



Mumbai : 703, Centrum IT Park, Opp. Railadevi TMC Office, Wagle Estate MIDC, Thane (W) - 400604, Maharashtra
nachiket@purencure.com | sachin@purencure.com | +91 - 98209 69038 / +91 - 99875 90100

Ahmedabad : 38/2, Pancharatna Industrial Estate, B/h. Laxmi Narayan Petrol Pump, Sarkhej Bavla Rd. Changodar, Ahmedabad
- 382213, Gujarat | marketing@purencure.com | +91-99988 20566

Bhiwandi : B-11, Jai Shriram Complex, Near Monginis Cake Factory, Dapoda, Bhiwandi-421302, Maharashtra
nachiket@purencure.com | +91 - 98209 69038 / +91 - 99875 90100

Chennai : 140, New Colony, Koyambedu, Land mark : Behind St. Thomas College, Chennai – 600107, TAMIL NADU
musheer@purencure.com | +91 91766 94821 / +91 - 94447 86495

Delhi : Plot No. 209, Patpadganj Industrial Estate, Patpadganj, Nr. Anand Vihar Bus / Metro Station Delhi – 110092,
delhi@purencure.com | +91 98715 40780

Hyderabad : Plot B-3, IDA Uppal, Uppal, Hyderabad, Telengana - 500039 | hyderabad@purencure.com | +91 88974 86227

Odha: 107, Neptune Industrial Park, Gate No - 4, Near Karnavati Estate, behind Royal Restaurant, S. P. Ring Road, Odhav -
Ahmedabad - 382415 | service@purencure.com | +91 99137 90229

Pune : 12, 'F' Wing, Steel India Compound, Mohan Nagar, Chinchwad, Pune – 411019, Maharashtra
sachin@purencure.com | +91 - 99875 90100 / +91 98209 69038

Kolkata : pradipta@purencure.com | +91 98300 25657

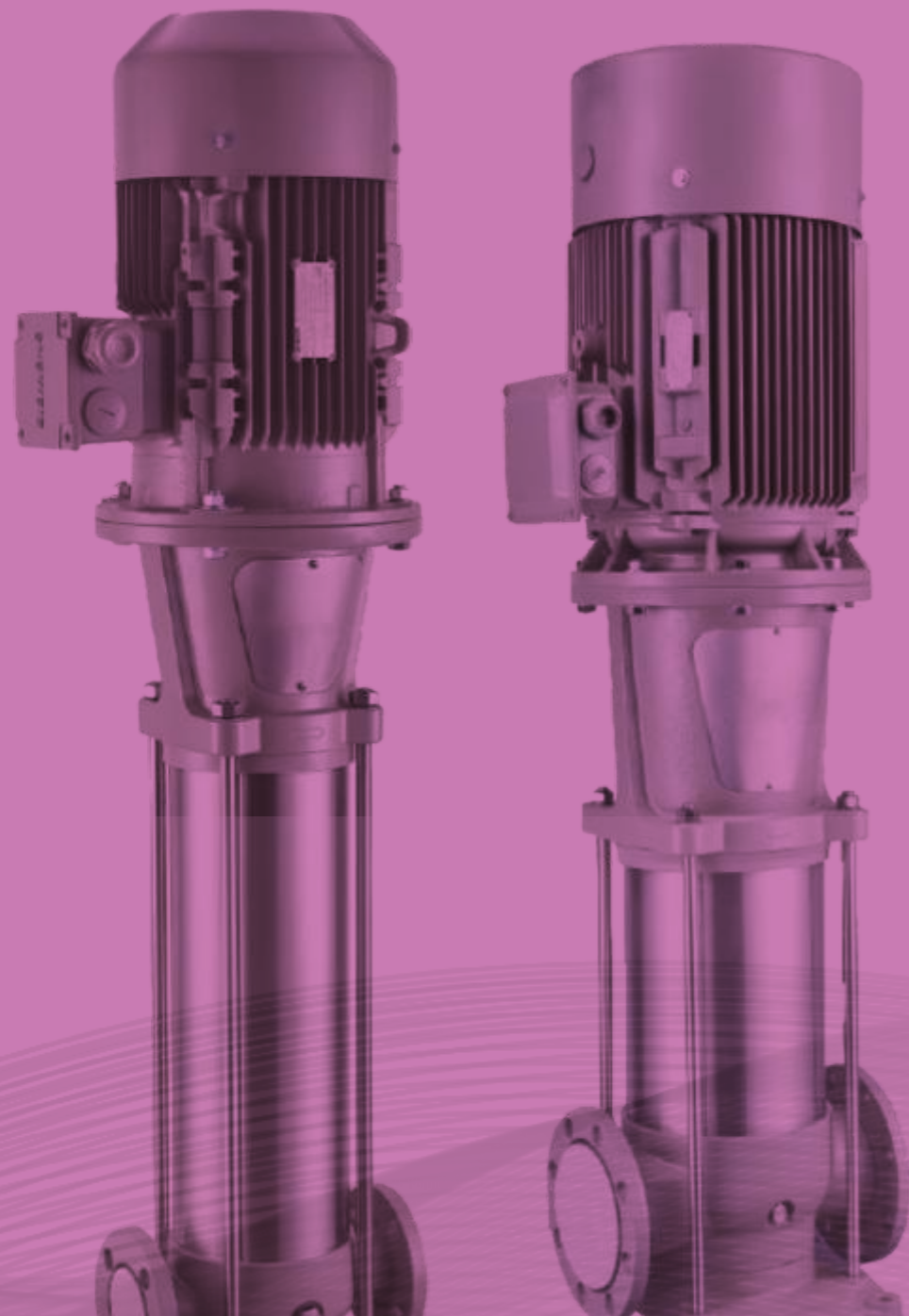
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PNC[®]
Pure & Cure Technology
CVSV
VERTICAL MULTISTAGE CENTRIFUGAL PUMP
50Hz (NEW GENERATION SERIES)



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Introduction

CVSV are high - efficiency and energy - saving vertical multi-stage centrifugal pump. The centrifugal force generated by the impeller of the rotary pump drives the fluid to transfer. Its pump body and motor are composed of main shaft, impeller, diffuser, pump case and mechanical seal, and connected by coupling.

CVSV series can be used as booster pump alone or as auxiliary booster equipment in the booster system of construction and industry. Its piping structure ensures that the pump is directly installed in the same horizontal piping system with the same diameter in and out. This design makes the structure and piping of the pump more compact.

CVSV series vertical multi - stage centrifugal pump can be installed vertically or horizontally on pipeline according to different installation space. In the case of horizontal installation, the pump needs to be added with fixed module to ensure the stability of the pump during operation.

Motor

- Totally enclosed, fan-cooled, 2-pole standard motors
- Enclosure class: IP55
- Insulation class: F
- Voltage: 3x220-240/380-415V
1x220-240V
- Available with single-phase motors(0.37kW-2.2kW)

Liquid temperature °C

- Normal temperature pump: -15°C to +70°C
- Hot temperature pump: -15°C to +120°C

Performance curves

- The motors used for the measurements are based on 2900rpm or 2950 rpm
- Tolerances to ISO 9906
- Measurements have been made with airless water at a temperature of 20 °C
- The curves apply to the following kinematic viscosity: = 1 mm²/s
- Select a best efficiency of the pump which is operating within the bold curve of the pump performance.

Pump material

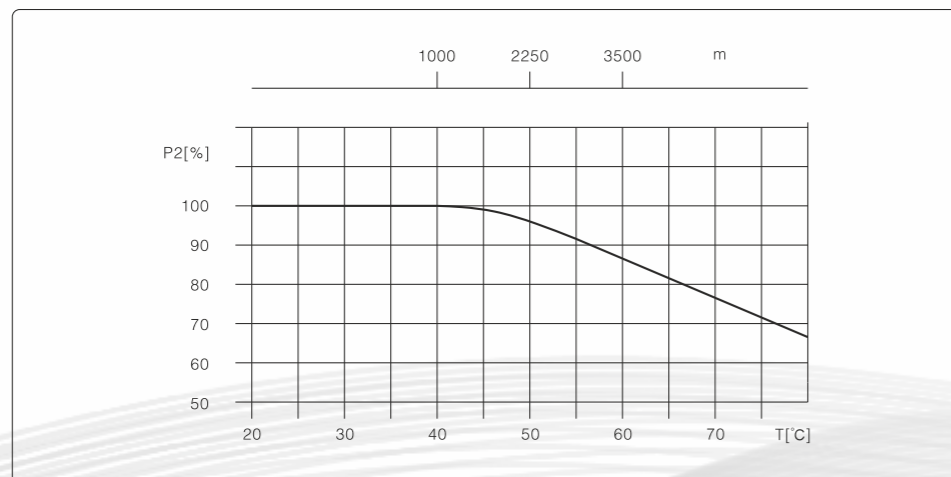
- Cast iron
- Stainlesssteel(AISI304/I316)
- Duplex stainless steel(2205)

Pipe connection

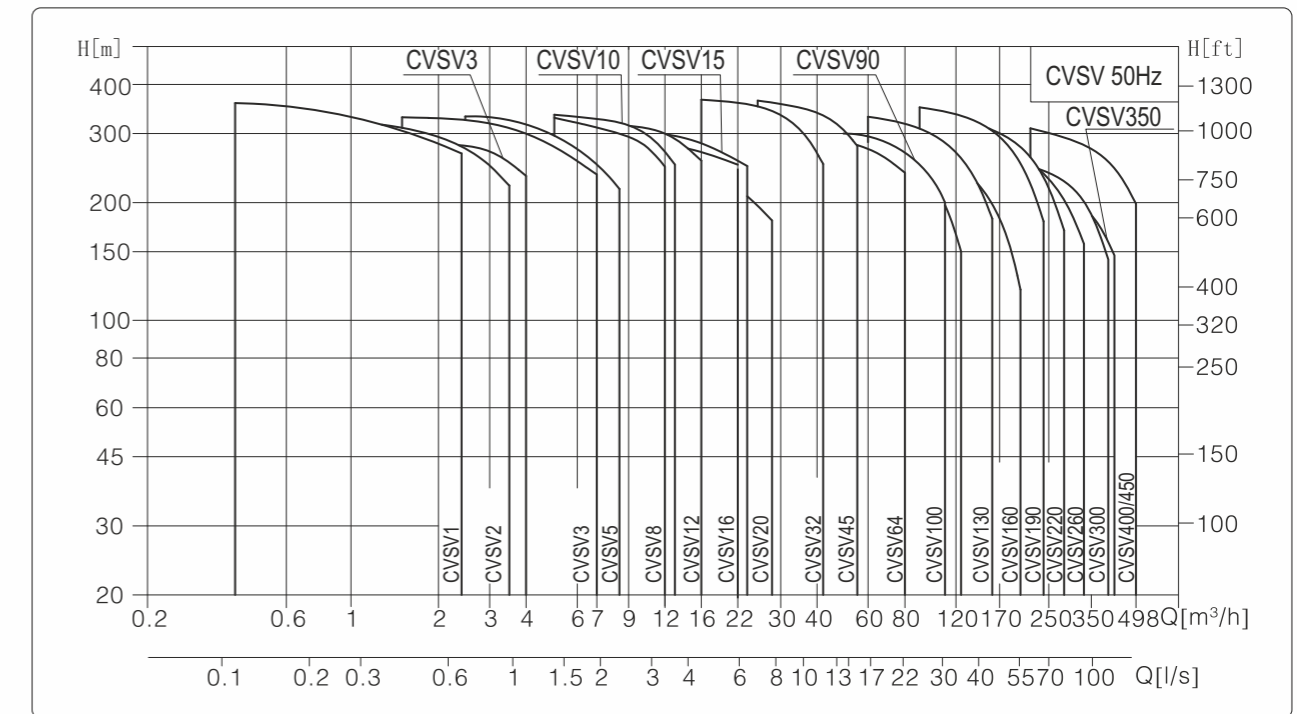
- DIN flange, ANSI flange
- Thread
- Tri-Clamp

Ambient temperature

If the ambient temperature exceeds the 40 °C or the pump is installed at an altitude exceeding 1000 m, the motor output power P2 will decrease. In such cases, it necessary to use a motor with a higher rated output.



Pump performance range



Minimum inlet pressure, NPSH

Cavitation may occur if the following conditions exist during the operation of the water pump:

- The water tank or pool is lower than the water pump inlet;
- High liquid temperature;
- Actual flow significantly greater than rated flow;
- Pressure in the pump lower than the vaporization pressure of the conveying liquid.

To avoid cavitation, make sure there is a minimum pressure on the inlet side of the pump. The maximum suction range H (m) can be calculated as follows:

$$H = P_b * 10.2 - NPSH - H_f - H_v - H_s$$

P_b = Atmospheric pressure (atmospheric pressure can be set to 1 bar), in closed system, P_b is system pressure

H_f = Net positive suction head (can be read from the maximum possible flow rate of the pump on the NPSH curve)

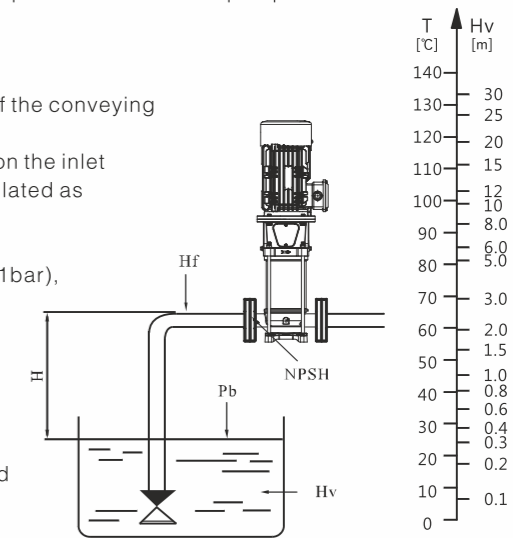
H_f = Pipeline loss at inlet

H_v = Vaporization pressure

H_s = Safety margin = Minimum 0.5m head

If the calculated value of H is positive, the pump can be operated at the maximum suction range H.

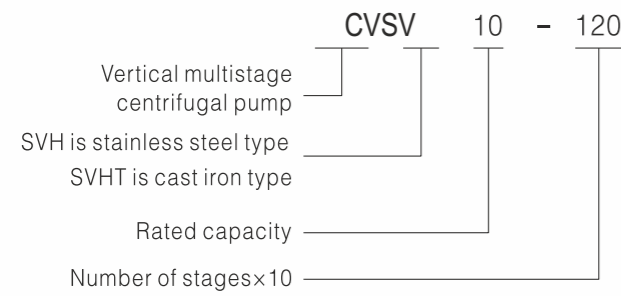
If the calculated H is negative, there must be a head with minimum inlet pressure H.



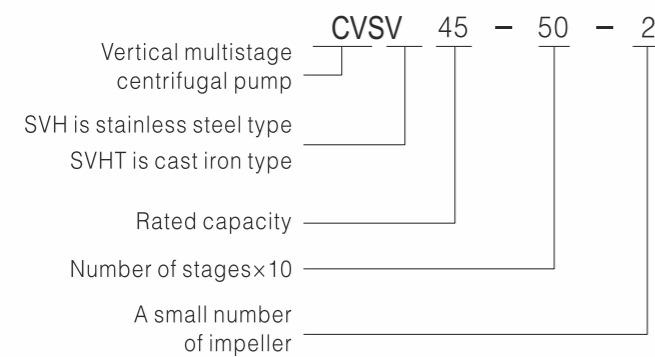
Make sure that the pump is not in a cavitation state

Model specification

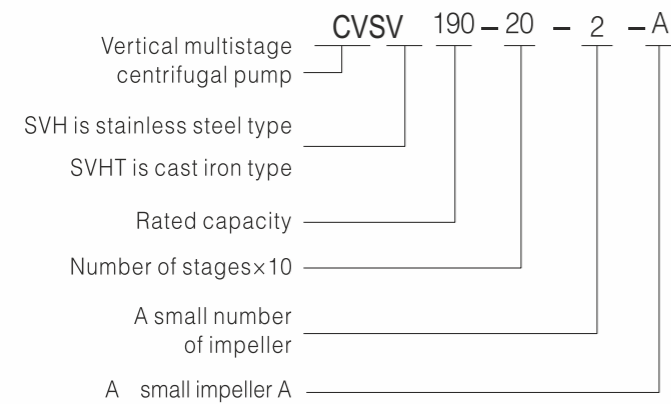
CVSV 1,2,3,4,5,8,10,12,15,16,20



CVSV 32,45,64,90



CVSV 100,130,160,190,220,260,300,350,400,450



Applications

Water supply

- Water filter
- Supercharging
- Pressurization of hotels
- Industrial pressurization

Industrial boosting

- Cleaning system
- High pressure flushing system
- Firefighting system
- Car cleaning equipment

Industrial liquid transport

- Cooling air conditioning system
- Boiler feed water
- Condensing system and cooling tower
- Machine tool cooling lubrication system

Water treatment

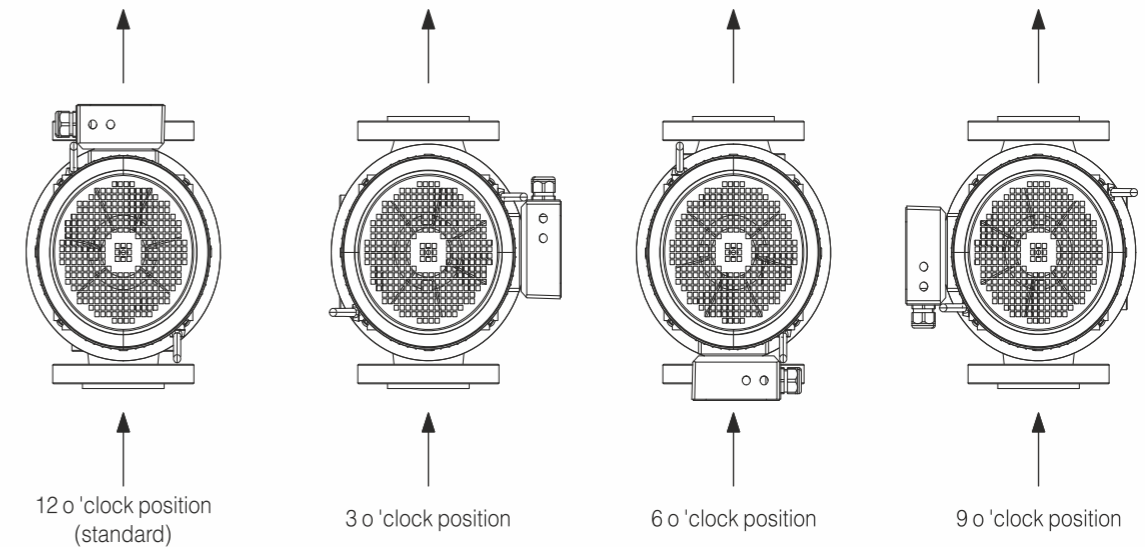
- Ultrafiltration system
- Reverse osmosis system
- Distillation system
- Separator
- Swimming pool

Irrigation

- Regional irrigation
- Sprinkler irrigation
- Drip irrigation
- Greenhouse irrigation

Junction box position

In standard cases, the junction box is installed on the outlet side of the pump.



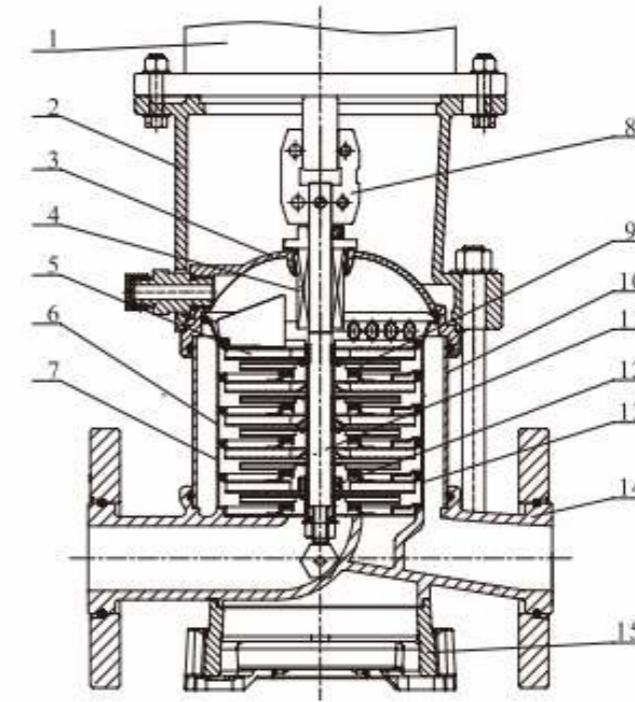
Product range introduction

Parameter	1	2	3	4	5	8	10	12	15	16	20
Rated flow rate [m³/h]	1	2	3	4	5	8	10	12	15	16	20
Rated flow rate [l/s]	0.28	0.56	0.83	1.1	1.39	2.2	2.78	3.3	4.17	4.4	5.6
Flow rate [m³/h]	0.4~2.4	1~3.5	1.2~4	1.5~6	2.5~8.5	5~12	5~13	7~16	8~23	8~22	10~28
Flow rate [l/s]	0.11~0.66	0.28~0.97	0.33~1.1	0.42~1.63	0.69~2.36	1.39~3.3	1.39~3.61	1.9~4.4	2.22~6.39	2.2~6.1	2.8~7.8
Maximum pressure [bar]	36	32	29	33	33	33	34	32	32	29	25
Power [kW]	0.37~3	0.37~5.5	0.37~5.5	0.55~7.5	0.37~7.5	0.75~15	0.75~15	1.5~18.5	1.1~22	2.2~22	1.1~22
Temperature range [°C]	-15 ~ +120										
Highest efficiency [%]	48	52	57	57	66	62	68	63	68	66	68
SVH Pipe connection											
DIN flange	DN25	DN25	DN25	DN32	DN32	DN40	DN40	DN50	DN50	DN50	DN50
Thread	R:1 ¼"	R:1 ¼"	R:1 ¼"	R:1 ¼"	R:1 ¼"	R:2"	R:2"	R:2"	R:2"	R:2"	R:2"
Clamp connection	DN32	DN32	DN32	DN32	DN32	DN50	DN50	DN50	DN50	DN50	DN50
SVHT Pipe connection											
DIN flange	DN25	DN25	DN25	DN32	DN32	DN40	DN40	DN50	DN50	DN50	DN50
Oval flange	Rp 1	Rp 1	Rp 1	Rp 1 ¼	Rp 1 ¼	Rp 1 ½	Rp 1 ½	Rp 1 ½	Rp 1 ½	Rp 1 ½	Rp 1 ½

Parameter	32	45	64	90	100	130	160	190	200	260
Rated flow rate [m³/h]	32	45	64	90	100	130	160	190	220	260
Rated flow rate [l/s]	8.9	12.5	17.8	25	27.78	36.11	44.44	52.78	61.11	72.22
Flow rate [m³/h]	16~42	25~55	30~80	50~110	50~125	60~160	80~200	90~240	105~282	125~330
Flow rate [l/s]	4.4~11	6.9~15.3	8~22	14~30	14~34.7	16.7~44.4	22.2~55.6	25~66.7	29.2~78.3	34.7~91.7
Maximum pressure [bar]	37	37	30	27	30	33	27	34	34	27
Power [kW]	2.2~45	4~55	4~75	7.5~75	5.5~75	11~110	11~110	18.5~200	22~200	30~200
Temperature range [°C]	-15 ~ +120									
Highest efficiency [%]	75	77	78	79	81	82	82	82	83	84
Pipe connection										
DIN flange	DN65	DN80	DN100	DN100	DN100	DN150	DN150	DN200	DN200	DN200

Parameter	300	350	400	450
Rated flow rate [m³/h]	300	350	400	450
Rated flow rate [l/s]	83.4	97.3	111.2	125.1
Flow rate [m³/h]	160~400	180~420	216~498	216~498
Flow rate [l/s]	44.5~111.2	50~116.8	60~138.4	60~138.4
Maximum pressure [bar]	28	24	34	34
Power [kW]	30~220	37~220	75~355	75~355
Temperature range [°C]	-15 ~ +120			
Highest efficiency [%]	83	85	86	86
Pipe connection				
DIN flange	DN250	DN250	DN250	DN250

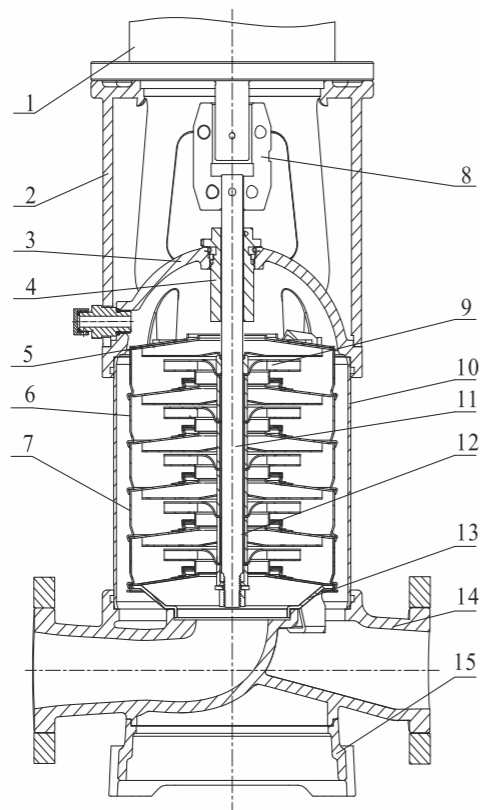
Structure CVSV 1,2,3,4,5



Materials CVSV 1,2,3,4,5

No.	Spare parts	Materials			
		CVSV	GB	EN DIN	AISI/ASTM
1	Motor	/	/	/	/
2	Bracket	Ductile cast iron	GB 1348-QT500-7	EN 1563 EN-GJS-500-7	ASTM A536 65-45-12
3	Seal base	Stainless steel / Ductile cast iron	GB/T20878-06Cr19Ni10 / GB 1348-QT500-7	EN 10088-1.4301 / EN 1563 EN-GJS-500-7	AISI 304 / ASTM A536 65-45-12
4	Mechanical seal	/	/	/	/
5	Top diffuser	Stainless steel	GB/T20878-06Cr19Ni10	EN 10088-1.4301	AISI 304
6	Diffuser	Stainless steel	GB/T20878-06Cr19Ni10	EN 10088-1.4301	AISI 304
7	Support diffuser	Stainless steel	GB/T20878-06Cr19Ni10	EN 10088-1.4301	AISI 304
8	Coupling	Ductile cast iron	GB 1348-QT500-7	EN 1563 EN-GJS-500-7	ASTM A536 65-45-12
9	Impeller	Stainless steel	GB/T20878-06Cr19Ni10	EN 10088-1.4301	AISI 304
10	Cylinder	Stainless steel	GB/T20878-06Cr19Ni10	EN 10088-1.4301	AISI 304
11	Shaft	Stainless steel	GB/T20878-06Cr19Ni10	EN 10088-1.4301	AISI 304
12	Bearing	SiC/WC	/	/	/
13	Inducer	Stainless steel	GB/T20878-06Cr19Ni10	EN 10088-1.4301	AISI 304
14	Inlet & outlet chamber	Stainless steel / Ductile cast iron	GB/T20878-06Cr19Ni10 / GB 1348-QT500-7	EN 10088-1.4301 / EN 1563 EN-GJS-500-7	AISI 304 / ASTM A536 65-45-12
15	Base	Ductile cast iron	GB 1348-QT500-7	EN 1563 EN-GJS-500-7	ASTM A536 65-45-12

