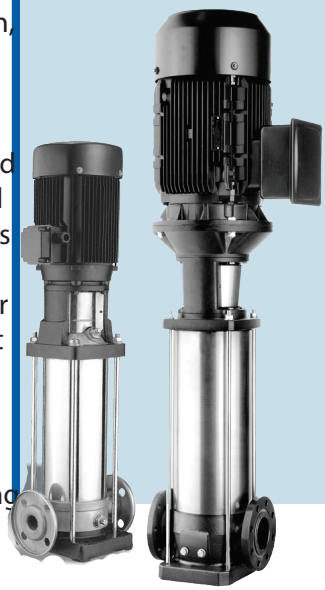
novax
PUMPS & MOTORS

STAINLESS STEEL CENTRIFUGAL PUMPS
STAINLESS STEEL VERTICAL MULTISTAGE PUMPS

ALSO AVAILABLE

VMX

Close-coupled complete pump with special motor, Ip55 protection, F class insulation.



APPLICATIONS

Spray irrigation systems, hydro pneumatic sets & industrial installations.

GENERAL INTRODUCTION

VMX vertical multipolar and stainless steel Centrifugal pump, manufactured by adopting advanced denimark technology. The best advantage is the advantages of advanced water-power model design, high effience and saves power. There is vane wheel inside, the pump shell and main fittings takes with stainless steel punch, flow-road is very smooth, axle is hard metal tool, so that will be super-powerful long lasting using time, to prevent producing second pollution, and its axle cover seals with wear-resisting machine, unravel. Electrical machine adopts MS lead case, import bearing, insulating grades F. Pump works smoothly, and low-noise. The quality of this product is dependable, good appearance, small bulk, light, and easy for transport and install. It is ideal water pump of green and environment protection and power saving.

MATERIAL

- Pump body, external casing, casing cover, impellers, diffusers, bearing sleeve, coupling guard, bolts and nuts in contact with liquid will be SS304 for VMX models.
- Pump body, external casing, casing cover, impellers, diffusers, bearing sleeve, coupling guard, bolts and nuts in contact with liquid will be SS316 for VMXL models.
- Tie rods, nuts bolts which is not in contact will be in Zinc coated steel.
- Shaft in SS316
- Bracket and base in CI

TYPICAL APPLICATION

- Urban water supply and pressure boosting
- Industrial circulating system and processing system
- Water supply for boiler or condensate system
- Environmental protection water treatment and infilitration analysis system
- Agriculture irrigation and rewatering
- Industrial building cleaning and other washing work
- (Others) many special applications

SCOPE OF APPLICATION

- Common type is applicable for liquid conveying, circulation and boosting of hot and cold clean water, soft water
- Stainless steel type is also used for water with tiny content of alkali, mineral, distilled water, water for swimming pool and solution with chloride, but the allowed Temperature of the liquid shall be reduced.

WORKING CONDITIONS

- Hot and cold clean, non-flammable, non-explosive liquid without solid grain and fiber
- Liquid temperature: ambient temperature -15°C~+70°C, hot-water +70°C~+120°C;
- Highest environmental temperature: +40°C
- Min inlet pressure: according to NPSH curve + min safe delivery 0.5m water head

EXPLANATION TO PERFORMANCE CURVE AND TABLE

- All the performance curves are based on the measured values of motor 3X380, 50Hz under constant speed of 2900r/min.The motor is of changeable voltage;
- Measurement is done on the basis of: 20°C water in free air, dynamic viscosity r=1mm2/sec; tolerance refers to attachment B of ISO2584.
- The operation of pump shall refer to the scope of performance of the black curve to prevent danger due to overheating.

