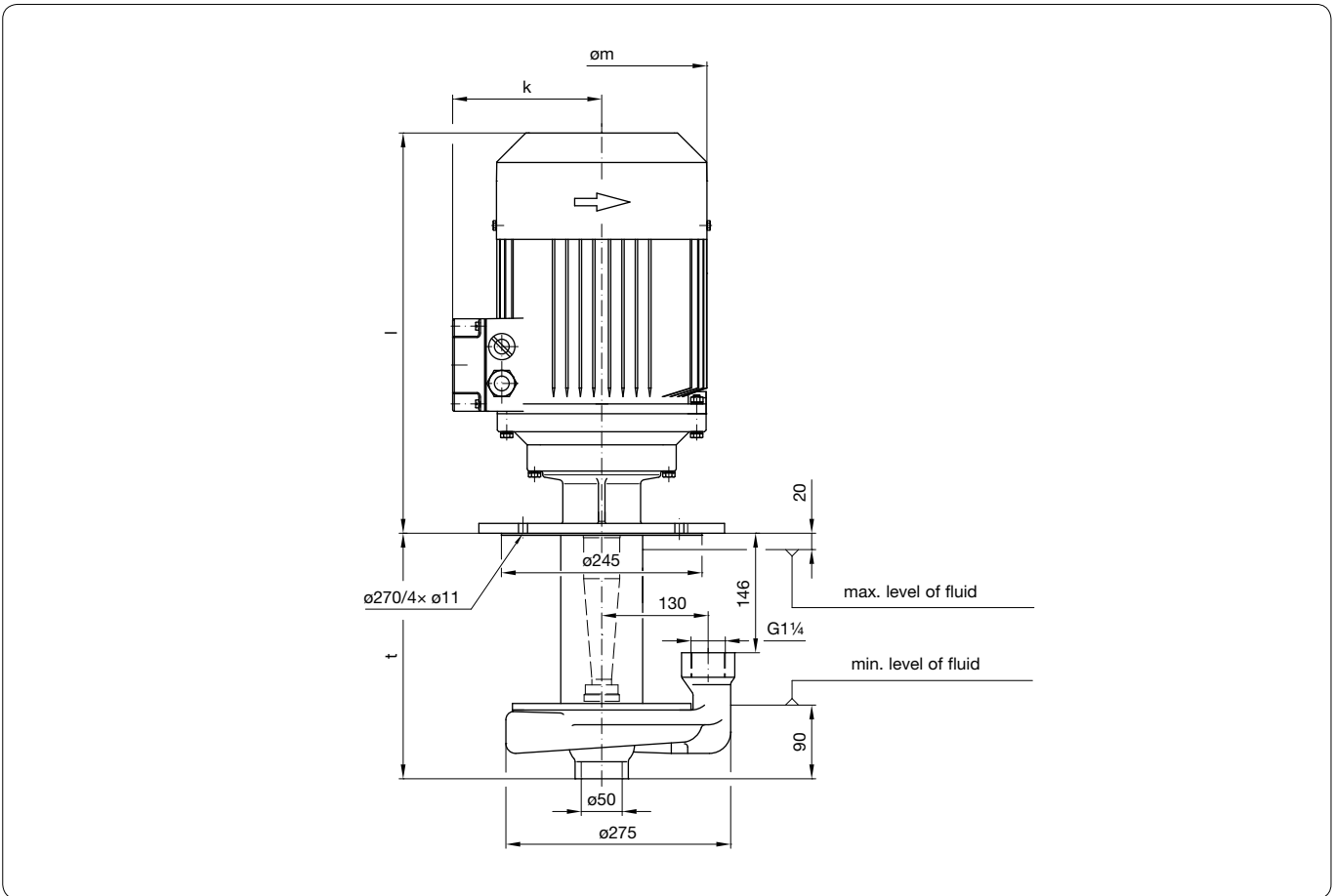
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Delivery temperature	-30°C to +80°C
Grain size	max. Ø8 mm
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Intermediate part	Aluminum (Al Cu Mg Pb F 38)
Pumps bottom	EN-GJL-200
Spray ring	1.0503

