

**SPCO**<sup>®</sup>  
makes life easier



**PD**  
In-line Circulating  
Pump, 50Hz

# Approvals

		<b>CB TEST CERTIFICATE</b>	Ref. Certificate No. CH-0876
<b>IEC SYSTEM FOR MUTUAL RECOGNITION OF TEST CERTIFICATES FOR ELECTRICAL EQUIPMENT (IECEE) CB SCHEME</b>			
Issued by:	Electrosuisse		
Product:	Horizontal and vertical multistage pumps		
Applicant:	Swiss Pump Company AG	Moosegg 36 CH-3045 Gwatt (Thun)	Switzerland
Manufacturer:	Swiss Pump Company AG	Moosegg 36 CH-3045 Gwatt (Thun)	Switzerland
Factory:	Swiss Pump Company AG	Moosegg 36 CH-3045 Gwatt (Thun)	Switzerland
Rating and principal characteristics:	3 x 200 - 277/346 - 480V~, 50/60Hz; 220-230V~, 50/60Hz; 127-200-240V~, 60Hz class I, IP55		
Trade mark (if any):	Swiss Pump Company AG (SPCO)		
Model/Type reference:	HM..., CH..., VM..., CDL..., ND..., CC..., MB..., GB..., SBF..., CCP..., SCP..., see appendix table list in test report		
Additional information:	---		
Sample of product tested to be in conformity with IEC:	60335-1-041.0am1.0 60335-2-41.041.3.am1.0	National differences: EU Group Differences; EU Special National Conditions; EU A-Deviations	
Test Report Ref. No.:	0640-0218.01 + .02 + .03 + .05		
This CB Test Certificate is issued by the National Certification Body			
Electrosuisse Luppenstrasse 1, CH-8320 Fehraltorf			
Signed by:	Erich Christ 2010-07-27		page 1 of 1



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## In-line Circulating Pumps

### English -Technical information:

The PD types are single stage in line centrifugal pumps, equipped with standard motor and mechanical seal. Comparing with other pumps in similar structure, these pumps are less accessible to the impurity in the liquid.

### Deutsch - Technische Information:

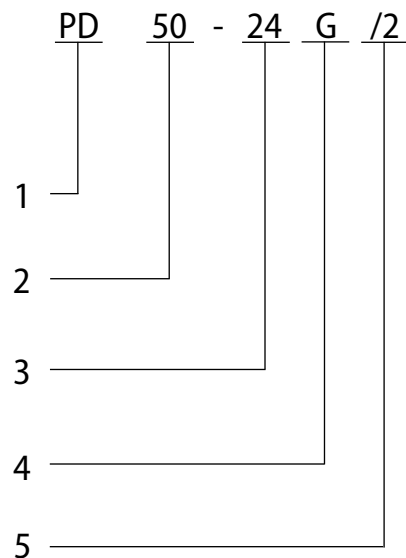
Die PD Typen sind einstufige Inline Pumpen, ausgestattet mit einem Standard Motor und einer Gleitringdichtung. Im Vergleich mit ähnlichen Pumpentypen weisen die PD Pumpen eine sehr gute Resistenz gegen Schmutz im Fördermedium auf.

### Français - Information technique :

Les pompes PD sont inline, centrifugat pompes avec un étage et avec un moteur standard et une garniture mécanique. Au comparant avec autres pompes de construction similaire notre modèle est résistant contre la boue dans le milieu.

## Definition of model

- 1  
Inline circulation pump  
Inline Zirkulationspumpe  
Pompe inline circulation
- 2  
DN of the inlet & outlet  
Nennweite Saug- und Druckseite  
Diamètre de la refoulement et aspiration
- 3  
Rated head in m  
Förderhöhe in m  
Hauteur en m
- 4  
New Generation
- 5  
Pole of the motor  
Polzahl vom Motor  
Pole de moteur



## Application

The pumps liquid is, thin, non-corrosive, non-flammable, and non-explosive liquid which shall not contain any solid grain and fiber that might damage the pump mechanically or chemically.

If the liquid viscosity or density is beyond the required level, the performance curves will descend and energy consumption will be increased.

**Water supply:** PD pumps are applicable for urban water supply, industrial water, cooling system, and cold & hot water for regional heat supply system:

- Main circulation pump.
- Mixed circuit pump
- Boiler mixed-flow pump
- Gas-fired freezer pump
- Filter pump
- Constant pressure system pump
- Urban hot water circulation

**Cooling liquid:** PD pumps can be used in chemical industry, pharmaceutical industry, food processing:

- Liquid feeding
- System pressure boosting
- Mixed circuit circulation pump

## Operating condition

Liquid (normal) temperature:  $-15^{\circ}\text{C} \sim 110^{\circ}\text{C}$

Max. Pressure: PN12 bar, option PN16 bar.

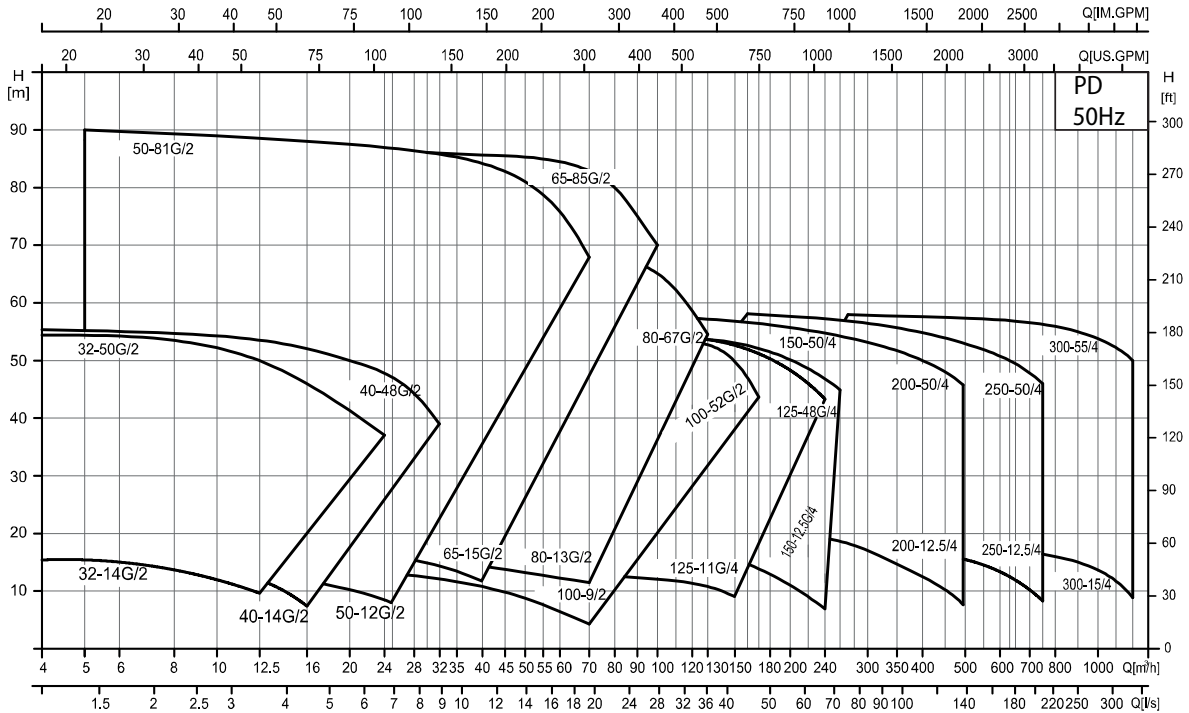
### water

- Ground water:  $< 90^{\circ}\text{C}$
- Boiler feed water  $< 110^{\circ}\text{C}$
- District feed water:  $< 110^{\circ}\text{C}$
- Condensate:  $< 90^{\circ}\text{C}$
- Softened water:  $-15^{\circ}\text{C} \sim 110^{\circ}\text{C}$

### Coolant liquids

- Hydrocarbon based antifreeze  $< 50^{\circ}\text{C}$
- Alcoholized compound  $< 50^{\circ}\text{C}$ , 50%
- 30% brine (NaCl,  $\text{CaCl}_2$  solution)  $< 50^{\circ}\text{C}$
- Organic solvent  $< 60^{\circ}\text{C}$

## Performance ranges



## Curves

Following is some explanation for the curves:

- 1- Curves tolerance is in conformity with ISO9906, Appendix A:
- 2- Motor used in tests are JB/T8680. 1-1998 " 3-phase asynchronous motor".
- 3- All curves are based on the measured value of motor 3x380V, under the constant speed of 2900rpm or 450rpm.
- 4- Test methods are in conformity with the GB/T3216.
- 5- The test medium is clear 20°C water without any solid impurity any air.
- 6- Pumps should not work if the flow is beyond the minimum or the maximum flow in the curves.
- 7- The motor performance shall be adjusted if the viscosity or density of medium is different from water.

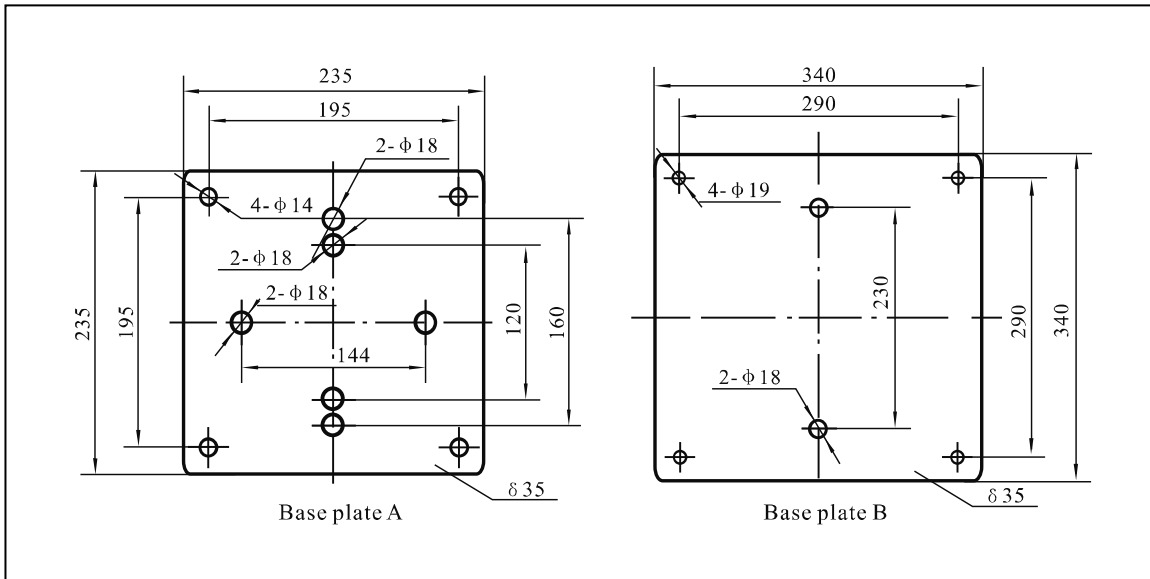
## Product ranges

Model	Q [m <sup>3</sup> /h]	H [m]	n [r/min]	Voltage [V]	
				1 X 220V	3 X 380V
				P2 [kW]	P2 [kW]
PD 32-14G/2	8	14	2900	0.75	0.75
PD 32-18G/2	8	18		1.1	1.1
PD 32-21G/2	12.5	21		1.5	1.5
PD 32-26G/2	12.5	26		2.2	2.2
PD 32-33G/2	12.5	33			3
PD 32-40G/2	12.5	40			4
PD 32-50G/2	12.5	50			5.5
PD 40-14G/2	8	14	2900	0.75	0.75
PD 40-16G/2	12.5	16		1.1	1.1
PD 40-21G/2	12.5	21		1.5	1.5
PD 40-20G/2	20	20		2.2	2.2
PD 40-26G/2	20	26			3
PD 40-30G/2	25	30			4
PD 40-36G/2	25	36			5.5
PD 40-48G/2	25	48		7.5	
PD 50-32G/2	12.5	32	2900		3
PD 50-39G/2	12.5	39			4
PD 50-49G/2	12.5	49			5.5
PD 50-59G/2	12.5	59			7.5
PD 50-80G/2	12.5	80			11
PD 50-12G/2	16	12		1.1	1.1
PD 50-15G/2	20	15		1.5	1.5
PD 50-18G/2	25	18		2.2	2.2
PD 50-24G/2	25	24			3
PD 50-28G/2	30	28			4
PD 50-35G/2	30	35			5.5
PD 50-40G/2	35	40			7.5
PD 50-50G/2	40	50			11
PD 50-60G/2	50	60			15
PD 50-70G/2	50	70			18.5
PD 50-81G/2	50	81		22	
PD 65-37G/2	25	37	2900		5.5
PD 65-48G/2	25	48			7.5
PD 65-15G/2	30	15		2.2	2.2
PD 65-20G/2	30	20			3
PD 65-22G/2	40	22			4
PD 65-30G/2	40	30			5.5
PD 65-34G/2	50	34			7.5
PD 65-41G/2	50	41			11
PD 65-51G/2	50	51			15
PD 65-61G/2	50	61			18.5
PD 65-68G/2	50	68			22
PD 65-85G/2	50	85		30	

Model	Q [m <sup>3</sup> /h]	H [m]	n [r/min]	Voltage [V]	
				1 X 220V	3 X 380V
				P2 [kW]	P2 [kW]
PD 80-41G/2	50	41	2900		11
PD 80-48G/2	50	48			15
PD 80-13G/2	50	13			3
PD 80-18G/2	50	18			4
PD 80-23G/2	50	23			5.5
PD 80-29G/2	50	29			7.5
PD 80-32G/2	80	32			11
PD 80-38G/2	80	38			15
PD 80-47G/2	80	47			18.5
PD 80-54G/2	80	54			22
PD 80-67G/2	80	67			30
PD 100-9/2	50	9	2900		2.2
PD 100-15/2	60	15			4
PD 100-17G/2	80	17			5.5
PD 100-22G/2	80	22			7.5
PD 100-27G/2	100	27			11
PD 100-33/2	100	33			15
PD 100-40/2	100	40			18.5
PD 100-48/2	100	48			22
PD 100-52/2	130	52			30
PD 125-11G/4	120	11	1450		5.5
PD 125-14G/4	120	14			7.5
PD 125-19G/4	160	19	1480		11
PD 125-22/4	160	22			15
PD 125-28/4	160	28			18.5
PD 125-32/4	160	32			22
PD 125-40/4	160	40			30
PD 125-48/4	160	48			37
PD 150-12.5G/4	200	12.5	1480		11
PD150-17G/4	200	17			15
PD 150-22G/4	200	21			18.5
PD 150-25/4	200	25			22
PD 150-33/4	200	33			30
PD 150-40/4	200	40			37
PD 150-50/4	200	50			45
PD 200-16/4	300	16	1480		18.5
PD 200-19/4	300	19			22
PD 200-24/4	300	24			30
PD 200-31/4	300	31			37
PD 200-36/4	300	36			45
PD 200-47/4	300	47			55
PD 200-53/4	300	53			75
PD 200-12.5/4	400	12.5			22
PD 200-20/4	400	20			30
PD 200-23/4	400	23			37
PD 200-27/4	400	27			45
PD 200-32/4	400	32			55
PD 200-43/4	400	43			75
PD 200-50/4	400	50			90

Model	Q [m <sup>3</sup> /h]	H [m]	n [r/min]	Voltage [V]		
				1 X 220V	3 X 380V	
				P2 [kW]	P2 [kW]	
PD 250-16/4	500	16	1480		30	
PD 250-19/4	500	19			37	
PD 250-22/4	500	22			45	
PD 250-29/4	500	29			55	
PD 250-36/4	500	36			75	
PD 250-47/4	500	47			90	
PD 250-56/4	500	56			110	
PD 250-12.5/4	630	12.5			30	
PD 250-14/4	630	14			37	
PD 250-17/4	630	17			45	
PD 250-20/4	630	20			55	
PD 250-26/4	630	26			75	
PD 250-32/4	630	32			90	
PD 250-40/4	630	40			110	
PD 250-50/4	630	50			132	
PD 300-15/4	900	15		1480		55
PD 300-20/4	900	20				75
PD 300-25/4	900	25				90
PD 300-30/4	900	30			110	
PD 300-35/4	900	35			132	
PD 300-44/4	900	44			160	
PD 300-55/4	900	55			200	

## Appendix: Base plate



No.	Product model	Basic plate type	No.	Product model	Basic plate type	No.	Product model	Basic plate type
1	PD32-14G/2	A	27	PD50-40G/2	A	53	PD80-54G/2	A
2	PD32-18G/2	A	28	PD50-50G/2	A	54	PD80-67G/2	A
3	PD32-21G/2	A	29	PD50-60G/2	A	55	PD100-9/2	A
4	PD32-26G/2	A	30	PD50-70G/2	A	56	PD100-15/2	A
5	PD32-33G/2	A	31	PD50-81G/2	A	57	PD100-17G/2	A
6	PD32-40G/2	A	32	PD65-37G/2	A	58	PD100-22G/2	A
7	PD32-50G/2	A	33	PD65-48G/2	A	59	PD100-27/2	A
8	PD40-14G/2	A	34	PD65-15G/2	A	60	PD100-33/2	A
9	PD40-16G/2	A	35	PD65-20G/2	A	61	PD100-40/2	B
10	PD40-21G/2	A	36	PD65-22G/2	A	62	PD100-48/2	B
11	PD40-20G/2	A	37	PD65-30G/2	A	63	PD100-52/2	B
12	PD40-26G/2	A	38	PD65-34G/2	A	64	PD125-11G/4	B
13	PD40-30G/2	A	39	PD65-41G/2	A	65	PD125-14G/2	B
14	PD40-36G/2	A	40	PD65-51G/2	A	66	PD125-18G/4	B
15	PD40-48G/2	A	41	PD65-61G/2	A	67	PD125-22/4	B
16	PD50-32G/2	A	42	PD65-68G/2	A	68	PD125-28/4	B
17	PD50-39G/2	A	43	PD65-85G/2	A	69	PD125-32/4	B
18	PD50-49G/2	A	44	PD80-41G/2	A	70	PD125-40/4	B
19	PD50-59G/2	A	45	PD80-48G/2	A	71	PD125-48/4	B
20	PD50-80G/2	A	46	PD80-13G/2	A	72	PD150-12.5G/4	B
21	PD50-12G/2	A	47	PD80-18G/2	A	73	PD150-17G/4	B
22	PD50-15G/2	A	48	PD80-23G/2	A	74	PD150-22G/4	B
23	PD50-18G/2	A	49	PD80-29G/2	A	75	PD150-25/4	B
24	PD50-24G/2	A	50	PD80-32G/2	A	76	PD150-33/4	B
25	PD50-28G/2	A	51	PD80-38G/2	A	77	PD150-40/4	B
26	PD50-35G/2	A	52	PD80-47G/2	A	78	PD150-50/4	B

## NPSH

The following formula can be used for calculation of minimum inlet pressure:

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

H - maximum suction head (m)

Pd - atmosphere pressure (bar)

In a closed system, Pd means system pressure (bar)

NPSH - Net positive suction head (m)

It can be read out from the point of possible max. flow rat shown on NPSH curve.

Hf - Pipeline loss at the inlet (m)

it is in accordance with pipeline possible max. flow.

Hv - Steam pressure (m)

It depends on liquid temperature and steam pressure value.

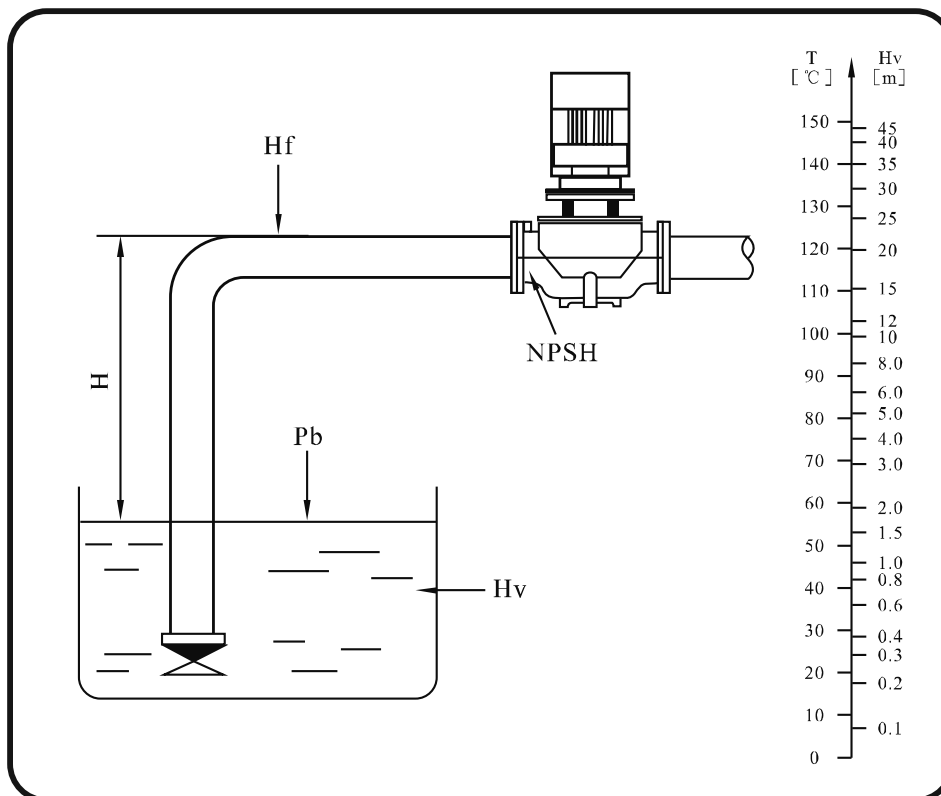
Hs - Safety margin (m)

Minimum 0.5m delivery head.

