

# PSM 60Hz

Light Vertical Multistage Centrifugal Pump

# PSMCF

For NEMA C-FRAME MOTORS



# Company Profile

Flo Fab was established in 1981 by Denis Gauvreau who created and developed the products line and constantly being perfected by Marc Gauvreau, as well as by a team of professional engineers and designers. It's a combination of existing designs from several renowned products and the innovative ideas of a new generation professionals.

Founder 1981



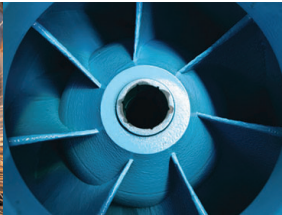
Through the years, Flo Fab has acquired several companies and service entities including : AQUA-PROFAB (ASME Tanks manufacturer), MÉNARD, LÉONARD ÉLECTRIQUE, PMA. , Furthermore Flo Fab purchased equipment, fabrication designs and patterns from IDEALCO, a manufacturer of shell and tube type heat exchangers.

The after sales services, sales, engineering, R&D, production, quality control, accounting and administration departments of all the above companies share the same location.

In December 2014, Marc Gauvreau, son of the founder, acquired all shares of The company. Flo Fab and is constantly investing in new state of the art innovations new product like the XRI series and Prefab Skid for Hydronic Hearing 8 cooling system, pumping systems. This has allowed Flo Fab to retain competent and experienced staff of professionals with varied and specialized abilities that constantly work on improving our existing products and add new engineered solutions that exceeding customer's expectations .

A handwritten signature in black ink, appearing to read 'MG' or 'Marc Gauvreau'.

Flo Fab has grown quite rapidly and now proudly offers of a wide range of products available directly from one manufacturer. This includes pumps & pump packages, tanks, heat exchangers & hydronic accessories. This allows each project stakeholders to enjoy economical savings, peace of mind, best value for their investment and optimized total cost of ownership.



# Content

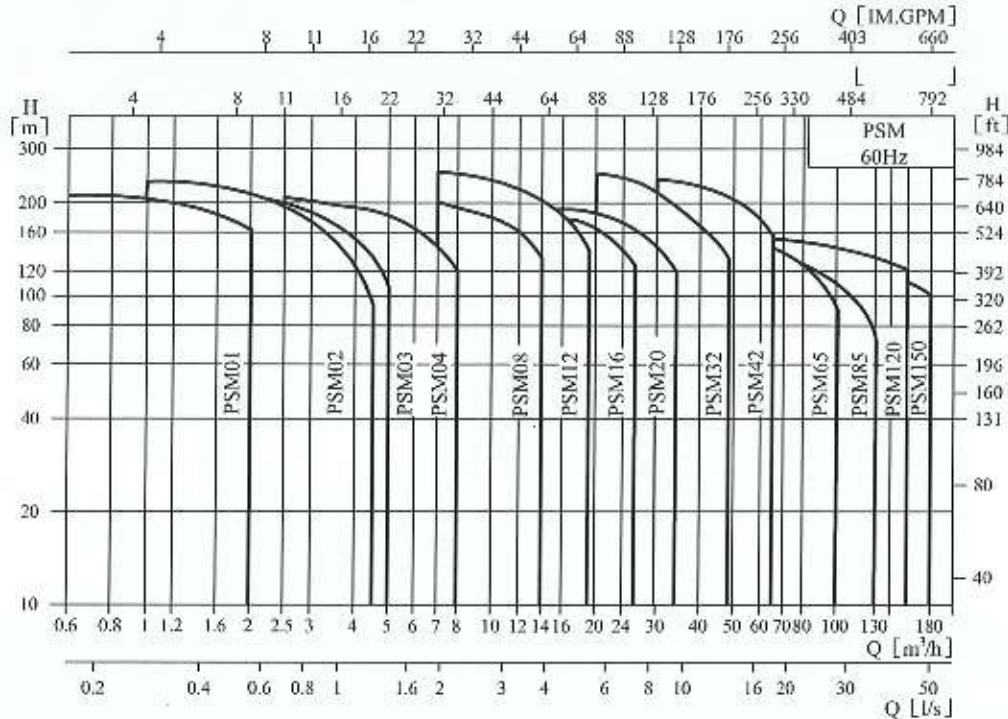
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## ● Performance scope



## ● Product range

Model	PSM01	PSM02	PSM03	PSM04	PSM08	PSM12	PSM16	PSM20	PSM32	PSM42	PSM65	PSM85	PSM120	PSM150
Rated Flow usgpm	4,4	8,8	13,2	17,6	35,2	52,8	70,4	88	140,8	184,8	286	374	52,8	660
Rated Flow (m³/h)	1	2	3	4	8	12	16	20	32	42	65	85	12	150
Rated Flow (l/s)	0,28	0,56	0,83	1,1	2,2	3,3	4,4	5,6	8,9	11,7	18	24	33	41,6
Flow Range usgpm	2,6-8	6,1-22	6,6-22	11-35	30-62	30-83	44-114	52-150	88-211	132-286	176-440	264-572	264-704	352-792
Flow Range (m³/h)	0,6-2	1,4-5	1,5-5	2,5-8	7,14	7,19	10,26	12,34	20,48	30,65	40,100	60,130	60,160	80,180
Flow range (l/s)	0,17-0,56	0,28-1,25	0,42-1,4	0,7-2,2	1,9-3,9	1,9-5,3	2,8-7,2	3,3-9,4	5,5-13,3	8,3-18	11,1-27,7	16,7-36,1	16,7-44,4	22-50
Max pressure psi	323,4	345,45	338,1	308,7	294	367,5	294	294	367,5	382,2	264,6	220,5	220,5	205,8
Max pressure (bar)	22	23,5	23	21	20	25	20	20	25	26	18	15	15	14
Motor HP	0,5-5	0,75-5	0,5-5	1-7,5	1-15	1,5-20	3-25	3-25	5-40	7,5-60	10-60	15-60	25-100	20-100
Motor power (kw)	0,37-3	0,55-4	0,37-4	0,75-5,5	0,75-11	1,1-15	2,2-18,5	2,2-18,5	3-30	5,5-45	7,5-45	11,45	18,5-75	15-75
Temperature F	5 @ 248													
Temperature (C)	-15 @ 120													
Max Efficiency (%)	44	46	54	59	64	63	66	69	76	78	80	81	74	73
Flange connection ANSI	1	1	1	1 1/4	1 1/2	2	2	2	2 1/2	3	4	4	5	5
Flange connection (DIN)	DN25	DN25	DN25	DN32	DN40	DN50	DN50	DN50	DN65	DN80	DN100	DN100	DN125	DN125
Flange Oval NPT	1	1	1	1 1/4	1 1/2									
Flange Oval (pipe)	G1	G1	G1	G1 1/4	G1 1/2									
Flange cutting ferrule joint	DN25	DN25	DN25	DN32	DN40	DN50	DN50	DN50						
Threaded	1	1	1	1 1/4	1 1/2									

## ● Pump

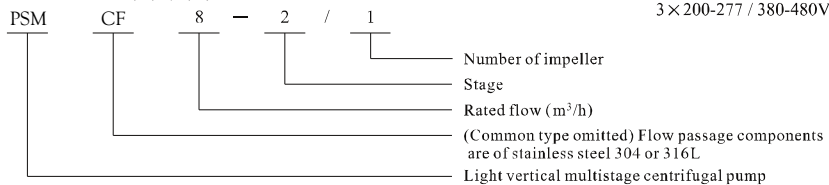
PSM is a kind of vertical non-self priming multistage centrifugal pump, which is driven by a standard electric motor. The motor output shaft directly connects with the pump shaft through a coupling. The pressure-resistant cylinder and flow passage components are fixed between pump head and inlet & outlet section with tie-bar bolts. The inlet and outlet are located at the pump bottom at the same plane. This kind of pump can be equipped with an intelligent protector to effectively prevent it from dry-running, out-of-phase and overload.

## ● Operation conditions

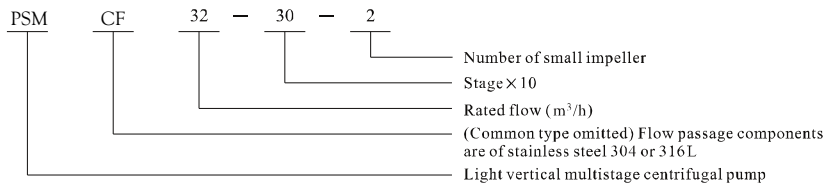
- Thin, clean, non-flammable and non-explosive liquid containing no solid granules and fibers.
- Liquid temperature:  
Normal temperature type:  $-15^{\circ}\text{C} \sim +70^{\circ}\text{C}$ ,  
Hot water type:  $-15^{\circ}\text{C} \sim +120^{\circ}\text{C}$
- Ambient temperature: up to  $+40^{\circ}\text{C}$
- Altitude: up to 1000m

## ● Definition of Model

PSM/PSMCF1,2,3,4,8,16 and 20



PSM/PSMCF32,42,65 and 85



## ● Application

PSM is a kind of multifunctional products. It can be used to convey various medium from tap water to industrial liquid at different temperature and with different flow rate and pressure. PSM type is applicable to conveying non-corrosive liquid, while CDLF is suitable for slightly corrosive liquid.

- Water supply: Water filter and transport in Waterworks, boosting of main pipeline, boosting in high-rise buildings.
- Industrial boosting: Process flow water system, cleaning system, high-pressure washing system, fire fighting system.
- Industrial liquid conveying: Cooling and air-conditioning system, boiler water supply and condensing system, machine-associated purpose, acids and alkali.
- Water treatment: Ultrafiltration system, reverse osmosis system, distillation system, separator, swimming pool.
- Irrigation: Farmland irrigation, spray irrigation, dripping irrigation.

## ● Motor

- Full-enclosed air-blast two-pole standard motor
- Protection class: IP55
- Insulation class: F
- Standard voltage: 60Hz:  $3 \times 200-230 / 346-400\text{V}$   
 $3 \times 200-255 / 380-440\text{V}$   
 $3 \times 200-277 / 380-480\text{V}$

# General Data

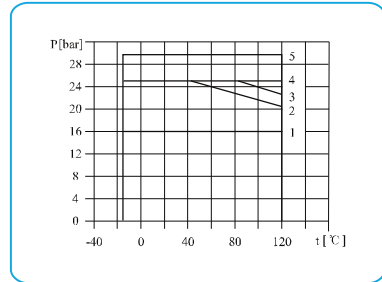
## ● Max working pressure

Model	Curve number
60Hz	
PSM1,2,3,4	2
PSM8,16,20	3
PSM32	
32-10-1 ~ 32-60-2	1 (*)
32-60 ~ 32-100-2	5
PSMF32	5
PSM42	
42-10-1 ~ 42-40-2	1 (*)
42-40 ~ 42-60	4 (*)
42-70-2 ~ 42-70	5
PSMF42	
42-10-1 ~ 42-60	4 (*)
42-70-2 ~ 42-70	5
PSMF65	
65-10-1 ~ 65-30	1 (**)
65-40-2 ~ 65-50-2	4
PSMF85	
85-10-1 ~ 85-30-2	1 (**)
85-30-1 ~ 85-40-2	4
PSMF65,85	4

\*: For curve 5, need to specify especially;

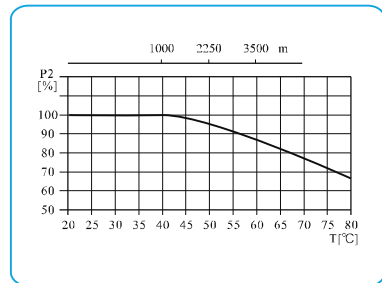
\*\* : For curve 4, need to specify especially.

The following figure shows the limitation of pressure and temperature, which shall be kept within the region as shown in the figure.

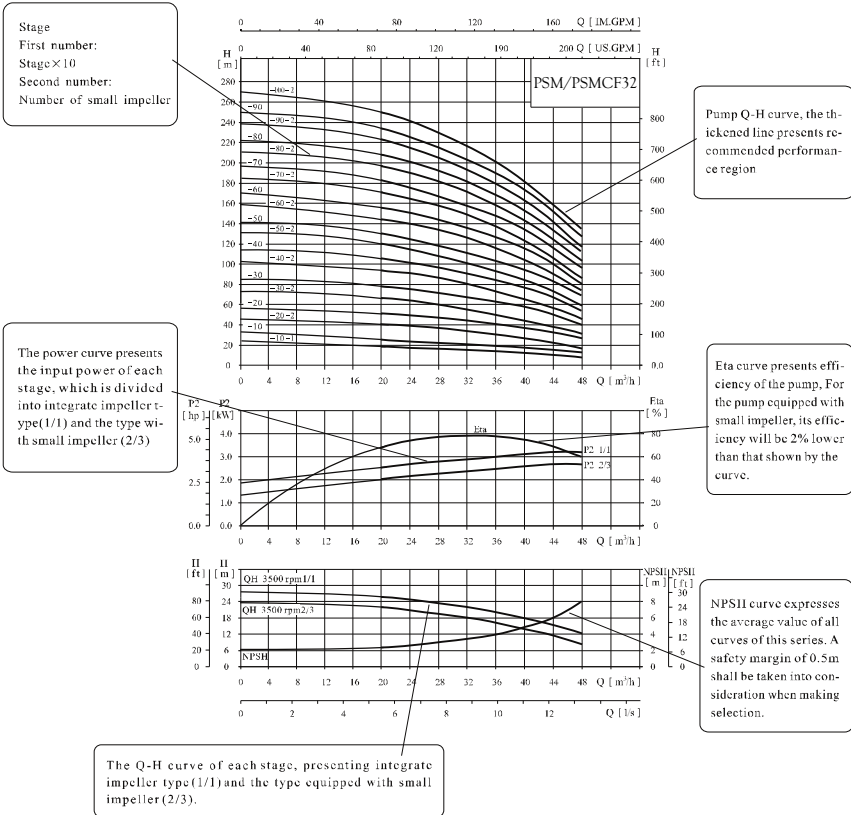


## ● Max. Ambient temperature

When the pump operates under ambient temperature higher than 40°C or under altitude higher than 1000m, because of low air density and poor cooling effects, the motor output power P2 will be decreased to certain extent. If the pump is operated under the above-said conditions, it should be equipped with motor of higher power.