**PSH – Immersion pumps, sealless**  
**60 Hz, singlestage, open impellers**



**Electrical data, dimensions and weights at 60 Hz**

Type of pump			Immer- sion depth t [mm]	Rated motor values					Dimensions [mm]			Weight [kg]	Sonic pressure [dBA]	Pressure port (DIN ISO 228)
Series	Frame size	Stages		Voltage $\Delta/Y$ U [V]	Motor index	Output P <sub>N</sub> [kW]	Current $\Delta/Y$ I <sub>N</sub> [A]	Speed n <sub>N</sub> [min <sup>-1</sup> ]	$\varnothing m$	k	l			
PSH	60	01	300	265/460	L	3,6	10,0/5,75	3500	196	155	392	42,5	68-74	G1¼
			550									55,5		
	80	01	300	$\Delta$ 460	N	6,2	$\Delta$ 11,2	3480	257	182	488	65,2	68-75	G1¼
			550									78,2		
	85	01	300	$\Delta$ 460	N	6,2	$\Delta$ 11,2	3480	257	182	488	65,2	68-75	G1¼
			550									78,2		

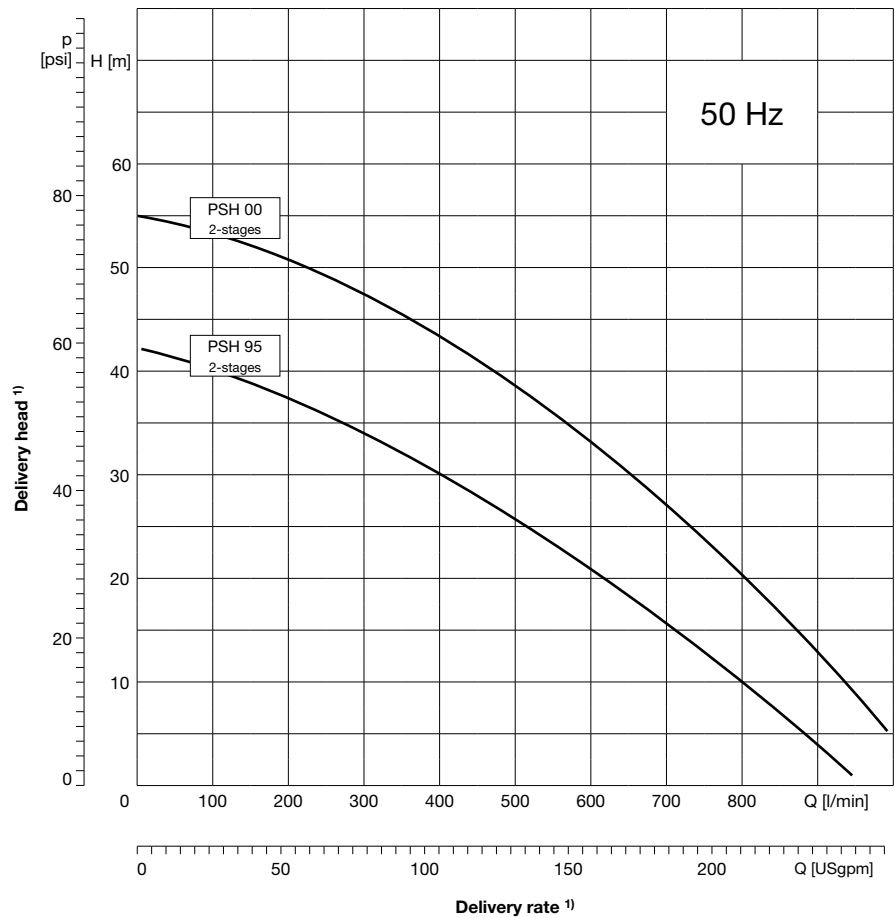
## PSH – Immersion pumps, sealless

### 50 Hz, dualstage, open impellers



#### Features

- Vertical multistage centrifugal pump
- For delivery of for highly contaminated fluids
- Installation directly into the reservoir
- Pressure port is located above the reservoir plate
- Pressure port is designed with internal thread G1½ (dual stages)



