

Vertical Multi-Stage In-Line Pumps



IVS - CI / 304SS
IVSS - All 304SS
IVSN - All 316SS

Standard NEMA Motors
Flanged Connections Standard
Victaulic Connections Available

- * All models come standard with **Stainless Steel Impellers, Pressure Chambers and Pressure Casing**
- * All pumps equipped with **Cartridge Style Mechanical Seals** for easy maintenance
- * **In-Line Suction and Discharge** of equal sizes for piping simplicity

Mechanical Seals

Standard Cartridge type mechanical seal made of Silicon Carbide/Silicon Carbide/EPDM or Viton. Based on the type of application, alternative materials are available for the seal and the elastomers. The cartridge type mechanical seal can be replaced in minutes without special tools and without dismantling the pump.

Seal Type	IVS, IVSS, IVSN		
	1,3,5,10,15, 20,32,45,64,90	120,150	
		0.5-60HP	75.0-100.0HP
S: O-ring seal Cartridge type	●	●	-
B: Rubber bellows seal Cartridge type	-	-	●
Seals Face Material			
QQ	●	●	●
UU	○	○	-
QB	○	○	-
UB	○	○	-
Rubber Material			
E	●	●	●
V	○	○	○

List of Materials	
Q : Silicon Carbide	E: EPDM
U: Tungsten Carbide	V: Viton
B: Carbon	



● Std. ○ Opt. - N/A

Minimum inlet pressure - NPSHA

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 feet can be calculated as follows:

$$H = P_b - NPSHR - H_f - H_v - H_s$$

P_b = Barometric pressure in feet absolute.

(Barometric pressure can be set to 33.9 feet.

At sea level. In closed systems, P_b indicates system pressure in feet.)

NPSHR = Net Positive Suction Head Required in feet.

(To be read from the NPSHR curve at the highest flow the pump will be delivering.)

H_f = Friction loss in suction pipe in feet.

(At the highest flow the pump will be delivering.)

H_v = Vapor pressure in feet.

(To be read from the vapor pressure scale.

" H_v " depends on the liquid temperature " T_m ".)

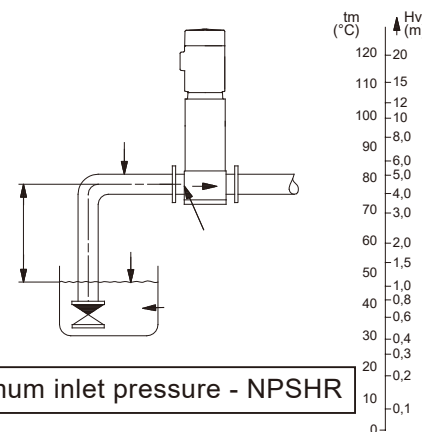
H_s = Safety margin = minimum 2.0 feet.

If the "H" calculated is positive, the pump can operate at a suction lift of maximum "H" feet.

If the "H" calculated is negative, an inlet pressure of minimum "H" feet is required.

Note: In order to avoid cavitation never, select a pump whose duty point lies too far to the right on the NPSHR curve.

Always check the NPSHR value of the pump at the highest possible flow.



Minimum inlet pressure - NPSHR

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 maximum 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.

Pump type	Flange & Victaulic				Oval Flange		
	Stages	Max. Operating Pressure	Stages	Max. Inlet Pressures	Stages	Max. Operating Pressure	Max. Inlet Pressures
IVS(S/N) 1	2 - 27	25 bar(362.6PSI)	2 - 25	10 bar(145PSI)	2 - 17	16 bar(232PSI)	10 bar(145PSI)
			27	15 bar(217.6PSI)			—
IVS(S/N) 3	2 - 25	25 bar(362.6PSI)	2 - 15	10 bar(145PSI)	2 - 15	16 bar(232PSI)	10 bar(145PSI)
			17 - 25	15 bar(217.6PSI)			—
IVS(S/N) 5	2 - 24	25 bar(362.6PSI)	2 - 9	10 bar(145PSI)	2 - 16	16 bar(232PSI)	10 bar(145PSI)
			10 - 24	15 bar(217.6PSI)			—
IVS(S/N) 10	1 - 10	16 bar(232PSI)	1 - 5	8 bar(116PSI)	1 - 10	10 bar(145PSI)	8 bar(116PSI)
	12 - 17	25 bar(362.6PSI)	6 - 17	10 bar(145PSI)			—
IVS(S/N) 15	1 - 8	16 bar(232PSI)	1 - 2	8 bar(116PSI)	1 - 5	10 bar(145PSI)	8 bar(116PSI)
	9 - 12	25 bar(362.6PSI)	3 - 12	10 bar(145PSI)			—
IVS(S/N) 20	1 - 7	16 bar(232PSI)	1	8 bar(116PSI)	1 - 5	10 bar(145PSI)	8 bar(116PSI)
	8 - 10	25 bar(362.6PSI)	2 - 10	10 bar(145PSI)			—
IVS(S/N) 32	(1-1) - 5	16 bar(232PSI)	(1-1) - 2	4 bar(58PSI)			
	(6-2) - (10-2)	30 bar(435.1PSI)	(3-2) - 6	10 bar(145PSI)			
			(7-2) - (10-2)	15 bar(217.6PSI)			
IVS(S/N) 45	(1-1) - 4	16 bar(232PSI)	(1-1) - 1	4 bar(58PSI)			
	(5-2) - 7	30 bar(435.1PSI)	(2-2) - 3	10 bar(145PSI)			
			(4-2) - 7	15 bar(217.6PSI)			
IVS(S/N) 64	(1-1) - 3	16 bar(232PSI)	(1-1)	4 bar(58PSI)			
	(4-2) - (5-2)	30 bar(435.1PSI)	1 - (2-1)	10 bar(145PSI)			
				2 - (5-2)	15 bar(217.6PSI)		
IVS(S/N) 90	(1-1) - 3	16 bar(232PSI)	(1-1) - (2-2)	10 bar(145PSI)			
	(4-2)	30 bar(435.1PSI)	(2-1) - (4-2)	15 bar(217.6PSI)			
IVS(S/N) 120	1 - (5-2)	30 bar(435.1PSI)	1	10 bar(145PSI)			
			(2-2) - (3-1)	15 bar(217.6PSI)			
			3 - (5-2)	20 bar(290.1PSI)			
IVS(S/N) 150	(1-1) - (4-2)	30 bar(435.1PSI)	(1-1)	10 bar(145PSI)			
			1 - 2	15 bar(217.6PSI)			
			(3-2) - (4-2)	20 bar(290.1PSI)			

* Rule to follow : Thde inlet pressure+the pressure against a closed valve < Max.Operating pressure.

Example Of Operating And Inlet Pressures

The values for operating and inlet pressures shown in the tables must not be considered individually but must always be compared, see the following examples:

Example 1:

The following pump type has been selected: IVS 64-4

Max. operating pressure: 30 bar

Max. inlet pressure: 15 bar

Discharge pressure against a closed valve: 16.7 bar

This pump is not allowed to start at an inlet pressure of 15 bar , but at an inlet pressure of 30 bar - 16.7 bar = 13.7 bar.

Example 2:

The following pump type has been selected: IVS 10-2

Maximum operating pressure: 16 bar.

Maximum inlet pressure: 8 bar.

Discharge pressure against a closed valve: 2.9 bar (97ft)

This pump is allowed to start at an inlet pressure of 8 bar, as the discharge is only 2.9 bar, which results in an operating pressure of 8 bar + 2 bar = 10 bar.

On the contrary, the maximum operating pressure of this pump is limited to 10.9 bar as a higher operating pressure will require an inlet pressure of more than 8 bar.

Pumped Liquids

IVS (S,N) pumps can handle a wide variety of liquids, each with its own characteristic.

IVS (S)

Non-corrosive liquids

For fluid transfer, circulation and pressure boosting of cold or hot clean water.

IVSN

Industrial liquids

Light acids

The fluids covered in the list are not complete. Data on the application limits of different pump materials when handling any of the listed fluids are considered to be the best choices.

However, the table is intended as a general guide only, and cannot replace actual testing of the pumped fluids and pump materials under specific working conditions.

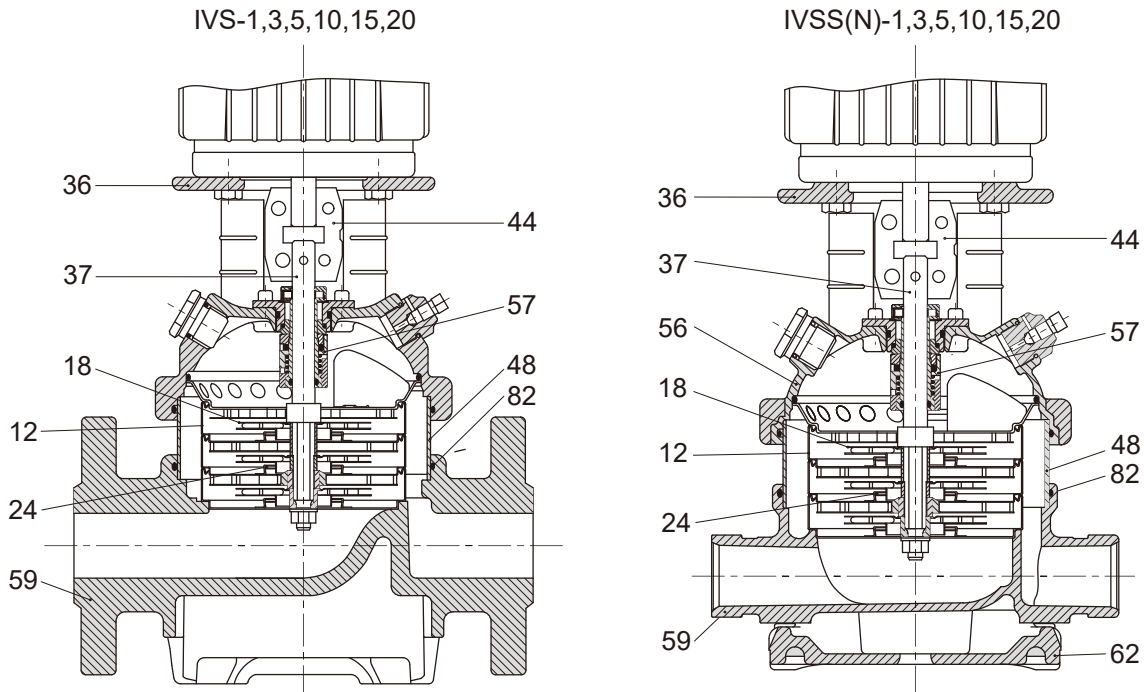
When choosing the pump version, sufficient attention should be given to the flow medium, such as density, solidification point, viscosity as well as ex-protection requirement. The limits of applicability of the pumps, based on pressure and temperature must also be considered.

- Recommended

Pumped Fluid	Fluid Concentration,temperature	IVS(S)		IVSN	
		EPDM	Viton	EPDM	Viton
Acetic acid anhydride	77°F			•	
Alkaline cleaner		•			
Aluminium sulphate	10%,77°F				•
Ammonia water (A.hydroxide)	20%,104°F	•			
Ammonia hydrogen carbonate	10%,104°F	•		•	
Benzoic acid	10%,194°F				•
Boric acid	Unsaturated solution,140°F				•
Butanol	140°F	•			
Calcium acetate	30%, 122°F	•			
Calcium hydroxide	Saturated solution, 122°F	•			
Chromic acid	1%, 68°F				•
Condensate	194°F	•			
Copper sulphate	Unsaturated solution,140°F				•
Deionic (fully desalinated water)	122°F			•	
Ethanol	100%,68°F	•			
Ethylene glycol/Diethylene glycol	40%,158°F	•	•	•	•
Fixer	77°F				•
Formic acid	5%,68°F			•	
Fruit juice	122°F				•
Glycerine	50%,122°F	•			
Heating oil (Light)		•			•
Hydraulic oil	100%,212°F		•		
Isopropanol		•			
Lactic acid	10%,68°F				•
Linoleic acid	100%,68°F	•			
Linseed oil	140°F		•		
Liqueur	140°F				•
Maize oil	176°F		•		

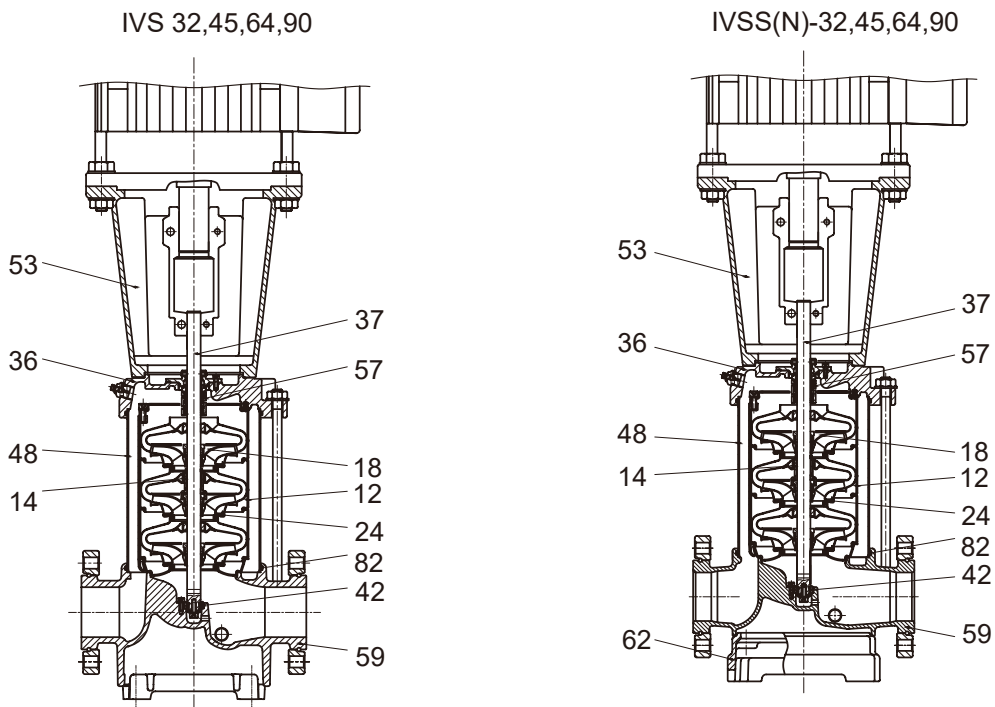
Pumped Fluid	Fluid Concentration, temperature	IVS(S)		IVSN	
		EPDM	Viton	EPDM	Viton
Maleic acid	50%, 122°F				●
Methanol	100%, 68°F	●			
Motor oil	100%, 176°F	●			
Oil-water-mixture	212°F		●		
Oxalic acid	1%, 68°F			●	
Peanut oil	100%, 176°F		●		
Phosphoric acid	20%, 68°F			●	
Polyglycols	194°F		●		●
Polyethylene glycols	40%, 158°F	●			
Potassium carbonate	10%, 140°F	●			
Potassium hydrogen carbonate	10%, 140°F	●			
Potassium permanganate	5%, 68°F			●	
Potassium sulphate	Unsaturated solution, 176°F			●	
Rapeseed oil	100%, 176°F		●		
Silicone oil	100%		●		
Sodium carbonate	10%, 140°F			●	
Sodium hydroxide	25%, 122°F			●	
Sodium nitrate	Unsaturated solution, 176°F			●	
Sodium phosphate	5%, 212°F			●	
Sodium sulphate	10%, 140°F			●	
Sulphuric acid	5%, 77°F				●
Water					
Swimming pool water	95°F	●IVSS		●	
Deionic	122°F			●	
Distilled water	122°F			●	
Decarbonated water				●	
Soft water				●	
Heating water				●	
Boiler water				●	
Pure water				●	
Rinsing water		●IVSS		●	

