

LAIKO

ALHY(S)

VERTICAL CONSTANT PRESSURE VARIABLE
FREQUENCY WATER SUPPLY SYSTEM



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FREQUENCY WATER SUPPLY SYSTEM

PUMP AND SYSTEM SOLUTION PROVIDER



Superior in Pump, Superior in Energy-Saving.

www.Laikopump.com



LAIKO Laiko Pump
Pump and System Solution Provider

LAIKO Pump(Zhejiang) Co., Ltd. is a subsidiary of Zhejiang Dayuan Pumps Industrial Co., Ltd. (Stock code: 603757), focusing on the research and manufacturing of energy-saving pumps.

LAIKO's applications cover the fields of construction, municipal, and industrial sectors. Currently, we have product lines including Inline Multistage Pumps, Inline Circulation Pumps, Horizontal Multistage Pumps, Cold and Hot Water Circulation Pipeline Pumps, Single-Stage Centrifugal Pumps, Standard Centrifugal Pumps, Stainless steel Horizontal Single-Stage Centrifugal Pumps, Submersible Sewage Pumps, and Immersed Multistage Centrifugal Pumps. Our products are exported to many countries and regions in Europe, America, and Asia, meeting local legal requirements and obtaining recognition from clients.

A standard research and development, production, sales, and service system has laid the core competitiveness and sustainable development space for LAIKO. Reliable product quality and thoughtful after-sales service have earned LAIKO widespread reputation.

LAIKO maintains a pioneering spirit, always adheres to the concept of technological innovation, and never stops exploring energy-saving endeavors!

Research and manufacturing of energy-saving pumps, providing pump and system solutions

With over 34 years of accumulated strength, we have formed an alliance with top domestic water pump research and development, production, sales, and technical teams, Established Zhejiang Laiko Pump Industry Co., Ltd. (referred to as Zhejiang Leike), with comprehensive strength ranking among the top in the industry.

The second-generation green intelligent factory of Industry 4.0 standard covers an area of nearly 200 acres, with an annual output of over 7 million units and a total investment of over 1 billion yuan.

Zhejiang Laiko has established a comprehensive sales and service network nationwide, with direct offices in major cities. Our products are exported to multiple countries and regions in Europe, America, and Asia. China Laiko pumps globally.



GREEN SMART FACTORY

Dayuan Pump Group and its subsidiary Laiko Pump Industry have implemented a significant strategic layout. Covering an area of nearly 200 acres with a total investment of approximately 1 billion RMB, the facility has an annual production capacity of 7 million units. It is a modern integrated factory that combines production, research and development, manufacturing, and logistics.



R&D STRENGTH

346	29	242	75	6
Domestic patents	Invention Patent	New utility patent	Appearance patent	Overseas patents

As a brand under Dayuan Pump Group, we have a strong foundation with over 177 R&D personnel and more than 352 patents. Our products have been honored with titles such as "Zhejiang Famous Brand Product" and "Zhejiang Export Famous Brand," and are exported to multiple countries and regions across Europe, America, and Asia. Our comprehensive strength ranks among the top in the industry. Through years of continuous investment in research and development, we have established a significant technological innovation advantage.

SERVICE COOPERATION

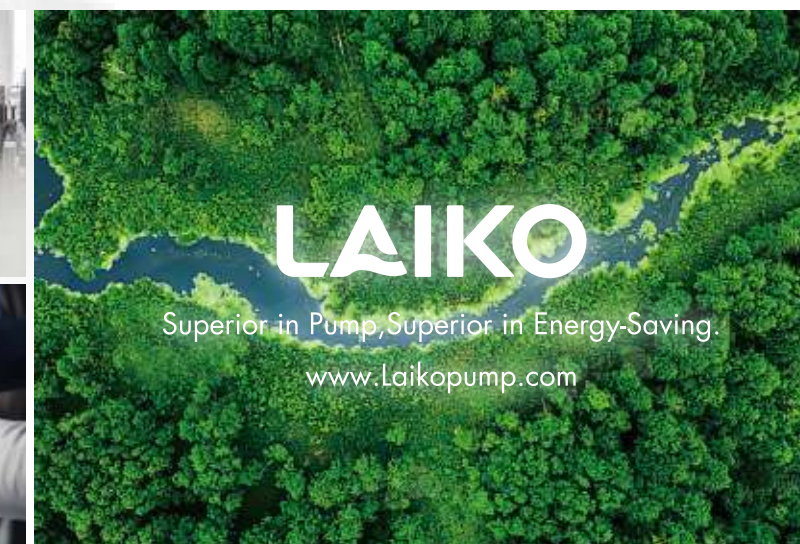
We have established offices in major cities across the country, supported by a professional and efficient service team. From consultation, purchase, after-sales, to maintenance, we provide high-quality, professional, timely, and attentive services at every stage.

Guided by the principle of "wholehearted dedication and customer-first," we respond quickly to customer needs, offering precise product recommendations and tailored solutions. Our comprehensive and full-cycle services ensure a worry-free experience for our customers.

SERVICE TENET: With all our heart and soul, Putting customers first

SERVICE TENET: Rapid response, Precise solution

SERVICE OBJECTIVES: Efficient O&M, Win-Win Cooperation



LAIKO

ALHY(S)

Vertical Constant Pressure Variable Frequency Water Supply System



Superior in Pump, Superior in Energy-Saving.
www.laikopump.com

LAIKO Laiko Pump (Zhejiang) Co., Ltd.

ALHY(S)

Vertical Constant Pressure Variable Frequency Water Supply System

The ALHY (S) series vertical constant pressure variable frequency water supply system is equipped with an intelligent variable frequency controller, which can achieve intelligent control functions such as constant pressure and constant pressure difference by connecting pressure sensors. It has the characteristics of energy saving, low noise, intelligence, environmental protection, compact structure, beautiful appearance, light weight, easy use and maintenance, and high reliability. The pump is equipped with accessories such as variable frequency controller, pressure sensor, stabilizing tube, five way valve, pressure gauge, etc. at the factory, and does not require customer installation.

Low viscosity, non flammable and non explosive liquid that is prone to vaporization, and does not contain solid particles or fibers. The liquid should not have a chemical reaction with the system materials. When the temperature of the transported liquid exceeds 70 °C, please consult our company.

Voltage: Three phase 380VAC

Medium temperature: 0~70 °C

Environmental temperature: +40 °C

Highest altitude: 1000m

APPLICATION FIELD

Water Supply

Industrial Turbocharging

Industrial Liquid Transportation

HVAC System

HVAC

TECHNICAL DATA

Flow range: 0.4~240m³/h

Head range: 4~240m

Power range: 0.37~18.5kW

Protection level: IP55

Output frequency range: 30~50Hz

APPLICATION

High-rise building water supply
Factory water filtration and transportation
Pipeline pressurization and equipment supporting system
Washing and cleaning system
Boiler feed water and cooling water circulation
HVAC system and ultra-filtration system
Food & beverage factory and fire protection system

FEATURES

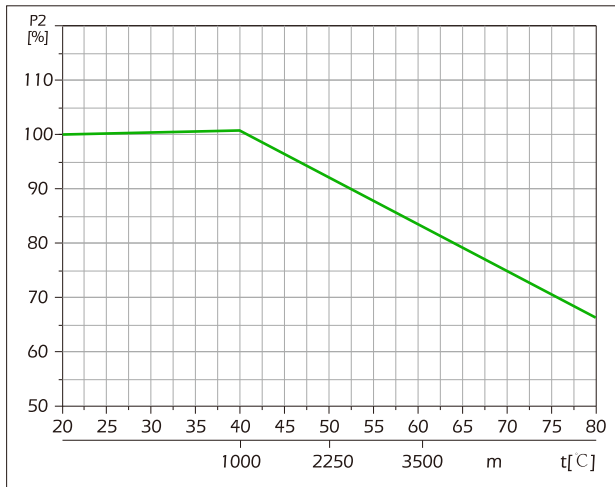
Low viscosity, non-flammable, non-explosive, easily vaporized liquid containing neither solid particles nor fibers , the liquid must not have chemical reaction on the pump material, when the density and viscosity of the conveying liquid is greater than water, please contact us for high-power motor.
Liquid temperature: -20°C~70°C (Common); -15°C ~ 120°C(optional)
Flow range: 0.4 ~240m3/h
Liquid pH value: 3~9
Maximum ambient temperature:+40°C
Peak working pressure (PWP): 33bar
Highest altitude:1000m

MOTOR

Fully enclosed standard air-cooled two-stage standard motor
Protection class: IP55
Insulation class: F

OPERATING ENVIRONMENT

The highest operating temperature of the pumps is +40°C If the pumps are used at a temperature above +40 °C, or their motors are installed at an altitude higher than 1000m, the output power of the motors will drop. See the figure below. In this circumstance, motors with larger output power are needed.



As shown above, when the pump is installed above 3500 meters above sea level, P2 is expected to drop to around 88%: when the ambient temperature reaches 70°C, P2 will drop to about 78%.

MODEL INSTRUCTION

32-10 - 3 - F - S - W - S - C

C:Common temperature; R: Hot water
S:AISI304; L:AISI316L; P:Common
W:50Hz; L:60Hz
(m):Single phase, without m is three phase
F: Flange; A:Oval flange; K:Clamp connection; G:Threaded connection
Small impeller stage
Impeller stages
Rated flow(m³/h)

MINIMUM INLET PRESSURE-NPSH

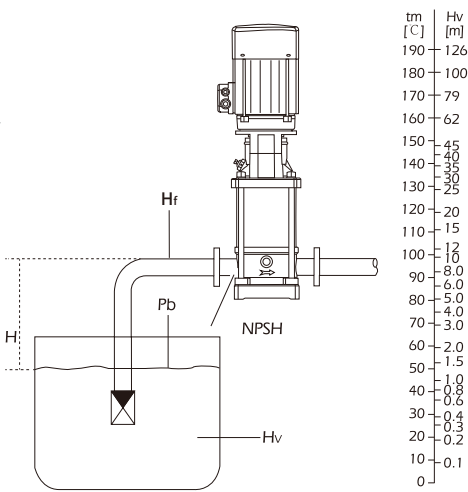
Calculation of the inlet pressure "H" is recommended in these Situations:
The liquid temperature is high
The flow is significantly higher than the rated flow.
Water is drawn from depths
Water is drawn through long pipes
Inlet conditions are poor

To avoid cavitation, make sure that there is a minimum pressure on the suction side of the pump. The maximum suction lift " H " in meters head can be calculated as follows:

- H =Pb*10.2-NPSH-Hf-Hv-HS
- Pb =Barometric pressure in bar.(Barometric pressure can be set to 1 bar).In closed systems, Pb indicates the system pressure in bar.
- NPSH =Net Positive Suction Head in meters head. (To be read from the NPSH curve at the highest flow the pump will be delivering.)
- HF =Friction loss in suction pipe in meters head.(At the highest flow the pump will be delivering.)
- HV =Vapor pressure in meters head.(lo be read from the vapor pressure scale. "Hv" depends on the liquid temperature "tm"
- HS =Safety margin=minimum 0.5 meters head

If the "H" calculated is positive, the pump can operate at a suction lift of maximum "H" metershead.
If the "H" calculated is negative, an inlte pressure of minimum "H" metershead is required.

Note: To avoid cavitation, never select a pump with a duty point too far to the right on the NPSH curve. Always check the NPSH value ofthe pump at the highest possible flow.



MAXIMUM INLET PRESSURE

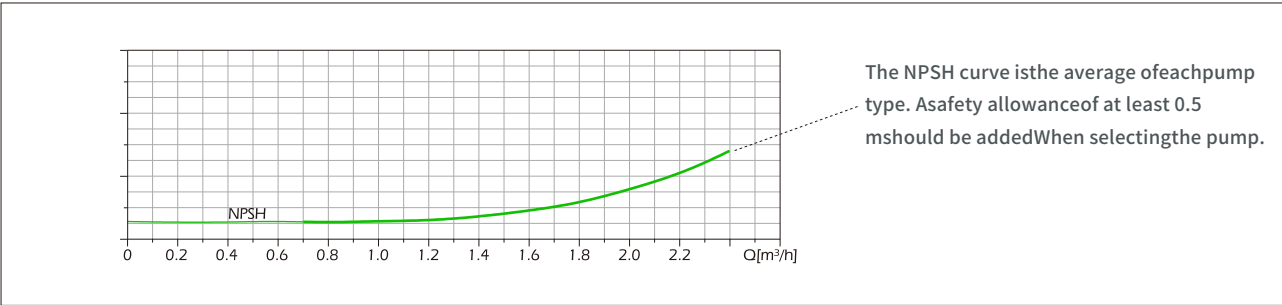
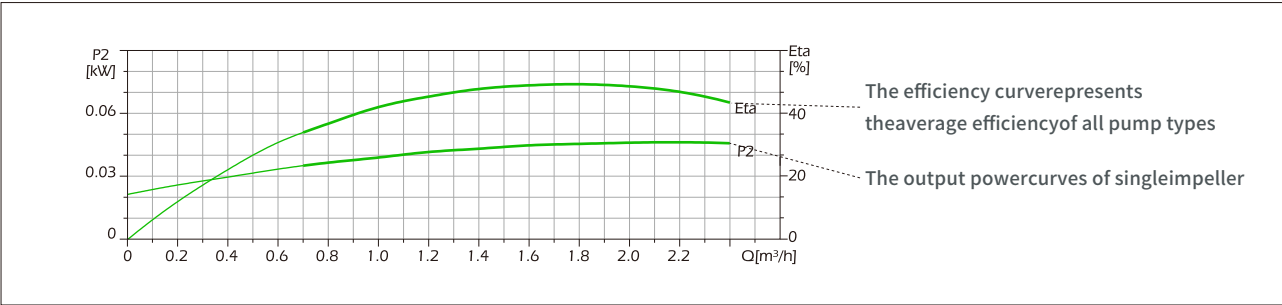
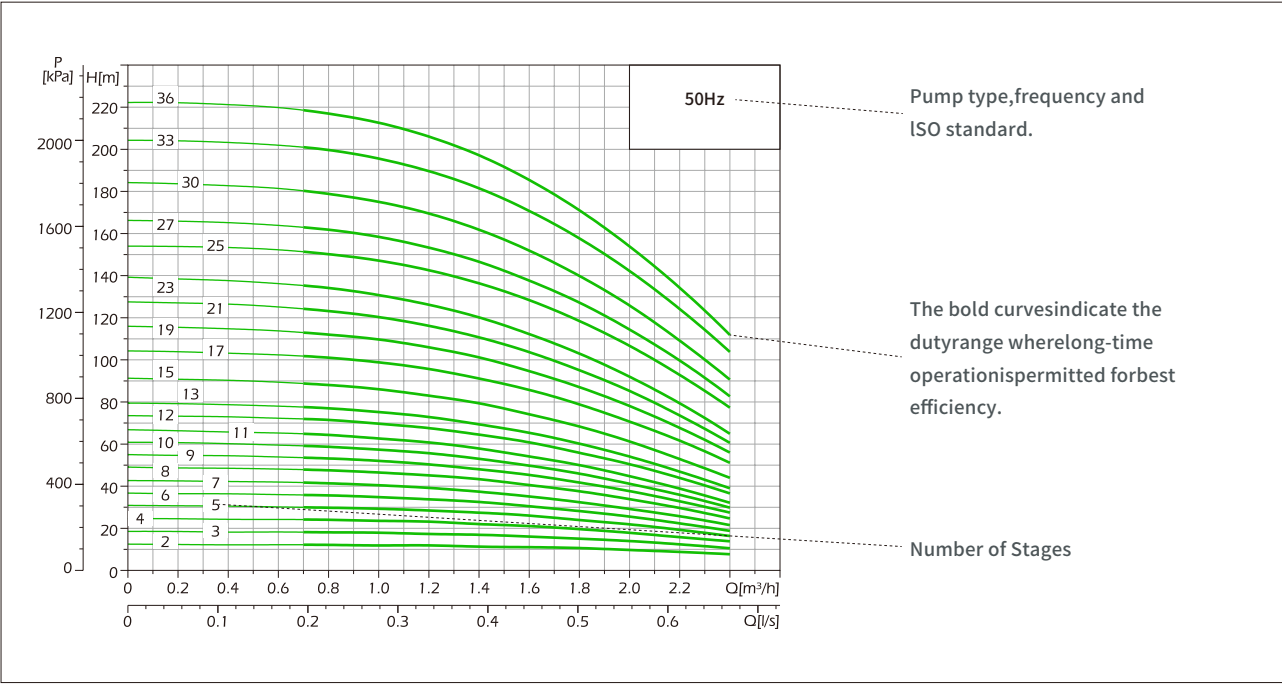
The Following table shows the maximum permissible inlet pressure. However, the current inlet pressure + the pressure against a closed valve must always be lower than the Max. permissible operating pressure. If the maximum permissible operating pressure is exceeded,the bearing in the motor may be damaged and the life of the shaft seal reduced.

Model	Maximum Inlet Pressure
1,3,5,10,15,20 Flange/cuttingferrule/pipe thread	25
1,3,5OVAL FLANGE	16
32	
32-1-1→32-8	16
32-9-2→32-16	30
32	30
45	
45-1-1→45-5	16
45-6-2→45-9	25
45-10-2→45-11	30
45-12-2→45-13-2	33
45	
45-1-1→45-10-2	25
45-10→45-13-2	33
64	
64-1-1→64-5-2	16
64-5-1→64-8-1	25
64	25
90	
90-1-1→90-4-2	16
90-4→90-6	25
90	25
120/150/200	20

Note: If the pressure range is beyond the above, please consult us.

TECHNICAL TABLE

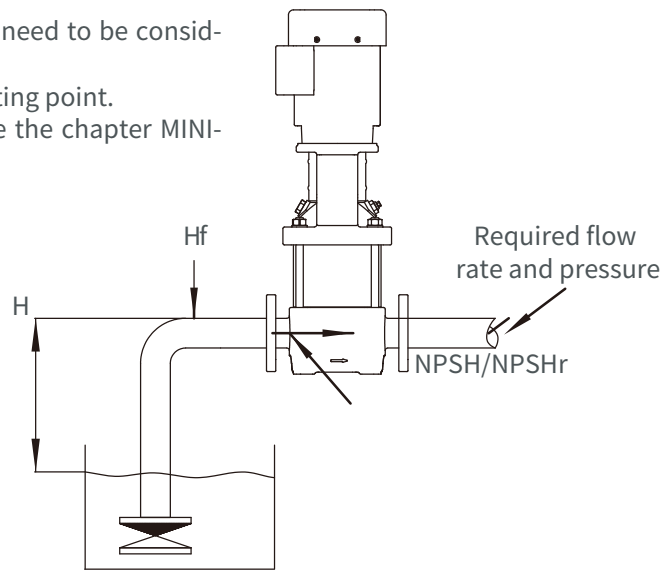
Tolerances to ISO 9006, Annex A.Measurements have been made withairless water at a temperature of 20°Cand kinematic viscosity of 1mm/s.To avoid overheating of the motor, thepump should not be use against a highhead for a long time.