## Curve illustration



## Performance curve

Following conditions are suitable for the performance curves shown below:

1. All curves are based on the measured values of constant motor speed 3500 r/min;
2. Curve tolerance in conformity with ISO9906 Annex A.
3. Measurement is done with 20°C air-free water, kinematic viscosity of 1mm<sup>2</sup>/sec.

kinematic viscosity of 1mm<sup>2</sup>/sec.

4. The operation of pump shall refer to the performance region indicated by the thickened curve to prevent overheating due to too small flow rate or overload of motor due to too large flow rate.

# General Data

## ● Minimum inlet pressure NPSH

In case that the pressure in pump is lower than the steam pressure used to convey liquid, the cavitations will occur. To avoid cavitations, a minimum pressure at the inlet side of the pump shall be guaranteed. The maximum suction stroke can be calculated with following formula:

$$H = P_b \times 10.2 - \text{NPSH} - H_f - H_v - H_s$$

$$P_b = \text{atmosphere pressure [bar]}$$

(can be set as 1bar)

In a closed system,  $P_b$  means system pressure [bar]

NPSH=Net positive suction head [m]

(It can be read out from the point of possible max.

flow rate shown on NPSH curve)

$H_f$ =Pipeline loss at the inlet [m]

$H_v$ =Steam pressure [m]

$H_s$ =Safety margin=Minimum 0.5m delivery head

If the calculated result  $H$  is positive, the pump may run under the max. Suction stroke  $H$ .

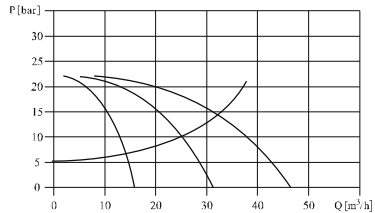
In case the calculated result  $H$  is negative, a delivery head of min. Inlet pressure is necessary.

## ● Operation in parallel

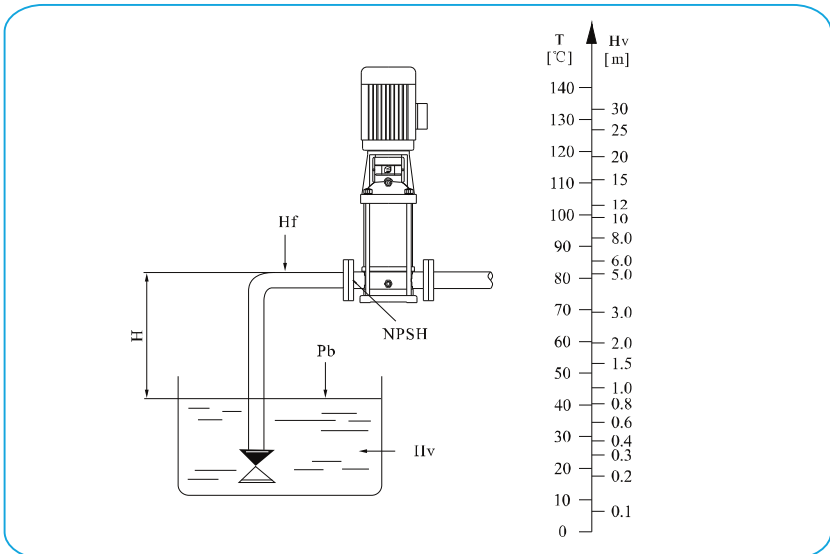
Connecting several pumps in parallel running will benefit much more than running a single large pump.

● Applicable to different working states necessary in a variable flow system.

● Increasing the possibility of water supply when the pump is in failure. Because in case of pump failure, only part of the system flow is effected.



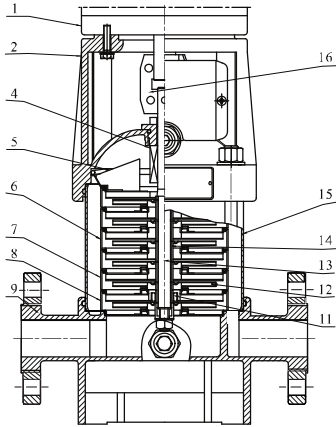
Two pumps or more can be connected in parallel running if necessary.



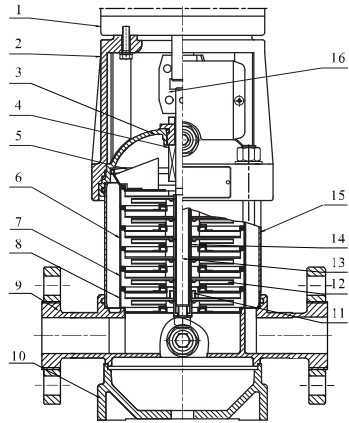
Check and ensure that the pump is not at cavitations state.



## ● Section drawing PSM/PSMCF1,2,3,4



PSM



PSMF

## ● Material PSM/PSMCF1,2,3,4

NO.	Name	Material	AISI/ASTM
1	Motor		
2	Pump head	Cast iron	ASTM25B
4	Mechanical seal		
5	Top diffuser	Stainless steel	AISI304
6	Diffuser	Stainless steel	AISI304
7	Support diffuser	Stainless steel	AISI304
8	Inducer	Stainless steel	AISI304
11	Bearing	Tungsten carbide	
12	Impeller	Stainless steel	AISI304
13	Shaft	Stainless steel	AISI304 AISI316L

NO.	Name	Material	AISI/ASTM
14	Impeller sleeve	Stainless steel	AISI304
15	Cylinder	Stainless steel	AISI304
16	Coupling	Carbon steel	

PSM

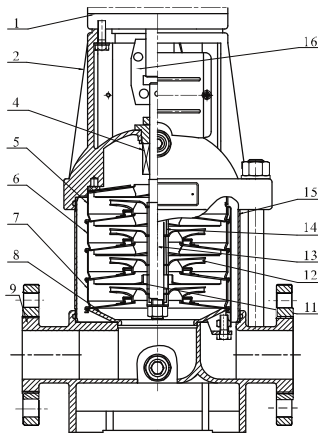
3	Seal base	Stainless steel	AISI304
9	Inlet and outlet chamber	Stainless steel	AISI304
10	Base plate	Cast iron	ASTM25B

PSMF

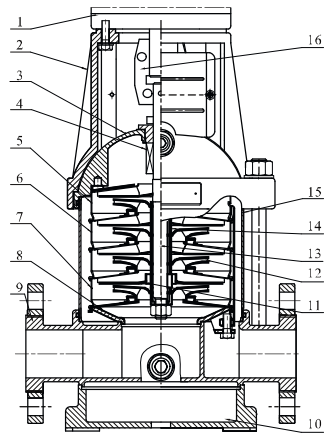
9	Inlet and outlet chamber	Cast iron	ASTM25B
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# General Data

## ● Section drawing PSM/PSMCF8,16,20



CDL



CDLF

## ● Material PSM/PSMCF8,16,20

NO.	Name	Material	AISI/ASTM
1	Motor		
2	Pump head	Cast iron	ASTM25B
4	Mechanical seal		
5	Top diffuser	Stainless steel	AISI304
6	Diffuser	Stainless steel	AISI304
7	Support diffuser	Stainless steel	AISI304
8	Inducer	Stainless steel	AISI304
11	Bearing	Tungsten carbide	
12	Impeller	Stainless steel	AISI304
13	Shaft	Stainless steel	AISI304 AISI316L

NO.	Name	Material	AISI/ASTM
14	Impeller sleeve	Stainless steel	AISI304
15	Cylinder	Stainless steel	AISI304
16	Coupling	Carbon steel	

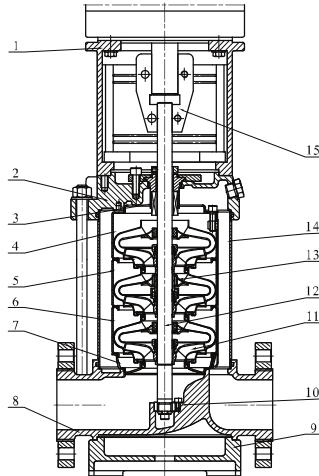
### PSMCF

3	Seal base	Stainless steel	AISI304
9	Inlet and outlet chamber	Stainless steel	AISI304
10	Base plate	Cast iron	ASTM25B

### PSM

9	Inlet and outlet chamber	Cast iron	ASTM25B
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## ● Section drawing PSM/PSMCF32,42,65,85



## ● Material PSM/PSMCF34,42,65,85

NO.	Name	Material	AISI/ASTM
1	Bracket	Cast iron	ASTM25B
3	Mechanical seal		
4	Top diffuser	Stainless steel	AISI304
5	Support diffuser	Stainless steel	AISI304
6	Diffuser	Stainless steel	AISI304
7	Inducer	Stainless steel	AISI304
9	Base plate	Cast iron	ASTM25B
10	Bottom bearing	Tungsten carbide	
11	Impeller	Stainless steel	AISI304

NO.	Name	Material	AISI/ASTM
12	Shaft	Stainless steel	AISI316L AISI304 AISI431
13	Intermediate bearing	Tungsten carbide	
14	Cylinder	Stainless steel	AISI304
15	Coupling	Carbon steel	
	Rubber parts	NBR	

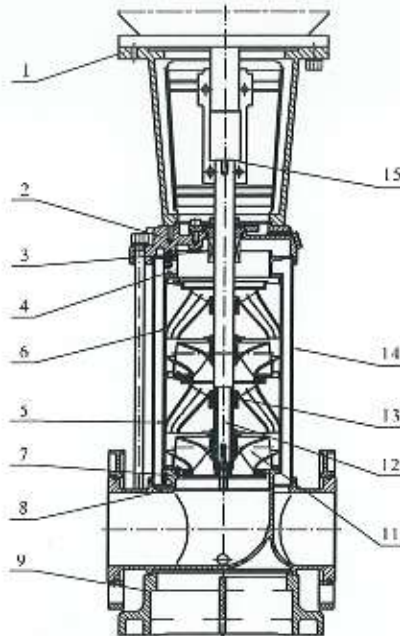
### PSM

2	Pump head	Cast iron	ASTM25B
8	Inlet and outlet chamber	Cast iron	ASTM25B

### PSMCF

2	Pump head	Stainless steel	AISI304
8	Inlet and outlet chamber	Stainless steel	AISI304

## ● Section Drawing PSM120, 150



## ● Material PSM120, 150

NO.	Name	Material	AISI/ASTM
1	Bracket	Cast iron	ASTM25B
3	Mechanical seal		
4	Discharge	Stainless steel	AISI304
5	Support diffuser	Stainless steel	AISI304
6	Diffuser	Stainless steel	AISI304
7	Inducer	Stainless steel	AISI304
9	Base plate	Cast iron	ASTM 80-55-06
11	Impeller	Stainless steel	AISI304
12	Shaft	Stainless steel	AISI304

NO.	Name	Material	AISI/ASTM
13	Bearing	Tungsten carbide	
14	Cylinder	Stainless steel	AISI304
15	Coupling	Carbon steel	
	Rubber parts	NBR	