If the calculated result H is negative, a delivery head of Min. inlet pressure is necessary.

Note: Normally, the above calculation will not be done. H is calculated in the following conditions:

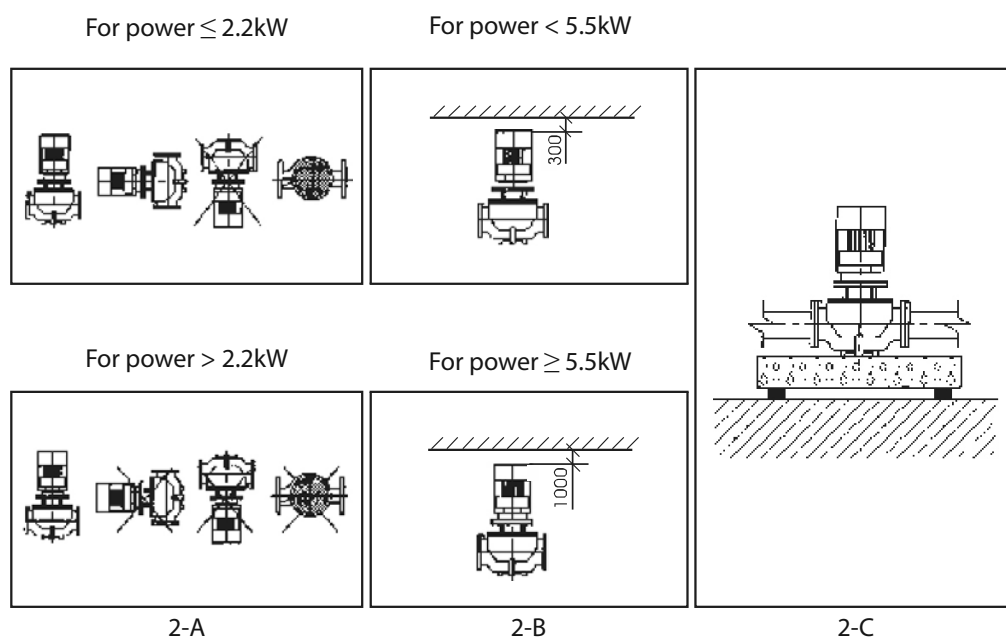
1. The liquid temperature is comparatively higher.
2. Liquid flow exceeds rated value.
3. Suction stroke is comparatively large or inlet pipeline long.
4. System pressure is too low.
5. Bad inlet condition.



## Installation requirements

Some detailed requirement of installation is as below, the concrete request is as follows:

- 1- If the system pipeline can support the pumps, pumps with 2.2kW motor power (including power is higher than 2.2kW) can be hung in line, if the system pipeline cannot support the pumps or the pump motor power is higher than 2.2kW, the pumps must be installed in brackets or base.
- 2- Pumps with motor power lower than 2.2kW (including 2.2kW) can be installed horizontally or vertically to pipe line. Pumps with motor power higher than 2.2kW, can only be installed vertically to the pipeline.
- 3- The pump installation shall not allow the system pipeline tensile force to be transferred to the pump body.
- 4- The pump should be installed in the environment with sufficient cooling and the cooling air shall not be above 40°C.
- 5- If the pumps are installed outdoors, there should be covers to protect electric components from water.
- 6- For the convenience of maintenance, there should be enough space above and below the pumps, minimum 300mm shall be kept for pumps with motor lower than 5.5kW, and minimum 1000mm for pumps with motor power higher than 5.5kW (including 5.5kW) .
- 7- To prevent noises and vibration and ensure the best operation, anti- vibration base shall be used in installation. Generally, centrally base with the weight equal or bigger than 1.5 X pump weight shall be adopted.
- 8- Pumps with bases or without bases are both available for customer's requirements.



## Product structure and Component material

Motor and pumps can be separated, standard motors and mechanical seals are provided.

The motors are entirely close and air cooling type standard motors. Its major dimensions are in conformity with GB standard.

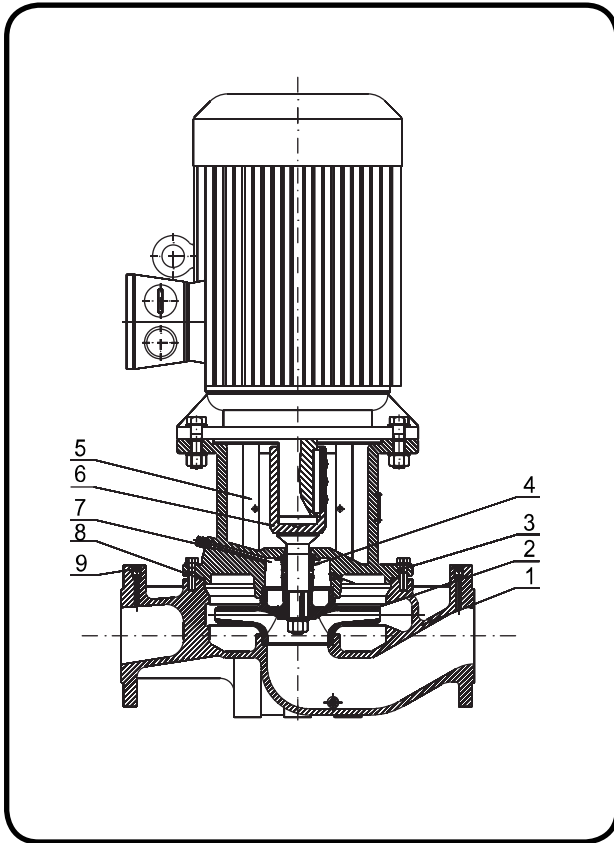
The pump body is equal to a section of pipeline. While in maintenance, blind flange can be used to seal the pump covers which enable the normal operation of pumps.

The flange connection dimensions are in conformity with the related provisions PN16 in GB/T17241.6 or ISO7005-2/DIN 2501.

The inlet and outlet diameters are inconformity with related standard dimensions.

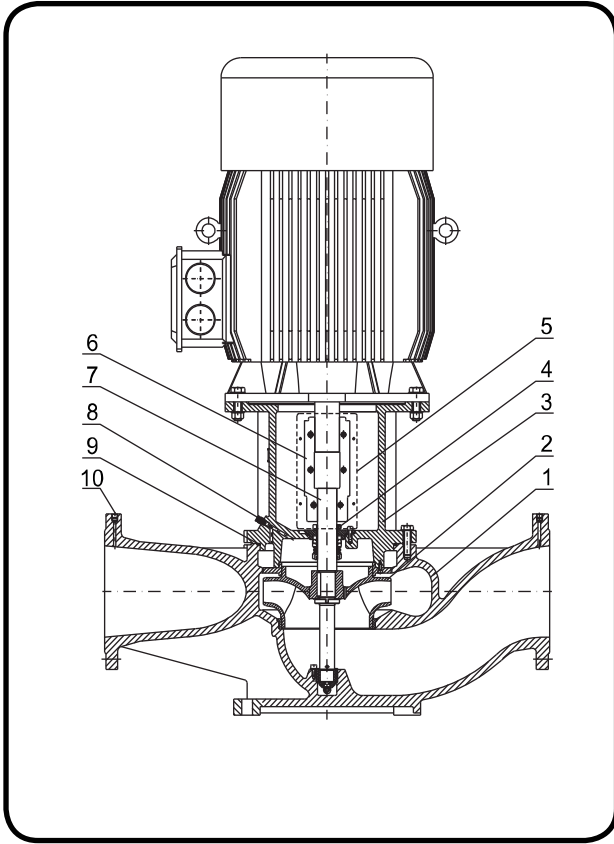
The bracket is to connect motor and the pump. "O" ring or flat rubber circle is used to seal the bracket and the pump.

## Section drawing PD 32-150 and material list



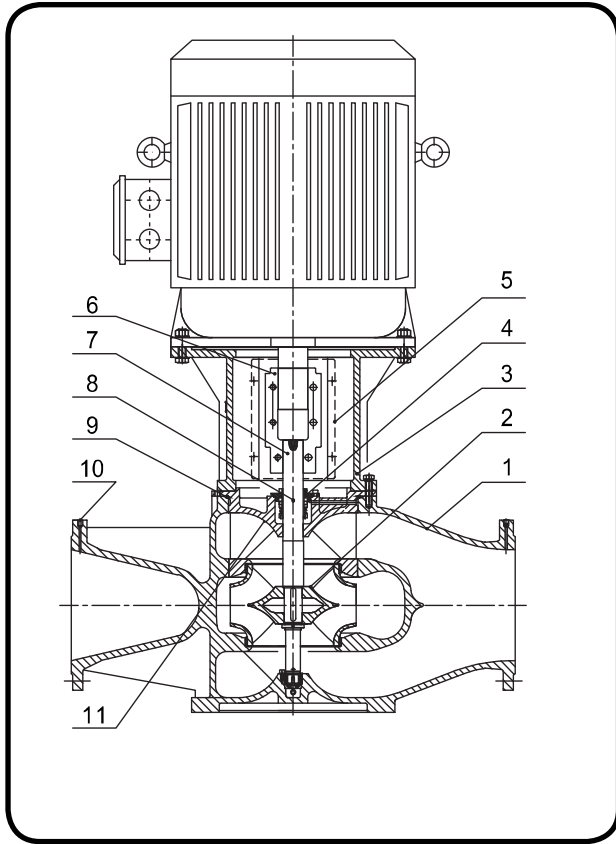
No.	Parts	Material
1	Pump body	Cast Iron
2	Impeller	Cast Iron/Steel
3	Pump head	Cast Iron
4	Mechanical seal	Carbon/ Silicon Carbide
5	Guard plate	SS304
6	Shaft	SS420
7	Air release bolt	SS304
8	Ring	NBR
9	Plug	SS304

## Section drawing PD 200-250 and material list



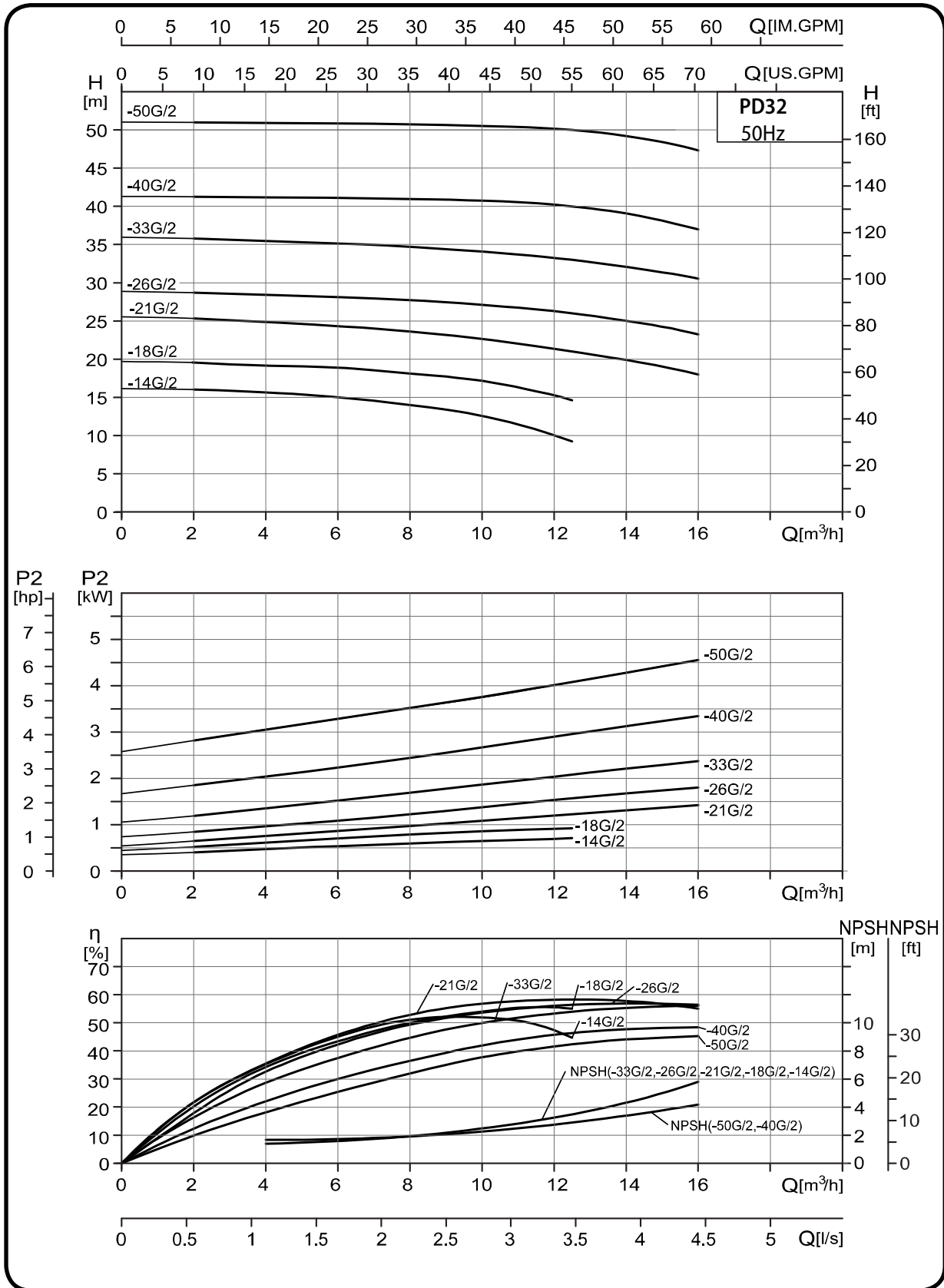
No.	Parts	Material
1	Pump body	Cast Iron
2	Impeller	Cast Iron/Steel
3	Pump head	Cast Iron
4	Mechanical seal	Carbon/ Silicon Carbide
5	Guard plate	SS304
6	Coupling	Cast Steel
7	Shaft	SS420
8	Air release bolt	SS304
9	O-Ring	NBR
10	Plug	SS304

## Section drawing PD 300 and material list

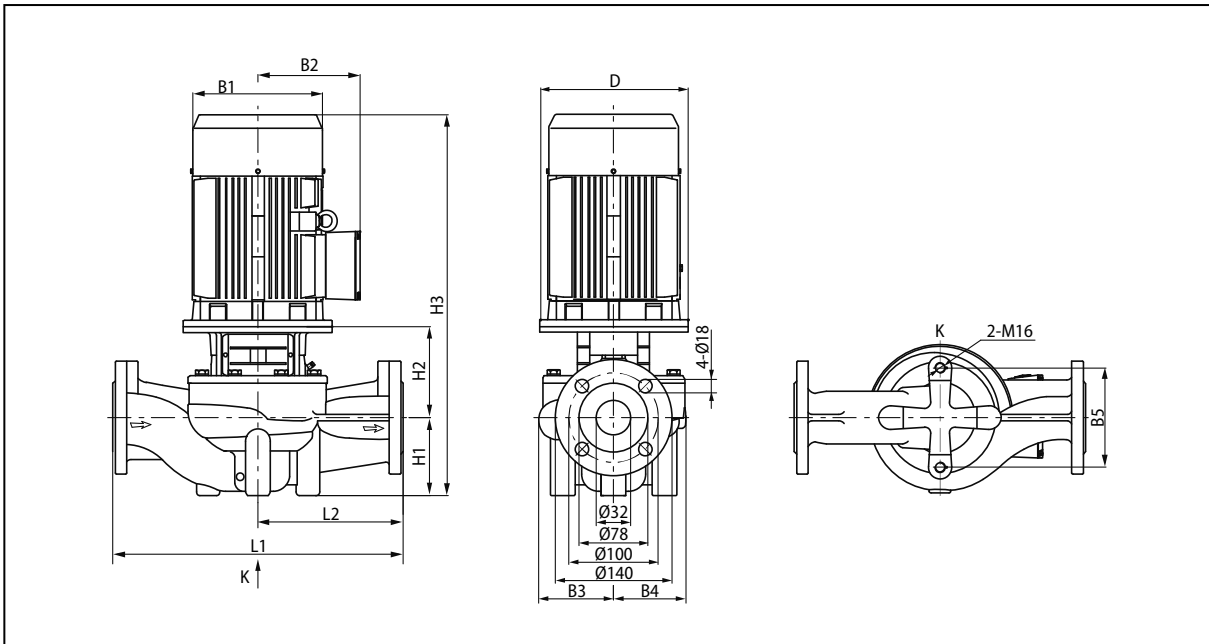


No.	Parts	Material
1	Pump body	Cast Iron
2	Impeller	Cast Iron/Steel
3	Pump head	Cast Iron
4	Mechanical seal	Carbon/ Silicon Carbide
5	Guard plate	SS304
6	Coupling	Cast Steel
7	Shaft	SS420
8	Air release valve	SS304
9	O-Ring	NBR
10	Plug	SS304
11	Pump cover	QT500-7

PD32-\*/2



## PD32-\*\*/2



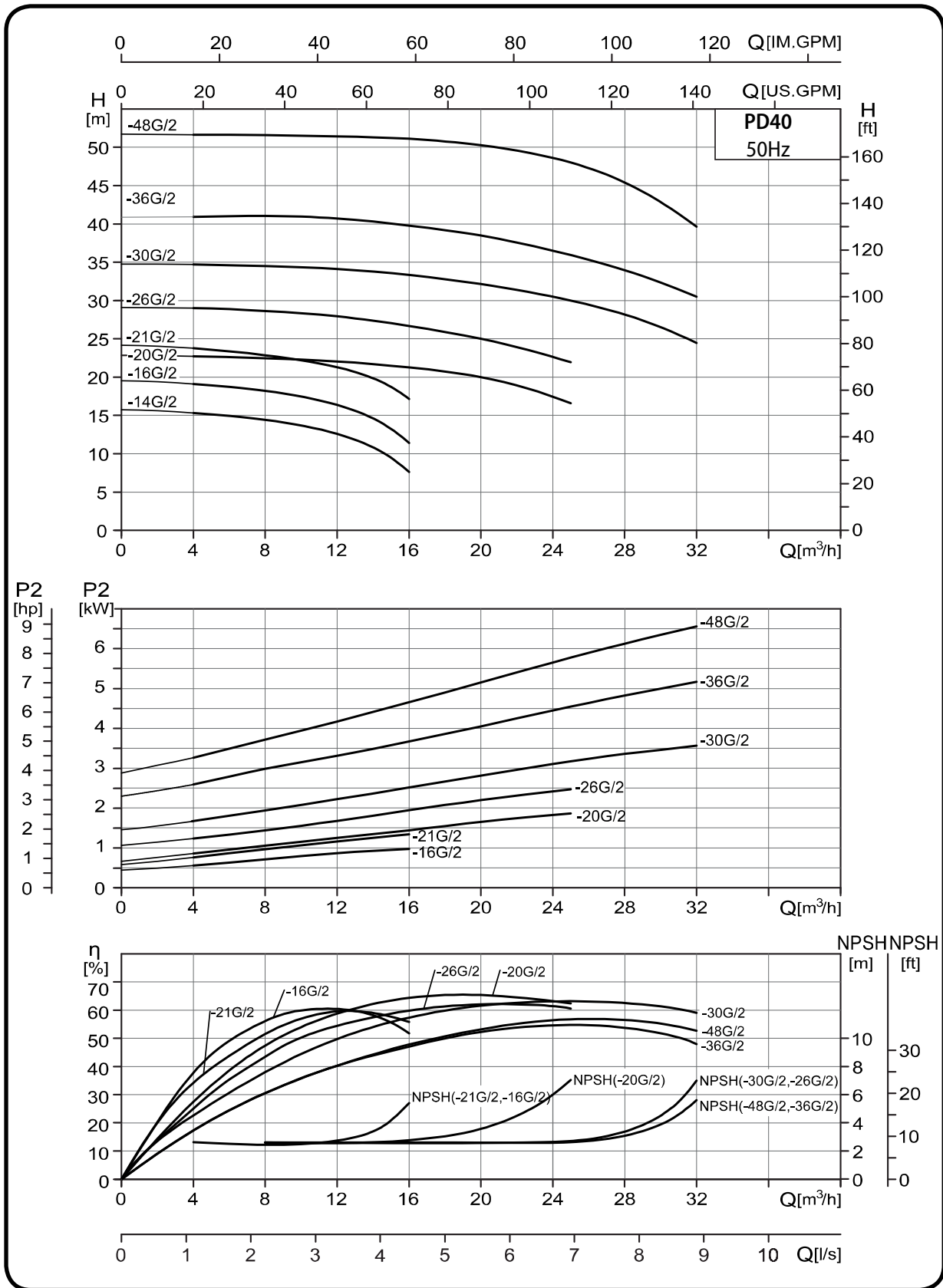
### Size, weight, and volume for transportation