Material



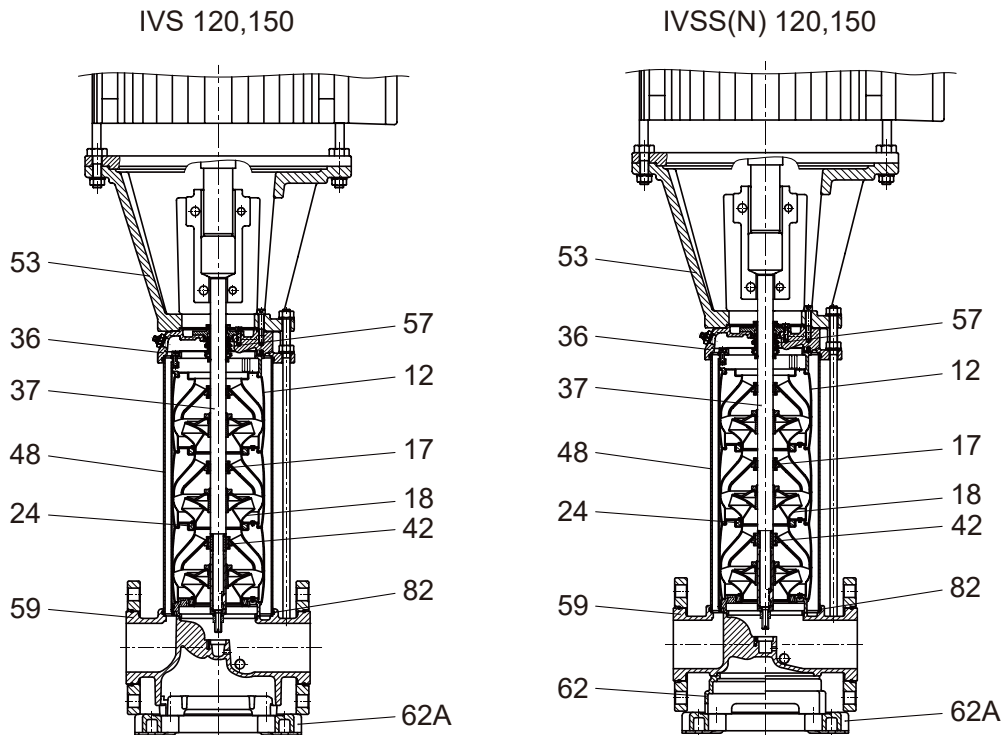
Pos.	Name	Material	IVS 1,3,5,10,15,20		IVSS 1,3,5,10,15,20		IVSN 1,3,5,10,15,20	
			Standard		Standard		Standard	
			Europe	USA	Europe	USA	Europe	USA
36	Pump head	Cast Iron	EN-GJL-200	ASTM 25B	EN-GJS-450-10	ASTM 65-45-12	EN-GJS-450-10	ASTM 65-45-12
56	Pump head cover	Stainless steel	N/A		1.4301	AISI 304	1.4401	AISI 316
18	Impeller	Stainless steel	1.4301	AISI 304	1.4301	AISI 304	1.4401	AISI 316
37	Shaft	Stainless steel	1.4057	AISI 431	1.4057	AISI 431	1.4401	AISI 316
48	Outer Sleeve	Stainless steel	1.4301	AISI 304	1.4301	AISI 304	1.4401	AISI 316
82	O-ring for outer sleeve	EPDM						
12	Chamber	Stainless steel	1.4301	AISI 304	1.4301	AISI 304	1.4401	AISI 316
24	Neck ring	PTFE						
59	Base	Cast Iron	EN-GJL-200	ASTM 25B				
		Stainless steel	N/A		1.4301	AISI 304	1.4401	AISI 316
62	Base plate	Cast Iron	N/A		EN-GJL-200	ASTM 25B	EN-GJL-200	ASTM 25B
44	Coupling	Sintered metal						
57	Mechanical Seal	Cartridge type						

Material



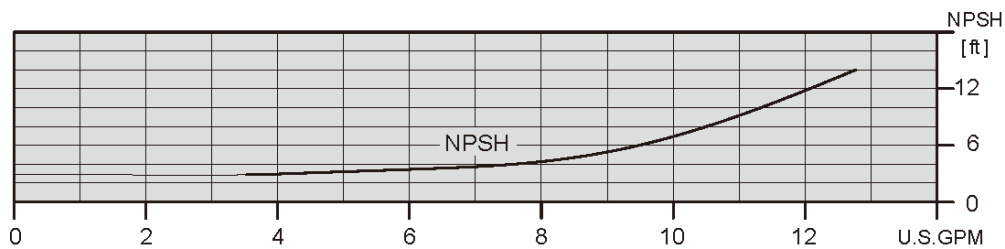
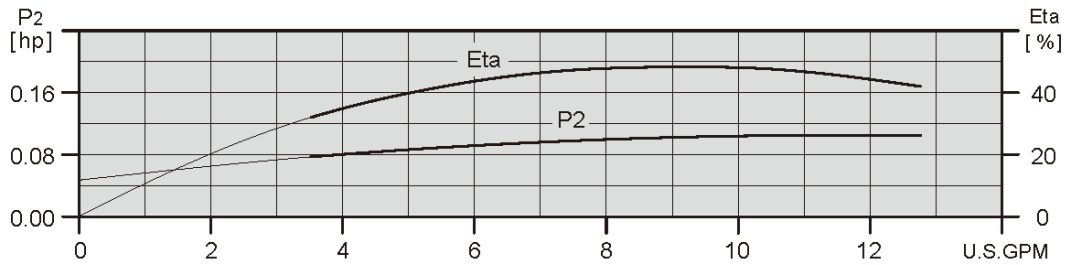
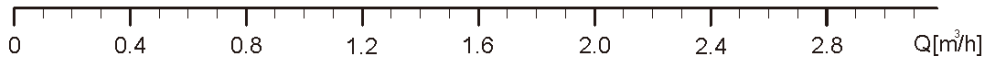
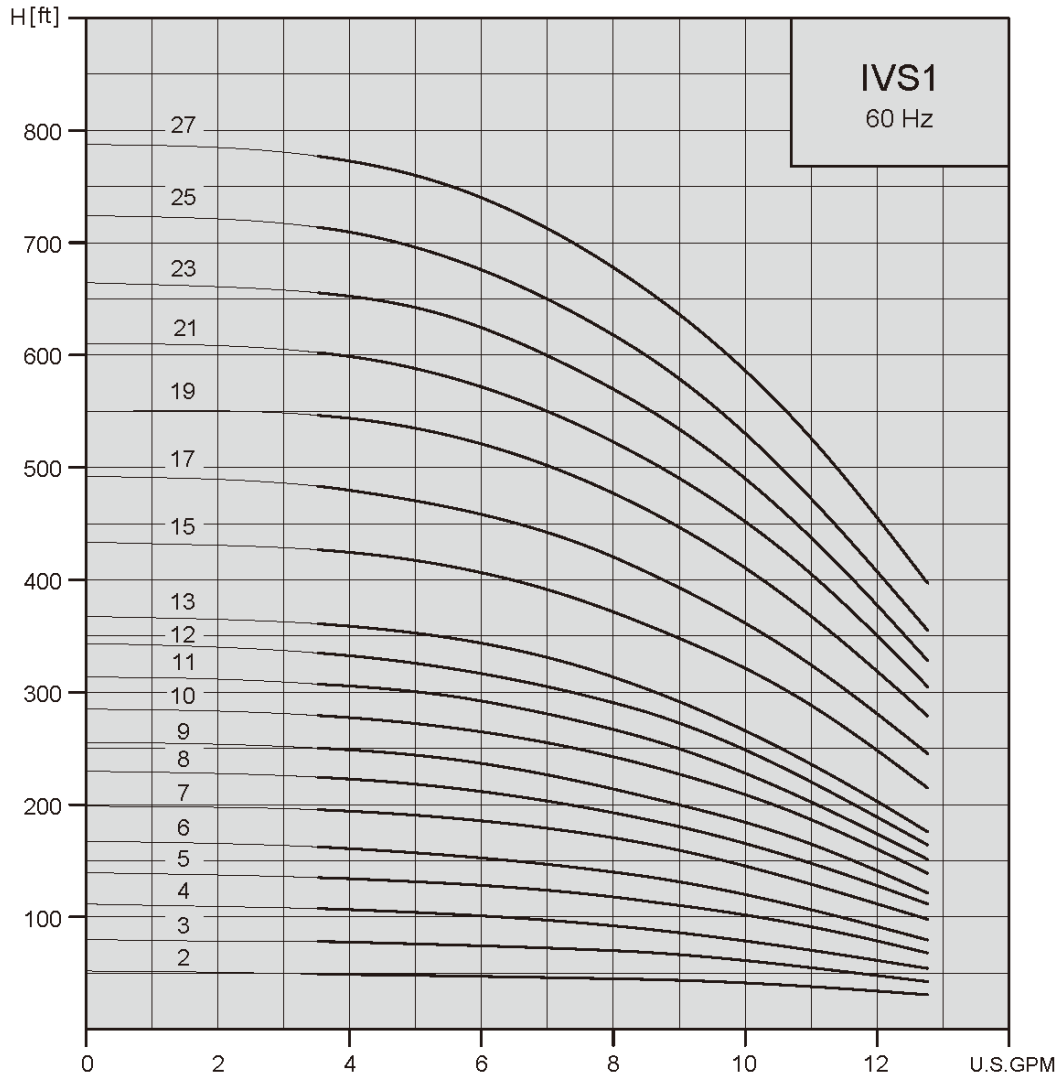
Pos.	Name	Material	IVS 32,45,64,90		IVSS 32,45,64,90		IVSN 32,45,64,90	
			Standard		Standard		Standard	
			Europe	USA	Europe	USA	Europe	USA
36	Pump head	Cast Iron	EN-GJL-250	ASTM 35B				
		Stainless steel			1.4301	AISI 304	1.4401	AISI 316
53	Motor Bracket	Cast Iron	EN-GJL-250	ASTM 35B	EN-GJL-250	ASTM 35B	EN-GJL-250	ASTM 35B
18	Impeller	Stainless steel	1.4301	AISI 304	1.4301	AISI 304	1.4401	AISI 316
37	Shaft	Stainless steel	1.4057	AISI 431	1.4057	AISI 431	1.4401	AISI 316
48	Outer Sleeve	Stainless steel	1.4301	AISI 304	1.4301	AISI 304	1.4401	AISI 316
82	O-ring for outer sleeve	EPDM						
12	Chamber	Stainless steel	1.4301	AISI 304	1.4301	AISI 304	1.4401	AISI 316
24	Neck ring	Carbon Fiber + POB + PTFE						
59	Base	Cast Iron	EN-GJL-250	ASTM 35B	N/A			
		Stainless steel	N/A		1.4301	AISI 304	1.4401	AISI 316
62	Base plate	Cast Iron	N/A		EN-GJL-250	ASTM 35B	EN-GJL-250	ASTM 35B
57	Mechanical seal	Cartridge type						
14	Bearing ring		Bronze				POB+Graphite+PTFE	
42	Bottom Bearing ring	Tungsten carbide/ Tungsten carbide						

Material

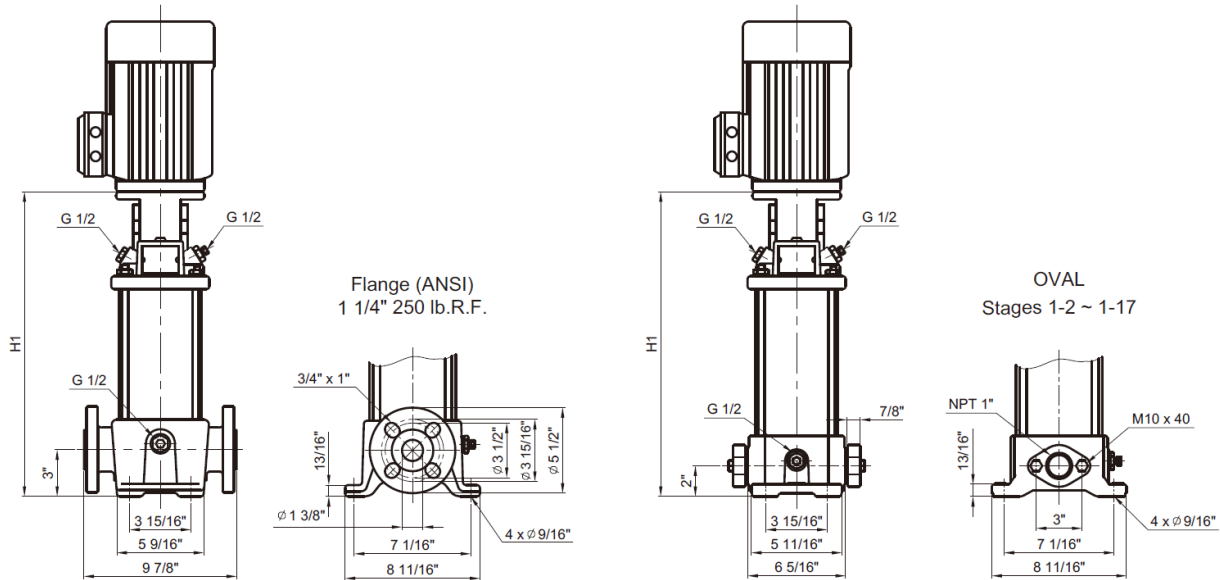


Pos.	Name	Material	IVS 120,150		IVSS 120,150		IVSN 120,150	
			Standard		Standard		Standard	
			Europe	USA	Europe	USA	Europe	USA
36	Pump head	Cast Iron	EN-GJL-250	ASTM 35B	N/A			
		Stainless steel	N/A		1.4301	AISI 304	1.4401	AISI 316
53	Motor Bracket (15HP~60HP)	Cast Iron	EN-GJL-250	ASTM 35B	EN-GJL-250	ASTM 35B	EN-GJL-250	ASTM 35B
	Motor Bracket (75HP~100HP)	Cast Iron	EN-GJS-450-10	ASTM 65-45-12	EN-GJS-450-10	ASTM 65-45-12	EN-GJS-450-10	ASTM 65-45-12
17	Bearing ring	PTFE						
18	Impeller	Stainless steel	1.4301	AISI 304	1.4301	AISI 304	1.4401	AISI 316
37	Shaft	Stainless steel	1.4057	AISI 431	1.4057	AISI 431	1.4401	AISI 316
48	Outer Sleeve	Stainless steel	1.4301	AISI 304	1.4301	AISI 304	1.4401	AISI 316
82	O-ring for outer sleeve	EPDM						
12	Chamber	Stainless steel	1.4301	AISI 304	1.4301	AISI 304	1.4401	AISI 316
24	Neck ring	PTFE						
59	Base	Cast Iron	EN-GJL-250	ASTM 35B	N/A			
		Stainless steel	N/A		1.4301	AISI 304	1.4401	AISI 316
62	Base plate	Cast Iron	N/A		EN-GJS-450-10	ASTM 65-45-12	EN-GJS-450-10	ASTM 65-45-12
62A	Base plate	Cast Iron	EN-GJS-450-10	ASTM 65-45-12	EN-GJS-450-10	ASTM 65-45-12	EN-GJS-450-10	ASTM 65-45-12
57	Mechanical seal	Cartridge type						
42	Bottom Bearing ring	SiC / SiC						