PUMP SELECTION

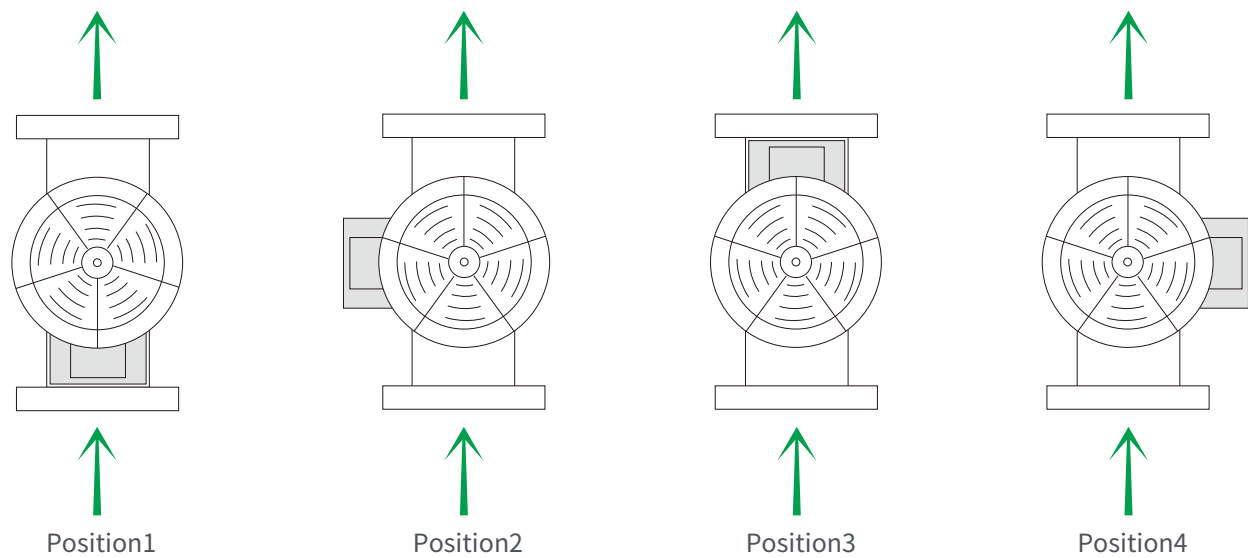
When selecting a pump, consider about these factors:

- Flow and pressure required at the extraction point.
- Pressure loss (H) due to height difference.
- Friction losses (Hf) in pipes, pressure losses caused by long pipes, bends, valves or similar structures may need to be considered.
- The best efficiency at the expected operating point.
- NPSH value. For calculation of NPSH, see the chapter MINIMUM INLET PRESSURE-NPSH



TERMINAL BOX POSITIONS

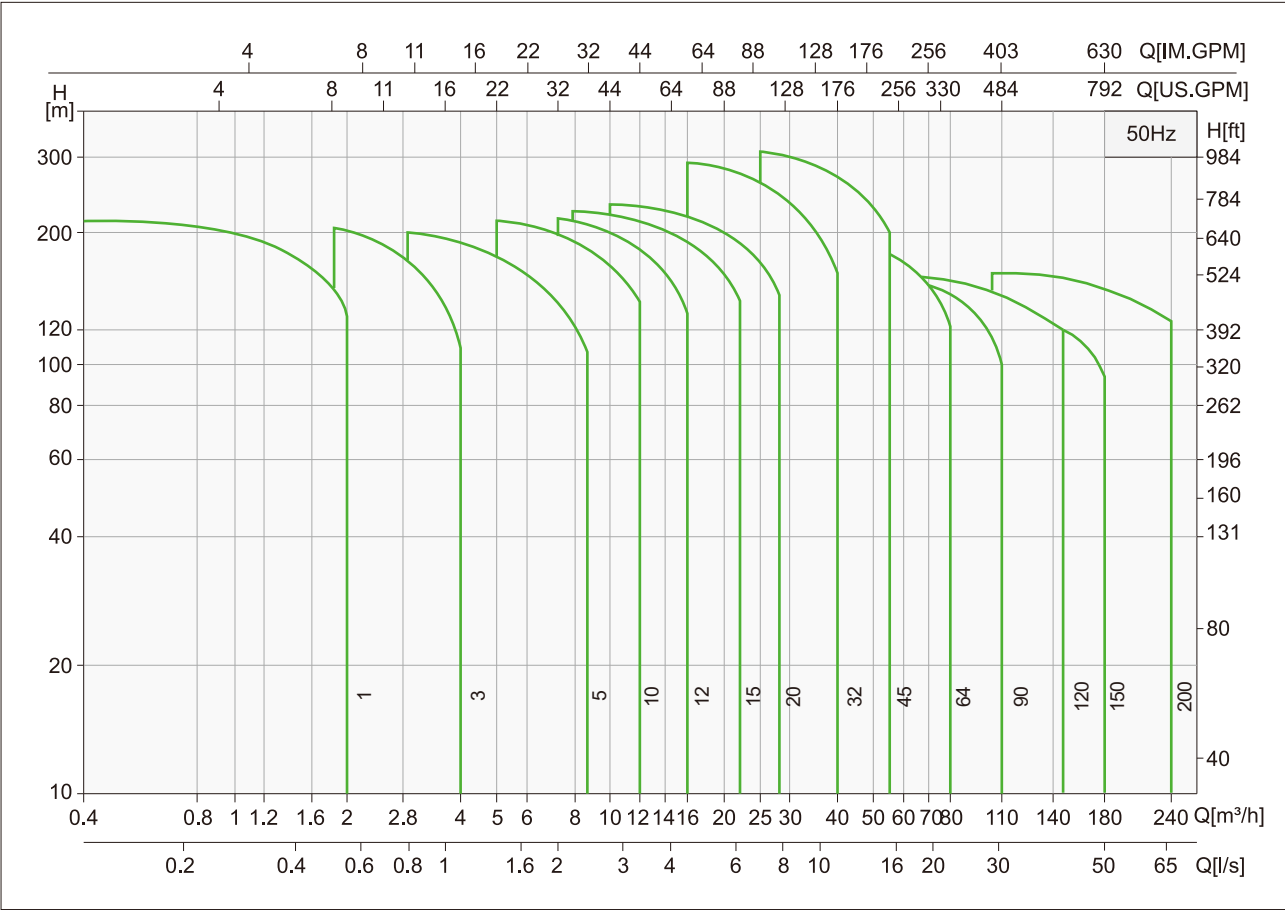
Note: set to position 3 before delivery



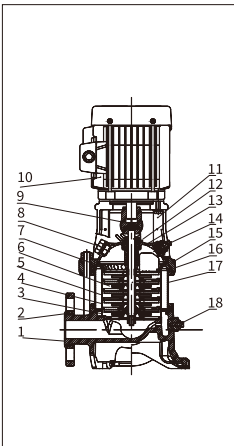
PRODUCT RANGE

Model	1	3	5	10	15	20	32	45	64	90	120	150	200
Rated flow[m³/h]	1	3	5	10	15	20	32	45	64	90	120	150	200
How range[m³/h]	0.4-2.0	1.2-4.4	2.3-8.4	5-14	8-23.5	10-29	14-39	23-60	30-86	46-121	60-150	80-180	100-240
Max.pressure bar	22	24	24	24	23	25	28	33	22	20	20	20	20
Motor power[kw]	0.37-2.2	0.37-3	0.37-4	0.75-11	1.1-15	1.1-18.5	1.5-30	3-45	4-45	5.5-45	11-75	11-75	18.5-110
Temperature Range[°C]	-20°C~+120°C Note: (Both the Max. permissible pressure and liquid temperature range refer to the pump capacity.)												
Max.pump efficiency[%]	45	55	60	72	70	72	74	78	76	77	74	73	79
Pipe connection-ALD													
Oval flange	G1	G1	G1 ¼	-	-	-	-	-	-	-	-	-	-
DIN flange	DN25	DN25	DN32	DN40	DN50	DN50	DN65	DN80	DN100	DN100	DN125	DN125	DN150
Pipe connection-ALDS													
DIN flange	DN25	DN25	DN32	DN40	DN50	DN50	DN65	DN80	DN100	DN100	DN125	DN125	DN150
Clamp connector	Φ42	Φ42	Φ42	-	-	-	-	-	-	-	-	-	-
Threaded connector	G1 ¼	G1 ¼	G1 ¼	-	-	-	-	-	-	-	-	-	-

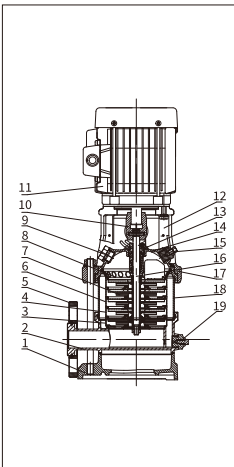
SCOPE OF PERFORMANCE



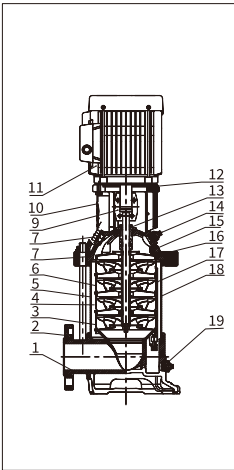
CROSS SECTION

	No	Name	Materials	GB	AISI/ASTM
	1	Pump body	Cast iron	GB/T9439-HT200	ASTM 25B
	2	Flange	Nodular cast iron	GB/T1348-QT400-18	ASTM A53660-40-18
	3	First diffuser	Stainless steel	GB/T20878-06Cr19Ni10	ASIS304
	4	Diffuser with bearing	Stainless steel	GB/T20878-06Cr19Ni10	ASIS304
	5	Medium diffuser	Stainless steel	GB/T20878-05Cr19Ni10	ASIS304
	6	Impeller	Stainless steel	GB/T20878-06Cr19Ni10	ASIS304
	7	Final diffuser	Stainless steel	GB/T20878-05Cr19Ni10	ASIS304
	8	Filling plug	Stainless steel	GB/T20878-06Cr19Ni10	ASIS304
	9	Half-coupling	Iron based powder metallurgy	/	/
	10	Motor	/	/	/
	11	Guarding plate	Stainless steel	GB/T20878-06Cr19Ni10	ASIS304
	12	Mechanical seal	/	/	/
	13	Pump cover	Cast iron	GB/T9439-HT200	ASTM 25B
	14	Vent plug assembly	Stainless steel	GB/T20878-06Cr19Ni10	ASIS304
	15	Motor base	Cast iron	GB/T9439-HT200	ASTM 25B
	16	Pump shaft	Stainless steel	GB/T20878-06Cr19Ni10	ASIS304
	17	Pump barrel	Stainless steel	GB/T20878-06Cr19Ni10	ASIS304
	18	Discharge bolt assembly	Stainless steel	GB/T20878-06Cr19Ni10	ASIS304

Structure figure1-1 1,3,5

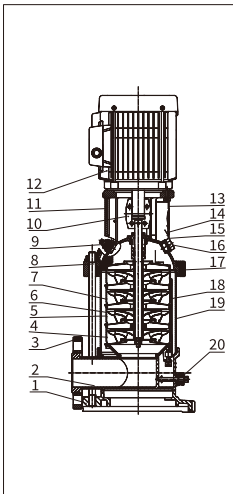
	No	Name	Materials	GB	AISI/ASTM
	1	Pump base	Cast iron	GB/T9439-HT200	ASTM 25B
	2	Pump body	Stainless steel	GB/T20878-06Cr19Ni10	ASIS304
	3	First diffuser	Stainless steel	GB/T20878-06Cr19Ni10	ASIS304
	4	Diffuser with bearing	Stainless steel	GB/T 20878-05Cr19Ni10	ASIS304
	5	Flange	Nodular cast iron	GB/T1348-QT400-18	ASTM A536 60-40-18
	6	Medium diffuser	Stainless steel	GB/T 20878-06Cr19Ni10	ASIS304
	7	Impeller	Stainless steel	GB/T20878-06Cr19Ni10	ASIS304
	8	Final diffuser	Stainless steel	GB/T 20878-06Cr19Ni10	ASIS304
	9	Filling plug	Stainless steel	GB/T 20878-06Cr19Ni10	ASIS304
	10	Half-coupling	Iron based powder metallurgy	/	/
	11	Motor	/	/	/
	12	Guarding plate	Stainless steel	GB/T 20878-06Cr19Ni10	ASIS304
	13	Mechanical seal	/	/	/
	14	Pump cover	Stainless steel	GB/T 20878-06Cr19Ni10	ASIS304
	15	Vent plug assembly	Stainless steel	GB/T 20878-06Cr19Ni10	ASIS304
	16	Pump shaft	Stainless steel	GB/T 20878-06Cr19Ni10	ASIS304
	17	Motor base	Cast iron	GB/T9439-HT200	ASTM25B
	18	Pump barrel	Stainless steel	GB/T 20878-06Cr19Ni10	ASIS304
	19	Discharge bolt assembly	Stainless steel	GB/T20878-06Cr19Ni10	ASIS304

Structure figure1-2 1,3,5

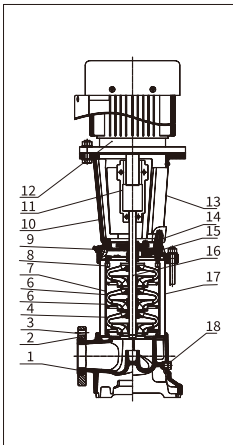
	No	Name	Materials	GB	AISI/ASTM
	1	Pump body	Cast iron	GB/T9439-HT200	ASTM25B
	2	Flange	Nodular cast iron	GB/T13480T400-18	ASTMA536 60-40-18
	3	First diffuser	Stainless steel	GB/T20878-06Cr19Ni10	ASIS304
	4	Diffuser with bearing	Stainless steel	GB/T20878-06Cr19Ni10	ASIS304
	5	Impeller	Stainless steel	GB/T20878-06Cr19Ni10	ASIS304
	6	Medium diffuser	Stainless steel	GB/T20878-06Cr19Ni10	ASIS304
	7	Final diffuser	Stainless steel	GB/T20878-06Cr19Ni10	ASIS304
	8	Filling plug	Stainless steel	GB/T20878-06Cr19Ni10	ASIS304
	9	Half-coupling	Iron based powder metallurgy	/	/
	10	Guarding plate	Stainless steel	GB/T20878-06Cr19Ni10	ASIS304
	11	Motor	/	/	/
	12	Motor base	Cast iron	GB/T9439-HT200	ASTM25B
	13	Mechanical seal	/	/	/
	14	Vent plug assembly	Stainless steel	GB/T20878-06Cr19Ni10	ASIS304
	15	Pump cover	Cast iron	GB/T9439-HT200	ASTM25B
	16	Pump shaft	Stainless steel	GB/T20878-06Cr19Ni10	ASIS304
	17	Tension plate	Stainless steel	GB/T20878-06Cr19Ni10	ASIS304
	18	Pump barrel	Stainless steel	GB/T20878-06Cr19Ni10	ASIS304
	19	Discharge bolt assembly	Stainless steel	GB/T20878-06Cr19Ni10	ASIS304

Structure figure1-3 10,15,20

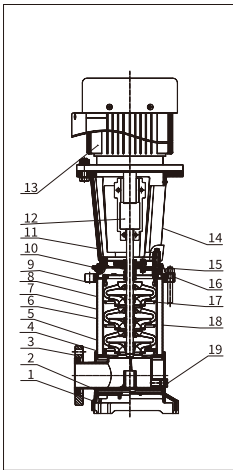
CROSS SECTION

	No	Name	Materials	GB	AISI/ASTM
	1	Pump base	Cast iron	GB/T9439-HT200	ASTM25B
	2	Pump body	Stainless steel	GB/T20878-06Cr19Ni10	ASIS304
	3	Flange	Nodular cast iron	GB/T1348-0T400-18	ASTMA53660-40-18
	4	First diffuser	Stainless steel	GB/T20878-06Cr19Ni10	ASIS304
	5	Diffuser with bearing	Stainless steel	GB/T20878-06Cr19Ni10	ASIS304
	6	Impeller	Stainless steel	GB/T20878-06Cr19Ni10	ASIS304
	7	Medium diffuser	Stainless steel	GB/T20878-06Cr19Ni10	ASIS304
	8	Final diffuser	Stainless steel	GB/T2087806Cr19Ni10	ASIS304
	9	Filling plug	Stainless steel	GB/T20878-06Cr19Ni10	ASIS304
	10	Half-coupling	Iron based powder metallurgy	/	/
	11	Motor base	Cast iron	GBT 9439-HT200	ASTM25B
	12	Motor	/	/	/
	13	Guarding plate	Stainless steel	GB/T20878-05Cr19Ni10	ASIS304
	14	Mechanical seal	/	/	/
	15	Pump cover	Stainless steel	GB/T20878-06Cr19Ni10	ASIS304
	16	Vent plug assembly	Stainless steel	GB/T20878-06Cr19Ni10	AS304
	17	Pump shaft	Stainless steel	GB/T20878-06Cr19Ni10	ASIS304
	18	Tension plate	Stainless steel	GB/T20878-06Cr19Ni10	ASIS304
	19	Pump barrel	Stainless steel	GB/T20878-06Cr19Ni10	ASIS304
	20	Discharge bolt assembly	Stainless steel	GB/T20878-06Cr19Ni10	ASIS304

Structure figure1-4 10,15,20

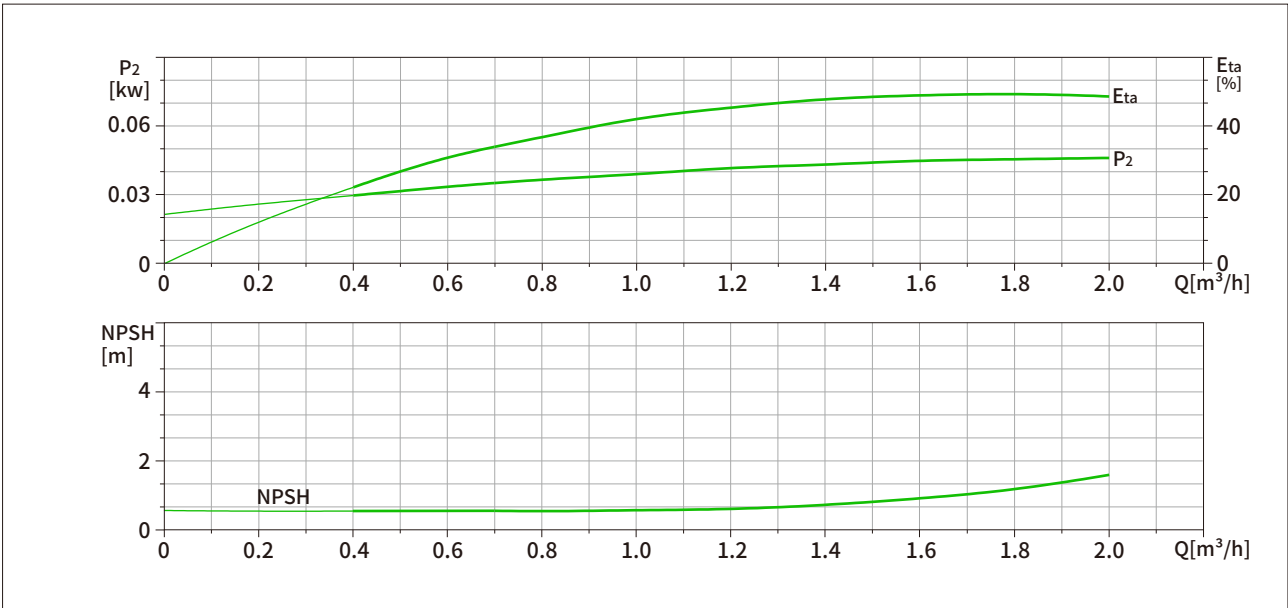
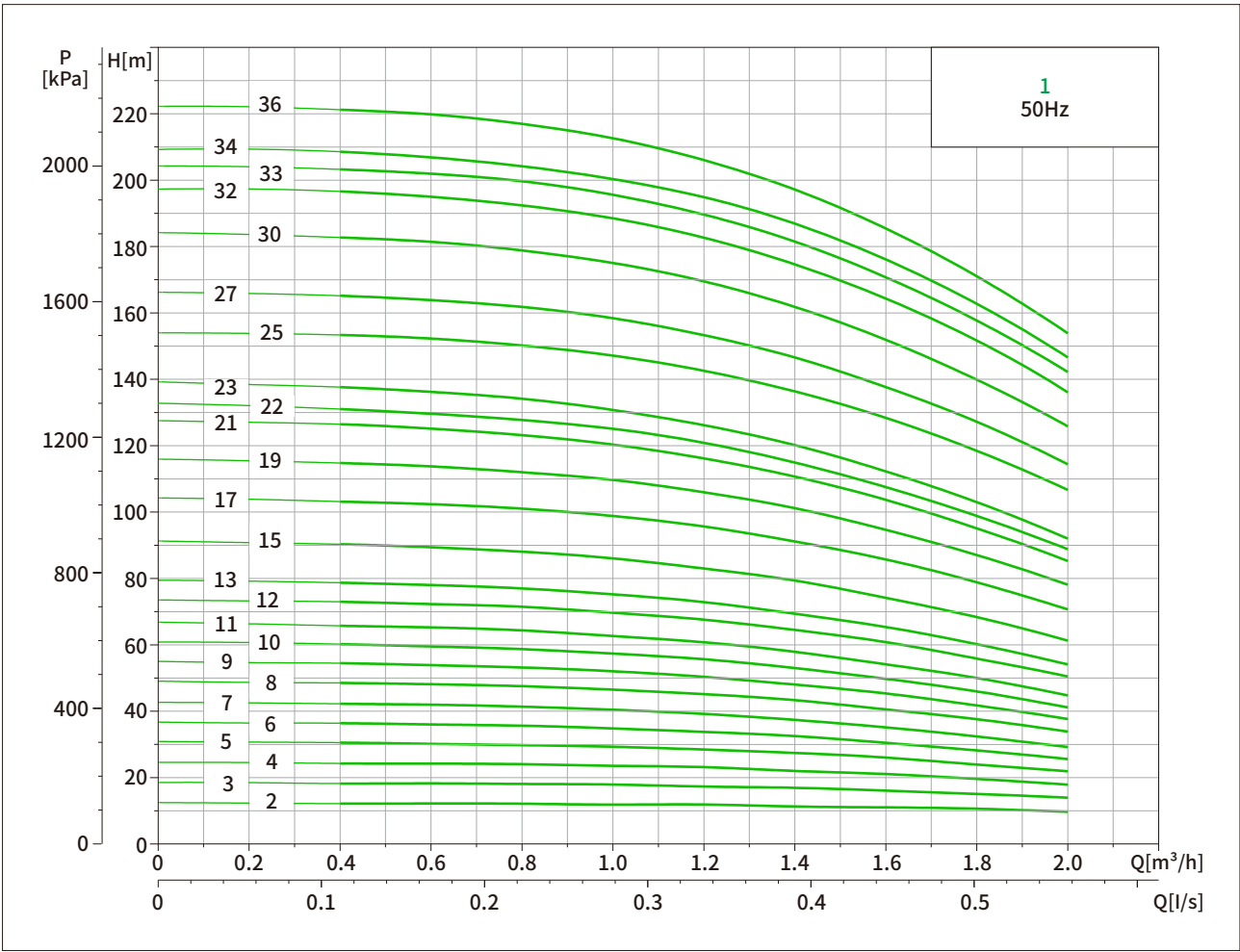
	No	Name		GB	AISI/ASTM
	1	Pump body	Cast iron	GB/T9439-HT200	ASTM25B
	2	Flange	Nodular cast iron	GB/T1348-QT400-18	ASTMA53660-40-18
	3	First diffuser	Stainless steel	GB/T20878-05Cr19Ni10	ASIS304
	4	Diffuser with bearing	Stainless steel	GB/T20878-05Cr19Ni10	ALISI304
	5	Impeller	Stainless steel	GB/T20878-05Cr19Ni10	ASIS304
	6	Medium diffuser	Stainless steel	GB/T20878-05Cr19Ni10	ALISI304
	7	Tension plate	Stainless steel	GB/T20878-05Cr19Ni10	ASIS304
	8	Final diffuser	Stainless steel	GB/T20878-06Cr19Ni10	ASIS304
	9	Vent plug assembly	Stainless steel	GB/T20878-06Cr19Ni10	ALISI304
	10	Motor base	Cast iron	GB/T9439-HT200	ASTM25B
	11	Half-coupling	Iron based powder metallurgy	GB/T1348QT400-18	ASTMA53560-40-18
	12	Motor	/	/	/
	13	Guarding plate	Stainless steel	GB/T20878-05Cr19Ni10	ASIS304
	14	Mechanical seal	/	/	/
	15	Pump cover	Cast iron	GB/T9439-HT200	ASTM25B
	16	Pump shaft	Stainless steel	GB/T20878-06Cr19Ni10	ASIS304
	17	Pump barrel	Stainless steel	GB/T20878-05Cr19Ni10	ASIS304
	18	Discharge bolt assembly	Stainless steel	GBT20878-05Cr19Ni10	ASIS304

