

**Spandau
pumpen**

— by **EBARA**

PMS - Centrifugal pumps

Data Book 50/60Hz



Quality Management
ISO 9001: 2015

Environmental Management
ISO 14001:2015



www.ebaraeurope.com



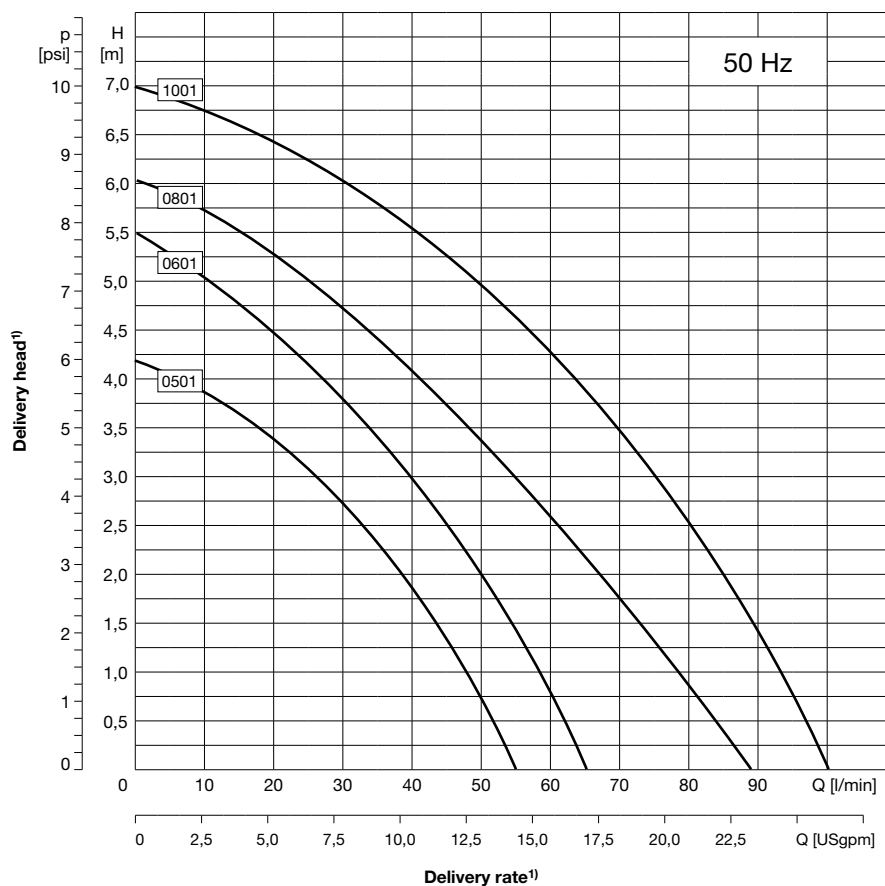
PMS 05, 06, 08, 10 – Immersion pumps, sealless

50 Hz, open impellers



Features

- Vertical multistage pump
- Connecting dimensions according to EN 12157
- For delivery of slightly contaminated types of fluids
- Installation directly into the reservoir
- Pressure port is located above the reservoir plate and designed with internal thread G3/4



Technical data

Delivery rate Q_{max}	100 l/min
Delivery head H_{max}	7 m
Immersion depth t_{max}	350 mm
Kinematic viscosity	max. 20 mm ² /s
Delivery temperature	
Material "P"	0 °C to 60 °C
Material "G"	0 °C to 80 °C
Grain size	max. Ø5 mm
Contamination	max. 10 kg/m ³
Direction of rotation	anti-clockwise (as viewed looking down on the motor's ventilation side)
Fluids delivered	Various industrial use fluids, emulsions, also with chemical additives, oils, water with corrosion protection additive, water colors, heat transfer oils

Mechanical design

Component	Material
Flange	EN-GJL-200 and steel
Shaft	1.0762
Impeller	POM
Intermediate chamber	EN-GJL-200
Bushes	PTFE graphite
Pumps bottom material "P"	POM
Splash ring material "P"	NBR

Variations

Component	Material
Bottom with extension tube "V"	EN-GJL-200
Impeller material "G"	EN-GJL-200
Bottom standard design "G"	EN-GJL-200
Splash ring material "G"	1.0718

Variations availability

Material	P		G	
Design	S	V	S	V
PMS0501	•	•	•	x
PMS0601	•	•	•	x
PMS0801	•	•	•	•
PMS1001	•	•	•	•

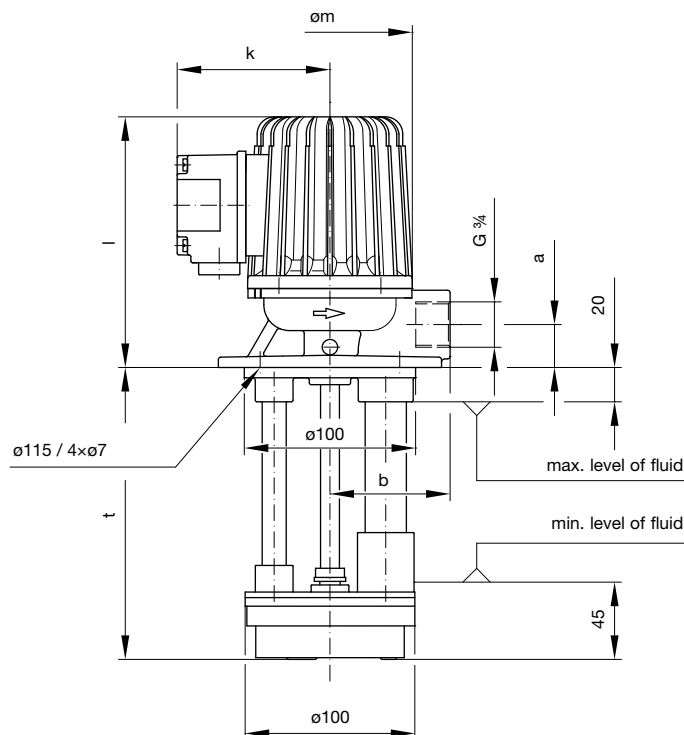
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¹⁾ Data for viscosity of ~1 mm²/s at a density of ~1 kg/dm³. Minimum volumetric flow: 5 to 10 % of nominal delivery rate.