Performance Range

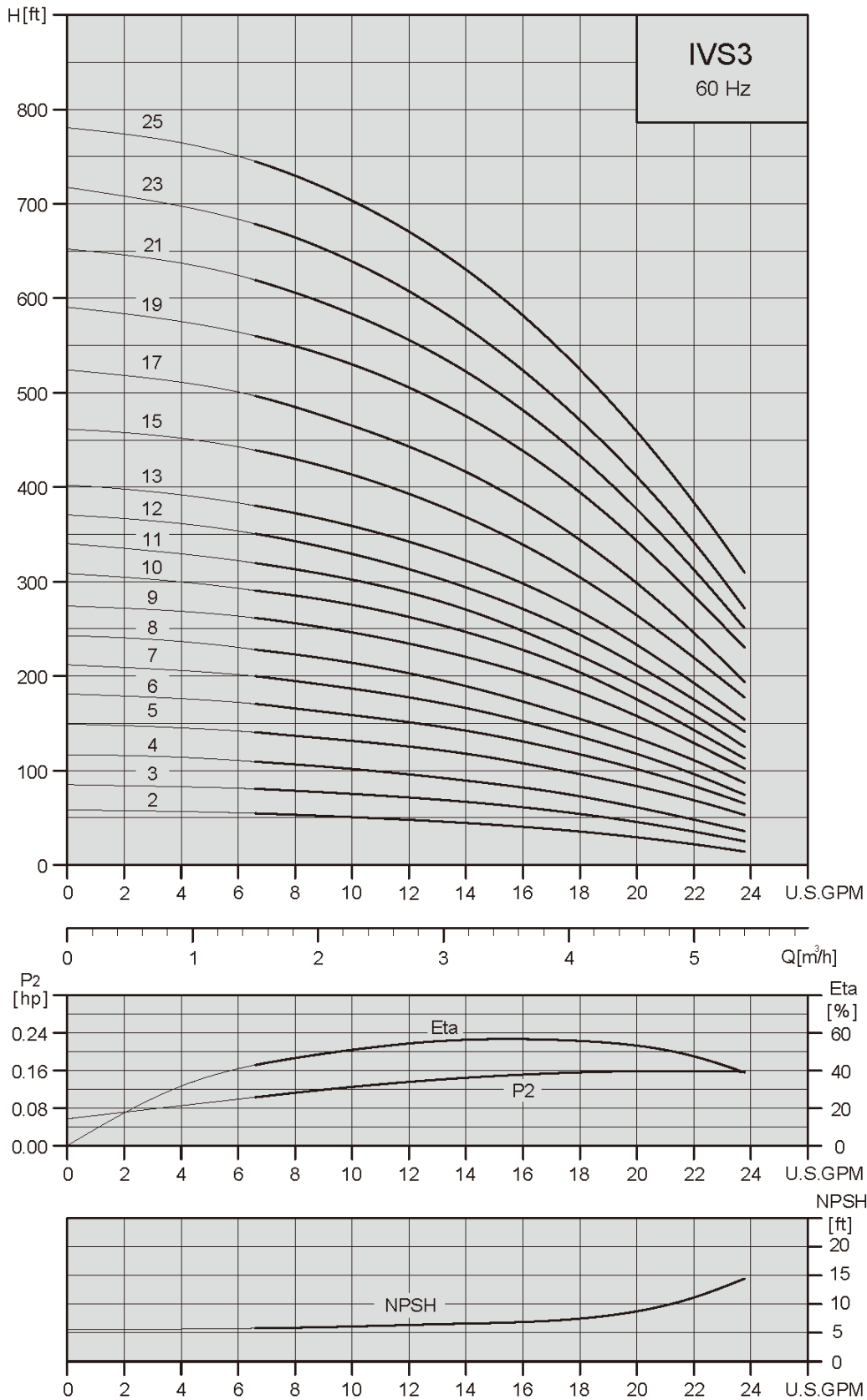


Specifications / Dimensions

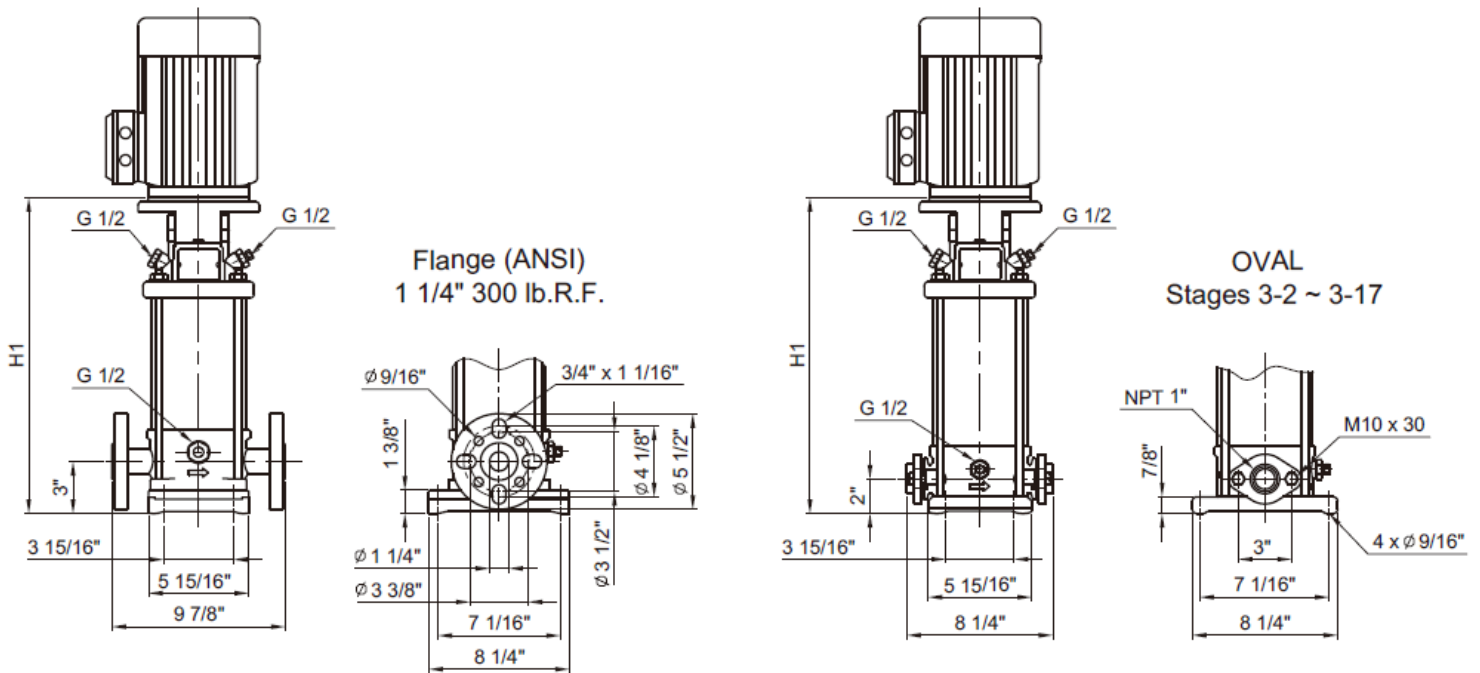


Pump Model	Recommended Motor			NEMA Frame TEFC	IVS			
	P ₂				Dimension (in)		Weight	
	(HP)	(kW)	(ph)		ANSI Flange H1	OVAL H1	ANSI Flange	OVAL
IVS1-2	0.5	0.37	1/3	56C	11.93	10.94	40.6	31.3
IVS1-3	0.5	0.37	1/3	56C	11.93	10.94	40.6	31.4
IVS1-4	0.5	0.37	1/3	56C	12.64	11.65	41.5	32.2
IVS1-5	0.75	0.56	1/3	56C	13.35	12.36	42.2	33.0
IVS1-6	0.75	0.56	1/3	56C	14.06	13.07	43.0	33.8
IVS1-7	0.75	0.56	1/3	56C	14.76	13.78	43.8	34.5
IVS1-8	1	0.75	1/3	56C	15.47	14.49	44.6	35.3
IVS1-9	1	0.75	1/3	56C	16.18	15.2	45.4	36.1
IVS1-10	1.5	1.1	1/3	56C	16.89	15.91	46.2	37.0
IVS1-11	1.5	1.1	1/3	56C	17.60	16.61	47.0	37.8
IVS1-12	1.5	1.1	1/3	56C	18.31	17.32	47.8	38.6
IVS1-13	1.5	1.1	1/3	56C	19.02	18.03	48.6	39.4
IVS1-15	2	1.5	1/3	56C	20.43	19.45	50.1	40.9
IVS1-17	2	1.5	1/3	56C	21.85	20.87	51.7	42.4
IVS1-19	2	1.5	1/3	56C	23.27	-	53.3	-
IVS1-21	3	2.2	1/3	182TC	25.63	-	60.8	-
IVS1-23	3	2.2	1/3	182TC	27.05	-	62.4	-
IVS1-25	3	2.2	1/3	182TC	28.46	-	63.9	-
IVS1-27	3	2.2	1/3	182TC	29.84	-	65.5	-

Performance Range

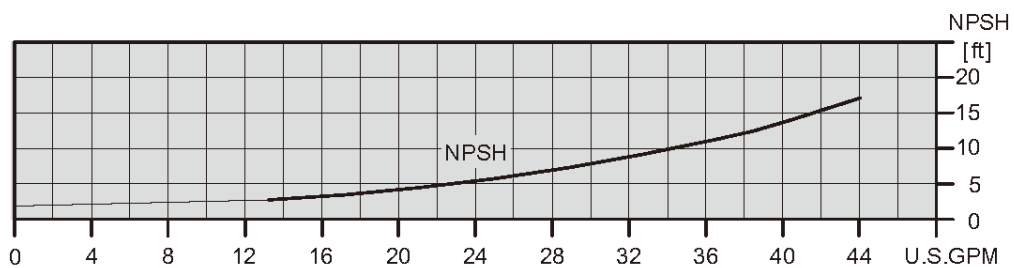
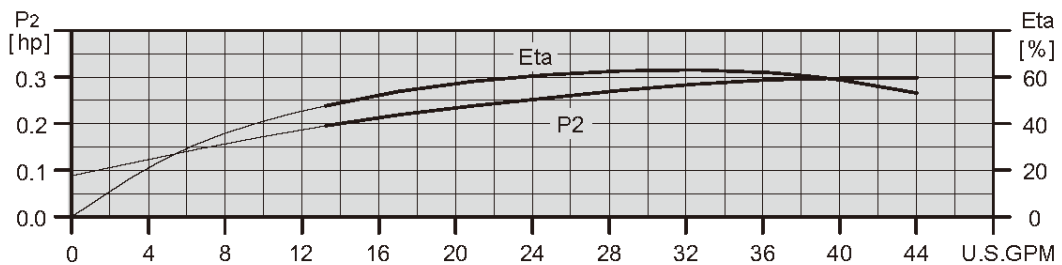
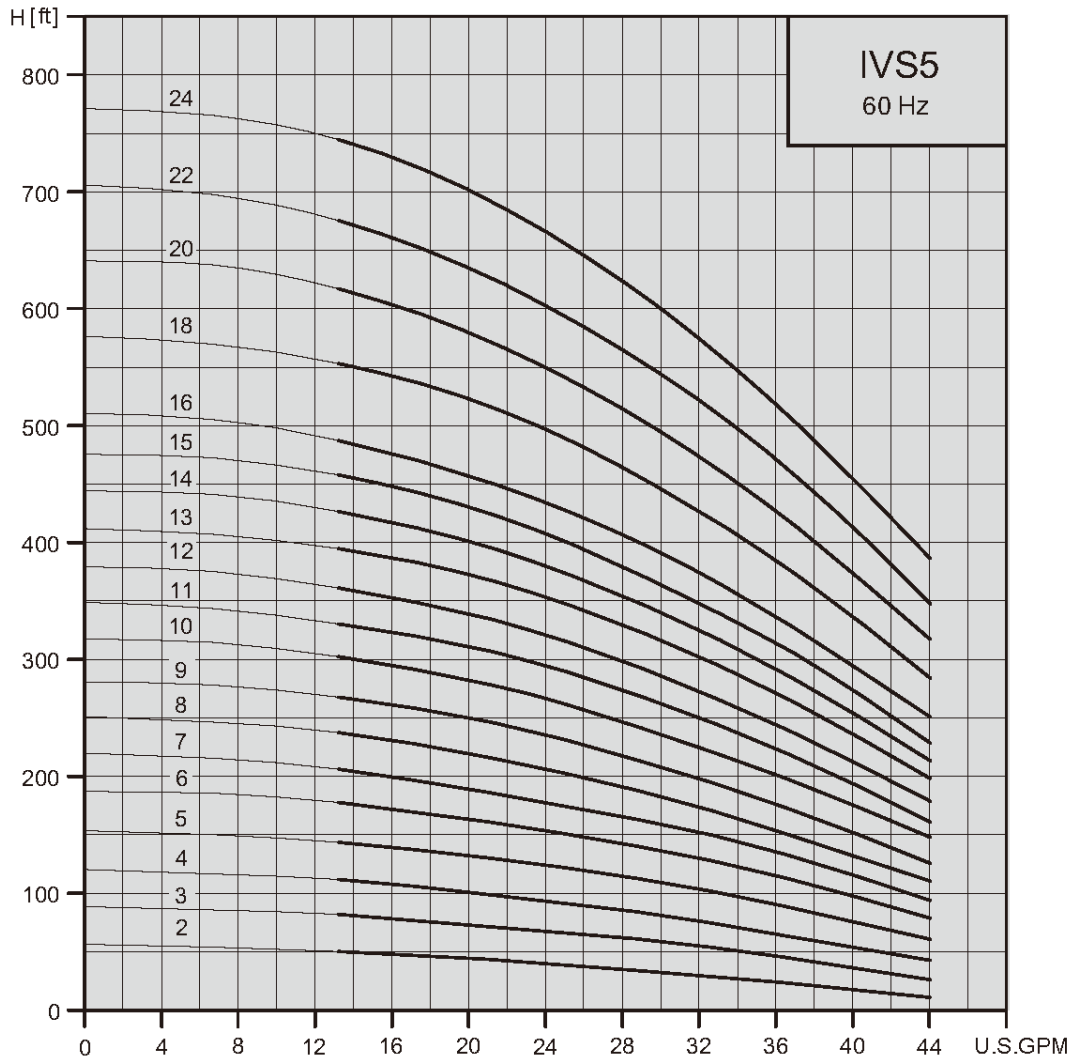