#### Technical Data

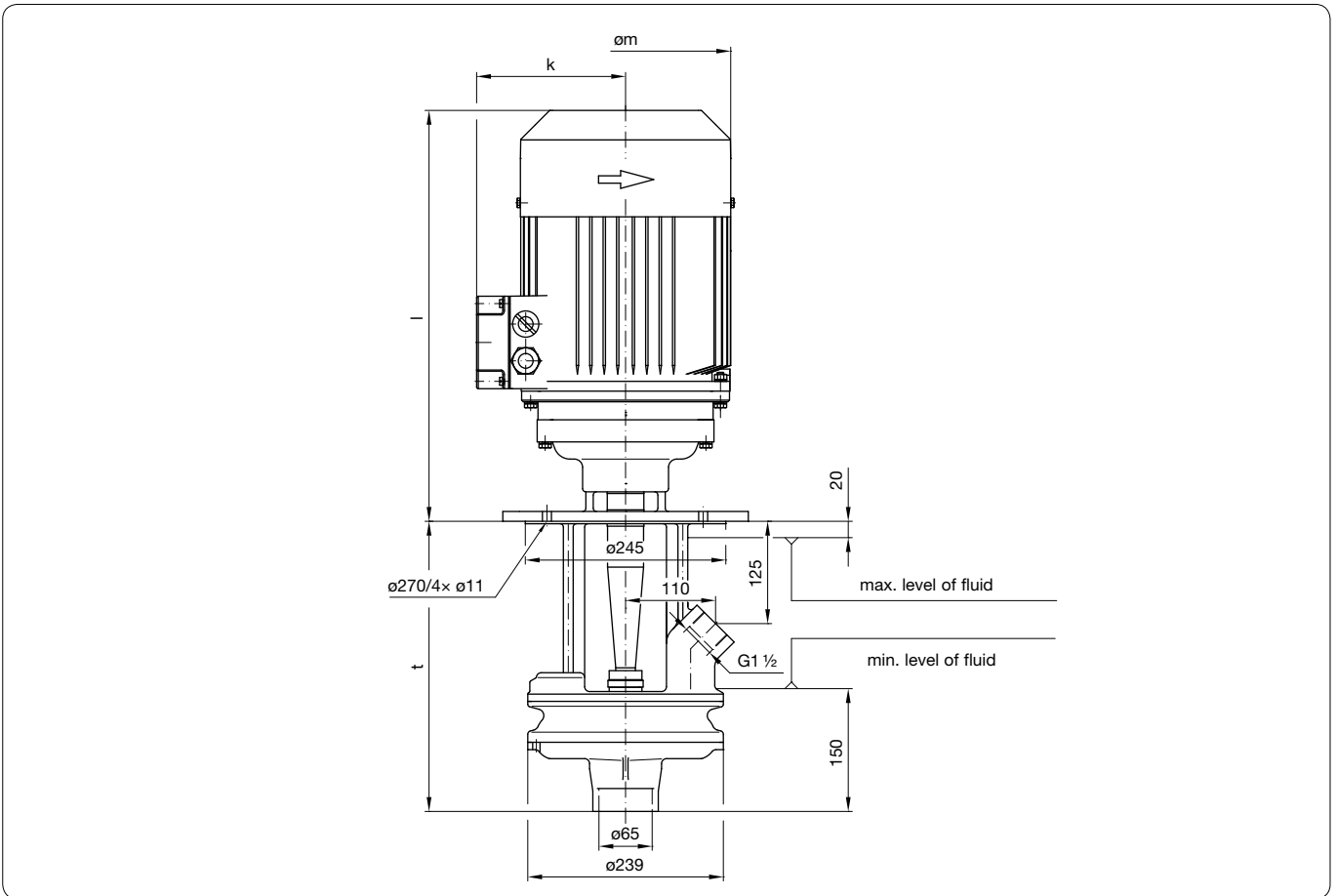
Delivery rate $Q_{max}$	1000 l/min
Delivery head $H_{max}$	54 m
Immersion depth $t_{max}$	350 mm
Kinematic viscosity	max. 30 mm <sup>2</sup> /s
Delivery temperature	-30°C to +80°C
Grain size	max. Ø8 mm
Contamination	max. 9,5 kg/m <sup>3</sup>
Direction of rotation	clockwise (as viewed looking down on the motor's ventilation side)
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<sup>1)</sup> Data for viscosity of ~1 mm<sup>2</sup>/s at a density of ~1 kg/dm<sup>3</sup>. Minimum volumetric flow: 5 to 10 % of nominal delivery rate.