Structure figure1-5 32, 45, 64, 90, 120, 150, 200

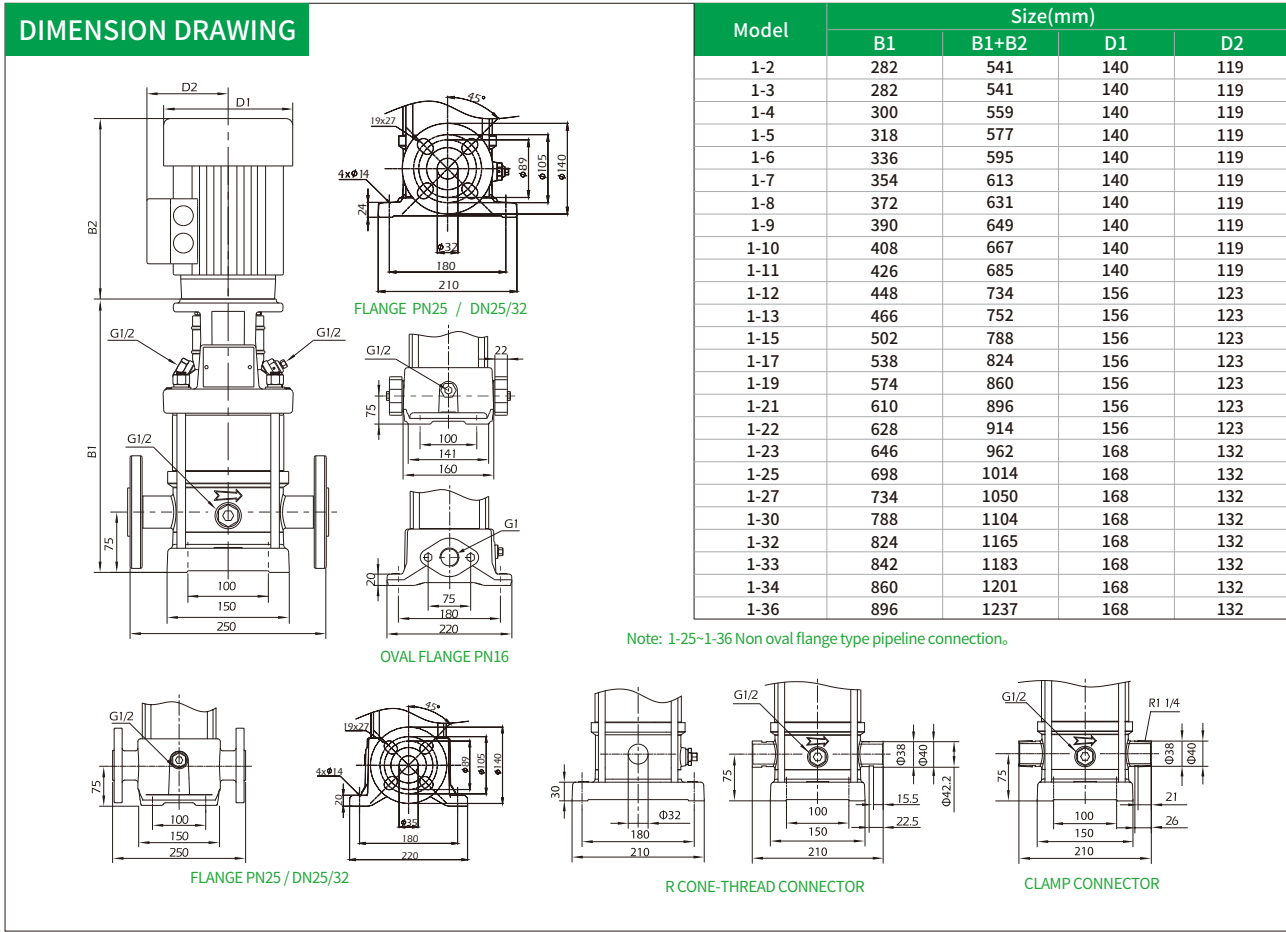
	No	Name	Materials	GB	AISI/ASTM
	1	Pump base	Cast iron	GB/T9439-HT200	ASTM25B
	2	Pump body	Stainless steel	GB/T20878-06Cr19Ni10	ASIS304
	3	Flange	Nodular cast iron	GB/T 1348-QT400-18	ASTM A536 60-40-18
	4	First diffuser	Stainless steel	GB/T20878-06Cr19Ni10	ASIS304
	5	Diffuser with bearing	Stainless steel	GB/T20878-06Cr19Ni10	ASIS304
	6	Medium diffuser	Stainless steel	GB/T20878-06Cr19Ni10	ASIS304
	7	Tension plate	Stainless steel	GB/T 20878-06Cr19Ni10	ASIS304
	8	Impeller	Stainless steel	GB/T20878-06Cr19Ni10	ASIS304
	9	Final diffuser	Stainless steel	GB/T20878-06Cr19Ni10	ASIS304
	10	Vent plug assembly	Stainless steel	GB/T20878-06Cr19Ni10	ASIS304
	11	Motor base	Cast iron	GB/T9439-HT200	ASTM25B
	12	Half-coupling	Iron based powder metallurgy	GB/T1348-QT400-18	ASTM A536 60-40-18A
	13	Motor	/	GB/T9439-HT200	STM25BASIS304
	14	Guarding plate	Stainless steel	GB/T20878-06Cr19Ni10	ASIS304
	15	Mechanical seal	/	/	/
	16	Pump cover	Stainless steel	GB/T20878-06Cr19Ni10	ASIS304
	17	Pump shaft	Stainless steel	GB/T20878-06Cr19Ni10	ASIS304
	18	Pump barrel	Stainless steel	GB/T20878-06Cr19Ni10	ASIS304
	19	Discharge bolt assembly	Stainless steel	GB/T20878-06Cr19Ni10	ASIS304

Structure figure1-6 32, 45, 64, 90, 120, 150, 200

PERFORMANCE CURVES

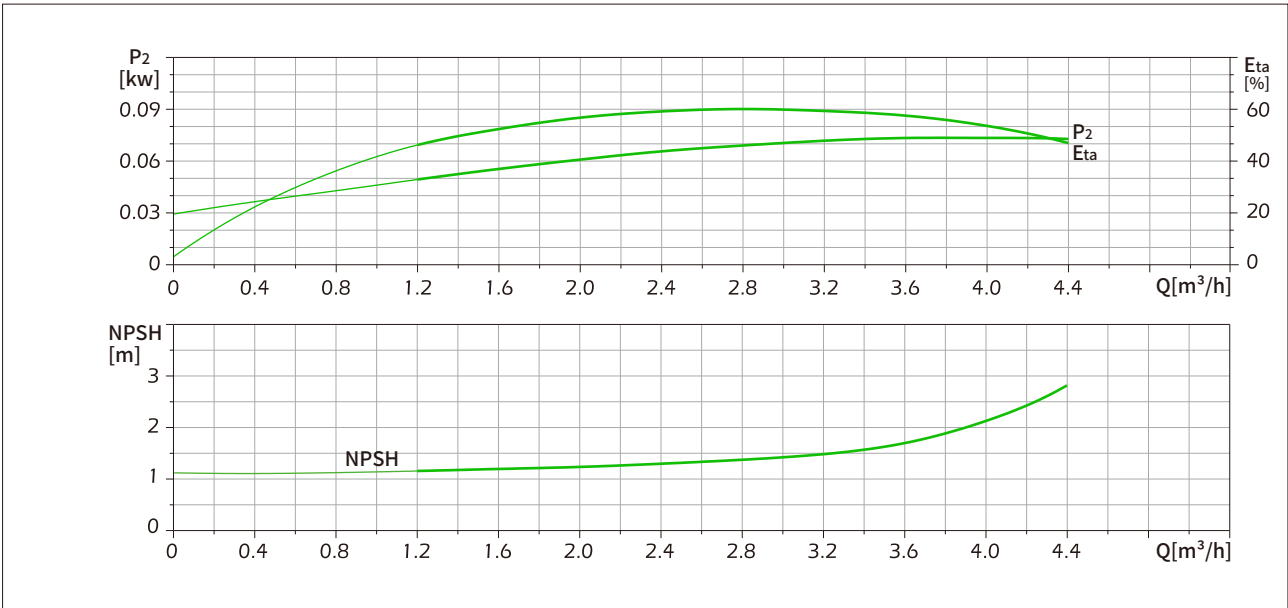
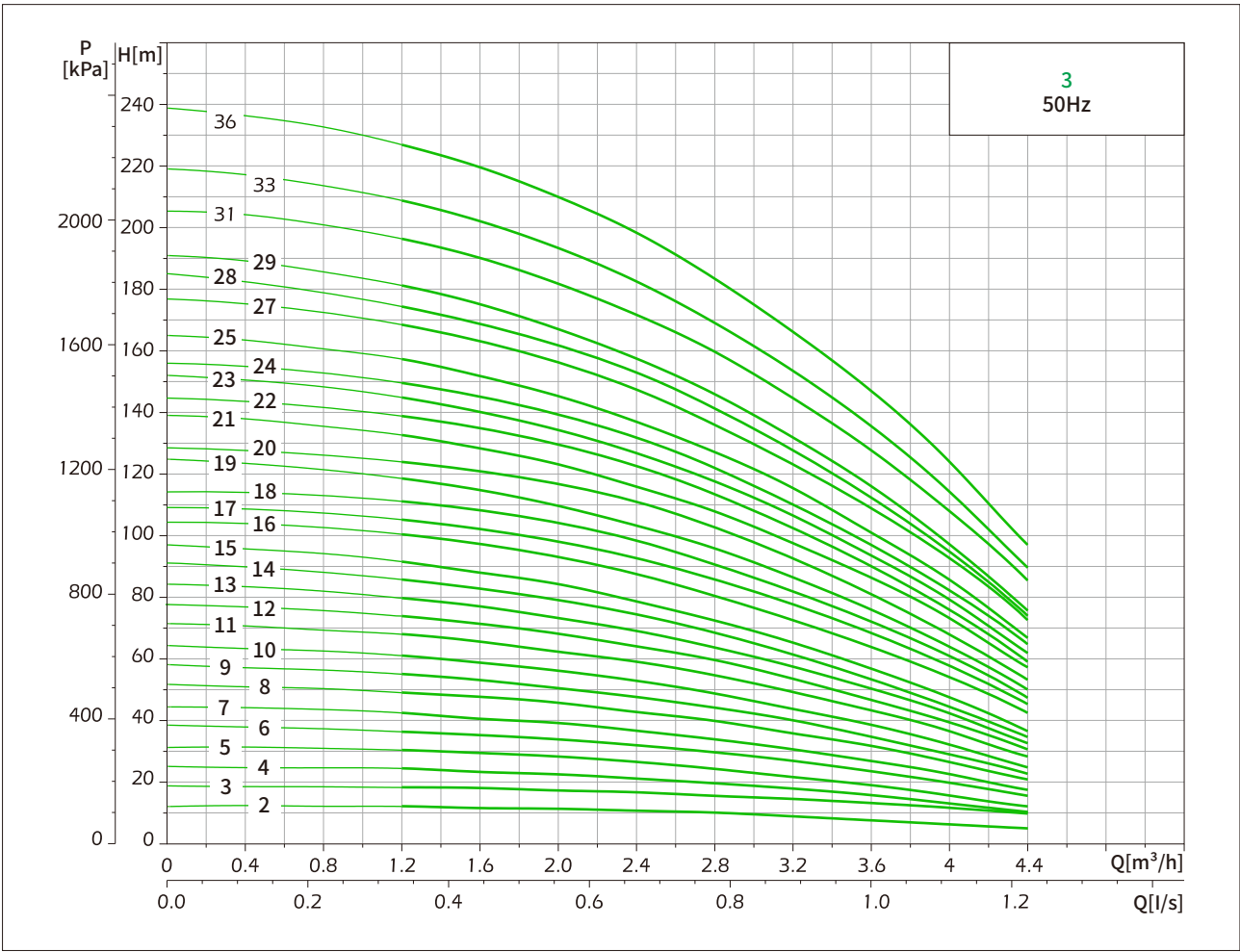


DIMENSION DRAWING

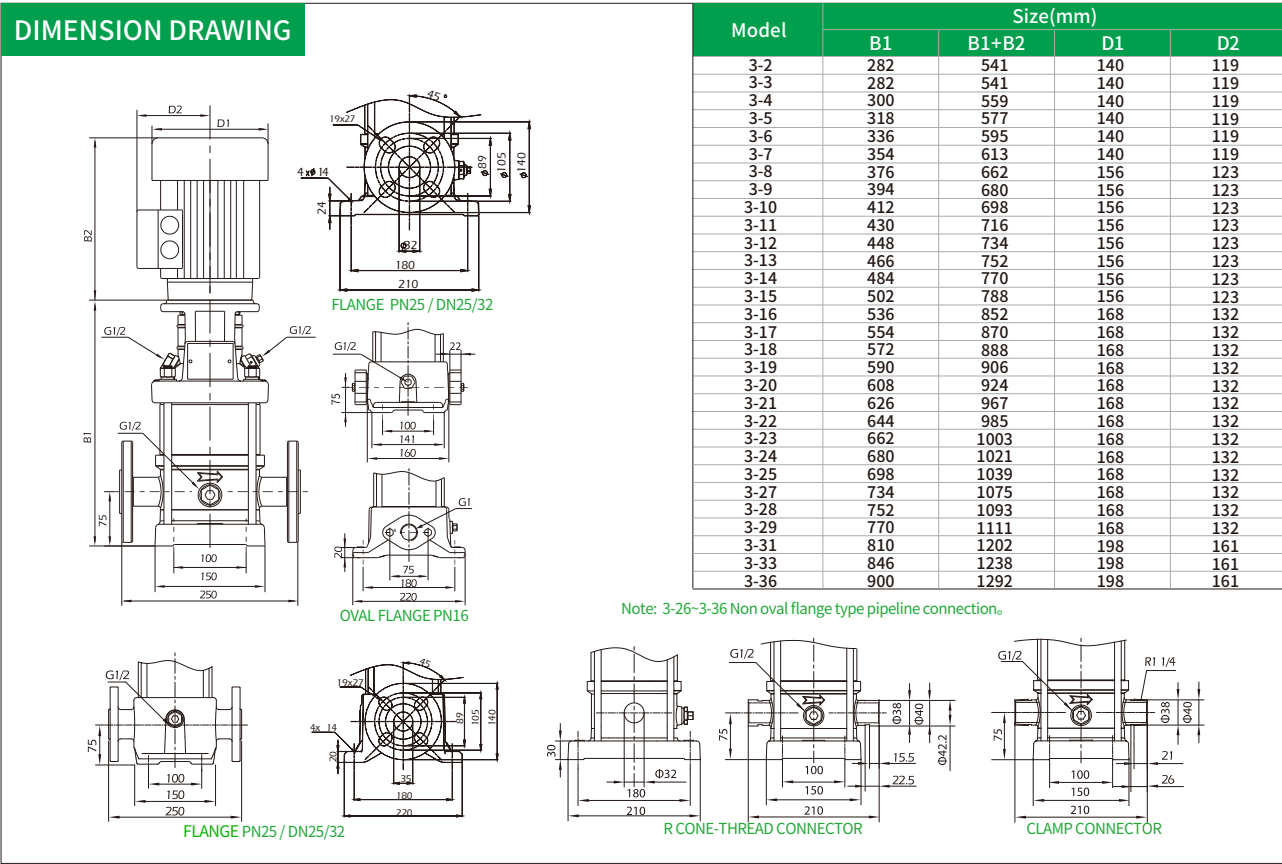


Model	Power(kw)	Q[m³/h]	0.4	0.6	0.8	1	1.2	1.4	1.6	1.8	2
1-2	0.37	H(m)	12	11.7	11.4	11.2	11	10.8	10.5	10.3	9.7
1-3	0.37		18	17.6	17.2	16.8	16	15.5	15	14.5	14
1-4	0.37		24	23.5	23	22.5	22	21.5	21	19	18
1-5	0.37		30	29.5	29	28.5	28	27	26	24	22
1-6	0.37		36	35.5	35	34.5	34	32	30	28	25
1-7	0.37		42	41.5	41	40.5	39	37	35	32	30
1-8	0.55		48	47.5	47	46.5	45	43	40	38	34
1-9	0.55		54	53.5	53	52	50	48	45	42	37
1-10	0.55		60	59	58	57.5	55	53	50	46	41
1-11	0.55		65	64.5	64	63	61	58	54	51	45
1-12	0.75		73	72	71	70	67	64	61	56	50
1-13	0.75		78	77.5	77	75	73	69	65	60	54
1-15	0.75		90	89.5	88	86	83	79	74	68	61
1-17	1.1		103	102	101	98	95	91	85	78	70
1-19	1.1		115	114	112	110	106	101	94	87	78
1-21	1.1		126	125	123	120	116	110	103	95	85
1-22	1.1		131	130	128	124	121	115	107	99	88
1-23	1.5		137	136	134	130	126	120	112	103	92
1-25	1.5		153	152	150	145	142	136	128	119	106
1-27	1.5		165	164	162	157	153	146	137	128	114
1-30	1.5		182	181	178	173	169	162	152	140	126
1-32	2.2		197	196	193	188	183	176	165	153	138
1-33	2.2		203	202	199	194	189	181	170	158	142
1-34	2.2		209	208	205	198	195	186	175	161	145
1-36	2.2		221	220	217	210	206	197	185	170	154

PERFORMANCE CURVES

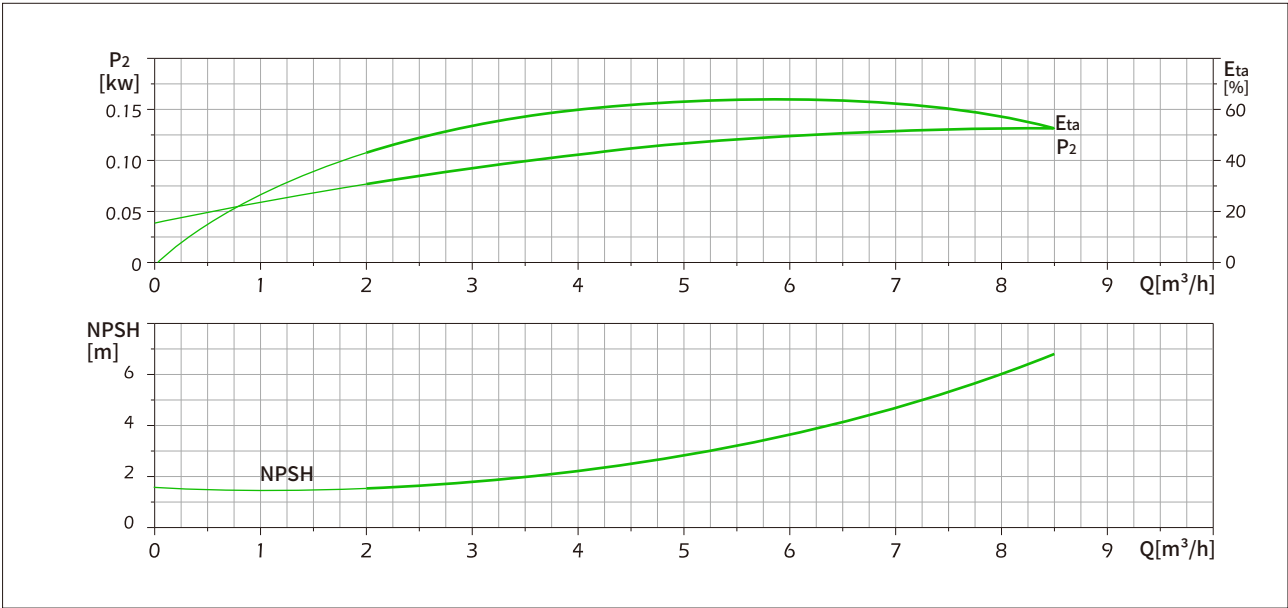
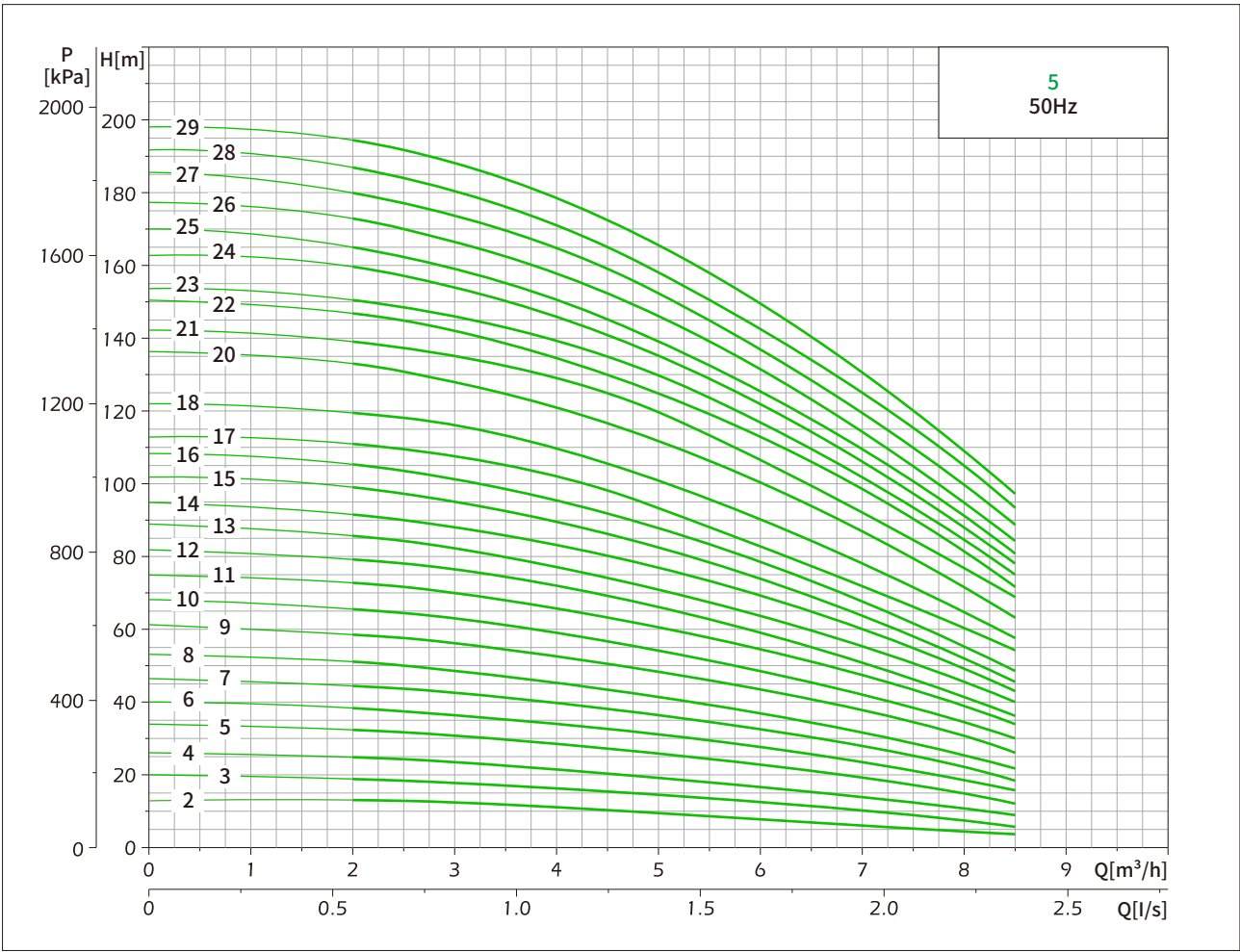