### PSM

2	Pump head	Cast iron	ASTM 80-55-06
8	Inlet and outlet chamber	Cast iron	ASTM 80-55-06

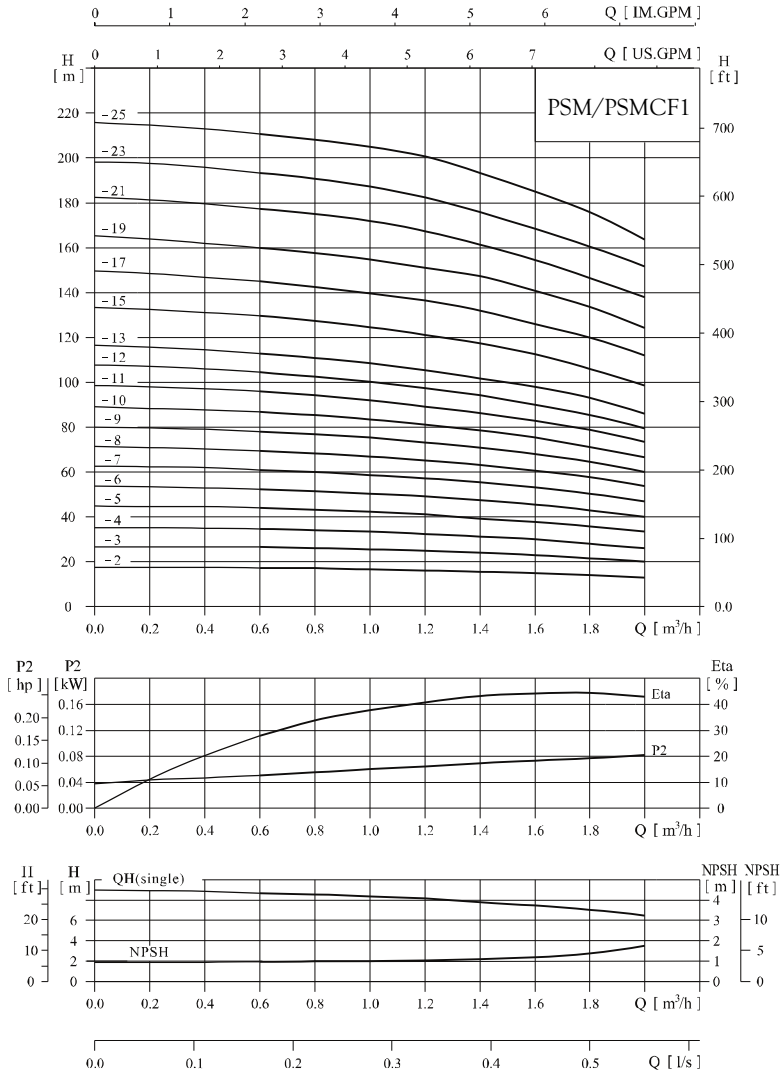
### PSMS4S6

2	Pump head	Stainless steel	AISI304
8	Inlet and outlet chamber	Stainless steel	AISI304

# PSM/PSMCF1,60Hz

## ● Performance curve

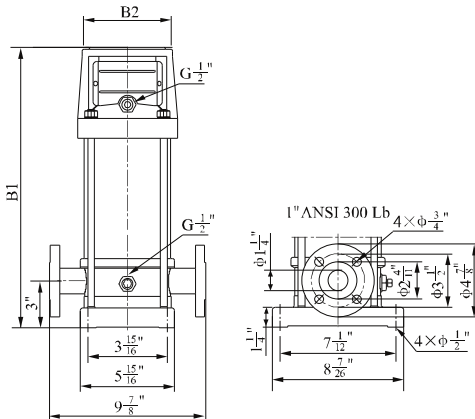
## ISO9906 Annex A



## ● Performance table

✓	Model	Driving motor		Frame	Q (m³/h)	H (m)							
		(kW)	(hp)			0.6	0.8	1	1.2	1.4	1.6	1.8	2
	<b>PSM1-2</b>	0.37	0.5	56C	H (m)	17.5	17	16.5	16	15.5	15	14	13
	<b>PSM1-3</b>	0.37	0.5	56C		26.5	26	25	24	23	22	21	20
	<b>PSM1-4</b>	0.37	0.5	56C		35	34	33	32	31	30	28	26
	<b>PSM1-5</b>	0.55	0.75	56C		43	42	41	40	39	38	35	33
	<b>PSM1-6</b>	0.55	0.75	56C		52	51	50	48	47	45	43	39
	<b>PSM1-7</b>	0.75	1	56C		60	59	58	56	55	52	50	46
	<b>PSM1-8</b>	0.75	1	56C		68	67	65	64	62	59	57	53
	<b>PSM1-9</b>	0.75	1	56C		76	75	74	73	71	66	64	60
	<b>PSM1-10</b>	1.1	1.5	56C		85	84	83	81	78	74	72	67
	<b>PSM1-11</b>	1.1	1.5	56C		95	93	90	87	85	81	78	73
	<b>PSM1-12</b>	1.1	1.5	56C		103	102	98	96	92	88	86	79
	<b>PSM1-13</b>	1.1	1.5	56C		112	110	107	105	100	95	93	86
	<b>PSM1-15</b>	1.5	2	56C		127	125	123	121	117	112	107	99
	<b>PSM1-17</b>	1.5	2	56C		144	141	139	137	132	124	120	112
	<b>PSM1-19</b>	2.2	3	182TC		160	157	155	153	147	141	134	124
	<b>PSM1-21</b>	2.2	3	182TC		177	174	172	168	162	153	147	138
	<b>PSM1-23</b>	2.2	3	182TC		193	190	188	184	174	167	161	152
	<b>PSM1-25</b>	2.2	3	182TC		210	207	205	202	192	154	176	164

## ● Installation sketch



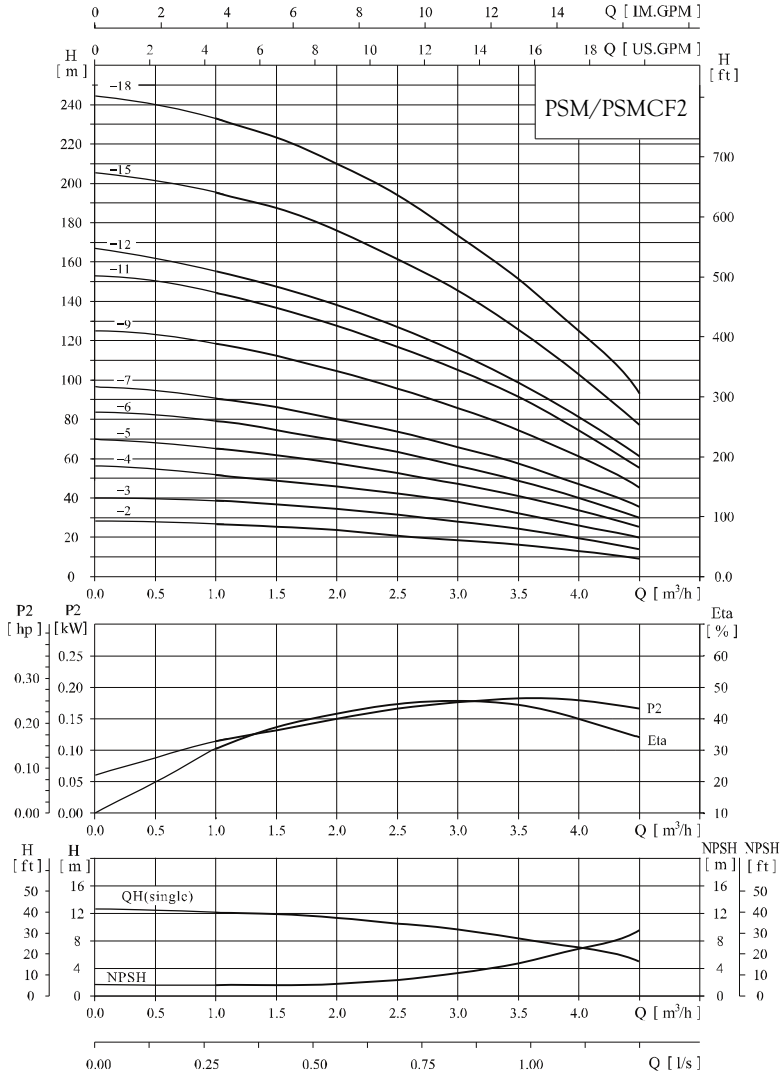
## ● Size and weight

Model	Size B1		Size B2		Weight	
	in	mm	in	mm	lbs	kg
<b>PSM1-2</b>	11,25	285,75	6,5	165,10	34	15,42
<b>PSM1-3</b>	12	304,80			35	15,88
<b>PSM1-4</b>	12,69	322,33			36	16,33
<b>PSM1-5</b>	13,38	339,85			37	16,78
<b>PSM1-6</b>	14,13	358,90			39	17,69
<b>PSM1-7</b>	14,81	376,17			40	18,14
<b>PSM1-8</b>	15,56	395,22			41	18,60
<b>PSM1-9</b>	16,25	412,75			42	19,05
<b>PSM1-10</b>	16,94	430,28			43	19,50
<b>PSM1-11</b>	17,69	449,33			44	19,96
<b>PSM1-12</b>	18,38	466,85			45	20,41
<b>PSM1-13</b>	19,06	484,12			46	20,87
<b>PSM1-15</b>	20,50	520,70			49	22,23
<b>PSM1-17</b>	21,94	557,28			51	23,13
<b>PSM1-19</b>	23,63	600,20	8,88	225,55	56	25,40
<b>PSM1-21</b>	25,06	636,52			57	25,85
<b>PSM1-23</b>	26,5	673,10			60	27,22
<b>PSM1-25</b>	17,88	454,15			62	28,12

# PSM/PSMCF2,60Hz

## ● Performance curve

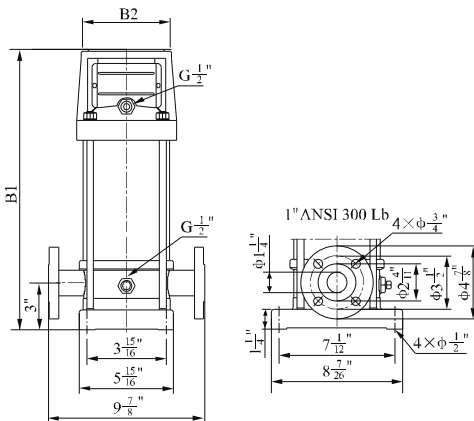
## ISO9906 Annex A



## ● Performance table

√	Model	Driving motor		Frame	Q (m <sup>3</sup> /h)	1	1.5	2	2.5	3	3.5	4	4.5
		(kW)	(hp)										
	PSM2-2	0.55	0.75	56C	H (m)	26	24	22	21	18	16	12	9
	PSM2-3	0.75	1	56C		39	36	33	31	27	24	19	15
	PSM2-4	1.1	1.5	56C		52	48	45	42	36	32	26	20
	PSM2-5	1.1	1.5	56C		65	60	57	52	46	41	32	25
	PSM2-6	1.1	1.5	56C		78	74	69	63	56	49	40	30
	PSM2-7	1.5	2	56C		91	86	81	74	66	57	47	35
	PSM2-9	2.2	3	182TC		117	111	104	95	86	75	61	45
	PSM2-11	2.2	3	182TC		143	136	128	116	104	90	75	56
	PSM2-12	2.2	3	182TC		157	149	140	126	114	98	82	61
	PSM2-15	3.7	5	184TC		195	186	176	160	142	125	103	77
	PSM2-18	3.7	5	184TC		234	228	212	195	171	151	126	94

## ● Installation sketch



## ● Size and weight

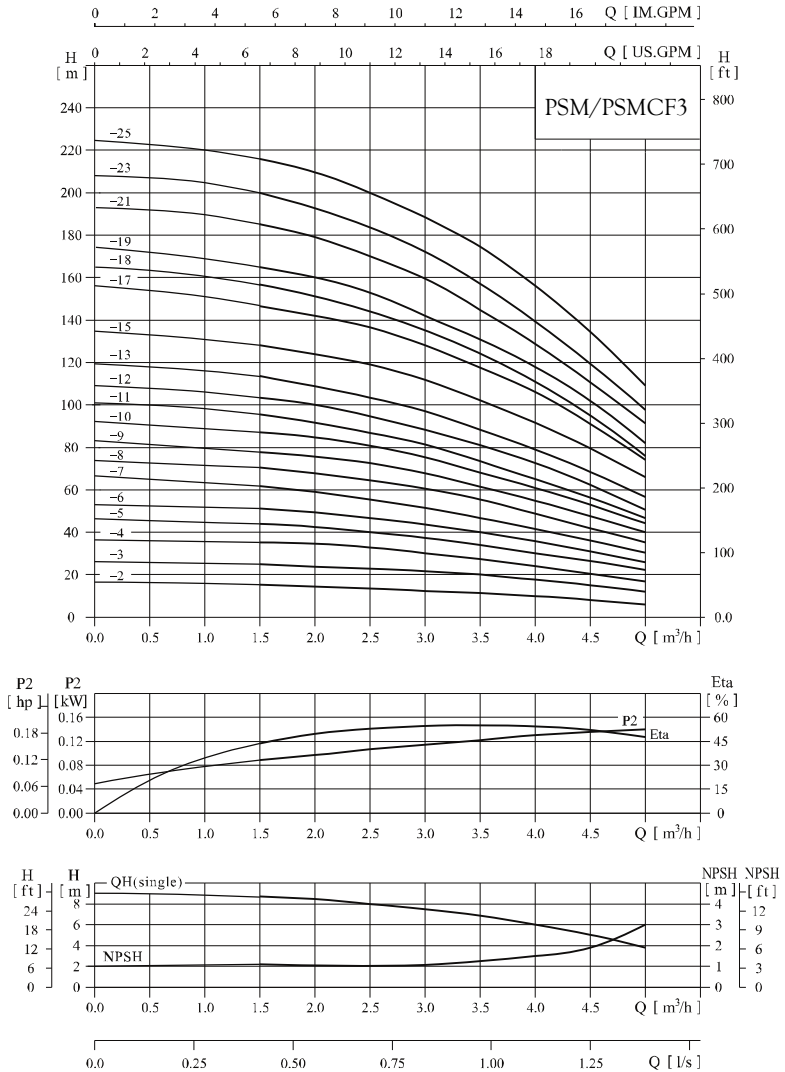
Model	Size B1		Size B2		Weight	
	in	mm	in	mm	lbs	kg
PSM1-2	11,25	285,75	6,5	165,10	34	15,42
PSM1-3	12	304,80			35	15,88
PSM1-4	12,69	322,33			36	16,33
PSM1-5	13,38	339,85			37	16,78
PSM1-6	14,13	358,90			39	17,69
PSM1-7	14,81	376,17	8,88	225,55	40	18,14
PSM1-8	16,56	420,62			42	19,05
PSM1-9	18	457,20			44	19,96
PSM1-10	18,69	474,73			50	22,68
PSM1-11	20,81	528,57			53	24,04
PSM1-12	22,94	582,68			55	24,95