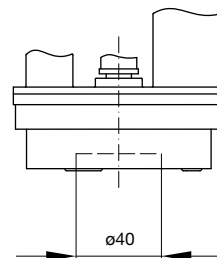


PMS 05, 06, 08, 10 – Immersion pumps, sealless

50 Hz, open impellers



Variation "V"
with bottom for extension tube



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 Δ/Y U [V]	Motor index	Output P _N [kW]	Current Δ/Y I _N [A]	Speed n _N [min ⁻¹]	Øm	k	l	Øa				b
PMS	05	01	90	230/400	A	0,09	0,46/0,26	2618	96	89	146	25	70	4,4 – 5,0	46	G¾
			120													
			140													
			170													
			200													
			220													
			250													
			270													
	06	01	350	230/400	A	0,09	0,46/0,26	2618	96	89	146	25	70	4,4 – 5,0	46	
			90													
			120													
			140													
			170													
			200													
			220													
			250													
	08	01	270	230/400	B	0,12	1,0/0,6	2890	120	99	181	25	70	7,5 – 8,5	55	
			350													
			120													
			170													
			220													
			250													
			270													
			350													
	10	01	90	230/400	C	0,18	1,1/0,6	2825	120	99	181	25	70	7,5 – 8,5	55	
			120													
			140													
			170													
200																
220																
250																
270																



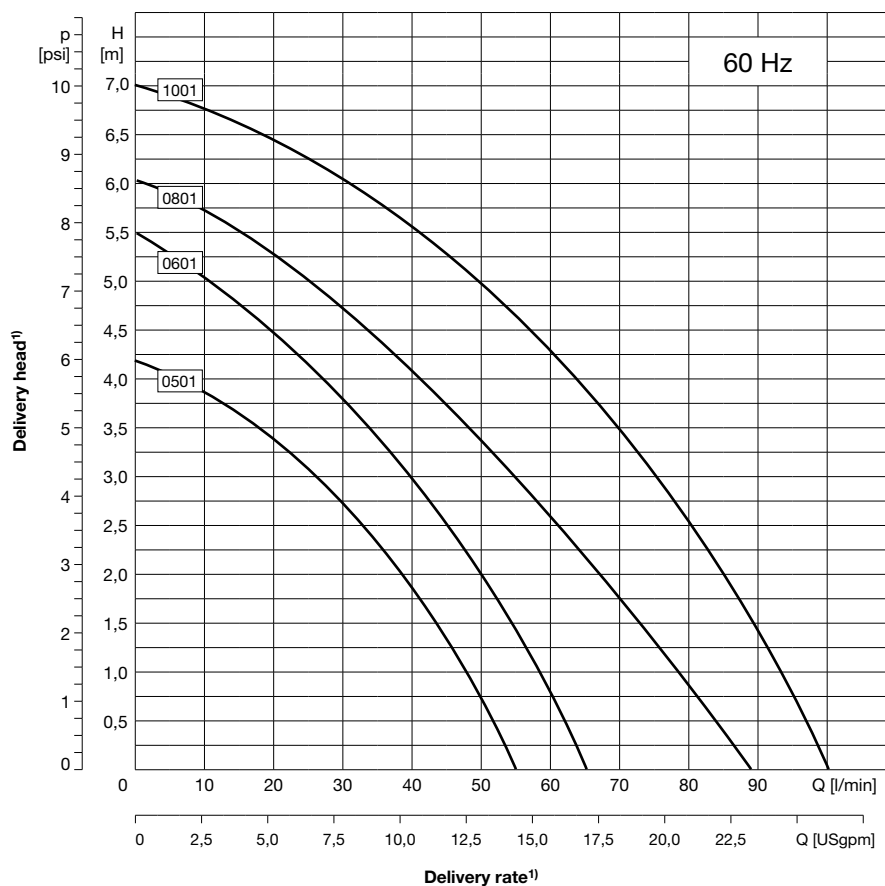
PMS 05, 06, 08, 10 – Immersion pumps, sealless

60 Hz, open impellers



Features

- Vertical multistage pump
- Connecting dimensions according to EN 12157
- For delivery of slightly contaminated types of fluids
- Installation directly into the reservoir
- Pressure port is located above the reservoir plate and designed with internal thread G3/4



Technical data

Delivery rate Q_{max}	100 l/min
Delivery head H_{max}	7 m
Immersion depth t_{max}	350 mm
Kinematic viscosity	max. 20 mm ² /s
Delivery temperature	
Material "P"	0 °C bis 60 °C
Material "G"	0 °C bis 80 °C
Grain size	max. Ø5 mm
Contamination	max. 10 kg/m ³
Direction of rotation	anti-clockwise (as viewed looking down on the motor's ventilation side)
Fluids delivered	Various industrial use fluids, emulsions, also with chemical additives, oils, water with corrosion protection additive, water colors, heat transfer oils

Mechanical design

Component	Material
Flange	EN-GJL-200 and steel
Shaft	1.0762
Impeller	POM
Intermediate chamber	EN-GJL-200
Bushes	PTFE graphite
Pumps bottom material "P"	POM
Splash ring material "P"	NBR