Specifications / Dimensions

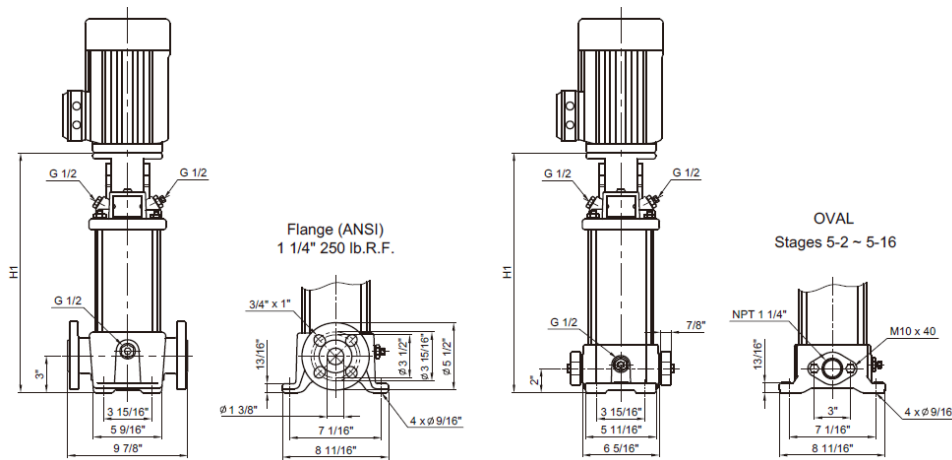


Pump Model	Recommended Motor			NEMA Frame TEFC	IVS		Weight	
	P ₂				Dimension (in)		ANSI Flange	OVAL
	(HP)	(kW)	(ph)		ANSI Flange H1	OVAL H1		
IVS3-2	0.50	0.37	1/3	56C	11.93	10.94	40.6	31.3
IVS3-3	0.50	0.37	1/3	56C	11.93	10.94	40.6	31.4
IVS3-4	0.75	0.56	1/3	56C	12.64	11.65	41.5	32.2
IVS3-5	0.75	0.56	1/3	56C	13.35	12.36	42.2	33.0
IVS3-6	1	0.75	1/3	56C	14.06	13.07	43.0	33.8
IVS3-7	1.5	1.12	1/3	56C	14.76	13.78	43.8	34.5
IVS3-8	1.5	1.12	1/3	56C	15.47	14.49	44.6	35.3
IVS3-9	1.5	1.12	1/3	56C	16.18	15.20	45.4	36.1
IVS3-10	2	1.5	1/3	56C	16.89	15.91	46.2	37.0
IVS3-11	2	1.5	1/3	56C	17.60	16.61	47.0	37.8
IVS3-12	2	1.5	1/3	56C	18.31	17.32	47.8	38.6
IVS3-13	3	2.2	1/3	182TC	19.96	18.98	54.5	45.3
IVS3-15	3	2.2	1/3	182TC	21.38	20.39	56.0	46.8
IVS3-17	3	2.2	1/3	182TC	22.80	21.81	57.6	48.4
IVS3-19	3	2.2	1/3	182TC	24.17	-	59.2	-
IVS3-21	5	3.7	1	213TC	26.18	-	65.7	-
			3	184TC	25.59	-	60.8	-
IVS3-23	5	3.7	1	213TC	27.60	-	67.3	-
			3	184TC	27.01	-	62.4	-
IVS3-25	5	3.7	1	213TC	29.02	-	68.8	-
			3	184TC	28.43	-	63.9	-

Performance Range

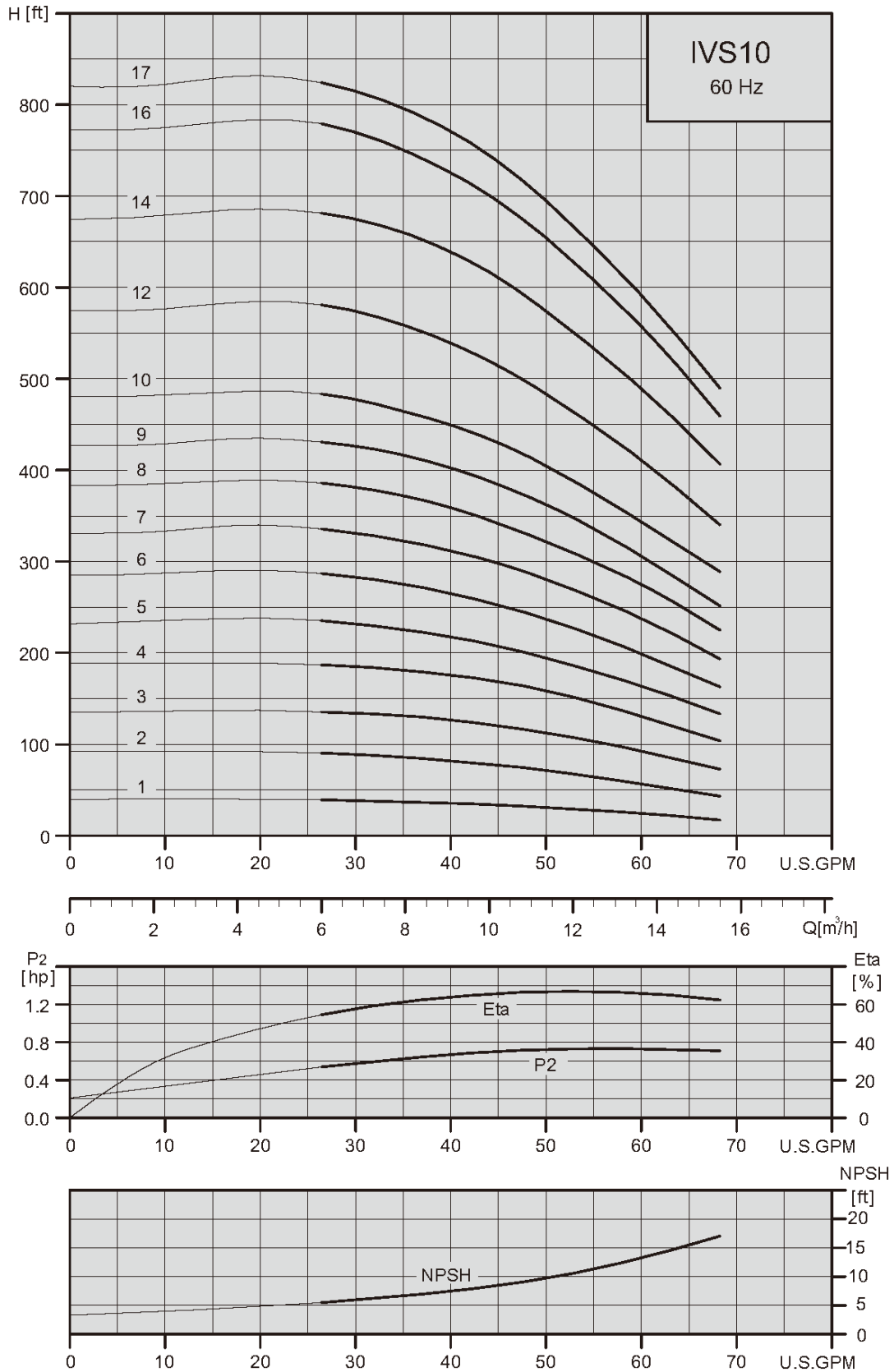


Specifications / Dimensions

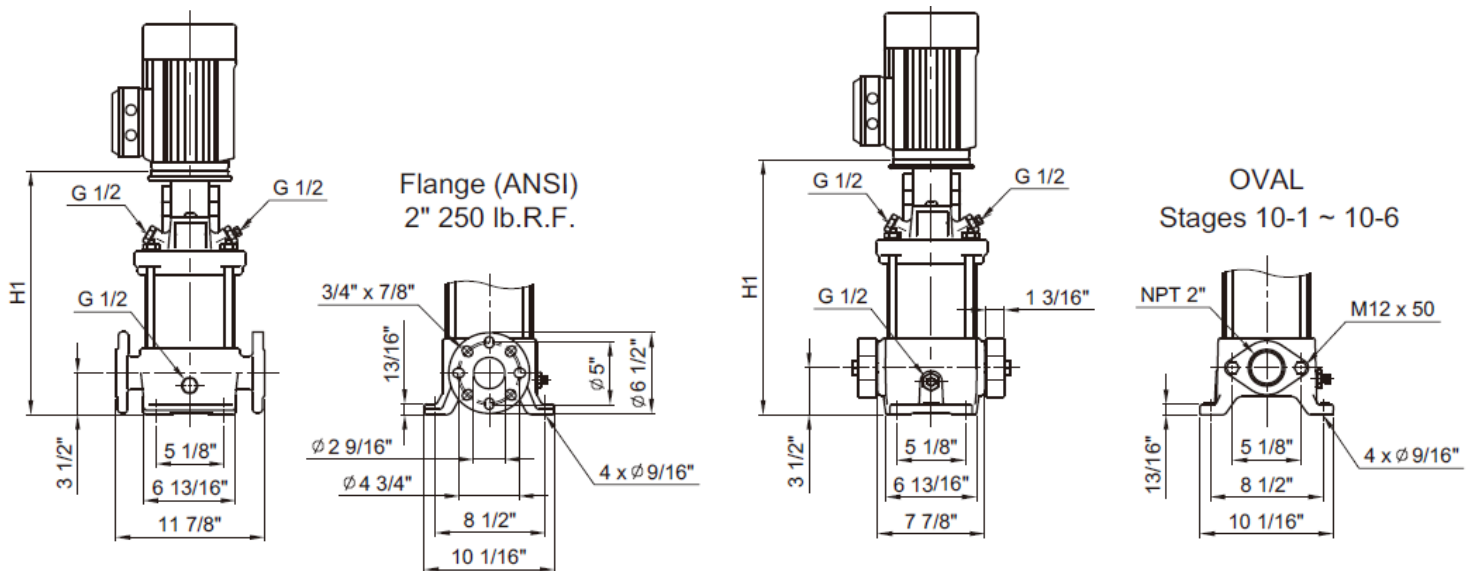


Pump Model	Recommended Motor			IVS				
	P ₂			NEMA Frame TEFC	Dimension (in)		Weight	
	(HP)	(kW)	(ph)		ANSI Flange H1	OVAL H1	ANSI Flange	OVAL
IVS5-2	0.75	0.56	1/3	56C	11.93	10.94	40.4	31.6
IVS5-3	1	0.75	1/3	56C	12.99	12.01	41.3	32.5
IVS5-4	1.5	1.12	1/3	56C	14.06	13.07	42.4	33.6
IVS5-5	1.5	1.12	1/3	56C	15.12	14.30	43.5	34.7
IVS5-6	2	1.49	1/3	56C	16.18	15.20	44.7	35.9
IVS5-7	3	2.24	1/3	182TC	17.24	16.26	45.7	36.9
IVS5-8	3	2.24	1/3	182TC	19.25	18.27	52.8	44.0
IVS5-9	3	2.24	1/3	182TC	20.31	19.33	53.9	45.1
IVS5-10	3	2.2	1/3	182TC	21.34	20.35	55.0	46.3
IVS5-11	5	3.7	1	213TC	22.99	22.01	61.1	52.3
			3	182TC	22.40	21.42	56.2	47.4
IVS5-12	5	3.7	1	213TC	24.05	23.07	62.2	53.4
			3	184TC	23.46	22.48	57.3	48.5
IVS5-13	5	3.7	1	213TC	25.12	24.13	63.3	54.5
			3	184TC	24.53	23.54	58.4	49.6
IVS5-14	5	3.7	1	213TC	26.18	25.20	64.6	55.8
			3	184TC	25.59	24.61	59.7	50.9
IVS5-15	5	3.7	1	213TC	27.24	26.26	65.3	56.5
			3	184TC	26.65	25.67	60.4	51.6
IVS5-16	5	3.7	1	213TC	28.31	27.32	66.6	57.8
			3	184TC	27.72	26.73	61.7	52.9
IVS5-18	7.5	5.6	1/3	213TC	30.47	-	69.2	-
IVS5-20	7.5	5.6	1/3	213TC	32.60	-	71.8	-
IVS5-22	7.5	5.6	1/3	213TC	34.72	-	73.7	-
IVS5-24	7.5	5.6	1/3	213TC	36.85	-	75.9	-