DIMENSION DRAWING

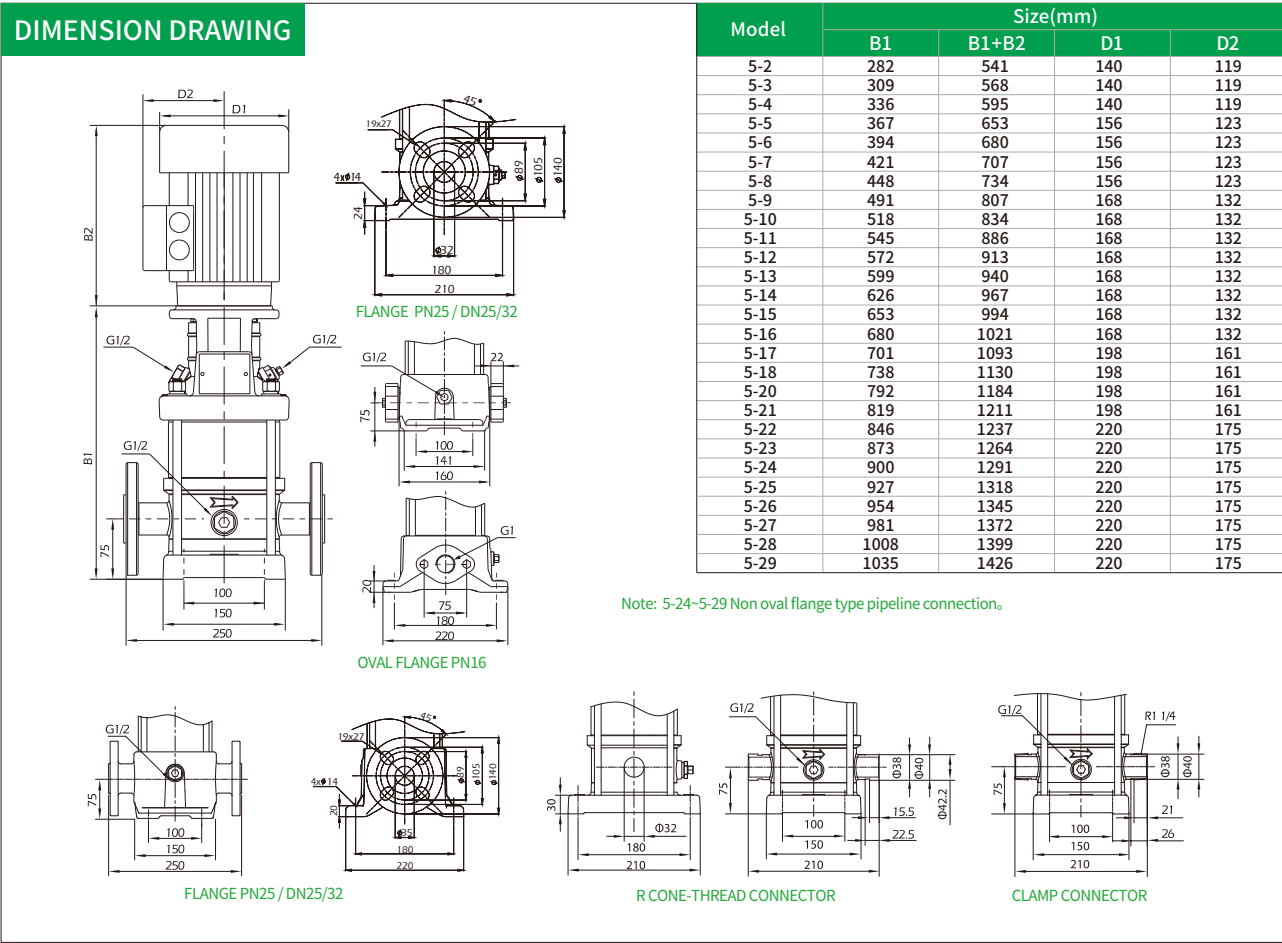


Model	Power(kW)	Q[m³/h]	1.2	1.6	2	2.4	2.8	3	3.6	4	4.4
3-2	0.37	H(m)	13	12.5	12	11.5	11	10	8	7.5	5
3-3	0.37		19	18.5	18	17	16	15	14	12	9
3-4	0.37		25	24	23	22	20	19	17	14	10
3-5	0.37		31	30	29	27	25	24	20	17	12
3-6	0.55		37	36	35	33	30	28	24	21	15
3-7	0.55		43	40	39	37	35	32	28	24	17
3-8	0.75		51	48	47	44	41	38	33	28	21
3-9	0.75		56	54	51	48	45	42	36	30	23
3-10	0.75		62	60	57	54	50	46	40	33	25
3-11	1.1		69	66	63	60	56	51	44	38	28
3-12	1.1		75	72	69	65	61	56	48	41	31
3-13	1.1		80	78	74	70	65	60	51	44	33
3-14	1.1		86	83	79	75	68	63	54	46	35
3-15	1.1		92	89	85	80	73	68	58	49	37
3-16	1.5		101	98	94	88	82	73	66	56	43
3-17	1.5		107	104	100	94	87	78	70	59	46
3-18	1.5		113	110	105	99	92	82	73	62	47
3-19	1.5		119	116	111	104	97	87	77	65	50
3-20	1.5		127	123	118	111	104	92	84	71	54
3-21	2.2		133	129	124	117	109	97	88	75	57
3-22	2.2		140	135	129	122	114	100	91	77	59
3-23	2.2		146	141	135	128	119	105	95	81	62
3-24	2.2		152	147	140	132	123	110	98	84	64
3-25	2.2		158	153	146	138	128	115	102	87	67
3-27	2.2		170	164	157	148	138	124	110	93	72
3-28	2.2		176	170	162	154	142	128	114	97	71
3-29	2.2		182	176	168	159	147	133	118	100	74
3-31	3		197	191	183	173	161	142	128	110	85
3-33	3		210	203	194	193	170	152	137	116	90
3-36	3		228	221	211	200	185	165	149	126	97

PERFORMANCE CURVES

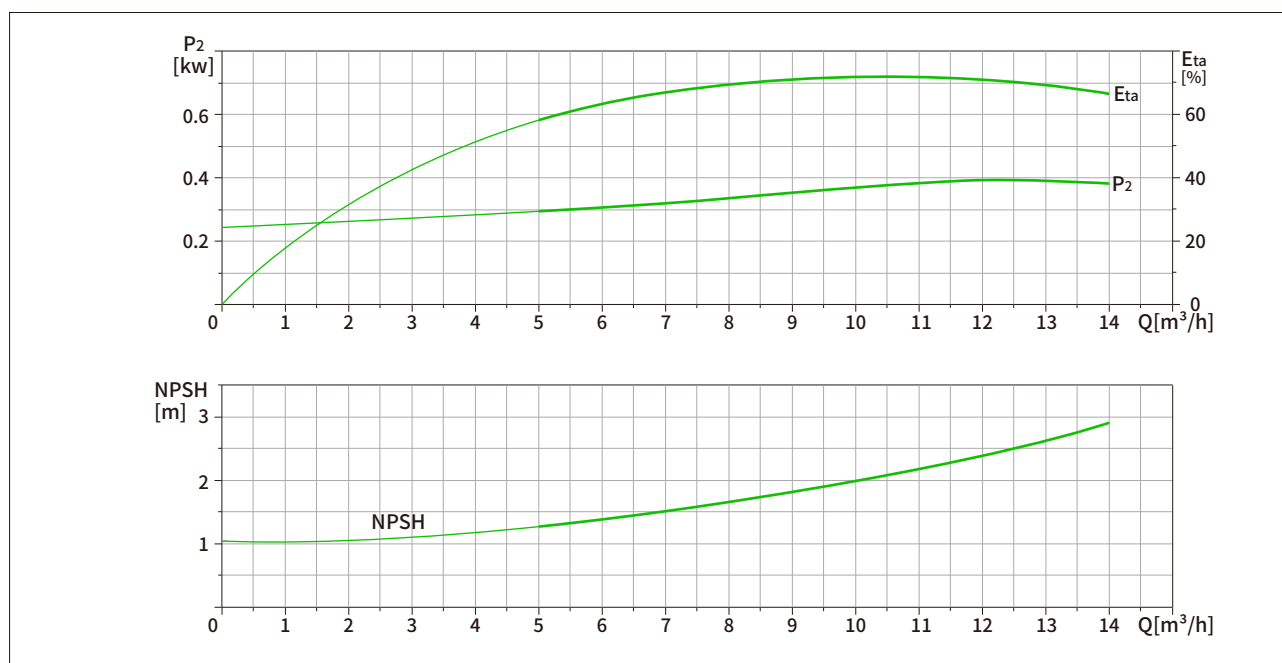
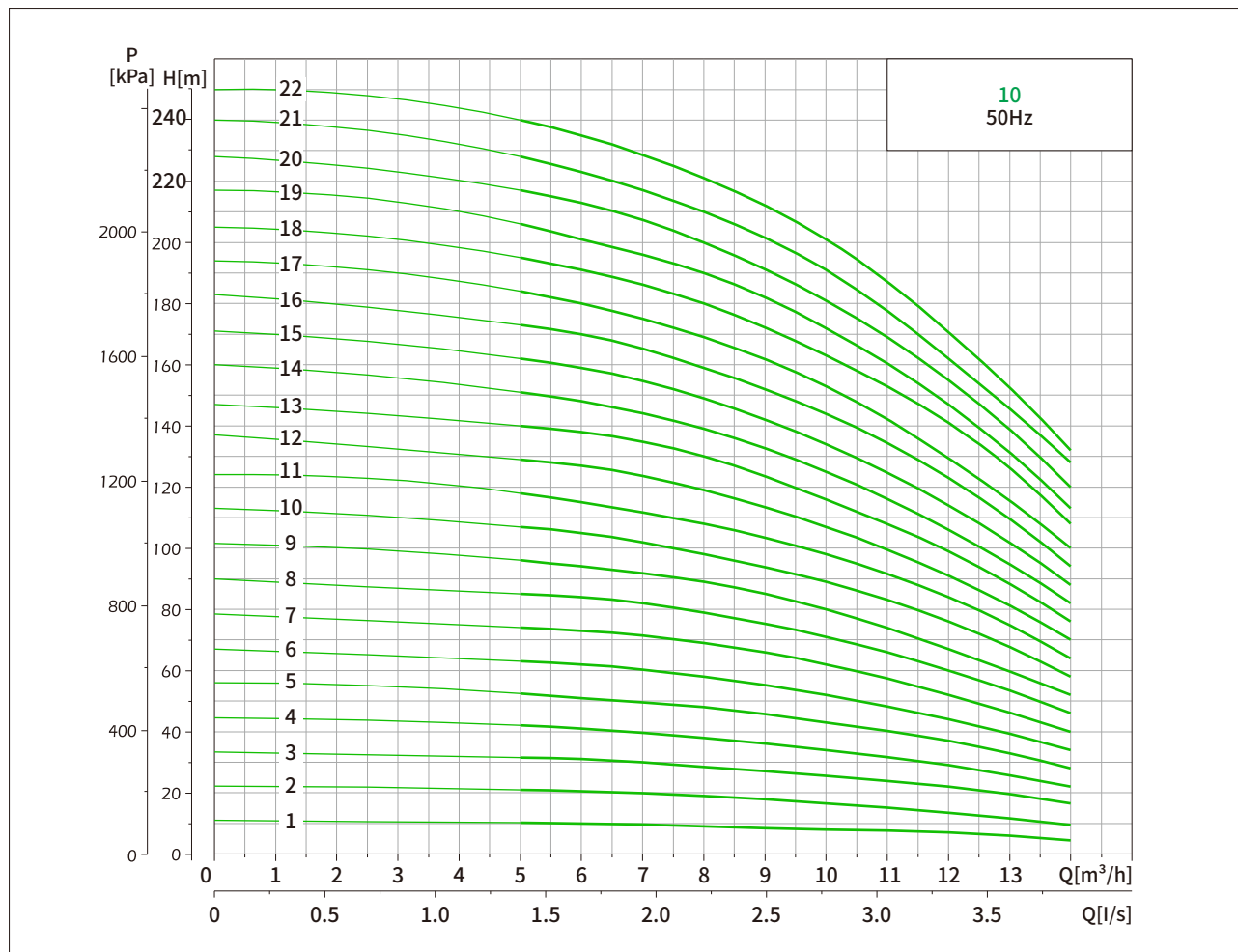


DIMENSION DRAWING

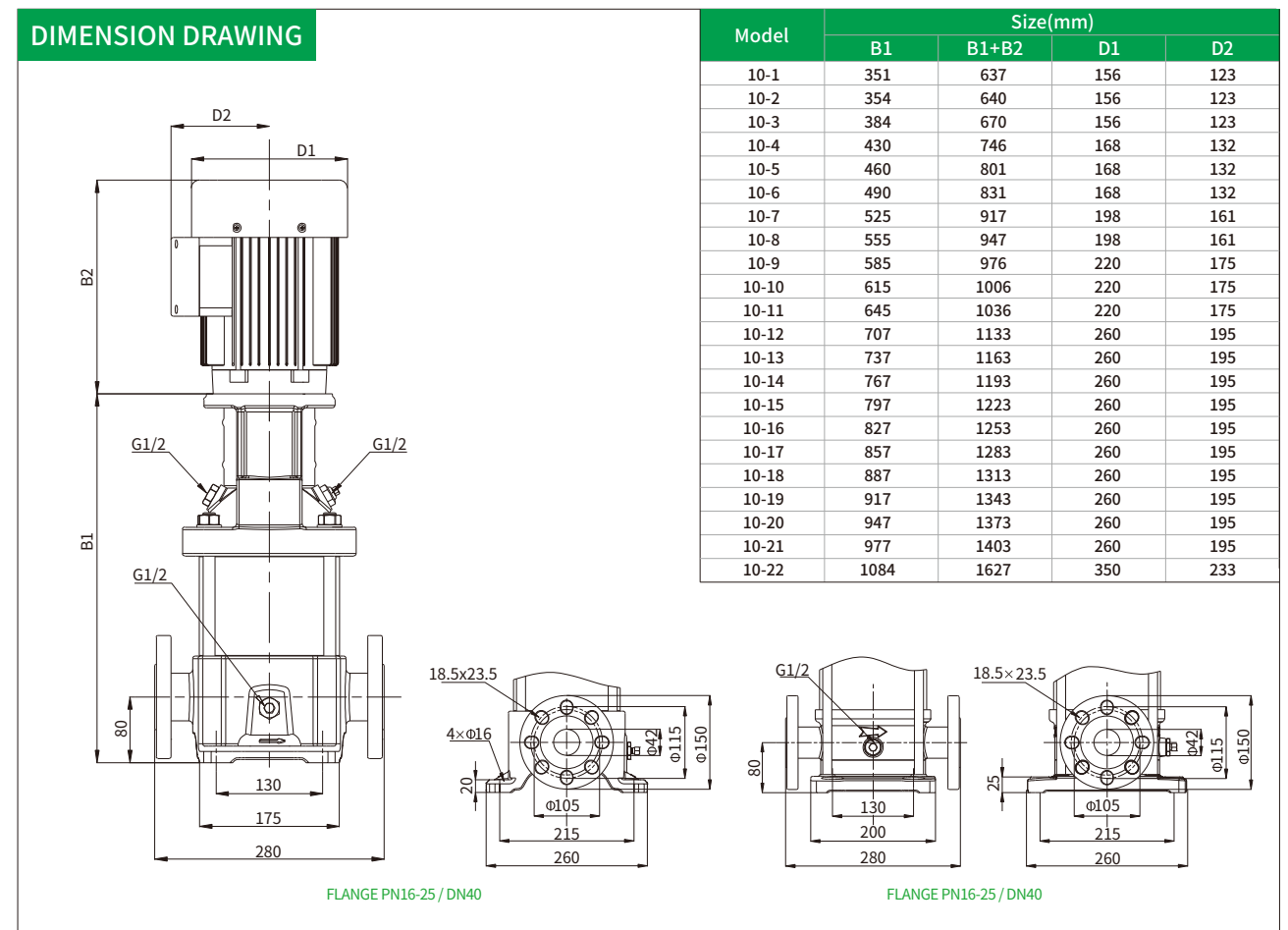


Model	Power(kW)	Q[m³/h]	2	3	4	5	6	7	8.5
5-2	0.37	H(m)	12.5	12	10	9	7	6	4
5-3	0.55		19	18	16	15	12	10	6
5-4	0.55		25	24	22	19	16	14	9
5-5	0.75		32	30	28	24	22	18	12
5-6	1.1		38	37	34	28	27	23	16
5-7	1.1		45	42	40	32	31	27	18
5-8	1.1		51	48	45	40	36	31	22
5-9	1.5		59	56	53	47	44	37	26
5-10	1.5		65	62	59	53	48	41	30
5-11	2.2		73	70	66	59	54	47	34
5-12	2.2		79	76	72	63	59	51	36
5-13	2.2		85	82	78	68	64	55	40
5-14	2.2		92	89	83	74	69	60	43
5-15	2.2		99	95	89	79	74	63	45
5-16	2.2		105	101	95	85	78	68	48
5-17	3		112	109	103	93	85	74	55
5-18	3		119	115	109	98	90	78	58
5-20	3		132	127	120	108	100	87	63
5-21	3		140	136	128	115	107	93	69
5-22	4		147	142	134	120	112	97	72
5-23	4		153	148	140	127	117	102	75
5-24	4		160	154	146	132	122	106	78
5-25	4		166	160	151	139	127	111	81
5-26	4		173	166	157	146	132	115	84
5-27	4		181	175	166	153	139	122	89
5-28	4		187	182	172	157	144	126	93
5-29	4		194	188	178	161	149	131	96