Variations

Component	Material
Bottom with extension tube "V"	EN-GJL-200
Impeller material "G"	EN-GJL-200
Bottom standard design "G"	EN-GJL-200
Splash ring material "G"	1.0718

Variations availability

Material	P		G	
Design	S	V	S	V
PMS0501	•	•	•	x
PMS0601	•	•	•	x
PMS0801	•	•	•	•
PMS1001	•	•	•	•

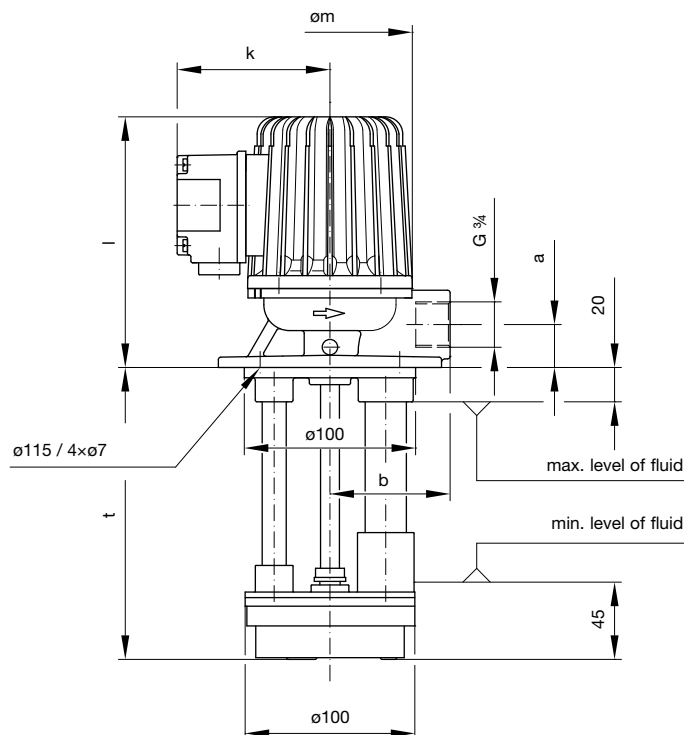
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¹⁾ Data for viscosity of ~1 mm²/s at a density of ~1 kg/dm³. Minimum volumetric flow: 5 to 10 % of nominal delivery rate.

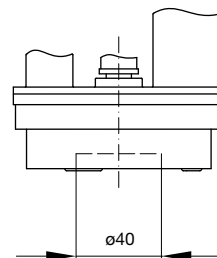


PMS 05, 06, 08, 10 – Immersion pumps, sealless

60 Hz, open impellers



Variation "V"
with bottom for extension tube



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 Δ/Y U [V]	Motor index	Output P _N [kW]	Current Δ/Y I _N [A]	Speed n _N [min ⁻¹]	Øm	k	l	Øa				b												
PMS	05	01	90	265/460	A	0,09	0,46/0,26	3257	96	89	146	25	70	4,4 – 5,0	46	G¾												
			120																									
			140																									
			170																									
			200																									
			220																									
			250																									
			270																									
	350																											
	06	01	90	265/460	A	0,09	0,46/0,26	3257	96	89	146	25	70	4,4 – 5,0	46													
			120																									
			140																									
			170																									
			200																									
			220																									
			250																									
			270																									
	350																											
	08	01	120	265/460	B	0,12	0,9/0,5	3505	120	99	181	25	70	7,5 – 8,5	55													
			170																									
			220																									
			250																									
			270																									
			350																									
10			01													90	265/460	C	0,18	1,0/0,6	3455	120	99	181	25	70	7,5 – 8,5	55
																120												
	140																											
	170																											
	200																											
	220																											
	250																											
	270																											
350																												