Performance Range

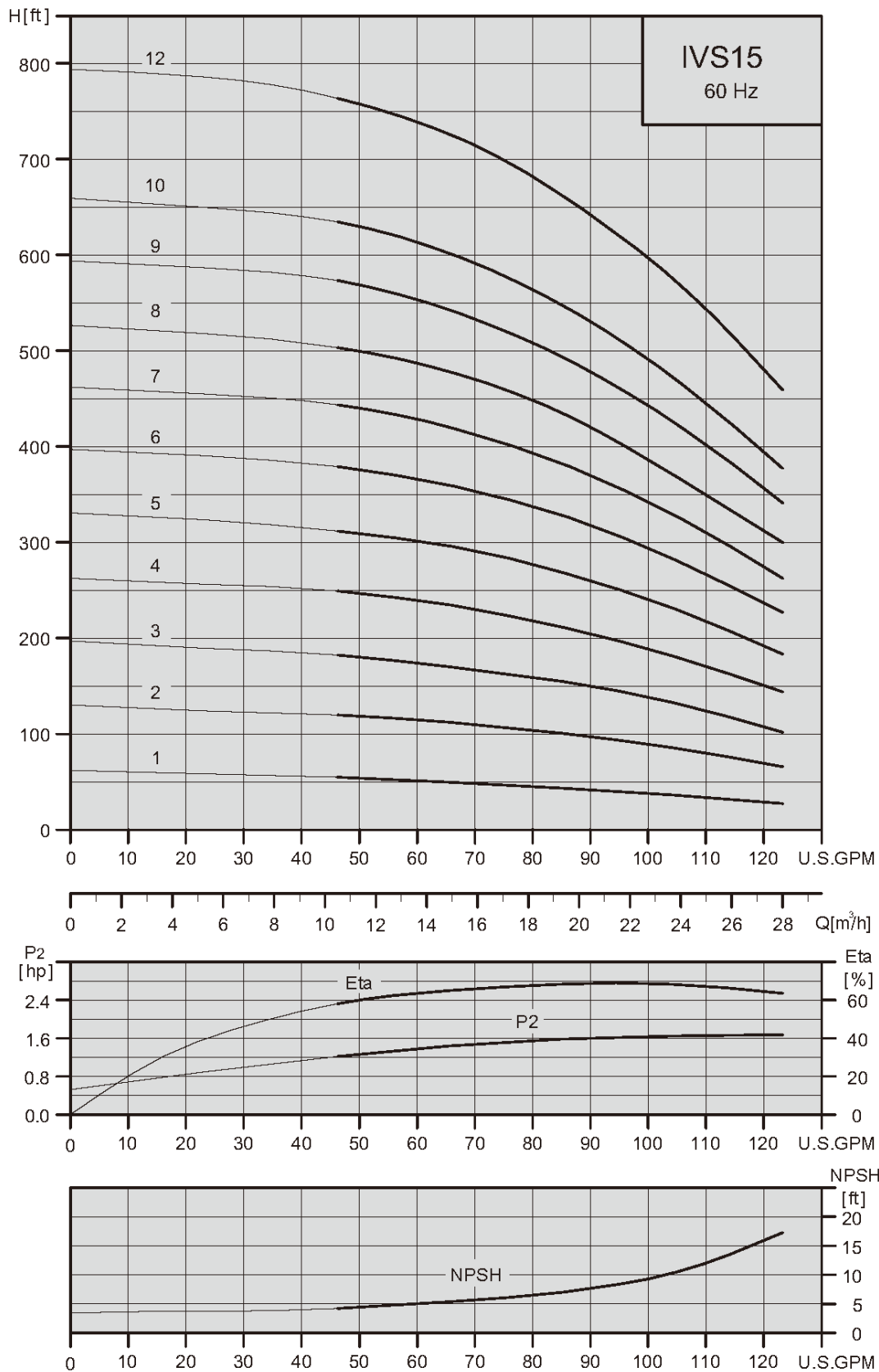


Specification / Dimensions

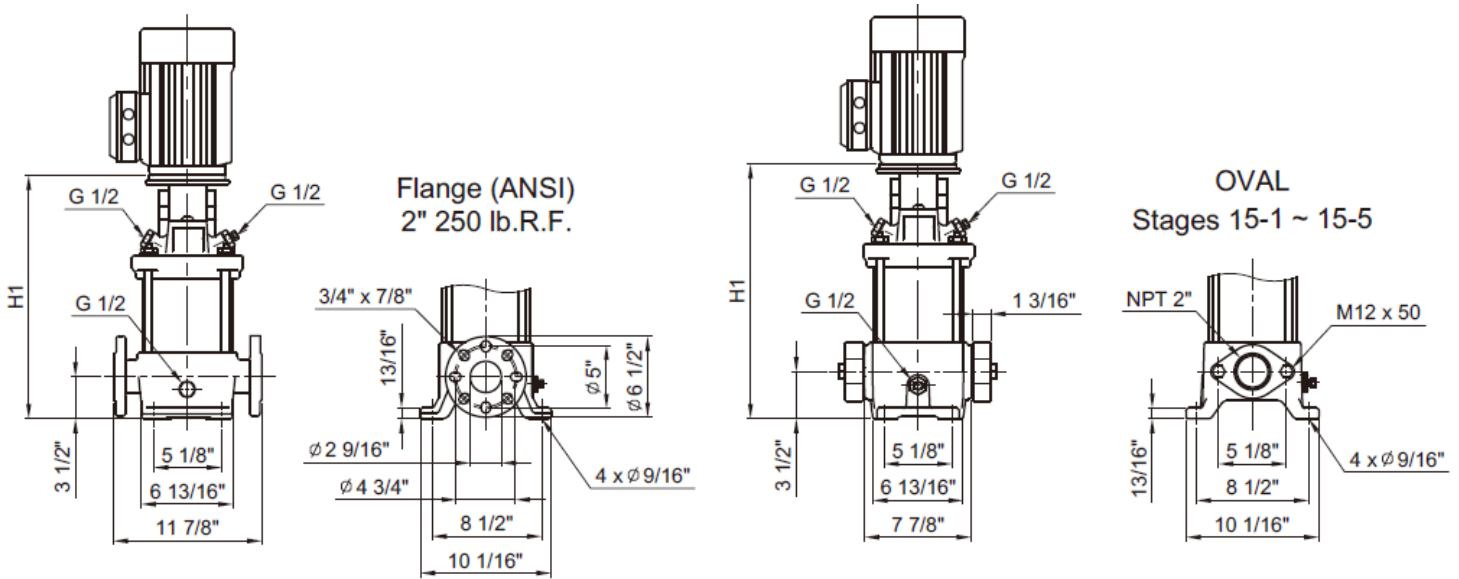


Pump Model	Recommended Motor			NEMA Frame TEFC	IVS			
	P ₂				Dimension (in)		Weight	
	(HP)	(kW)	(ph)		ANSI Flange H1	OVAL H1	ANSI Flange	OVAL
IVS10-1	0.75	0.56	1/3	56C	15.08	15.08	75.8	63.9
IVS10-2	1.5	1.12	1/3	56C	15.08	15.08	76.2	64.3
IVS10-3	3	2.24	1/3	182TC	17.20	17.20	92.1	80.2
IVS10-4	3	2.24	1/3	182TC	18.39	18.39	94.4	82.5
IVS10-5	5	3.74	1	184TC	20.16	20.16	101.5	89.6
			3	213TC	19.57	19.57	96.6	84.7
IVS10-6	5	3.74	1	184TC	21.34	21.34	103.7	91.7
			3	213TC	20.75	20.75	98.8	86.8
IVS10-7	5	3.74	1	184TC	20.50	-	105.9	-
			3	213TC	21.91	-	101.0	-
IVS10-8	7.5	5.60	1/3	213TC	23.68	-	110.4	-
IVS10-9	7.5	5.6	1/3	213TC	24.86	-	112.6	-
IVS10-10	7.5	5.6	1/3	213TC	26.04	-	114.8	-
IVS10-12	10	7.5	1/3	215TC	28.40	-	119.2	-
IVS10-14	10	7.5	1/3	215TC	30.80	-	123.7	-
IVS10-16	15	11.2	3	254TC	35.75	-	137.3	-
IVS10-17	15	11.2	3	254TC	36.93	-	139.5	-

Performance Range

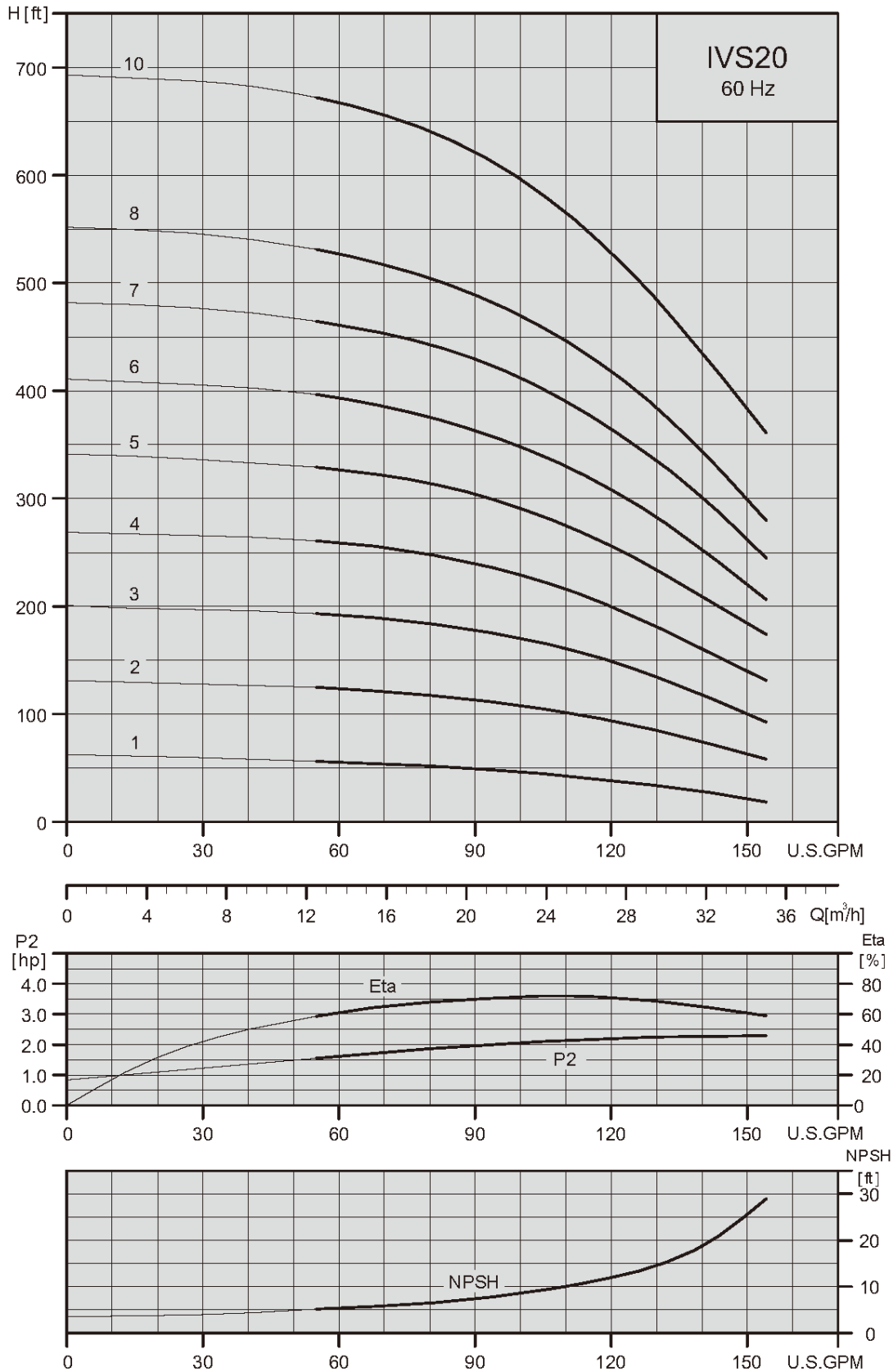


Specifications / Dimensions

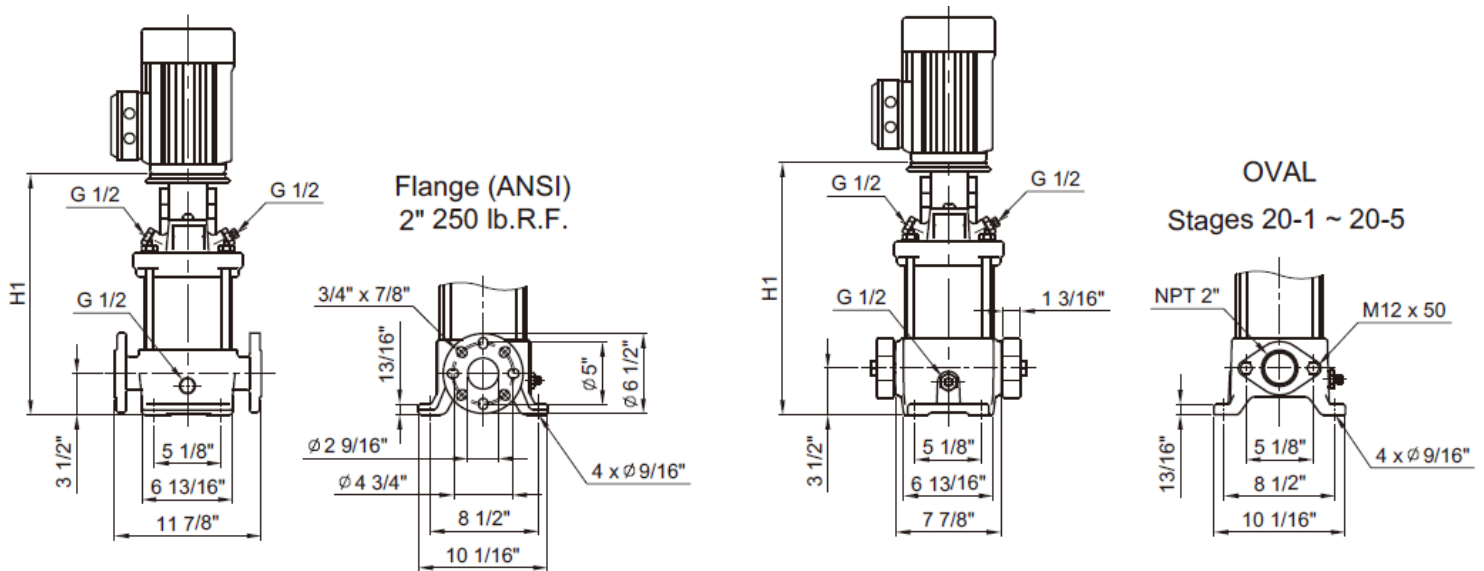


Pump Model	Recommended Motor			NEMA Frame TEFC	IVS			
	P ₂				Dimension (in)		Weight	
	(HP)	(kW)	(ph)		ANSI Flange H1	OVAL H1	ANSI Flange	OVAL
IVS15-1	2	1.49	1/3	56C	16.24	16.24	77.4	65.5
IVS15-2	5	3.74	1	184TC	19.55	19.55	96.6	84.7
			3	213TC	21.37	21.37	91.7	79.8
IVS15-3	5	3.74	1	184TC	21.89	21.89	99.7	87.6
			3	213TC	18.96	18.96	94.9	82.7
IVS15-4	7.5	5.60	1/3	213TC	21.30	21.30	105.0	93.1
IVS15-5	10	7.47	1/3	215TC	23.07	23.07	108.1	96.2
IVS15-6	10	7.47	1/3	215TC	24.87	-	111.2	-
IVS15-7	15	11.21	3	254TC	29.24	-	123.5	-
IVS15-8	15	11.21	3	254TC	31.01	-	126.6	-
IVS15-9	15	11.21	3	254TC	32.78	-	129.7	-
IVS15-10	20	14.94	3	256TC	34.55	-	132.8	-
IVS15-12	25	18.68	3	284TSC	37.40	-	140.4	-