Model	Size [mm]											Weight [kg]
	D	B1	B2	B3	B4	B5	H1	H2	H3	L1	L2	
PD32-14G/2	120	151	125	101	101	144	90	135	469	320	160	33
PD32-18GG/2	120	151	125	101	101	144	90	135	469	320	160	34
PD32-21G/2	140	171	137	101	101	144	90	137	514	320	160	38
PD32-26G/2	140	171	137	101	101	144	90	137	514	320	160	42
PD32-33G/2	160	196	150	109	109	144	90	145	572	340	170	52
PD32-40G/2	160	214	169	128	128	144	100	151	593	360	180	65
PD32-50G/2	200	257	190	128	128	144	100	173	656	360	180	84

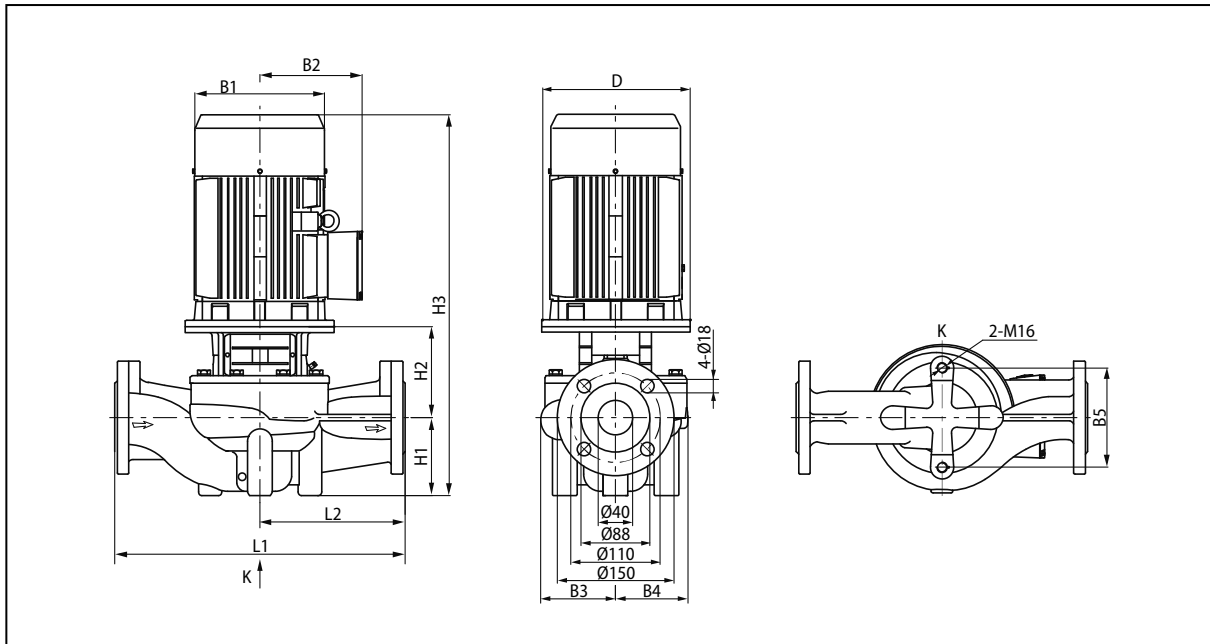
### Performance Table

Model	Motor		Q [m <sup>3</sup> /h]	2	4	6	8	10	12.5	14	16
	[kW]	[HP]									
PD32-14G/2	0.75	1	H [m]	16	15.7	15.1	14	12.6	9.3		
PD32-18G/2	1.1	1.5		19.6	19.3	18.6	18	17.2	14.6		
PD32-21G/2	1.5	2		25.3	24.9	24.3	23.6	22.6	21	19.9	18
PD32-26G/2	2.2	3		28.7	28.4	28.1	27.7	27.1	26	25	23.2
PD32-33G/2	3	4		35.8	35.5	35.1	34.7	34.1	33	32.1	30.6
PD32-40G/2	4	5.5		41.3	41.2	41.1	41	40.7	40	39.1	37
PD32-50G/2	5.5	7.5		51	50.9	50.8	50.7	50.5	50	49.2	47.3

PD40-\*/2



## PD40-\*/\*/2



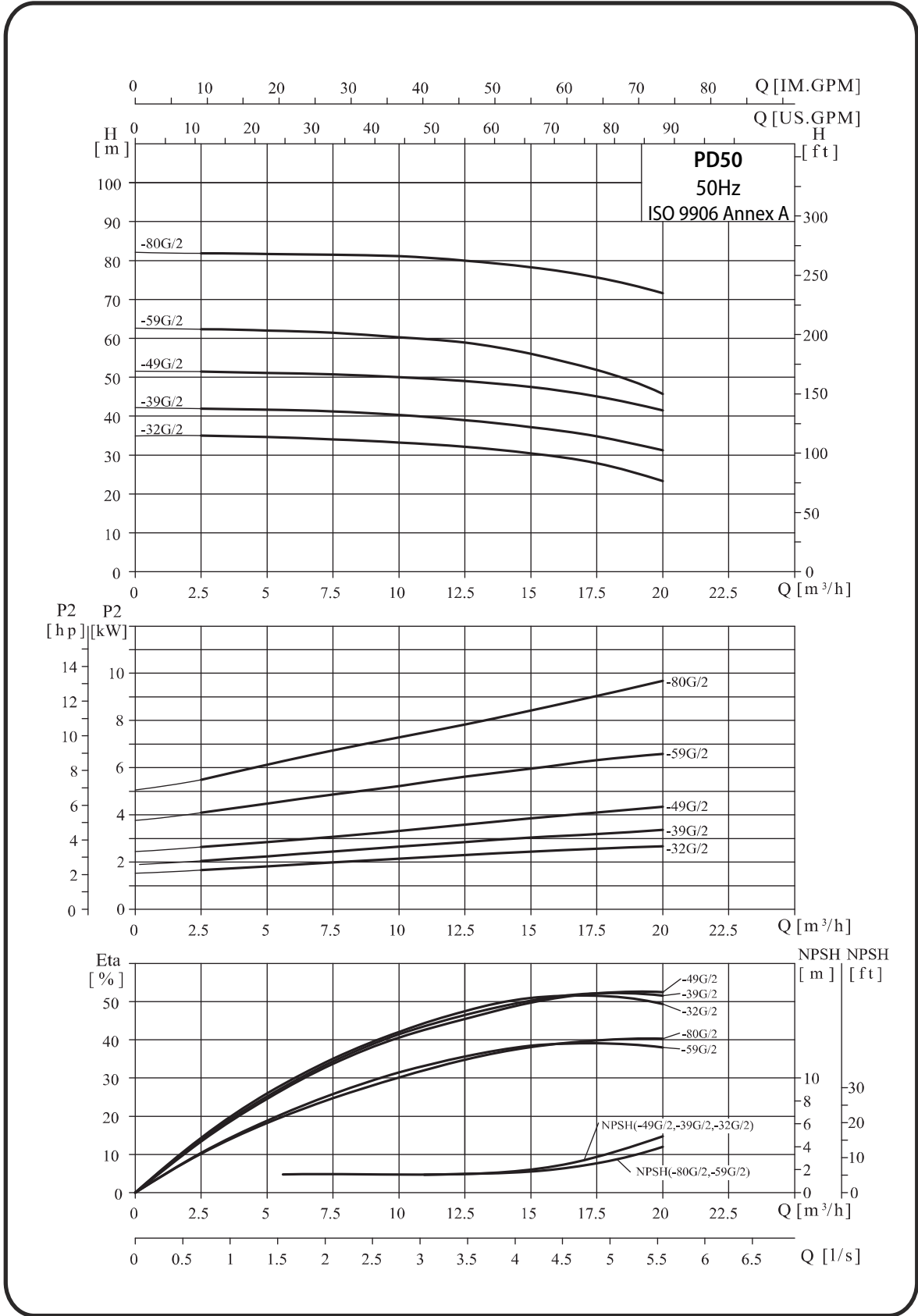
### Size, weight, and volume for transportation

Model	Size [mm]											Weight [kg]
	D	B1	B2	B3	B4	B5	H1	H2	H3	L1	L2	
PD40-14G/2	120	151	125	98	95	120	68	139	451	320	160	31
PD40-16G/2	120	151	125	98	95	120	68	139	451	320	160	32
PD40-21G/2	140	171	137	98	95	120	68	149	504	320	160	38
PD40-20G/2	140	171	137	105	95	144	85	144	516	340	170	43
PD40-26G/2	160	196	150	116	109	144	85	156	578	340	170	54
PD40-30G/2	160	214	169	116	109	144	85	156	583	340	170	62
PD40-36G/2	200	257	190	133	128	144	90	181	654	380	190	85
PD40-48G/2	200	257	190	133	128	144	90	181	654	380	190	94

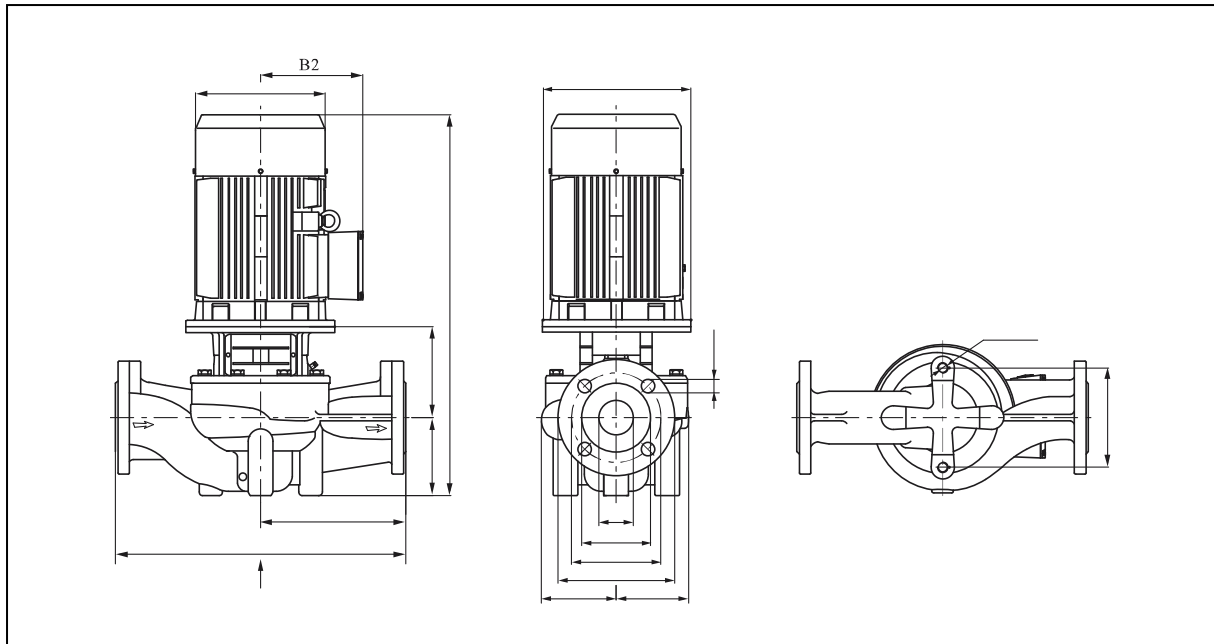
### Performance Table

Model	Motor		Q [m <sup>3</sup> /h]	4	8	12.5	16	20	25	28	32
	[kW]	[HP]									
PD40-14G	0.75	1	H [m]	15.4	14	10.2					
PD40-16G/2	1.1	1.5		19.1	18.2	16	11.4				
PD40-21G/2	1.5	2		23.8	22.9	21	17.1				
PD40-20G/2	2.2	3		22.7	22.5	22	21.3	20	16.6		
PD40-26G/2	3	4		29	28.6	27.8	26.7	25	21.9		
PD40-30G/2	4	5.5		34.7	34.5	34.1	33.4	32.2	30	28.2	24.5
PD40-36G/2	5.5	7.5		42.1	42	41.5	40.9	39.6	36	32.6	26.5
PD40-48G/2	7.5	10		51.6	51.6	51.4	51.1	50.3	48	45.4	39.6

PD50-\*\*/2



## PD50-\*/\*/2



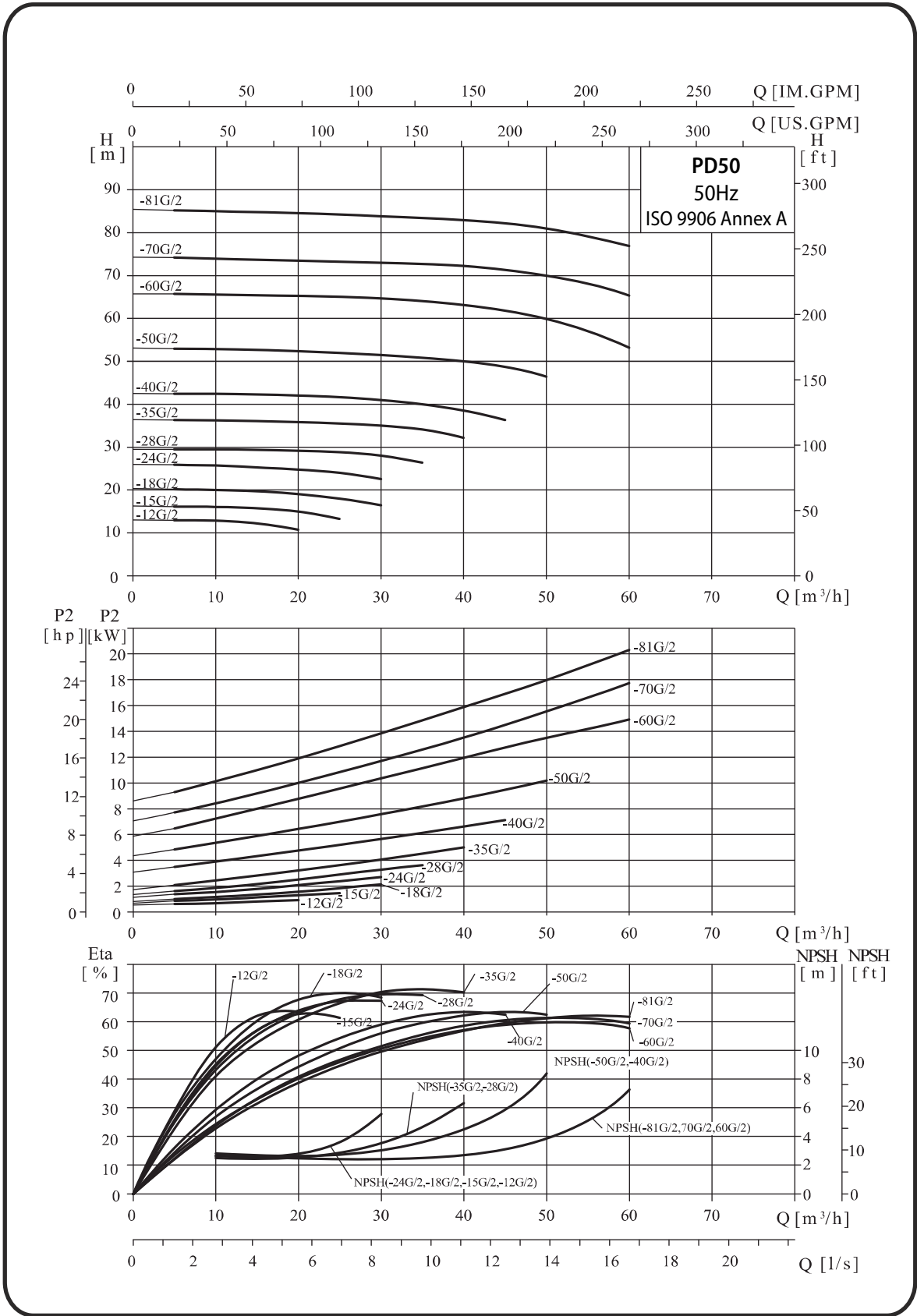
### Size, weight, and volume for transportation

Model	Size [mm]											Weight [kg]
	D	B1	B2	B3	B4	B5	H1	H2	H3	L1	L2	
PD50-32G/2	160	196	150	128	128	144	105	150	592	400	200	64
PD50-39G/2	160	214	169	128	128	144	105	150	597	400	200	71
PD50-49G/2	200	257	190	128	128	144	105	172	660	400	200	88
PD50-59G/2	200	257	190	136	136	144	105	178	666	440	220	112
PD50-80G/2	350	314	261	136	136	144	105	222	783	440	220	184

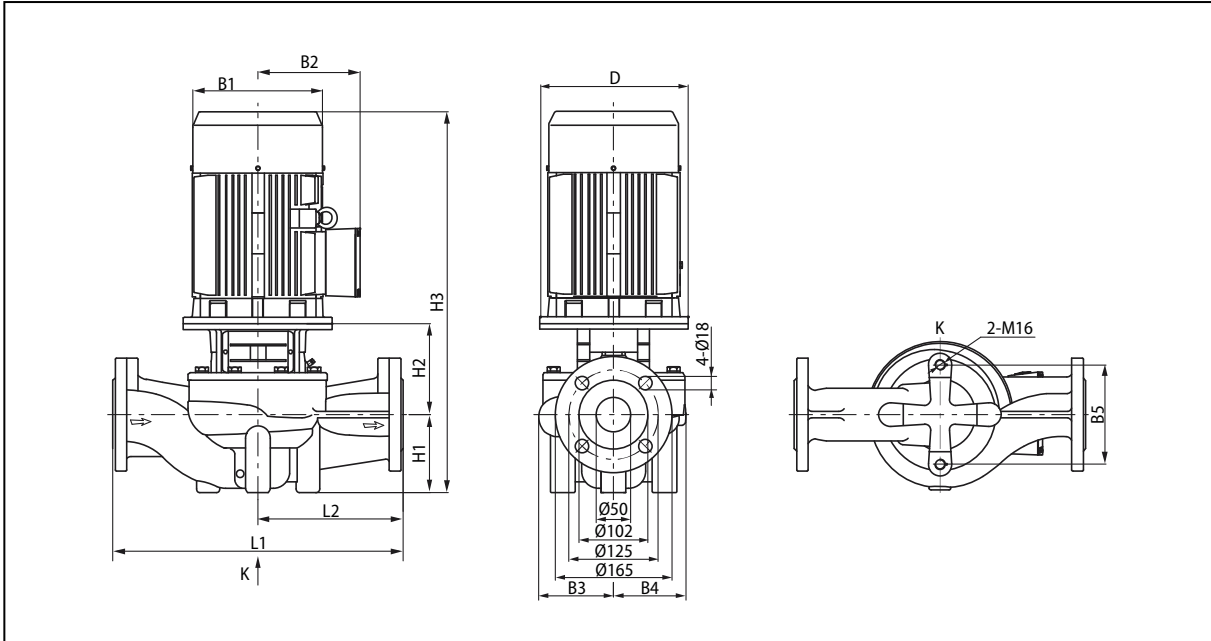
### Performance Table

Model	Motor		Q [m <sup>3</sup> /h]	2.5	5	7.5	10	12.5	15	17.5	20
	[kW]	[HP]									
PD50-32G/2	3	4	H [m]	35	34.6	34	33.2	32	30.5	27.9	23.3
PD50-39G/2	4	5.5		41.9	41.7	41.3	40.2	39	37.2	34.8	31.2
PD50-49G/2	5.5	7.5		51.6	51.2	50.7	50	49	47.5	45.1	41.5
PD50-59G/2	7.5	10		62.4	62.1	61.4	60.3	59	56.1	51.9	45.7
PD50-80G/2	11	15		81.9	81.7	81.5	81.1	80	78.3	75.7	71.6