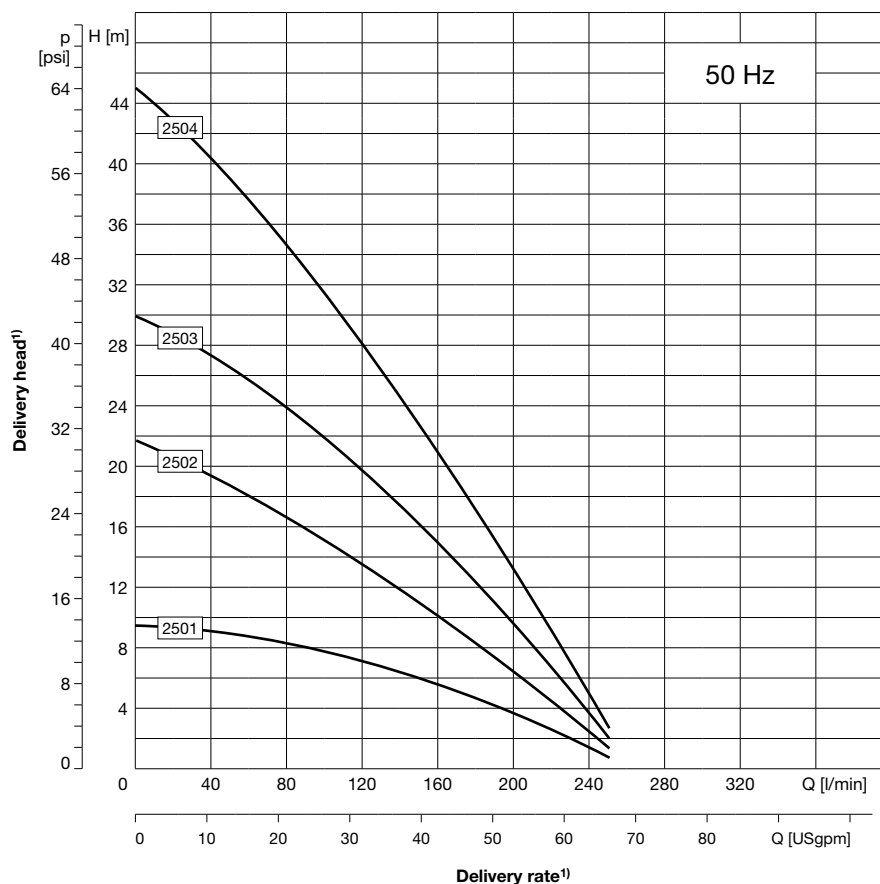
PMS 25 – Immersion pumps, sealless

50 Hz, open impellers



Features

- Vertical multistage pump
- Connecting dimensions according to EN 12157
- For delivery of slightly contaminated types of fluids
- Installation directly into the reservoir
- Pressure port is located above the reservoir plate and designed with internal thread G1¼



Technical data

Delivery rate Q_{max}	250 l/min
Delivery head H_{max}	45 m
Immersion depth t_{max}	550 mm
Kinematic viscosity	max. 20 mm ² /s
Delivery temperature	
Material "P"	0 °C bis 60 °C
Material "G"	0 °C bis 80 °C
Grain size	max. Ø8 mm
Contamination	max. 1,5% (proportion by weight)
Direction of rotation	anti-clockwise (as viewed looking down on the motor's ventilation side)
Fluids delivered	Various industrial use fluids, emulsions, also with chemical additives, oils, water with corrosion protection additive, water colors, heat transfer oils

Mechanical design

Component	Material
Flange	EN-GJL-200 and steel
Shaft	1.0762
Impeller	POM
Intermediate chamber	EN-GJL-200
Bushes	PTFE graphite
Pumps bottom material "P"	POM
Splash ring material "P"	NBR

Variations

Component	Material
Bottom with extension tube "V"	EN-GJL-200
Impeller material "G"	EN-GJL-200
Bottom standard design "G"	EN-GJL-200
Splash ring material "G"	1.0718

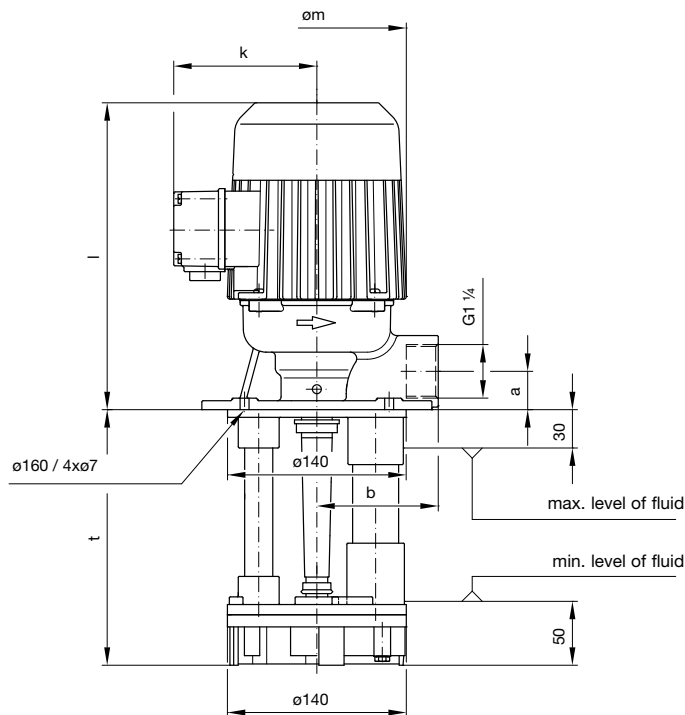
Variations availability

Material	P		G	
Design	S	V	S	V
PMS2501	•	x	•	•
PMS2502	•	x	•	•
PMS2503	•	x	•	•
PMS2504	•	x	x	x

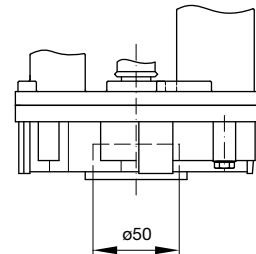
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¹⁾ Data for viscosity of ~1 mm²/s at a density of ~1 kg/dm³. Minimum volumetric flow: 5 to 10 % of nominal delivery rate.

PMS 25 – Immersion pumps, sealless 50 Hz, open impellers



Variation "V"
with bottom for extension tube



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 Δ/Y U [V]	Motor index	Output P _N [kW]	Current Δ/Y I _N [A]	Speed n _N [min ⁻¹]	Øm	k	l	Øa	b			
PMS	25	01	170	230/400	F	0,55	2,4/1,4	2818	141.4	104	267	30	95	15,0 – 18,0	59	G1¼
			200													
			270													
			350													
			440													
			550													
		02	270	230/400	J	1,5	7,1/4,1	2945	176	128	364	32	100	33,0 – 35,0	59	
			310													
			350													
			390													
			480													
		03	310	230/400	J	1,5	7,1/4,1	2945	176	128	364	32	100	35,5 – 36,5	65	
			350													
			390													
			430													
		04	350	230/400	L	3,0	11,1/6,4	2890	176	128	364	32	100	41,0	65	