Performance Range

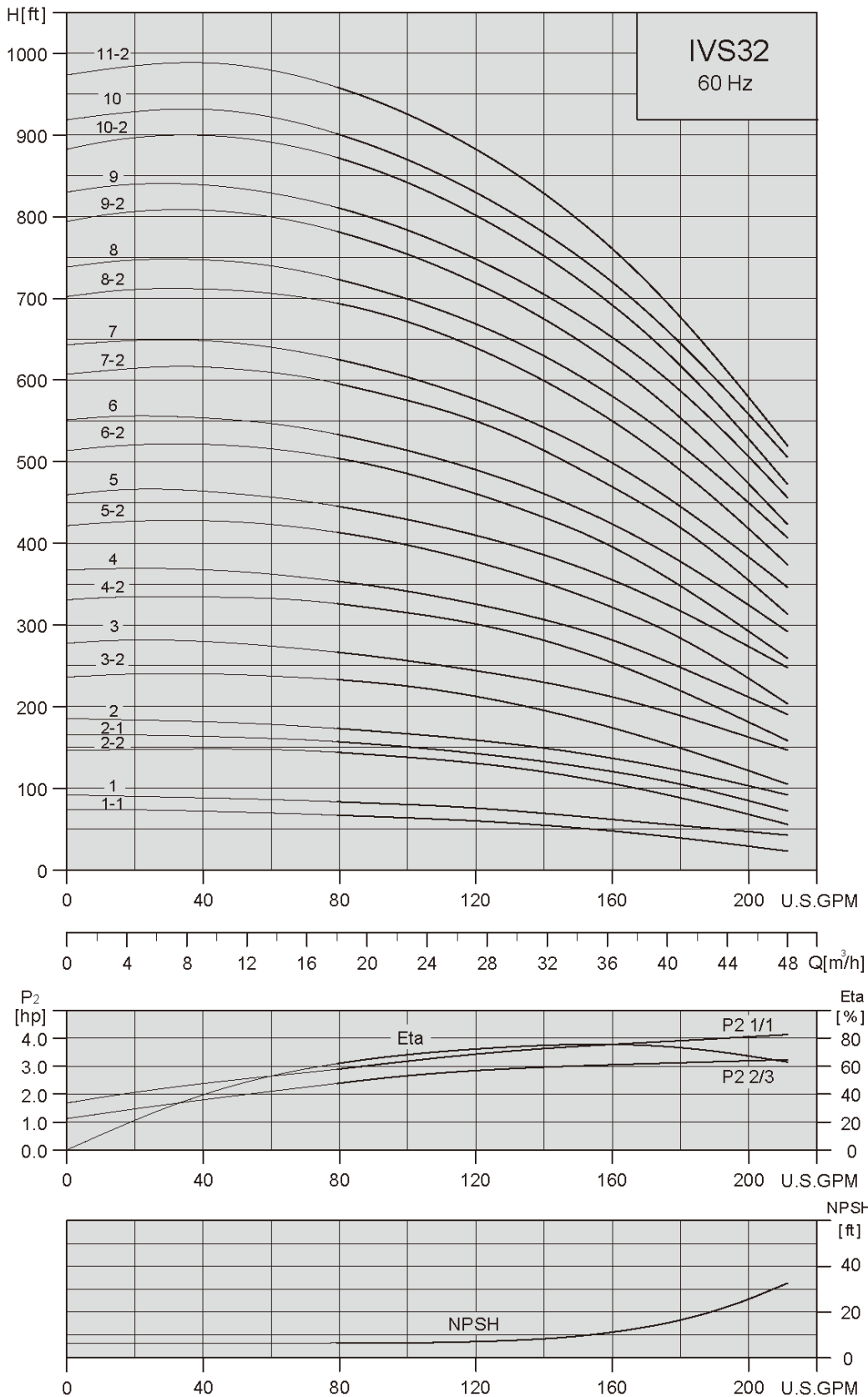


Specifications / Dimensions

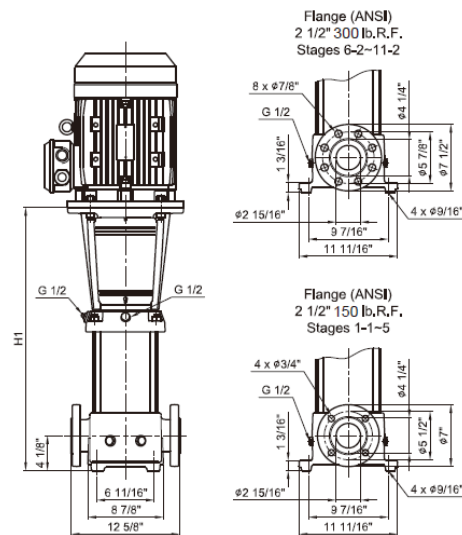


Pump Model	Recommended Motor			NEMA Frame TEFC	IVS			
	P ₂				Dimension (in)		Weight	
	(HP)	(kW)	(ph)		ANSI Flange H1	OVAL H1	ANSI Flange	OVAL
IVS20-1	3	2.24	1/3	182TC	17.19	17.19	91.1	79.3
IVS20-2	5	3.74	1	184TC	17.78	17.78	96.6	84.7
			3	213TC	17.19	17.19	91.7	79.8
IVS20-3	7.5	5.60	1/3	213TC	19.52	19.52	101.9	90.0
IVS20-4	10	7.47	1/3	215TC	21.30	21.30	105.0	93.1
IVS20-5	15	11.21	3	254TC	25.69	25.69	117.3	105.4
IVS20-6	15	11.21	3	254TC	27.46	-	120.4	-
IVS20-7	20	14.94	3	256TC	29.24	-	123.5	-
IVS20-8	20	14.94	3	256TC	31.01	-	126.6	-
IVS20-10	25	18.68	3	284TSC	33.86	-	134.0	-

Performance Range

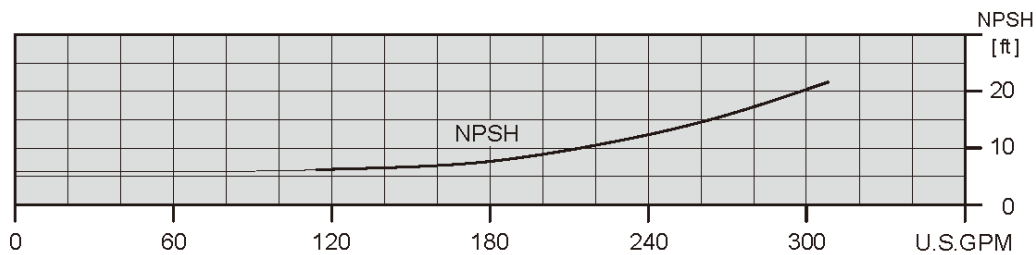
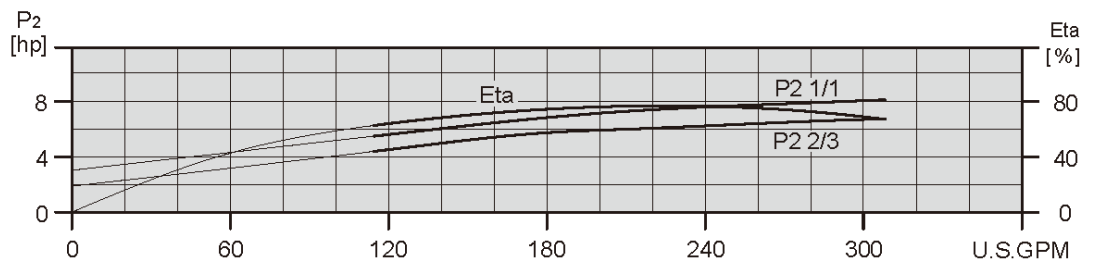
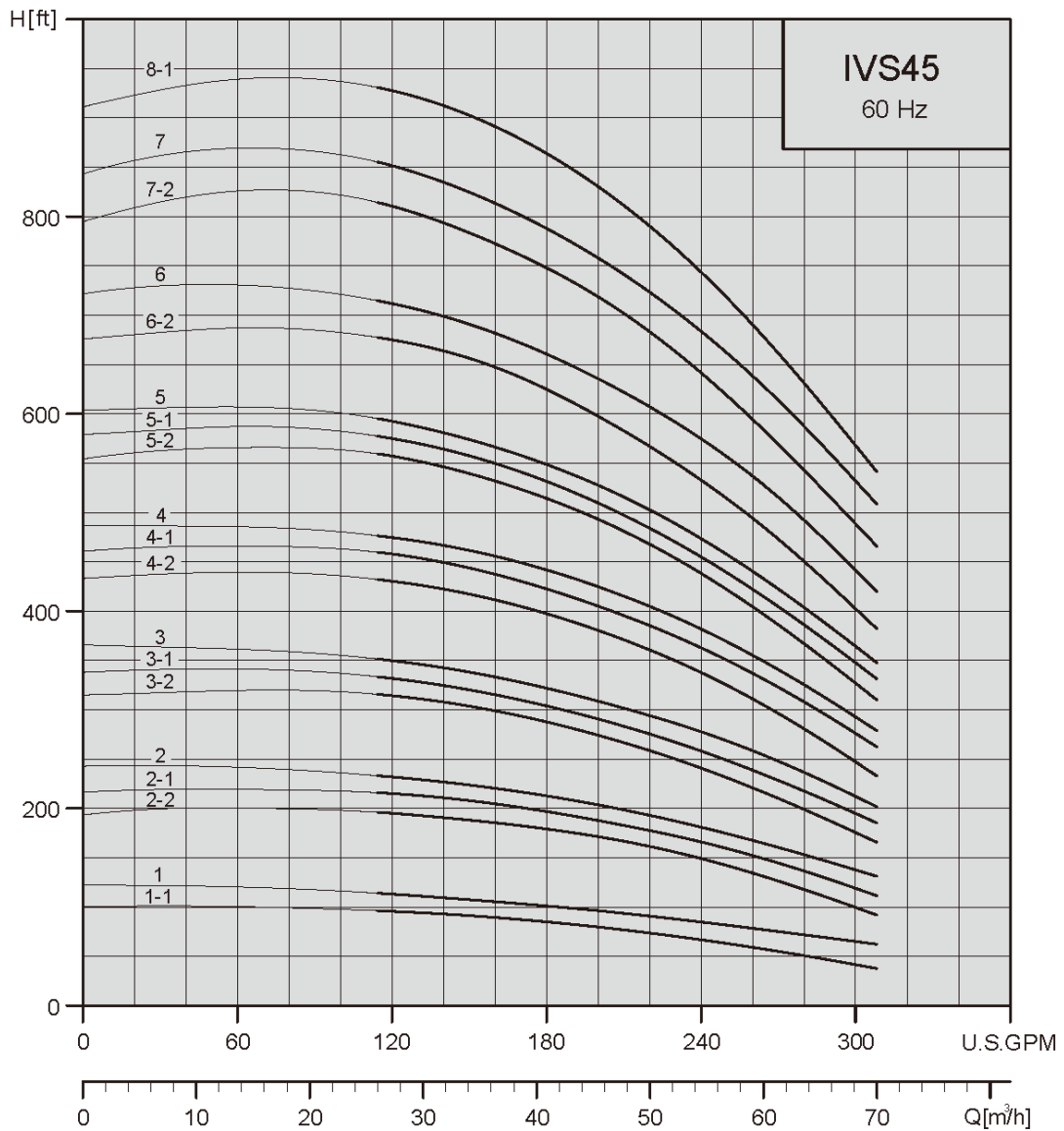


Specifications / Dimensions

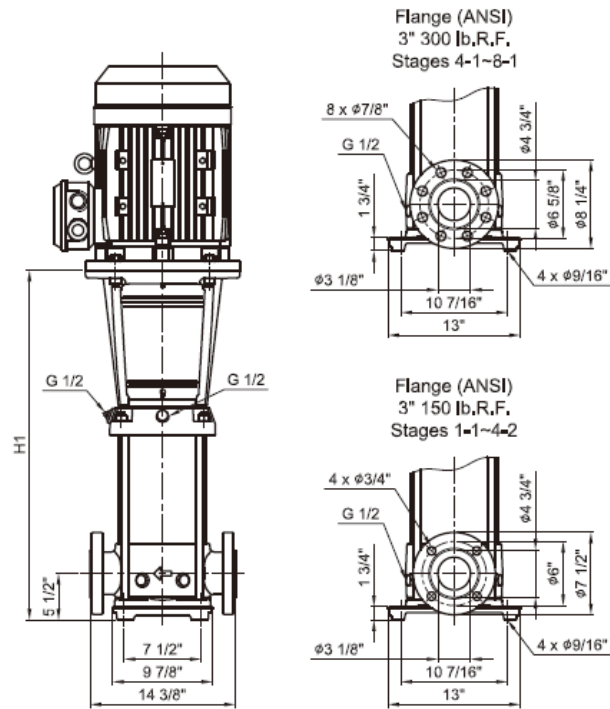


Pump Model	Recommended Motor			NEMA Frame TEFC	IVS	
	P ₂				Dimension (in)	Weight
	(HP)	(kW)	(ph)		ANSI Flange	ANSI Flange
IVS32-1-1	5	3.74	1	213TC	20.02	120.7
			3	184TC	20.02	120.7
IVS32-1	5	3.74	1	213TC	20.02	120.7
			3	184TC	20.02	120.7
IVS32-2-2	7.5	5.60	1/3	213TC	22.78	127.4
IVS32-2-1	7.5	5.60	1/3	213TC	22.78	127.4
IVS32-2	10	7.47	1/3	215TC	22.78	133.8
IVS32-3-2	10	7.47	1/3	215TC	25.53	155.2
IVS32-3	15	11.21	1/3	254TC	29.67	161.8
IVS32-4-2	15	11.21	1/3	254TC	32.42	161.8
IVS32-4	20	14.94	1/3	256TC	32.42	168.4
IVS32-5-2	20	14.94	1/3	256TC	35.18	168.4
IVS32-5	20	14.94	1/3	256TC	35.18	177.2
IVS32-6-2	25	18.68	1/3	284TSC	37.93	177.2
IVS32-6	25	18.68	1/3	284TSC	37.93	183.9
IVS32-7-2	30	22.41	1/3	286TSC	40.69	183.9
IVS32-7	30	22.41	1/3	286TSC	40.69	183.9
IVS32-8-2	30	22.41	1/3	286TSC	43.44	190.8
IVS32-8	40	29.88	1/3	324TSC	43.44	190.8
IVS32-9-2	40	29.88	1/3	324TSC	46.20	196.8
IVS32-9	40	29.88	1/3	324TSC	46.20	196.8
IVS32-10-2	40	29.88	1/3	324TSC	48.96	202.5
IVS32-11-2	50	37.35	1/4	326TSC	51.71	208.4