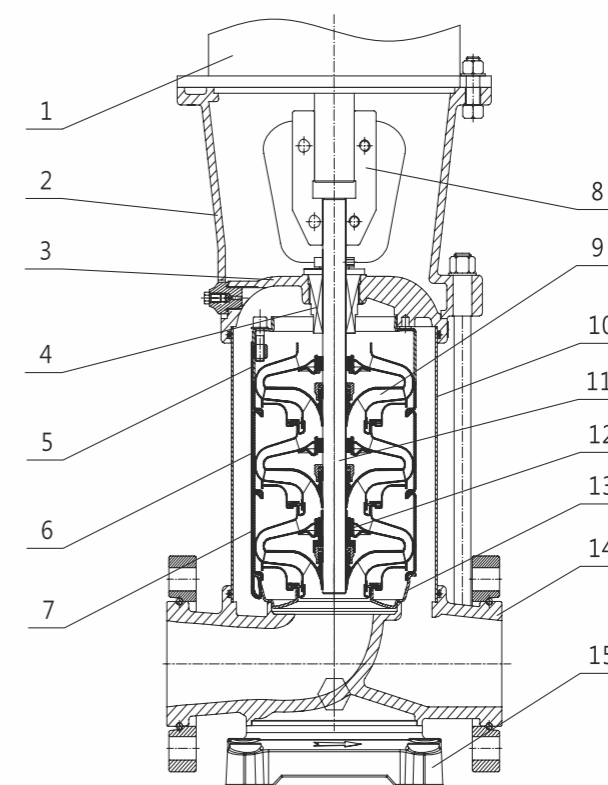
Structure CVSV 8,10,12,15,16,20



Materials CVSV 8,10,12,15,16,20

No.	Spare parts	Materials	GB	EN DIN	AISI/ASTM
		CVSV	CVSV	CVSV	CVSV
1	Motor	/	/	/	/
2	Bracket	Ductile cast iron	GB 1348-QT500-7	EN 1563 EN-GJS-500-7	ASTMA536 65-45-12
3	Seal base	Stainless steel /Ductile cast iron	GB/T20878-06Cr19Ni10 /GB1348-QT500-7	EN 10088-1.4301 /EN 1563 EN-GJS-500-7	AISI304 /ASTMA536 65-45-12
4	Mechanical seal	/	/	/	/
5	Top diffuser	Stainless steel	GB/T20878-06Cr19Ni10	EN 10088-1.4301	AISI304
6	Diffuser	Stainless steel	GB/T20878-06Cr19Ni10	EN 10088-1.4301	AISI304
7	Support diffuser	Stainless steel	GB/T20878-06Cr19Ni10	EN 10088-1.4301	AISI304
8	Coupling	Ductile cast iron	GB 1348-QT500-7	EN 1563 EN-GJS-500-7	ASTMA536 65-45-12
9	Impeller	Stainless steel	GB/T20878-06Cr19Ni10	EN 10088-1.4301	AISI304
10	Cylinder	Stainless steel	GB/T20878-06Cr19Ni10	EN 10088-1.4301	AISI304
11	Shaft	Stainless steel	GB/T20878-06Cr19Ni10	EN 10088-1.4301	AISI304
12	Bearing	SIC/WC	/	/	/
13	Inducer	Stainless steel	GB/T20878-06Cr19Ni10	EN 10088-1.4301	AISI304
14	Inlet&outlet chamber	Stainless steel /Ductile cast iron	GB/T20878-06Cr19Ni10 /GB1348-QT500-7	EN 10088-1.4301 /EN 1563 EN-GJS-500-7	AISI304 /ASTMA536 65-45-12
15	Base	Ductile cast iron	GB 1348-QT500-7	EN 1563 EN-GJS-500-7	ASTM A536 65-45-12

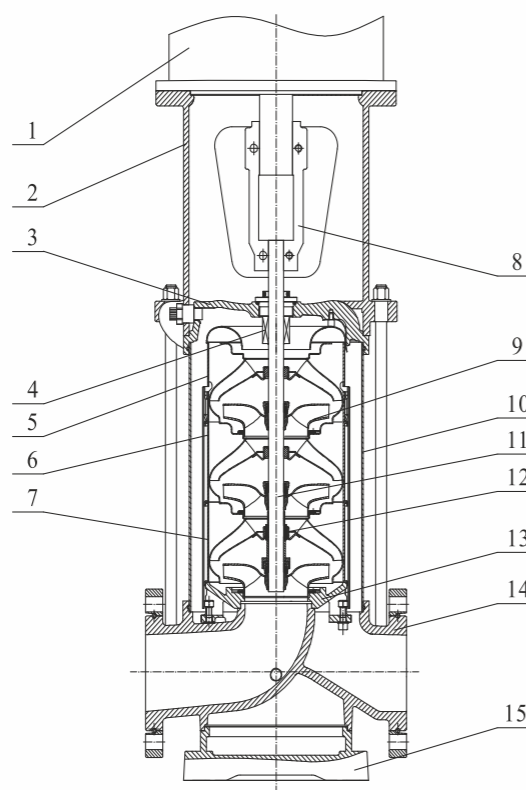
Structure CVSV 32,45,64,90



Materials CVSV 32,45,64,90

No.	Spare parts	Materials	GB	EN DIN	AISI/ASTM
		CVSV	CVSV	CVSV	CVSV
1	Motor	/	/	/	/
2	Bracket	Ductile cast iron	GB 1348-QT500-7	EN 1563 EN-GJS-500-7	ASTMA536 65-45-12
3	Seal base	Stainless steel /Ductile cast iron	GB/T20878-06Cr19Ni10 /GB1348-QT500-7	EN 10088-1.4301 /EN 1563 EN-GJS-500-7	AISI304 /ASTMA536 65-45-12
4	Mechanical seal	/	/	/	/
5	Top diffuser	Stainless steel	GB/T20878-06Cr19Ni10	EN 10088-1.4301	AISI304
6	Diffuser	Stainless steel	GB/T20878-06Cr19Ni10	EN 10088-1.4301	AISI304
7	Support diffuser	Stainless steel	GB/T20878-06Cr19Ni10	EN 10088-1.4301	AISI304
8	Coupling	Ductile cast iron	GB 1348-QT500-7	EN 1563 EN-GJS-500-7	ASTMA536 65-45-12
9	Impeller	Stainless steel	GB/T20878-06Cr19Ni10	EN 10088-1.4301	AISI304
10	Cylinder	Stainless steel	GB/T20878-06Cr19Ni10	EN 10088-1.4301	AISI304
11	Shaft	Stainless steel	GB/T20878-06Cr19Ni10	EN 10088-1.4301	AISI304
12	Bearing	SIC/WC	/	/	/
13	Inducer	Stainless steel	GB/T20878-06Cr19Ni10	EN 10088-1.4301	AISI304
14	Inlet&outlet chamber	Stainless steel /Ductile cast iron	GB/T20878-06Cr19Ni10 /GB1348-QT500-7	EN 10088-1.4301 /EN 1563 EN-GJS-500-7	AISI304 /ASTMA536 65-45-12
15	Base	Ductile cast iron	GB 1348-QT500-7	EN 1563 EN-GJS-500-7	ASTM A536 65-45-12

Structure CVSV 100,130,160,190,220,260,300,350,400,450



Materials CVSV 100,130,160,190,220,260,300,350,400,450

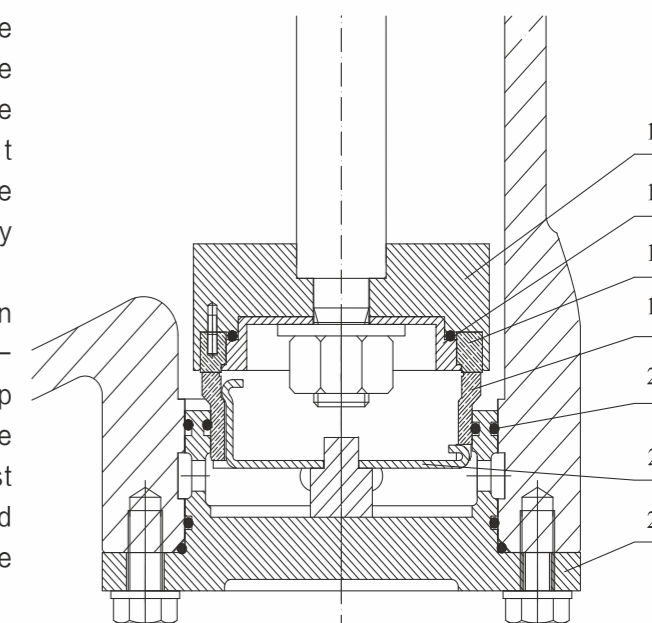
No.	Spare parts	Materials	GB	EN DIN	AISI/ASTM
		CVSV	CVSV	CVSV	CVSV
1	Motor	/	/	/	/
2	Bracket	Ductile cast iron	GB 1348-QT500-7	EN 1563 EN-GJS-500-7	ASTMA536 65-45-12
3	Seal base	Stainless steel /Ductile cast iron	GB/T20878-06Cr19Ni10 /GB1348-QT500-7	EN 10088-1.4301 /EN 1563 EN-GJS-500-7	AISI304 /ASTMA536 65-45-12
4	Mechanical seal	/	/	/	/
5	Top diffuser	Stainless steel	GB/T20878-06Cr19Ni10	EN 10088-1.4301	AISI304
6	Diffuser	Stainless steel	GB/T20878-06Cr19Ni10	EN 10088-1.4301	AISI304
7	Support diffuser	Stainless steel	GB/T20878-06Cr19Ni10	EN 10088-1.4301	AISI304
8	Coupling	Ductile cast iron	GB 1348-QT500-7	EN 1563 EN-GJS-500-7	ASTMA536 65-45-12
9	Impeller	Stainless steel	GB/T20878-06Cr19Ni10	EN 10088-1.4301	AISI304
10	Cylinder	Stainless steel	GB/T20878-06Cr19Ni10	EN 10088-1.4301	AISI304
11	Shaft	Stainless steel	GB/T20878-06Cr19Ni10	EN 10088-1.4301	AISI304
12	Bearing	SIC/WC	/	/	/
13	Inducer	Stainless steel	GB/T20878-06Cr19Ni10	EN 10088-1.4301	AISI304
14	Intel&outlet chamber	Stainless steel /Ductile cast iron	GB/T20878-06Cr19Ni10 /GB1348-QT500-7	EN 10088-1.4301 /EN 1563 EN-GJS-500-7	AISI304 /ASTMA536 65-45-12
15	Base	Ductile cast iron	GB 1348-QT500-7	EN 1563 EN-GJS-500-7	ASTMA536 65-45-12

Thrust balancing device

Brief introduction

To balance most of the axial force produced by hydraulic rotating parts, reduce the motor bearing to bear axial load, we in the CVSV 190/220/260 series product structure configuration of the thrust balance device (CVSV), to enhance the stability and service life of the pump.

The CVSV thrust balancer is an optional component consisting of a non-rotating component mounted in or on the pump base and a rotating component mounted on the shaft end below the first impeller. The thrust balancer absorbs most of the thrust generated by the impeller, thereby reducing the axial force required by the motor bearing.

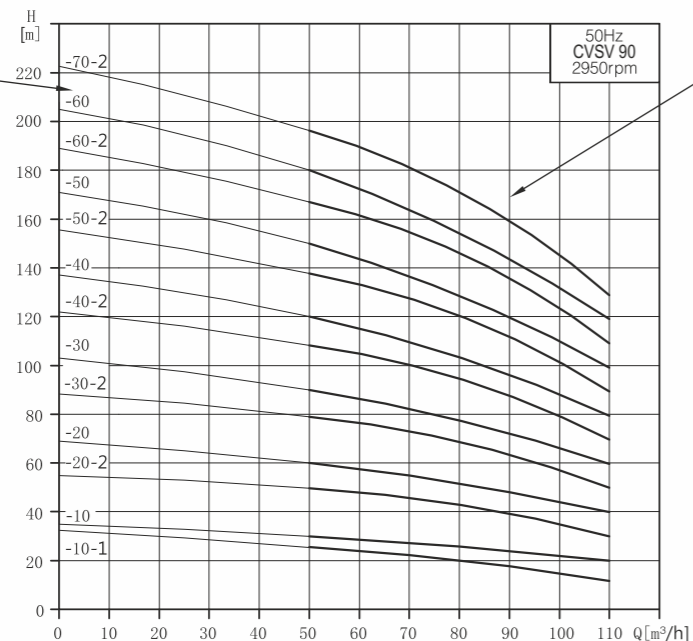


Material sheet for thrust balancer

NO.	PARTS	MATERIAL	GB	EN DIN	AISI/ASTM
16	Moving ring seat	Stainless steel	GB/T20878-06Cr19Ni10	EN 10088-1.4301	AISI304
17	Moving ring gland	Stainless steel	GB/T20878-06Cr19Ni10	EN 10088-1.4301	AISI304
18	Moving ring	Tungsten carbide	/	/	/
19	Static ring	Tungsten carbide	/	/	/
20	Seal	Fluorine rubber	/	/	/
21	Suspension bracket	Stainless steel	GB/T20878-06Cr19Ni10	EN 10088-1.4301	AISI304
22	Static ring seat	Stainless steel	GB/T20878-06Cr19Ni10	EN 10088-1.4301	AISI304

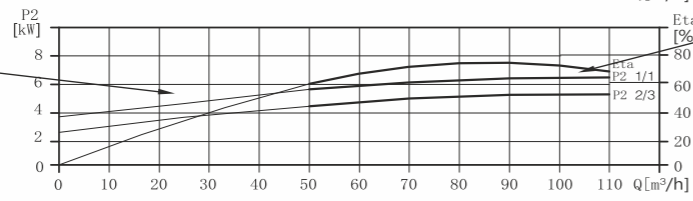
Curve charts reading

Number of stages
First figure:
number of
stages*10
Second figure:
number of
reduced-diameter
impellers

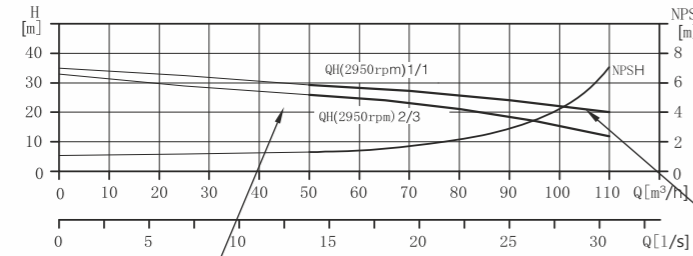


The bold curves indicate the recommended duty range for best efficiency.

The power curves indicate pump input power per stage. Curves are shown for full (1/1) and for reduced-diameter (2/3) impellers



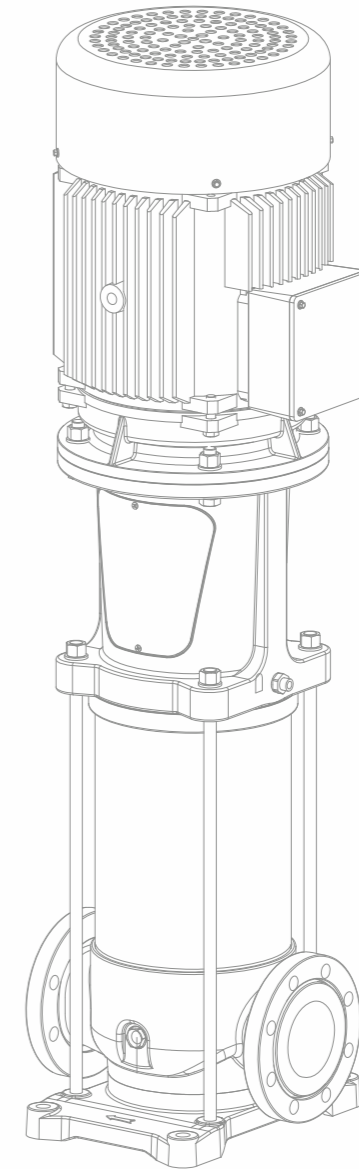
The ETA curve shows the efficiency of a pump with an average number of stages. The efficiency of pumps with reduced-diameter impellers is approximately 2 % lower than the eta curve shown in the chart



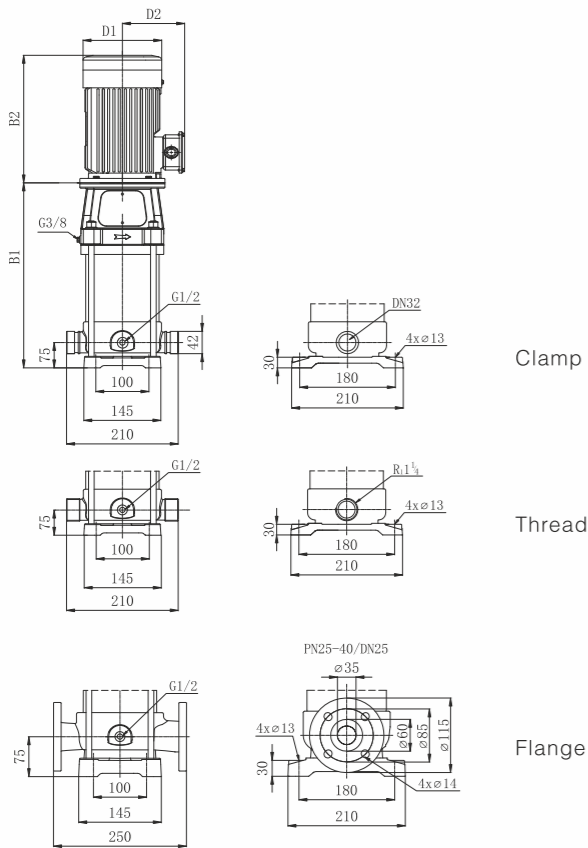
The NPSH curve shows the efficiency of a pump with an average number of stages, a safety margin of at least 0.5m should be added in the selection

Q-H curve for each individual impeller. Curves are shown for full (1/1) and for reduced-diameter (2/3) impellers.

CVSV



Installation dimensions and weight



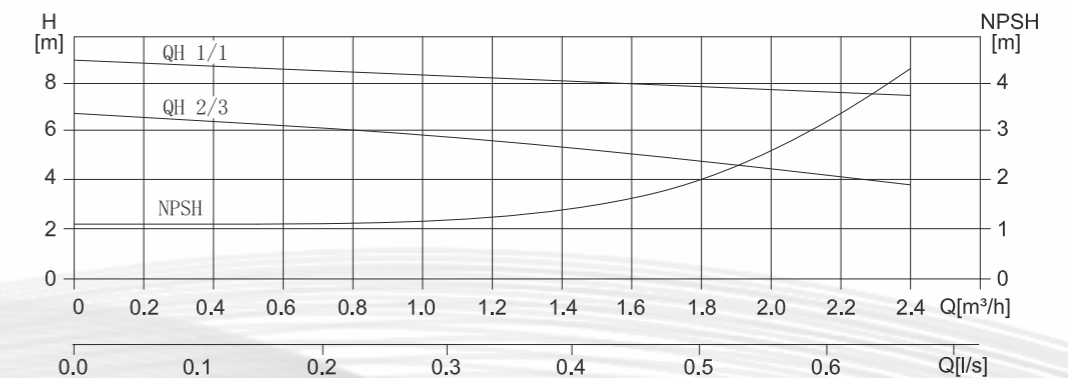
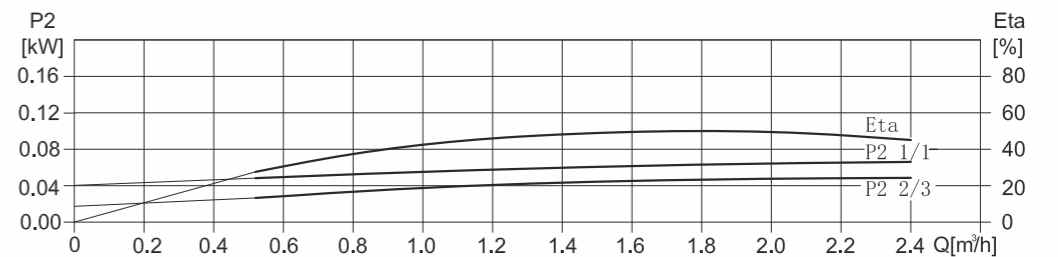
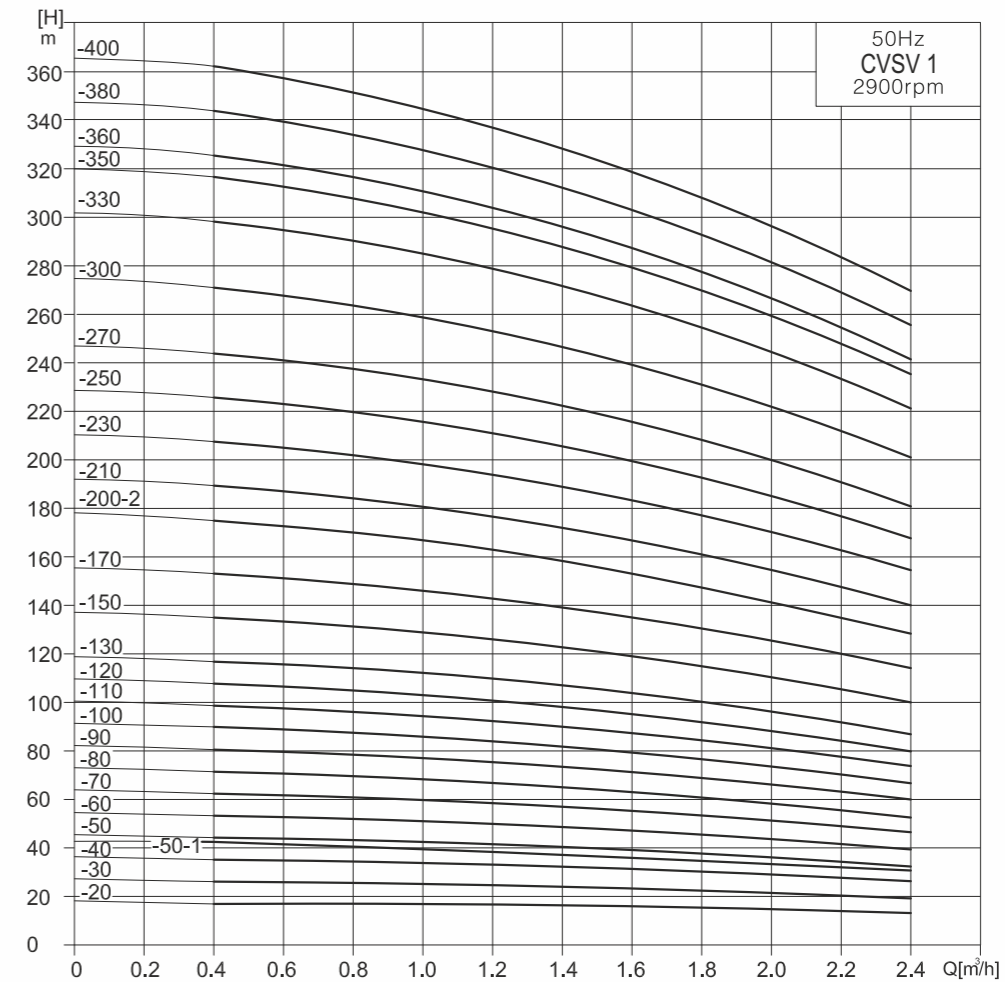
Model	Dimension (mm)					Weight (kg)
	B1	B2	B1+B2	D1	D2	
1-20	262	249	511	139	116	21
1-30	280	249	529	139	116	21
1-40	298	249	547	139	116	22
1-50-1	316	249	565	139	116	23
1-50	316	249	565	139	116	24
1-60	334	249	583	139	116	25
1-70	352	249	601	139	116	26
1-80	380	271	651	154	124	29
1-90	398	271	669	154	124	30
1-100	416	271	687	154	124	31
1-110	434	271	705	154	124	33
1-120	452	271	723	154	124	34
1-130	470	271	741	154	124	35
1-150	506	271	777	154	124	36
1-170	552	272	824	166	135	43
1-200-2	606	272	878	166	135	45
1-210	624	322	946	166	135	48
1-230	660	322	982	166	135	49
1-250	696	322	1018	166	135	51
1-270	732	322	1054	166	135	52
1-300	786	322	1108	166	135	54
1-330	850	339	1189	193	147	66
1-350	886	339	1225	193	147	67
1-360	904	339	1243	193	147	68
1-380	940	339	1279	193	147	69
1-400	976	339	1315	193	147	70

NOTE: For same model, SVHT weighs 1.5 kgs heavier than SVH

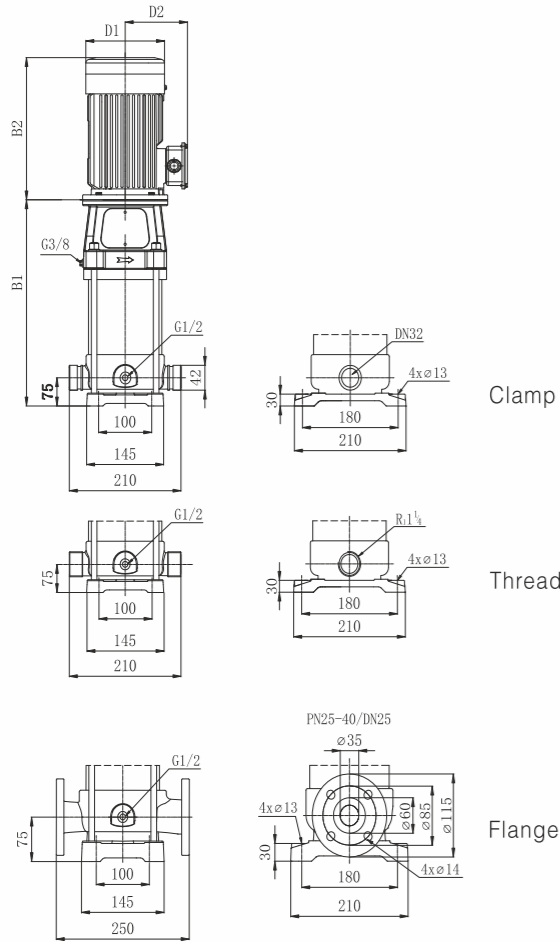
Performance data

Model	Power(kW)		Q (m³/h)	H (m)												
	kW	Hp		0.4	0.6	0.8	1.0	1.2	1.4	1.6	1.8	2	2.2	2.4		
1-20	0.37	0.5	18	17.7	17.4	17	16.8	16.5	16	15.5	15	14	13			
1-30	0.37	0.5	27	26.7	26.4	26	25	24.5	24	23	22	21	20			
1-40	0.37	0.5	36	35.5	35	34	33.5	33	32	31	30	28	27			
1-50-1	0.37	0.5	43	42	41	39.5	39	38	37	36	34	33	31			
1-50	0.55	0.75	45	44.5	44	43	42	41	40	38.5	37	35	33.5			
1-60	0.55	0.75	54	53.5	53	51	50	49	48	46	44	42	40			
1-70	0.55	0.75	63	62.5	61.5	60	59	58	56	54	52	50	47			
1-80	0.75	1	72	71.5	70	69	67	66	64	62	59	57	54			
1-90	0.75	1	81	80	79	77	76	74	72	69	67	64	60			
1-100	0.75	1	90	89	88	86	84	82	80	77	74	71	67			
1-110	1.1	1.5	99	98	97	94	93	90	88	85	81	78	74			
1-120	1.1	1.5	108	107	105	103	101	99	96	93	89	85	80			
1-130	1.1	1.5	117	116	114	111	110	107	104	100	96	92	87			
1-150	1.1	1.5	135	134	132	129	126	123	120	116	111	106	100			
1-170	1.5	2	153	151.5	150	146	143	140	135	131	126	120	114			
1-200-2	1.5	2	175	173	170	167	163	158	153	148	142	136	128			
1-210	2.2	3	189	187.5	185	180	177	173	167	162	155	149	141			
1-230	2.2	3	207	205	202	197	194	189	183	177	170	163	154			
1-250	2.2	3	225	223	220	214	211	206	199	193	185	177	167			
1-270	2.2	3	243	241	238	231	227	222	215	208	200	191	181			
1-300	2.2	3	270	268	264	257	253	247	239	231	222	212	201			
1-330	3	4	297	295	290	283	278	271	263	255	244	234	221			
1-350	3	4	315	312	308	300	295	288	279	270	259	248	234			
1-360	3	4	324	321	317	309	303	296	287	278	266	255	241			
1-380	3	4	344	339	334	328	320	312	303	293	281	269	256			
1-400	3	4	362	357	351	345	337	328	319	308	296	284	270			