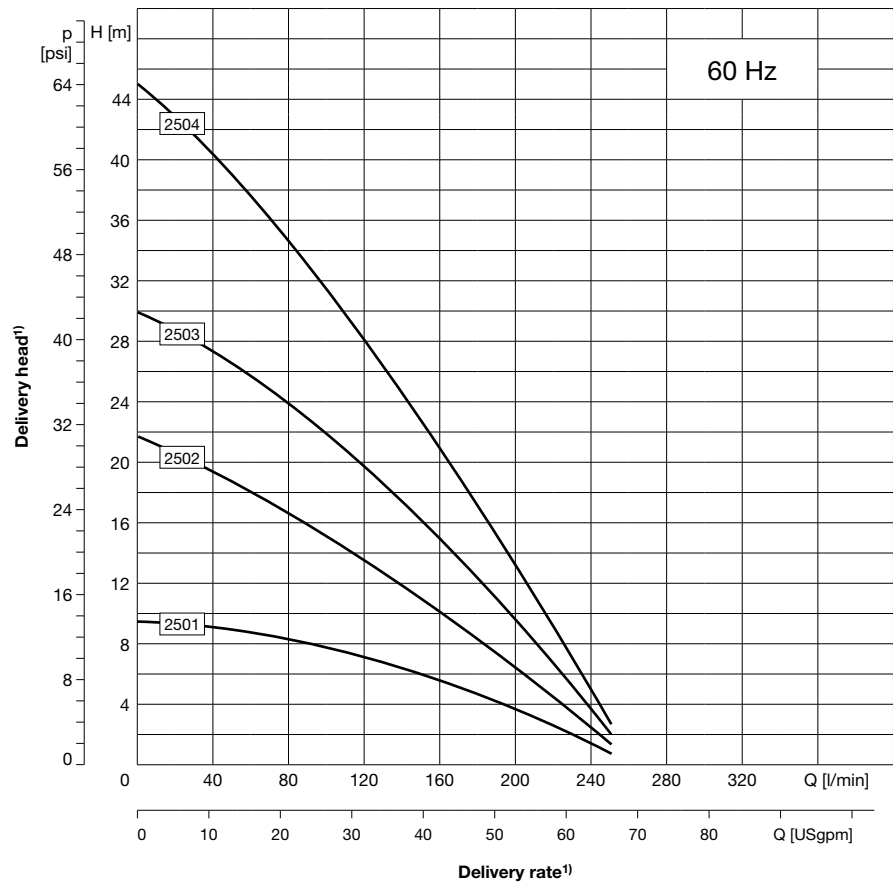
PMS 25 – Immersion pumps, sealless

60 Hz, open impellers



Features

- Vertical multistage pump
- Connecting dimensions according to EN 12157
- For delivery of slightly contaminated types of fluids
- Installation directly into the reservoir
- Pressure port is located above the reservoir plate and designed with internal thread G1¼



Technical data

Delivery rate Q_{max}	250 l/min
Delivery head H_{max}	45 m
Immersion depth t_{max}	550 mm
Kinematic viscosity	max. 20 mm ² /s
Delivery temperature	
Material "P"	0 °C bis 60 °C
Material "G"	0 °C bis 80 °C
Grain size	max. Ø8 mm
Contamination	max. 1,5% (proportion by weight)
Direction of rotation	anti-clockwise (as viewed looking down on the motor's ventilation side)
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Component	Material
Flange	EN-GJL-200 and steel
Shaft	1.0762
Impeller	POM
Intermediate chamber	EN-GJL-200
Bushes	PTFE graphite
Pumps bottom material "P"	POM
Splash ring material "P"	NBR

Variations

Component	Material
Bottom with extension tube "V"	EN-GJL-200
Impeller material "G"	EN-GJL-200
Bottom standard design "G"	EN-GJL-200
Splash ring material "G"	1.0718

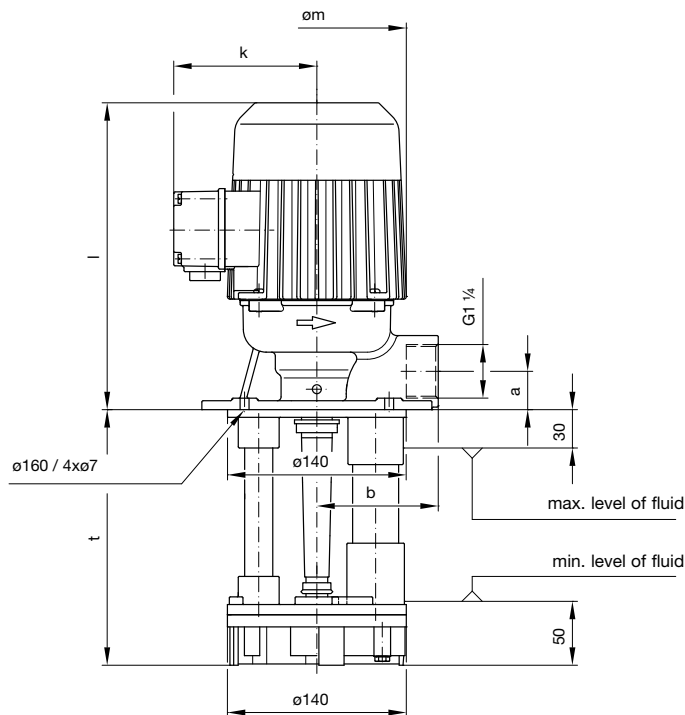
Variations availability

Material	P		G	
Design	S	V	S	V
PMS2501	•	x	•	•
PMS2502	•	x	•	•
PMS2503	•	x	•	•
PMS2504	•	x	x	x

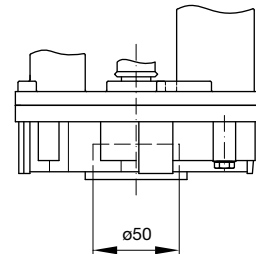
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¹⁾ Data for viscosity of ~1 mm²/s at a density of ~1 kg/dm³. Minimum volumetric flow: 5 to 10 % of nominal delivery rate.