PERFORMANCE CURVES

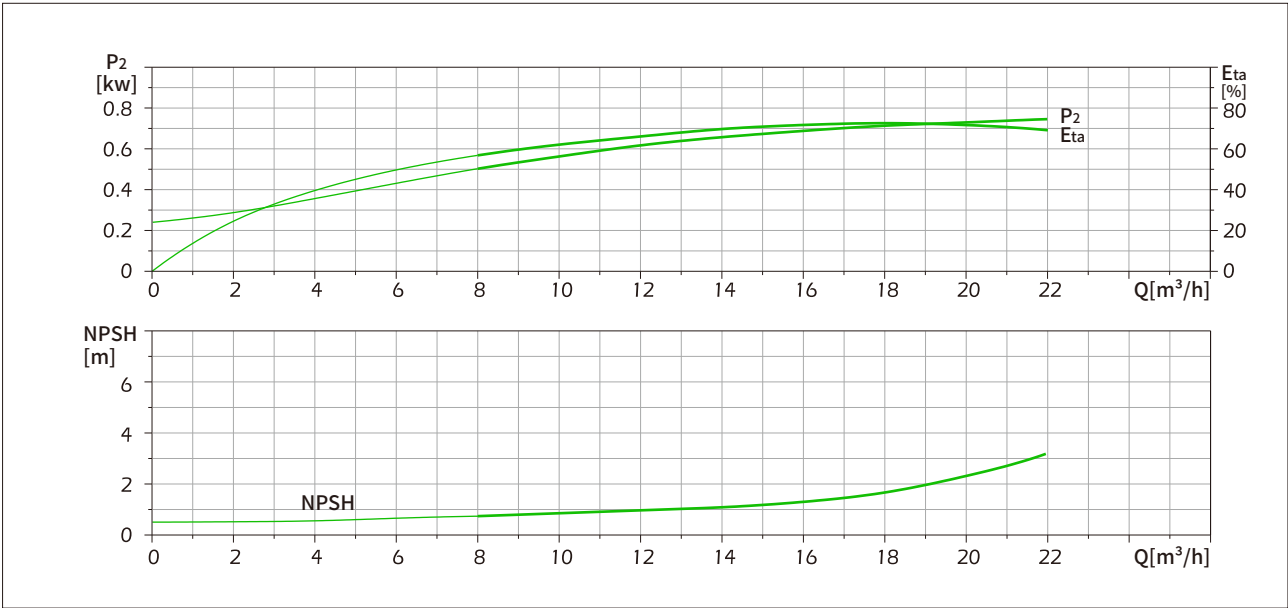
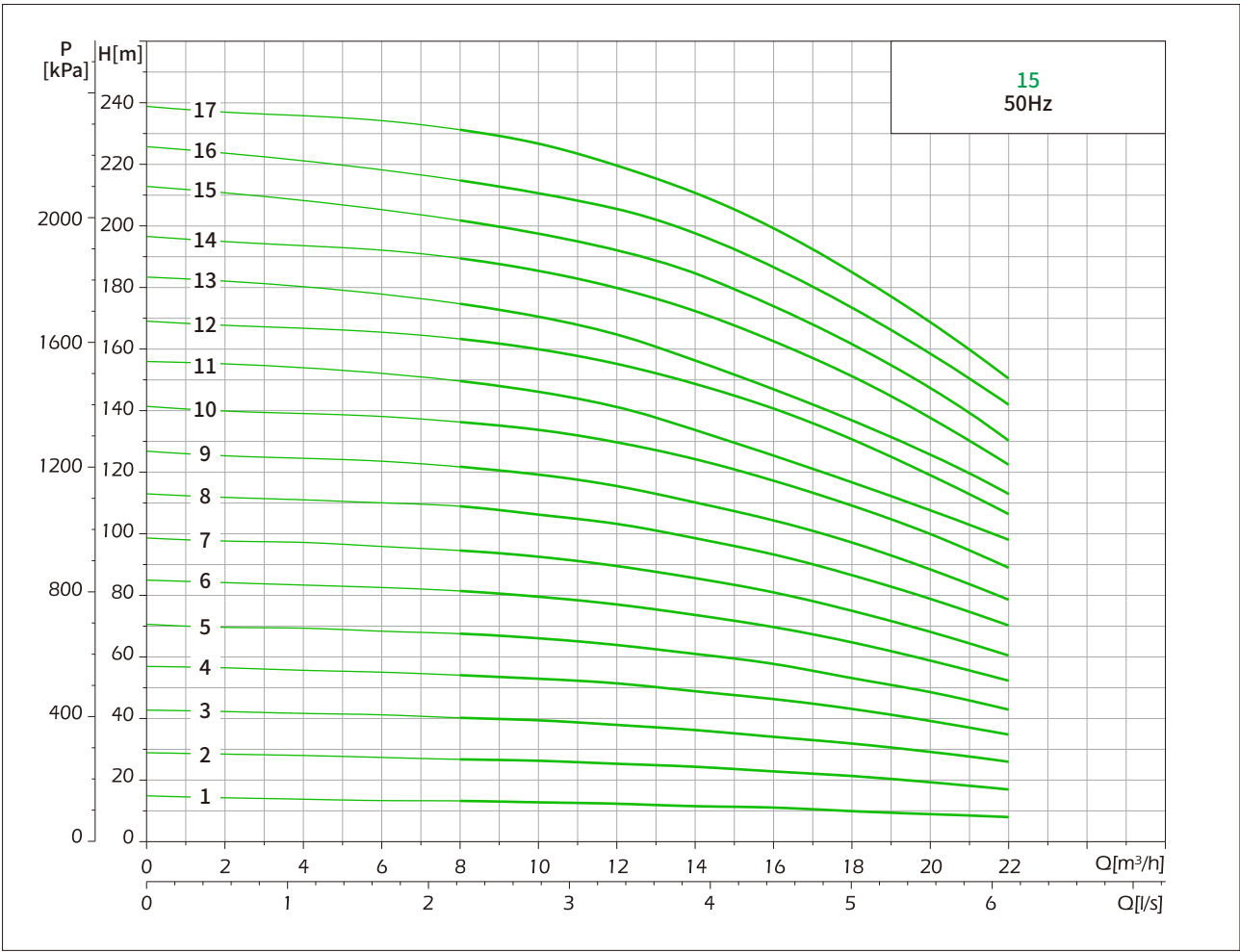


DIMENSION DRAWING

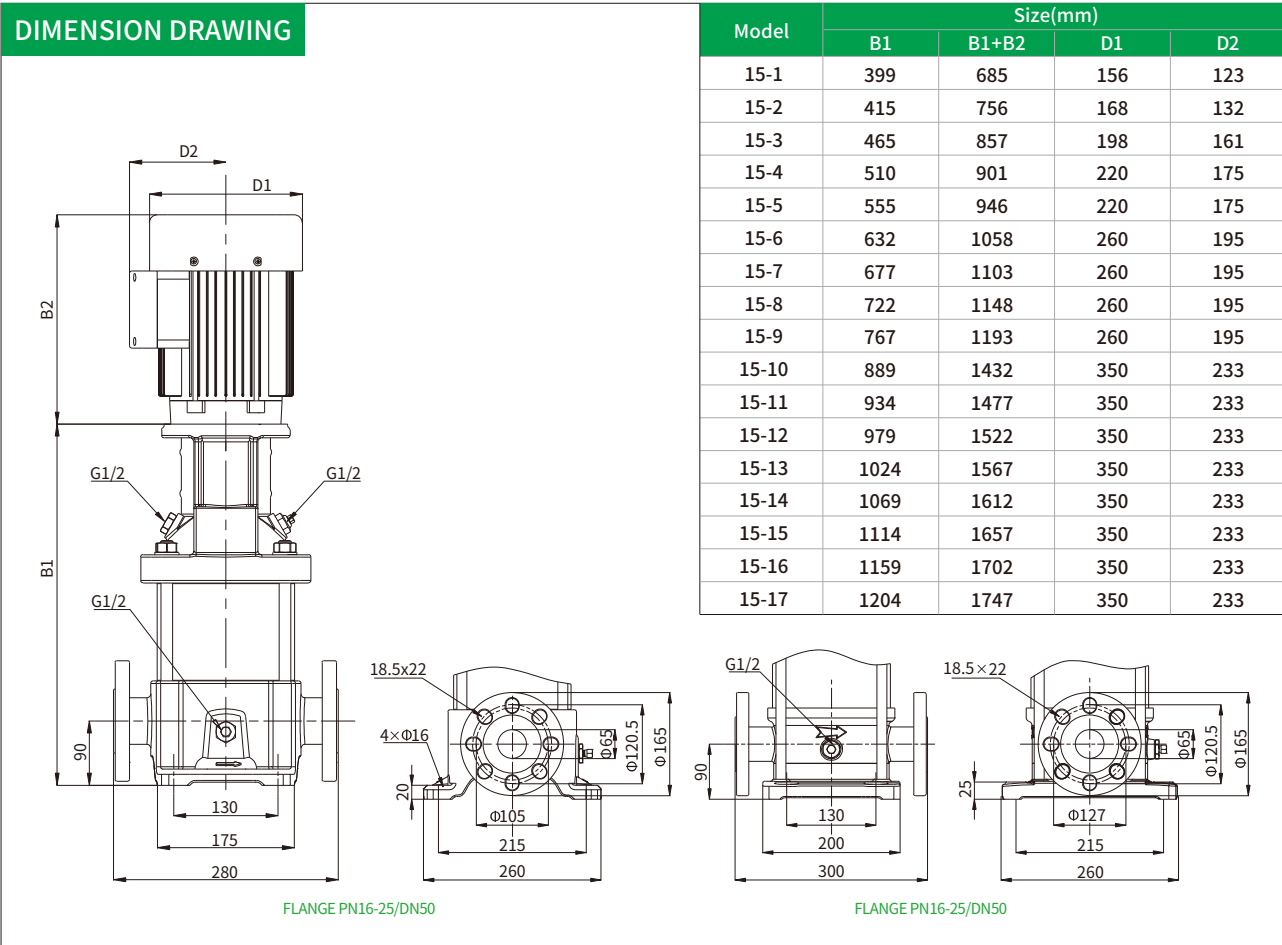


Model	Power(kW)	Q[m³/h]	5	6	8	10	12	14
10-1	0.75	H(m)	10.2	10	9	8	7	4.5
10-2	0.75		21	20.5	19	16.5	13.5	9.5
10-3	1.1		31.5	31	28.5	25.5	22	16.5
10-4	1.5		42	41	38	34	29	22
10-5	2.2		52.5	51	48	43	37	28
10-6	2.2		63	62	58	52	44	34
10-7	3		74	73	69	62	52	40
10-8	3		85	84	79	71	60	46
10-9	4		96	94	89	80	67	52
10-10	4		107	105	98	89	76	58
10-11	4		118	115	108	98	84	64
10-12	5.5		129	127	119	107	91	70
10-13	5.5		140	138	130	116	99	76
10-14	5.5		151	148	139	125	106	82
10-15	5.5		162	159	149	134	114	88
10-16	7.5		173	170	159	144	123	94
10-17	7.5		184	180	169	153	130	100
10-18	7.5		195	191	180	163	141	108
10-19	7.5		206	201	190	172	147	113
10-20	7.5		217	213	200	181	155	120
10-21	7.5		228	223	210	191	162	128
10-22	11		240	235	221	201	171	132

PERFORMANCE CURVES



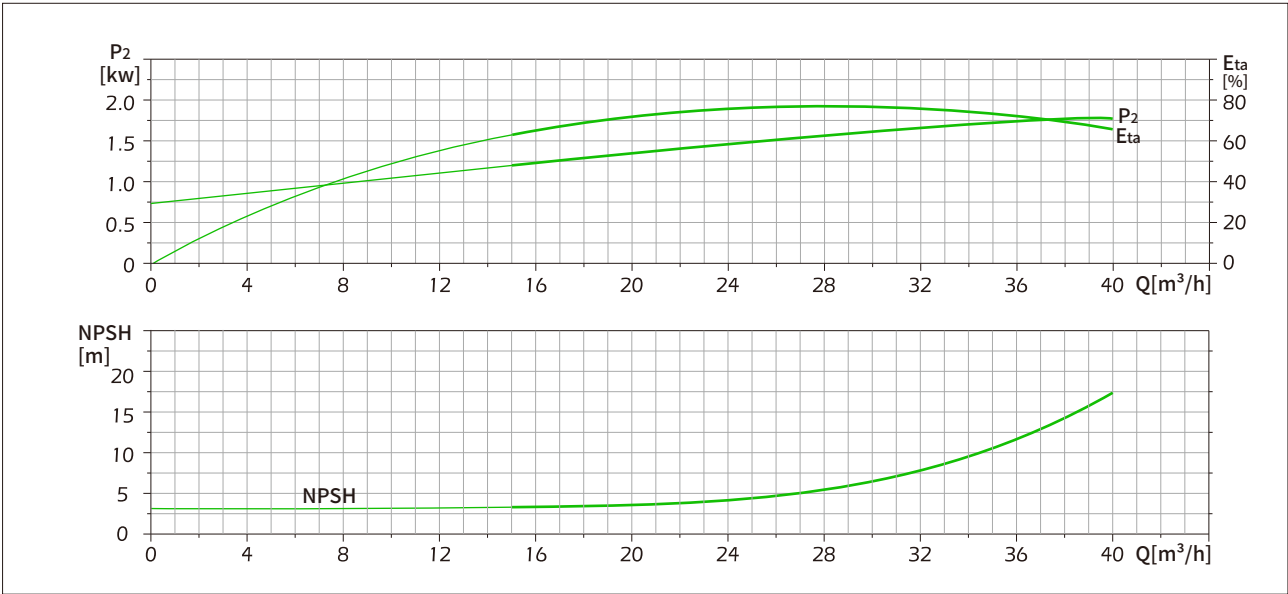
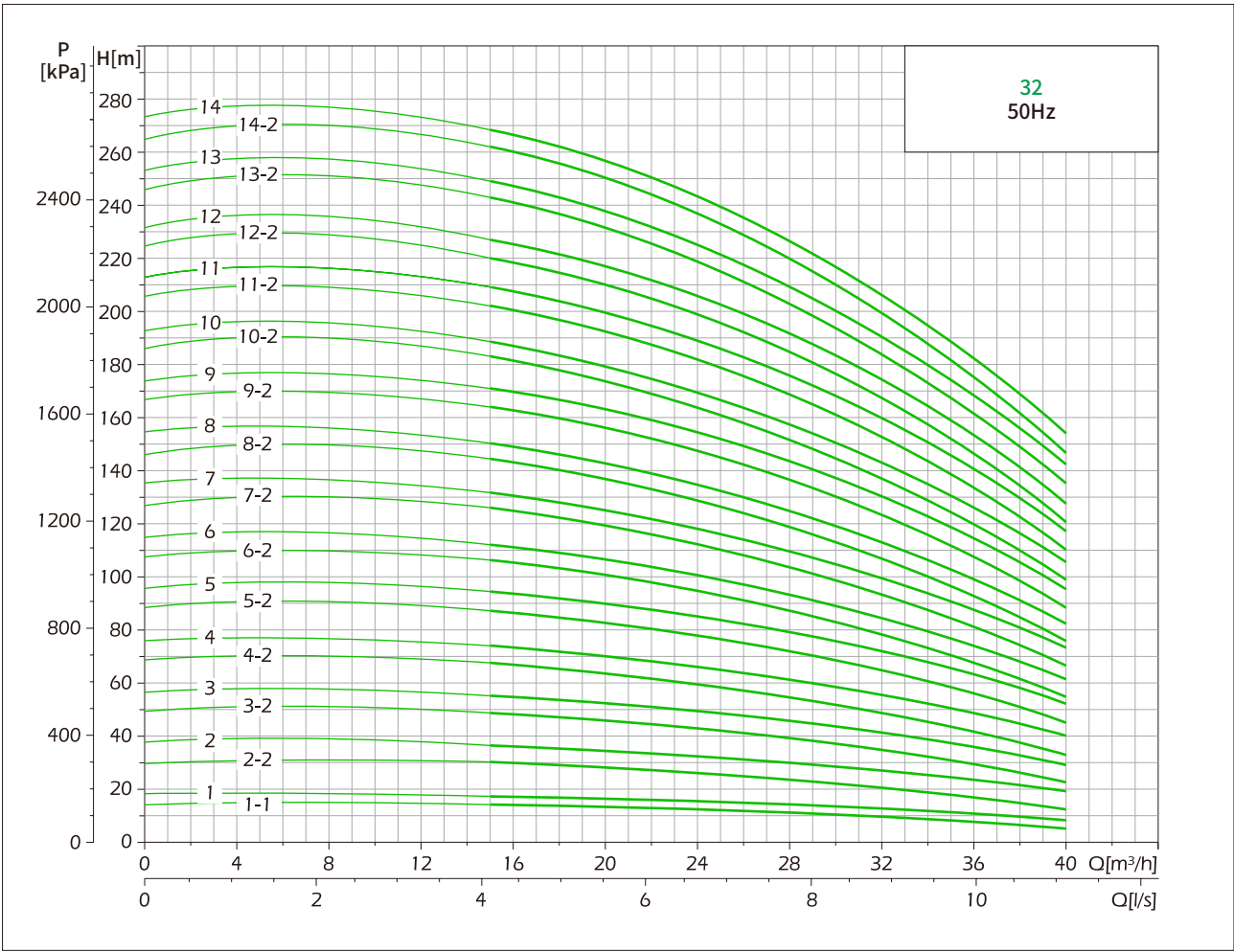
DIMENSION DRAWING



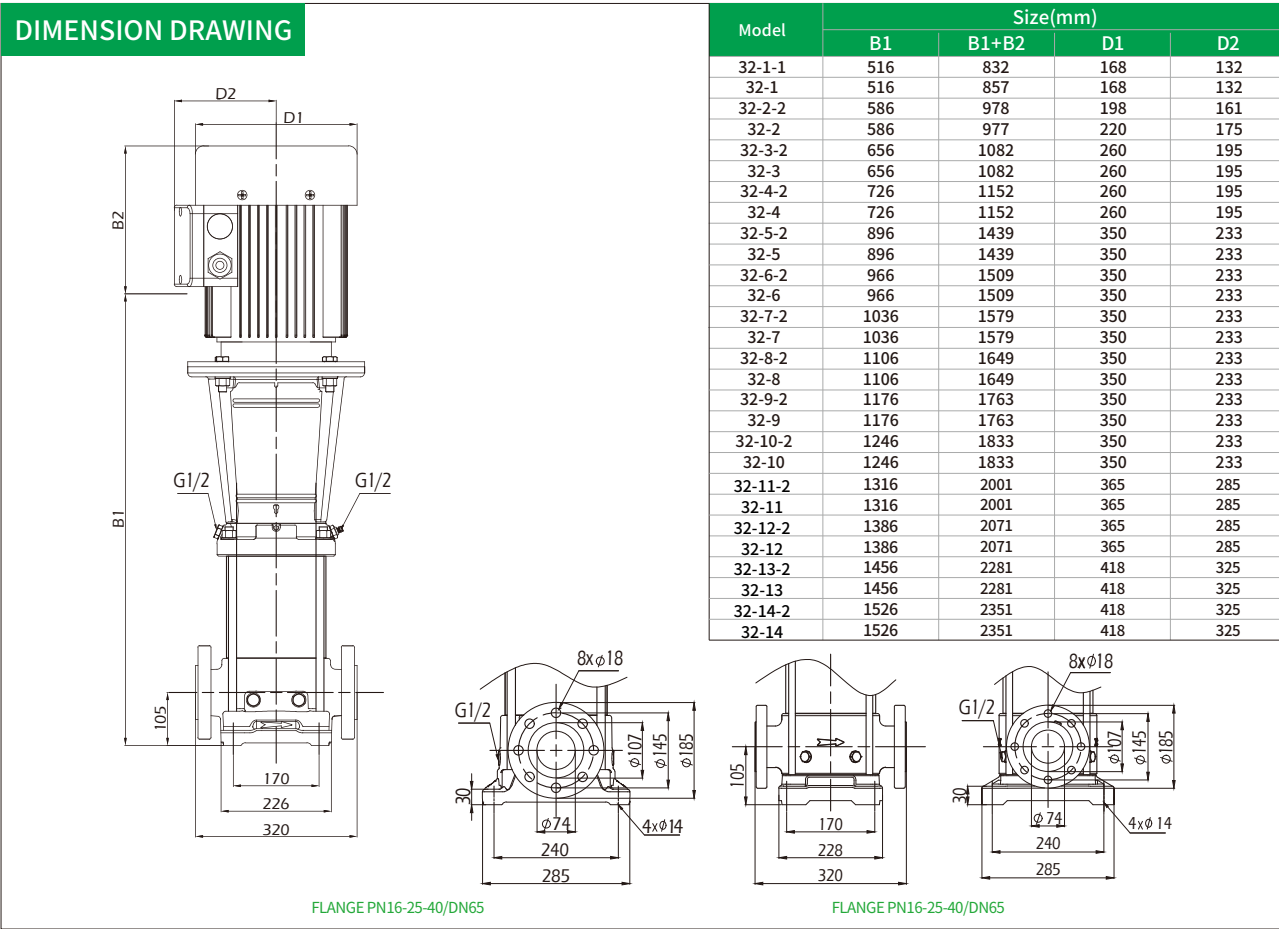
Model	Size(mm)			
	B1	B1+B2	D1	D2
15-1	399	685	156	123
15-2	415	756	168	132
15-3	465	857	198	161
15-4	510	901	220	175
15-5	555	946	220	175
15-6	632	1058	260	195
15-7	677	1103	260	195
15-8	722	1148	260	195
15-9	767	1193	260	195
15-10	889	1432	350	233
15-11	934	1477	350	233
15-12	979	1522	350	233
15-13	1024	1567	350	233
15-14	1069	1612	350	233
15-15	1114	1657	350	233
15-16	1159	1702	350	233
15-17	1204	1747	350	233

Model	Power(kW)	Q[m³/h]	8	9	12	15	18	20	22
15-1	1.1	H(m)	13.5	13	12	11	10	9.5	8
15-2	2.2		28	26	25	23	21	19	17
15-3	3.0		41	40	38	35	32	29	25
15-4	4.0		56	55	51	47	43	39	35
15-5	4.0		68	66	64	58	53	49	43
15-6	5.5		82	80	77	71	64	59	52
15-7	5.5		95	94	89	83	75	68	60
15-8	7.5		110	108	103	96	86	79	70
15-9	7.5		123	120	115	108	97	89	78
15-10	11.0		138	136	129	120	109	100	89
15-11	11.0		151	149	142	130	119	109	98
15-12	11.0		165	162	155	142	130	119	107
15-13	11.0		176	174	166	153	139	128	113
15-14	11.0		190	188	180	166	151	138	122
15-15	15.0		203	202	192	180	162	148	130
15-16	15.0		217	214	205	191	174	159	141
15-17	15.0		232	230	219	205	185	169	150