Performance Range

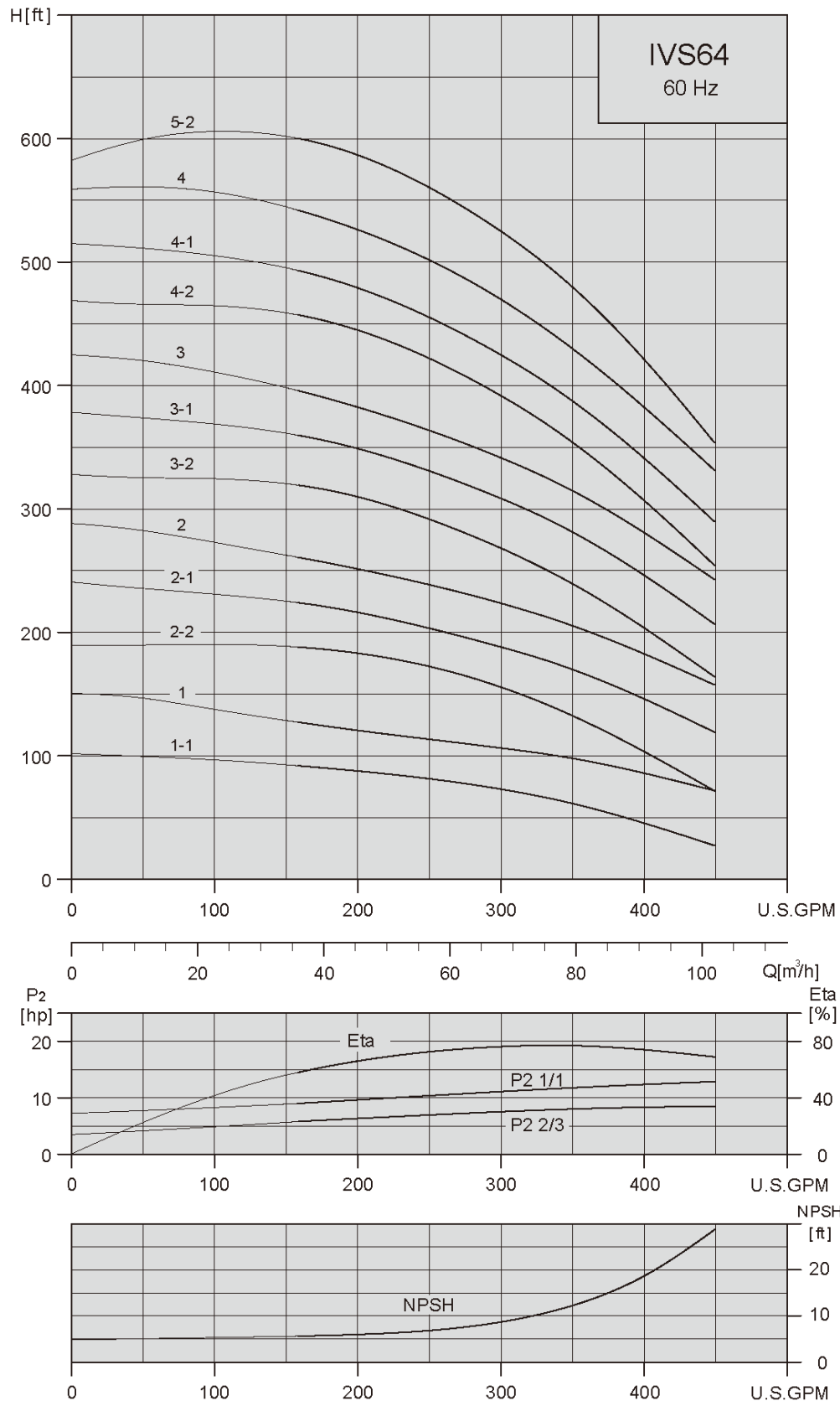


Specifications / Dimensions

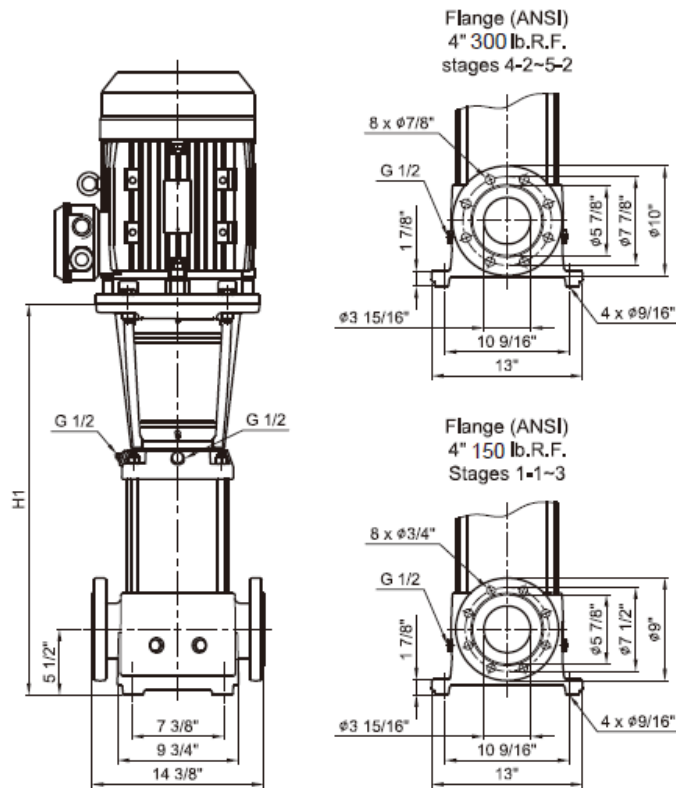


Pump Model	Recommended Motor			IVS		
	P ₂			NEMA Frame TEFC	Dimension (in)	Weight
	(HP)	(kW)	(ph)		ANSI Flange	ANSI Flange
IVS45-1-1	7.5	5.60	1/3	213TC	H1	143.4
IVS45-1	10	7.47	1/3	215TC	22.26	143.4
IVS45-2-2	15	11.21	3	254TC	29.55	172.6
IVS45-2-1	15	11.21	3	254TC	29.55	172.6
IVS45-2	20	14.94	3	256TC	29.55	172.6
IVS45-3-2	20	14.94	3	256TC	32.70	180.7
IVS45-3-1	25	18.68	3	284TSC	32.70	182.9
IVS45-3	25	18.68	3	284TSC	32.70	182.9
IVS45-4-2	30	22.41	3	286TSC	35.85	190.9
IVS45-4-1	30	22.41	3	286TSC	35.85	191.0
IVS45-4	40	29.88	3	324TSC	36.85	191.0
IVS45-5-2	40	29.88	3	324TSC	39.00	199.0
IVS45-5-1	40	29.88	3	324TSC	39.00	199.0
IVS45-5	40	29.88	3	324TSC	39.00	199.1
IVS45-6-2	50	37.35	3	326TSC	42.15	224.5
IVS45-6	50	37.35	3	326TSC	42.15	224.6
IVS45-7-2	60	44.82	3	364TSC	45.30	232.6
IVS45-7	60	44.82	3	364TSC	45.30	232.7
IVS45-8-1	60	44.82	3	364TSC	48.44	239.8

Performance Range

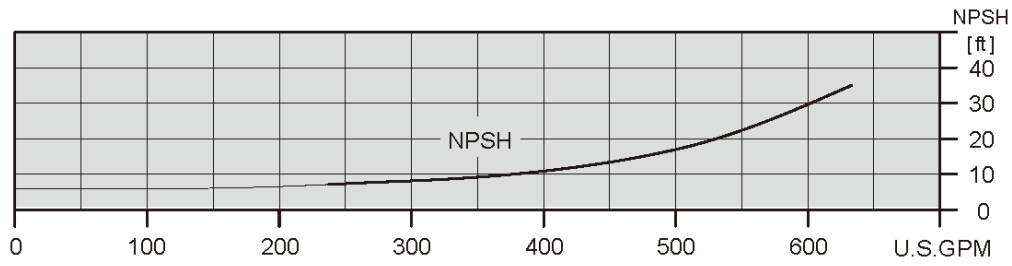
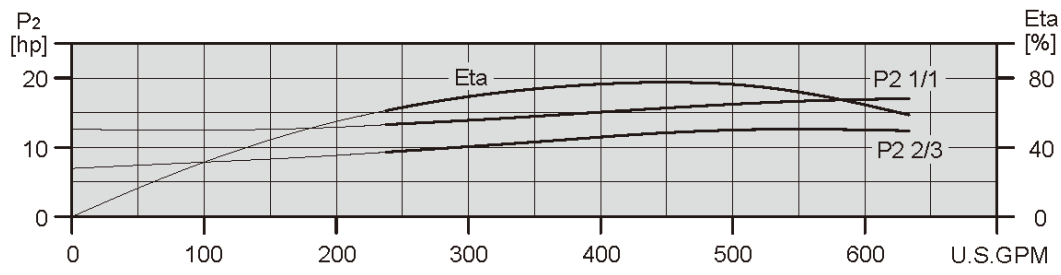
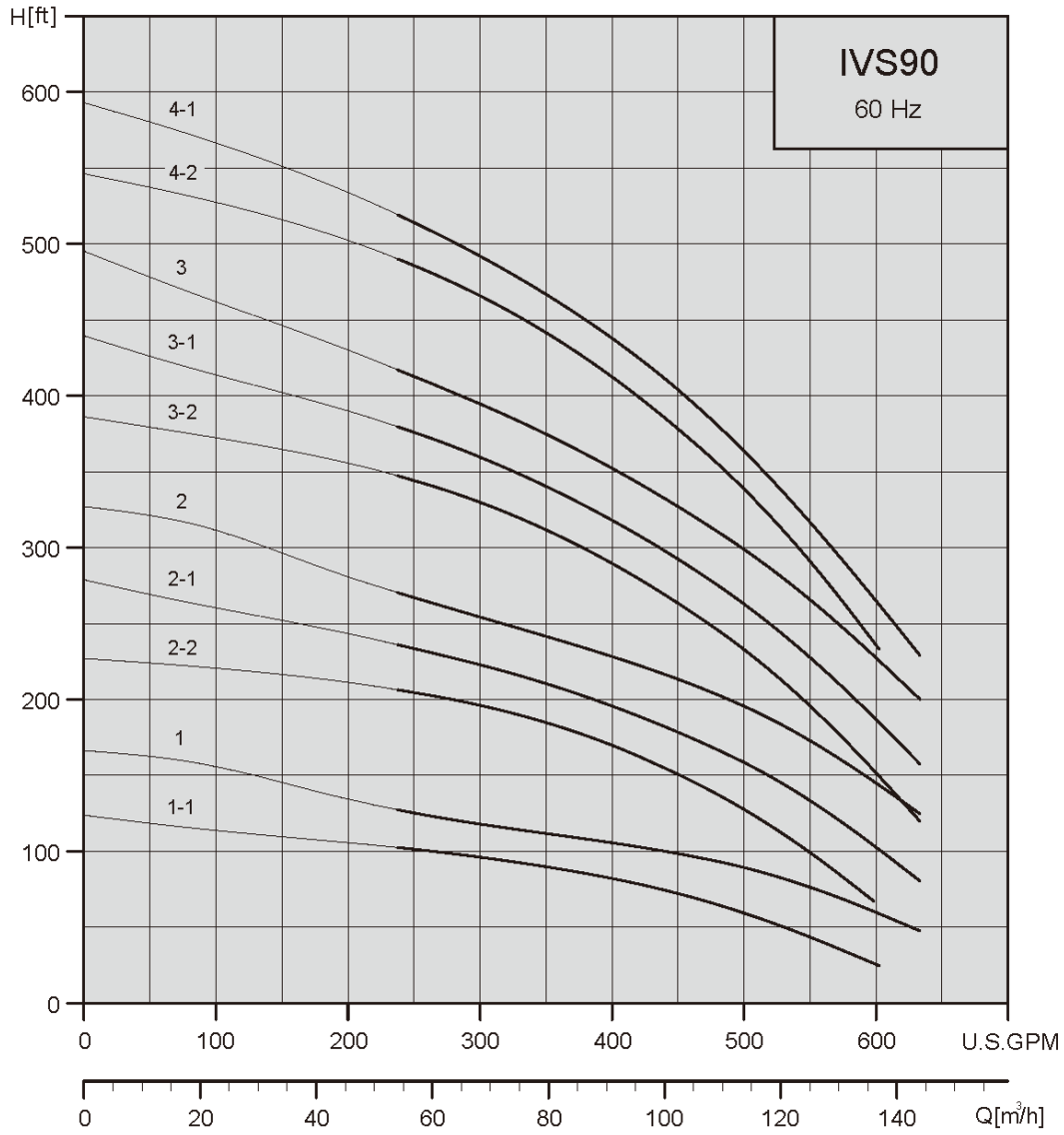


Specifications / Dimensions

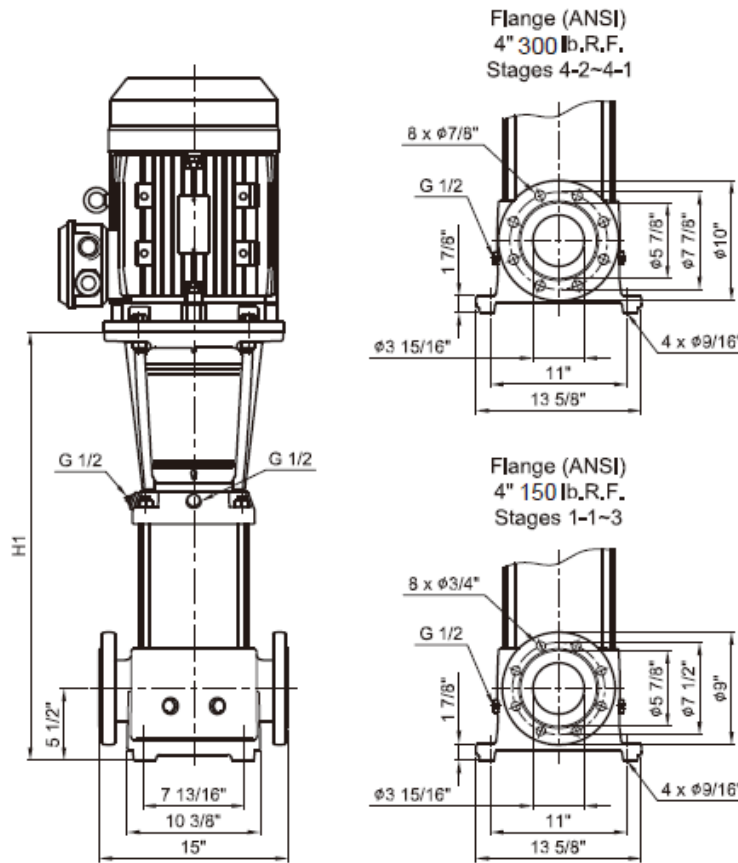


Pump Model	Recommended Motor			NEMA Frame TEFC	IVS	
	P ₂				Dimension (in)	Weight
	(HP)	(kW)	(ph)		ANSI Flange	ANSI Flange
IVS64-1-1	10	7.47	1/3	215TC	H1 22.36	130.1
IVS64-1	15	11.21	1/3	254TC	26.50	151.3
IVS64-2-2	20	14.94	3	256TC	29.74	159.9
IVS64-2-1	25	18.68	3	284TSC	29.74	159.9
IVS64-2	25	18.68	3	284TSC	29.74	162.1
IVS64-3-2	30	22.41	3	286TSC	32.99	171.9
IVS64-3-1	40	29.88	3	324TSC	32.99	171.9
IVS64-3	40	29.88	3	324TSC	32.99	191.9
IVS64-4-2	50	37.35	3	326TSC	36.24	180.5
IVS64-4-1	50	37.35	3	326TSC	36.24	198.0
IVS64-4	50	37.35	3	326TSC	36.24	198.2
IVS64-5-2	60	44.82	3	364TSC	39.49	206.6