Performance curve



Installation dimensions and weight



Model	Dimension (mm)					Weight (kg)
	B1	B2	B1+B2	D1	D2	
2-20	262	249	511	139	116	21
2-30-3	280	249	529	139	116	21
2-30	280	249	529	139	116	24
2-40	298	249	547	139	116	24
2-50	326	271	597	154	124	28
2-60	344	271	615	154	124	28
2-70	362	271	633	154	124	31
2-80	380	271	651	154	124	32
2-90	398	271	669	154	124	32
2-100	426	272	698	166	135	39
2-110	444	272	716	166	135	39
2-120	462	272	734	166	135	40
2-130	480	322	802	166	135	43
2-140	498	322	820	166	135	43
2-150	516	322	838	166	135	44
2-160	534	322	856	166	135	45
2-170	552	322	874	166	135	45
2-180	570	322	892	166	135	47
2-190	598	339	937	193	147	56
2-200	616	339	955	193	147	57
2-210	634	339	973	193	147	58
2-220	652	339	991	193	147	58
2-230	670	339	1009	193	147	59
2-240	688	354	1042	220	172	68
2-250	706	354	1060	220	172	68
2-260	724	354	1078	220	172	69
2-270	742	354	1096	220	172	70
2-280	760	354	1114	220	172	71
2-290	778	354	1132	220	172	71
2-300	796	354	1150	220	172	72
2-310	834	414	1248	220	192	89
2-320	852	414	1266	220	192	89

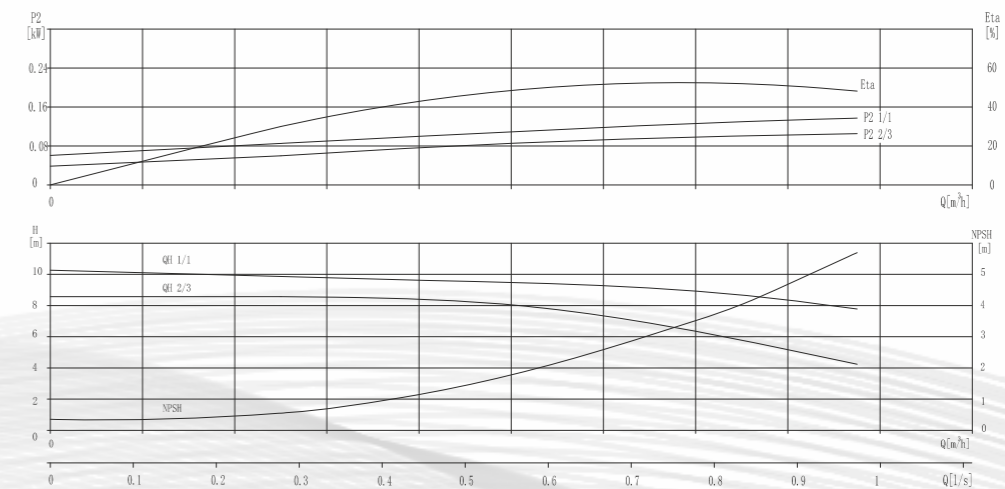
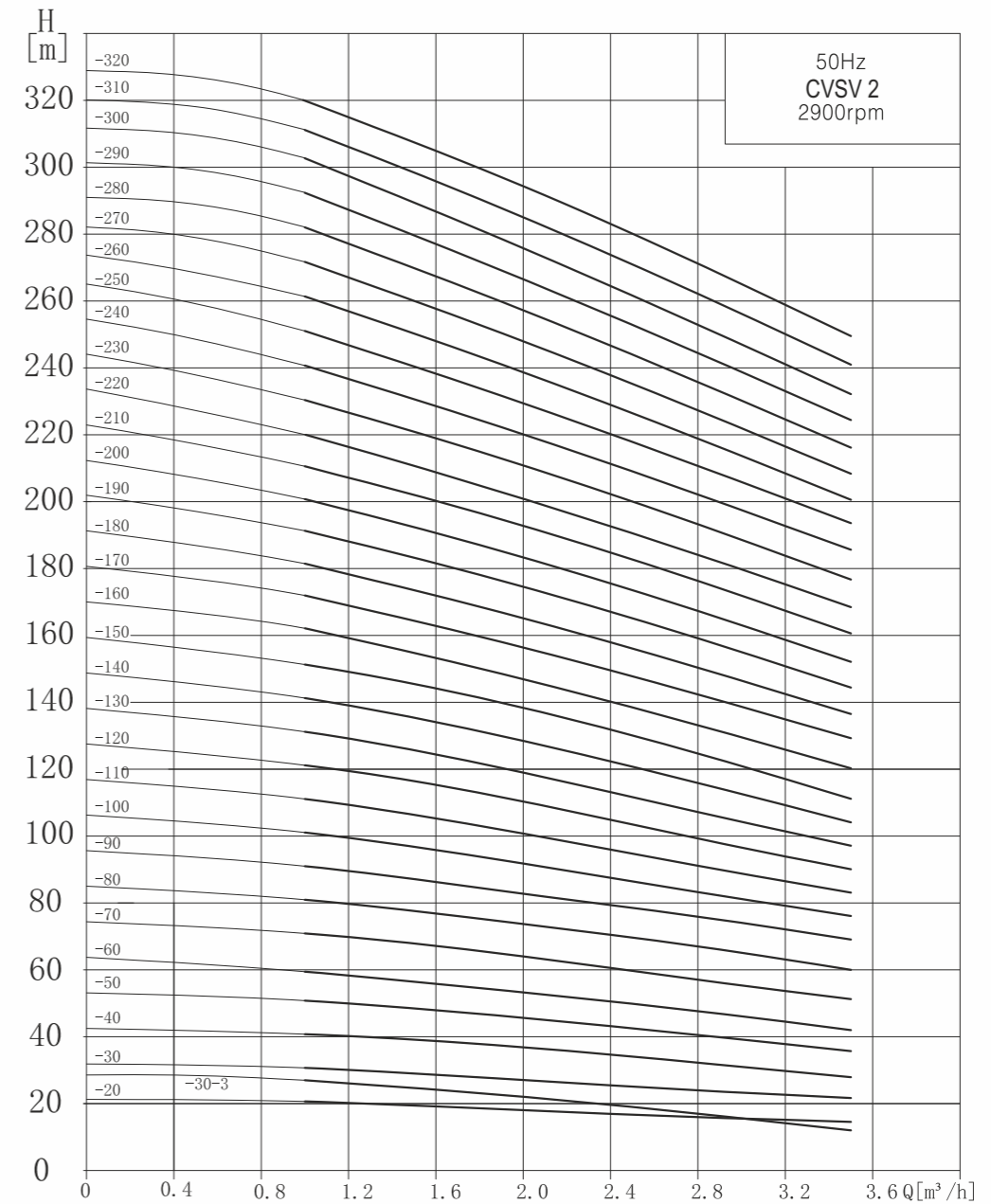
NOTE: For same model, SVHT weighs 1.5 kgs heavier than SVH

Performance data

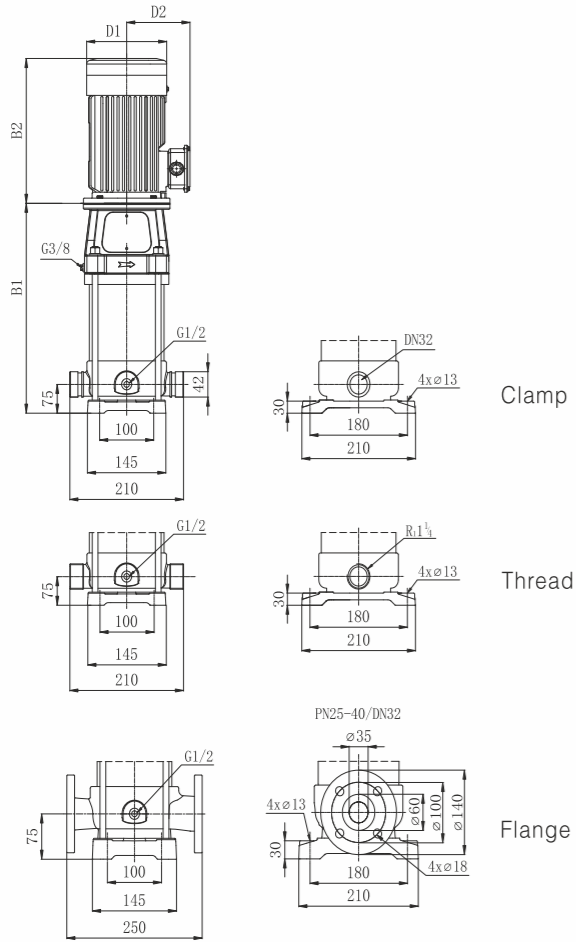
Model	Power (kW)	Q (m³/h)	H (m)								
			1.0	1.2	1.6	2.0	2.4	2.8	3.2	3.5	
2-20	0.37		21	20	19	18	17	16	15	13	
2-30-3	0.37		27	26	24	22	20	18	15	12	
2-30	0.55		31	30	28	27	26	24	22	20	
2-40	0.55		41	40	38	37	35	32	30	27	
2-50	0.75		51	50	48	45	43	40	38	34	
2-60	0.75		61	60	58	54	52	48	46	42	
2-70	1.1		71	70	67	64	61	56	53	51	
2-80	1.1		81	80	77	74	71	67	63	60	
2-90	1.1		91	90	86	82	78	75	72	68	
2-100	1.5		101	100	96	92	87	83	79	76	
2-110	1.5		111	110	105	101	96	91	87	83	
2-120	1.5		121	120	115	111	105	99	93	89	
2-130	2.2		131	130	124	120	113	107	101	97	
2-140	2.2		141	140	134	129	122	116	108	105	
2-150	2.2		151	150	143	138	131	124	117	112	
2-160	2.2		162	160	153	148	140	133	126	121	

Model	Power (kW)	Q (m³/h)	H (m)								
			1.0	1.2	1.6	2.0	2.4	2.8	3.2	3.5	
2-170	2.2		172	170	163	157	149	142	135	129	
2-180	2.2		181	180	172	165	157	150	142	137	
2-190	3		191	190	182	174	167	159	150	145	
2-200	3		201	200	191	183	176	167	159	153	
2-210	3		211	210	201	193	185	176	168	161	
2-220	3		221	220	210	202	193	183	175	169	
2-230	3		232	230	221	212	202	192	184	177	
2-240	4		242	240	230	221	211	201	193	186	
2-250	4		253	250	240	230	220	210	201	193	
2-260	4		263	260	250	239	229	219	210	201	
2-270	4		273	270	259	248	238	228	218	210	
2-280	4		283	280	269	258	247	237	226	217	
2-290	4		293	290	278	267	256	245	234	225	
2-300	4		303	300	288	276	263	253	242	233	
2-310	5.5		313	310	298	285	272	262	251	242	
2-320	5.5		323	320	307	294	282	271	259	251	

Performance curve



Installation dimensions and weight



Model	Dimension (mm)					Weight (kg)
	B1	B2	B1+B2	D1	D2	
4-20	280	249	520	139	116	23
4-30-3	307	249	547	139	116	25
4-30	317	271	597	154	124	27
4-40	344	271	624	154	124	30
4-50	371	271	651	154	124	30
4-60	408	272	758	166	135	37
4-70-2	435	272	785	166	135	38
4-70	435	322	785	166	135	40
4-80	462	322	812	166	135	41
4-90	489	322	839	166	135	41
4-100-2	516	322	866	166	135	42
4-100	526	339	936	193	147	50
4-110	553	339	963	193	147	53
4-120	580	339	990	193	147	54
4-130	607	339	1017	193	147	54
4-140	634	354	1044	220	172	63
4-150	661	354	1071	220	172	64
4-160	688	354	1098	220	172	64
4-170	715	354	1125	220	172	65
4-180	742	354	1152	220	172	68
4-190	789	414	1254	259	192	83
4-200	816	414	1281	259	192	83
4-210	843	414	1308	259	192	84
4-220	870	414	1335	259	192	85
4-230	897	414	1362	259	192	91
4-240	924	414	1389	259	192	92
4-250	951	414	1416	259	192	93
4-260	978	414	1443	259	192	93
4-270	1005	414	1470	259	192	94
4-280	1032	414	1497	259	192	95
4-290	1059	414	1524	259	192	96
4-300	1086	414	1551	259	192	96

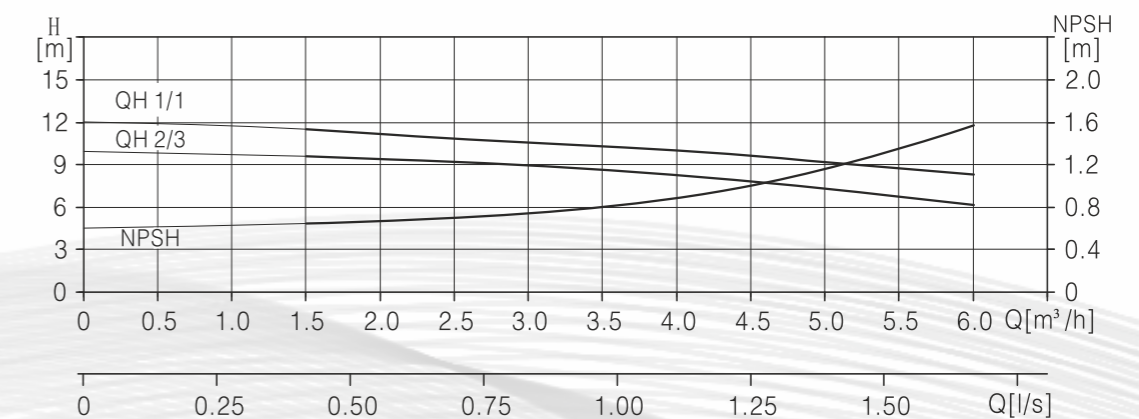
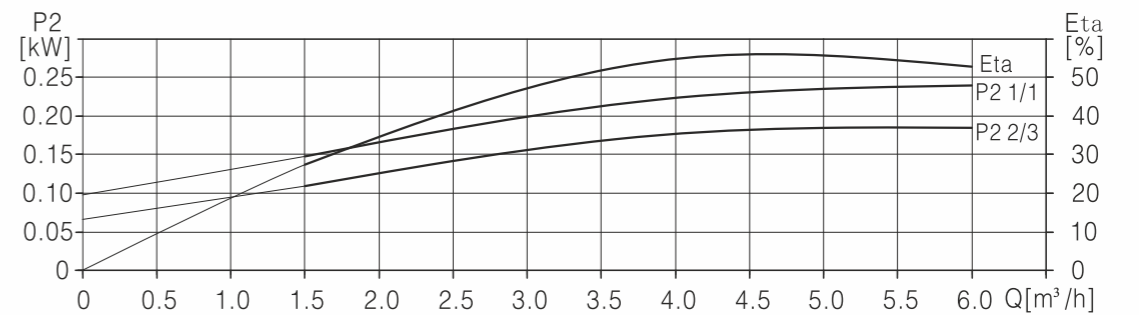
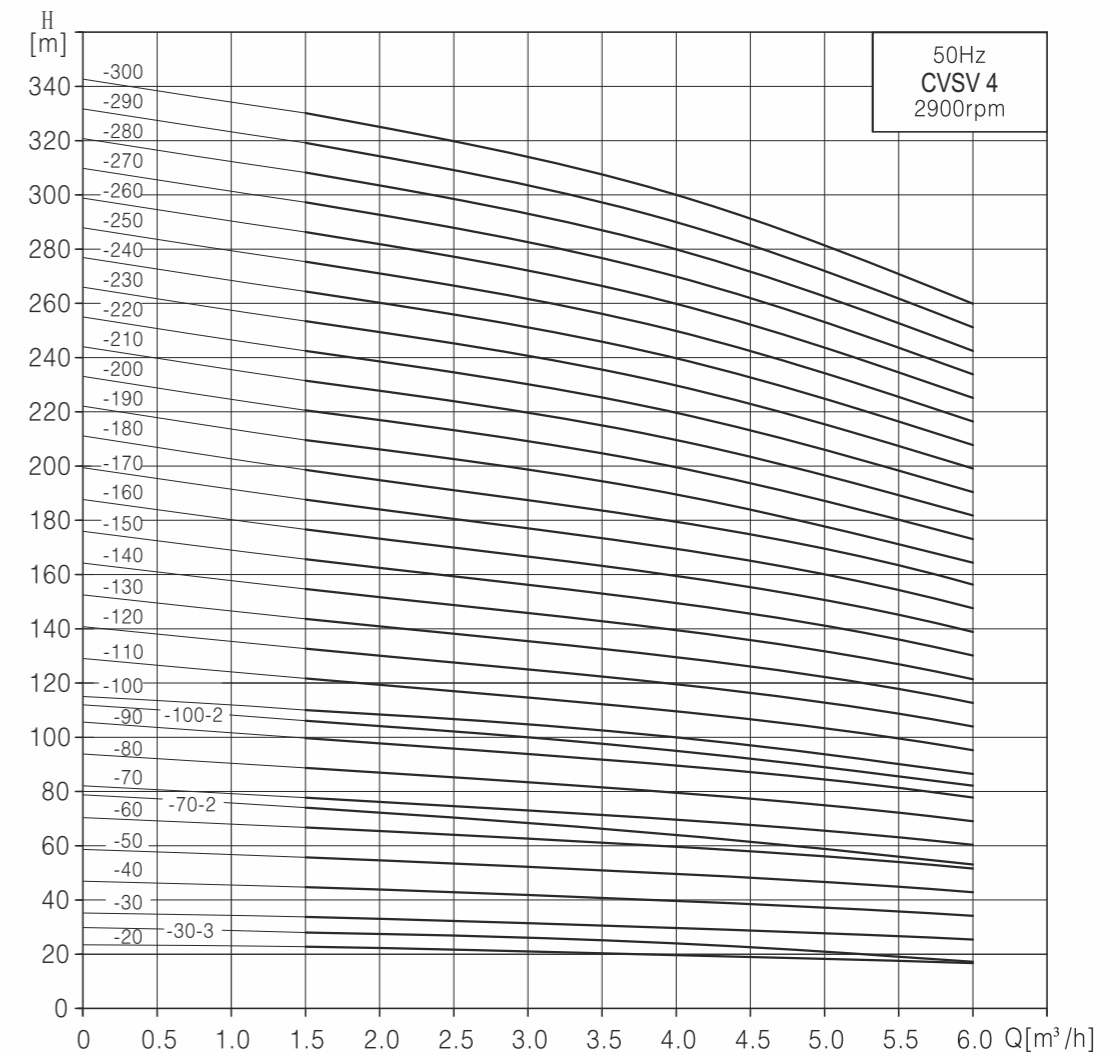
NOTE: For same model, SVHT weighs 1.5 kgs heavier than SVH

Performance data

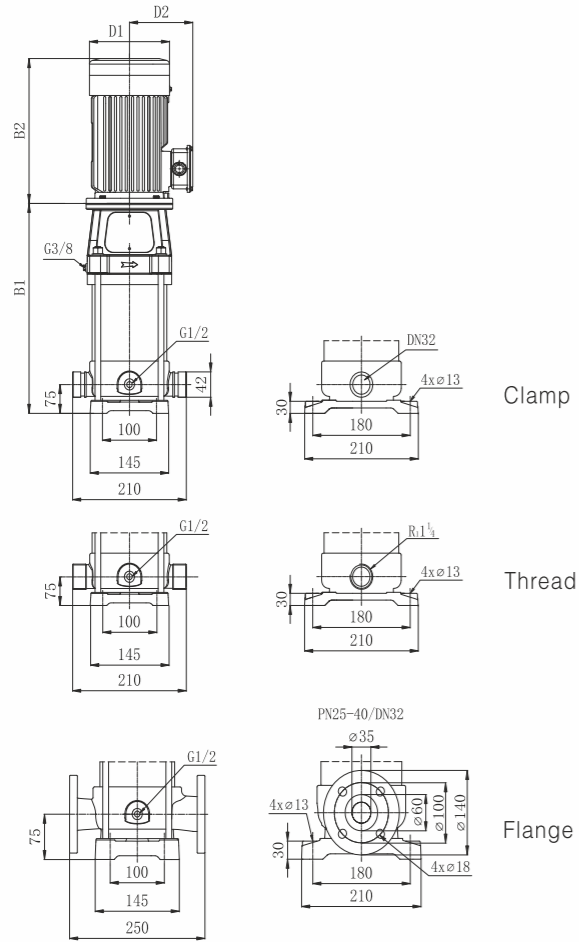
Model	Power (kW)	Q (m³/h)	H (m)					
			1.5	2.0	3.0	4.0	5.0	6.0
4-20	0.55		23	22	21	20	18	17
4-30-3	0.55		28	27	26	24	20	18
4-30	0.75		33	32	31	30	28	26
4-40	1.1		44	43	41	40	38	35
4-50	1.1		55	54	52	50	47	44
4-60	1.5		66	65	62	60	56	53
4-70-2	1.5		74	72	68	64	59	53
4-70	2.2		77	75	73	70	66	61
4-80	2.2		88	86	83	80	75	70
4-90	2.2		98	97	93	90	85	79
4-100-2	2.2		106	104	100	95	90	84
4-100	3		110	108	104	100	95	88
4-110	3		121	119	114	110	104	97
4-120	3		132	130	125	120	113	106
4-130	3		143	140	135	130	123	114
4-140	4		154	152	145	140	132	123

Model	Power (kW)	Q (m³/h)	H (m)					
			1.5	2.0	3.0	4.0	5.0	6.0
4-150	4		165	162	156	150	142	132
4-160	4		176	173	166	160	151	141
4-170	4		187	184	177	170	161	150
4-180	4		198	195	187	180	170	159
4-190	5.5		210	206	199	190	178	164
4-200	5.5		220	217	209	200	187	173
4-210	5.5		231	228	220	210	197	182
4-220	5.5		242	238	230	220	206	190
4-230	7.5		253	249	240	230	215	199
4-240	7.5		264	260	251	240	225	208
4-250	7.5		275	271	261	250	234	216
4-260	7.5		286	282	272	260	244	225
4-270	7.5		297	292	282	270	253	234
4-280	7.5		308	303	293	280	263	242
4-290	7.5		319	314	303	290	272	251
4-300	7.5		330	325	314	300	282	260

Performance curve



Installation dimensions and weight



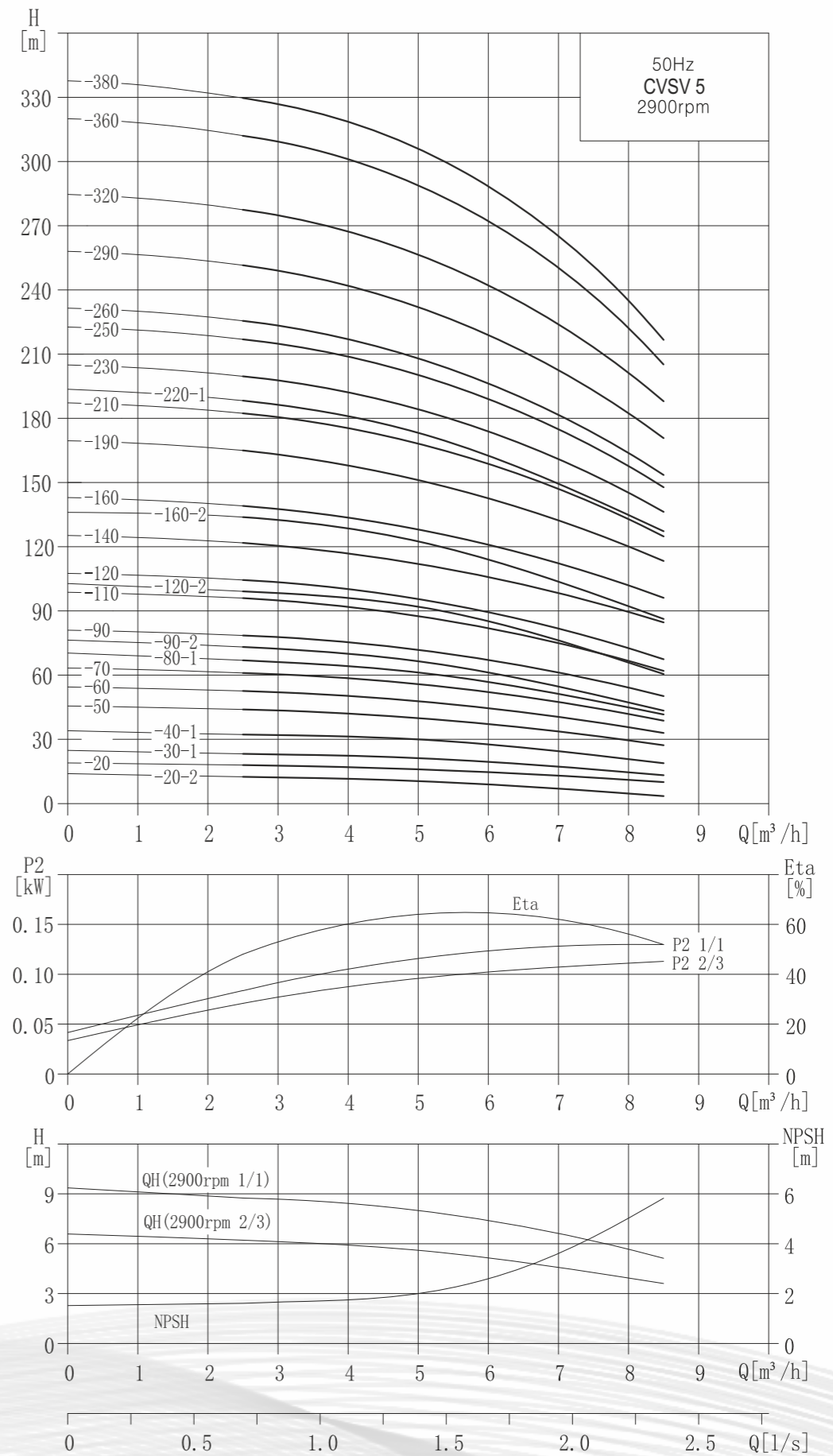
Model	Dimension (mm)					Weight (kg)
	B1	B2	B1+B2	D1	D2	
5-20-2	280	249	529	139	116	21
5-20	280	249	529	139	116	23
5-30-1	307	249	556	139	116	23
5-40-1	344	271	615	154	124	27
5-50	371	271	642	154	124	29
5-60	398	271	669	154	124	30
5-70	435	272	707	166	135	36
5-80-1	462	272	734	166	135	37
5-90-2	489	272	761	166	135	38
5-90	489	322	811	166	135	40
5-110	543	322	865	166	135	40
5-120-2	570	322	892	166	135	41
5-120	570	322	892	166	135	42
5-140	634	339	973	193	147	52
5-160-2	688	339	1027	193	147	54
5-160	688	339	1027	193	147	54
5-190	769	354	1123	220	172	64
5-210	823	354	1177	220	172	66
5-220-1	850	354	1204	220	172	66
5-230	897	414	1311	259	192	83
5-250	951	414	1365	259	192	84
5-260	978	414	1392	259	192	85
5-290	1059	414	1473	259	192	93
5-320	1140	414	1554	259	192	95
5-360	1248	414	1662	259	192	99
5-380	1302	414	1716	259	192	101