# PSM/PSMCF3,60Hz

## ● Performance curve

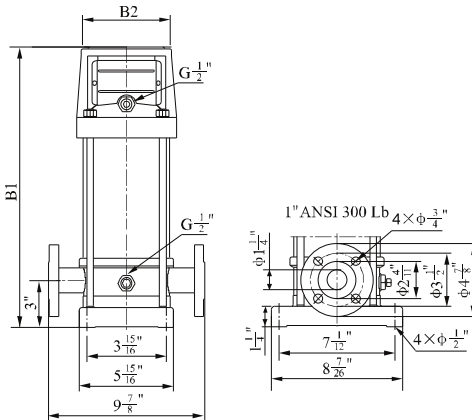
## ISO9906 Annex A



## ● Performance table

√	Model	Driving motor		Frame	Q (m³/h)	H (m)							
		(kW)	(hp)			1.5	2	2.5	3	3.5	4	4.5	5
	PSM3-2	0.37	0.5	56C	H (m)	17.5	16	15	14	13	11	9	8
	PSM3-3	0.55	0.75	56C		26.5	25	24	23	20	18	15	12
	PSM3-4	0.55	0.75	56C		35	34	32	30	27	25	20	17
	PSM3-5	0.75	1	56C		44	42	40	38	33	31	26	23
	PSM3-6	1.1	1.5	56C		51	50	48	45	40	37	32	27
	PSM3-7	1.1	1.5	56C		61	59	56	52	46	43	38	31
	PSM3-8	1.1	1.5	56C		70	67	64	61	53	49	44	35
	PSM3-9	1.5	2	56C		78	77	72	68	60	56	50	40
	PSM3-10	1.5	2	56C		87	84	81	76	68	63	55	44
	PSM3-11	1.5	2	56C		96	92	87	82	74	69	59	48
	PSM3-12	2.2	3	182TC		104	100	96	90	79	73	63	52
	PSM3-13	2.2	3	182TC		112	109	104	98	86	80	69	57
	PSM3-15	2.2	3	182TC		129	126	120	112	99	93	81	65
	PSM3-17	2.2	3	182TC		147	143	137	128	114	106	91	74
	PSM3-18	2.2	3	182TC		156	152	145	135	120	112	96	78
	PSM3-19	3.7	5	184TC		165	160	153	142	126	118	102	82
	PSM3-21	3.7	5	184TC		183	178	170	160	141	129	112	91
	PSM3-23	3.7	5	184TC		200	194	185	174	154	142	122	98
	PSM3-25	3.7	5	184TC		217	211	202	187	167	154	134	108

## ● Installation sketch



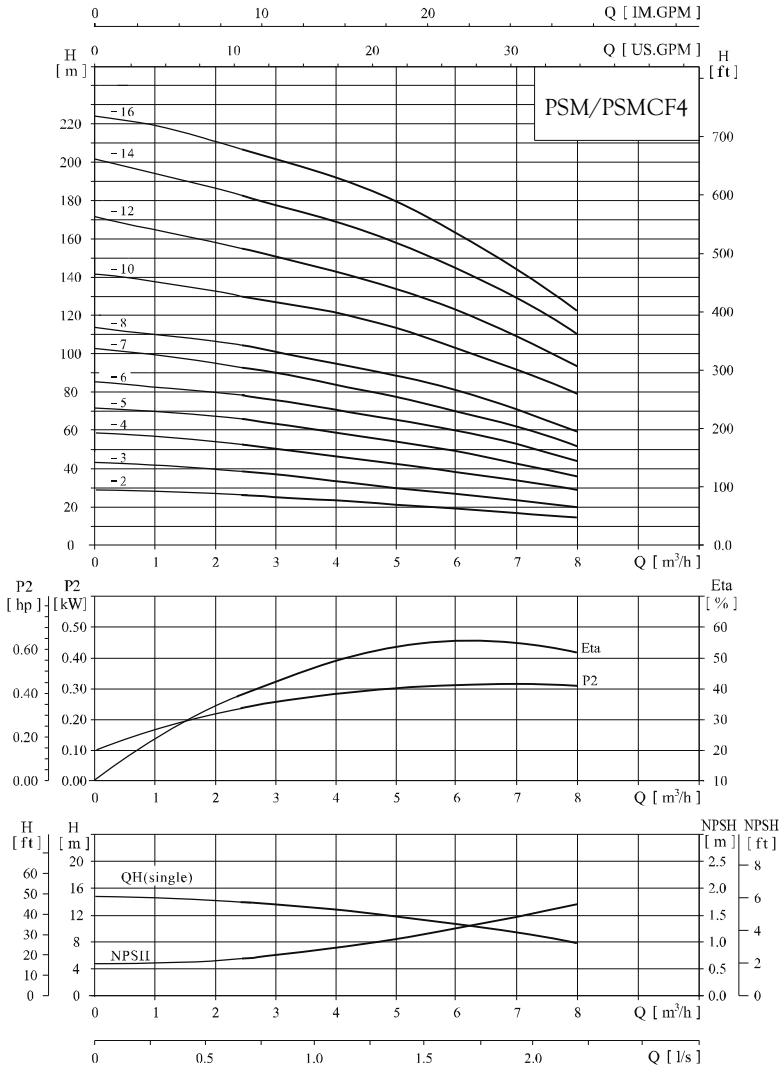
## ● Size and weight

Model	Size B1		Size B2		Weight	
	in	mm	in	mm	lbs	kg
PSM3-2	11,25	285,75	6,5	165,10	34	15,42
PSM3-3	12,00	304,80			35	15,88
PSM3-4	12,69	322,33			36	16,33
PSM3-5	13,38	339,85			37	16,78
PSM3-6	14,13	358,90			39	17,69
PSM3-7	14,81	376,17			40	18,14
PSM3-8	15,56	395,22			41	18,60
PSM3-9	16,25	412,75			42	19,05
PSM3-10	16,94	430,28			43	19,50
PSM3-11	17,69	449,33			44	19,96
PSM3-12	18,69	474,73	8,88	225,55	50	22,68
PSM3-13	19,38	492,25			51	23,13
PSM3-15	20,81	528,57			53	24,04
PSM3-17	22,25	565,15			54	24,49
PSM3-18	22,94	582,68			55	24,95
PSM3-19	23,63	600,20			56	25,40
PSM3-21	25,06	636,52			57	25,85
PSM3-23	26,50	673,10			60	27,22
PSM3-25	27,88	708,15			62	28,12

# PSM/PSMCF4,60Hz

## ● Performance curve

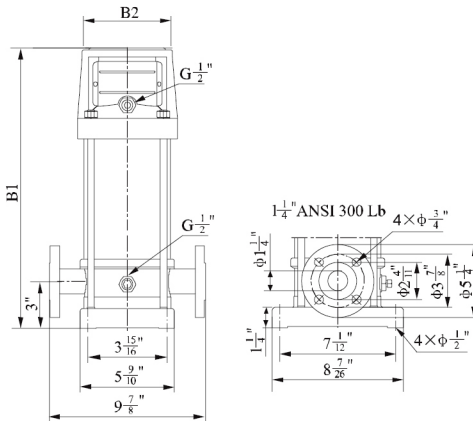
## ISO9906 Annex A



## ● Performance table

√	Model	Driving motor		Frame	Q (m <sup>3</sup> /h)	2.5	3	4	5	6	7	8
		(kW)	(hp)									
	PSM4-2	0.75	1	56C	H (m)	26	25	23	21	19	16	14
	PSM4-3	1.1	1.5	56C		39	38	36	32	28	24	21
	PSM4-4	1.5	2	56C		52	50	48	44	38	35	31
	PSM4-5	2.2	3	182TC		65	62	60	55	49	44	39
	PSM4-6	2.2	3	182TC		78	75	72	67	59	54	47
	PSM4-7	3.7	5	184TC		92	88	84	78	69	62	55
	PSM4-8	3.7	5	184TC		104	100	95	90	79	72	63
	PSM4-10	3.7	5	184TC		130	125	120	113	102	90	80
	PSM4-12	5.5	7.5	213TC		156	150	145	136	122	109	96
	PSM4-14	5.5	7.5	213TC		182	176	170	159	145	129	112
	PSM4-16	5.5	7.5	213TC		207	201	196	183	165	146	128

## ● Installation sketch



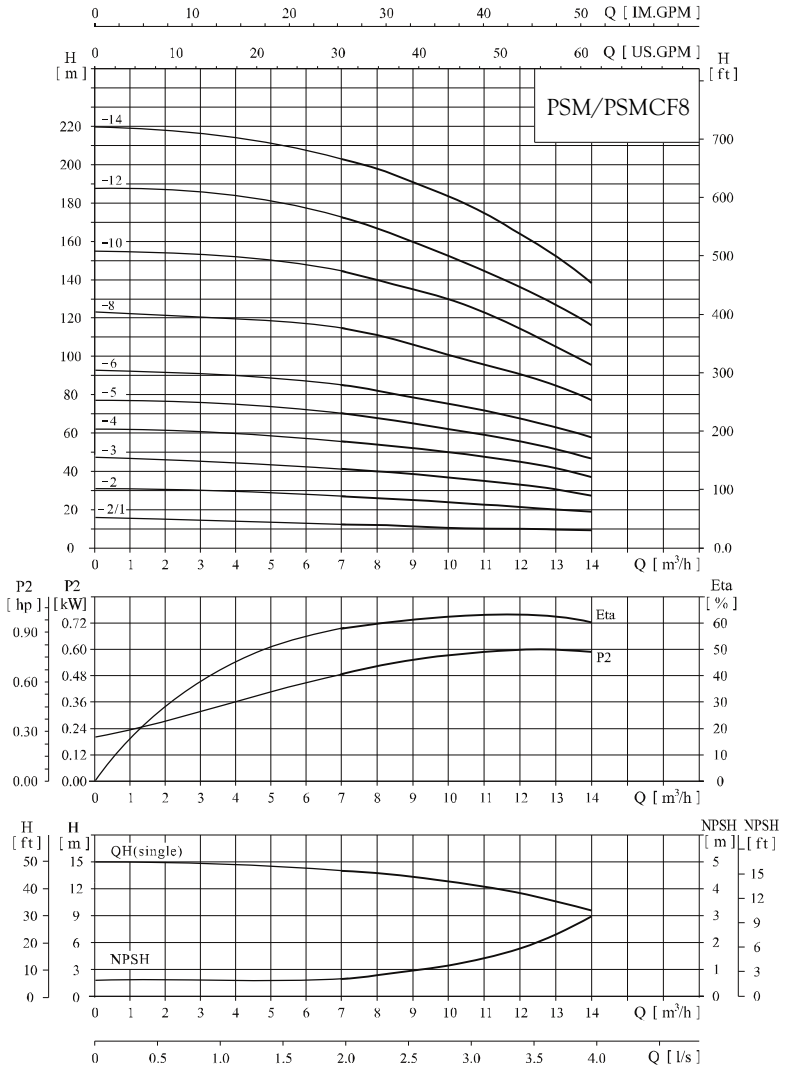
## ● Size and weight

Model	Size B1		Size B2		Weight	
	in	mm	in	mm	lbs	kg
PSM4-2	12,00	304,80	6,5	165,10	37	16,78
PSM4-3	13,06	331,72			39	17,69
PSM4-4	14,13	358,90	8,88	225,55	40	18,14
PSM4-5	15,44	392,18			46	20,87
PSM4-6	16,56	420,62			47	21,32
PSM4-7	17,63	447,80			49	22,23
PSM4-8	18,69	474,73			50	22,68
PSM4-10	20,81	528,57			51	23,13
PSM4-12	23,44	595,38			55	24,95
PSM4-14	25,56	649,22			57	25,85
PSM4-16	27,69	703,33			60	27,22