Performance Range

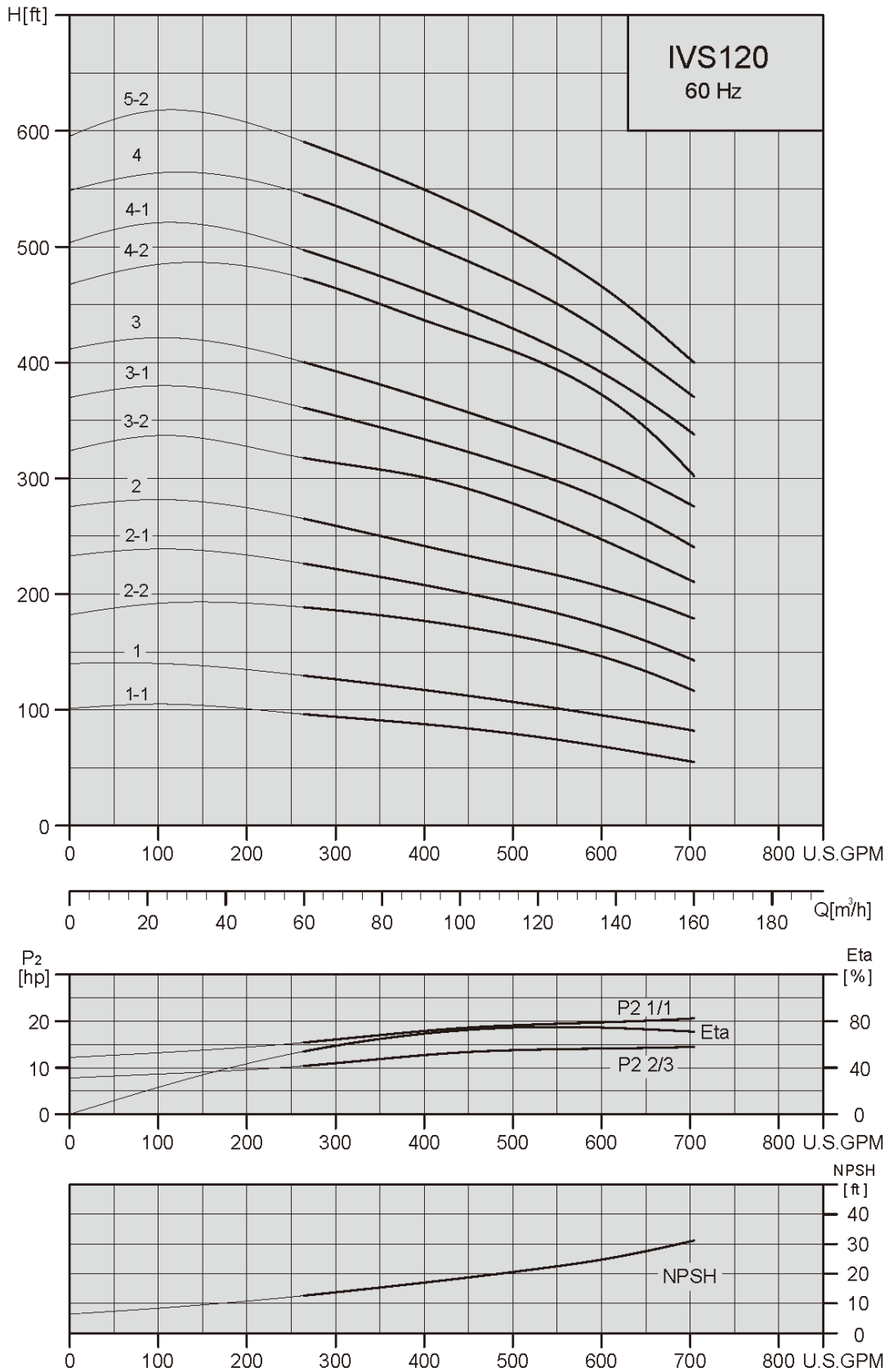


Specifications / Dimensions

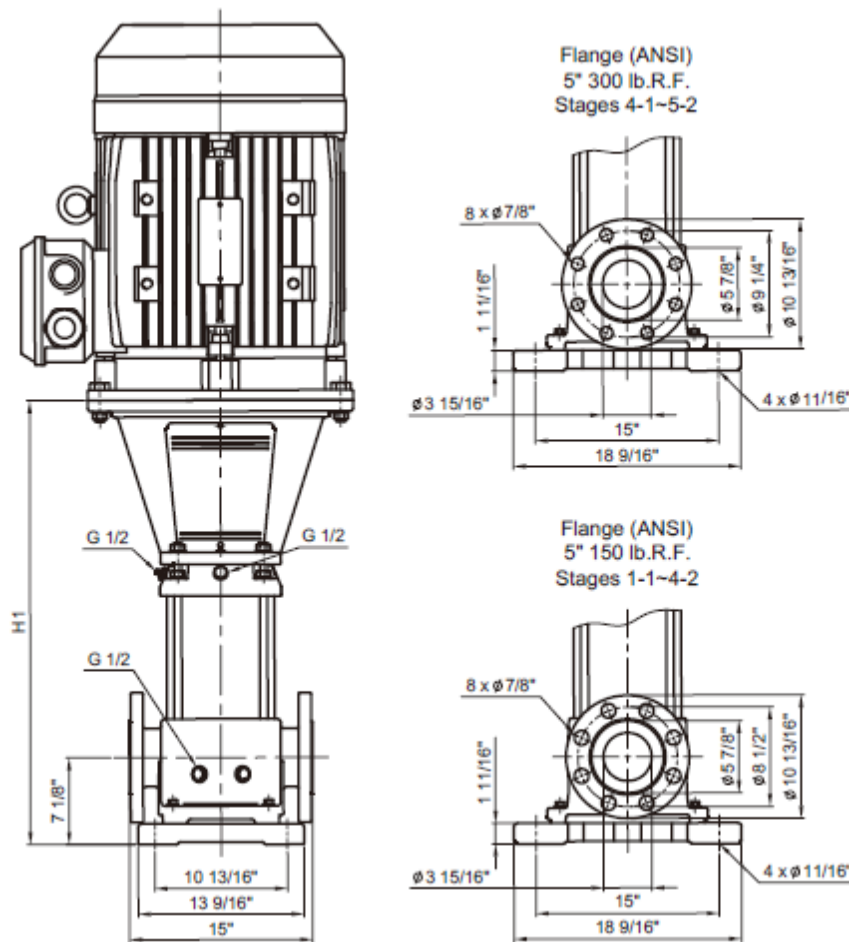


Pump Model	Recommended Motor			NEMA Frame TEFC	IVS	
	P ₂				Dimension (in)	Weight
	(HP)	(kW)	(ph)		ANSI Flange	ANSI Flange
IVS90-1-1	15	11.21	3	254TC	H1 26.60	180.8
IVS90-1	20	14.94	3	256TC	26.60	180.9
IVS90-2-2	25	18.68	3	284TSC	30.19	194.4
IVS90-2-1	30	22.41	3	286TSC	30.19	194.4
IVS90-2	40	29.88	3	324TSC	30.19	194.5
IVS90-3-2	50	37.35	3	326TSC	33.77	205.7
IVS90-3-1	50	37.35	3	326TSC	33.77	233.2
IVS90-3	50	37.35	3	326TSC	33.77	233.2
IVS90-4-2	60	44.82	3	364TSC	37.21	238.5
IVS90-4-1	75	56.03	3	365TSC	37.21	238.9

Performance Range

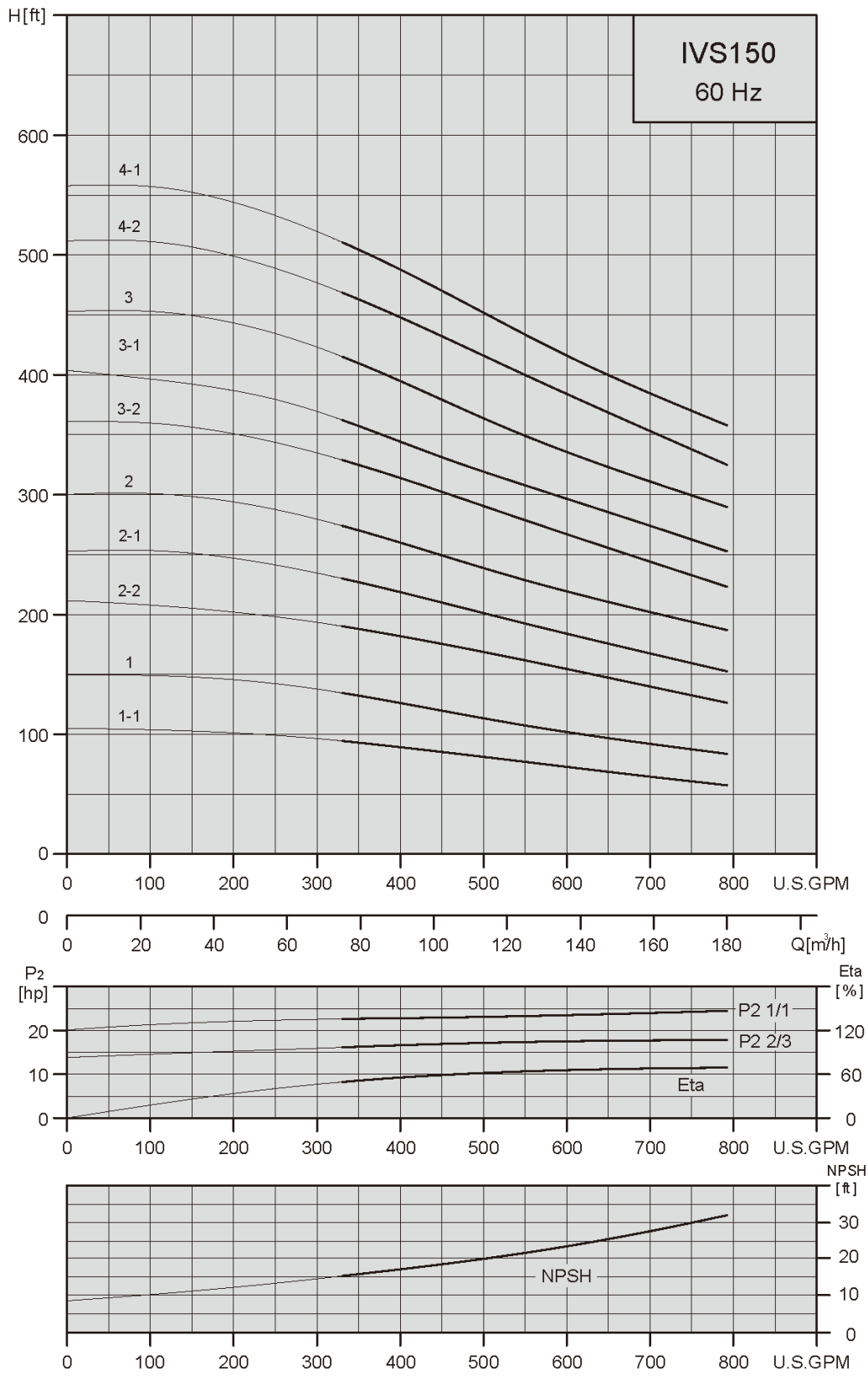


Specifications / Dimensions

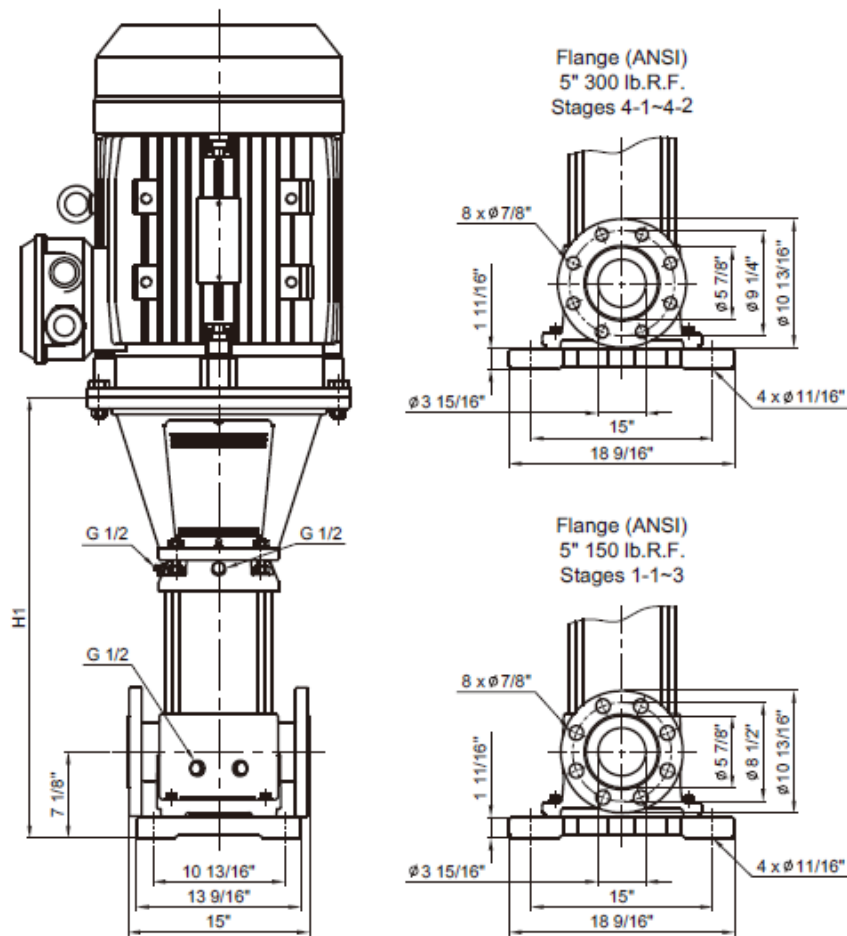


Pump Model	Recommended Motor			NEMA Frame TEFC	IVS	
	P ₂				Dimension (in)	Weight
	(HP)	(kW)	(ph)		ANSI Flange	ANSI Flange
IVS120-1-1	20	14.94	3	254TC	32.83	246.9
IVS120-1	25	18.68	3	284TSC	32.83	249.3
IVS120-2-2	40	29.88	3	324TSC	38.96	270.6
IVS120-2-1	40	29.88	3	324TSC	38.96	270.8
IVS120-2	50	37.35	3	326TSC	38.96	288.4
IVS120-3-2	50	37.35	3	326TSC	45.08	309.4
IVS120-3-1	60	44.82	3	364TSC	45.08	309.6
IVS120-3	75	56.03	3	365TSC	45.55	364.3
IVS120-4-2	75	56.03	3	365TSC	51.67	385.3
IVS120-4-1	100	74.70	3	405TSC	51.67	385.5
IVS120-4	100	74.70	3	405TSC	51.67	385.7
IVS120-5-2	100	74.70	3	405TSC	57.80	407.0

Performance Range



Specifications / Dimensions



Pump Model	Recommended Motor			NEMA Frame TEFC	IVS	
	P ₂				Dimension (in)	Weight
	(HP)	(kW)	(ph)		ANSI Flange H1	ANSI Flange
IVS150-1-1	25	18.68	3	284TSC	32.83	249.1
IVS150-1	30	22.41	3	286TSC	32.83	249.2
IVS150-2-2	40	29.88	3	324TSC	38.96	270.6
IVS150-2-1	50	37.35	3	326TSC	38.96	288.0
IVS150-2	60	44.82	3	364TSC	38.96	288.2
IVS150-3-2	75	56.03	3	365TSC	45.55	364.1
IVS150-3-1	75	56.03	3	365TSC	45.55	364.1
IVS150-3	100	74.70	3	405TSC	45.55	364.2
IVS150-4-2	100	74.70	3	405TSC	51.67	385.7
IVS150-4-1	100	74.70	3	405TSC	51.67	385.8