PERFORMANCE CURVES

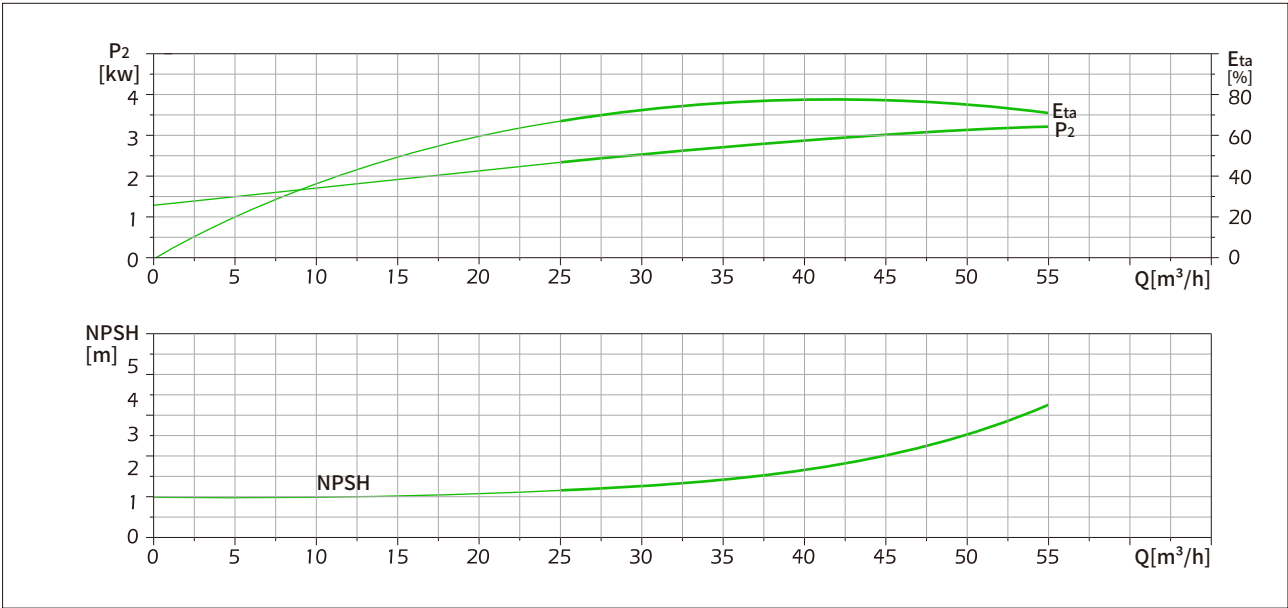
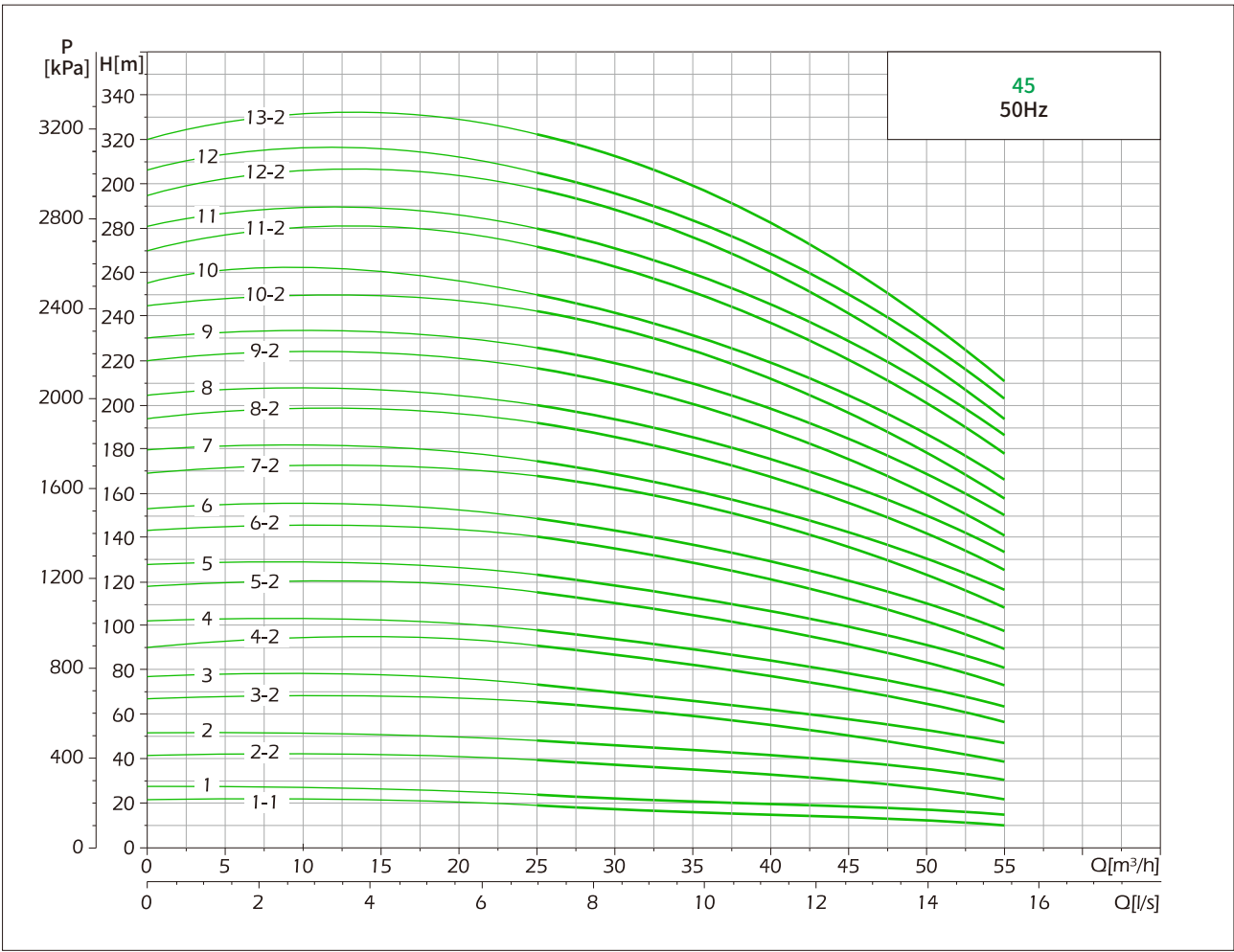


DIMENSION DRAWING

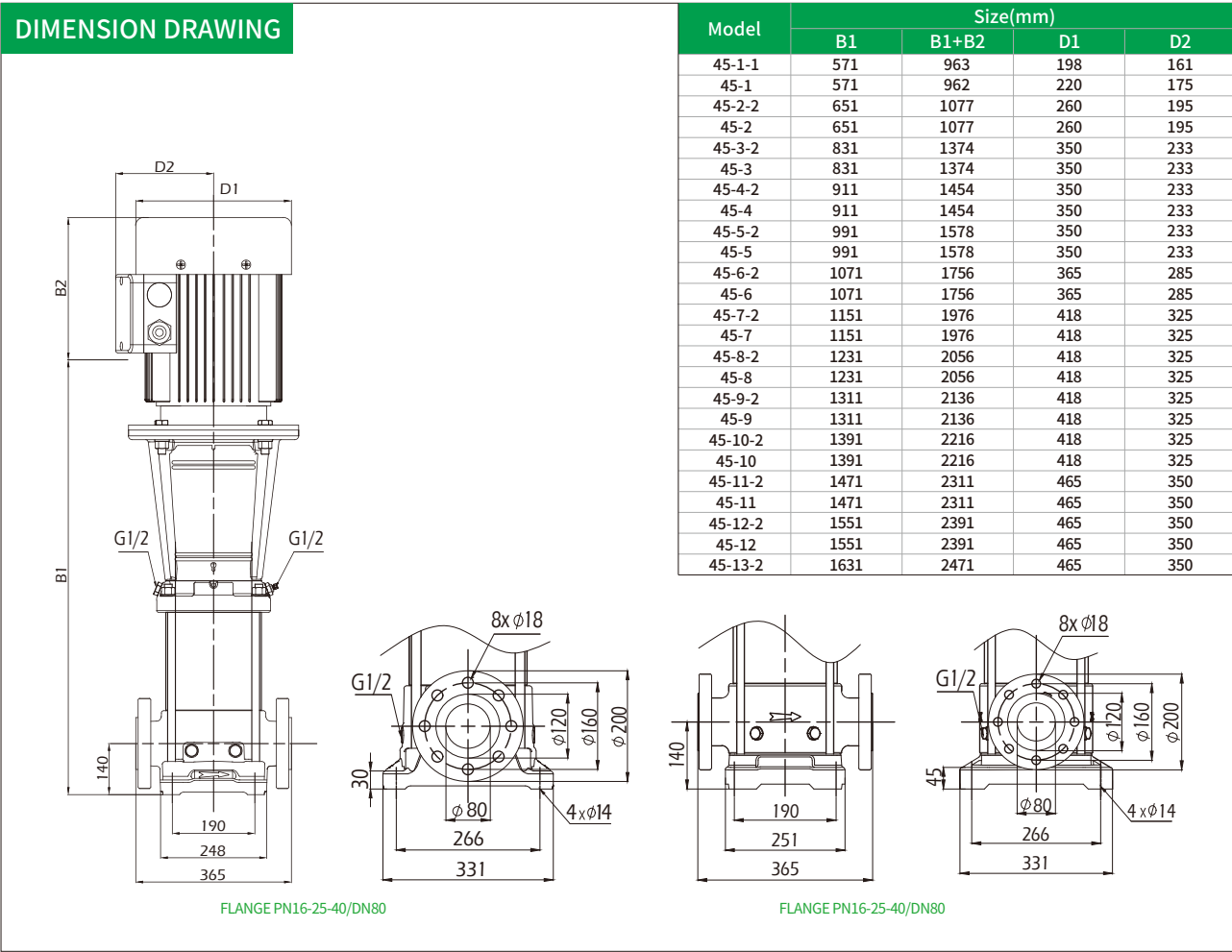


Model	Power(kW)	Q[m³/h]	15	20	25	32	35	40
32-1-1	1.5	H(m)	15	14	13	10	8	5
32-1	2.2		18	17	16	13	11.5	9
32-2-2	3.0		31	29.5	26.5	20.5	17.5	12
32-2	4.0		37	35.5	32.5	27.5	25	19.5
32-3-2	5.5		50	47	43.5	35.5	31	22.5
32-3	5.5		55.5	53	49	41.5	37.5	29.5
32-4-2	7.5		68.5	65	60	49.5	44	32.5
32-4	7.5		74.5	70.5	66	56	50.5	40
32-5-2	11		88.5	84.5	78	65.5	58.5	45
32-5	11		94.5	90	94	72	65	52
32-6-2	11		107	102	94.5	79.5	71	55
32-6	11		113	108	100	85.5	77.5	61.5
32-7-2	15		127	121	112	94.5	85	66.5
32-7	15		133	126	118	101	92	73.5
32-8-2	15		145	138	128	108	98	76.5
32-8	15		151	144	134	115	104	83
32-9-2	18.5		165	158	147	124	112	88.5
32-9	18.5		171	163	152	131	119	95.5
32-10-2	18.5		184	175	163	138	125	98.5
32-10	18.5		190	181	169	145	133	106
32-11-2	22	H(m)	203	194	181	154	140	111
32-11	22		209	200	187	161	147	118
32-12-2	22		222	212	197	168	152	121
32-12	22		227	217	203	176	160	128
32-13-2	30		244	233	218	187	169	136
32-13	30		250	239	224	193	177	145
32-14-2	30		263	251	234	201	183	146
32-14	30		269	258	241	207	188	156

PERFORMANCE CURVES



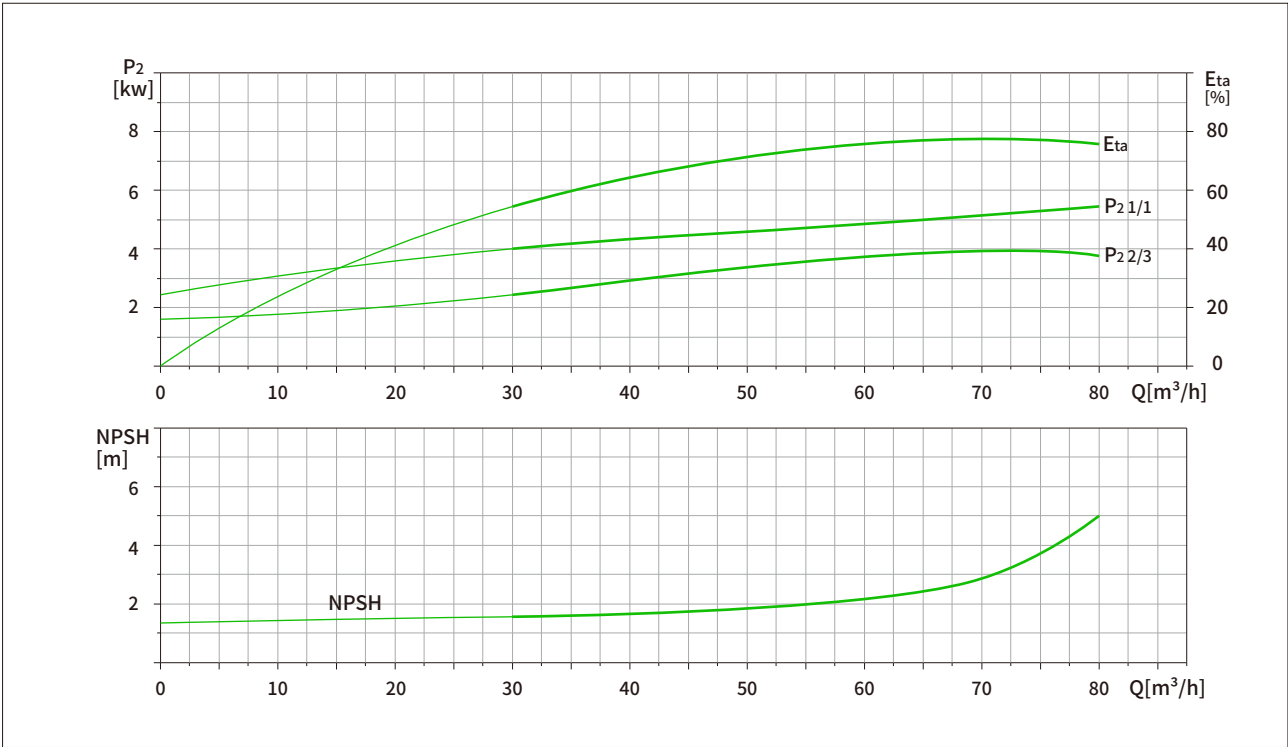
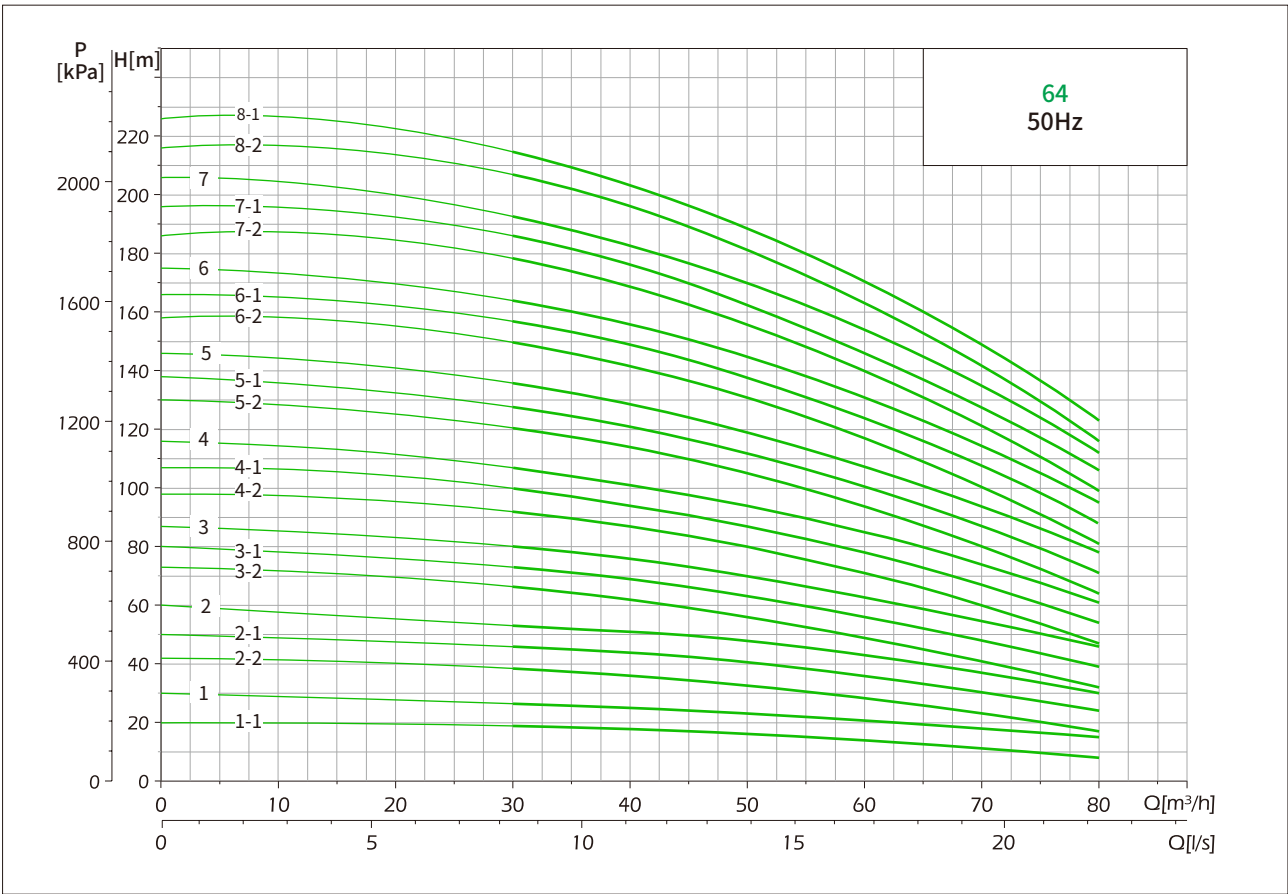
DIMENSION DRAWING



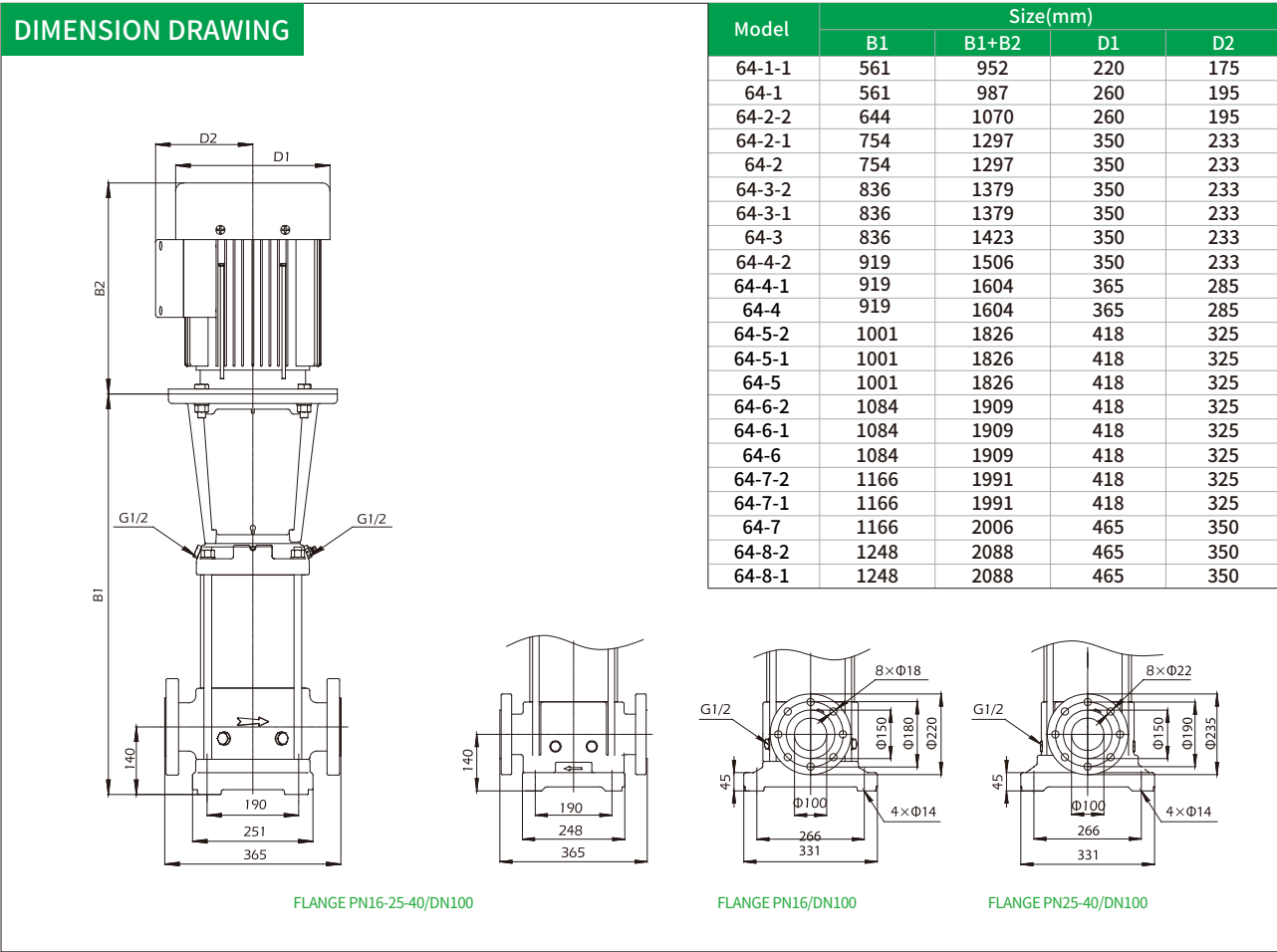
Model	Size(mm)			
	B1	B1+B2	D1	D2
45-1-1	571	963	198	161
45-1	571	962	220	175
45-2-2	651	1077	260	195
45-2	651	1077	260	195
45-3-2	831	1374	350	233
45-3	831	1374	350	233
45-4-2	911	1454	350	233
45-4	911	1454	350	233
45-5-2	991	1578	350	233
45-5	991	1578	350	233
45-6-2	1071	1756	365	285
45-6	1071	1756	365	285
45-7-2	1151	1976	418	325
45-7	1151	1976	418	325
45-8-2	1231	2056	418	325
45-8	1231	2056	418	325
45-9-2	1311	2136	418	325
45-9	1311	2136	418	325
45-10-2	1391	2216	418	325
45-10	1391	2216	418	325
45-11-2	1471	2311	465	350
45-11	1471	2311	465	350
45-12-2	1551	2391	465	350
45-12	1551	2391	465	350
45-13-2	1631	2471	465	350

Model	Power(kW)	Q[m³/h]	25	30	35	40	45	50	55
45-1-1	3.0	H(m)	20	19.5	18	17	15	12.5	10.5
45-1	4.0		24	23	22	20.5	19	17.5	15
45-2-2	5.5		41	39	37	34	30.5	26.5	22
45-2	7.5		48.5	46.5	44.5	42	39	35	31
45-3-2	11		66	64	61	56.5	52	46	40
45-3	11		73.5	71	68	64	59.5	54	47.5
45-4-2	15		91	88	84	78.5	72	64.5	56
45-4	15		98.5	95	91	85.5	79.5	72.5	64
45-5-2	18.5		116	113	107	101	92.5	83.5	73
45-5	18.5		124	120	115	108	100	91.5	81
45-6-2	22		142	137	131	122	113	103	90
45-6	22		149	144	138	130	121	111	98
45-7-2	30		168	163	156	147	135	123	109
45-7	30		176	171	163	156	144	132	116
45-8-2	30		193	187	179	168	155	142	126
45-8	30		200	194	187	176	164	149	134
45-9-2	30		217	211	202	189	175	159	142
45-9	30		226	219	210	199	185	170	151
45-10-2	37		243	236	225	212	196	179	159
45-10	37		251	243	233	220	205	187	166
45-11-2	45		273	264	253	238	222	201	179
45-11	45		281	272	261	246	230	209	187
45-12-2	45		298	289	276	261	242	220	195
45-12	45		306	296	284	268	251	229	204
45-13-2	45		323	313	300	283	263	239	212