NOTE: For same model, SVHT weighs 1.5 kgs heavier than SVH

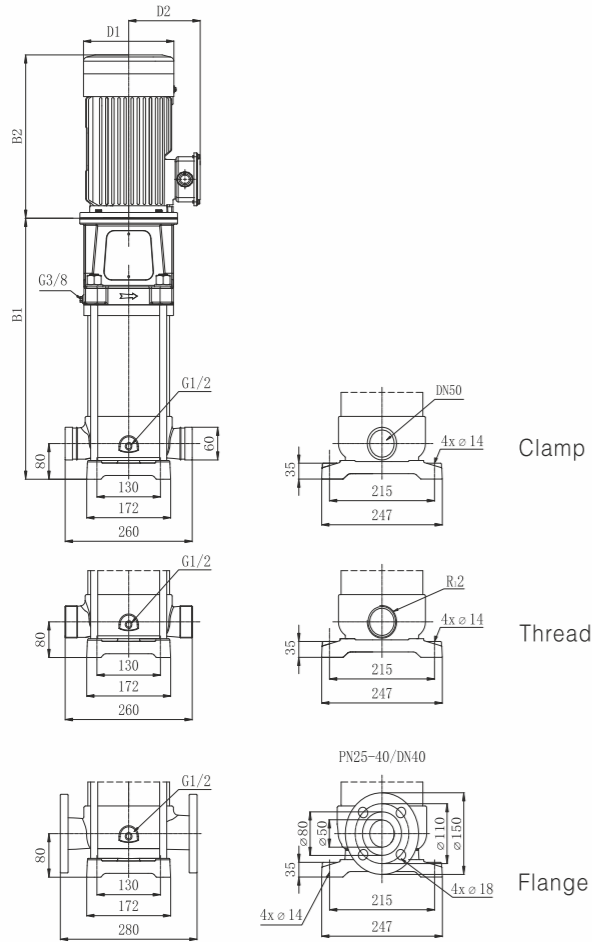
Performance data

Model	Power(kW)	Q (m³/h)	H (m)					
			2.5	4	5	6	7	8.5
5-20-2	0.37		12.5	11.5	10.5	9	7	3.5
5-20	0.55		17	16.5	16	15	14	12
5-30-1	0.55		23	22	21	20	17	13
5-40-1	0.75		32	31	30	27	24	19
5-50	1.1		43	42	40	38	35	29
5-60	1.1		52	50	48	45	42	34
5-70	1.5		61	59	56	53	49	40
5-80-1	1.5		67	64	61	57	52	42
5-90-2	1.5		73	70	67	62	56	43
5-90	2.2		78	75	72	68	62	51
5-110	2.2		95	92	88	83	76	63
5-120-2	2.2		99	95	92	85	76	61
5-120	2.2		104	101	96	91	83	68
5-140	3		121	117	112	106	97	80
5-160-2	3		134	129	123	115	104	83
5-160	3		139	134	128	121	111	91
5-190	4		165	159	152	143	132	108
5-210	4		182	176	168	159	146	120
5-220-1	4		188	182	173	163	149	121
5-230	5.5		199	193	184	174	160	131
5-250	5.5		217	210	200	189	174	143
5-260	5.5		225	218	208	196	181	148
5-290	7.5		251	243	232	219	201	165
5-320	7.5		277	268	256	242	222	182
5-360	7.5		312	302	288	272	250	205
5-380	7.5		330	319	306	289	265	217

Performance curve



Installation dimensions and weight



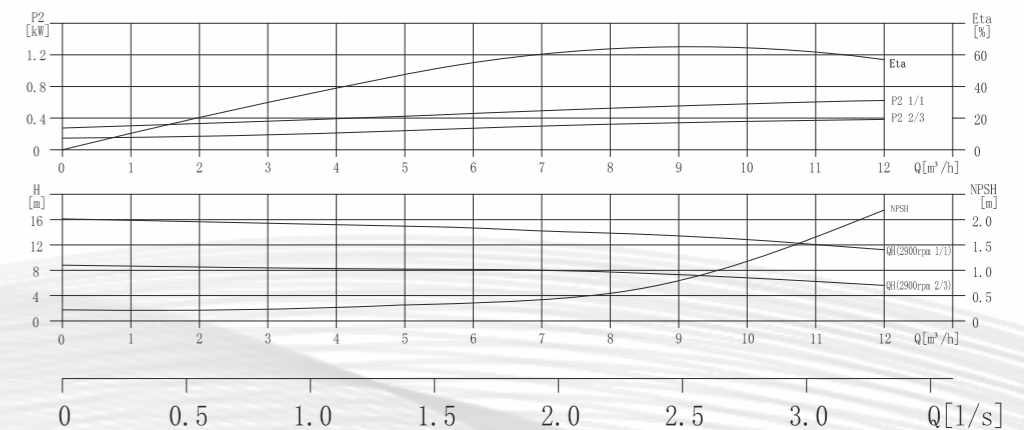
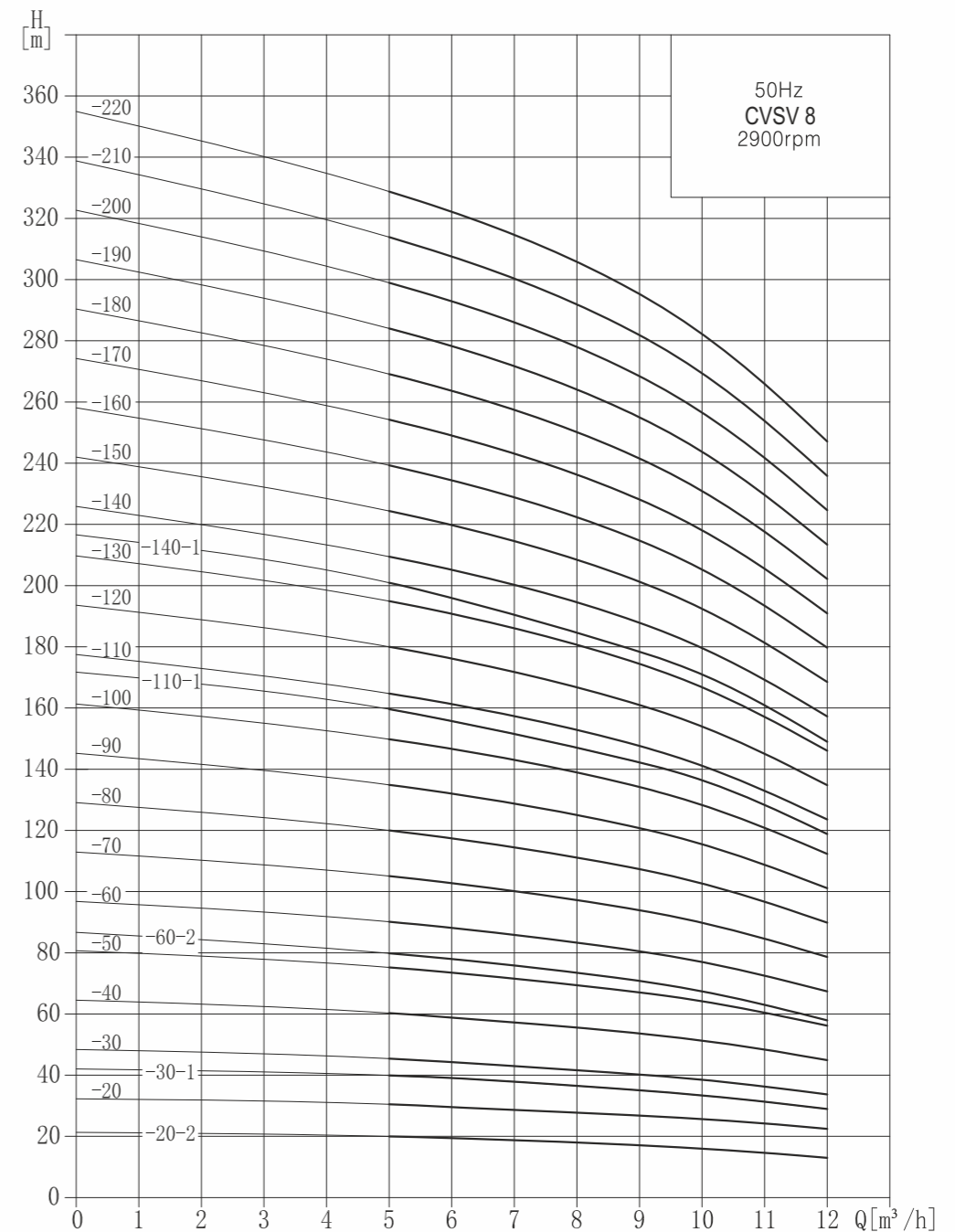
Model	Dimension (mm)					Weight (kg)
	B1	B2	B1+B2	D1	D2	
8-20-2	355	271	626	154	124	27
8-20	355	271	626	154	124	29
8-30-1	395	272	667	166	135	36
8-30	395	322	717	166	135	38
8-40	425	322	747	166	135	39
8-50	465	339	804	193	147	49
8-60-2	495	339	834	193	147	50
8-60	495	354	849	220	172	58
8-70	525	354	879	220	172	59
8-80	555	354	909	220	172	63
8-90	605	414	1019	259	192	78
8-100	635	414	1049	259	192	79
8-110-1	665	414	1079	259	192	80
8-110	665	414	1079	259	192	86
8-120	695	414	1109	259	192	87
8-130	725	414	1139	259	192	88
8-140-1	755	414	1169	259	192	89
8-140	843	523	1366	311	235	159
8-150	873	523	1396	311	235	160
8-160	903	523	1426	311	235	161
8-170	933	523	1456	311	235	162
8-180	963	523	1486	311	235	163
8-190	993	523	1516	311	235	171
8-200	1023	523	1546	311	235	172
8-210	1053	523	1576	311	235	173
8-220	1083	523	1606	311	235	174

NOTE: For same model, SVHT weighs 2.6 kgs heavier than SVH

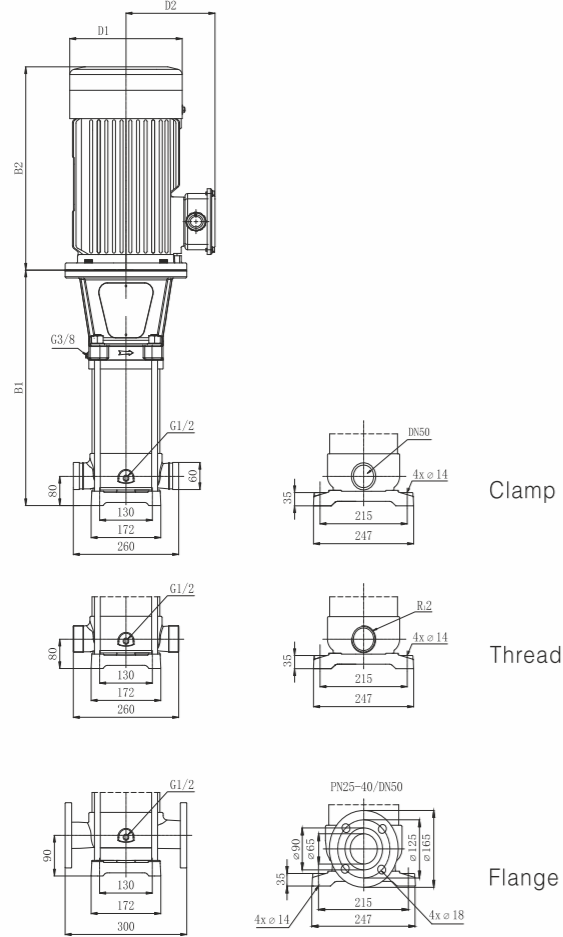
Performance data

Model	Power(kW)	Q (m³/h)	H (m)																	
			5	6	7	8	9	10	11	12										
8-20-2	0.75	20	19.5	19	18	17	16	14	13											
8-20	1.1	30	29	28	27	26	25.5	24	22											
8-30-1	1.5	40	39	38	36	35	34	31	29											
8-30	2.2	45	44	42.5	41	40.5	38.5	36	34											
8-40	2.2	60	58.5	56.5	55	54	51	48	45											
8-50	3	75	73	71	68	68	64	60	56											
8-60-2	3	80	78	76	73	71	67	62	58											
8-60	4	90	88	85	82	81	77	72	67											
8-70	4	105	103	99	96	95	90	84	79											
8-80	4	120	117	113	110	108	103	96	90											
8-90	5.5	135	132	127	124	122	116	108	101											
8-100	5.5	150	147	142	137	135	128	121	112											
8-110-1	5.5	160	156	151	147	144	136	128	119											
8-110	7.5	165	161	156	151	149	141	133	124											
8-120	7.5	180	176	170	165	162	154	145	135											
8-130	7.5	195	191	184	179	176	167	157	146											
8-140-1	7.5	201	196	190	185	180	171	160	149											
8-140	11	210	205	198	193	189	180	169	157											
8-150	11	224	220	212	206	203	193	181	168											
8-160	11	239	235	226	220	216	205	193	180											
8-170	11	254	249	241	234	230	218	205	191											
8-180	11	269	264	255	248	244	231	217	202											
8-190	15	284	279	269	262	257	244	229	213											
8-200	15	299	294	283	276	271	257	241	224											
8-210	15	314	309	297	287	284	270	253	235											
8-220	15	329	324	311	300	297	283	265	246											

Performance curve



Installation dimensions and weight



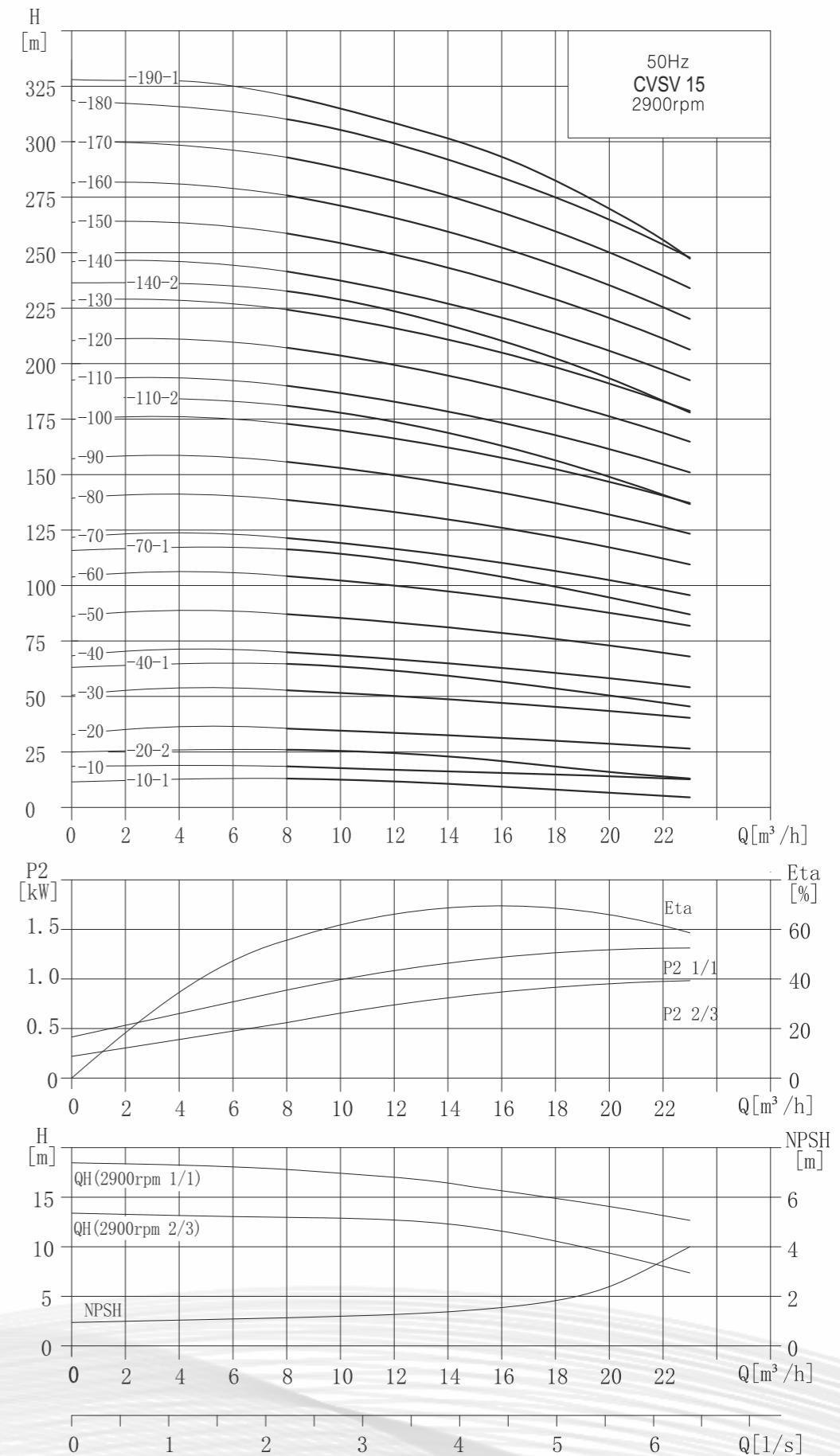
Model	Dimension (mm)					Weight (kg)
	B1	B2	B1+B2	D1	D2	
15-10-1	346	271	617	154	124	30
15-10	356	272	628	166	135	35
15-20-2	401	322	723	166	135	39
15-20	411	339	750	193	147	49
15-30	456	354	810	220	172	58
15-40-1	501	354	855	220	172	59
15-40	521	414	935	259	192	75
15-50	566	414	980	259	192	76
15-60	611	414	1025	259	192	83
15-70-1	656	414	1070	259	192	84
15-70	744	523	1267	311	235	155
15-80	789	523	1312	311	235	156
15-90	834	523	1357	311	235	157
15-100	879	523	1402	311	235	160
15-110-2	924	523	1447	311	235	161
15-110	924	523	1447	311	235	168
15-120	969	523	1492	311	235	169
15-130	1014	523	1537	311	235	170
15-140-2	1059	523	1582	311	235	171
15-140	1059	578	1637	311	235	193
15-150	1104	578	1682	311	235	194
15-160	1149	578	1727	311	235	195
15-170	1194	578	1772	311	235	229
15-180	1239	578	1817	311	235	230
15-190-1	1284	578	1862	311	235	231

NOTE: For same model, SVHT weighs 2.8 kgs heavier than SVH

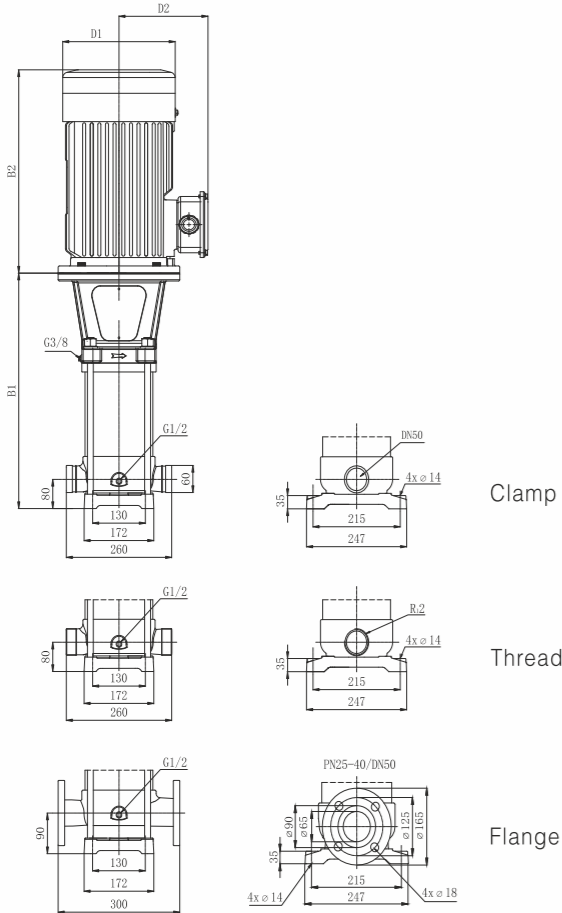
Performance data

Model	Power(kW)	Q (m³/h)	H (m)																		
			8	10	12	14	15	16	18	20	23										
15-10-1	1.1		13	12	11.5	10.5	10	9	7.5	6	4.5										
15-10	1.5		17.5	17	16.6	16.3	16	15.5	15	14.5	14										
15-20-2	2.2		26	25	24	23	22	20.5	18	16	13										
15-20	3		34.5	34	33	32.5	32	31.5	30.5	29.5	28										
15-30	4		52	51	50	49	48	47.5	46	44.5	41										
15-40-1	4		65	63	61	59	58	57	54	51	46										
15-40	5.5		69	68	66.5	65	64	63	61	59	55										
15-50	5.5		86	85	83	81	80	79	77	74	69										
15-60	7.5		103	102	100	98	96	95	92	89	83										
15-70-1	7.5		116	114	111	108	106	104	99	95	87										
15-70	11		121	119	116	114	112	111	107	104	96										
15-80	11		138	136	133	130	128	127	122	118	110										
15-90	11		155	153	149	146	144	143	138	133	124										
15-100	11		172	170	166	163	160	158	153	148	138										
15-110-2	11		181	178	173	169	166	163	156	149	137										
15-110	15		190	187	183	179	176	174	168	163	151										
15-120	15		207	204	199	195	192	190	184	177	165										
15-130	15		224	221	216	212	208	206	199	192	179										
15-140-2	15		233	229	223	218	214	211	202	193	178										
15-140	18.5		241	238	232	228	224	222	214	207	193										
15-150	18.5		258	255	249	244	240	238	230	222	206										
15-160	18.5		276	272	266	260	256	253	245	237	220										
15-170	22		293	288	282	277	272	269	260	251	234										
15-180	22		310	305	299	293	288	285	275	266	248										
15-190-1	22		321	315	309	302	298	293	283	270	247										

Performance curve



Installation dimensions and weight



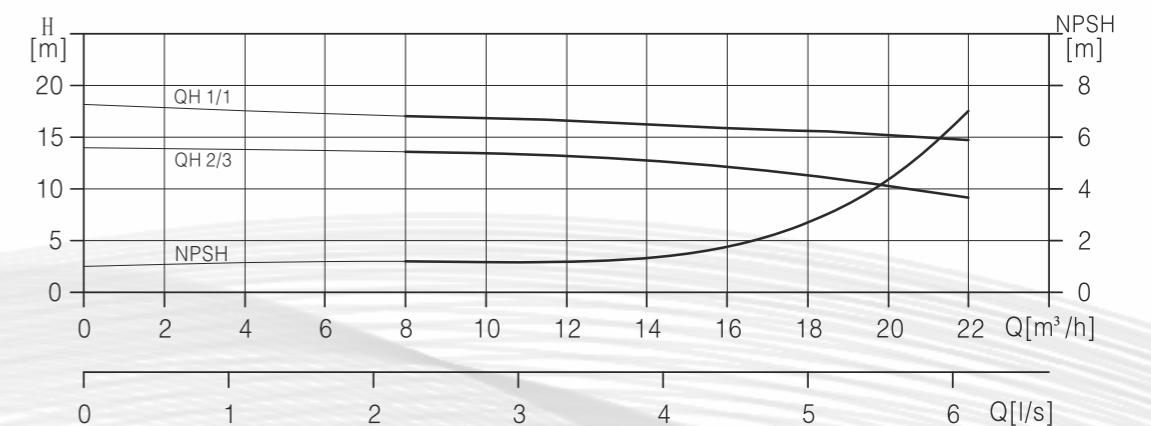
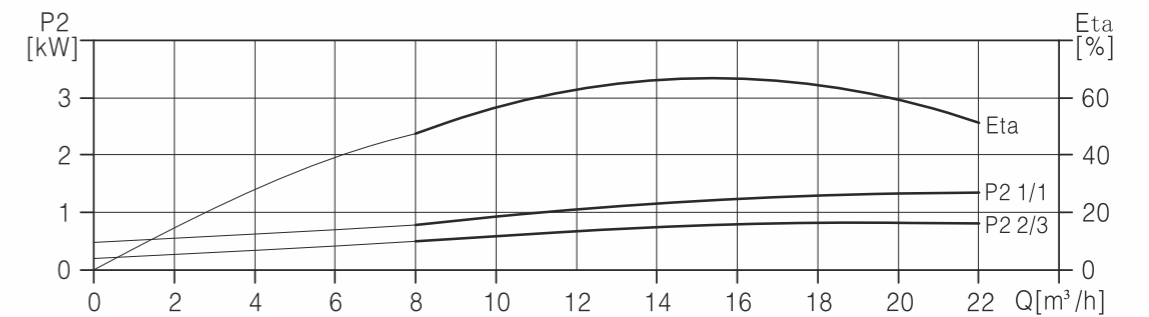
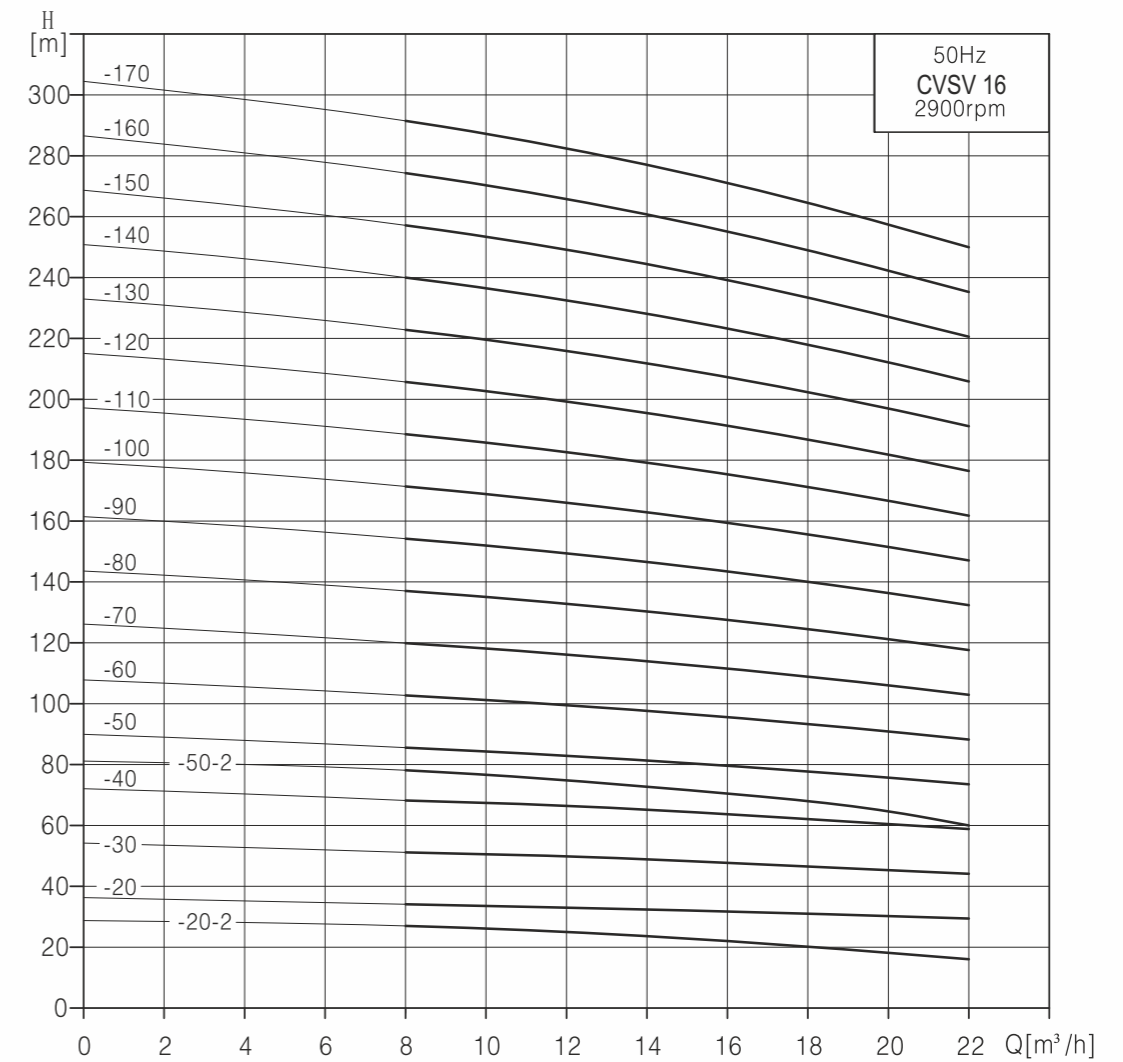
Model	Dimension (mm)					Weight (kg)
	B1	B2	B1+B2	D1	D2	
16-20-2	401	322	723	166	135	39
16-20	411	339	750	193	147	49
16-30	456	354	810	220	172	58
16-40	521	414	935	259	192	75
16-50-2	566	414	980	259	192	76
16-50	566	414	980	259	192	82
16-60	611	414	1025	259	192	83
16-70	745	523	1268	311	235	156
16-80	790	523	1313	311	235	156
16-90	835	523	1358	311	235	157
16-100	880	523	1403	311	235	165
16-110	925	523	1448	311	235	166
16-120	970	523	1493	311	235	168
16-130	1015	578	1593	311	235	191
16-140	1060	578	1638	311	235	192
16-150	1105	578	1683	311	235	225
16-160	1150	578	1728	311	235	226
16-170	1195	578	1773	311	235	228