**PSH – Immersion pumps, sealless**  
**50 Hz, dualstage, open impellers**



**Electrical data, dimensions and weights at 50 Hz**

Type of pump			Immer- sion depth $t$ [mm]	Rated motor values					Dimensions [mm]			Weight [kg]	Sonic pressure [dBA]	Pressure port (DIN ISO 228)
Series	Frame size	Stages		Voltage $\Delta/Y$ $U$ [V]	Motor index	Output $P_N$ [kW]	Current $\Delta/Y$ $I_N$ [A]	Speed $n_N$ [min <sup>-1</sup> ]	$\varnothing m$	$k$	$l$			
PSH	95	02	350	$\Delta$ 400	O	7,5	$\Delta$ 14,5	2900	257	182	501	77,9	72-75	G1½
	00	02	350	$\Delta$ 400	P	11,0	$\Delta$ 21	2920	257	182	539	115,2	75-79	

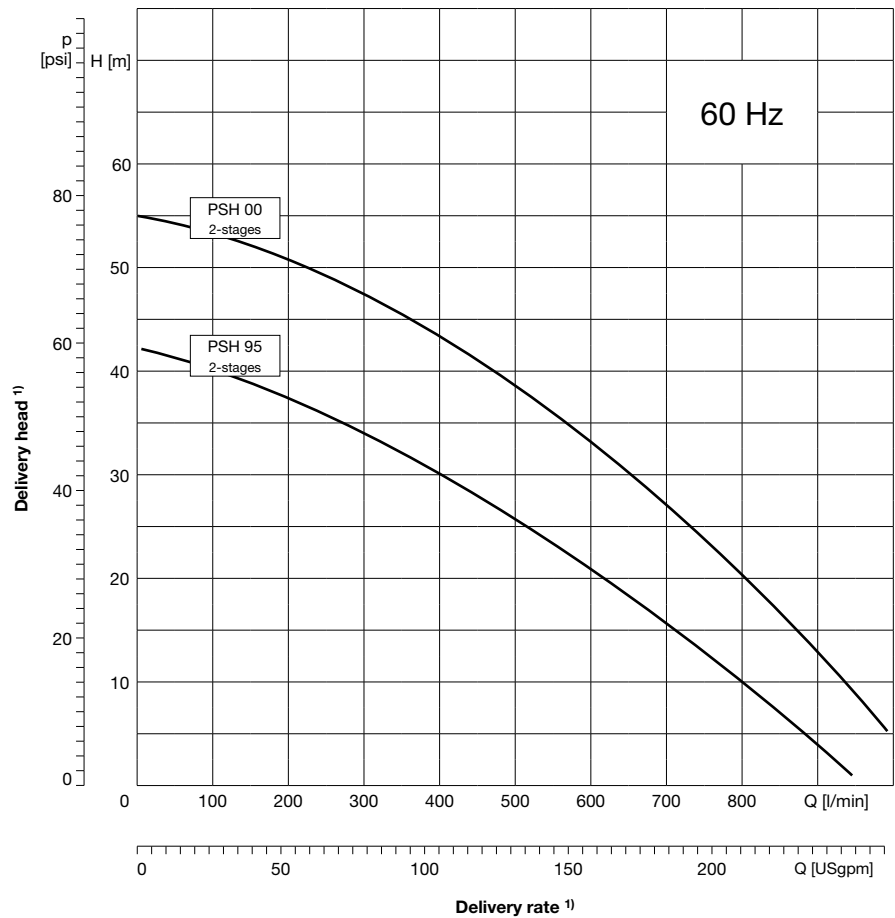
## PSH – Immersion pumps, sealless

### 60 Hz, dualstage, open impellers



#### Features

- Vertical multistage centrifugal pump
- For delivery of for highly contaminated fluids
- Installation directly into the reservoir
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- Pressure port is designed with internal thread G1½ (dual stages)