# PSM/PSMCF8,60Hz

## ● Performance curve

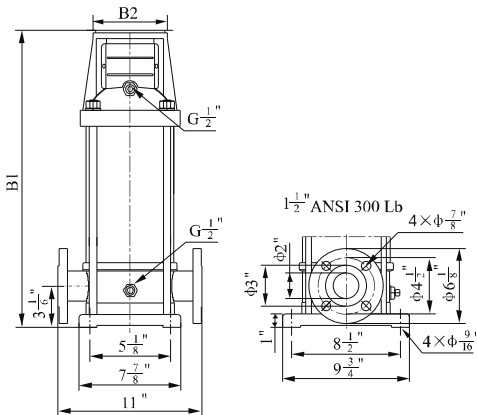
## ISO9906 Annex A



## ● Performance table

√	Model	Driving motor		Frame	Q (m <sup>3</sup> /h)	7	8	9	10	11	12	13	14
		(kW)	(hp)										
	<b>PSM8-2/1</b>	0.75	1	56C	H (m)	13	12	11.5	11	10.5	10	9.5	9
	<b>PSM8-2</b>	1.5	2	56C		27	26	25	24	23	22	20	18
	<b>PSM8-3</b>	2.2	3	182TC		41	40	38	37	35	33	30	28
	<b>PSM8-4</b>	3.7	5	184TC		55	54	52	50	47	45	41	38
	<b>PSM8-5</b>	3.7	5	184TC		70	68	65	63	59	56	52	47
	<b>PSM8-6</b>	3.7	5	184TC		85	82	78	76	72	68	62	57
	<b>PSM8-8</b>	5.5	7.5	213TC		115	110	105	101	97	91	84	75
	<b>PSM8-10</b>	7.5	10	215TC		145	140	132	126	122	115	105	95
	<b>PSM8-12</b>	7.5	10	215TC		173	167	160	152	147	132	125	115
	<b>PSM8-14</b>	11	15	254TC		202	195	188	179	174	163	147	135

## ● Installation sketch



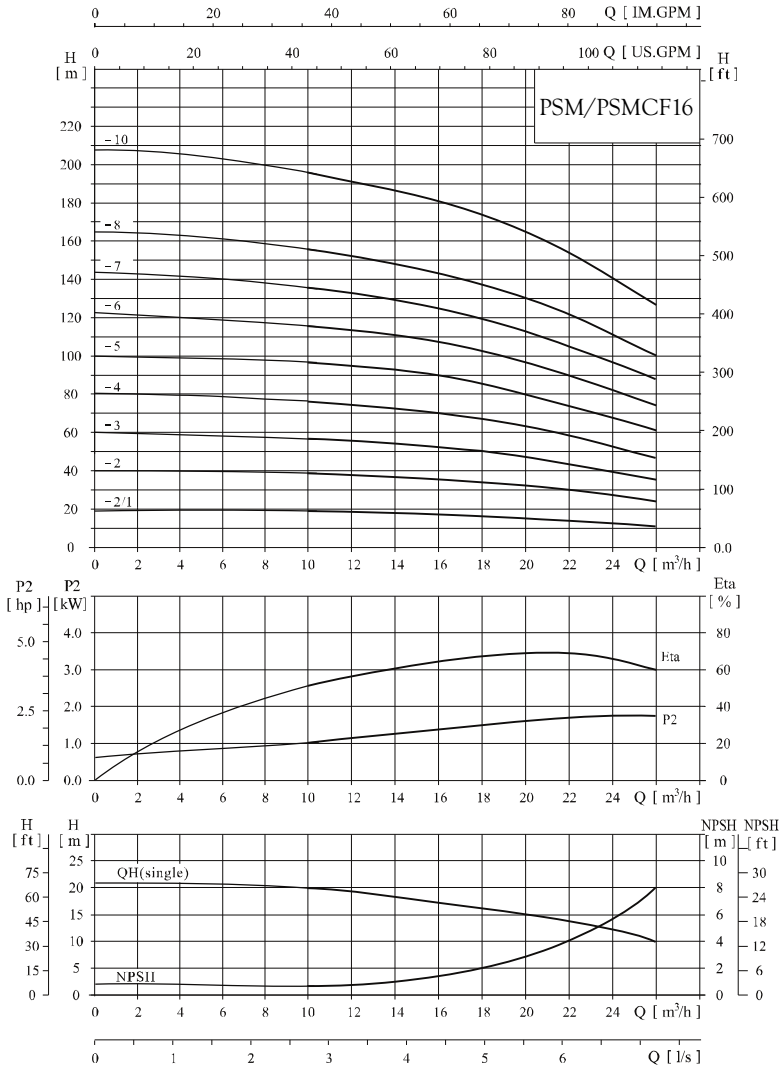
## ● Size and weight

Model	Size B1		Size B2		Weight	
	in	mm	in	mm	lbs	kg
<b>PSM8-2/1</b>	14,44	366,89	6,5	165,10	57	25,85
<b>PSM8-2</b>	14,44	366,89			57	25,85
<b>PSM8-3</b>	16,06	407,99	8,88	225,55	65	29,48
<b>PSM8-4</b>	17,25	438,15			66	29,94
<b>PSM8-5</b>	18,43	468,09			67	30,39
<b>PSM8-6</b>	19,60	497,84			68	30,84
<b>PSM8-8</b>	22,44	569,98			82	37,19
<b>PSM8-10</b>	24,80	629,92			84	38,10
<b>PSM8-12</b>	27,17	690,03			86	39,01
<b>PSM8-14</b>	32,52	826,01			95	43,09

# PSM/PSMCF16,60Hz

## ● Performance curve

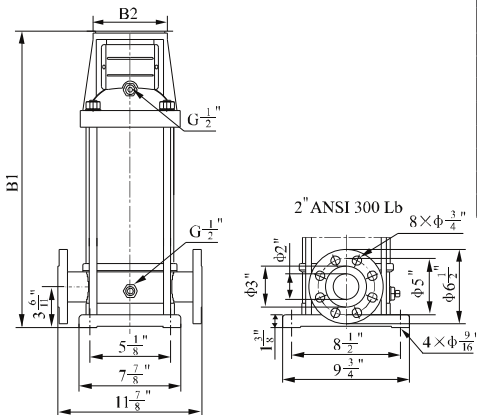
## ISO9906 Annex A



## ● Performance table

√	Model	Driving motor		Frame	Q (m <sup>3</sup> /h)	10	12	14	16	18	20	22	24	26
		(kW)	(hp)											
	<b>PSM16-2/1</b>	2.2	3	182TC	H (m)	19	18.5	18	17	16	15	14	13	11
	<b>PSM16-2</b>	3.7	5	184TC		38	37	36	35	34	32	30	27	24
	<b>PSM16-3</b>	5.5	7.5	213TC		57	56	55	54	51	48	45	40	36
	<b>PSM16-4</b>	7.5	10	215TC		76	75	73	72	68	64	60	54	49
	<b>PSM16-5</b>	11	15	254TC		96	94	92	90	85	80	75	68	62
	<b>PSM16-6</b>	11	15	254TC		115	113	111	108	102	96	91	82	75
	<b>PSM16-7</b>	15	20	256TC		135	132	129	126	119	113	106	96	88
	<b>PSM16-8</b>	15	20	256TC		155	152	148	144	137	130	122	111	101
	<b>PSM16-10</b>	18,5	25	284TSC		197	192	187	181	174	165	153	139	127

## ● Installation sketch



## ● Size and weight

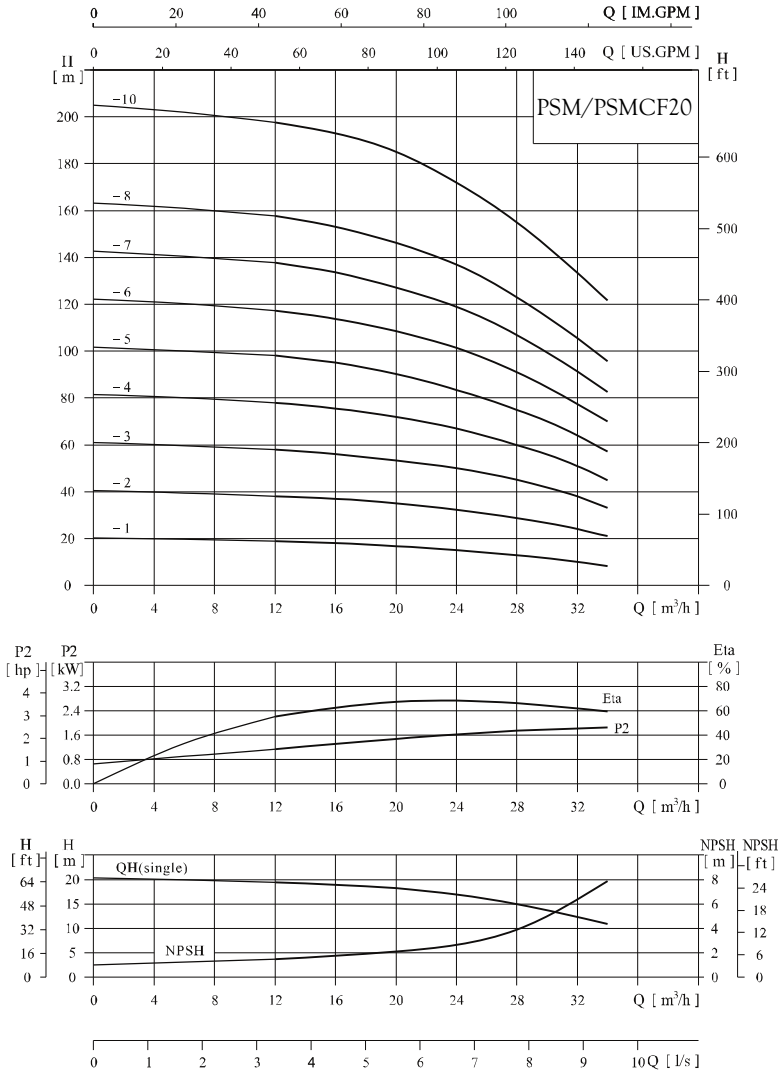
Model	Size B1		Size B2		Weight			
	in	mm	in	mm	lbs	kg		
<b>PSM16-2/1</b>	16,46	418,04	8,88	225,55	71	32,21		
<b>PSM16-2</b>	16,46	418,04			71	32,21		
<b>PSM16-3</b>	18,70	474,98			73	33,11		
<b>PSM16-4</b>	20,47	519,95			75	34,02		
<b>PSM16-5</b>	25,24	640,98			84	38,10		
<b>PSM16-6</b>	27,00	685,80			86	39,01		
<b>PSM16-7</b>	28,79	731,25			88	39,92		
<b>PSM16-8</b>	30,56	776,11			93	42,18		
<b>PSM16-10</b>	33,35	846,99			11,03	280,19	101	45,81



# PSM/PSMCF20,60Hz

## ● Performance curve

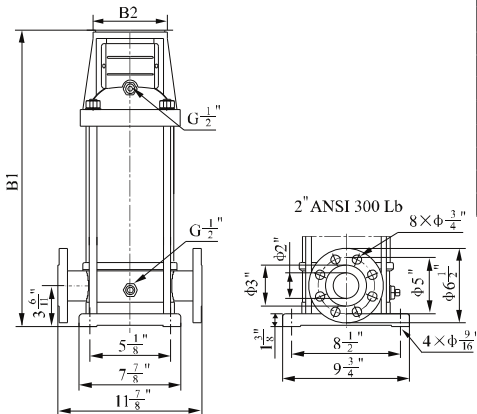
## ISO9906 Annex A



## ● Performance table

√	Model	Driving motor		Frame	Q (m <sup>3</sup> /h)	12	16	20	24	28	32	34
		(kW)	(hp)									
	<b>PSM20-1</b>	2.2	3	182TC	H (m)	19	18	17	15	13	10	8.5
	<b>PSM20-2</b>	3.7	5	184TC		38	37	35	32	29	24	21
	<b>PSM20-3</b>	5.5	7.5	213TC		58	56	53	50	45	38	33
	<b>PSM20-4</b>	7.5	10	215TC		78	75	72	67	60	51	45
	<b>PSM20-5</b>	11	15	254TC		98	94	90	85	75	64	57
	<b>PSM20-6</b>	11	15	254TC		118	113	108	102	91	77	70
	<b>PSM20-7</b>	15	20	256TC		138	133	127	119	107	91	83
	<b>PSM20-8</b>	15	20	256TC		158	153	146	137	123	105	96
	<b>PSM20-10</b>	18.5	25	284TSC		198	193	185	172	155	133	122