NOTE: For same model, SVHT weighs 2.8 kgs heavier than SVH

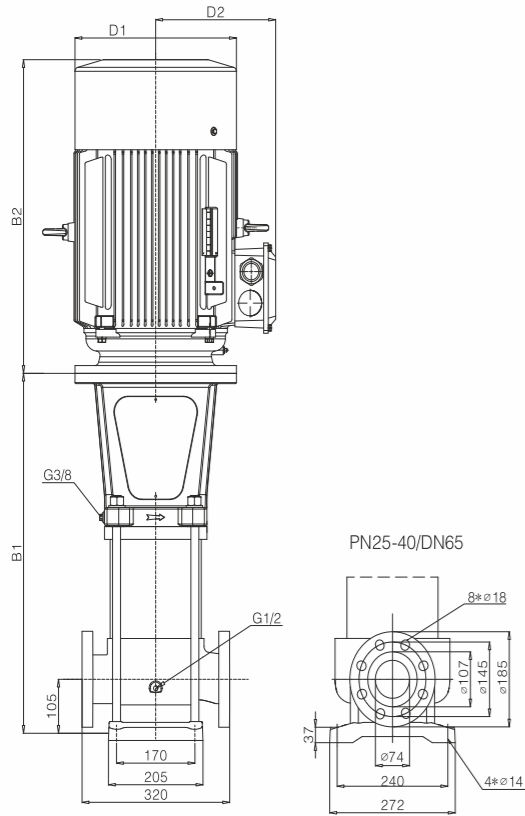
Performance data

Model	Power(kW)	Q (m³/h)	H (m)									
			8	10	12	14	16	18	20	22		
16-20-2	2.2		27	26	25	24	22	21	19	16		
16-20	3		34	33.5	33	32.5	32	31	30	29		
16-30	4		51	50.5	50	48.5	48	47	46	44		
16-40	5.5		68	67	66	64.5	63.5	63	61	59		
16-50-2	5.5		78	77	75	73	70	68	65	60		
16-50	7.5		85	84	83	81	79	78	76	74		
16-60	7.5		102	101	100	97	95	94	91	88		
16-70	11		119	118	116	113	110	109	106	103		
16-80	11		136	135	133	129	126	125	122	118		
16-90	11		153	152	149	145	142	141	137	132		
16-100	15		170	168	166	161	158	156	152	147		
16-110	15		187	185	183	178	173	172	167	162		
16-120	15		204	202	199	194	189	188	183	176		
16-130	18.5		222	219	216	210	205	203	198	191		
16-140	18.5		239	236	233	226	221	219	213	206		
16-150	22		256	253	250	242	237	235	229	220		
16-160	22		273	270	267	258	253	250	244	235		
16-170	22		290	287	284	274	269	266	259	250		

Performance curve



Installation dimensions and weight



Model	Dimension (mm)					Weight (kg)
	B1	B2	B1+B2	D1	D2	
32-10-1	444	322	766	166	135	47
32-10	454	339	793	193	147	56
32-20-2	524	354	878	220	172	66
32-20	530	414	944	259	192	82
32-30-2/SVH/T32-30	600	414	1014	259	192	90
32-40-2/SVH/T32-40	770	523	1293	311	235	164
32-50-2	840	523	1363	311	235	166
32-50	840	523	1363	311	235	173
32-60-2/SVH/T32-60	910	523	1433	311	235	175
32-70-2/SVH/T32-70	980	578	1558	311	235	199
32-80-2	1050	578	1628	311	235	201
32-80	1050	578	1628	311	235	235
32-90-2/SVH/T32-90	1120	578	1698	311	235	237
32-100-2/SVH/T32-100	1190	666	1856	397	305	311
32-110-2/SVH/T32-110	1260	666	1926	397	305	313
32-120-2/SVH/T32-120	1330	666	1996	397	305	315
32-130-2/SVH/T32-130	1400	666	2066	397	305	331
32-140-2/SVH/T32-140	1470	666	2136	397	305	333
32-150-2	1540	666	2206	397	305	335
32-150	1540	704	2244	442	324	406
32-160-2/SVH/T32-160	1610	704	2314	442	324	408
32-170-2/SVH/T32-170	1680	704	2384	442	324	410

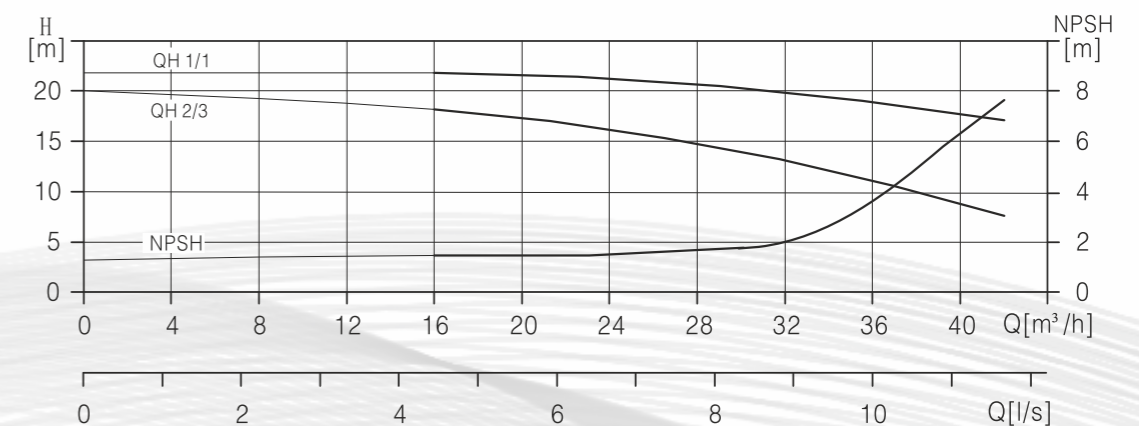
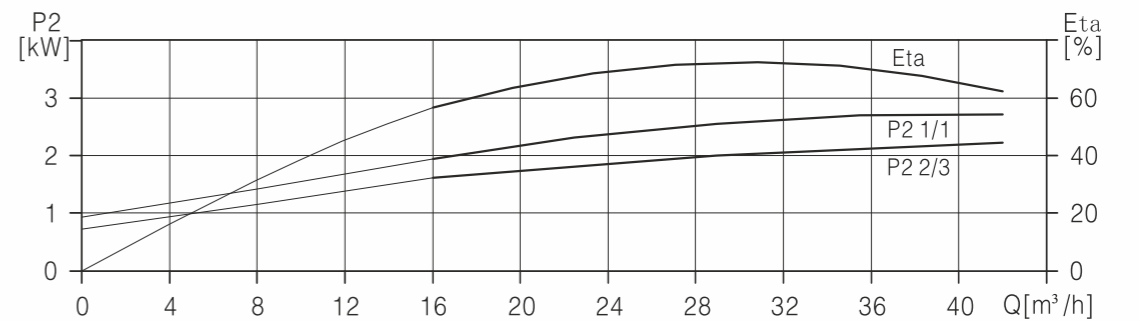
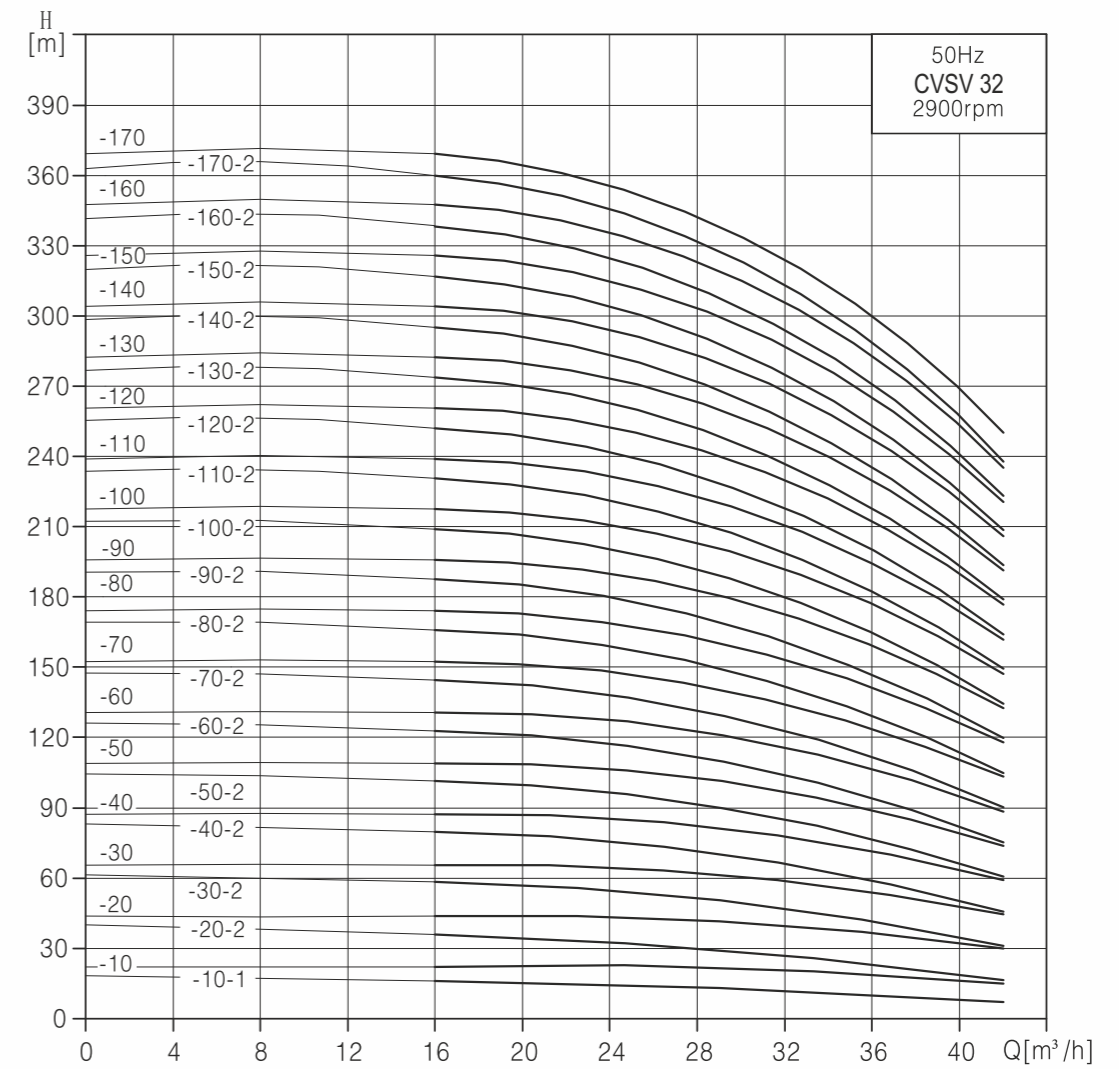
NOTE: For same model, SVHT weighs 4.6 kgs heavier than SVH

Performance data

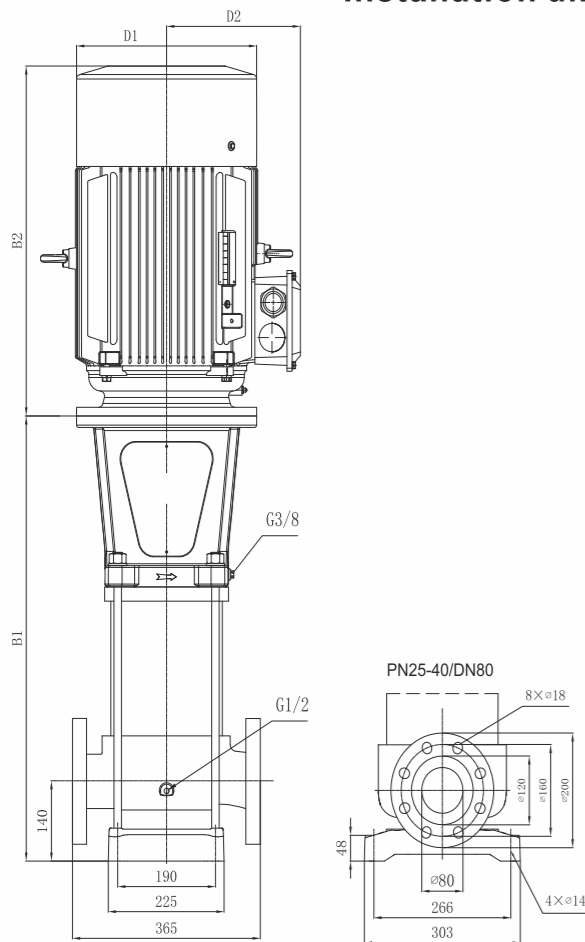
Model	Power (kW)	Q (m³/h)	H (m)							
			16	20	24	28	32	36	40	42
32-10-1	2.2		18	17	15	14	13	11	8	7
32-10	3		22	21.5	21	20	19	18	16	15
32-20-2	4		36	34	32	29	27	23	18	17
32-20	5.5		43	42.5	42	40	38	35	32	29
32-30-2	7.5		58	55	53	49	46	41	34	31
32-30	7.5		65	64	63	61	57	53	48	44
32-40-2	11		79	77	74	69	65	58	50	46
32-40	11		86	85	83	81	77	71	63	59
32-50-2	11		101	98	95	90	84	76	66	61
32-50	15		108	107	104	101	96	88	79	74
32-60-2	15		122	119	115	110	104	94	81	75
32-60	15		129	128	125	121	115	106	95	88
32-70-2	18.5		144	141	136	130	123	111	97	90
32-70	18.5		151	149	146	141	134	124	111	103
32-80-2	18.5		165	162	157	150	142	129	113	105
32-80	22		172	171	167	162	153	142	127	118
32-90-2	22		187	183	178	170	161	147	129	120
32-90	22		194	192	188	182	172	159	143	133
32-100-2	30		208	205	199	191	180	165	145	134

Model	Power (kW)	Q (m³/h)	H (m)							
			16	20	24	28	32	36	40	42
32-100	30		215	214	208	202	191	177	159	147
32-110-2	30		230	226	220	211	199	182	161	149
32-110	30		237	235	229	222	210	195	174	162
32-120-2	30		251	248	240	231	218	200	177	164
32-120	30		258	256	250	242	230	212	190	177
32-130-2	37		273	269	261	251	237	218	192	179
32-130	37		280	278	271	263	249	230	206	192
32-140-2	37		294	290	282	271	257	235	208	193
32-140	37		301	299	292	283	268	248	222	206
32-150-2	37		316	312	303	292	276	253	224	208
32-150	45		323	320	313	303	287	265	238	221
32-160-2	45		337	333	324	312	295	271	240	223
32-160	45		345	342	333	323	306	283	254	236
32-170-2	45		359	354	345	332	314	288	256	238
32-170	45		366	363	354	343	325	301	270	251

Performance curve



Installation dimensions and weight



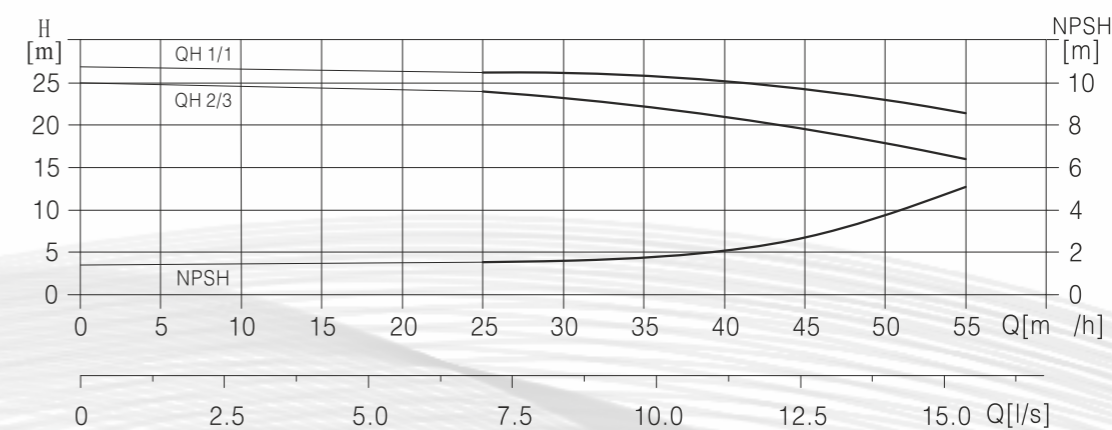
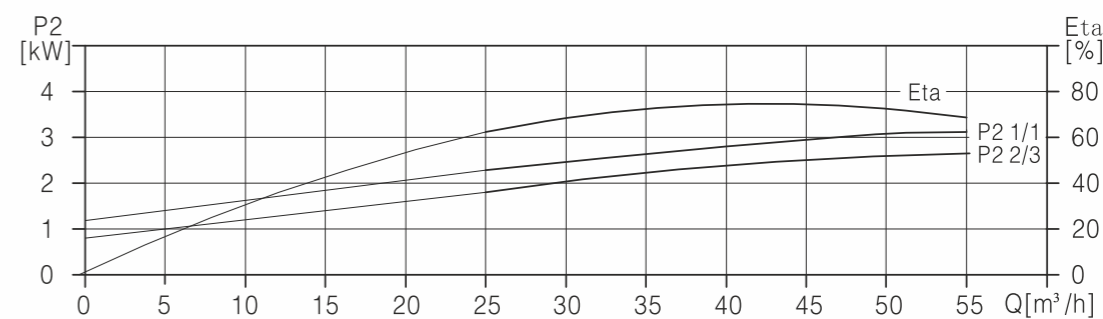
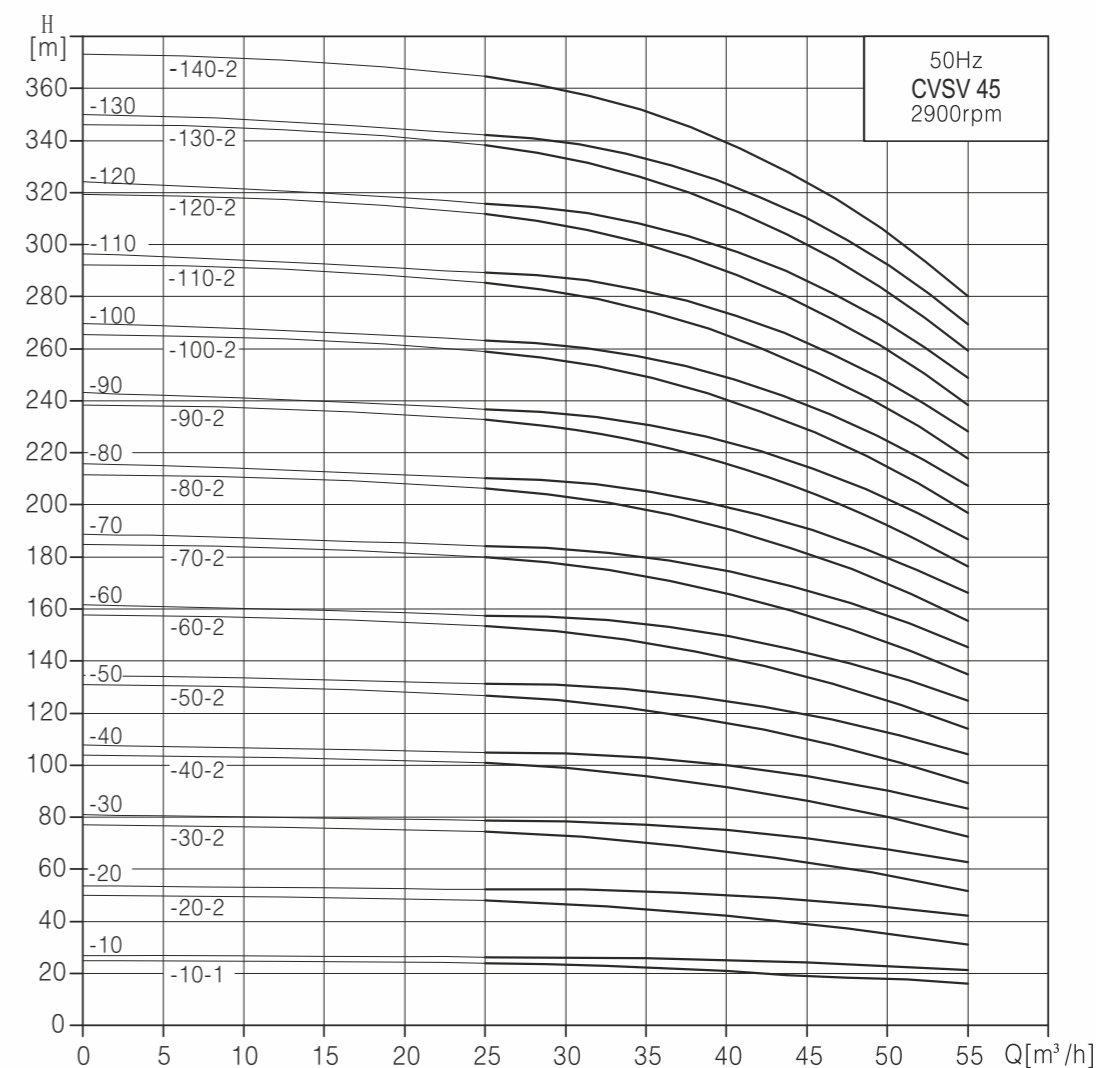
Model	Dimension (mm)					Weight (kg)
	B1	B2	B1+B2	D1	D2	
45-10-1	507	354	861	220	172	71
45-10	516	414	930	259	192	87
45-20-2	596	414	1010	259	192	96
45-20	696	523	1219	311	235	168
45-30-2	776	523	1299	311	235	171
45-30	776	523	1299	311	235	180
45-40-2	856	523	1379	311	235	183
45-40	856	578	1434	311	235	204
45-50-2	936	578	1514	311	235	207
45-50	936	578	1514	311	235	238
45-60-2	1016	666	1682	397	305	316
45-60	1016	666	1682	397	305	316
45-70-2	1096	666	1762	397	305	318
45-70	1096	666	1762	397	305	318
45-80-2	1176	666	1842	397	305	335
45-80	1176	666	1842	397	305	335
45-90-2	1256	666	1922	442	324	338
45-90	1256	666	1922	442	324	338
45-100-2	1336	704	2040	442	324	411
45-100	1336	704	2040	442	324	412
45-110-2	1416	704	2120	484	365	414
45-110	1416	704	2120	484	365	414
45-120-2	1526	785	2311	484	365	521
45-120	1526	785	2311	484	365	521
45-130-2	1606	849	2455	548	388	523
45-130	1606	849	2455	548	388	523
45-140-2	1686	849	2535	548	388	526

NOTE: For same model, SVHT weighs 6.0 kgs heavier than SVH

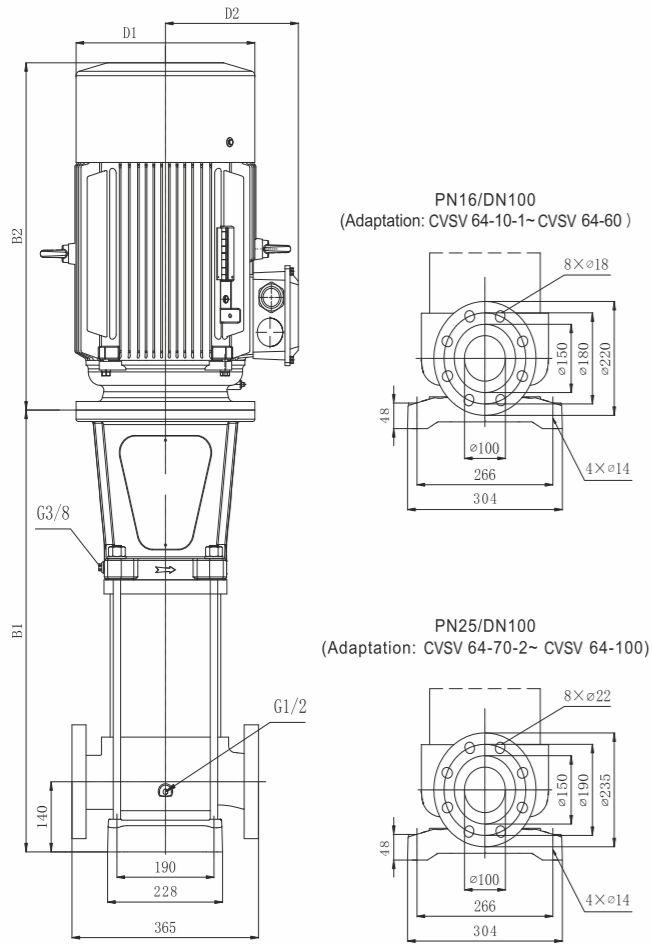
Performance data

Model	Power(kW)	Q (m³/h)	H (m)								
			25	30	35	40	45	50	55		
45-10-1	4		24	23	22	21	19	18	16		
45-10	5.5		26.5	26	25.5	25	23.5	22	21		
45-20-2	7.5		48	46	44	42	39	35	31		
45-20	11		53	52	51	49	48	45	41		
45-30-2	11		74	72	69	67	63	57	52		
45-30	15		79	78	76	74	71	67	62		
45-40-2	15		101	98	95	91	87	80	72		
45-40	18.5		105	104	102	99	95	90	83		
45-50-2	18.5		127	124	120	116	110	102	93		
45-50	22		132	130	127	124	119	112	104		
45-60-2	30		153	150	146	141	134	125	114		
45-60	30		158	156	153	148	143	134	124		
45-70-2	30		180	176	171	166	158	147	135		
45-70	30		184	182	178	173	166	157	145		
45-80-2	37		206	202	197	190	182	169	155		
45-80	37		210	208	204	198	190	179	166		
45-90-2	37		232	228	222	215	205	192	176		
45-90	37		237	234	229	222	214	202	186		
45-100-2	45		258	254	248	240	229	214	197		
45-100	45		263	260	255	247	238	224	207		
45-110-2	45		285	280	273	264	253	237	217		
45-110	45		289	285	280	272	261	246	228		
45-120-2	55		311	306	299	289	277	259	238		
45-120	55		316	311	305	296	285	269	248		
45-130-2	55		337	331	324	314	300	281	259		
45-130	55		342	337	331	321	309	291	269		
45-140-2	55		364	357	349	338	324	304	279		