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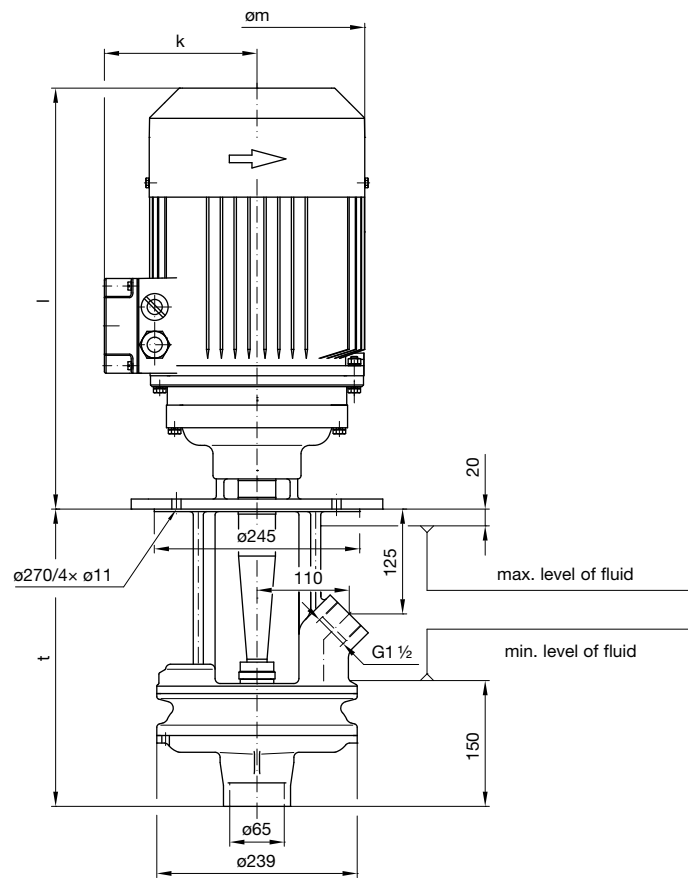
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Pumps bottom	EN-GJL-200
Spray ring	1.0503



## PSH – Immersion pumps, sealless

### 60 Hz, dualstage, open impellers



#### Electrical data, dimensions and weights at 60 Hz

Type of pump			Immer- sion depth $t$ [mm]	Rated motor values					Dimensions [mm]			Weight [kg]	Sonic pressure [dBA]	Pressure port (DIN ISO 228)
Series	Frame size	Stages		Voltage $\Delta/Y$ $U$ [V]	Motor index	Output $P_N$ [kW]	Current $\Delta/Y$ $I_N$ [A]	Speed $n_N$ [min <sup>-1</sup> ]	$\varnothing m$	$k$	$l$			
PSH	95	02	350	$\Delta$ 460	O	8,6	$\Delta$ 14,5	3480	257	182	501	77,9	72-75	G1 1/2
	00	02	350	$\Delta$ 460	P	12,5	$\Delta$ 21	3500	257	182	539	115,2	75-79	

# PSH – Immersion pumps, sealless

## Order key

	<b>P</b>	<b>S</b>	<b>H</b>															
Series																		
Frame size																		
<p>To determine the desired frame size the corresponding characteristics has to be used.</p> <p><b>60</b> = max. 600 l/min                      <b>95</b> = max. 950 l/min  <b>80</b> = max. 800 l/min                      <b>00</b> = max. 1000 l/min  <b>85</b> = max. 850 l/min</p>																		
Stages																		
<p>To determine the desired number of stages the corresponding characteristics has to be used.</p> <p><b>01</b> = 1 stages  <b>02</b> = 2 stages</p>																		
Materials																		
<p><b>G</b> = gray cast iron (standard)</p>																		
Seal																		
<p><b>O</b> = sealless (standard)</p>																		
Pump design																		
<p><b>S</b> = standard design</p>																		
Immersion depth in mm																		
<p><b>300</b> = 300 mm                  ...  <b>550</b> = 550 mm</p>																		
Motor index																		
<p>To determine the desired motor index the appropriate table "Electrical data, dimensions and weights" has to be used.                  Example: <b>L</b> = 3,0 kW</p>																		
Power supply																		
<p><b>01</b> = 230/400 V at 50 Hz (to 4 kW)                  265/460 V at 60 Hz (to 4,6 kW)  <b>02</b> = Δ400 V at 50 Hz (from 5,5 kW)                  Δ460 V at 60 Hz (from 6,3 kW)  <b>05 = Standard for Europe</b>                  230/400 V at 50 Hz (from 4 kW)                  Δ400 V at 50 Hz (from 4 kW)</p> <p>... further designs on request</p>																		
Motor design																		
<p><b>BA</b> = standard (insulation class F, IP 54, 2-pole, IE2)                  Further designs on request.</p>																		

PSH

**Order example: PSH8501GOS550N02BA**

Series: **PSH**, Frame size: **85**, **01** stage, Material: **G** grey cast iron, Seal: **O** gap bush, Pump design: **S** standard design, Immersion depth: **550** mm, Motor index: **N** 5,5 kW, Power supply: **02** Δ400 V 50 Hz, Δ460 V 60 Hz, Motor design: **BA** Standard (IE2)



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