PD50-\*/2



## PD50-\*/\*/2



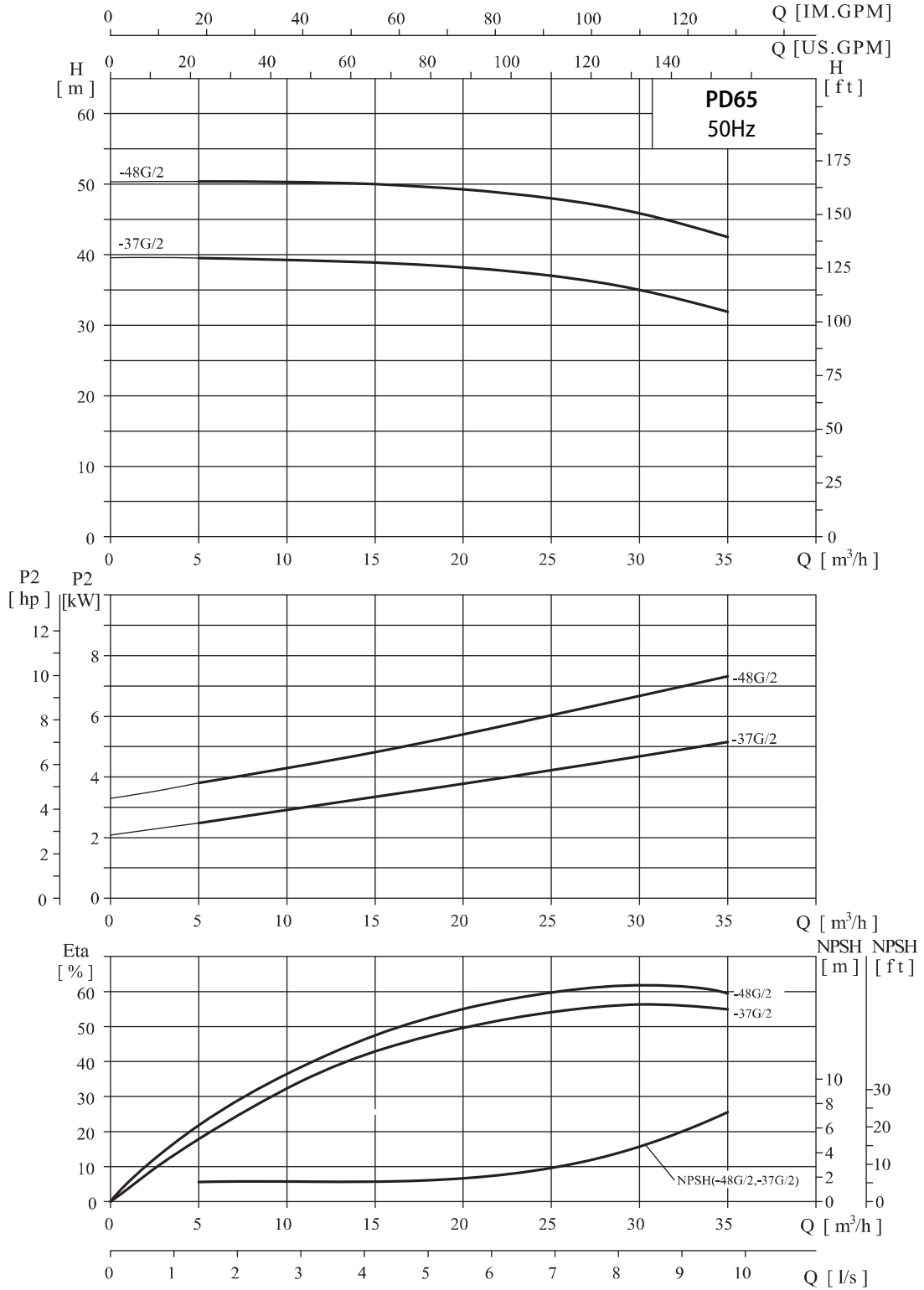
### Size, weight, and volume for transportation

Model	Size [mm]											Weight [kg]
	D	B1	B2	B3	B4	B5	H1	H2	H3	L1	L2	
PD50-12G/2	120	151	125	114	101	144	105	135	484	340	170	37
PD50-15G/2	140	171	137	114	101	144	105	137	529	340	170	42
PD50-18G/2	140	171	137	114	101	144	105	137	529	340	170	45
PD50-24G/2	160	196	150	114	101	144	105	147	589	340	170	55
PD50-28G/2	160	214	169	118	109	144	105	152	599	340	170	64
PD50-35G/2	200	257	190	118	109	144	105	175	663	400	200	81
PD50-40G/2	200	257	190	142	138	144	105	175	663	400	200	98
PD50-50G/2	350	314	261	142	138	144	105	225	830	440	220	173
PD50-60G/2	350	314	261	171	163	144	115	225	840	440	220	196
PD50-70G/2	350	314	261	171	163	144	115	225	884	440	220	203
PD50-81G/2	350	355	273	171	163	144	115	225	917	440	220	256

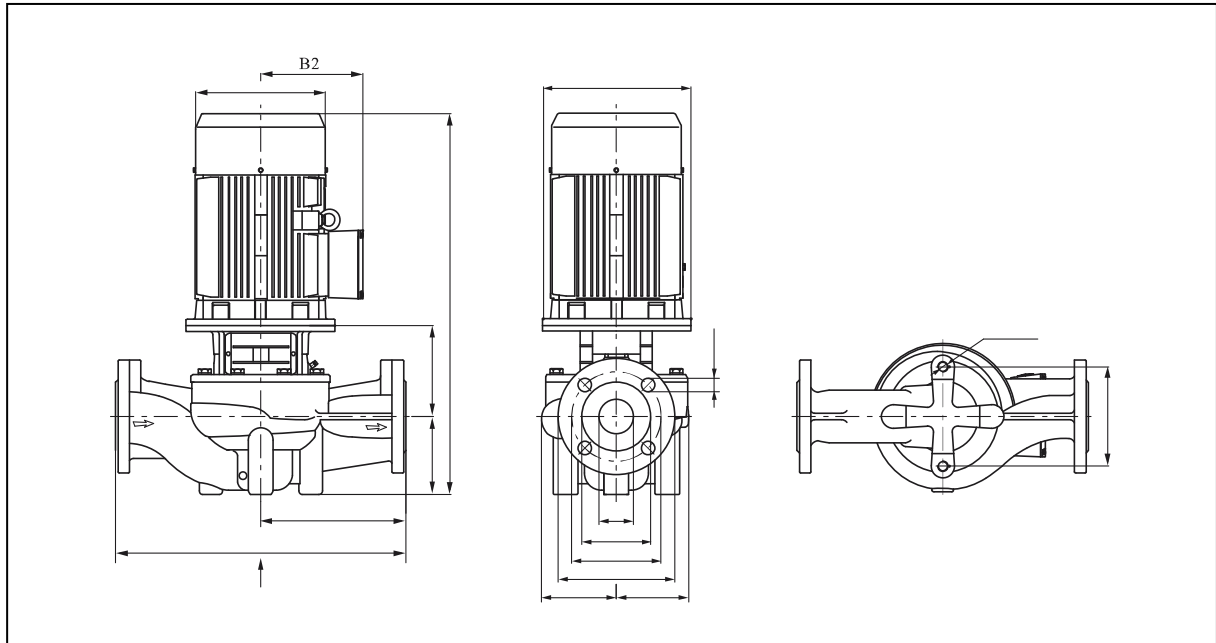
### Performance Table

Model	Motor		Q [m <sup>3</sup> /h]	H													
	[kW]	[HP]		5	10	16	20	25	30	35	40	45	50	60			
PD50-12G/2	1.1	1.5	H [m]	13	12.9	12	10.7										
PD50-15G/2	1.5	2		16.1	16.1	15.6	15	13.3									
PD50-18G/2	2.2	3		20.2	20	19.6	19	18	16.4								
PD50-24G/2	3	4		25.9	25.7	25.2	24.8	24	22.6								
PD50-28G/2	4	5.5		29.5	29.5	29.9	29.2	28.8	28	26.4							
PD50-35G/2	5.5	7.5		36.3	36.2	36	35.9	35.5	35	34.1	32.2						
PD50-40G/2	7.5	10		42.5	42.4	42.2	42.1	41.7	41	40	38.5	36.4					
PD50-50G/2	11	15		53	52.9	52.6	52.4	52	51.5	50.9	50	48.7	46.4				
PD50-60G/2	15	20		65.8	65.7	65.7	65.6	65.3	64.7	63.9	62.8	61.6	60	53.2			
PD50-70G/2	18.5	25		73.7	73.6	73.4	73.3	73.1	72.9	72.5	72	71.2	70	65.4			
PD50-81G/2	22	30		85.5	85.3	85	84.8	84.5	84	83.5	82.8	82.1	81	77.1			

PD65-\*/2



## PD65-\*/\*/2



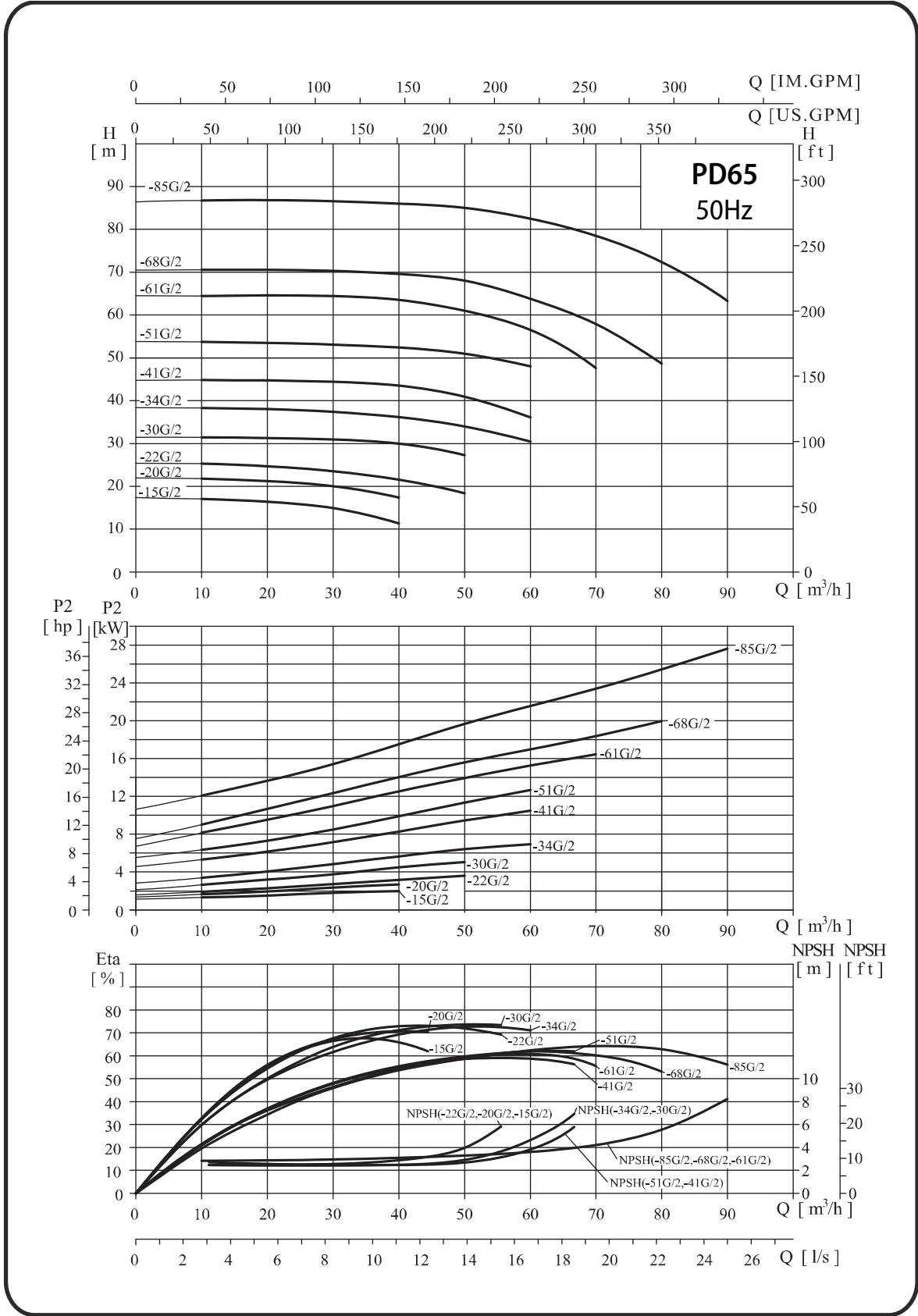
### Size, weight, and volume for transportation

Model	Size [mm]											Weight [kg]
	D	B1	B2	B3	B4	B5	H1	H2	H3	L1	L2	
PD65-37G/2	200	257	190	128	128	144	105	180	668	400	200	90
PD65-48G/2	200	257	190	128	128	144	105	180	668	400	200	98

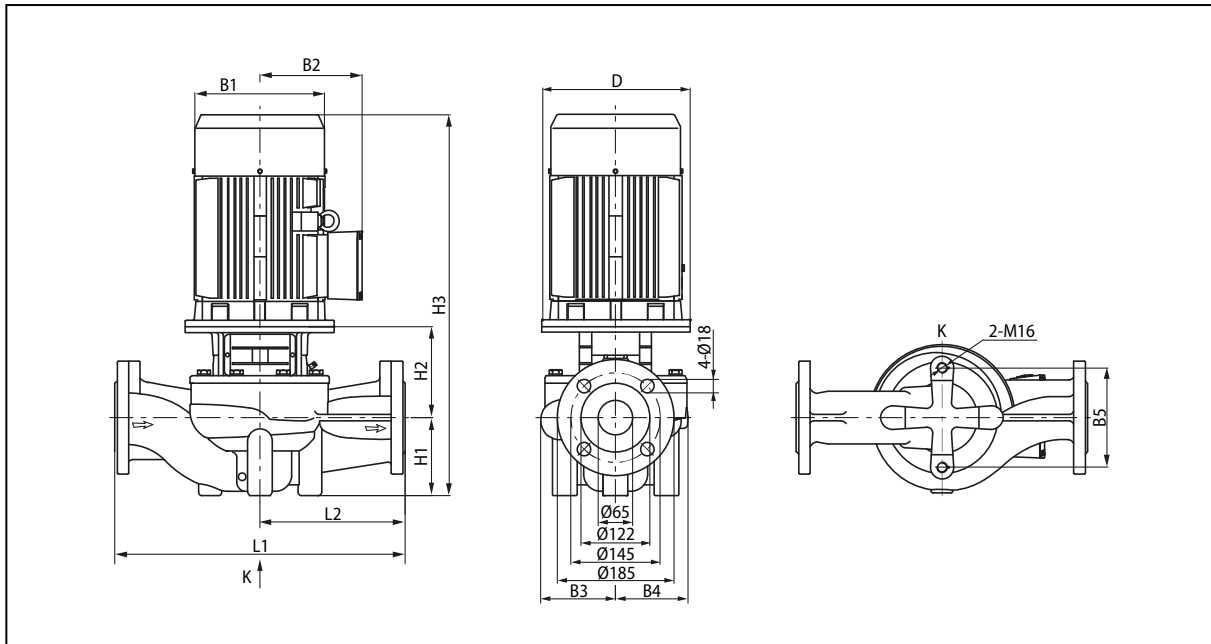
### Performance Table

Model	Motor		Q [m <sup>3</sup> /h] H [m]	5	10	15	20	25	30	35
	[kW]	[HP]								
PD65-37G/2	5.5	7.5		39.6	39.3	39	38.2	37	35	32.1
PD50-48G/2	7.5	10		50.4	50.3	50	49.3	48	45.9	42.6

PD65-\*/2



## PD65-\*\*/2



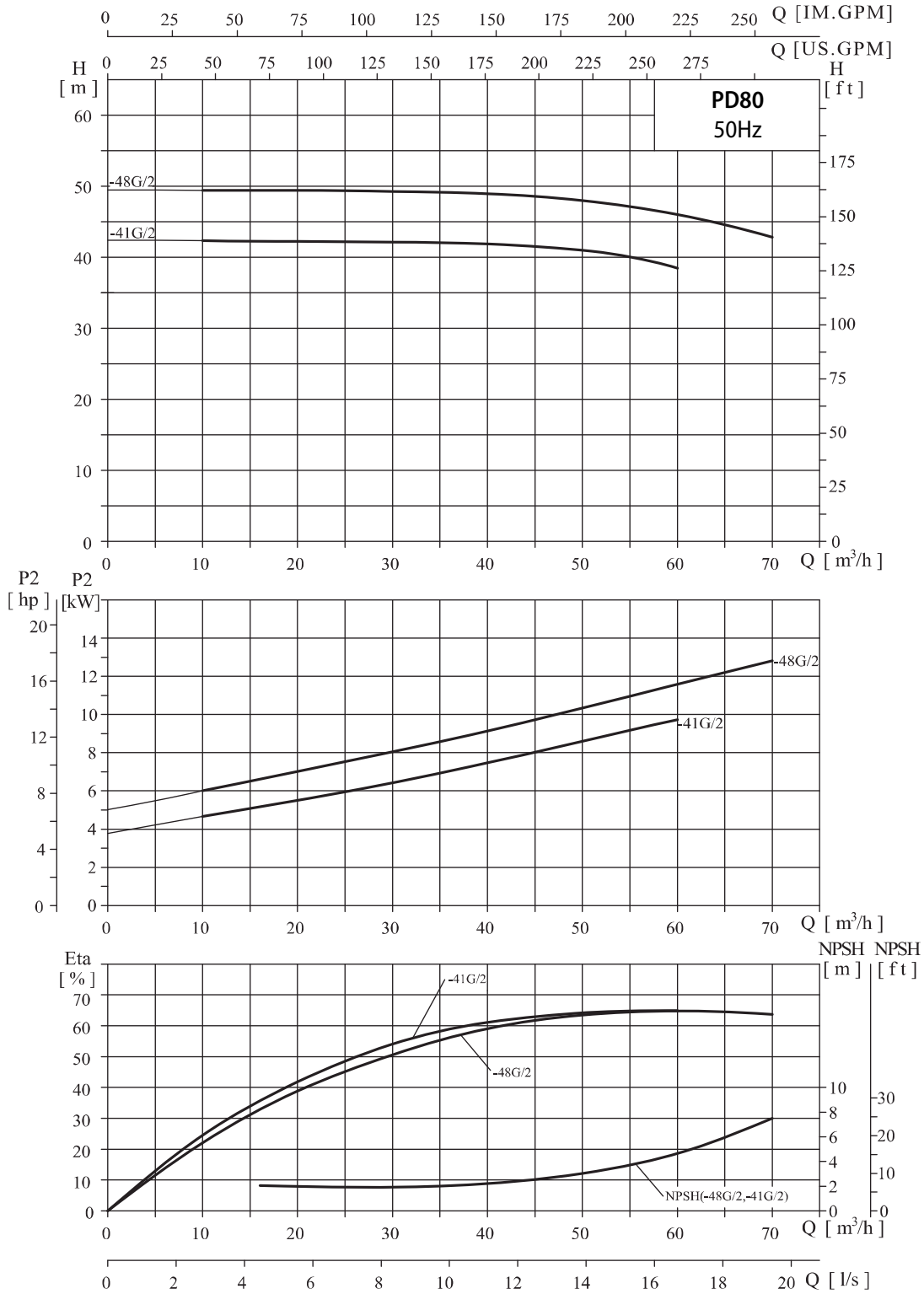
### Size, weight, and volume for transportation

Model	Size [mm]											Weight [kg]
	D	B1	B2	B3	B4	B5	H1	H2	H3	L1	L2	
PD65-15G/2	140	171	137	116	101	144	105	153	545	340	170	48
PD65-20G/2	160	196	150	116	101	144	105	163	605	340	170	57
PD65-22G/2	160	214	169	116	101	144	105	163	610	340	170	64
PD65-30G/2	200	257	190	131	115	144	105	194	682	360	180	85
PD65-34G/2	200	257	190	131	115	144	105	194	682	360	180	94
PD65-41G/2	350	314	261	148	138	144	105	234	839	400	200	173
PD65-51G/2	350	314	261	148	138	144	105	234	839	400	200	188
PD65-61G/2	350	314	261	174	162	160	125	228	897	475	238	208
PD65-68G/2	350	355	273	174	162	160	125	228	930	475	238	260
PD65-85G/2	400	397	314	174	162	160	125	231	1008	475	238	322