## ● Installation sketch



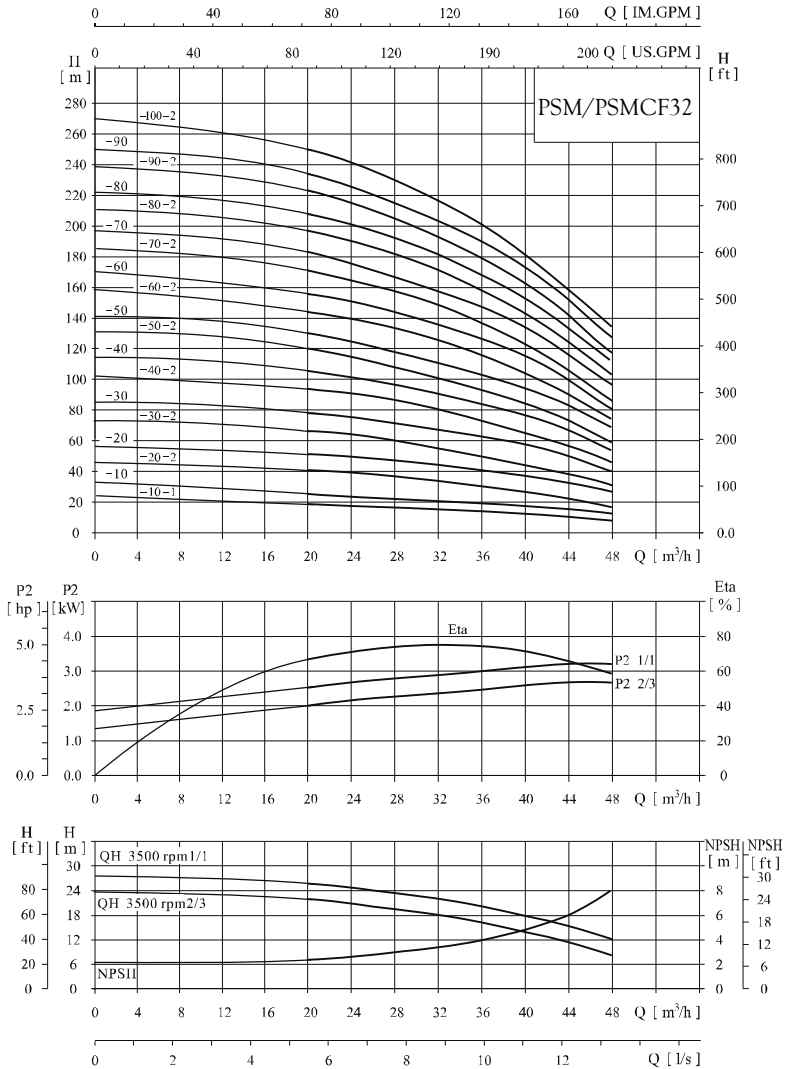
## ● Size and weight

Model	Size B1		Size B2		Weight			
	in	mm	in	mm	lbs	kg		
<b>PSM20-1</b>	16,46	418,04	8,88	225,55	73	33,11		
<b>PSM20-2</b>	16,46	418,04			73	33,11		
<b>PSM20-3</b>	18,70	474,98			75	34,02		
<b>PSM20-4</b>	20,44	519,29			77	34,93		
<b>PSM20-5</b>	25,24	640,98			86	39,01		
<b>PSM20-6</b>	27,00	685,80			88	39,92		
<b>PSM20-7</b>	28,79	731,25			90	40,82		
<b>PSM20-8</b>	30,56	776,11			95	43,09		
<b>PSM20-10</b>	33,35	846,99			110,3	280,19	104	47,17

# PSM/PSMCF32,60Hz

## ● Performance curve

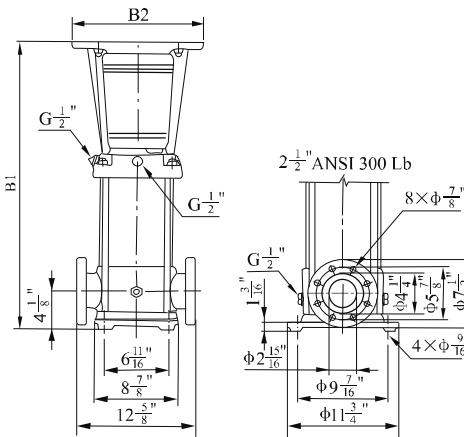
## ISO9906 Annex A



## Performance table

✓	Model	Driving motor		Frame	Q (m <sup>3</sup> /h)	H (m)							
		(kW)	(hp)			20	24	28	32	36	40	44	48
	PSM32-10-1	2.2	3	182TC	H (m)	20	19	18	17	15	13	10	7
	PSM32-10	3.7	5	184TC		26	25	24	23	21	19	17	14
	PSM32-20-2	5.5	7.5	213TC		41	40	38	35	31	27	22	17
	PSM32-20	7.5	10	215TC		52	50	48	45	41	37	33	27
	PSM32-30-2	7.5	10	215TC		67	64	61	57	52	46	39	31
	PSM32-30	11	15	254TC		78	75	71	67	62	56	50	40
	PSM32-40-2	11	15	254TC		94	91	87	81	73	65	56	45
	PSM32-40	15	20	256TC		104	101	96	91	83	75	66	55
	PSM32-50-2	15	20	256TC		119	115	109	102	94	84	73	59
	PSM32-50	15	20	256TC		130	125	119	112	104	94	83	69
	PSM32-60-2	18.5	25	284TSC		145	140	134	126	116	104	90	74
	PSM32-60	18.5	25	284TSC		155	150	144	136	126	114	100	81
	PSM32-70-2	22	30	286TSC		172	166	158	149	137	123	106	86
	PSM32-70	22	30	286TSC		182	176	168	159	148	133	118	97
	PSM32-80-2	22	30	286TSC		196	190	182	172	159	143	124	102
	PSM32-80	30	40	324TSC		208	201	192	181	167	152	132	111
	PSM32-90-2	30	40	324TSC		223	216	206	194	179	162	142	117
	PSM32-90	30	40	324TSC		234	226	216	204	189	172	152	127
	PSM32-100-2	30	40	324TSC		248	241	231	217	201	181	159	133

## Installation sketch



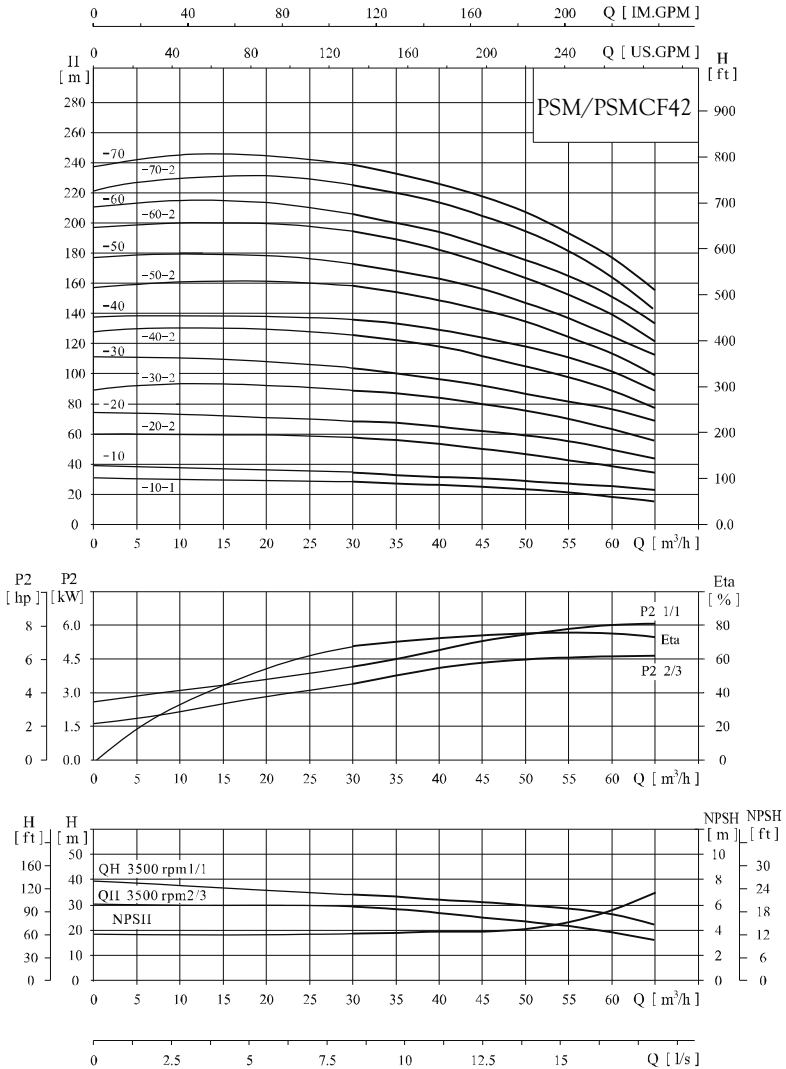
## Size and weight

Model	Size B1		Size B2		Weight	
	in	mm	in	mm	lbs	kg
PSM32-10-1	20,12	511,05	8,88	225,55	93	42,18
PSM32-10	20,12	511,05			93	42,18
PSM32-20-2	22,88	581,03			101	45,81
PSM32-20	22,88	581,03			101	45,81
PSM32-30-2	25,63	650,88			110	49,90
PSM32-30	29,13	739,99			128	58,06
PSM32-40-2	31,89	809,98			137	62,14
PSM32-40	31,89	809,98			137	62,14
PSM32-50-2	34,64	879,93			146	66,22
PSM32-50	34,64	879,93			139	63,05
PSM32-60-2	33,86	859,97	11,03	280,19	148	67,13
PSM32-60	33,86	859,97			148	67,13
PSM32-70-2	37,38	949,33			157	71,21
PSM32-70	37,38	949,33	157	71,21		
PSM32-80-2	42,13	1069,98	13,58	345,02	165	74,84
PSM32-80	42,92	1090,08			179	81,19
PSM32-90-2	42,92	1090,08			187	84,82
PSM32-90	42,92	1090,08			187	84,82
PSM32-100-2	48,43	1230,09	196	88,90		

# PSM/PSMCF42,60Hz

## ● Performance curve

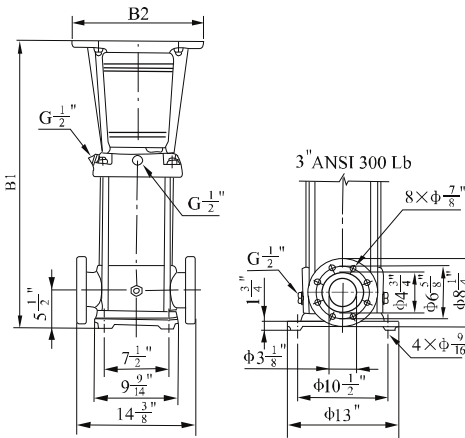
## ISO9906 Annex A



## ● Performance table

√	Model	Driving motor		Frame	Q (m <sup>3</sup> /h)	H (m)										
		(kW)	(hp)			30	35	40	42	45	50	55	60	65		
	<b>PSM42-10-1</b>	5.5	7.5	213TC	H (m)	29	28	27	26	25	23	21	19	16		
	<b>PSM42-10</b>	7.5	10	215TC		34	33	32	31.5	30	29	27	25	22		
	<b>PSM42-20-2</b>	11	15	254TC		57	55	53	52	49	46	43	38	33		
	<b>PSM42-20</b>	15	20	256TC		69	67	65	63	61	59	55	50	44		
	<b>PSM42-30-2</b>	18.5	25	284TSC		90	88	85	83	80	75	72	63	55		
	<b>PSM42-30</b>	18.5	25	284TSC		102	100	97	95	92	88	82	76	68		
	<b>PSM42-40-2</b>	22	30	286TSC		125	121	118	115	112	105	98	89	78		
	<b>PSM42-40</b>	30	40	324TSC		136	133	129	126	123	117	112	102	89		
	<b>PSM42-50-2</b>	30	40	324TSC		159	154	149	146	142	134	121	115	99		
	<b>PSM42-50</b>	30	40	324TSC		171	166	161	158	154	145	138	126	112		
	<b>PSM42-60-2</b>	37	50	326TSC		194	188	182	178	173	163	155	139	122		
	<b>PSM42-60</b>	37	50	326TSC		205	200	193	190	186	176	166	152	134		
	<b>PSM42-70-2</b>	45	60	364TSC		227	220	213	210	205	193	182	165	144		
	<b>PSM42-70</b>	45	60	364TSC		239	232	226	221	216	204	194	178	157		

## ● Installation sketch



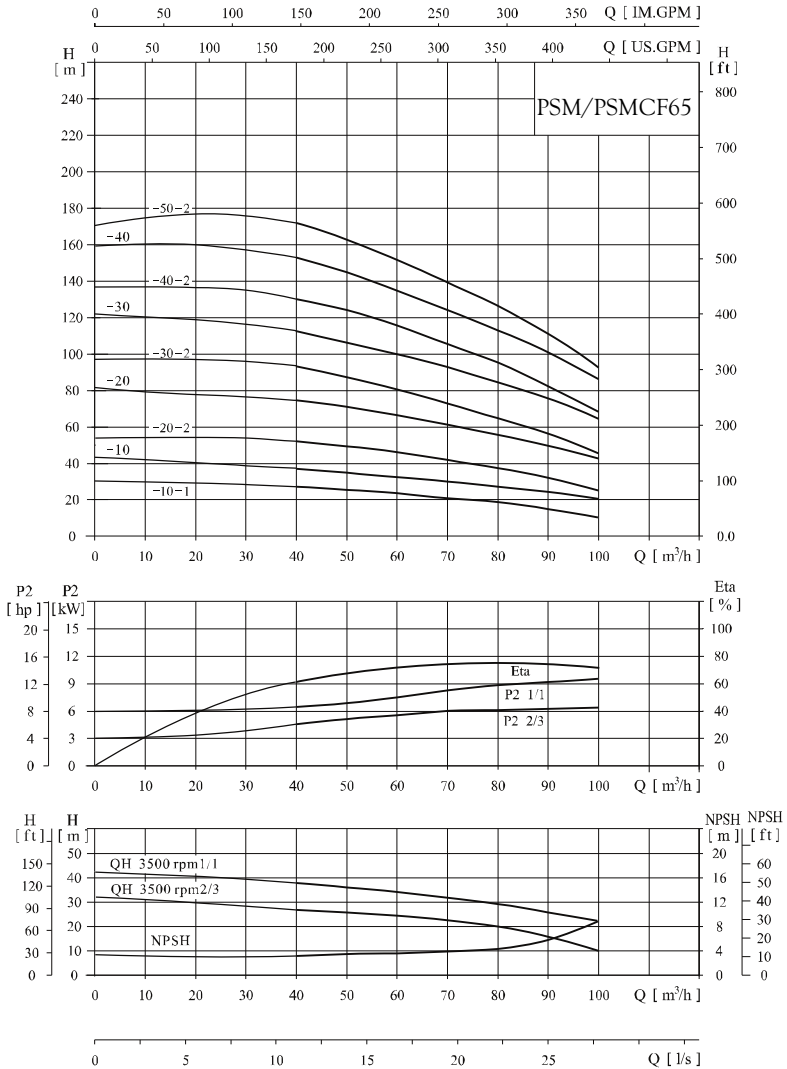
## ● Size and weight

Model	Size B1		Size B2		Weight	
	in	mm	in	mm	lbs	kg
<b>PSM42-10-1</b>	22,32	566,93	8,88	225,55	137	62,14
<b>PSM42-10</b>	22,32	566,93			137	62,14
<b>PSM42-20-2</b>	29,05	737,87			163	73,94
<b>PSM42-20</b>	29,05	737,87			163	73,94
<b>PSM42-30-2</b>	31,40	797,56	11,03	280,19	165	74,84
<b>PSM42-30</b>	31,40	797,56			165	74,84
<b>PSM42-40-2</b>	34,56	877,89	13,58	345,02	174	78,93
<b>PSM42-40</b>	35,36	898,07			190	86,18
<b>PSM42-50-2</b>	38,50	977,90			198	89,81
<b>PSM42-50</b>	38,50	977,90			198	89,81
<b>PSM42-60-2</b>	41,67	1058,33			207	93,89
<b>PSM42-60</b>	41,67	1058,33			207	93,89
<b>PSM42-70-2</b>	44,40	1127,76	15,55	394,97	234	106,14
<b>PSM42-70</b>	44,40	1127,76			234	106,14