PMS 25 – Immersion pumps, sealless 60 Hz, open impellers



Variation "V"
with bottom for extension tube



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 Δ/Y U [V]	Motor index	Output P _N [kW]	Current Δ/Y I _N [A]	Speed n _N [min ⁻¹]	Øm	k	l	Øa	b			
PMS	25	01	170	265/460	F	0,55	2,1/1,2	3430	141,4	104	267	30	95	15,0 – 18,0	59	G1¼
			200													
			270													
			350													
			440													
			550													
		02	270	265/460	J	1,5	6,1/3,5	3555	176	128	364	32	100	33,0 – 25,0	59	
			310													
			350													
			390													
			480													
		03	310	265/460	J	1,5	6,1/3,5	3555	176	128	364	32	100	35,5 – 36,5	65	
			350													
			390													
			430													
		04	350	265/460	L	3,0	9,7/5,6	3500	176	128	364	32	100	41,0	65	



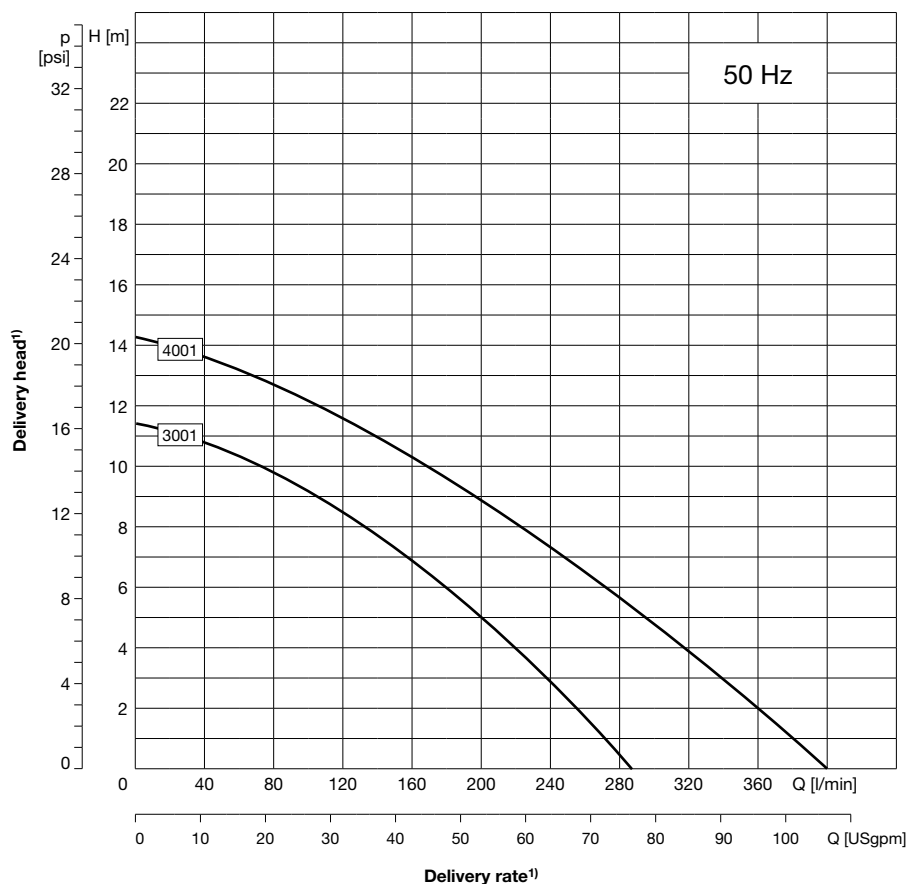
PMS 30, 40 – Immersion pumps, sealless

50 Hz, open impellers



Features

- Vertical multistage pump
- Connecting dimensions according to EN 12157
- For delivery of slightly contaminated types of fluids
- Installation directly into the reservoir
- Pressure port is located above the reservoir plate and designed with internal thread G1¼



Technical data

Delivery rate Q_{max}	400 l/min
Delivery head H_{max}	14 m
Immersion depth t_{max}	560 mm
Kinematic viscosity	max. 20 mm ² /s
Delivery temperature	
Material "P"	0 °C bis 60 °C
Material "G"	0 °C bis 80 °C
Grain size	max. Ø8 mm
Contamination	max. 1,5% (proportion by weight)
Direction of rotation	anti-clockwise (as viewed looking down on the motor's ventilation side)
Fluids delivered	Various industrial use fluids, emulsions, also with chemical additives, oils, water with corrosion protection additive, water colors, heat transfer oils

Mechanical design

Component	Material
Flange	EN-GJL-200 and steel
Shaft	1.0762
Impeller	POM
Intermediate chamber	EN-GJL-200
Bushes	PTFE graphite
Pumps bottom material "P"	POM
Splash ring material "P"	NBR

Variations

Component	Material
Bottom with extension tube "V"	EN-GJL-200
Impeller material "G"	EN-GJL-200
Bottom standard design "G"	EN-GJL-200
Splash ring material "G"	1.0718