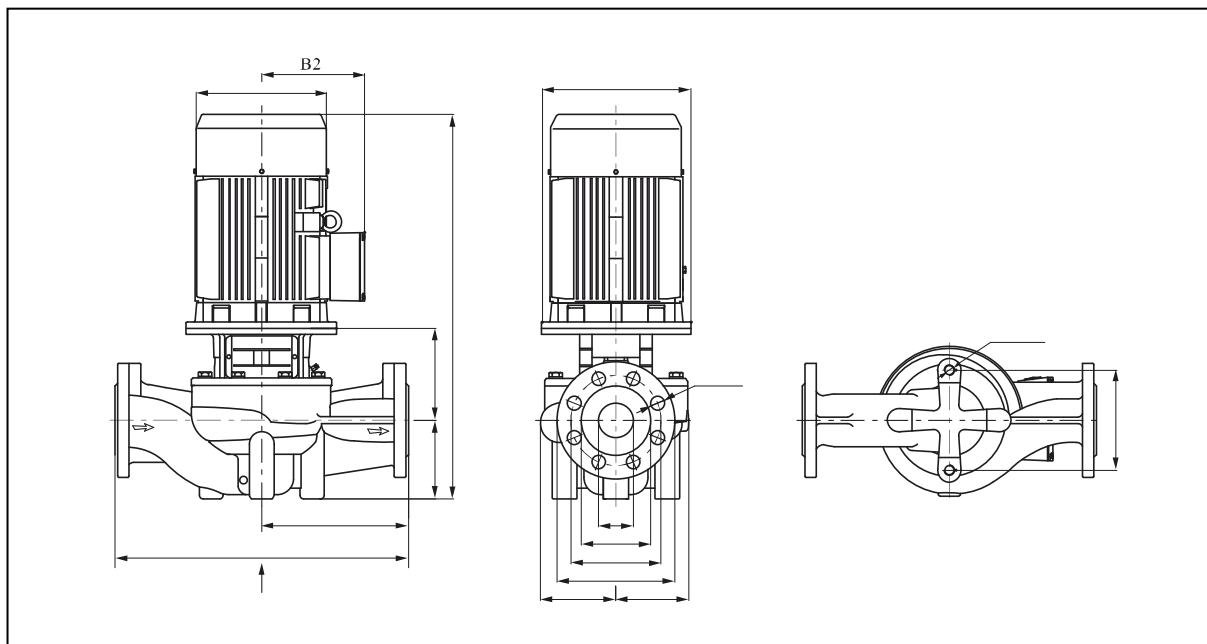
### Performance Table

Model	Motor		Q [m <sup>3</sup> /h]	10	20	30	40	50	60	70	80	90
	[kW]	[HP]										
PD65-15G/2	2.2	3	H [m]	17.1	16.4	15.0	11.3					
PD65-20G/2	3	4		21.8	21.2	20	17.4					
PD65-22G/2	4	5.5		25.1	24.8	24.0	22	18.4				
PD65-30G/2	5.5	7.5		31.5	31.3	31	30	27.3				
PD65-34G/2	7.5	10		38.3	38	37.4	36.1	34	30.5			
PD65-41G/2	11	15		44.8	44.7	44.4	43.5	41	36.1			
PD65-51G/2	15	20		53.7	53.5	53.1	53.1	52.4	51	48		
PD65-61G/2	18.5	25		64.5	64.6	64.4	63.5	61	56.5	47.6		
PD65-68G/2	22	30		70.5	70.5	70.3	69.6	68	63.8	58	48.6	
PD65-85G/2	30	40		86.7	86.7	86.5	86	85	82.5	78.5	72.4	63.3

PD80-\*/2



## PD80-\*/\*/2



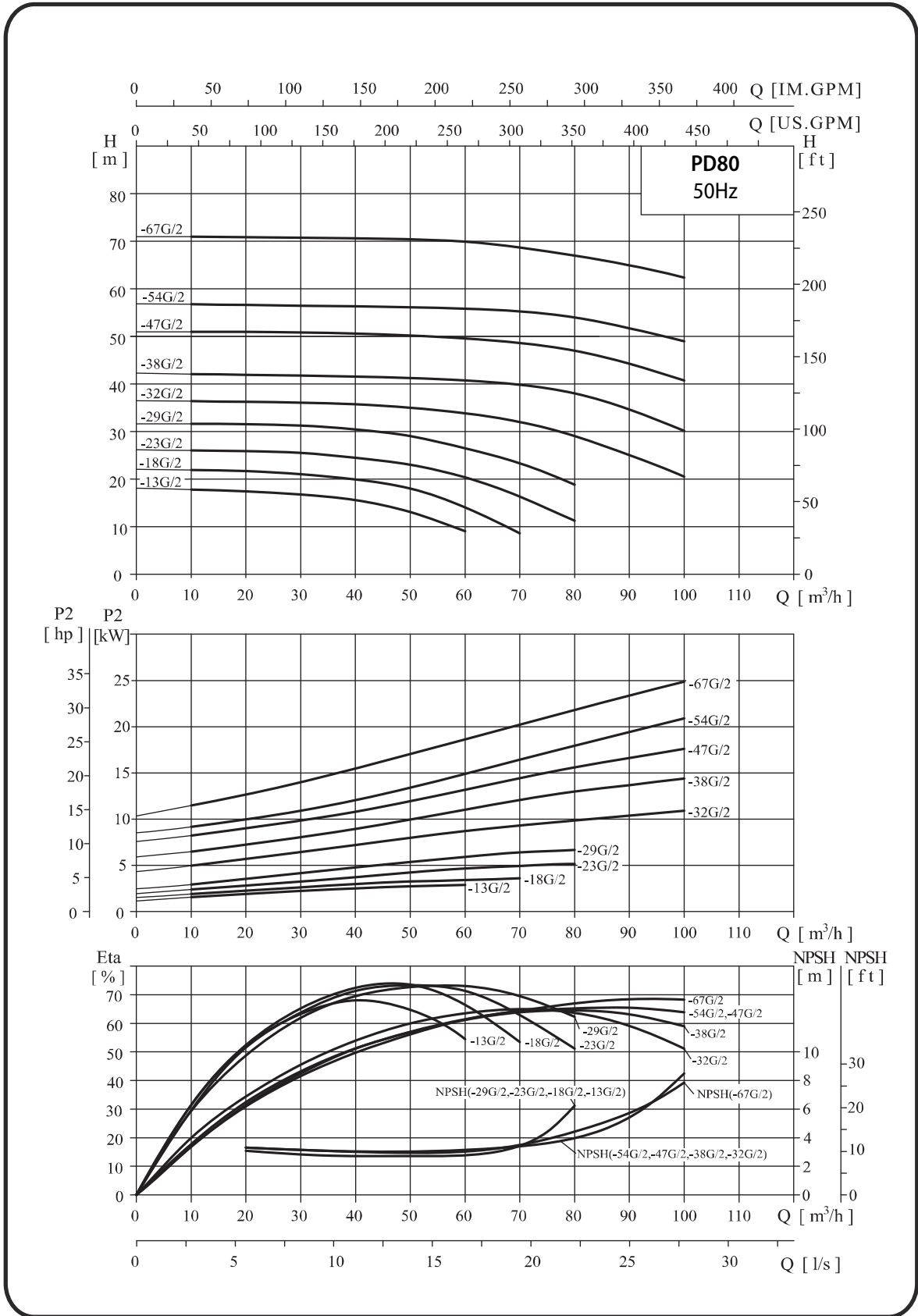
### Size, weight, and volume for transportation

Model	Size [mm]											Weight [kg]
	D	B1	B2	B3	B4	B5	H1	H2	H3	L1	L2	
PD80-41G/2	350	314	261	137	128	144	115	221	836	500	250	176
PD80-48G/2	350	314	261	137	128	144	115	221	836	500	250	191

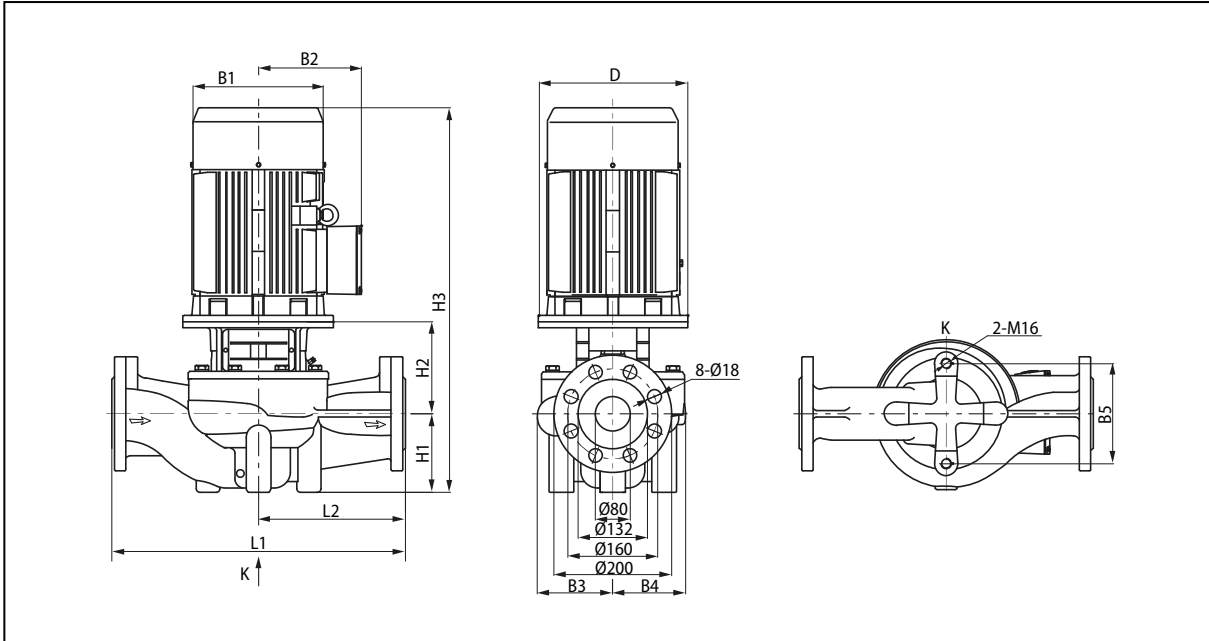
### Performance Table

Model	Motor		Q [m <sup>3</sup> /h] H [m]	10	20	30	40	50	60	70
	[kW]	[HP]								
PD80-41G/2	11	15		42.3	42.2	42.1	41.8	41	38.4	
PD80-48G/2	15	20		49.4	49.4	49.3	49	48	46	42.8

PD80-\*/2



## PD80-\*\*/2



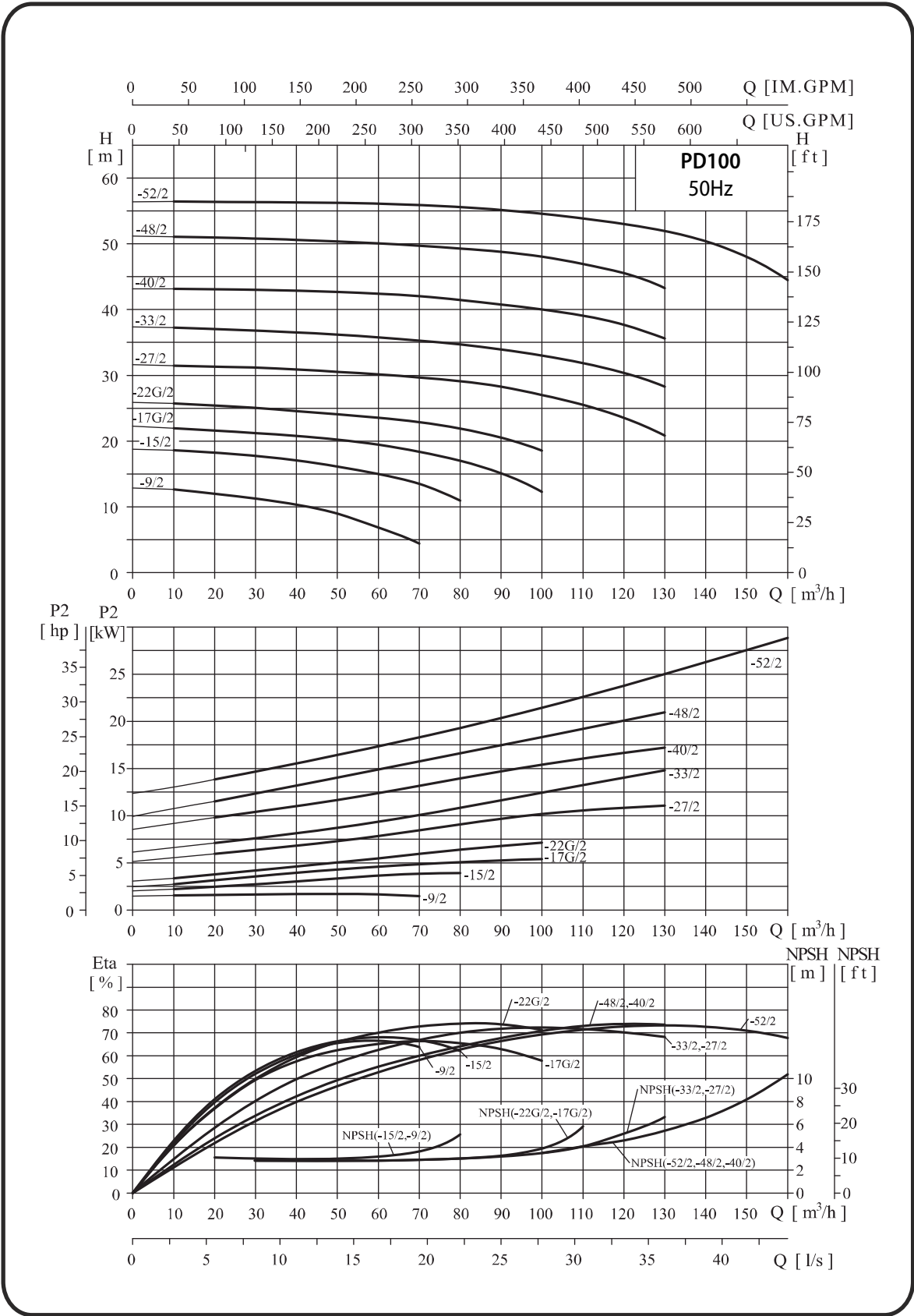
## Size, weight, and volume for transportation

Model	Size [mm]											Weight [kg]
	D	B1	B2	B3	B4	B5	H1	H2	H3	L1	L2	
PD80-13G/2	160	196	150	134	112	144	105	171	613	400	200	63
PD80-18G/2	160	214	169	134	112	144	105	171	618	400	200	70
PD80-23G/2	200	257	190	134	112	144	105	195	683	400	200	87
PD80-29G/2	200	257	190	134	112	144	105	195	683	400	200	95
PD80-32G/2	350	314	261	159	138	144	115	240	855	450	225	179
PD80-38G/2	350	314	261	159	138	144	115	240	855	450	225	194
PD80-47G/2	350	314	261	159	138	144	115	240	899	450	225	203
PD80-54G/2	350	355	273	159	138	144	115	240	932	450	225	256
PD80-67G/2	400	397	314	180	162	160	115	242	1017	500	250	324

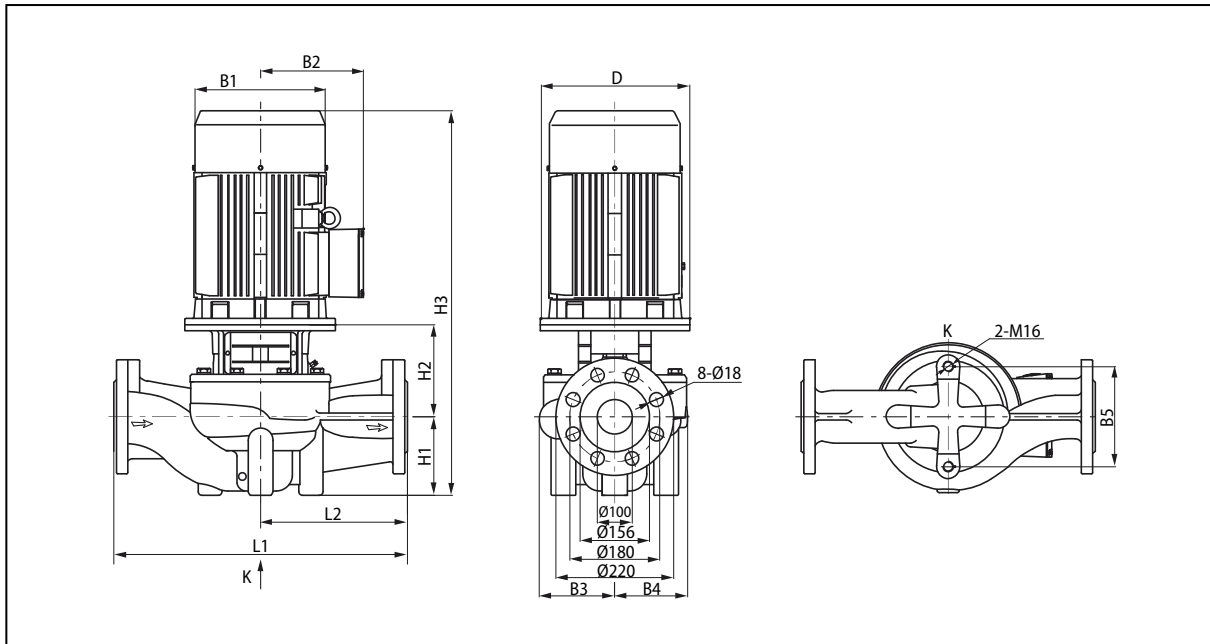
## Performance Table

Model	Motor		Q [m <sup>3</sup> /h]	10	20	30	40	50	60	70	80	90	100
	[kW]	[HP]											
PD80-13G/2	3	4	H [m]	17.8	17.4	16.7	15.5	13	9.1				
PD80-18G/2	4	5.5		21.9	21.7	21	19.9	18	14	8.6			
PD80-23G/2	5.5	7.5		26	25.9	25.5	24.5	23	20.3	16.3	11.3		
PD80-29G/2	7.5	10		31.6	31.5	31.2	30.4	29	26.5	23.3	18.8		
PD80-32G/2	11	15		36.4	36.2	36.1	35.7	35	33.8	32	29	25	20.5
PD80-38G/2	15	20		42.1	41.9	41.7	41.5	41.2	40.7	39.8	38	34.6	30.1
PD80-47G/2	18.5	25		50.9	50.9	50.8	50.6	50.2	49.6	48.6	47	44.3	40.7
PD80-54G/2	22	30		56.7	56.6	56.5	56.3	56.1	55.8	55.3	54	51.7	49
PD80-67G/2	30	40		71	70.9	70.8	70.6	7.4	69.9	68.7	67	65	62.3

PD100-\*\*/2



## PD100-\*/\*/2



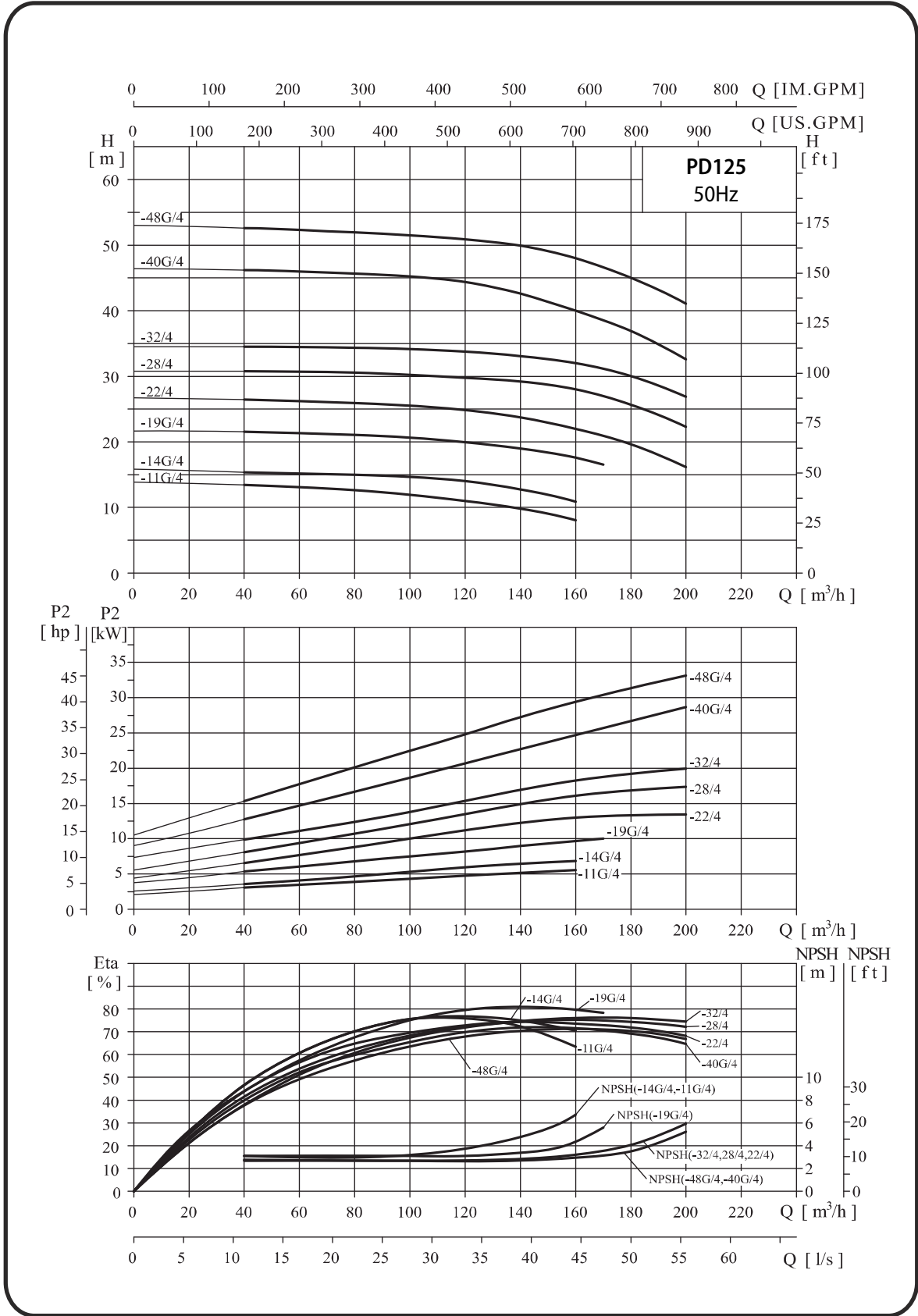
### Size, weight, and volume for transportation