# PSM/PSMCF65,60Hz

## ● Performance curve

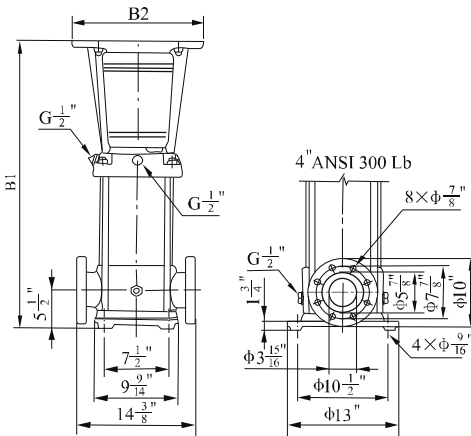
## ISO9906 Annex A



## ● Performance table

√	Model	Driving motor		Frame	Q (m <sup>3</sup> /h)	40	50	60	65	70	80	90	100
		(kW)	(hp)										
	<b>PSM65-10-1</b>	7.5	10	215TC	H (m)	26	25	23	22	21	18	14	10
	<b>PSM65-10</b>	11	15	254TC		37	35	33	32	31	28	24	21
	<b>PSM65-20-2</b>	15	20	256TC		53	50	47	44	42	37	31	23
	<b>PSM65-20</b>	22	30	286TSC		74	72	67	64	62	57	51	42
	<b>PSM65-30-2</b>	22	30	286TSC		93	88	80	76	72	65	56	45
	<b>PSM65-30</b>	30	40	324TSC		112	108	100	96	93	86	77	65
	<b>PSM65-40-2</b>	30	40	324TSC		130	124	115	110	103	94	83	66
	<b>PSM65-40</b>	37	50	326TSC		152	144	135	130	123	114	102	86
	<b>PSM65-50-2</b>	45	60	364TSC		172	162	151	144	137	126	112	91

## ● Installation sketch



## ● Size and weight

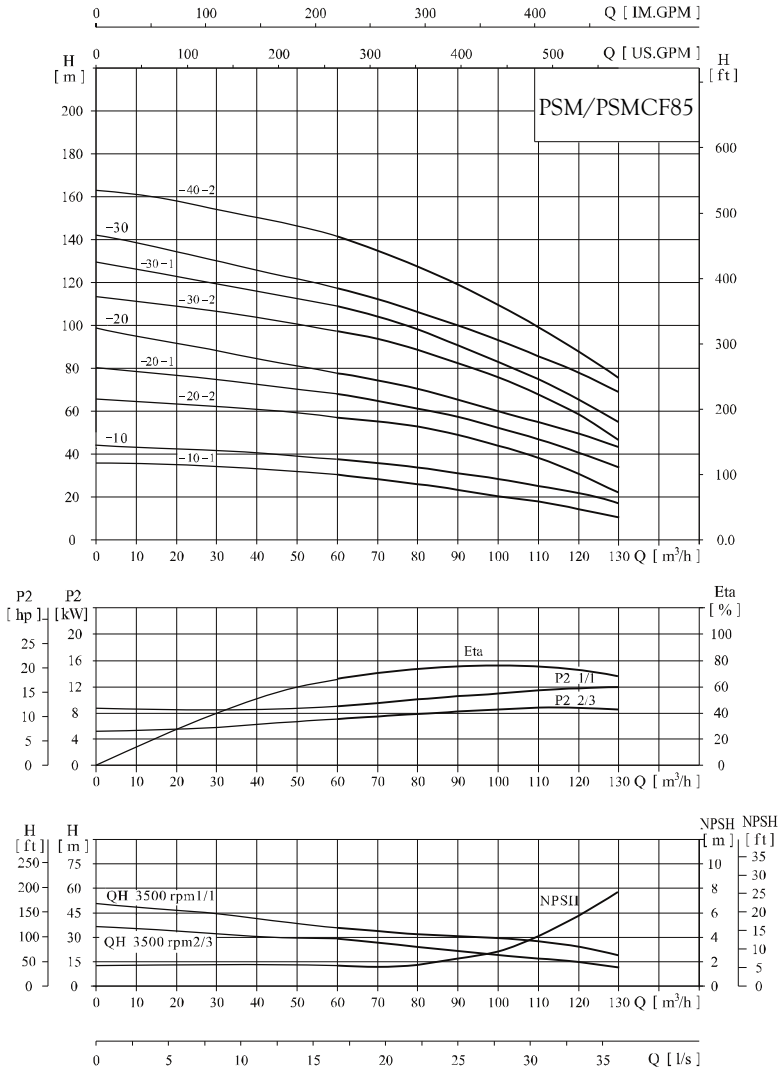
Model	Size B1		Size B2		Weight	
	in	mm	in	mm	lbs	kg
<b>PSM65-10-1</b>	22,32	566,93	8,88	225,55	139	63,05
<b>PSM65-10</b>	26,02	661,00			157	71,21
<b>PSM65-20-2</b>	29,29	744,07	11,03	280,19	168	76,20
<b>PSM65-20</b>	28,50	723,90			161	73,03
<b>PSM65-30-2</b>	31,73	806,03	13,58	345,02	172	78,02
<b>PSM65-30</b>	32,50	825,50			187	84,82
<b>PSM65-40-2</b>	35,77	908,54	15,55	394,97	198	89,81
<b>PSM65-40</b>	35,79	909,05			214	97,07
<b>PSM65-50-2</b>	38,63	981,08			225	102,06



# PSM/PSMCF85,60Hz

## ● Performance curve

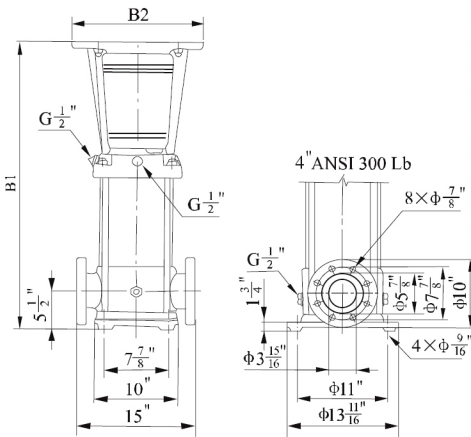
## ISO9906 Annex A



## Performance table

√	Model	Driving motor		Frame	Q (m <sup>3</sup> /h)	H (m)								
		(kW)	(hp)			60	70	80	85	90	100	110	120	130
	PSM85-10-1	11	15	254TC	H (m)	31	27	25	24	23	21	18	14	9
	PSM85-10	15	20	256TO		36	35	33	31	30	29	26	23	18
	PSM85-20-2	18.5	25	284TSC		59	57	54	51	48	44	39	32	22
	PSM85-20-1	22	30	286TSC		67	65	62	59	57	51	47	41	33
	PSM85-20	30	40	324TSC		76	73	69	66	64	60	56	52	44
	PSM85-30-2	37	50	326TSC		98	94	88	85	82	75	69	59	46
	PSM85-30-1	37	50	326TSC		108	104	98	94	90	83	78	69	56
	PSM85-30	45	60	364TSC		116	111	105	102	97	93	88	79	69
	PSM85-40-2	45	60	364TSC		141	135	128	124	118	109	102	89	72

## Installation sketch



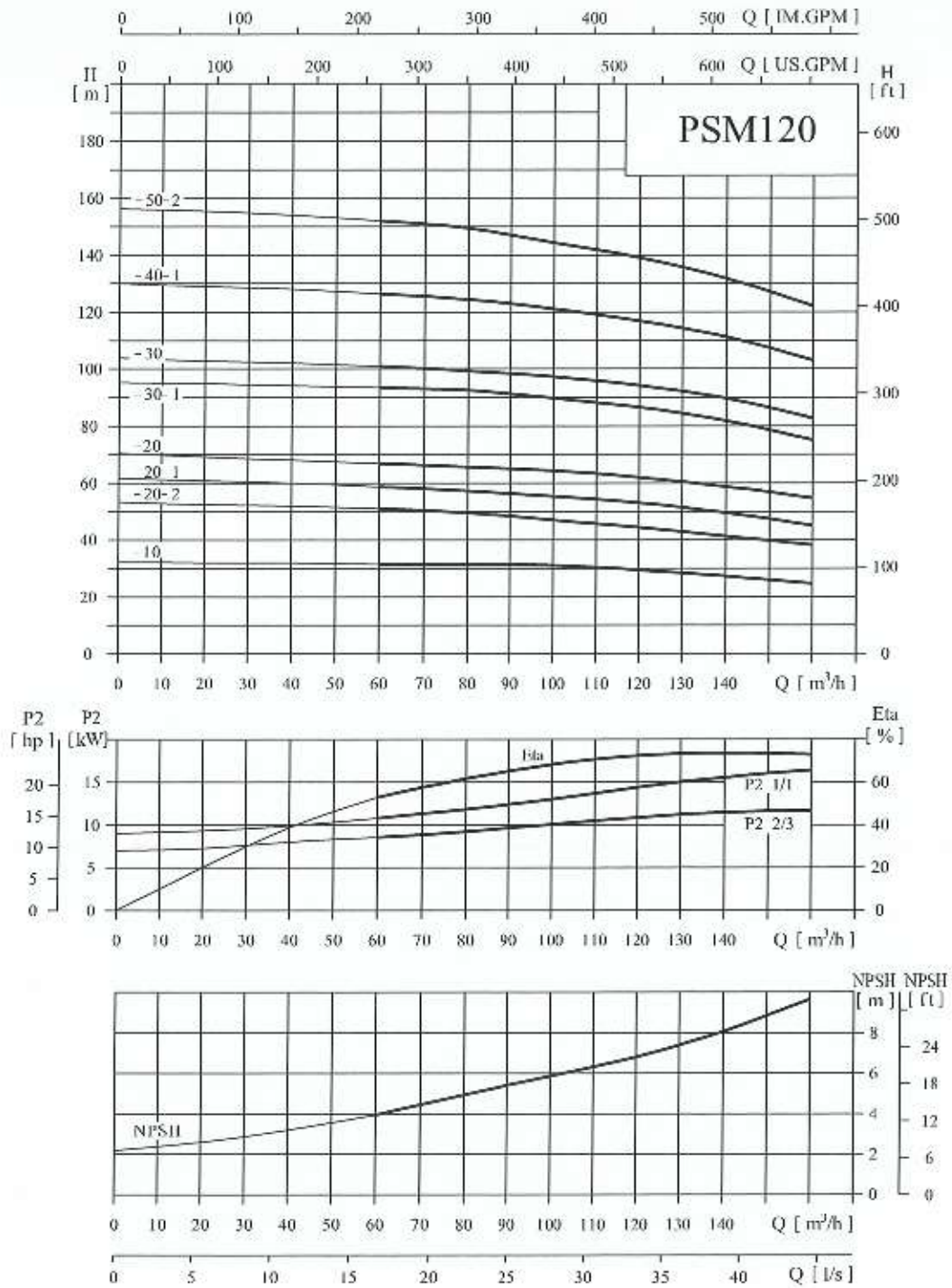
## Size and weight

Model	Size B1		Size B2		Weight	
	in	mm	in	mm	lbs	kg
PSM85-10-1	22,09	561,01	8,88	225,55	163	73,94
PSM85-10	22,09	561,01			163	73,94
PSM85-20-2	29,25	742,95	11,03	280,19	168	76,20
PSM85-20-1	29,25	742,95			168	76,20
PSM85-20	30,04	763,02	13,58	345,02	187	84,82
PSM85-30-2	33,67	855,13			202	91,63
PSM85-30-1	33,67	855,13	15,55	394,97	202	91,63
PSM85-30	33,27	844,97			220	99,79
PSM85-40-2	36,89	936,98			234	106,14