Variations availability

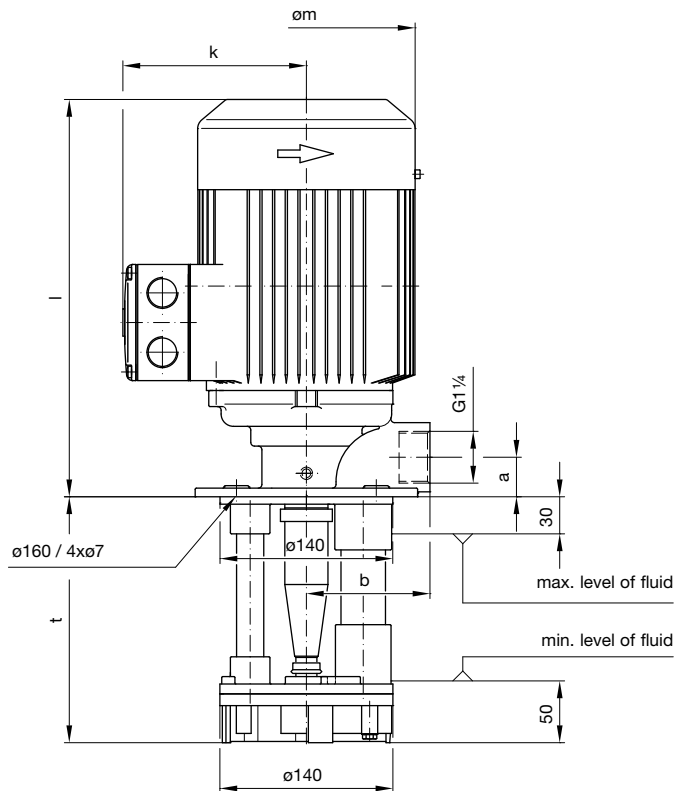
Material	P		G	
Design	S	V	S	V
PMS3001	•	x	•	•
PMS4001	x	x	•	•

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X not available

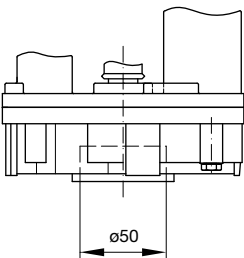
¹⁾ Data for viscosity of ~1 mm²/s at a density of ~1 kg/dm³. Minimum volumetric flow: 5 to 10 % of nominal delivery rate.

PMS 30, 40 – Immersion pumps, sealless

50 Hz, open impellers



Variation "V"
with bottom for extension tube



Electrical data, dimensions and weights at 50 Hz

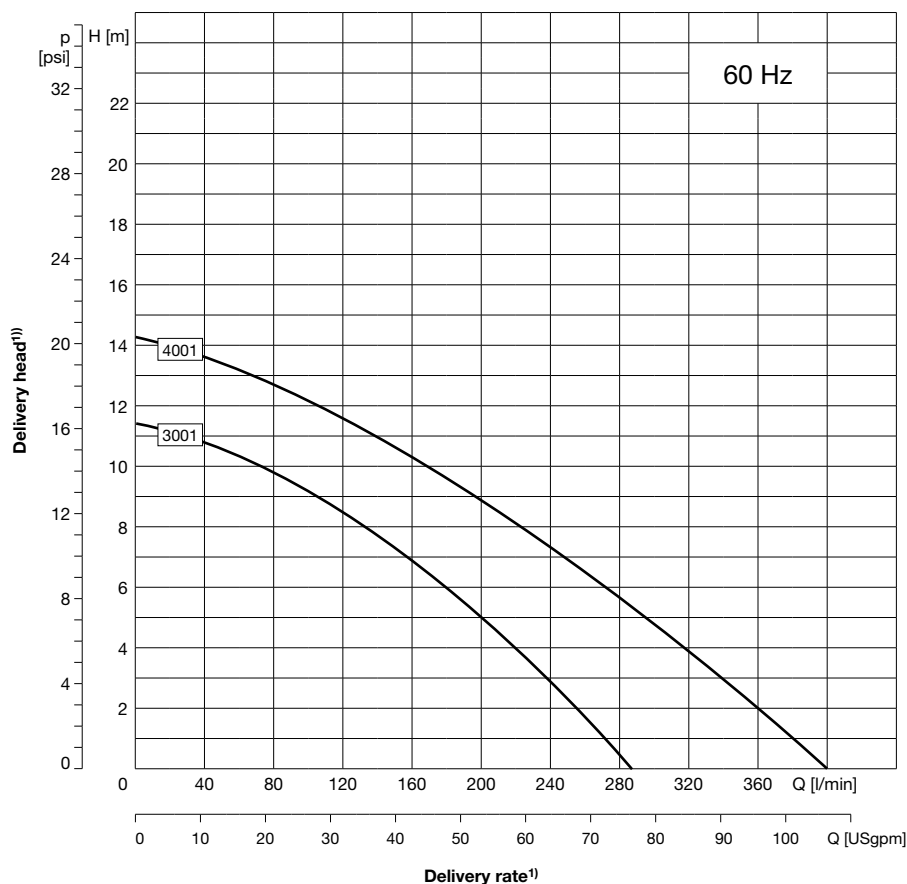
Type of pump			Immer- sion depth t [mm]	Rated motor values					Dimensions [mm]					Weight [kg]	Sonic pressure [dBA]	Pressure port (DIN ISO 228)
Series	Frame size	Stages		Voltage Δ/Y U [V]	Motor index	Output P _N [kW]	Current Δ/Y I _N [A]	Speed n _N [min ⁻¹]	Øm	k	l	Øa	b			
PMS	30	01	170	230/400	G	0,75	3,0/1,7	2845	141,4	104	267	30	95	17,5 – 20,5	59	G1¼
			200													
			270													
			350													
			440													
			550													
	40	01	210	230/400	J	1,5	7,1/4,1	2945	176	128	364	32	100	32,0 – 35,0	65	
			240													
			280													
			320													
			360													
			560													

PMS 30, 40 – Immersion pumps, sealless 60 Hz, open impellers



Features

- Vertical multistage pump
- Connecting dimensions according to EN 12157
- For delivery of slightly contaminated types of fluids
- Installation directly into the reservoir
- Pressure port is located above the reservoir plate and designed with internal thread G1¼