Model	Size [mm]											Weight [kg]
	D	B1	B2	B3	B4	B5	H1	H2	H3	L1	L2	
PD100-9/2	140	171	137	134	101	160	105	178	570	450	225	56
PD100-15/2	160	214	169	134	101	160	105	190	637	450	225	73
PD100-17G/2	200	257	190	146	118	144	140	199	702	450	250	96
PD100-22G/2	200	257	190	146	118	144	140	199	702	450	250	104
PD100-27/2	350	314	261	147	123	144	140	260	900	550	275	187
PD100-33/2	350	314	261	147	123	144	140	260	900	550	275	202
PD100-40/2	350	314	261	181	152	230	140	270	954	550	275	220
PD100-48/2	350	355	273	181	152	230	140	270	987	550	275	273
PD100-52/2	400	397	314	181	152	230	140	270	1062	550	275	336

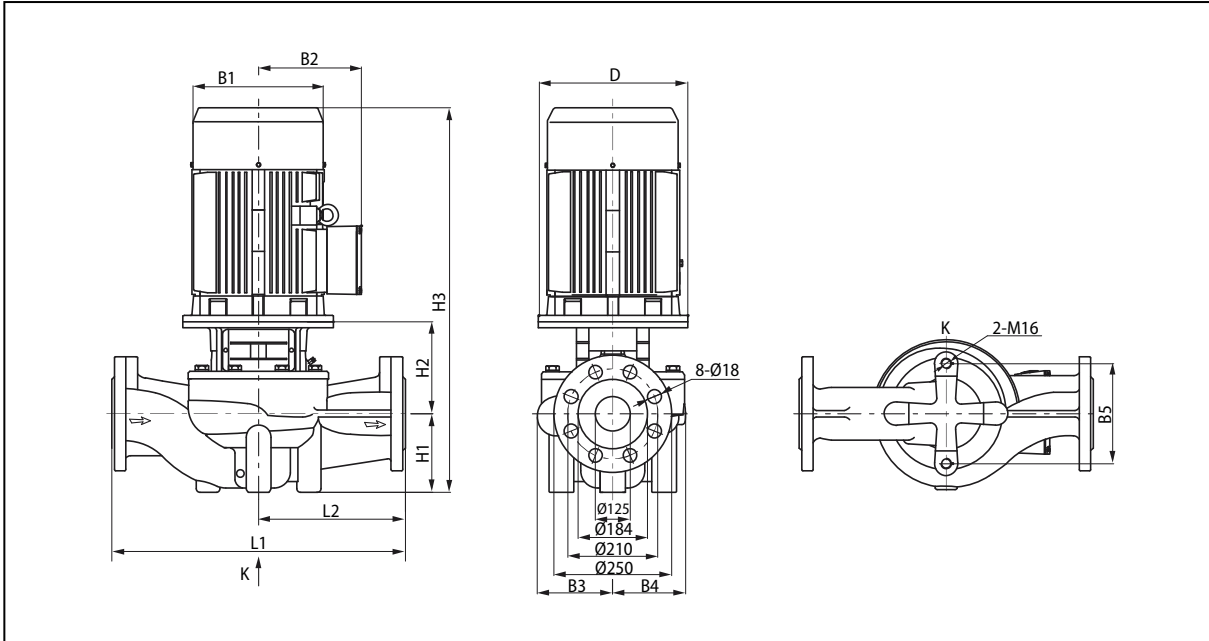
### Performance Table

Model	Motor		Q [m³/h]	Flow Rate [m³/h]															
	[kW]	[HP]		10	20	30	40	50	60	70	80	90	100	110	120	130	145	160	
PD100-9/2	2.2	3	H [m]	13.9	13.2	12.2	10.8	9.0	6.8	4.4									
PD100-15/2	4	5.5		18.6	18.2	17.7	17.1	16.2	15.0	13.4	11.0								
PD100-17G/2	5.5	7.5		21.9	21.6	21.2	20.8	20.0	19.4	18.4	17.0	15.1	12.3						
PD100-22G/2	7.5	10		25.7	25.5	25.0	24.6	24.1	23.6	22.9	21.9	20.5	18.6						
PD100-27/2	11	15		31.5	31.3	31.1	30.9	30.7	30.3	29.8	29.2	28.2	27.0	25.5	23.6	20.8			
PD100-33/2	15	20		37.1	37.0	36.8	36.6	36.2	35.8	35.3	34.7	33.9	33.0	31.7	30.1	27.9			
PD100-40/2	18.5	25		43.3	43.2	43.1	42.9	42.7	42.4	42.1	41.6	40.9	40.0	38.9	37.4	35.3			
PD100-48/2	22	30		51.2	51.1	51.0	50.8	50.6	50.3	49.9	49.4	48.8	48.0	46.9	45.3	43.2			
PD100-52/2	30	40		56.4	56.4	56.3	56.3	56.2	56.1	55.9	55.6	55.1	54.5	53.8	53.1	52.0	49.3	44.5	

PD125-\*/4



## PD125-\*/\*/4



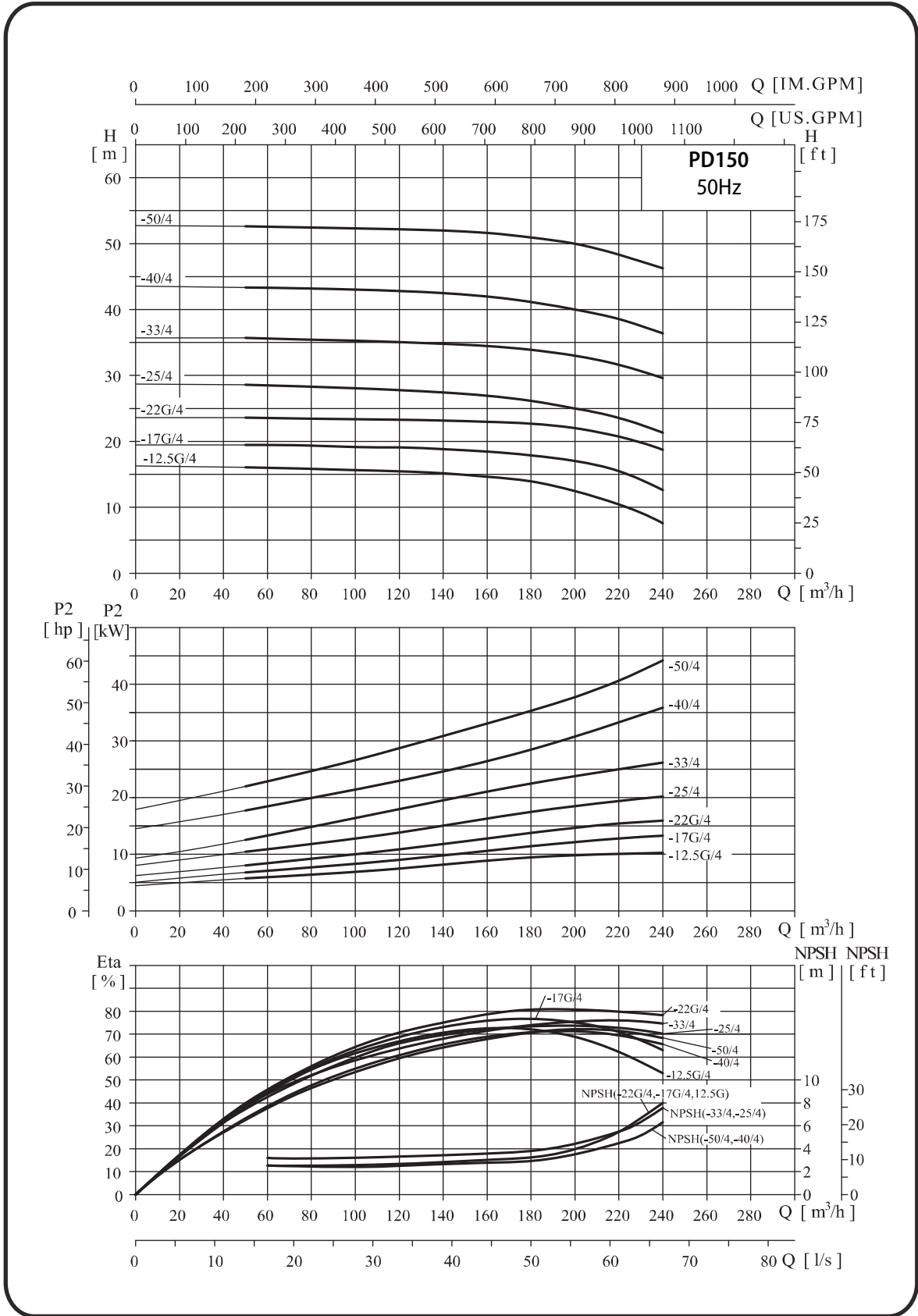
### Size, weight, and volume for transportation

Model	Size [mm]											Weight [kg]
	D	B1	B2	B3	B4	B5	H1	H2	H3	L1	L2	
PD125-11G/4	200	257	190	198	162	230	160	229	873	620	310	140
PD125-14G/4	200	257	190	198	162	230	160	229	873	620	310	150
PD125-19G/4	350	314	261	213	178	230	160	301	1061	660	330	255
PD125-22/4	350	314	261	236	208	230	215	292	1154	800	400	310
PD125-28/4	350	355	273	236	208	230	215	292	1187	800	400	340
PD125-32/4	350	355	273	236	208	230	215	292	1125	800	400	361
PD125-40/4	400	397	314	261	233	230	160	298	1206	800	400	455
PD125-48/4	450	445	334	261	233	230	160	313	1294	800	400	492

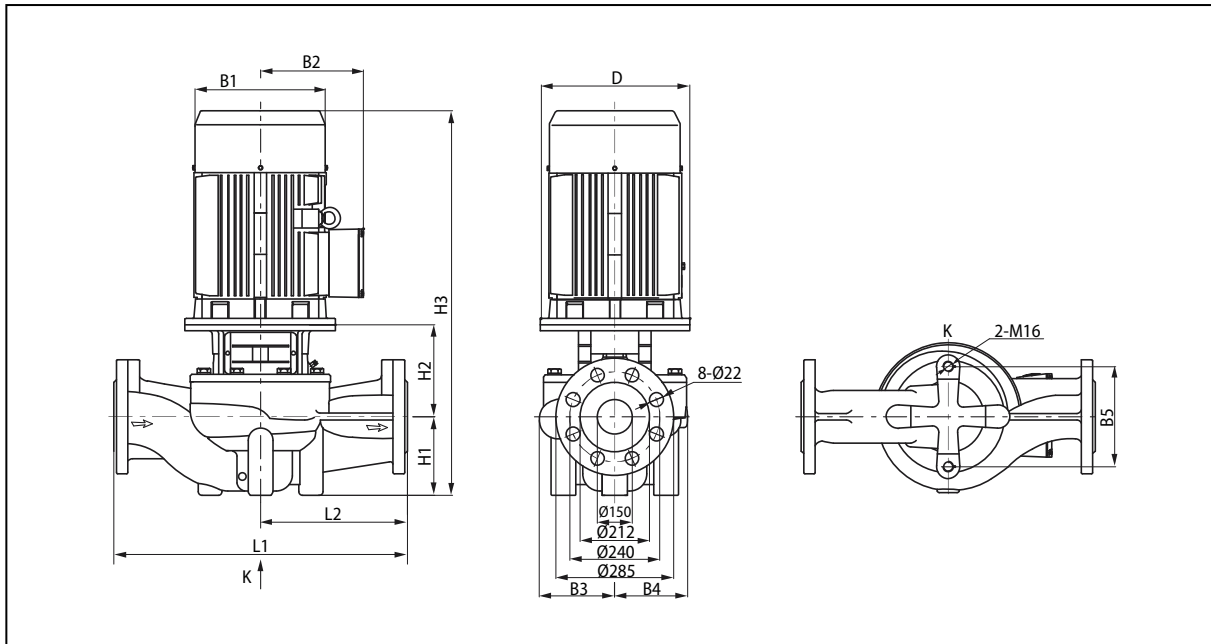
### Performance Table

Model	Motor		Q [m³/h]	40	60	80	100	120	140	160	170	180	200
	[kW]	[HP]											
PD125-11G/4	5.5	7.5	H [m]	13.4	13.1	12.6	11.9	11	9.8	8.1			
PD125-14G/4	7.5	10		15.4	15.2	15	14.7	14	12.8	10.9			
PD125-19G/4	11	15		21.5	21.3	21.1	20.7	19.9	19	17.6	16.5		
PD125-22/4	15	20		26.7	26.5	26.2	25.7	24.9	23.7	22	20.9	19.8	16.7
PD125-28/4	18.5	25		30.9	30.8	30.7	30.5	30.1	29.3	28	26.9	25.8	22.2
PD125-32/4	22	30		34.6	34.6	34.5	34.4	34	33.3	32	31.1	30.2	27.3
PD125-40/4	30	40		46.2	46	45.7	45.2	44.3	42.5	40	38.5	36.9	32.5
PD125-48/4	37	50		52.6	52.3	51.5	50.9	49.9	49.1	48	46.4	45	41.1

PD150-\*\*/4



## PD150-\*/\*/4



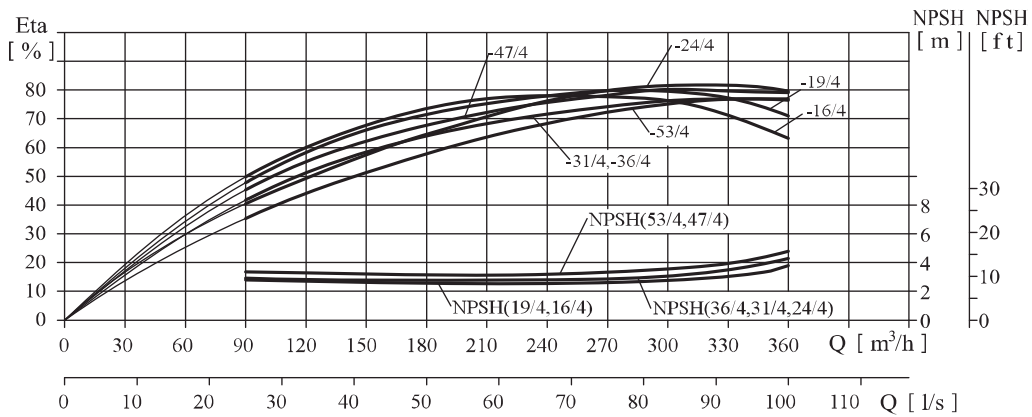
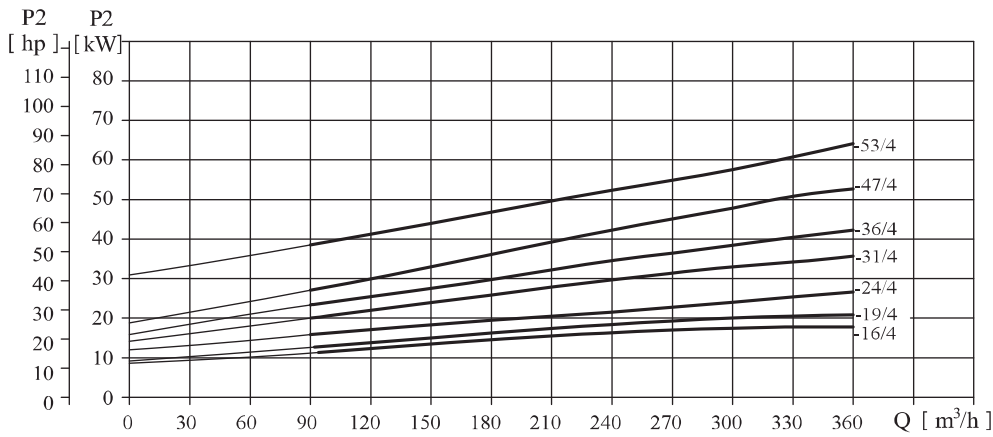
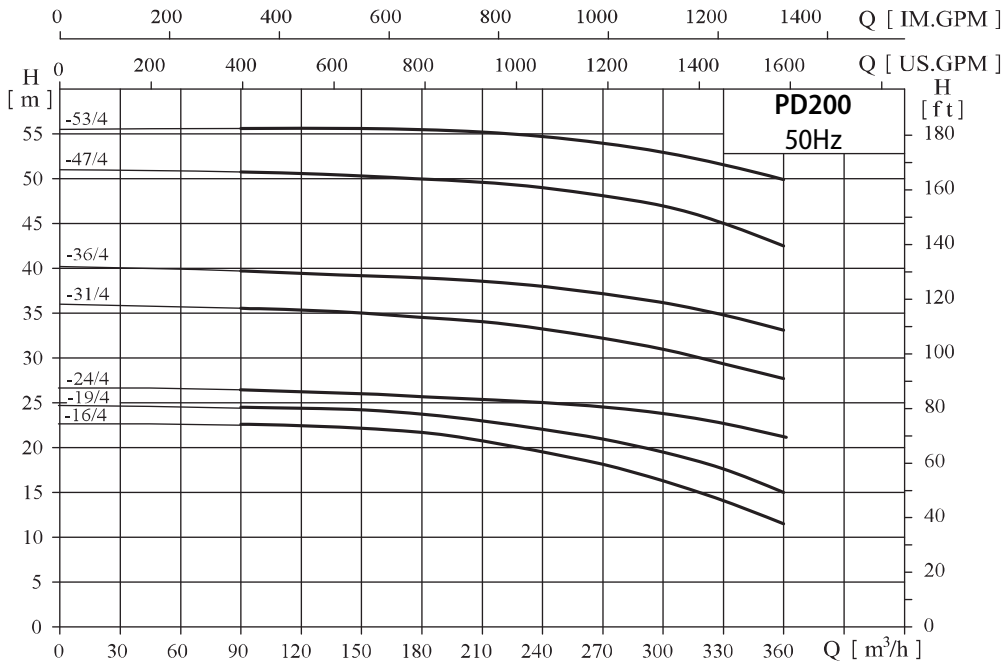
### Size, weight, and volume for transportation

Model	Size [mm]											Weight [kg]
	D	B1	B2	B3	B4	B5	H1	H2	H3	L1	L2	
PD150-12.5G/4	350	314	261	217	180	230	175	297	972	660	330	260
PD150-17G/4	350	314	261	217	180	230	175	297	1016	660	330	281
PD150-22G/4	350	355	273	217	180	230	175	297	1049	660	330	312
PD150-25/4	350	355	273	238	208	230	215	269	1061	800	400	365
PD150-33/4	400	397	314	238	208	230	215	269	1136	800	400	445
PD150-40/4	450	445	334	267	248	230	230	288	1212	900	450	518
PD150-50/4	450	445	334	267	248	230	230	288	1212	900	450	570