# PSM120, 60Hz

## ● Performance curve

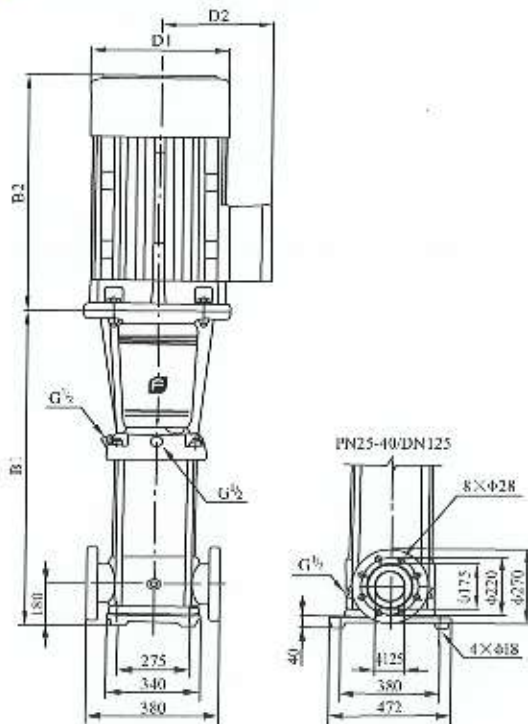
ISO9906 Annex A 3540rpm



## Performance table

Model	Motor		USGPM	264	308	352	396	440	484	528	572	616	660	704
	HP	KW		60	70	80	90	100	110	120	130	140	150	160
PSM120-10	25	19	feet head	98.56	98.24	98.24	97.6	96.96	94.4	92.16	88.32	84.48	81.28	78.08
			H (meter)	30.8	30.7	30.7	30.5	30.3	29.5	28.8	27.6	26.4	25.4	24.4
PSM120-20-2	40	30	feet head	168.92	165.64	162.36	155.8	150.88	149.24	146.944	141.04	134.48	130.216	126.28
			H (meter)	51.5	50.5	49.5	47.5	46	45.5	44.8	43	41	39.7	38.5
PSM120-20-1	40	30	feet head	186.56	185.6	183.36	179.2	175.04	172.8	169.6	164.8	160	151.68	144
			H (meter)	58.3	58	57.3	56	54.7	54	53	51.5	50	47.4	45
PSM120-20	50	37	feet head	212.16	211.2	210.24	208	206.08	201.6	198.4	194.24	190.72	182.4	174.72
			H (meter)	66.3	66	65.7	65	64.4	63	62	60.7	59.6	57	54.6
PSM120-30-1	60	45	feet head	292.16	291.2	289.28	284.8	280.64	275.2	270.08	262.4	256	245.44	234.56
			H (meter)	91.3	91	90.4	89	87.7	86	84.4	82	80	76.7	73.3
PSM120-30	75	55	feet head	320.96	320	318.08	314.56	311.36	305.6	300.8	294.4	288	276.16	264.64
			H (meter)	100.3	100	99.4	98.3	97.3	95.5	94	92	90	86.3	82.7
PSM120-40-1	100	75	feet head	403.2	401.28	398.72	392.32	385.92	379.2	372.8	364.8	356.16	342.4	329.6
			H (meter)	126	125.4	124.6	122.6	120.6	118.5	116.5	114	111.3	107	103
PSM120-50-2	100	75	feet head	486.4	483.2	479.04	470.4	460.8	452.8	444.8	433.6	422.4	406.4	390.4
			H (meter)	152	151	149.7	147	144	141.5	139	135.5	132	127	122

## Installation sketch



## Size and weight

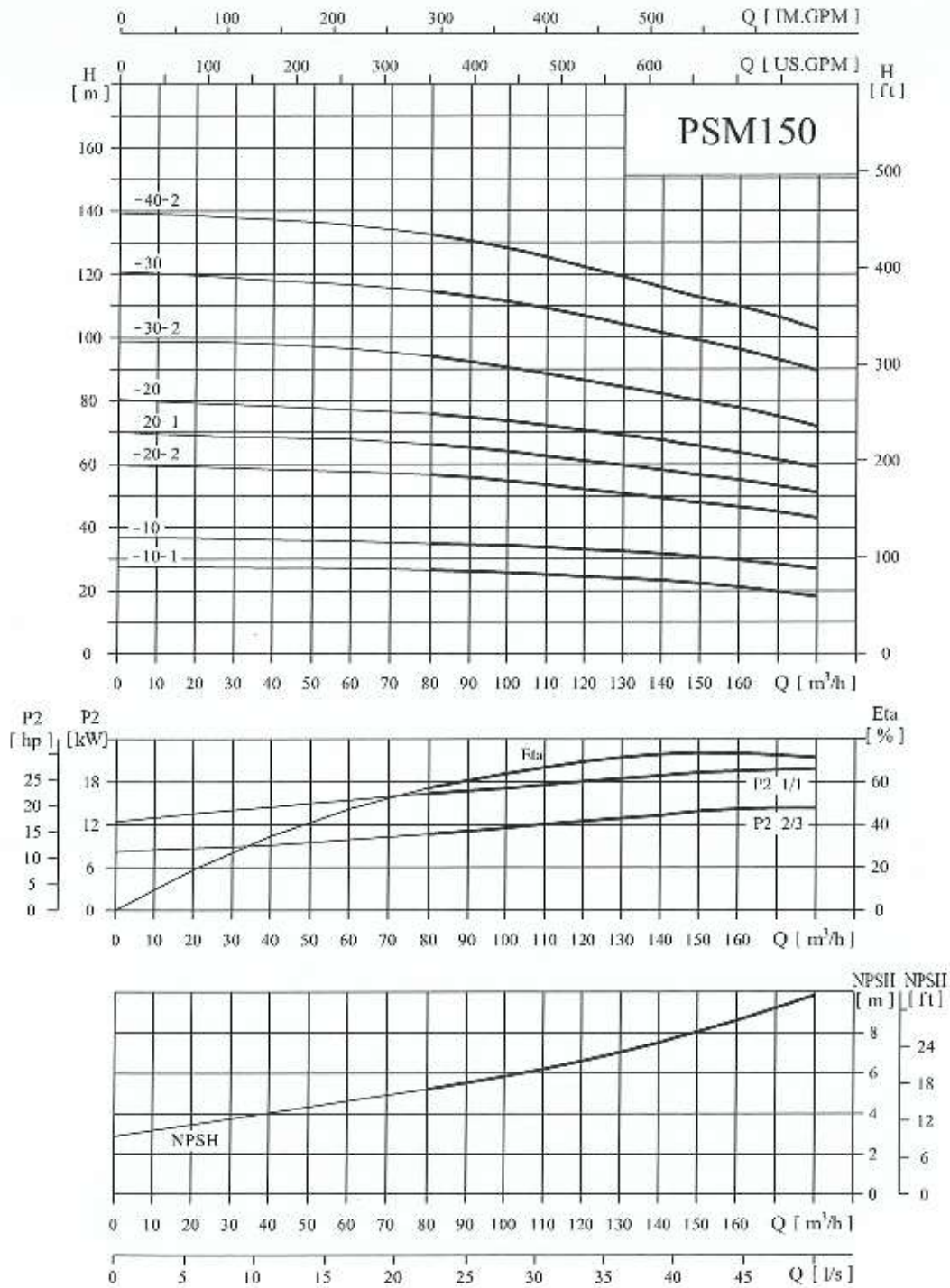
Model		Weight				lbs	kgs
		B1	B2	D1	D2		
PSM120-10	inches	32.76	21.45	12.87	9.945	550	250
	mm	840	550	330	255		
PSM120-20-2	inches	39	25.74	15.6	12.09	770	350
	mm	1000	660	400	310		
PSM120-20-1	inches	39	25.74	15.6	12.09	770	350
	mm	1000	660	400	310		
PSM120-20	inches	39	25.74	15.6	12.09	836	380
	mm	1000	660	400	310		
PSM120-30-1	inches	45.24	27.3	17.94	13.26	979	445
	mm	1160	700	460	340		
PSM120-30	inches	46.41	30.03	21.06	14.43	1199	545
	mm	1190	770	540	370		
PSM120-40-1	inches	52.65	32.955	22.62	15.99	1485	675
	mm	1350	845	580	410		
PSM120-50-2	inches	58.89	32.955	22.62	15.99	1518	690
	mm	1510	845	580	410		

The overall dimensions of the single-phase motor and explosion-proof motor are a little different. Pls contact us for details.

# PSM150, 60Hz

## ● Performance curve

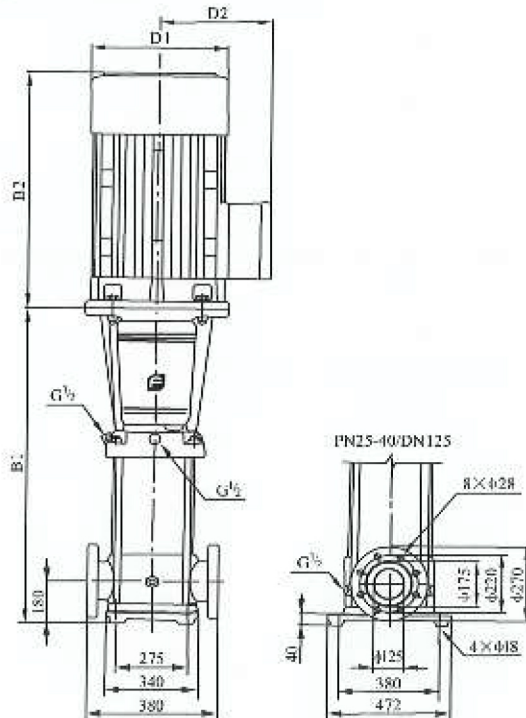
ISO9906 Annex A 3540rpm



## ● Performance table

Model	Motor		USGPM Q (m <sup>3</sup> h)	352	396	440	484	528	572	616	660	704	748	792
	HP	KW		80	90	100	110	120	130	140	150	160	170	180
PSM150-10-1	20	15	feet head	86.92	85.28	84.296	82	79.704	78.064	76.096	73.144	69.536	63.96	59.04
			H (meter)	26.5	26	25.7	25	24.3	23.8	23.2	22.3	21.2	19.5	18
PSM150-10	30	22	feet head	114.8	113.16	111.52	110.208	108.24	105.944	103.976	100.696	97.088	91.84	88.56
			H (meter)	35	34.5	34	33.6	33	32.3	31.7	30.7	29.6	28	27
PSM150-20-2	40	30	feet head	186.96	182.04	173.84	170.56	168.264	164	160.72	157.44	154.16	147.6	141.04
			H (meter)	57	55.5	53	52	51.3	50	49	48	47	45	43
PSM150-20-1	50	37	feet head	219.76	213.2	208.28	203.36	200.08	196.8	191.88	183.68	180.4	173.84	167.28
			H (meter)	67	65	63.5	62	61	60	58.5	56	55	53	51
PSM150-20	60	45	feet head	247.64	244.36	241.408	236.16	230.912	226.32	221.4	214.84	208.28	200.08	193.52
			H (meter)	75.5	74.5	73.6	72	70.4	69	67.5	65.5	63.5	61	59
PSM150-30-2	75	55	feet head	308.32	301.76	296.84	289.952	283.392	272.664	265.68	262.4	255.84	246.984	237.8
			H (meter)	94	92	90.5	88.4	86.4	83.1	81	80	78	75.3	72.5
PSM150-30	100	75	feet head	375.232	370.64	365.064	357.52	349.32	341.12	332.92	324.72	314.88	305.04	293.232
			H (meter)	114.4	113	111.3	109	106.5	104	101.5	99	96	93	89.4
PSM150-40-2	100	75	feet head	436.24	427.384	418.528	408.688	399.176	388.024	377.2	369	360.8	348.664	336.2
			H (meter)	133	130.3	127.6	124.6	121.7	118.3	115	112.5	110	106.3	102.5

## ● Installation sketch



## ● Size and weight

Model		B1	B2	D1	D2	Weight	
						lbs	kg
PSM150-10-1	inches	32.76	19.11	12.87	9.945	517	235
	mm	840	490	330	255		
PSM150-10	inches	32.76	23.01	14.04	11.115	616	280
	mm	840	590	360	285		
PSM150-20-2	inches	39	25.74	15.6	12.09	792	360
	mm	1000	660	400	310		
PSM150-20-1	inches	39	25.74	15.6	12.09	836	380
	mm	1000	660	400	310		
PSM150-20	inches	39	27.3	17.94	13.26	957	435
	mm	1000	700	460	340		
PSM150-30-2	inches	46.41	30.03	21.06	14.43	1199	545
	mm	1190	770	540	370		
PSM150-30	inches	46.41	32.955	22.62	15.99	1463	665
	mm	1190	845	580	410		
PSM150-40-2	inches	52.65	32.955	22.62	15.99	1496	680
	mm	1350	845	580	410		

The overall dimensions of the single-phase motor and explosion-proof motor are a little different. Pls contact us for details.



E150307  
subject to amendments