Performance curve



Installation dimensions and weight



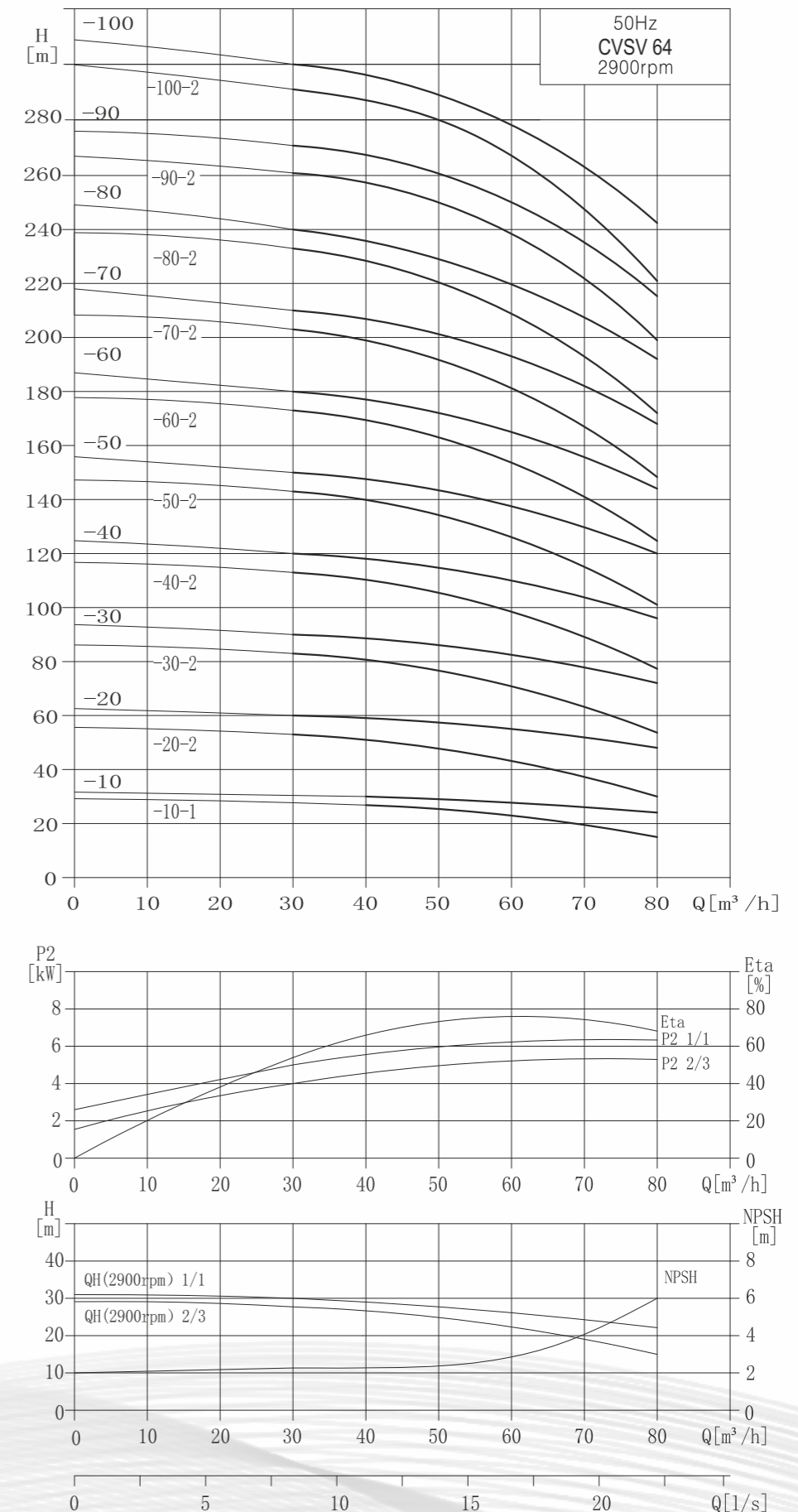
Model	Dimension (mm)					Weight (kg)
	B1	B2	B1+B2	D1	D2	
64-10-1	519	414	933	259	192	89
64-10	519	414	933	259	192	98
64-20-2	702	523	1225	311	235	171
64-20	702	523	1225	311	235	178
64-30-2	785	578	1363	311	235	203
64-30	785	578	1363	311	235	237
64-40-2	868	666	1534	397	305	312
64-40	868	666	1534	397	305	312
64-50-2	951	666	1617	397	305	329
64-50	951	666	1617	397	305	329
64-60-2	1034	704	1738	442	324	403
64-60	1034	704	1738	442	324	403
64-70-2	1147	785	1932	484	365	510
64-70	1147	785	1932	484	365	510
64-80-2	1230	785	2015	484	365	513
64-80	1230	785	2015	484	365	513
64-90-2	1313	849	2162	548	388	630
64-90	1313	849	2162	548	388	630
64-100-2	1396	849	2245	548	388	633
64-100	1396	849	2245	548	388	633

NOTE: For same model, SVHT weighs 6.5 kgs heavier than SVH

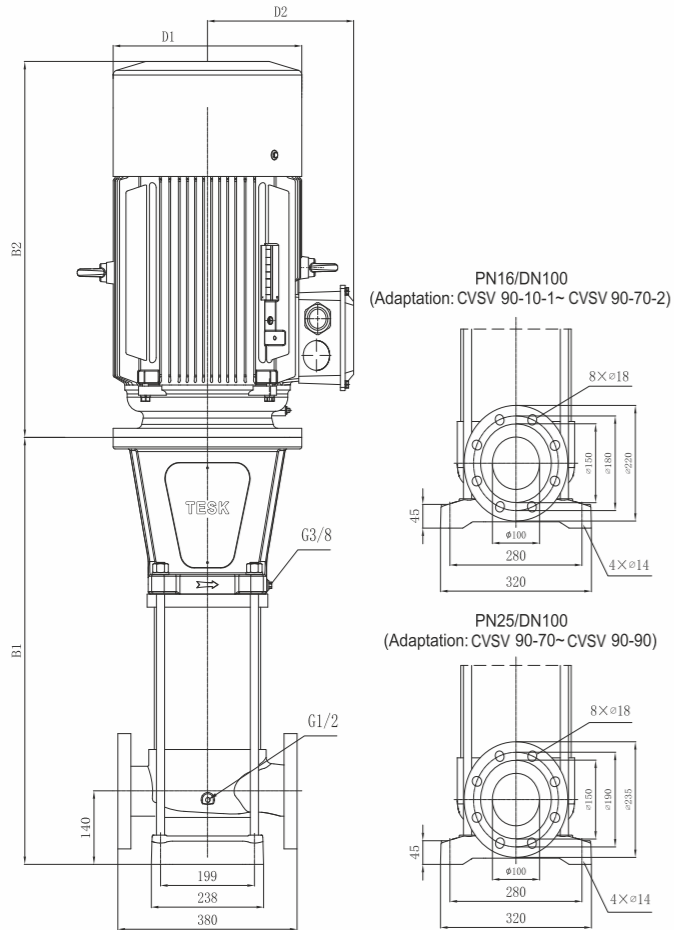
Performance data

Model	Power(kW)	Q (m³/h)	H (m)							
			30	40	50	60	64	70	80	
64-10-1	5.5		27	25	23	21	20	18	15	
64-10	7.5		30	29.5	29	28	27	26	24	
64-20-2	11		53	51	47	43	41	37	30	
64-20	15		60	59	58	55	54	52	48	
64-30-2	18.5		83	81	76	71	68	63	54	
64-30	22		90	89	86	83	81	78	72	
64-40-2	30		113	110	105	98	95	89	78	
64-40	30		128	124	119	114	111	108	102	
64-50-2	37		143	140	133	126	122	115	102	
64-50	37		160	155	149	143	140	135	128	
64-60-2	45		173	170	162	153	149	141	126	
64-60	45		180	178	173	165	162	156	144	
64-70-2	55		203	199	191	181	176	167	150	
64-70	55		210	207	201	193	189	182	168	
64-80-2	55		233	229	220	208	203	193	174	
64-80	55		240	237	230	220	216	208	192	
64-90-2	75		261	258	250	239	233	222	199	
64-90	75		271	268	261	250	245	235	216	
64-100-2	75		292	288	280	268	260	248	221	
64-100	75		301	298	291	279	272	261	240	

Performance curve



Installation dimensions and weight



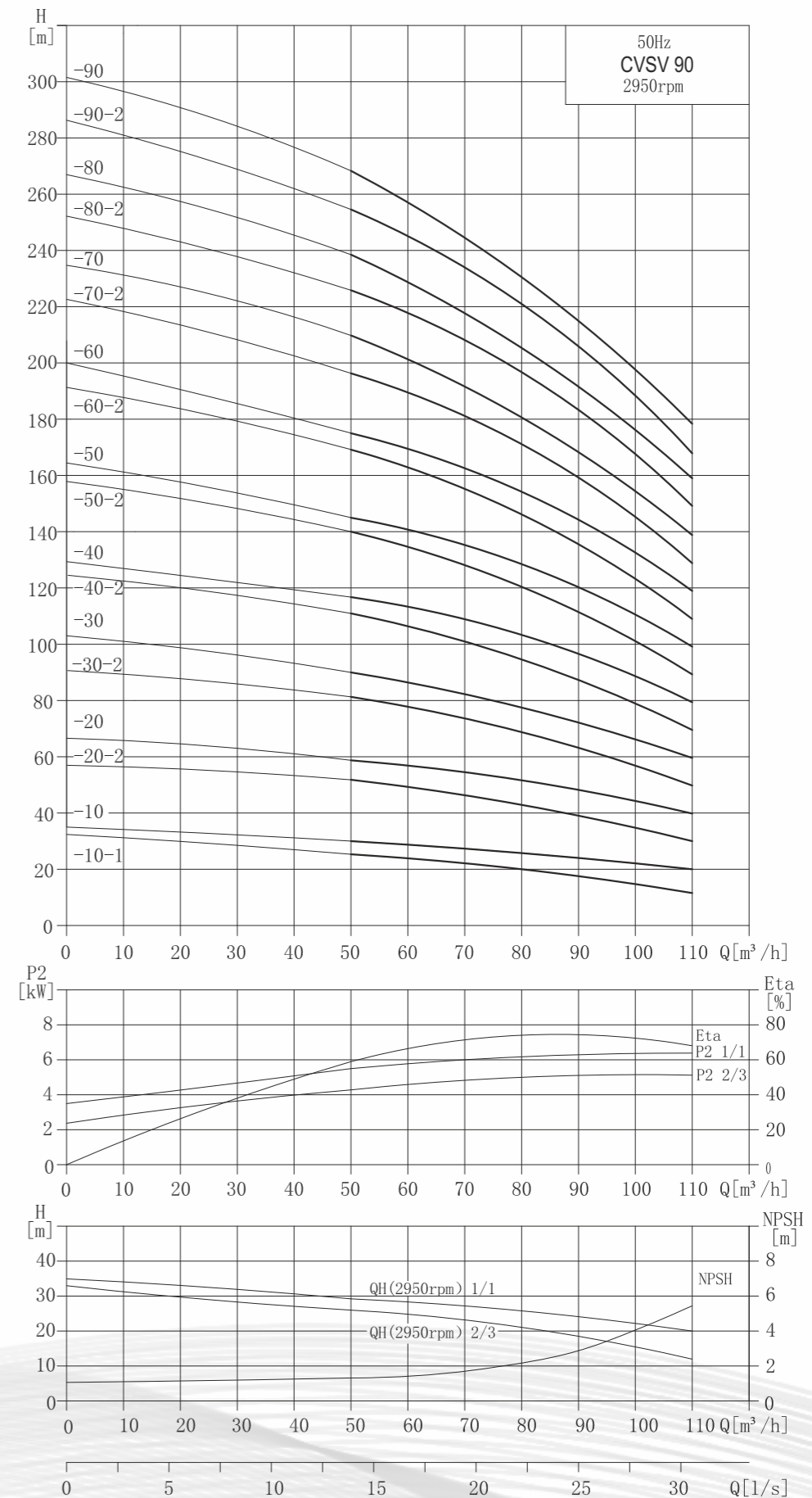
Model	Dimension (mm)					Weight (kg)
	B1	B2	B1+B2	D1	D2	
90-10-1	598	414	1012	259	192	103
90-10	628	523	1151	311	235	173
90-20-2	720	523	1243	311	235	183
90-20	720	578	1298	311	235	206
90-30-2	812	578	1390	311	235	242
90-30	812	666	1478	397	305	313
90-40-2	904	666	1570	397	305	316
90-40	904	666	1570	397	305	330
90-50-2	996	666	1662	397	305	333
90-50	996	704	1700	442	324	406
90-60-2	1088	704	1792	442	324	409
90-60	1118	785	1903	484	365	513
90-70-2	1210	785	1995	484	365	516
90-70	1302	849	2151	548	388	630
90-80-2	1394	849	2243	548	388	633
90-80	1486	849	2335	548	388	633
90-90-2	1578	849	2427	548	388	636
90-90	1670	849	2519	548	388	636

NOTE: For same model, SVHT weighs 5.9 kgs heavier than SVH

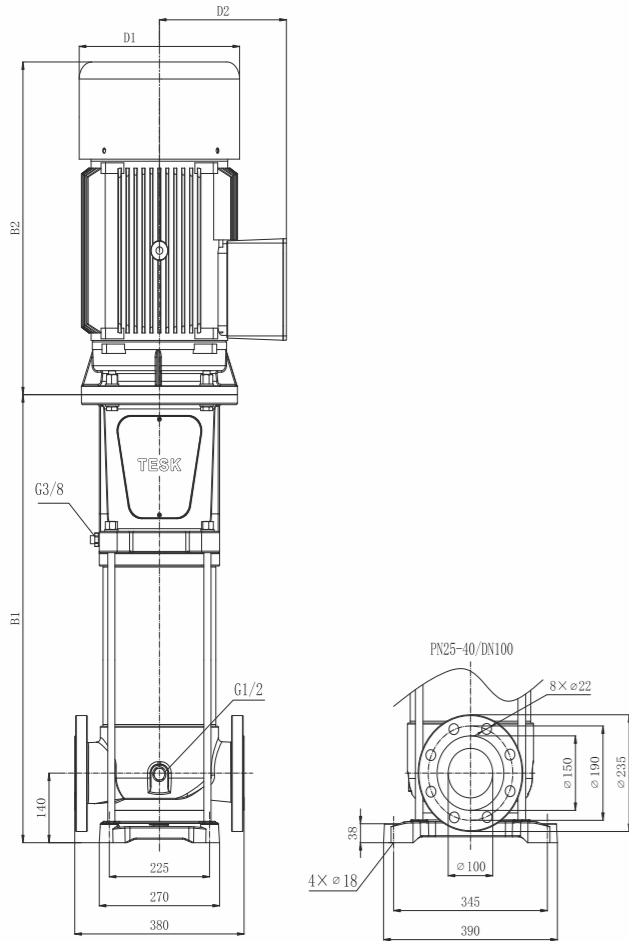
Performance data

Model	Power(kW)	Q (m³/h)	H (m)							
			50	60	70	80	90	100	110	
90-10-1	7.5		26	23	22	20	18	15	12	
90-10	11		30	29	27	26	24	22	20	
90-20-2	15		53	50	47	44	40	36	30	
90-20	18.5		59	58	55	51	48	44	39	
90-30-2	22		82	78	74	70	64	58	50	
90-30	30		90	86	82	77	72	66	59	
90-40-2	30		112	106	102	95	88	80	69	
90-40	37		118	115	109	103	96	88	79	
90-50-2	37		140	135	129	121	112	102	89	
90-50	45		145	142	137	128	120	110	98	
90-60-2	45		169	162	156	147	136	124	109	
90-60	55		175	173	164	154	144	132	118	
90-70-2	55		197	190	184	172	160	146	128	
90-70	75		209	201	191	181	167	153	138	
90-80-2	75		226	217	208	197	183	166	148	
90-80	75		238	228	217	205	191	175	158	
90-90-2	75		255	246	235	222	206	188	167	
90-90	75		268	257	244	230	214	196	177	

Performance curve



Installation dimensions and weight



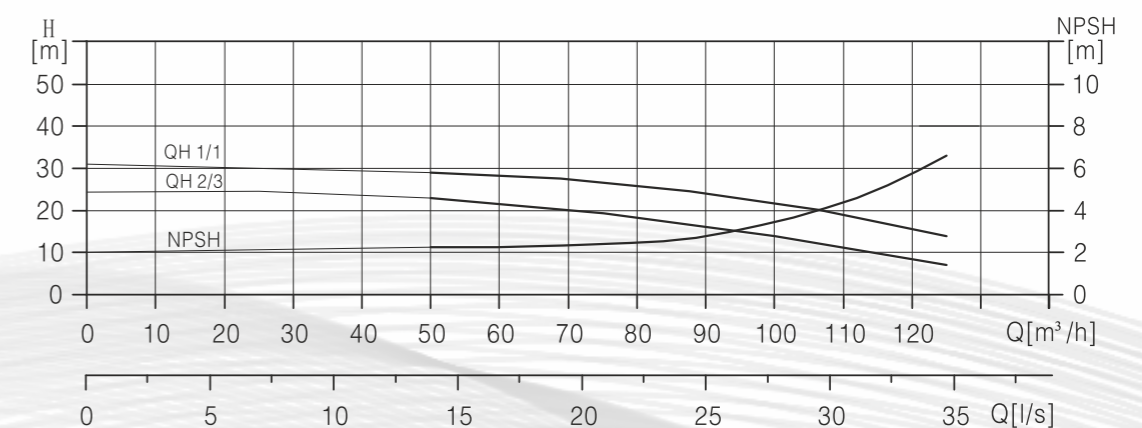
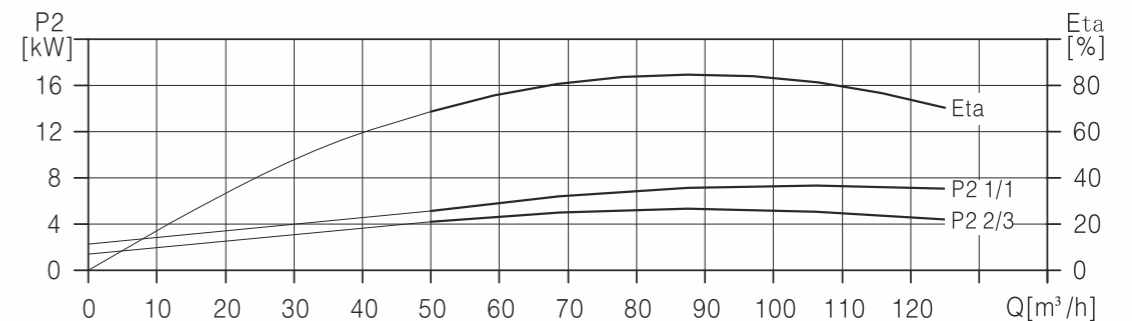
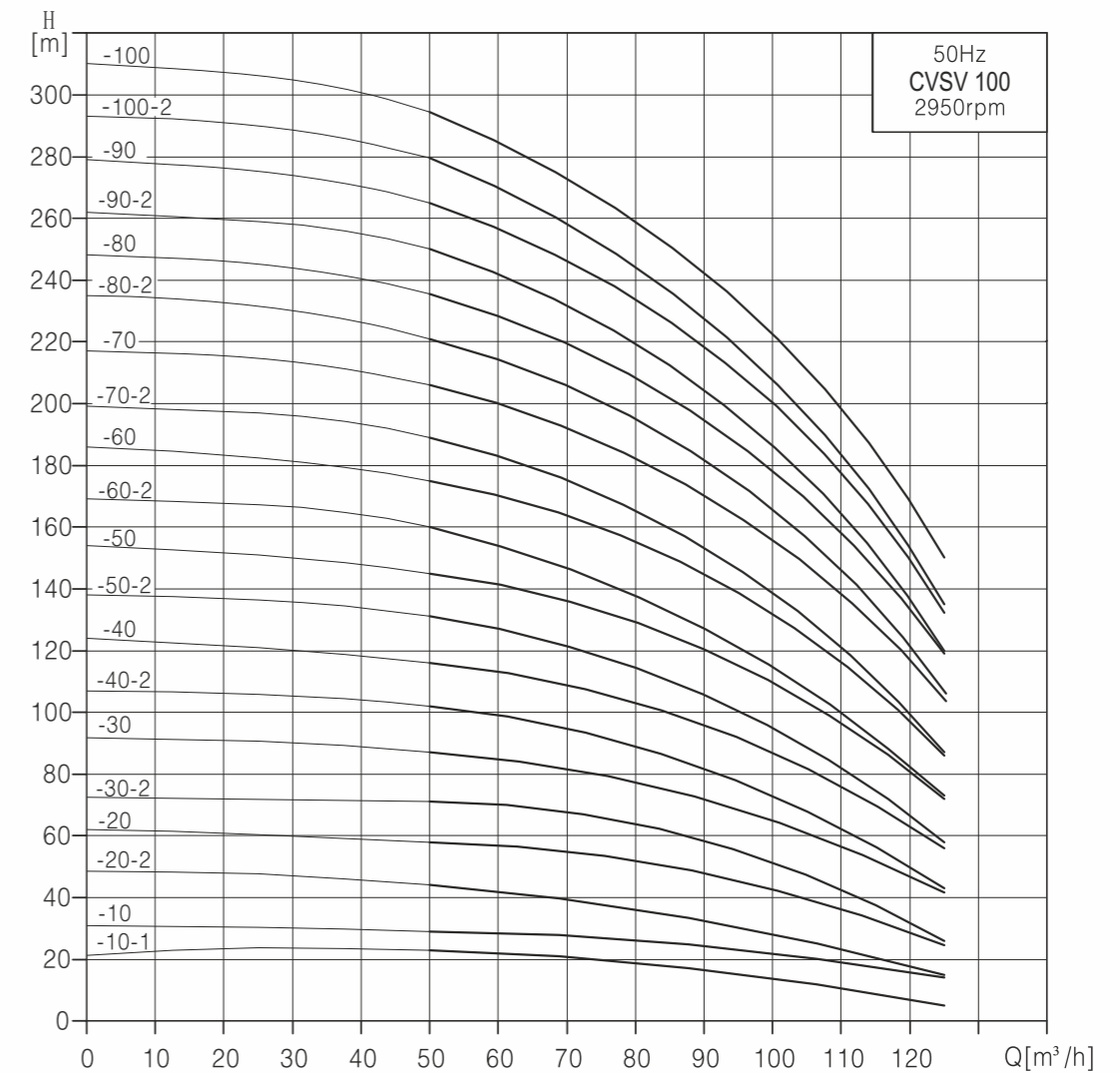
Model	Dimension (mm)					Weight (kg)
	B1	B2	B1+B2	D1	D2	
100-10-1	592	414	1006	259	192	95
100-10	592	414	1006	259	192	101
100-20-2	797	523	1320	311	235	178
100-20	797	523	1320	311	235	185
100-30-2	902	578	1480	311	235	213
100-30	902	578	1480	311	235	246
100-40-2	1007	666	1673	397	305	322
100-40	1007	666	1673	397	305	322
100-50-2	1112	666	1778	397	305	341
100-50	1112	666	1778	397	305	341
100-60-2	1217	704	1921	442	324	421
100-60	1217	704	1921	442	324	421
100-70-2	1352	785	2137	484	365	530
100-70	1352	785	2137	484	365	530
100-80-2	1457	785	2242	484	365	535
100-80	1457	849	2306	548	388	650
100-90-2	1562	849	2411	548	388	655
100-90	1562	849	2411	548	388	655
100-100-2	1667	849	2516	548	388	661
100-100	1667	849	2516	548	388	661

NOTE: For same model, SVHT weighs 10.0 kgs heavier than SVH

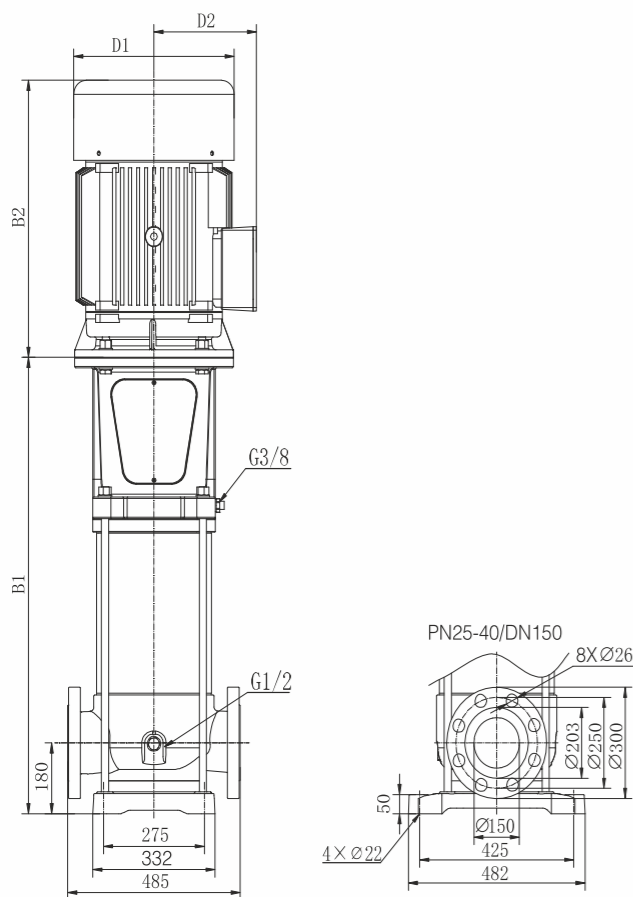
Performance data

Model	Power(kW)	Q (m³/h)	H (m)																			
			50	60	70	80	90	100	110	120	125											
100-10-1	5.5		23	22	20	18	16	14	11	8	7											
100-10	7.5		29	28	27	26	24	22	18	16	14											
100-20-2	11		44	43	41	38	34	28	23	17	15											
100-20	15		58	56	54	52	49	43	37	31	28											
100-30-2	18.5		71	68	66	62	57	52	42	31	26											
100-30	22		87	84	81	78	73	65	56	48	43											
100-40-2	30		102	99	95	90	83	71	60	48	43											
100-40	30		116	113	109	104	97	87	76	64	58											
100-50-2	37		131	127	122	116	107	93	79	65	58											
100-50	37		145	141	136	130	122	109	96	80	72											
100-60-2	45		160	156	150	142	131	115	99	81	73											
100-60	45		175	170	164	157	146	132	115	96	89											
100-70-2	55		189	184	177	168	156	137	119	97	87											
100-70	55		206	202	193	183	172	156	138	114	105											
100-80-2	55		221	215	207	197	182	165	142	115	103											
100-80	75		235	231	221	209	197	178	158	130	120											
100-90-2	75		250	245	234	221	206	184	161	131	120											
100-90	75		265	260	248	235	221	201	177	147	135											
100-100-2	75		279	274	262	247	231	206	181	147	135											
100-100	75		294	289	279	261	246	223	197	163	150											

Performance curve



Installation dimensions and weight



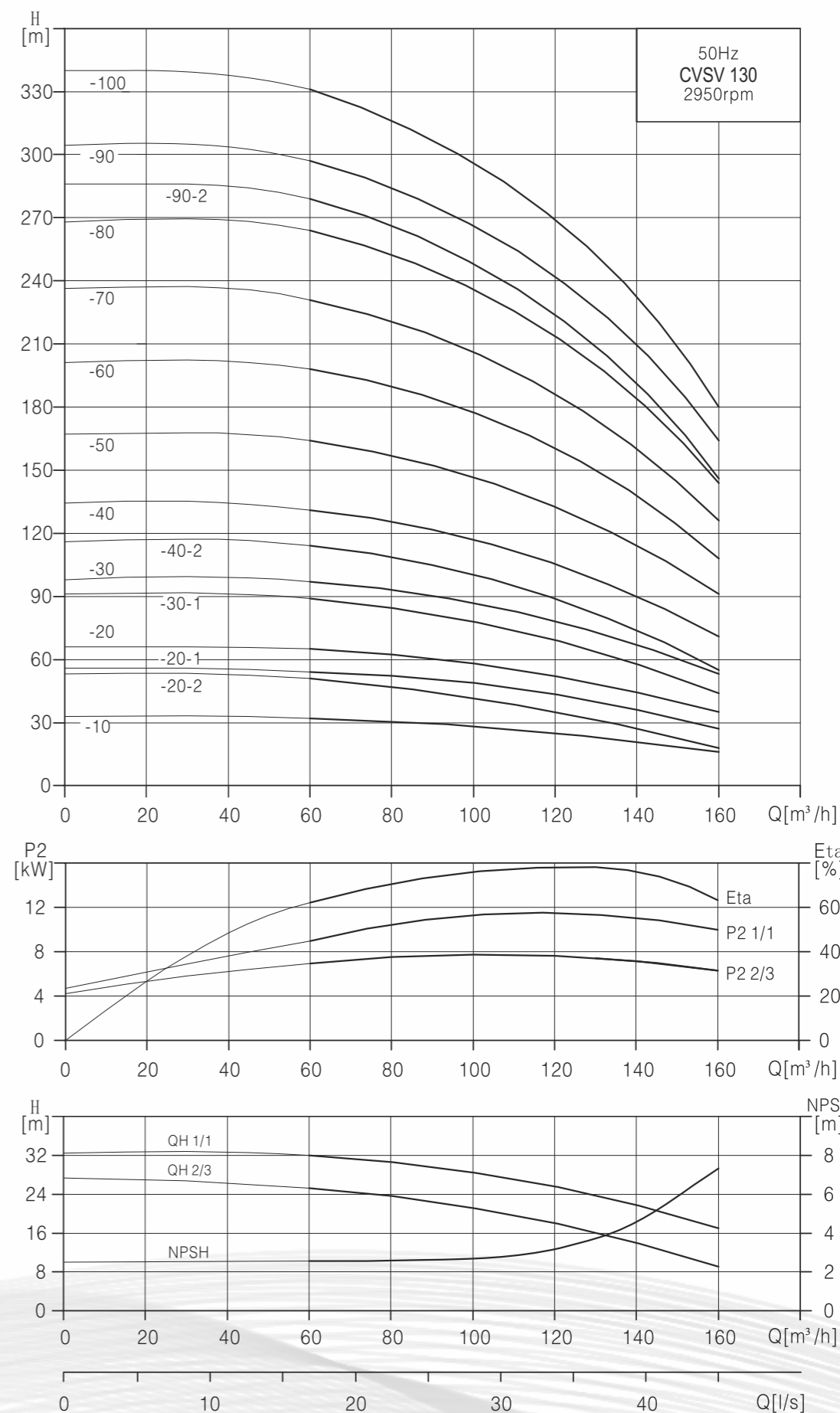
Model	Dimension (mm)					Weight (kg)
	B1	B2	B1+B2	D1	D2	
130-10	787	523	1310	311	235	206
130-20-2	909	523	1432	311	235	222
130-20-1	909	578	1487	311	235	244
130-20	909	578	1487	311	235	276
130-30-1	1031	666	1697	397	305	355
130-30	1031	666	1697	397	305	369
130-40-2	1153	666	1819	397	305	378
130-40	1153	704	1857	442	324	449
130-50	1305	785	2090	484	365	565
130-60	1427	849	2276	548	388	688
130-70	1549	849	2398	548	388	697
130-80	1671	900	2571	548	388	752
130-90-2	1793	900	2693	548	388	762
130-90	1793	1190	2983	630	525	1098
130-100	1915	1190	3105	630	525	1107