PERFORMANCE CURVES

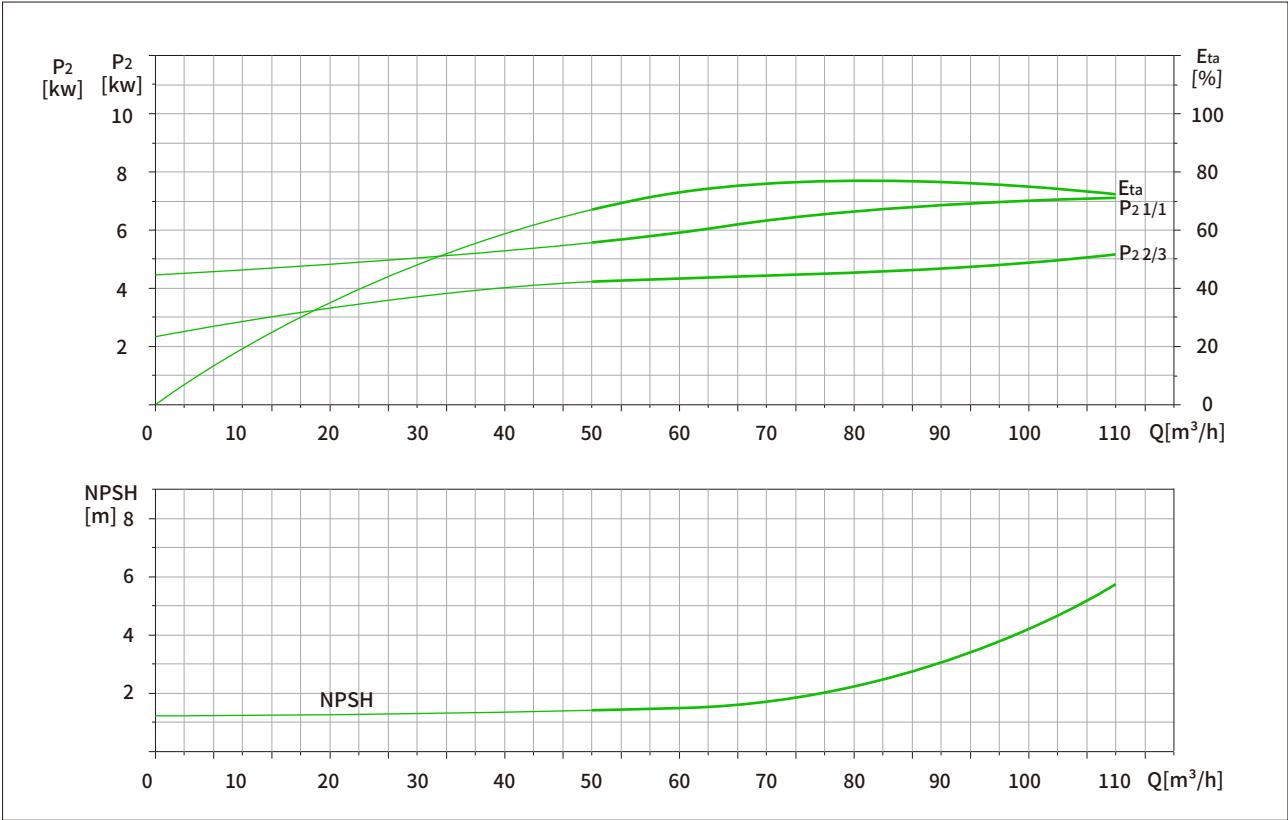
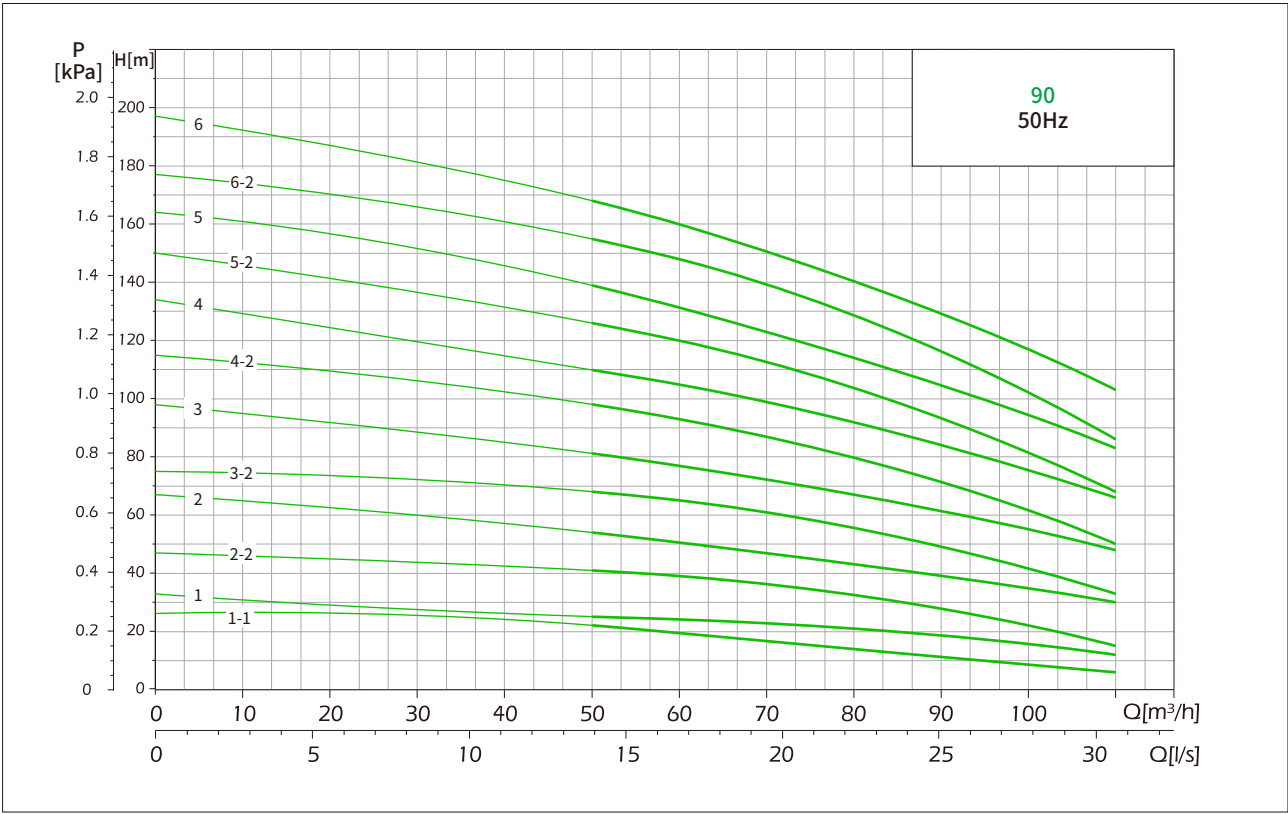


DIMENSION DRAWING

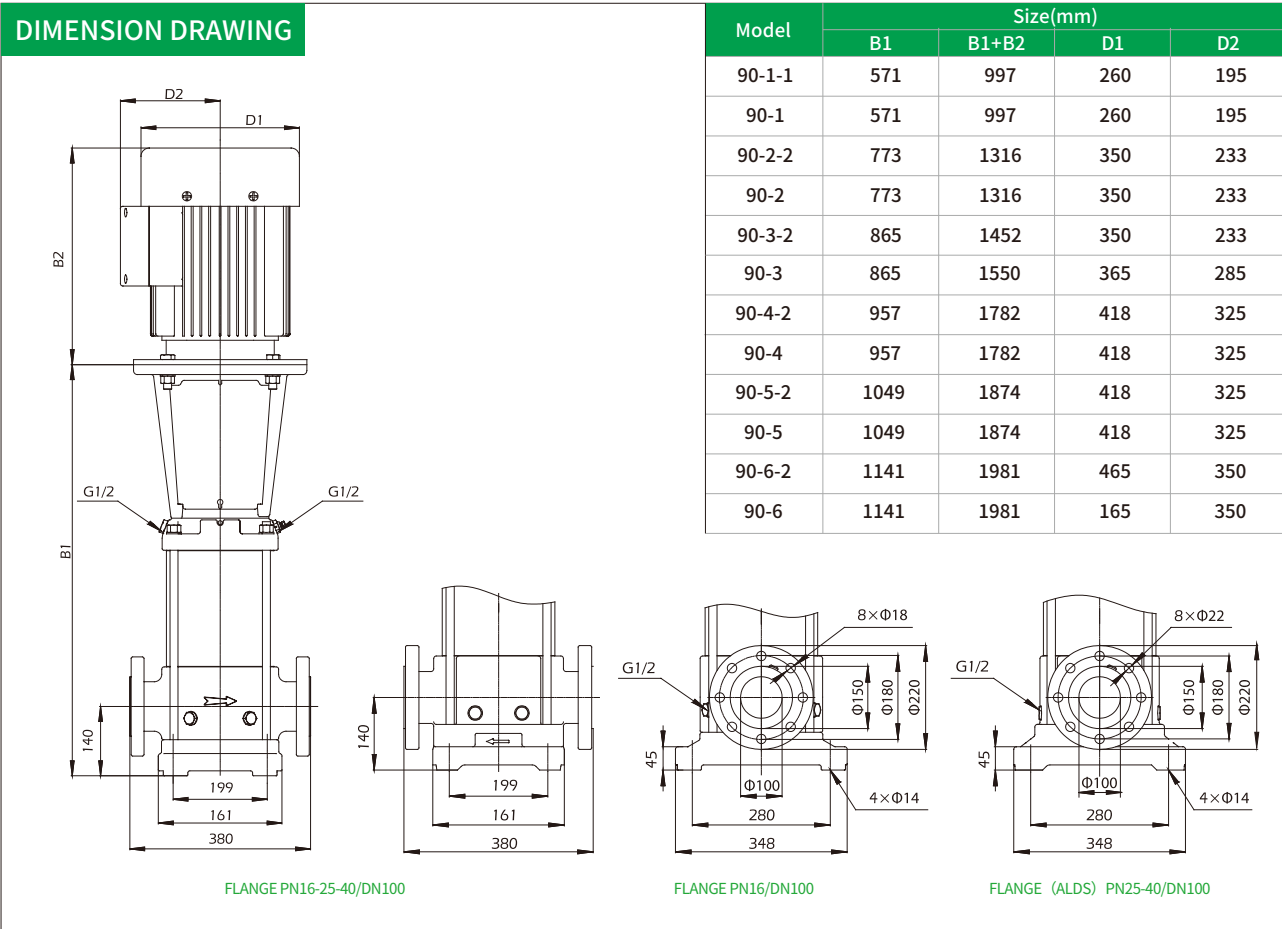


Model	Power(kW)	Q[m³/h]	30	40	50	60	64	70	80
64-1-1	4	H(m)	19	18	16	14	13.2	11	8
64-1	5.5		27	25	23	21	20.2	18	15
64-2-2	7.5		39	36	33	29	27	23	17
64-2-1	11		46	44	40	36	34	30	24
64-2	11		53	51	47	43	41	37	30
64-3-2	15		66	62	56	50	47	41	32
64-3-1	15		73	69	63	57	54	48	39
64-3	18.5		80	76	70	64	61	55	46
64-4-2	18.5		92	87	80	71	67	60	47
64-4-1	22		100	94	87	78	74	67	54
64-4	22		107	101	94	85	81	74	61
64-5-2	30		121	114	105	95	89	80	64
64-5-1	30		128	121	112	102	96	87	71
64-5	30		136	129	119	109	103	94	78
64-6-2	30		150	142	131	118	111	101	81
64-6-1	37		157	149	138	125	118	108	88
64-6	37		164	156	145	132	125	115	95
64-7-2	37		179	169	156	141	133	121	99
64-7-1	37		186	176	163	148	140	128	106
64-7	45		193	183	170	155	147	135	112
64-8-2	45		207	196	182	164	155	142	116
64-8-1	45		215	203	189	171	162	149	123

PERFORMANCE CURVES

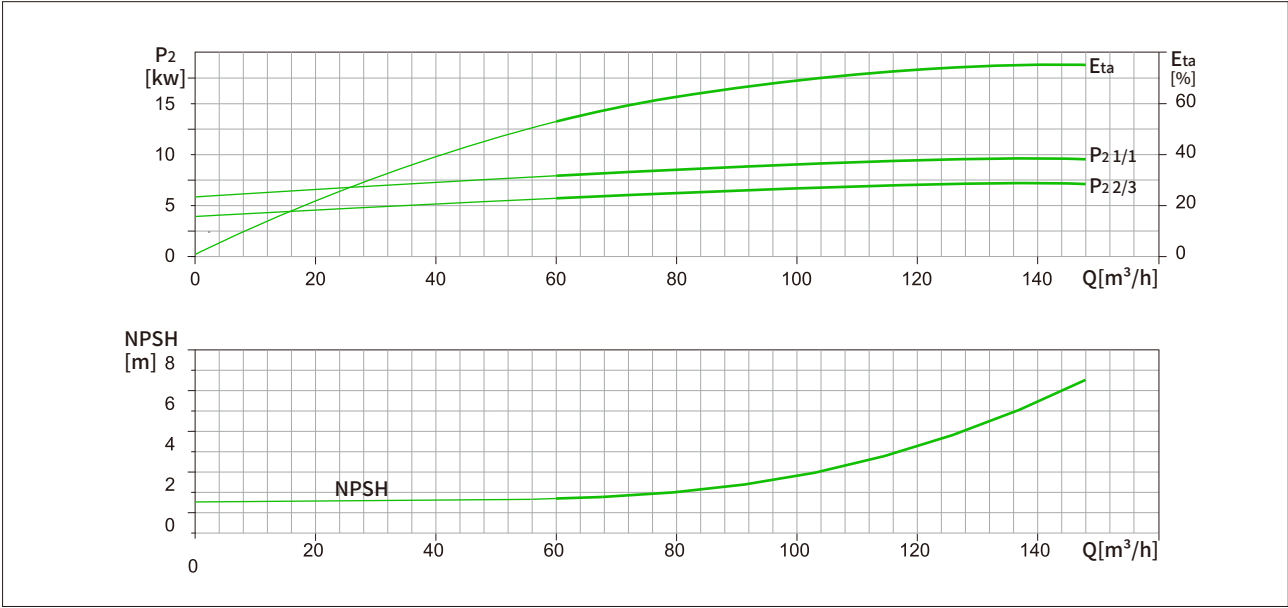
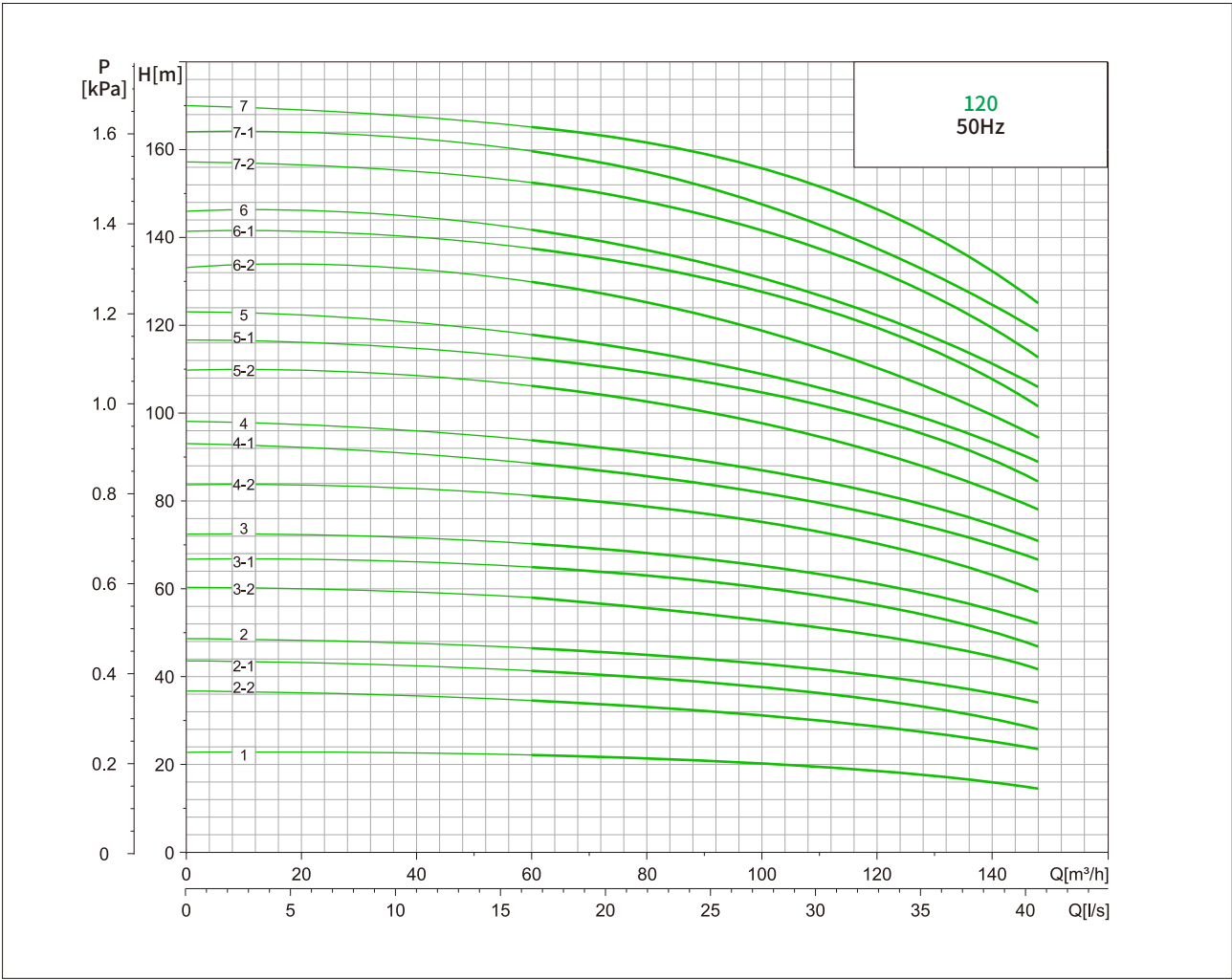


DIMENSION DRAWING

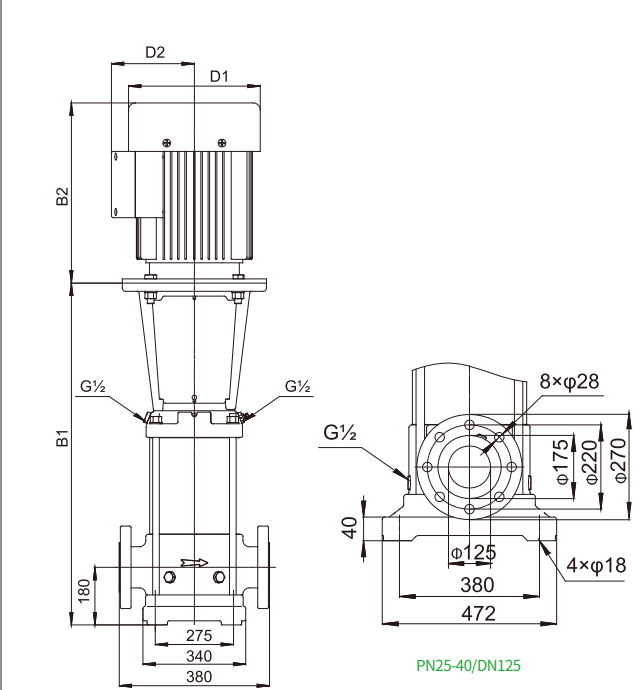


Model	Power(kW)	Q[m³/h]	50	60	70	80	85	90	100	110
90-1-1	5.5	H(m)	22	19	17	16	14	13	10	6
90-1	7.5		25	24	22	21	20	19	16	12
90-2-2	11		41	39	36	32	30	28	22	15
90-2	15		53	50	47	44	41	40	36	30
90-3-2	18.5		68	65	60	55	52	49	41	32
90-3	22		81	77	72	67	64	62	55	48
90-4-2	30		98	93	87	80	75	72	62	50
90-4	30		110	105	100	92	86	84	76	66
90-5-2	37		126	120	113	104	98	93	81	68
90-5	37		139	131	124	115	110	106	94	83
90-6-2	45		155	148	139	129	122	117	102	86
90-6	45		168	160	150	141	134	130	117	103