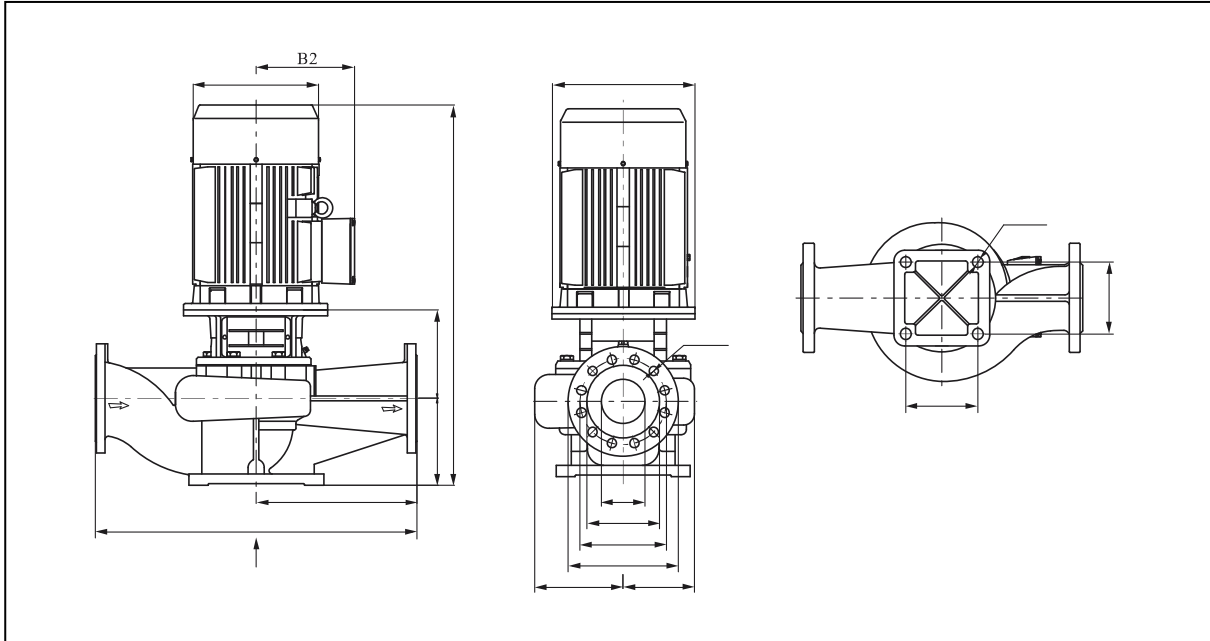
### Performance Table

Model	Motor		Q [m <sup>3</sup> /h]	50	80	120	140	180	200	220	240
	[kW]	[HP]									
PD150-12.5G/4	11	15	H [m]	16.1	15.8	15.4	15.1	13.9	12.5	10.4	7.6
PD150-17G/4	15	20		19.5	19.4	19.1	18.8	17.9	17	15.5	12.6
PD150-22G/4	18.5	25		23.6	23.4	23.3	23.1	22.7	22	20.7	17.9
PD150-25/4	22	30		28.1	28	27.7	27.3	26.1	25	23.5	21.3
PD150-33/4	30	40		35.5	35.4	35.1	34.8	33.9	33	31.5	29.6
PD150-40/4	37	50		43.1	43	42.7	42.4	41.1	40	38.4	36.2
PD150-50/4	45	60		52.4	52.2	51.9	51.7	50.9	50	48.7	46.7

PD200-\*/4



## PD200-\*/\*/4



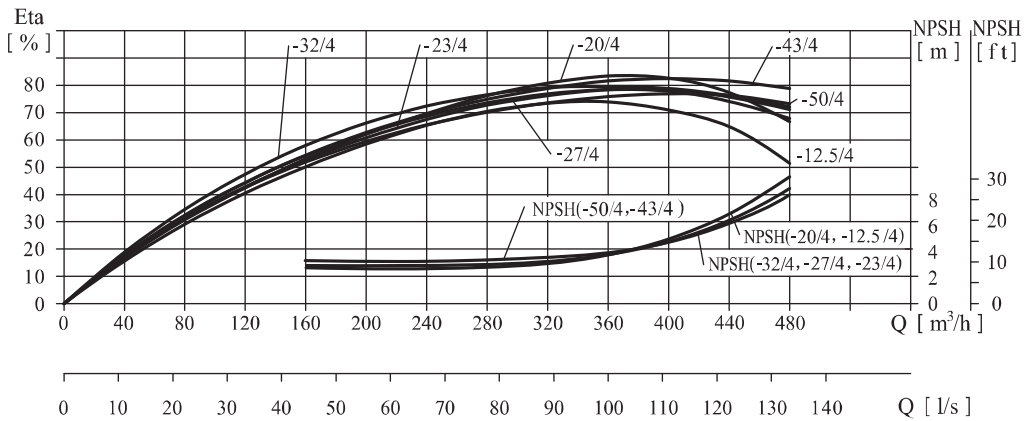
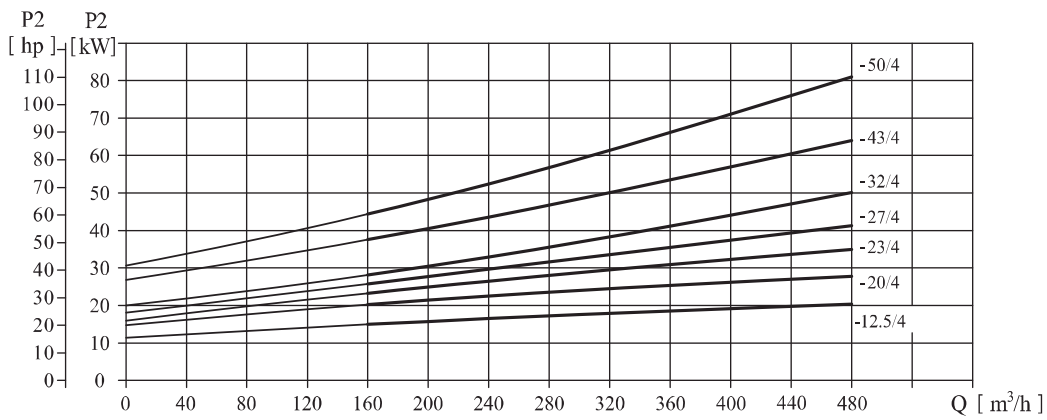
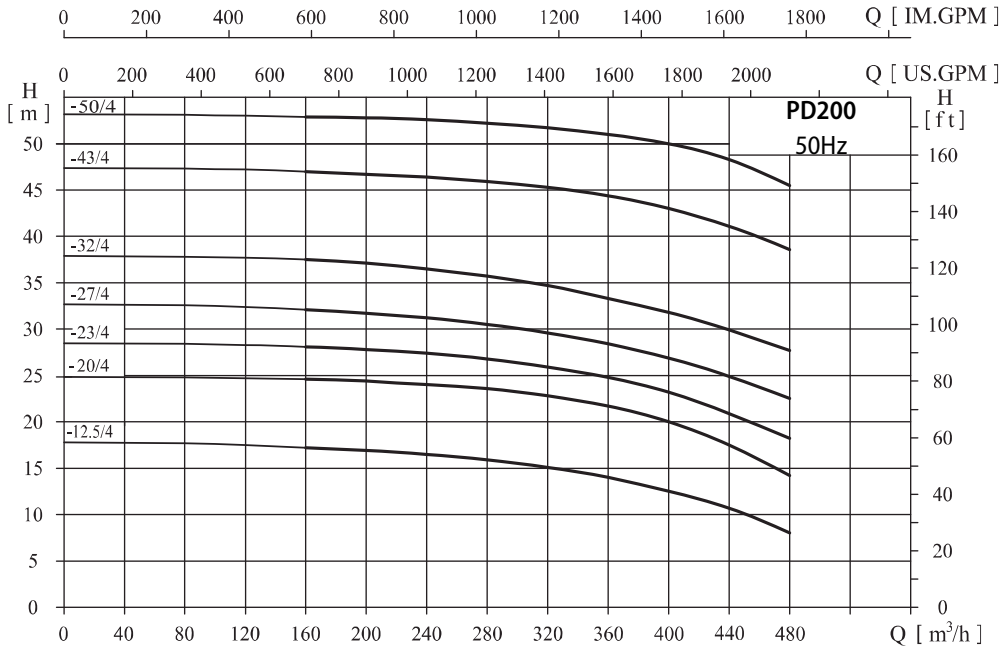
### Size, weight, and volume for transportation

Model	Size [mm]										Weight [kg]	
	D	B1	B2	B3	B4	B5	H1	H2	H3	L1		L2
PD200-16/4	350	355	273	278	219	360	270	415	1265	1000	500	417
PD200-19/4	350	355	273	278	219	360	270	415	1305	1000	500	434
PD200-24/4	400	397	314	303	252	360	270	415	1335	1100	550	537
PD200-31/4	450	445	334	303	252	360	270	445	1395	1100	550	602
PD200-36/4	450	445	334	303	252	360	270	445	1420	1100	550	648
PD200-47/4	550	484	367	315	269	360	270	457	1517	1100	550	744
PD200-53/4	550	547	407	315	269	360	270	457	1587	1100	550	877

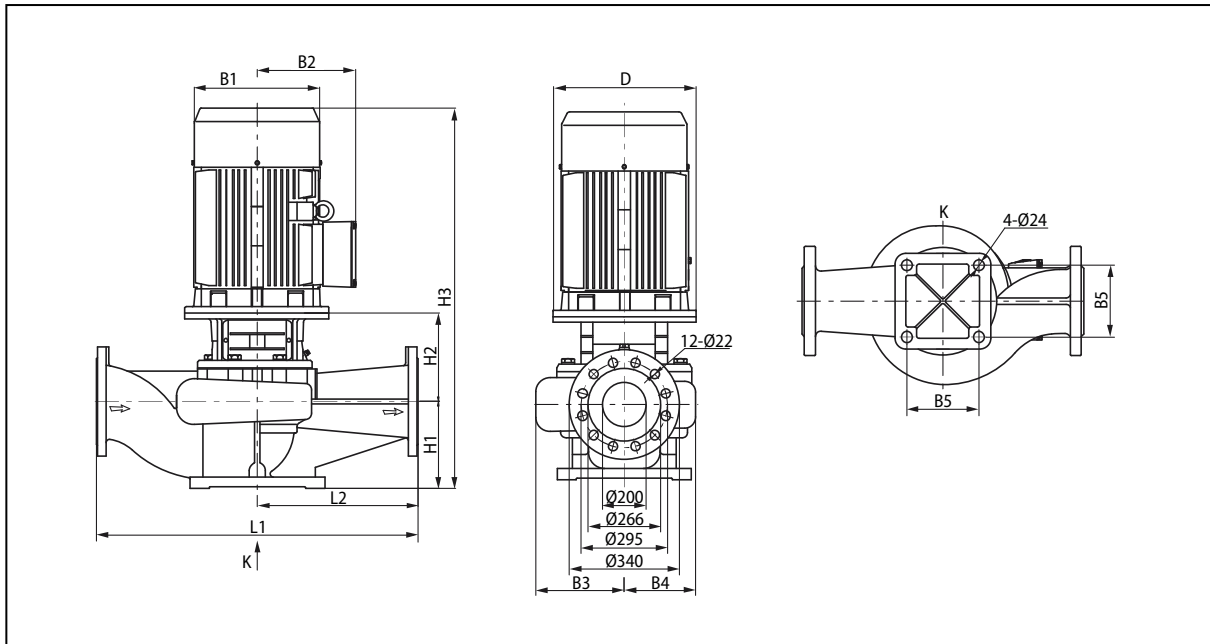
### Performance Table

Model	Motor		Q [m <sup>3</sup> /h]	90	120	150	180	210	240	270	300	330	360
	[kW]	[HP]											
PD200-16/4	18.5	25	H [m]	22.6	22.4	22.2	21.7	20.7	19.4	18.1	16	14	11.5
PD200-19/4	22	30		24.4	24.3	24.2	23.7	23	22	20.9	19	17.6	15
PD200-24/4	30	40		26.1	26	25.8	25.7	25.4	25.1	24.6	24	23.1	21.5
PD200-31/4	37	50		35.4	35.3	35	34.5	33.9	33.2	32.2	31	29.3	27.6
PD200-36/4	45	60		39.6	39.4	39.1	38.8	38.5	37.9	37	36	34.7	33
PD200-47/4	55	75		50.6	50.5	50.2	49.8	49.5	48.9	48	47	44.9	42.4
PD200-53/4	75	100		55.7	55.7	55.7	55.5	55.3	54.8	54	53	51.6	50

PD200-\*/4



## PD200-\*/\*/4



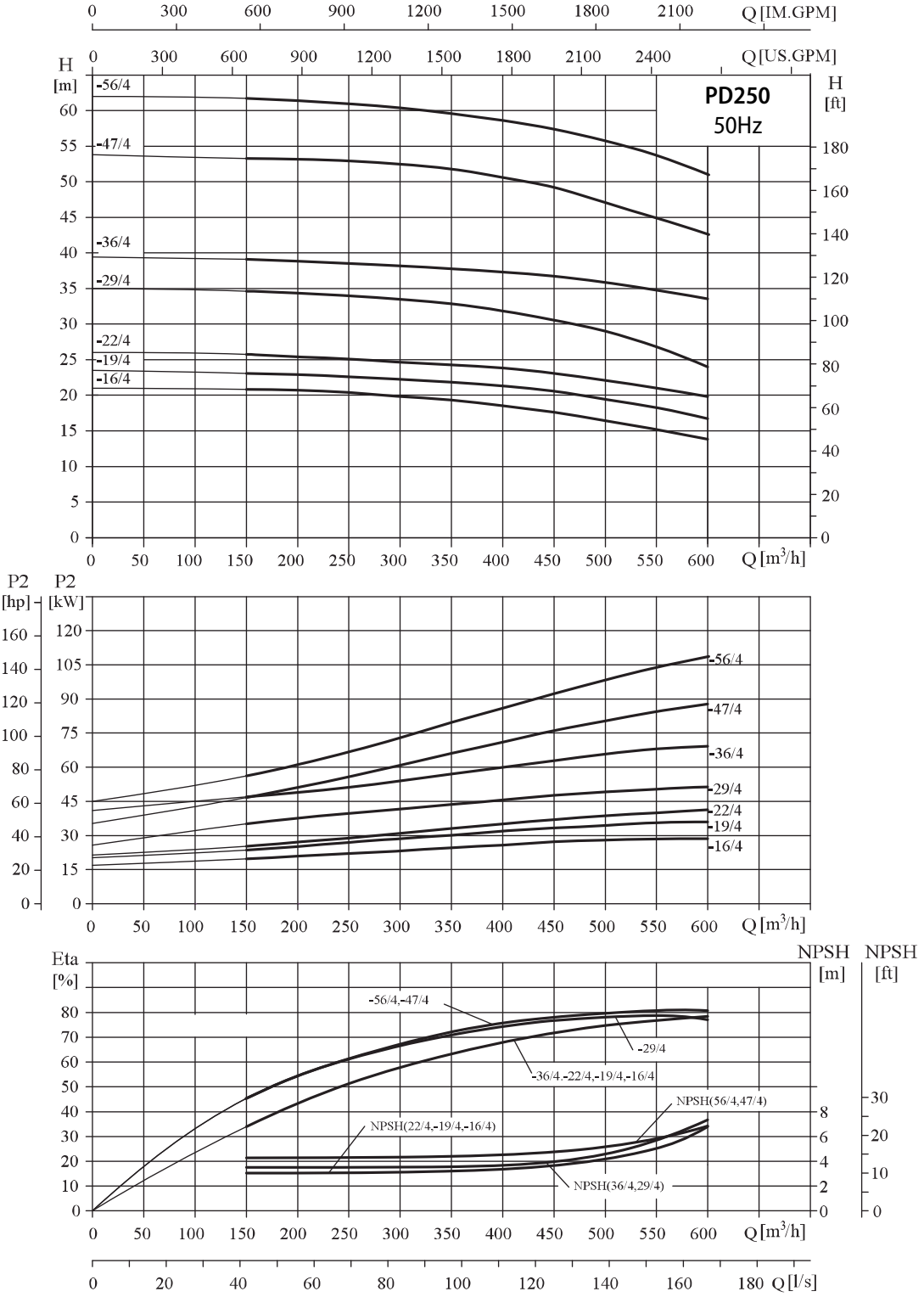
### Size, weight, and volume for transportation

Model	Size [mm]											Weight [kg]
	D	B1	B2	B3	B4	B5	H1	H2	H3	L1	L2	
PD200-12.5/4	350	355	273	278	219	360	270	415	1300	1000	500	432
PD200-20/4	400	397	314	278	219	360	270	415	1334	1000	500	492
PD200-23/4	450	445	334	303	252	360	270	445	1389	1100	550	602
PD200-27/4	450	445	334	303	252	360	270	445	1412	1100	550	638
PD200-32/4	550	484	367	303	252	360	270	445	1488	1100	550	710
PD200-43/4	550	547	407	315	269	360	270	457	1556	1100	550	883
PD200-50/4	550	547	407	315	269	360	270	457	1607	1100	550	975

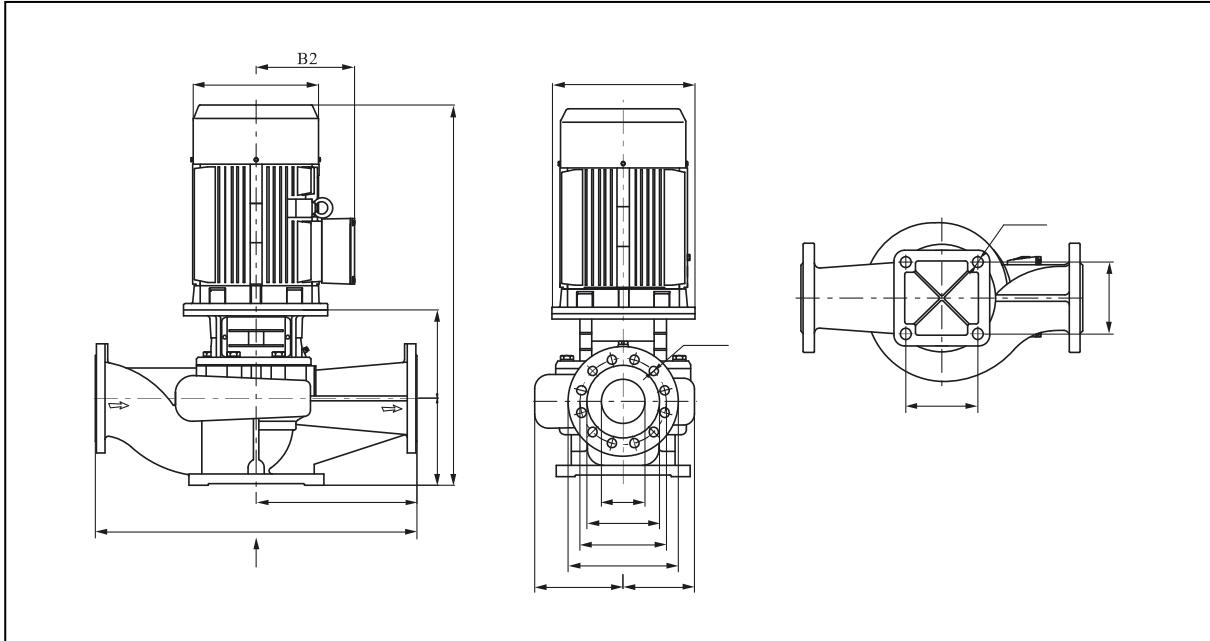
### Performance Table

Model	Motor		Q [m <sup>3</sup> /h]	160	200	240	280	320	360	400	440	480
	[kW]	[HP]										
PD200-12.5/4	22	30	H [m]	17.2	16.9	16.5	15.9	15.1	14	12.5	10.7	8
PD200-20/4	30	40		24.6	24.4	24	23.6	22.8	21.7	20	17.5	14.2
PD200-23/4	37	50		28.1	27.8	27.4	26.8	25.9	24.8	23	20.9	18.2
PD200-27/4	45	60		32.1	31.7	31.2	30.5	29.6	28.4	27	24.9	22.5
PD200-32/4	55	75		37.5	37.1	36.5	35.7	34.7	33.3	32	29.9	27.7
PD200-43/4	75	100		47	46.7	46.4	45.9	45.3	44.4	43	41.1	38.6
PD200-50/4	90	120		52.9	52.8	52.6	52.2	51.7	51	50	48.3	45.5