NOTE: For same model, SVHT weighs 16.5 kgs heavier than SVH

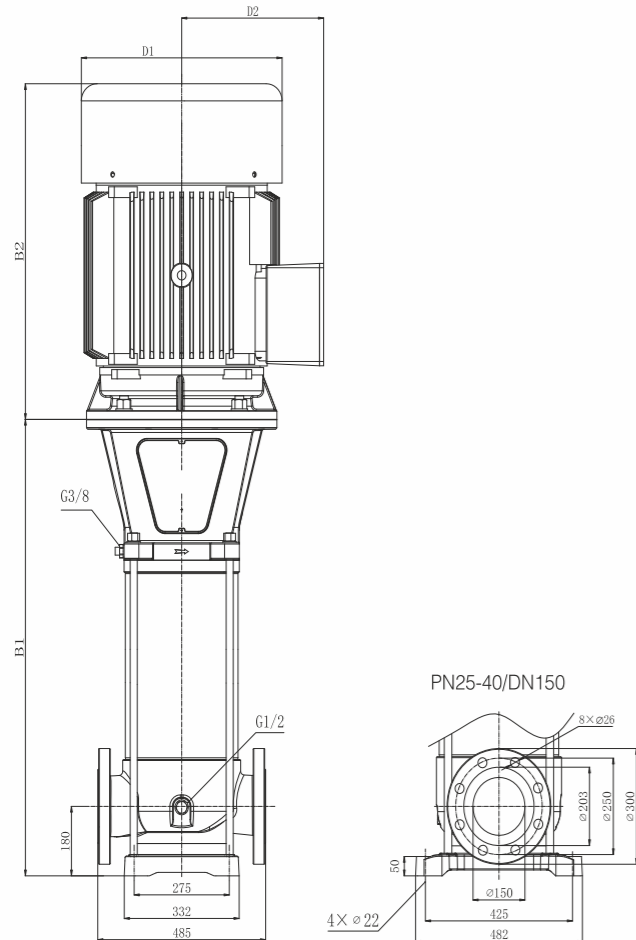
Performance data

Model	Power(kW)	Q (m³/h)	H (m)												
			60	70	80	90	100	110	120	130	140	150	160		
130-10	11		32	31	30	29	28	27	25	23	22	20	17		
130-20-2	15		51	48	46	43	40	37	34	31	27	23	18		
130-20-1	18.5		54	52	51	50	49	47	45	40	35	31	27		
130-20	22		65	64	62	60	58	56	52	48	44	40	35		
130-30-1	30		89	87	85	82	78	74	70	64	58	51	44		
130-30	37		97	96	94	91	87	83	77	73	67	61	53		
130-40-2	37		114	111	108	104	98	94	89	81	74	64	55		
130-40	45		131	129	125	121	117	113	105	97	89	82	71		
130-50	55		164	162	158	152	147	142	133	124	114	103	91		
130-60	75		198	196	189	182	178	170	161	150	137	122	108		
130-70	75		231	227	222	218	209	199	187	174	159	144	126		
130-80	90		264	260	254	248	238	228	213	200	182	164	144		
130-90-2	90		279	274	269	261	250	239	224	208	188	168	146		
130-90	110		297	293	287	279	268	257	243	227	207	187	164		
130-100	110		331	325	318	311	298	284	270	250	230	207	182		

Performance curve



Installation dimensions and weight



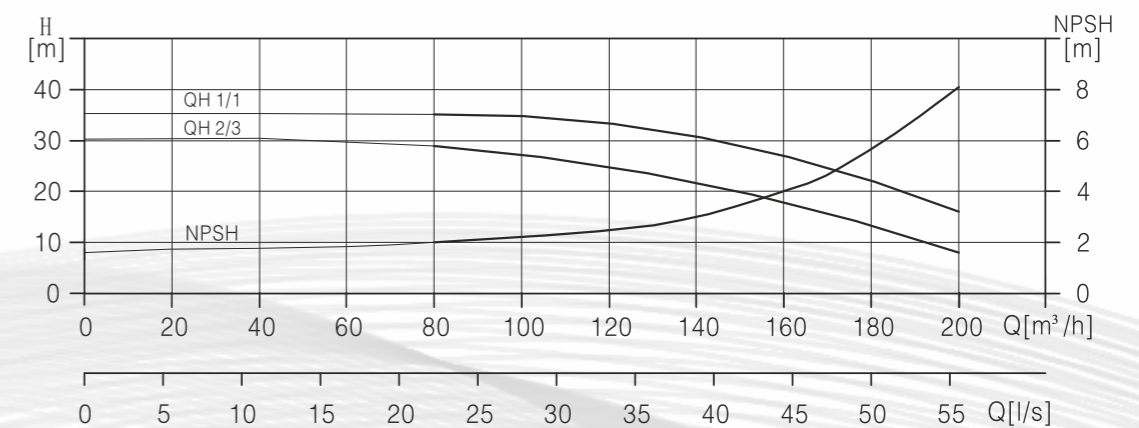
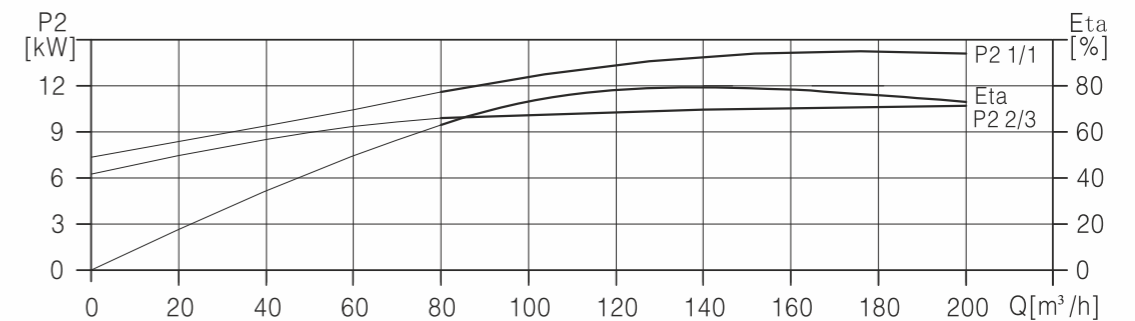
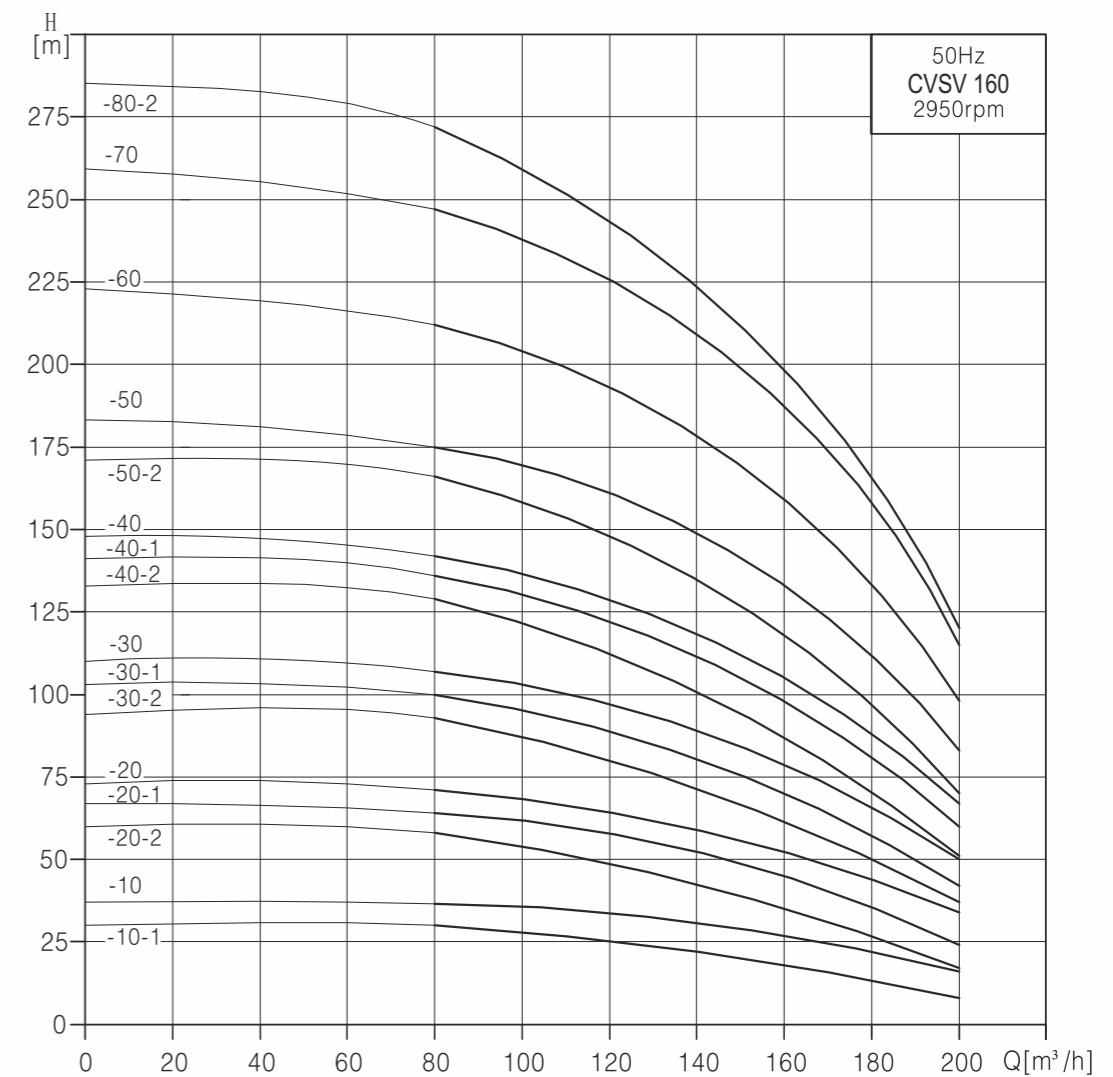
Model	Dimension (mm)					Weight (kg)
	B1	B2	B1+B2	D1	D2	
160-10-1	787	523	1310	311	235	206
160-10	787	523	1310	311	235	213
160-20-2	909	578	1487	311	235	276
160-20-1	909	666	1575	397	305	346
160-20	909	666	1575	397	305	346
160-30-2	1031	666	1697	397	305	369
160-30-1	1031	704	1735	442	324	441
160-30	1031	704	1735	442	324	441
160-40-2	1183	785	1968	484	365	561
160-40-1	1183	785	1968	484	365	561
160-40	1183	849	2032	548	388	675
160-50-2	1305	849	2154	548	388	680
160-50	1305	849	2154	548	388	680
160-60	1427	900	2327	548	388	736
160-70	1549	1190	2739	630	525	1081
160-80-2	1671	1190	2861	630	525	1090

NOTE: For same model, SVHT weighs 16.5 kgs heavier than SVH

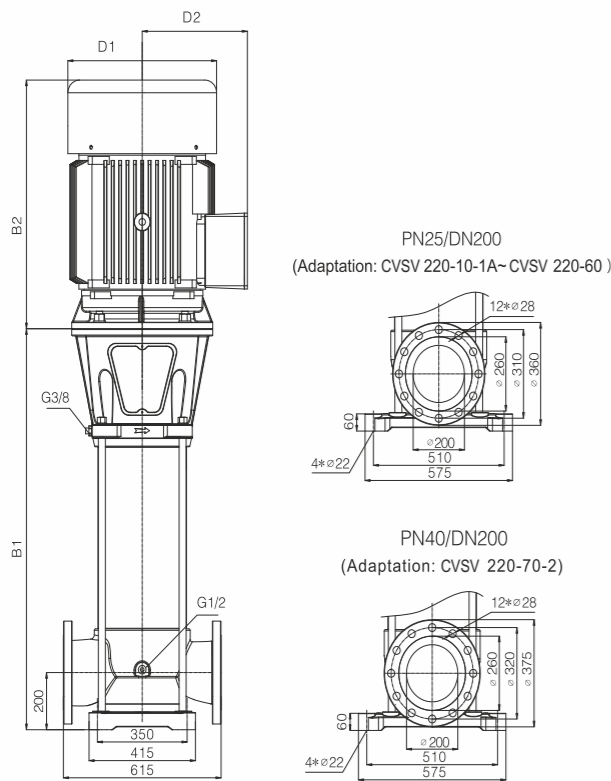
Performance data

Model	Power(kW)	Q (m³/h)	H (m)															
			80	90	100	110	120	130	140	150	160	170	180	190	200			
160-10-1	11		29	28	27	26	25	23	21	20	18	16	14	11	8			
160-10	15		35	34	33	32	31	30	29	28	27	24	21	19	16			
160-20-2	22		58	56	54	51	48	45	42	39	35	31	27	22	17			
160-20-1	30		64	62	60	58	56	53	50	48	45	40	35	30	24			
160-20	30		71	68	67	66	64	61	58	55	52	48	44	39	34			
160-30-2	37		93	91	89	85	81	77	72	67	61	55	49	43	37			
160-30-1	45		100	96	94	92	89	84	79	75	70	64	58	50	42			
160-30	45		107	103	101	99	96	93	90	85	79	73	66	58	50			
160-40-2	55		129	124	121	117	112	106	100	94	87	79	71	61	51			
160-40-1	55		136	133	130	126	122	117	112	105	98	90	81	70	60			
160-40	75		142	137	134	131	128	123	118	112	105	97	88	78	67			
160-50-2	75		166	163	159	154	148	142	135	127	118	108	96	83	70			
160-50	75		175	173	171	168	164	158	151	142	133	122	111	97	83			
160-60	90		212	209	205	201	196	190	181	171	159	147	133	115	98			
160-70	110		247	244	241	236	231	222	212	200	188	171	154	135	115			
160-80-2	110		272	267	262	256	249	238	226	213	198	180	161	141	120			

Performance curve



Installation dimensions and weight



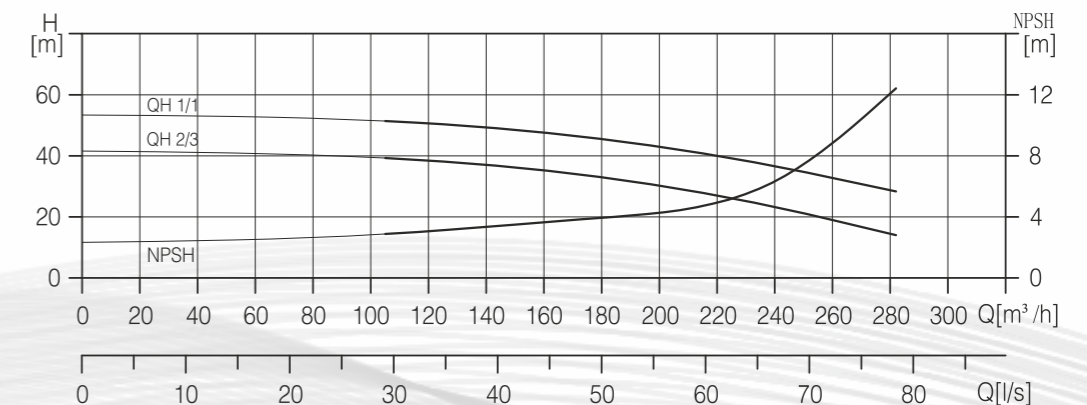
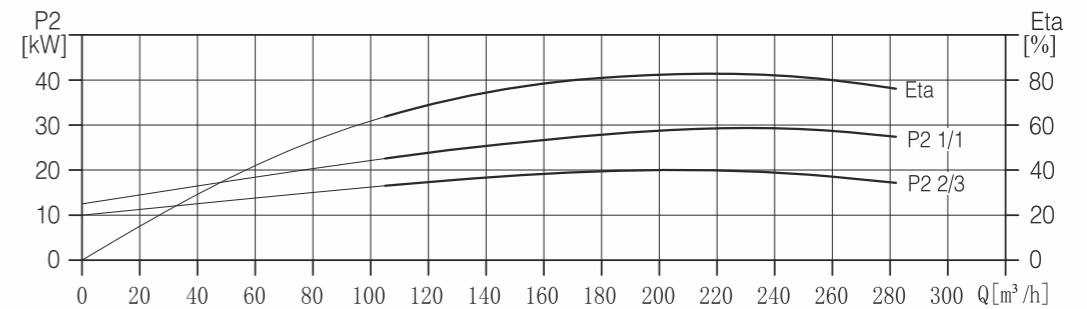
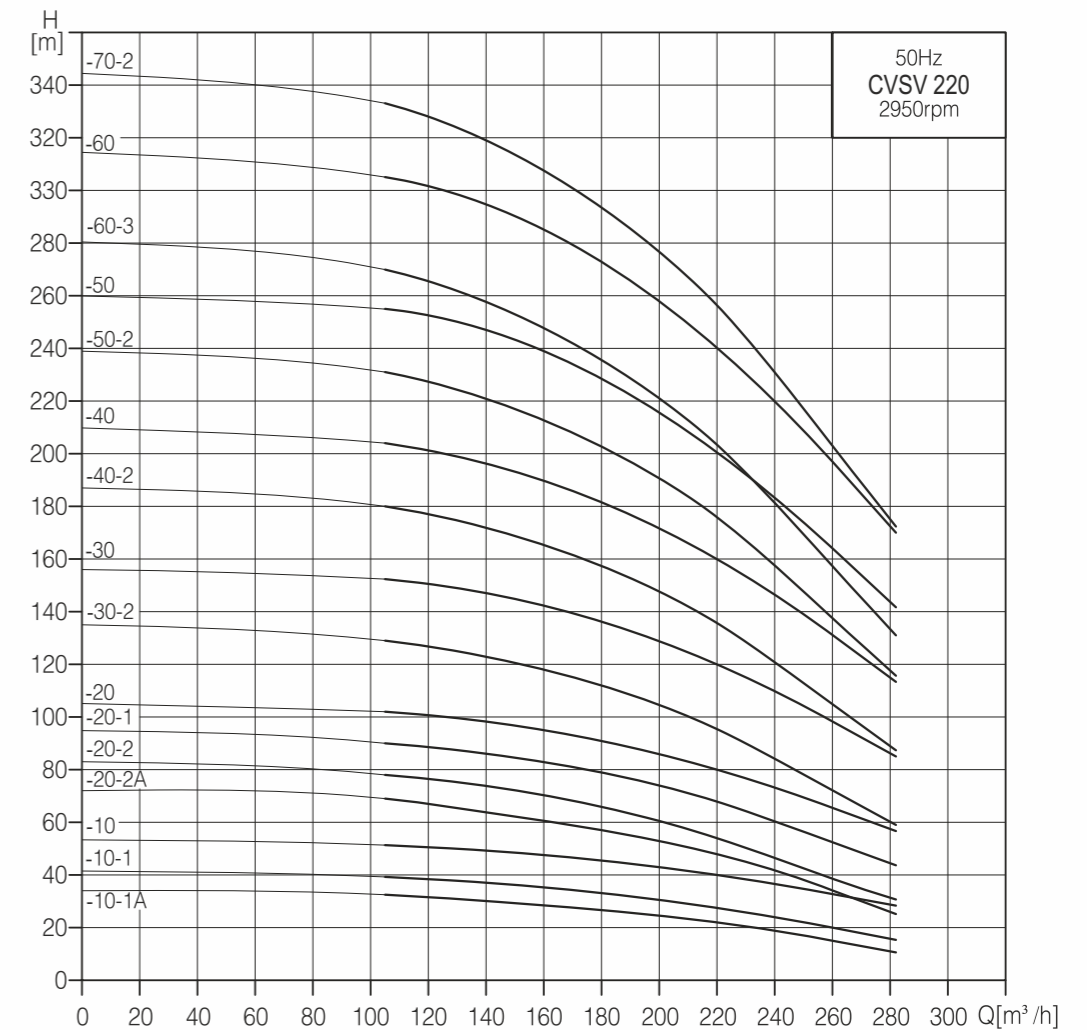
Model	Dimension (mm)					Weight (kg)
	B1	B2	B1+B2	D1	D2	
220-10-1A	861	578	1439	311	235	284
220-10-1	861	578	1439	311	235	316
220-10	861	666	1527	397	305	400
220-20-2A	989	666	1655	397	305	413
220-20-2	989	704	1693	442	324	483
220-20-1	1019	785	1804	484	365	596
220-20	1019	849	1868	548	388	712
220-30-2	1147	849	1996	548	388	722
220-30	1147	900	2047	548	388	769
220-40-2	1275	1190	2465	630	525	1106
220-40	1275	1190	2465	630	525	1247
220-50-2	1403	1190	2593	630	525	1251
220-50	1403	1190	2593	630	525	1245
220-60-3	1531	1190	2721	630	525	1251
220-60	1531	1190	2721	630	525	1521
220-70-2	1659	1190	2849	630	525	1529

NOTE: For same model, SVHT weighs 28.7 kgs heavier than SVH

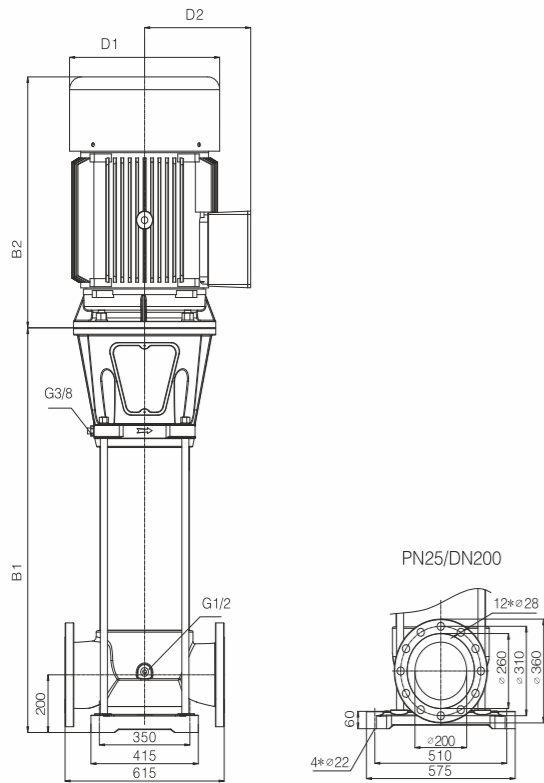
Performance data

Model	Power (kW)	Q (m³/h)	H (m)												
			105	120	140	160	180	200	220	240	260	280	282		
220-10-1A	18.5		33	31	30	28	26	24	22	18	15	13	11		
220-10-1	22		39	38	37	35	33	30	27	24	20	16	15		
220-10	37		51	50	49	48	46	43	40	37	33	29	28		
220-20-2A	37		69	66	63	60	57	52	48	40	34	27	25		
220-20-2	45		78	77	74	70	66	60	54	47	40	32	31		
220-20-1	55		90	89	86	83	79	73	67	60	53	45	44		
220-20	75		102	101	98	95	91	87	80	73	66	58	57		
220-30-2	75		129	127	123	118	112	103	94	84	73	60	59		
220-30	90		153	151	147	143	137	130	120	110	99	87	85		
220-40-2	110		180	177	172	165	157	147	134	121	106	89	87		
220-40	132		204	201	196	191	183	173	160	147	132	116	113		
220-50-2	132		231	228	221	213	203	190	174	157	139	118	116		
220-50	160		255	252	245	238	228	217	200	183	165	145	142		
220-60-3	160		270	266	258	248	236	220	201	181	159	134	131		
220-60	200		306	302	294	286	274	260	240	220	198	174	170		
220-70-2	200		333	328	319	308	294	277	254	231	205	176	172		

Performance curve



Installation dimensions and weight



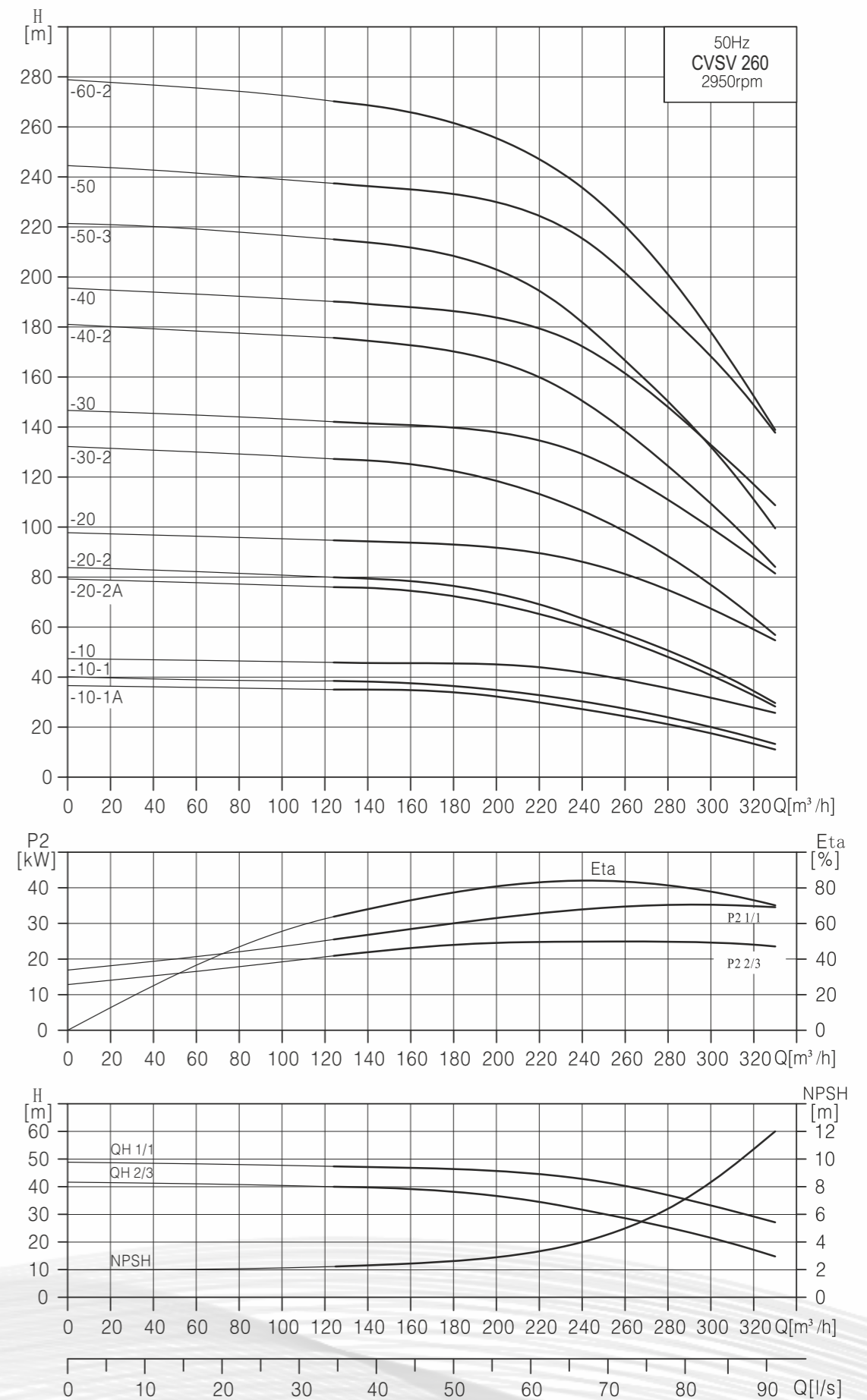
Model	Dimension mm					Weight (kg)
	B1	B2	B1+B2	D1	D2	
260-10-1A	864	578	1442	311	235	319
260-10-1	864	666	1530	397	305	389
260-10	864	666	1530	397	305	403
260-20-2A	997	704	1701	442	324	478
260-20-2	1027	785	1812	484	365	588
260-20	1027	849	1876	548	388	703
260-30-2	1160	900	2060	548	388	754
260-30	1160	1190	2350	630	525	1086
260-40-2	1293	1190	2483	630	525	1231
260-40	1293	1190	2483	630	525	1225
260-50-3	1426	1190	2616	630	525	1231
260-50	1426	1190	2616	630	525	1501
260-60-2	1559	1190	2749	630	525	1506