PERFORMANCE CURVES



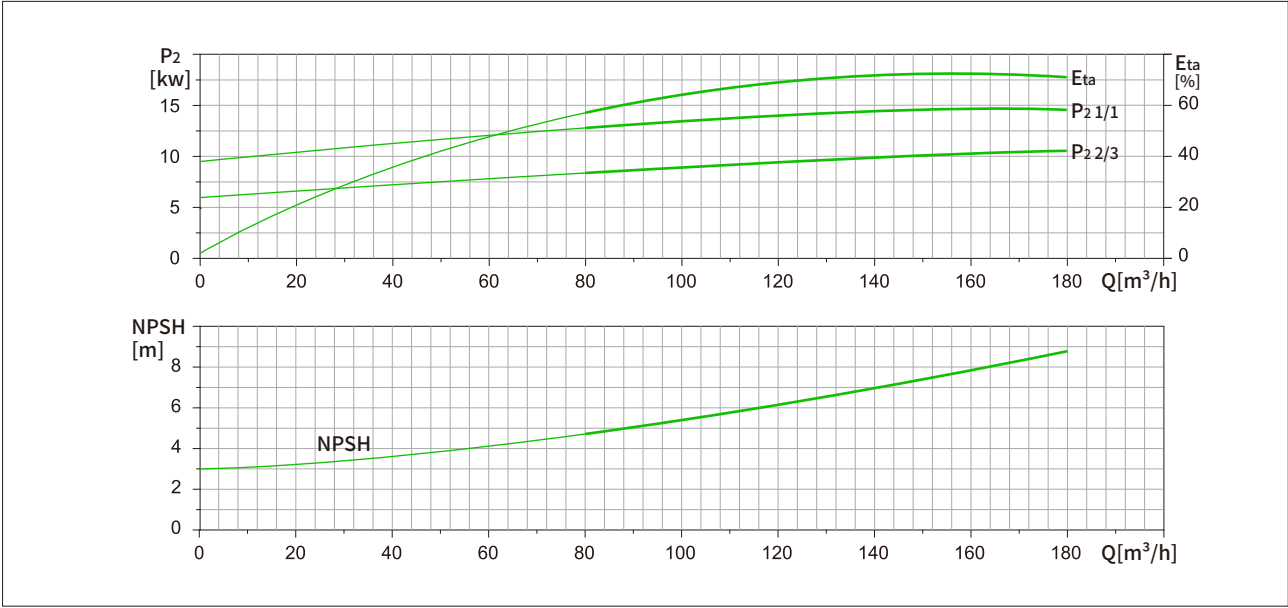
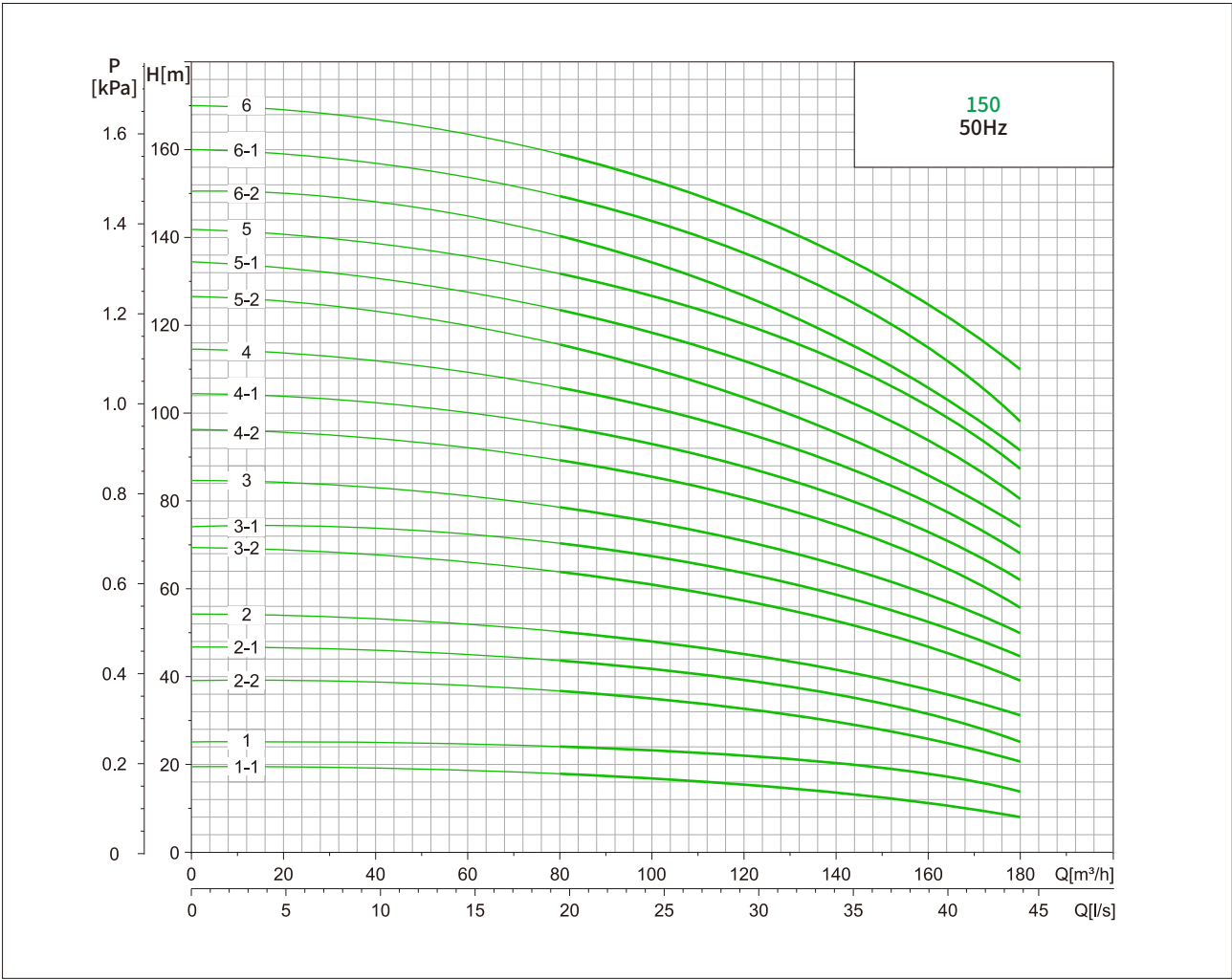
DIMENSION DRAWING



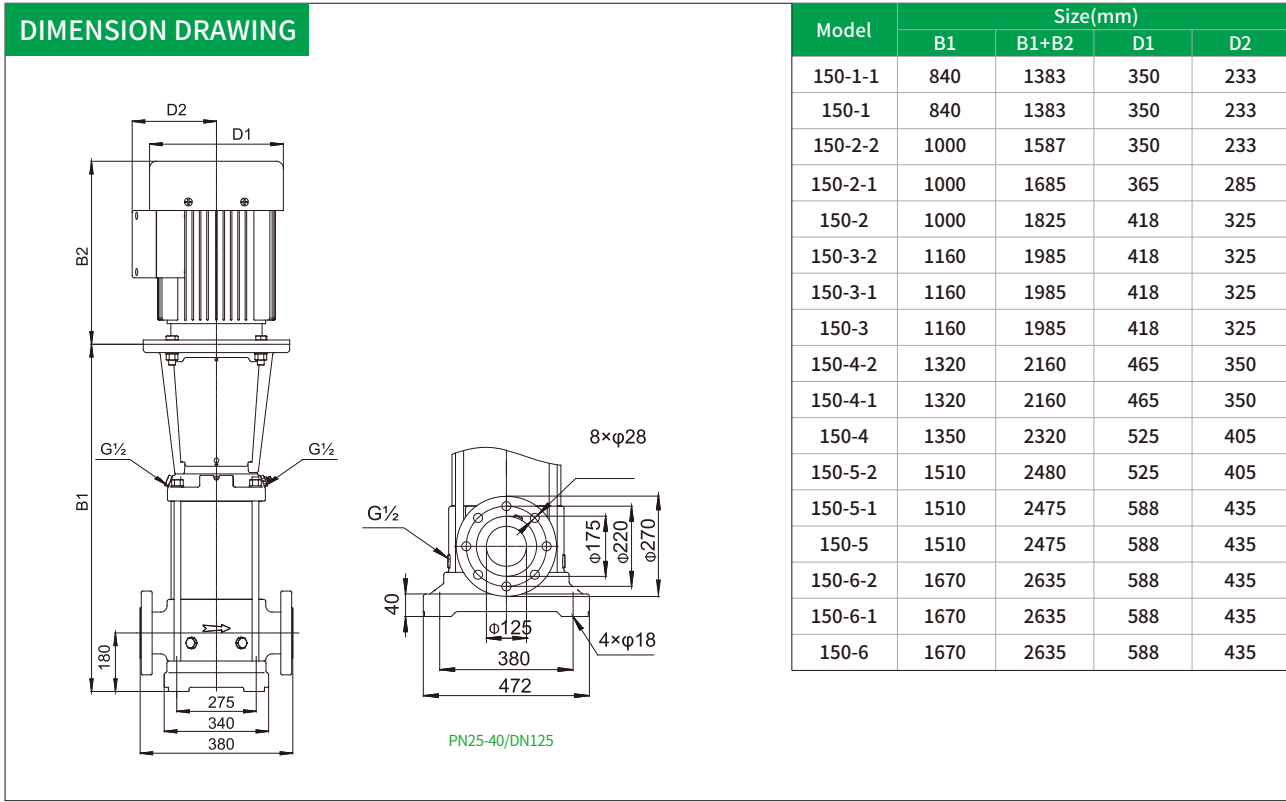
Model	Size(mm)			
	B1	B1+B2	D1	D2
120-1	840	1383	350	233
120-2-2	1000	1543	350	233
120-2-1	1000	1587	350	233
120-2	1000	1685	365	285
120-3-2	1160	1985	418	325
120-3-1	1160	1985	418	325
120-3	1160	1985	418	325
120-4-2	1320	2145	418	325
120-4-1	1320	2145	418	325
120-4	1320	2160	465	350
120-5-2	1480	2320	465	350
120-5-1	1480	2320	465	350
120-5	1510	2480	525	405
120-6-2	1670	2640	525	405
120-6-1	1670	2640	525	405
120-6	1670	2635	588	435
120-7-2	1830	2795	588	435
120-7-1	1830	2795	588	435
120-7	1830	2795	588	435

Model	Power(kW)	Q[m³/h]	60	70	80	90	100	110	120	130	140	150
120-1	11	H(m)	22	21.8	21.6	21	20.5	19.5	18.5	17	16	15
120-2-2	15		34	33.6	33	31	30.5	30	28.5	27	25	24
120-2-1	18.5		41	40	39.5	38.5	37	36.5	34.5	32.5	30	27.5
120-2	22		46	45	44.5	43.5	42.4	41	40	38	36	33.5
120-3-2	30		57	56	55	53.5	52	51	49	46.5	43.5	41
120-3-1	30		64	63	62	60	58.5	57.5	55.5	52	49	46
120-3	30		69.5	68.5	67.5	66	64.4	62.5	61	57.5	54.5	51
120-4-2	37		80.5	79	78	76	73.5	72	69	66	61.5	58
120-4-1	37		87	86	84.5	82	80	78	76	72	68	64.5
120-4	45		92.5	91	90	88	85.5	83	81	77	73	68.5
120-5-2	45		104.5	103	101	99	96	93	90	85.5	80.5	75.5
120-5-1	45		110.5	109	107.5	105	102	100	97	92	86.5	83
120-5	55		115.5	114	113	110	107.5	104.5	101.5	96	91	86
120-6-2	55		128	125.5	123	121	117.3	113.5	110	104.5	98.5	92.5
120-6-1	55		134	132	130.5	127	124	121	118	111	105	100
120-6	75		139	137	135	132	128.8	126	123	116	110	104
120-7-2	75		151	148	145.5	143	138.6	134	130	123.5	116.5	109
120-7-1	75		156.5	154	152	148.5	144.5	141	137.5	130	123	116.5
120-7	75		162.5	160.5	158.5	155	151	148	145	137	129	123

PERFORMANCE CURVES

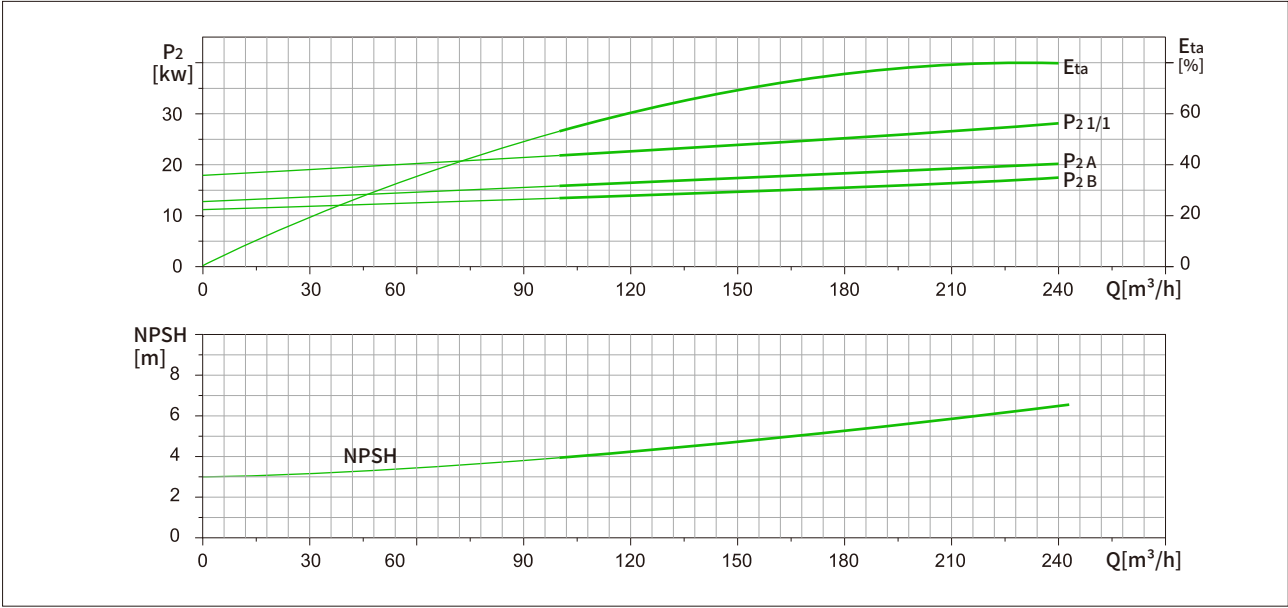
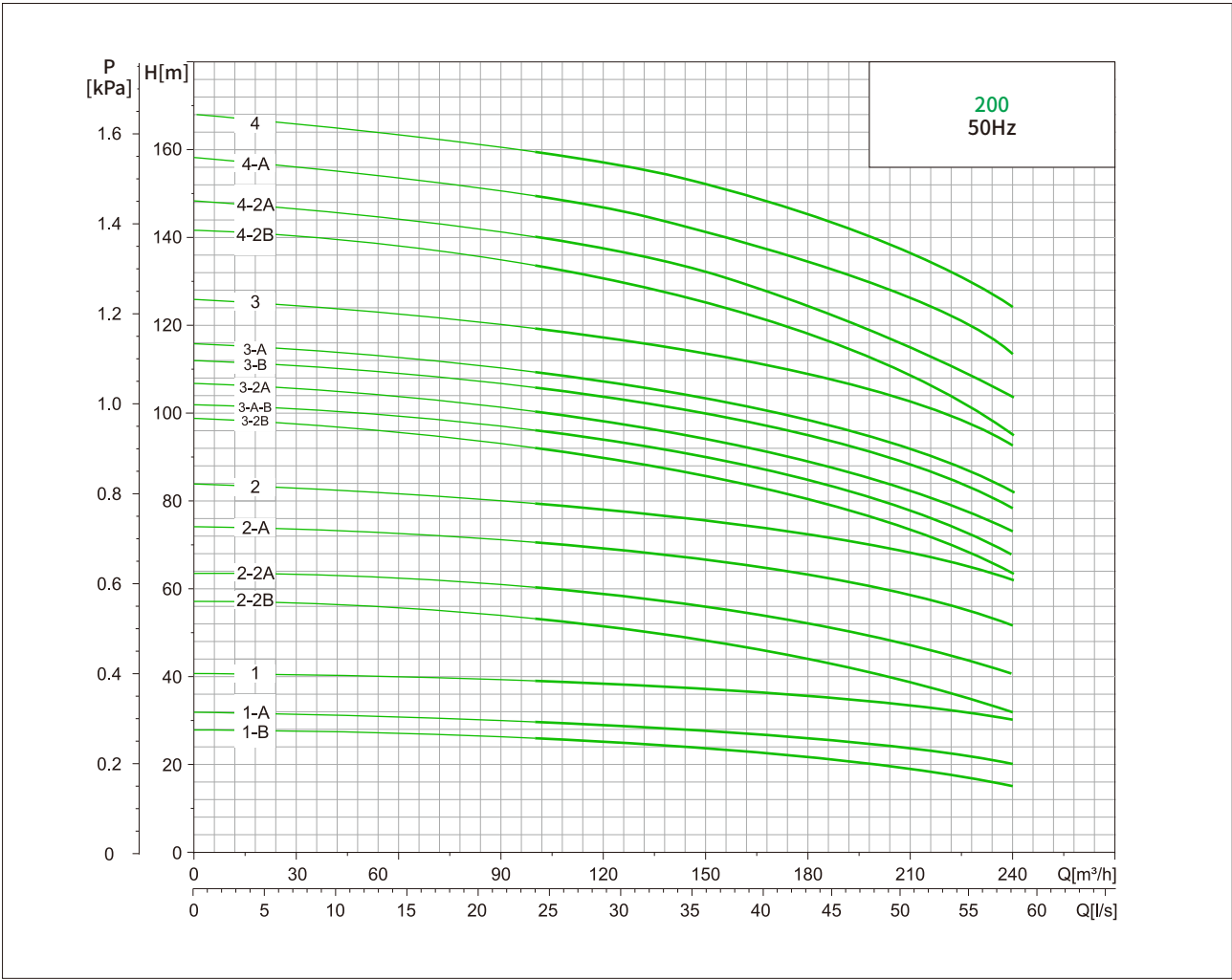


DIMENSION DRAWING

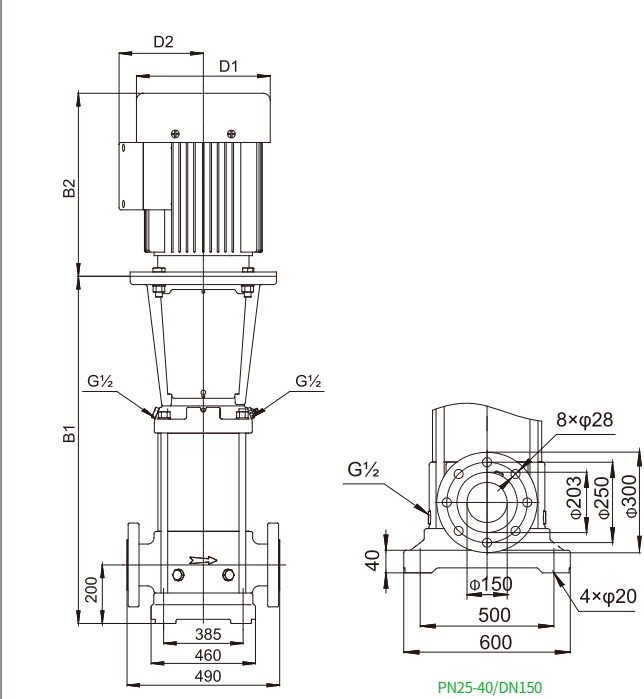


Model	Power(kW)	Q[m³/h]	80	90	100	110	120	130	140	150	160	170	180
150-1-1	11	H(m)	18.3	17.8	17.3	17	16	15	14	12.5	11	10	8.5
150-1	15		24	23	22.5	22	21.5	20.5	20	18.5	17	16	15
150-2-2	18.5		37	35.5	34	33	32	31	29	27.5	26	23	21
150-2-1	22		44.3	43	42	40	39	38.5	37.5	35	33	30	27
150-2	30		50	49	48	47	45.5	44	42	40	37	34	32
150-3-2	30		63.5	61	59	57.5	56	54.5	53	49	45.5	42	39
150-3-1	37		70	68	67	65	63	62	60	56	53	49	45
150-3	37		78	76.5	75	73	70.5	68	66	63	59	55	50.5
150-4-2	45		89	87	84	81.5	79	77	74.5	70.5	65.5	60	56
150-4-1	45		96.5	94	91.5	89	86.5	84	81.5	77	72.5	67	62
150-4	55		104	102	100	97	95	91	88	84	79.5	74	68
150-5-2	55		115.5	112	109	106	102.5	100	97	92	86	79	73.5
150-5-1	75		122.5	119.5	117	113.5	111.5	107.5	104.5	99	93.5	87	80
150-5	75		130	127.5	125	121	119	115	111.5	106.5	101	94.5	86.5
150-6-2	75		140	137	133	130	126	121	118	112	106	98	91
150-6-1	75		148.5	145	141.7	137.5	135	131	127	120.5	114.5	106.5	97.5
150-6	75		157	153	149	145	142	139.5	137	130	123.5	116	109

PERFORMANCE CURVES



DIMENSION DRAWING



Model	Size(mm)			
	B1	B1+B2	D1	D2
200-1-B	907	1494	350	233
200-1-A	907	1592	365	285
200-1	907	1732	418	325
200-2-2B	1101	1926	418	325
200-2-2A	1101	1941	465	350
200-2-A	1131	2101	525	405
200-2	1131	2101	525	405
200-3-2B	1325	2290	588	435
200-3-A-B	1325	2290	588	435
200-3-2A	1325	2290	588	435
200-3-B	1325	2290	588	435
200-3-A	1325	2290	588	435
200-3	1325	2322	588	435
200-4-2B	1519	2516	588	435
200-4-2A	1519	2734	620	555
200-4-A	1519	2734	620	555
200-4	1519	2734	620	555

Model	Power(kW)	Q[m³/h]	100	120	140	160	180	200	220	240
200-1-B	18.5	H(m)	25.5	25	24	23	21.5	20	18	15.5
200-1-A	22		29	28.5	27.5	26.5	25.5	24	22	20
200-1	30		38.5	38	37.5	36.5	35	34	32.5	30
200-2-2B	37		53	51	49	47	44	41	37	32
200-2-2A	45		59.5	58	56	54	52.5	49	44.5	40.5
200-2-A	55		69	68	66	64	62	59	55.5	51
200-2	55		78.5	77.5	76	74	71.5	69	66	61.5
200-3-2B	75		91.5	89	86.5	83.5	79	75	70	63
200-3-A-B	75		95	93	90	87	83.5	79	73.5	67
200-3-2A	75		99.5	97.5	94.5	91.5	89	84	78.5	72
200-3-B	75		104.5	102.5	100	97	93	89	84.5	77.5
200-3-A	75		108	106	103.5	100.5	97.5	93	88	81.5
200-3	90		117.5	116	113.5	110.5	107	103	99	92
200-4-2B	90		131.5	129	125.5	121	115.5	110	103.5	94
200-4-2A	110		138.5	136	132	128	124	118	111	102.2
200-4-A	110		148	145.5	142.5	138	134	128	122	113
200-4	110		157.5	155.5	152.5	148	143.5	138	132.5	123.5