PD250-\*/\*/4



## PD250-\*/\*/4



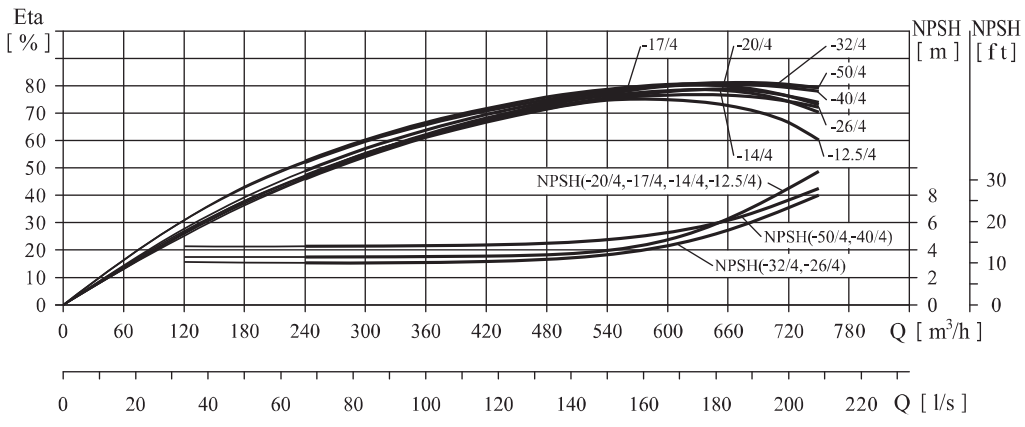
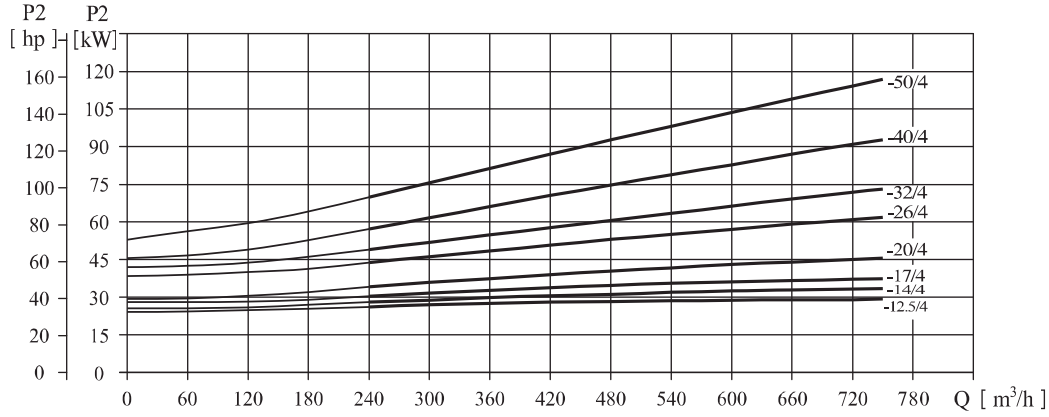
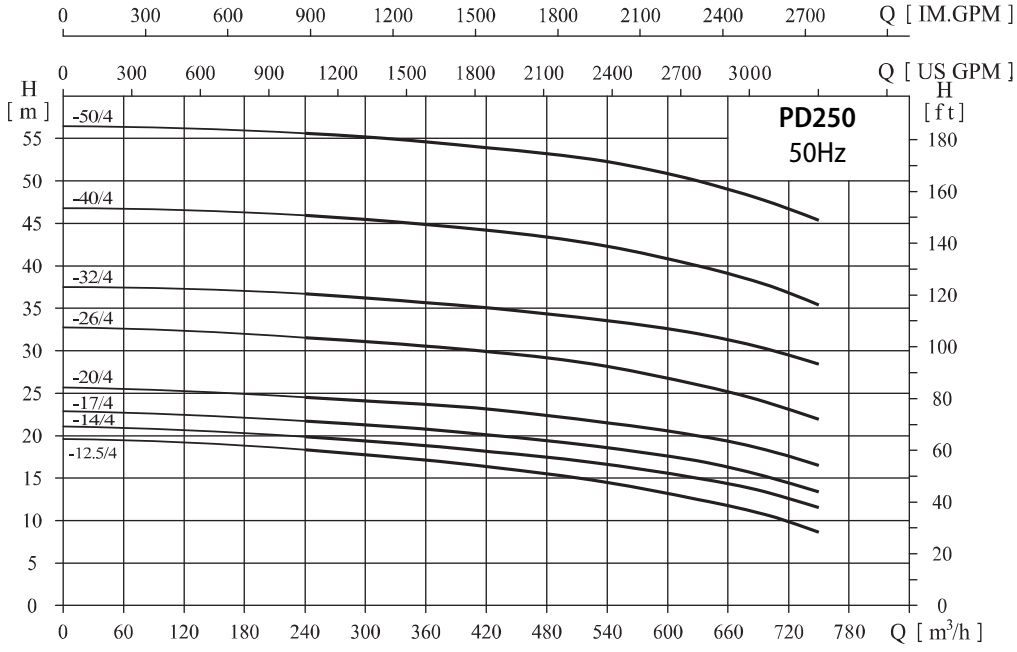
### Size, weight, and volume for transportation

Model	Size [mm]											Weight [kg]
	D	B1	B2	B3	B4	B5	H1	H2	H3	L1	L2	
PD250-16/4	400	397	314	316	243	390	300	465	1430	1100	550	550
PD250-19/4	450	445	334	316	243	390	300	495	1475	1100	550	611
PD250-22/4	450	445	334	316	243	390	300	495	1500	1100	550	647
PD250-29/4	550	484	367	329	264	440	300	504	1597	1100	550	773
PD250-36/4	550	547	407	329	264	440	300	507	1667	1100	550	909
PD250-47/4	550	547	407	347	292	440	305	485	1700	1200	600	1030
PD250-56/4	660	645	535	347	292	440	305	525	1860	1200	600	1389

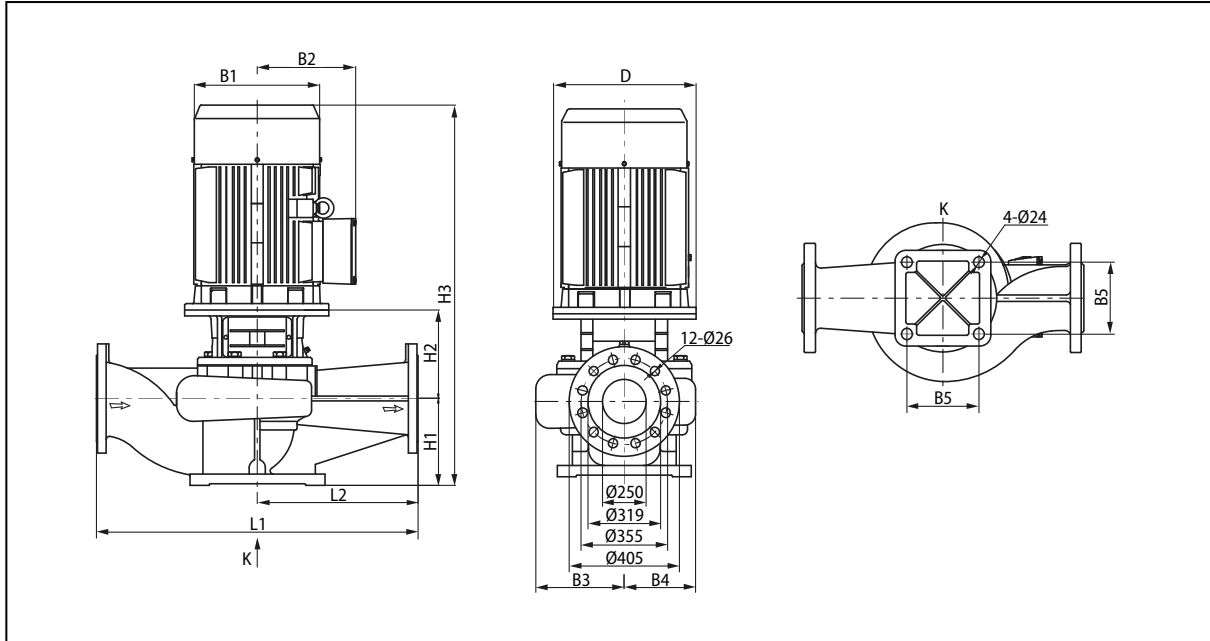
### Performance Table

Model	Motor		Q [m <sup>3</sup> /h]	150	200	250	300	350	400	450	500	550	600
	[kW]	[HP]											
PD250-16/4	30	40	H [m]	20.5	20.4	20.1	19.6	19	18.2	17.3	16	14.7	13.3
PD250-19/4	37	50		22.7	22.4	22.1	21.7	21.3	20.8	20.1	19	17.9	16.6
PD250-22/4	45	60		25.7	25.3	25.1	24.7	24.3	23.8	23.1	22	21	19.7
PD250-29/4	55	75		34.6	34.4	34	34.4	32.6	31.8	30.6	29	26.8	23.9
PD250-36/4	75	100		39.1	38.8	38.5	38.2	37.8	37.3	36.8	36	34.3	32.5
PD250-47/4	90	120		53.3	53.1	52.9	52.4	51.8	50.6	49.2	47	45	42.5
PD250-56/4	110	150		61.6	61.4	60.9	60.2	59.5	58.6	57.4	56	53.8	51

PD250-\*/4



## PD250-\*/\*/4



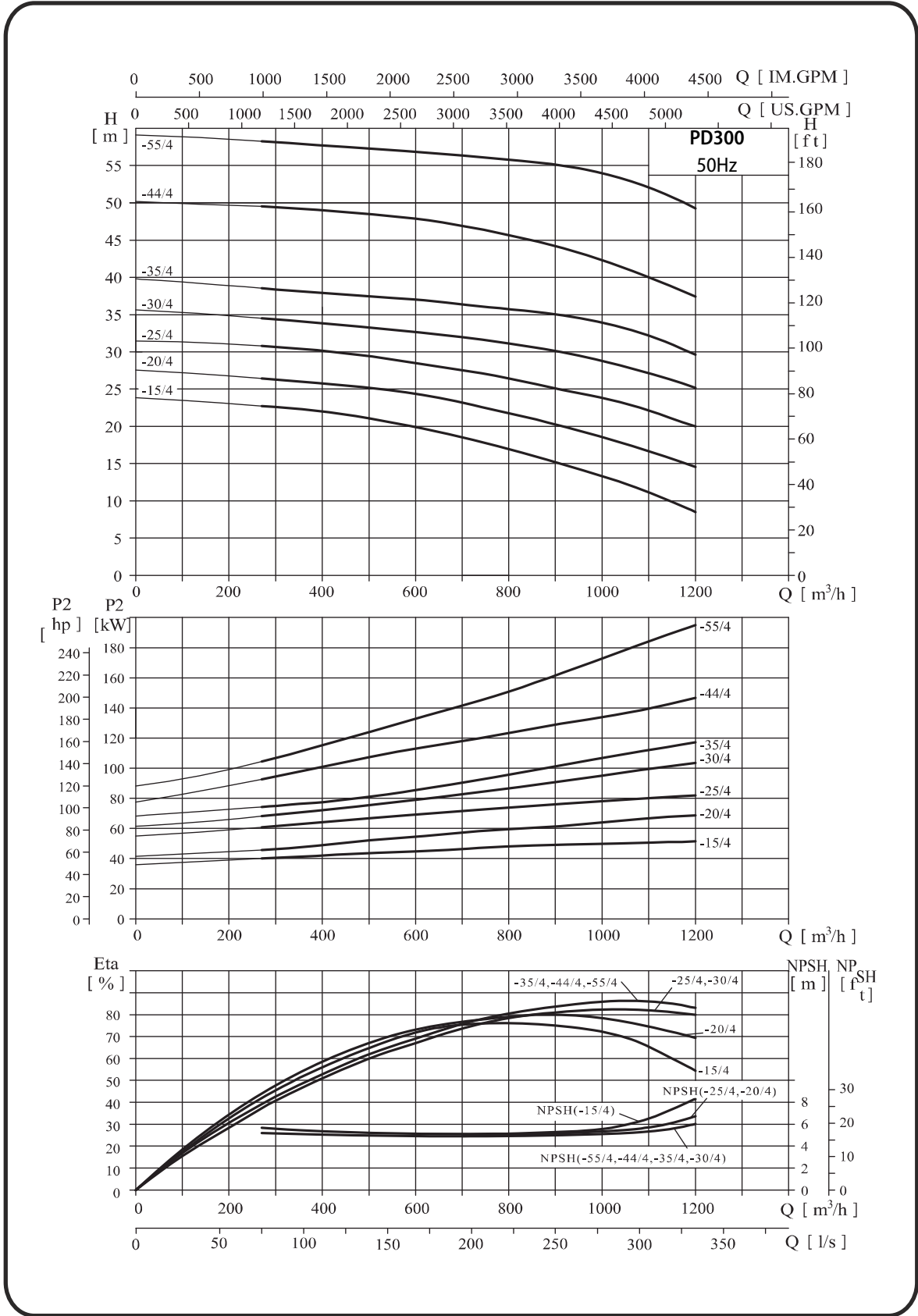
### Size, weight, and volume for transportation

Model	Size [mm]											Weight [kg]
	D	B1	B2	B3	B4	B5	H1	H2	H3	L1	L2	
PD250-12.5/4	400	397	314	316	243	390	300	465	1414	1100	550	552
PD250-14/4	450	445	334	316	243	390	300	495	1469	1100	550	613
PD250-17/4	450	445	334	316	243	390	300	495	1492	1100	550	649
PD250-20/4	550	484	367	316	243	390	300	495	1568	1100	550	722
PD250-26/4	550	547	407	329	264	440	300	507	1636	1100	550	909
PD250-32/4	550	547	407	329	264	440	300	507	1687	1100	550	999
PD250-40/4	660	645	535	347	292	440	305	525	1840	1200	600	1389
PD250-50/4	660	645	535	347	292	440	305	525	1990	1200	600	1473

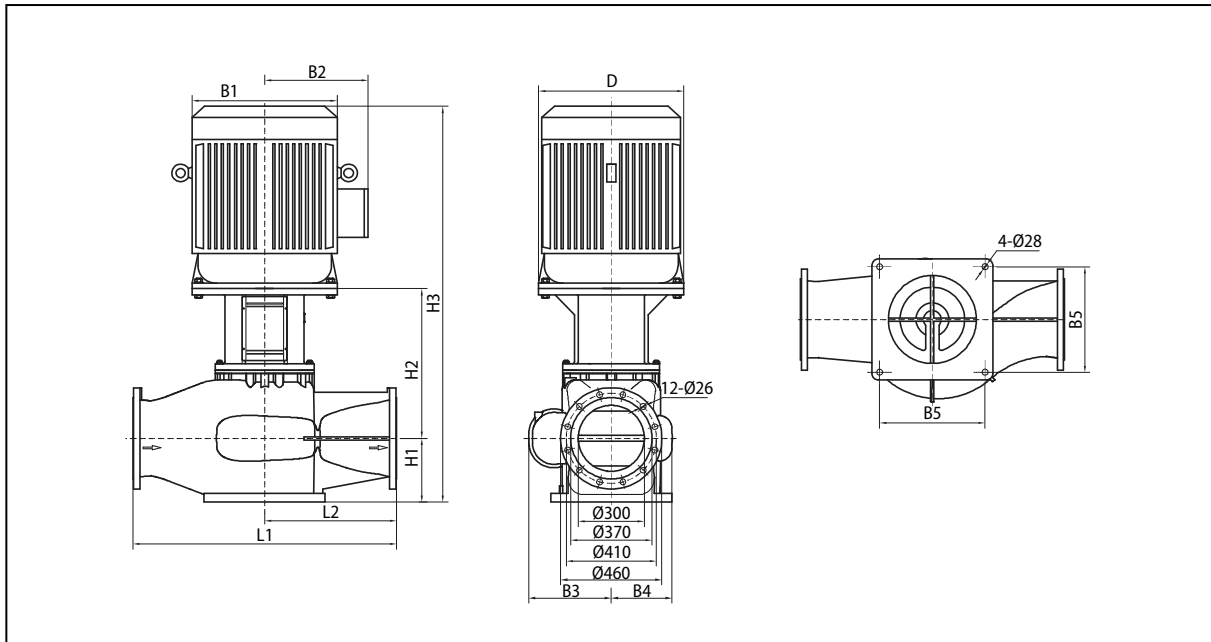
### Performance Table

Model	Motor		Q [m³/h]	H [m]												
	[kW]	[HP]		240	300	360	420	480	540	600	630	660	720	750		
PD250-12.5/4	30	40	H [m]	18.4	17.9	17.2	16.4	15.5	14.5	13.2	12.5	11.8	9.9	8.7		
PD250-14/4	37	50		20	19.5	18.9	18.2	17.5	16.6	15.6	14	13.4	12.6	11.6		
PD250-17/4	45	60		21.8	21.3	20.8	20.1	19.4	18.6	17.6	17	16.3	14.4	13.4		
PD250-20/4	55	75		24.5	24.1	23.7	23.1	22.4	21.5	20.5	20	19.3	17.6	16.5		
PD250-26/4	75	100		31.7	31.1	30.6	29.9	29.1	28.2	26.8	26	25.2	23.1	21.9		
PD250-32/4	90	120		36.7	36.3	35.7	35.1	34.3	33.5	32.6	32	31.3	29.5	28.4		
PD250-40/4	110	150		46	45.5	44.9	44.2	43.4	42.3	40.8	40	39.1	36.8	35.5		
PD250-50/4	132	180		55.6	55.2	54.6	53.9	53.2	52.3	50.9	50	49	46.7	45.4		

PD300-\*/4



## PD300-\*/\*/4



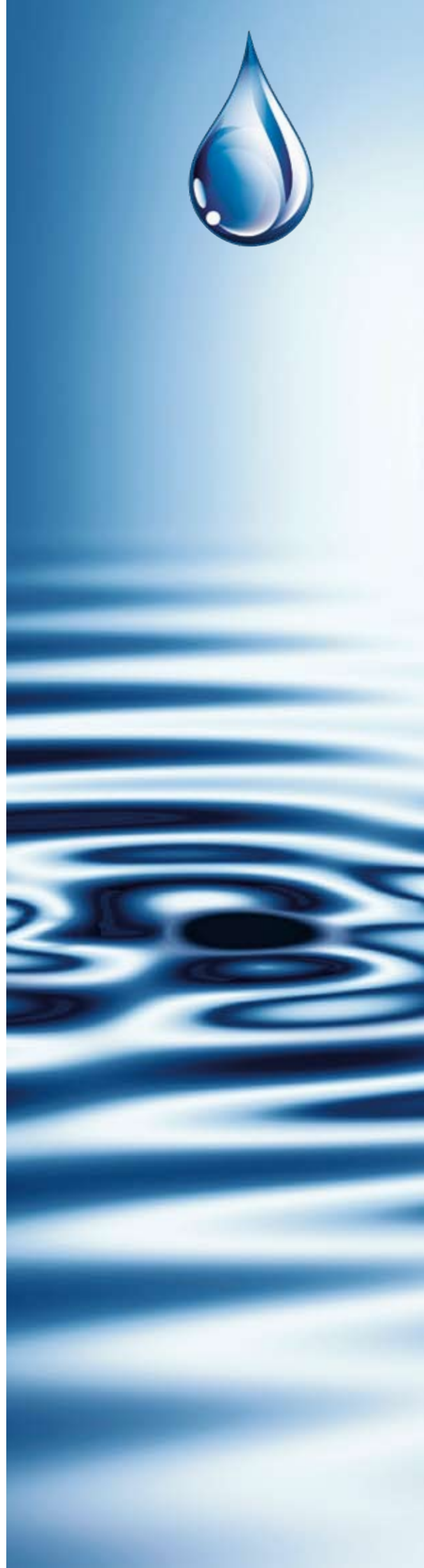
## Size, weight, and volume for transportation

Model	Size [mm]											Weight [kg]
	D	B1	B2	B3	B4	B5	H1	H2	H3	L1	L2	
PD300-15/4	550	484	365	345	250	440	290	649	1720	1200	600	907
PD300-20/4	550	547	400	345	250	440	290	649	1770	1200	600	1075
PD300-25/4	550	547	400	380	280	480	290	659	1850	1200	600	1230
PD300-30/4	660	645	550	380	280	480	290	699	2000	1200	600	1570
PD300-35/4	660	645	550	380	280	480	290	699	2150	1200	600	1650
PD300-44/4	660	645	550	380	295	480	290	702	2150	1200	600	1790
PD300-55/4	660	645	550	380	295	480	290	702	2150	1200	600	1905

## Performance Table

Model	Motor		Q [m <sup>3</sup> /h]	270	360	450	630	750	900	1080	1200
	[kW]	[HP]									
PD300-15/4	55	75	H [m]	22.7	22.3	21.6	19.5	17.8	15	11.6	8.5
PD300-20/4	75	100		26.4	26	25.5	24.1	22.4	20	17.1	14.5
PD300-25/4	90	120		30.8	30.4	29.8	28.2	27.1	25	22.5	20
PD300-30/4	110	150		34.5	34	33.5	32.4	31.6	30	27.5	25
PD300-35/4	132	180		38.6	38.1	37.8	36.9	36	35	32.6	29.6
PD300-44/4	160	215		49.5	49.2	48.8	47.6	46.3	44	40.5	37.5
PD300-55/4	200	270		58.2	57.9	57.6	56.7	56.1	55	52.5	49.2







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