NOTE: For same model, SVHT weighs 28.7 kgs heavier than SVH

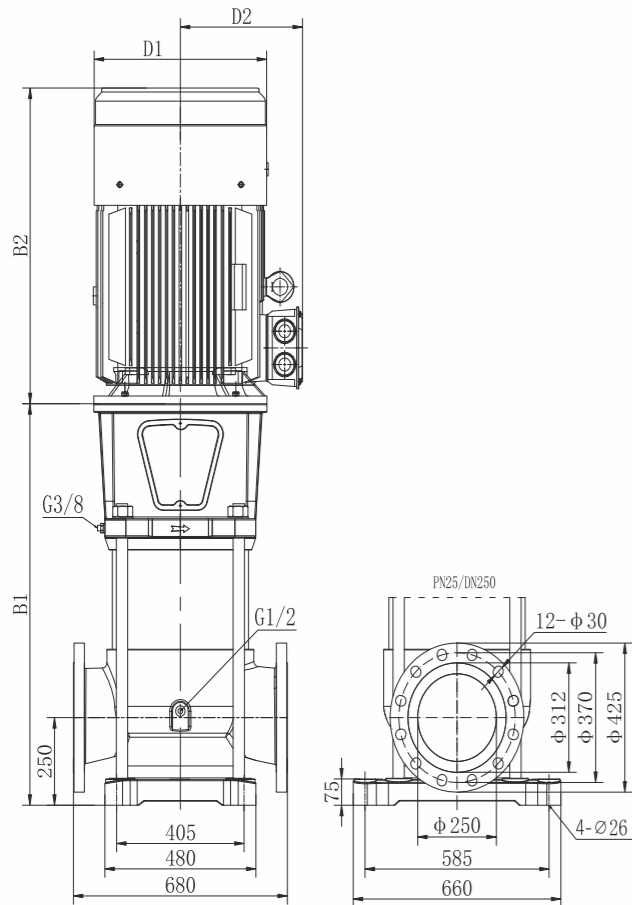
Performance data

Model	Power (kW)	Q (m³/h)	H (m)												
			125	140	160	180	200	220	240	260	280	300	320	330	
260-10-1A	22		36.7	34.5	33.6	31.5	29.6	27	24	21.5	17	14	10	8	
260-10-1	30		38.8	38.3	37.8	37.3	35.8	33.1	30.2	27.2	23.8	19.8	16.0	13.7	
260-10	37		46.8	46.5	46.2	45.8	45.1	43.9	41.6	38.9	35.5	31.9	28.0	26.0	
260-20-2A	45		75	72	69	64	60.5	55	49	45	37	29.5	21.5	18	
260-20-2	55		81	80	79	78	75	69	63	57	51	42.5	35.0	30.5	
260-20	75		97	96	95	94	93	91	86	81	74	67	59	55	
260-30-2	90		130	128	126	124	121	115	106	98	88	76	64	58	
260-30	110		145	144	143	142	140	136	129	121	111	100	89	82	
260-40-2	132		178	177	175	173	168	160	150	138	125	109	94	85	
260-40	160		194	193	192	190	186	182	172	161	148	133	118	110	
260-50-3	160		199	217	214	211	205	195	181	167	150	130	111	101	
260-50	200		242	241	239	237	233	227	215	202	185	167	148	137	
260-60-2	200		274	272	270	267	261	251	236	219	199	176	153	140	

Performance curve



Installation dimensions and weight



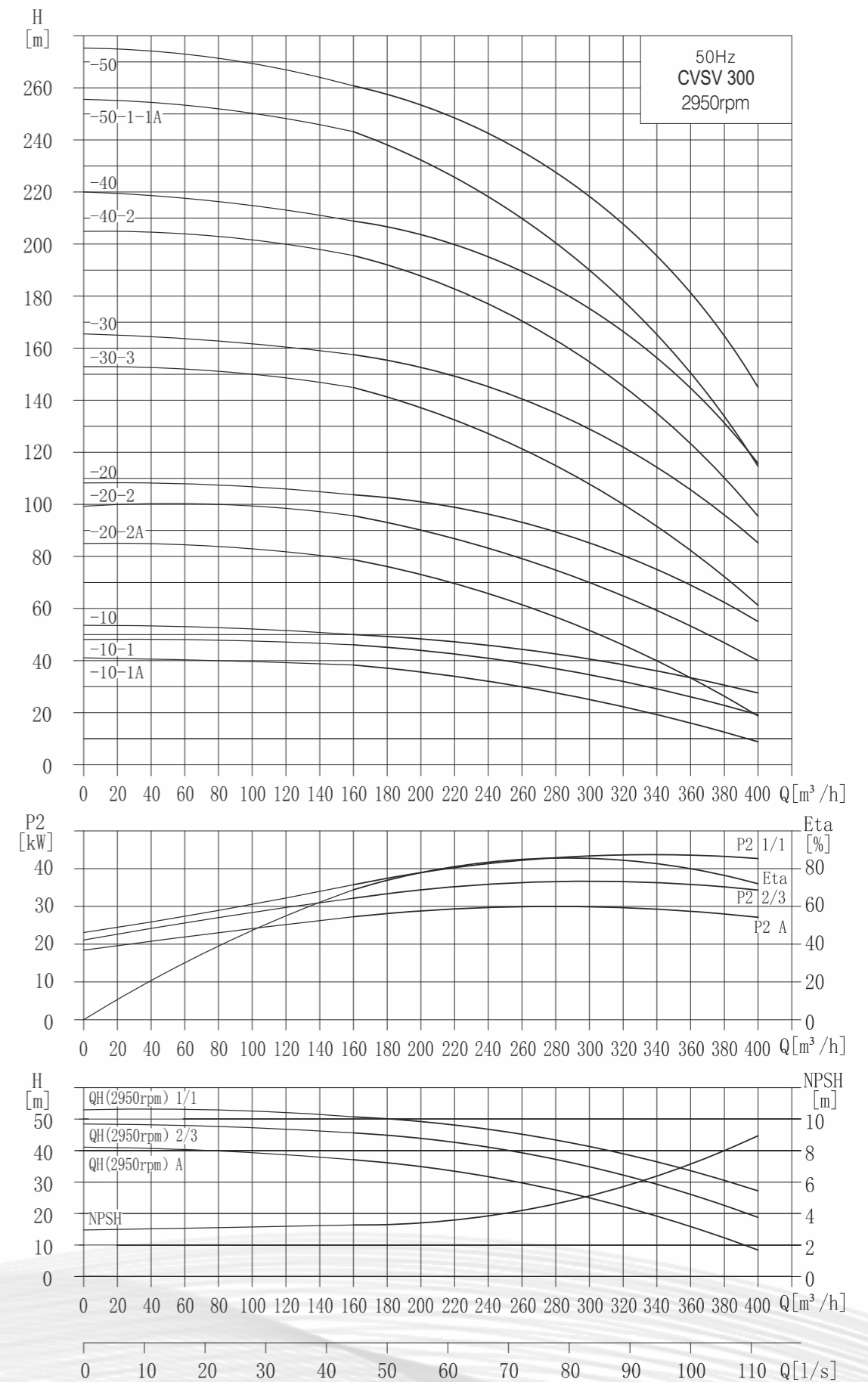
Model	Dimension mm					Weight (kg)
	B1	B2	B1+B2	D1	D2	
300-10-1A	970	666	1636	397	305	387
300-10-1	970	666	1636	397	305	403
300-10	970	704	1674	442	324	470
300-20-2A	1145	785	1930	484	365	564
300-20-2	1145	849	1994	548	388	702
300-20	1145	900	2045	548	388	749
300-30-3	1290	1190	2480	630	525	1071
300-30	1290	1190	2480	630	525	1226
300-40-2	1435	1190	2625	630	525	1223
300-40	1435	1190	2625	630	525	1448
300-50-1-1A	1580	1190	2770	630	525	1499
300-50	1580	1190	2770	630	525	1500

NOTE: For same model, SVHT weighs 28.7 kgs heavier than SVH

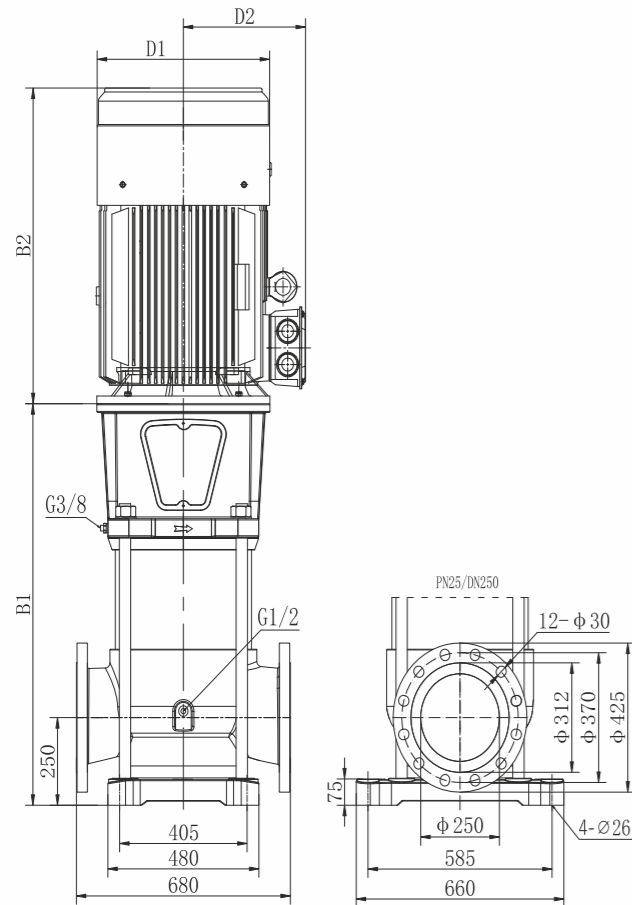
Performance data

Model	Power (kW)	Q (m³/h)	H (m)													
			160	180	200	220	240	260	280	300	320	340	360	380	400	
300-10-1A	30		38	37	36	34	32	30	27.5	25	22	19	16	12	8	
300-10-1	37		46	45	44	42.5	41	39	37	34	32	29	26	23	19	
300-10	45		50	49	48	47	46	44	43	42	39	36	33	31	27	
300-20-2A	55		78	76	73	70	66	62	57	52	46	40	33	26	18	
300-20-2	75		95	93	90	87	83	79	75	70	65	59	53	47	40	
300-20	90		104	103	101	99	96	93	90	85	80	75	69	62	55	
300-30-3	110		145	141	137	133	127	122	115	107	100	92	82	72	62	
300-30	132		157	155	152	149	145	141	135	129	122	114	105	95	85	
300-40-2	160		195	192	188	183	177	170	163	155	145	135	123	110	95	
300-40	185		209	206	203	200	195	190	183	174	166	156	145	131	115	
300-50-1-1A	200		243	238	232	225	218	210	200	189	178	165	150	133	114	
300-50	220		261	257	253	248	243	235	227	219	208	195	181	164	144	

Performance curve



Installation dimensions and weight



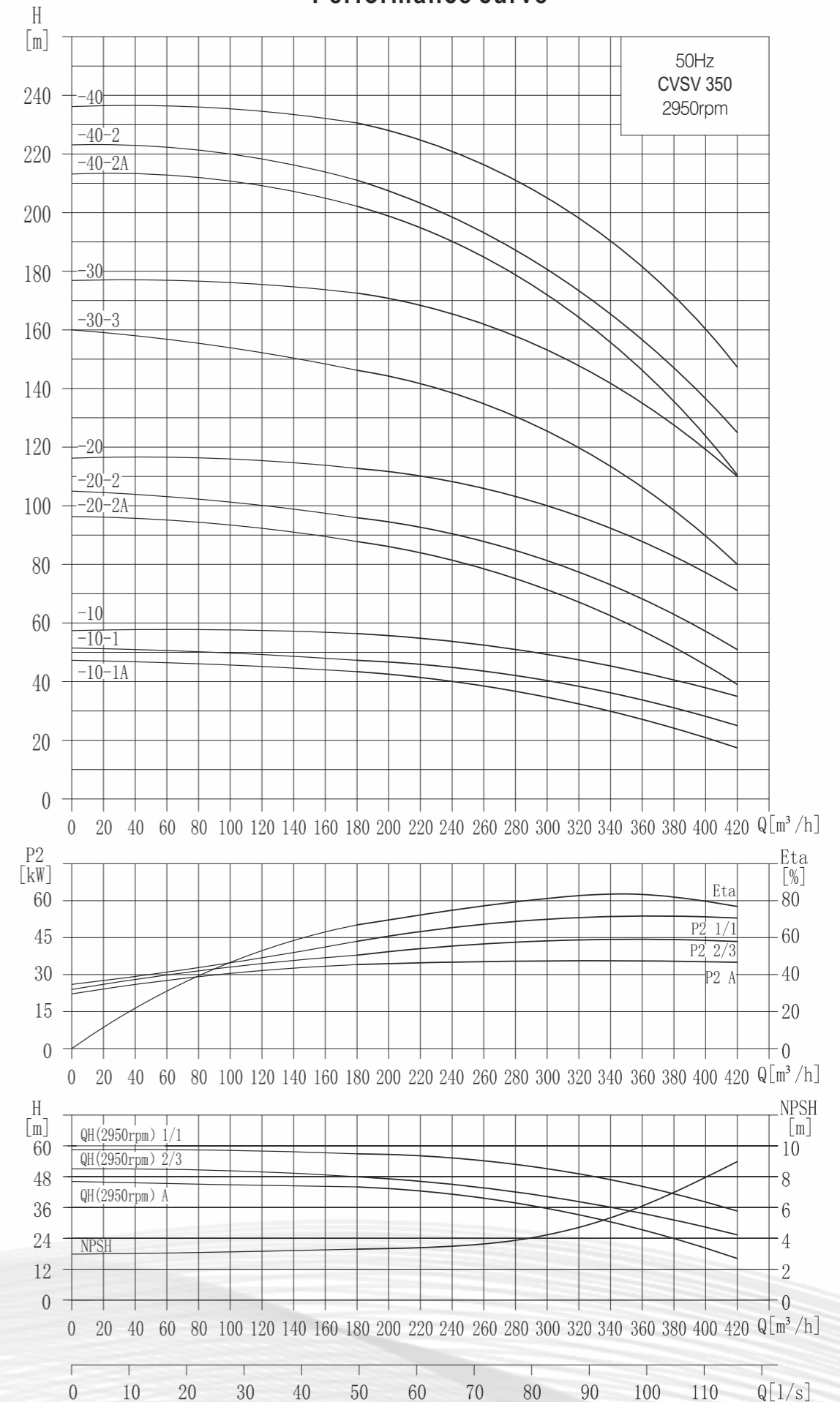
Model	Dimension mm					Weight (kg)
	B1	B2	B1+B2	D1	D2	
350-10-1A	970	666	1636	397	305	405
350-10-1	970	704	1674	442	324	473
350-10	1000	785	1785	484	365	559
350-20-2A	1145	849	1994	548	388	704
350-20-2	1145	900	2045	548	388	751
350-20	1145	1190	2335	630	525	1070
350-30-3	1290	1190	2480	630	525	1224
350-30	1290	1190	2480	630	525	1218
350-40-2A	1435	1190	2625	630	525	1450
350-40-2	1435	1190	2625	630	525	1495
350-40	1435	1190	2625	630	525	1541

NOTE: For same model, SVHT weighs 28.7 kgs heavier than SVH

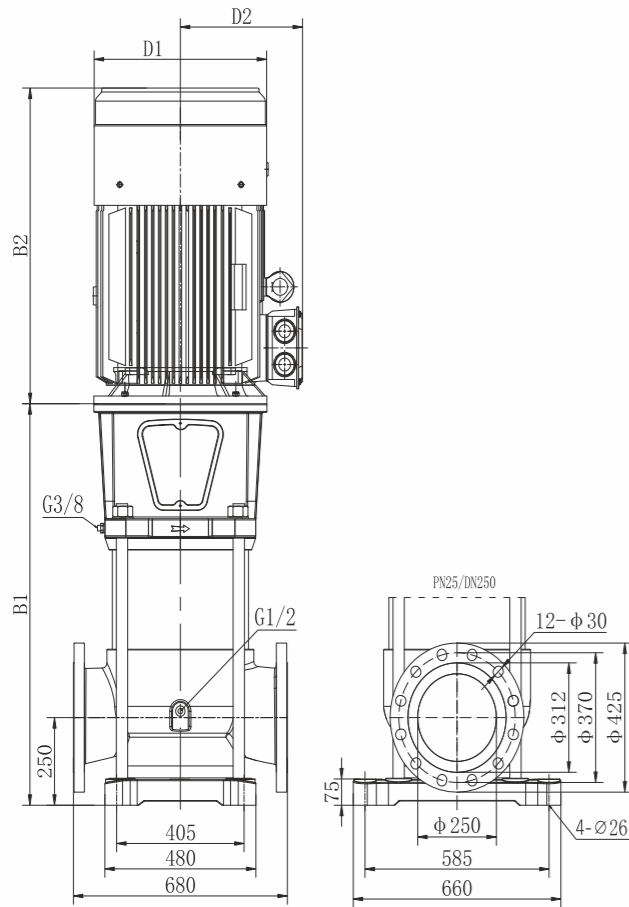
Performance data

Model	Power (kW)	Q (m³/h)	H (m)													
			160	200	220	240	260	280	300	320	340	350	360	380	400	420
350-10-1A	37		44	42.5	41	40	38	36	34	32	30	29	27	24	21	17
350-10-1	45		48	47	46	45	44	42	40	38	36	35	34	31	28	25
350-10	55		57	56	55	54	52	51	49	47	45	44	43	41	36	35
350-20-2A	75		88	86	84	81	78	75	71	67	63	60	57	52	45	38
350-20-2	90		96	94	92	90	88	85	82	78	74	72	68	63	57	51
350-20	110		113	111	110	108	106	103	100	96	93	90	87	83	74	71
350-30-3	132		146	144	141	138	135	130	125	120	113	110	106	98	90	80
350-30	160		173	171	168	165	162	158	154	148	142	138	135	127	118	110
350-40-2A	185		202	198	195	190	185	178	172	164	156	150	146	135	124	110
350-40-2	200		211	207	203	198	193	190	184	173	167	163	157	147	136	125
350-40	220		231	228	224	221	216	211	205	198	190	186	181	171	160	147

Performance curve



Installation dimensions and weight



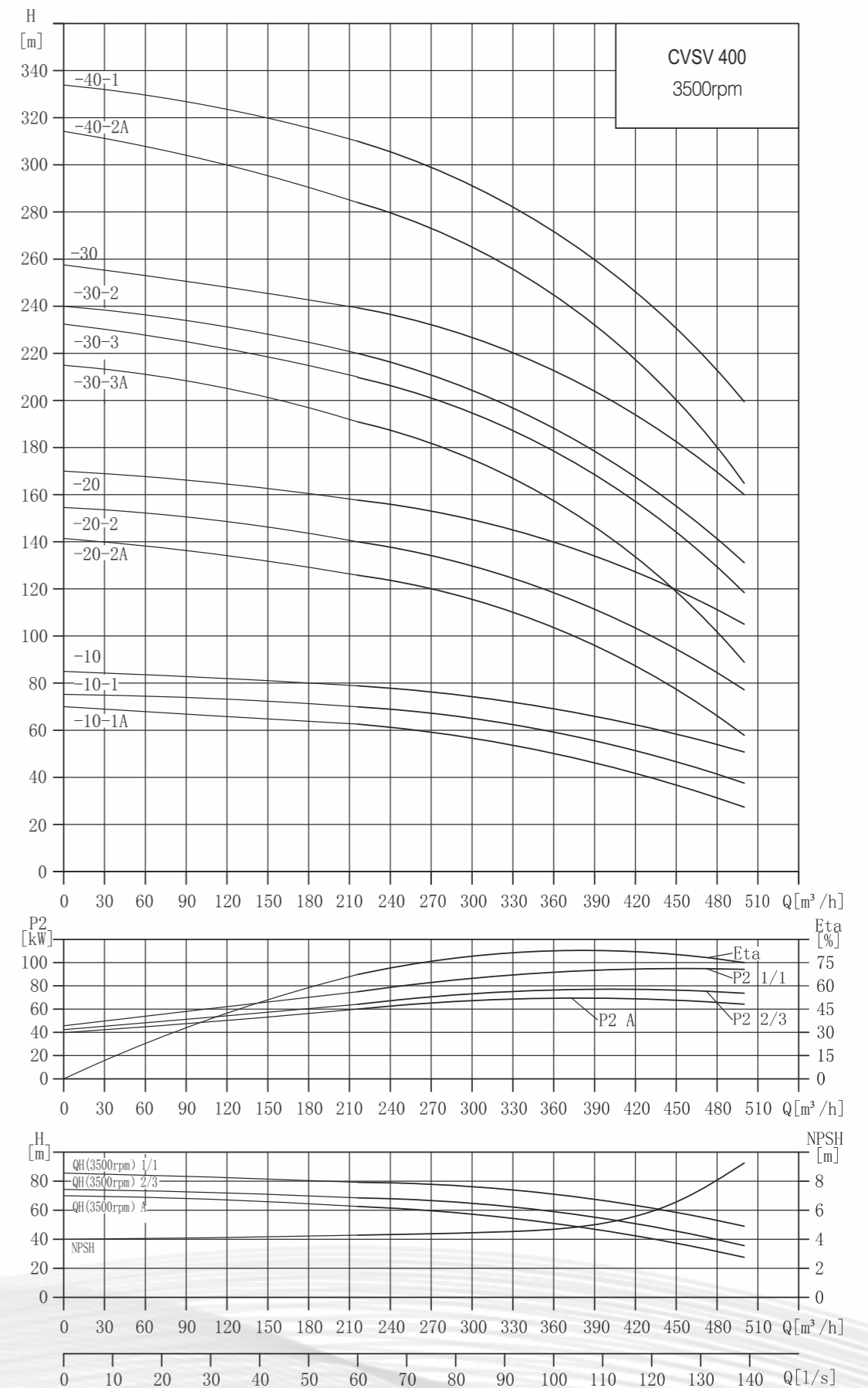
Model	Dimension mm					Weight (kg)
	B1	B2	B1+B2	D1	D2	
400-10-1A	970	767	1737	352	273	470
400-10-1	970	767	1737	352	273	471
400-10	970	767	1737	352	273	491
400-20-2A	1115	704	1819	442	324	537
400-20-2	1115	704	1819	442	324	563
400-20	1115	704	1819	442	324	580
400-30-3A	1260	704	1964	442	324	609
400-30-3	1290	785	2075	484	365	636
400-30-2	1290	785	2075	484	365	665
400-30	1290	785	2075	484	365	685
400-40-2A	1435	785	2220	484	365	706
400-40-1	1580	929	2509	548	388	780

NOTE: For same model, SVHT weighs 28.7 kgs heavier than SVH

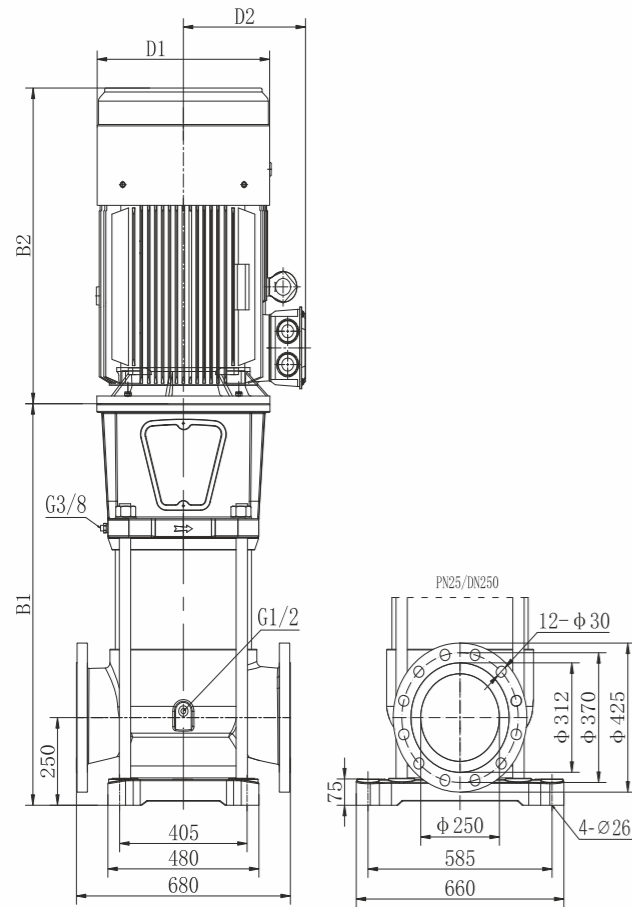
Performance data

Model	Power (kW)	Q (m³/h)	H (m)													
			216	240	270	300	330	360	390	400	420	450	480	498		
400-10-1A	75		63	61	58	56	53	50	47	45	42	37	32	27		
400-10-1	75		69	68	67	65	62	59	56	53	47	43	41	37		
400-10	90		79	78	76	74	72	69	66	64	62	58	54	52		
400-20-2A	132		124	122	120	115	110	104	96	93	87	77	66	57		
400-20-2	160		140	137	133	129	124	118	112	108	103	94	85	77		
400-20	185		158	156	153	149	145	140	134	132	127	120	111	105		
400-30-3A	200		190	187	182	175	167	157	146	142	134	129	102	88		
400-30-3	225		210	206	201	194	187	178	168	164	157	143	130	118		
400-30-2	250		221	216	211	204	196	188	178	175	168	155	142	131		
400-30	280		239	237	232	226	220	212	204	200	194	182	169	160		
400-40-2A	315		284	280	273	264	255	244	232	227	217	200	180	164		
400-40-1	355		310	305	299	291	282	271	260	255	246	230	213	199		

Performance curve



Installation dimensions and weight



Model	Dimension mm					Weight (kg)
	B1	B2	B1+B2	D1	D2	
450-10-1A	970	767	1737	352	273	470
450-10-1	970	767	1737	352	273	471
450-10	970	767	1737	352	273	491
450-20-2A	1115	704	1819	442	324	537
450-20-2	1115	704	1819	442	324	563
450-20	1115	704	1819	442	324	580
450-30-3A	1260	704	1964	442	324	609
450-30-3	1290	785	2075	484	365	636
450-30-2	1290	785	2075	484	365	665
450-30	1290	785	2075	484	365	685
450-40-2A	1435	785	2220	484	365	706
450-40-1	1580	929	2509	548	388	780

NOTE: For same model, SVHT weighs 28.7 kgs heavier than SVH

Performance data

Model	Power (kW)	Q (m³/h)	H (m)												
			216	240	270	300	330	360	390	400	420	450	480	498	
450-10-1A	75		63	61	58	56	53	50	47	45	42	37	32	27	
450-10-1	75		69	68	67	65	62	59	56	53	47	43	41	37	
450-10	90		79	78	76	74	72	69	66	64	62	58	54	52	
450-20-2A	132		124	122	120	115	110	104	96	93	87	77	66	57	
450-20-2	160		140	137	133	129	124	118	112	108	103	94	85	77	
450-20	185		158	156	153	149	145	140	134	132	127	120	111	105	
450-30-3A	200		190	187	182	175	167	157	146	142	134	129	102	88	
450-30-3	225		210	206	201	194	187	178	168	164	157	143	130	118	
450-30-2	250		221	216	211	204	196	188	178	175	168	155	142	131	
450-30	280		239	237	232	226	220	212	204	200	194	182	169	160	
450-40-2A	315		284	280	273	264	255	244	232	227	217	200	180	164	
450-40-1	355		310	305	299	291	282	271	260	255	246	230	213	199	

Performance curve