Technical data

Delivery rate Q_{max}	400 l/min
Delivery head H_{max}	14 m
Immersion depth t_{max}	560 mm
Kinematic viscosity	max. 20 mm ² /s
Delivery temperature	
Material "P"	0 °C bis 60 °C
Material "G"	0 °C bis 80 °C
Grain size	max. Ø8 mm
Contamination	max. 1,5% (proportion by weight)
Direction of rotation	anti-clockwise (as viewed looking down on the motor's ventilation side)
Fluids delivered	Various industrial use fluids, emulsions, also with chemical additives, oils, water with corrosion protection additive, water colors, heat transfer oils

Mechanical design

Component	Material
Flange	EN-GJL-200 and steel
Shaft	1.0762
Impeller	POM
Intermediate chamber	EN-GJL-200
Bushes	PTFE graphite
Pumps bottom material "P"	POM
Splash ring material "P"	NBR

Variations

Component	Material
Bottom with extension tube "V"	EN-GJL-200
Impeller material "G"	EN-GJL-200
Bottom standard design "G"	EN-GJL-200
Splash ring material "G"	1.0718

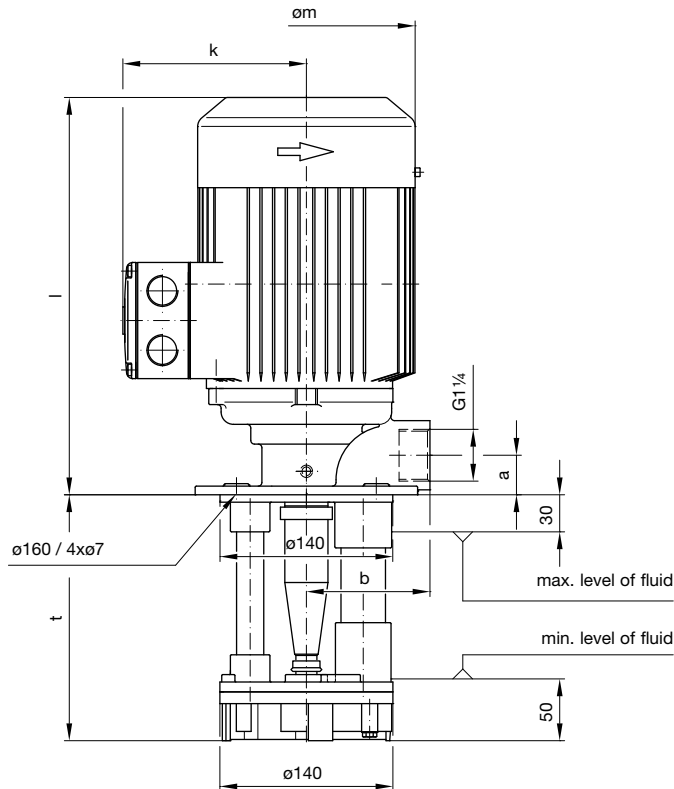
Variations availability

Material	P		G	
	S	V	S	V
PMS3001	•	x	•	•
PMS4001	x	x	•	•

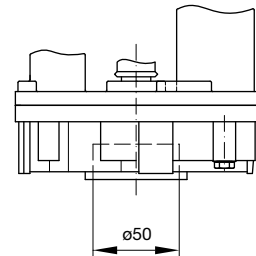
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¹⁾ Data for viscosity of ~1 mm²/s at a density of ~1 kg/dm³. Minimum volumetric flow: 5 to 10 % of nominal delivery rate.

 PMS 30, 40 – Immersion pumps, sealless
60 Hz, open impellers



Variation "V"
with bottom for extension tube



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 Δ/Y U [V]	Motor index	Output P _N [kW]	Current Δ/Y I _N [A]	Speed n _N [min ⁻¹]	Øm	k	l	Øa	b			
PMS	30	01	170	265/460	G	0,75	2,6/1,5	3460	141,4	104	267	30	95	17,5 bis 20,5	59	G1¼
			200													
			270													
			350													
			440													
			550													
	40	01	210	265/460	J	1,5	6,1/3,5	3555	176	128	364	32	100	32,0 bis 35,0	65	
			240													
			280													
			320													
			360													
			560													



PMS – Immersion pumps, sealless

Order key

	P	M	S															
Series																		
Frame size																		
To determine the frame size the corresponding characteristics has to be used. 05, 06, 08, 10, 25, 30, 40																		
Stages																		
To determine the desired number of stages the corresponding characteristics has to be used. 01 = 1-stage ... 04 = 4-stages																		
Materials																		
P = plastic (Standard) G = gray cast iron (check the availability)																		
Seal																		
B = gap bush																		
Pump design																		
S = standard design V = bottom for extension tube (check the availability)																		
Immersion depth in mm																		
To determine the desired immersion depth the appropriate table "Electrical data, dimensions and weights" has to be used. 90 = 90 mm ... 560 = 560 mm																		
Motor index																		
To determine the desired motor index the appropriate table "Electrical data, dimensions and weights" has to be used. Example: H = 1,1 kW																		
Power supply																		
05 = Standard for Europe 230/400 V at 50Hz 06 = 265/460 V at 60Hz ... further designs on request																		
Motor design																		
AA = standard for 0,09 kW (insulation class F, IP 54, 2-pole) CA = standard from 0,12 kW (insulation class F, IP 54, 2-pole, IE3) ... further designs on request																		

Order example: PMS4001GBS280J05CA

Series: **PMS**, Frame size: **40**, **01**-stage, Material: **G** grey cast iron, Seal: **B** gap bush, Pump design: **S** standard design, Immersion depth: **280** mm, Motor index: **J** 1,5 kW, Power supply: **05** 230/400 V at 50 Hz, Motor design: **CA** Standard (IE3)

**Spandau
pumpen**

— by **EBARA**

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03/25

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