EQ FEATURES

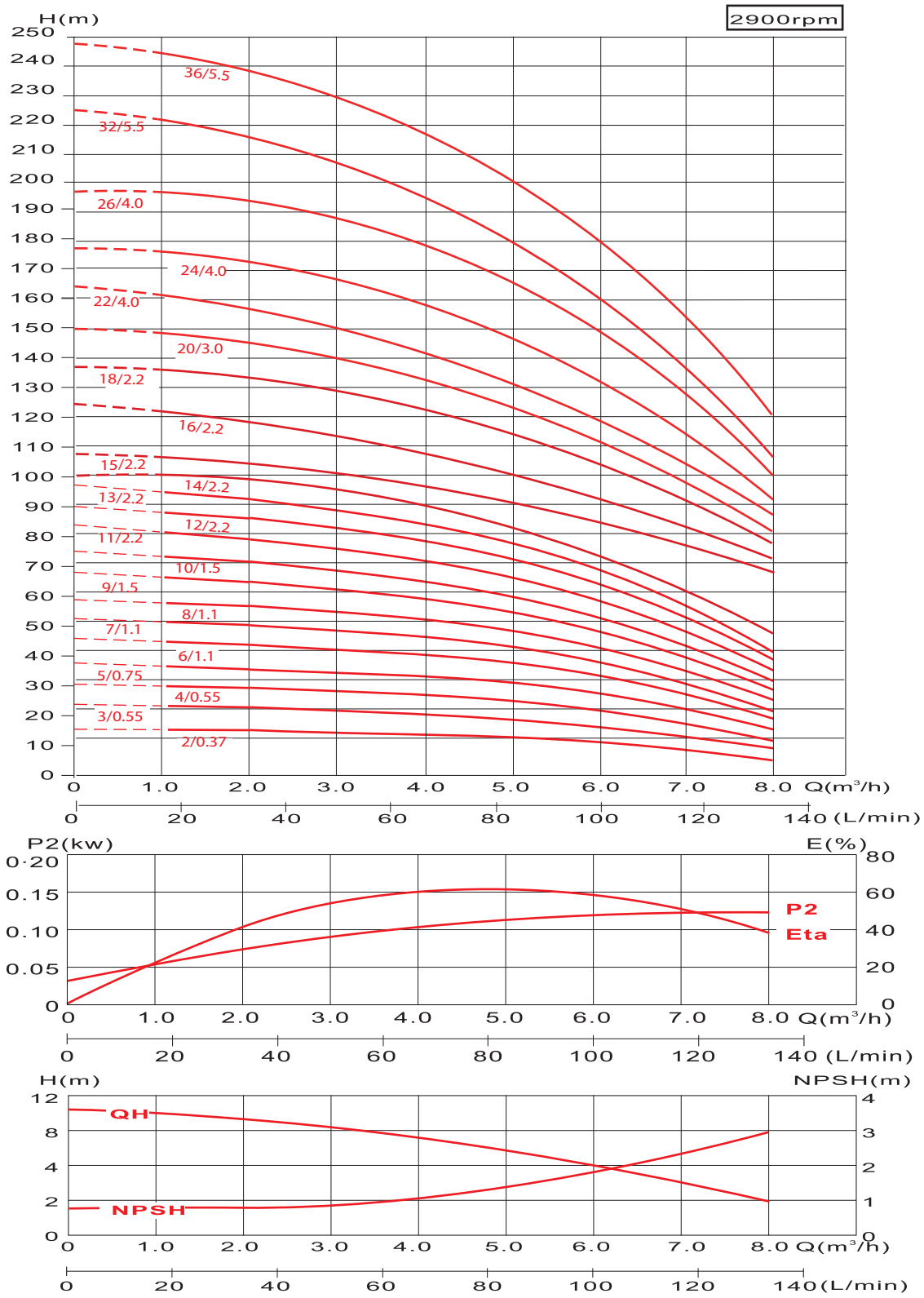
Various control modes (pressure, distant pressure, temperature) Excellent energy-saving Installation at all standard three phase inducement electromotor is possible Easy to remodel original pump Including pump, motor protection function. Easy to install and operate Until 6 vehicles can be connected to each pump (tandem operation).

VMX SERIES :

- VMX 3
- VMX 5
- VMX 15
- VMX 20
- VMX 32
- VMX 45
- VMX 90
- VMX 120
- VMX 150

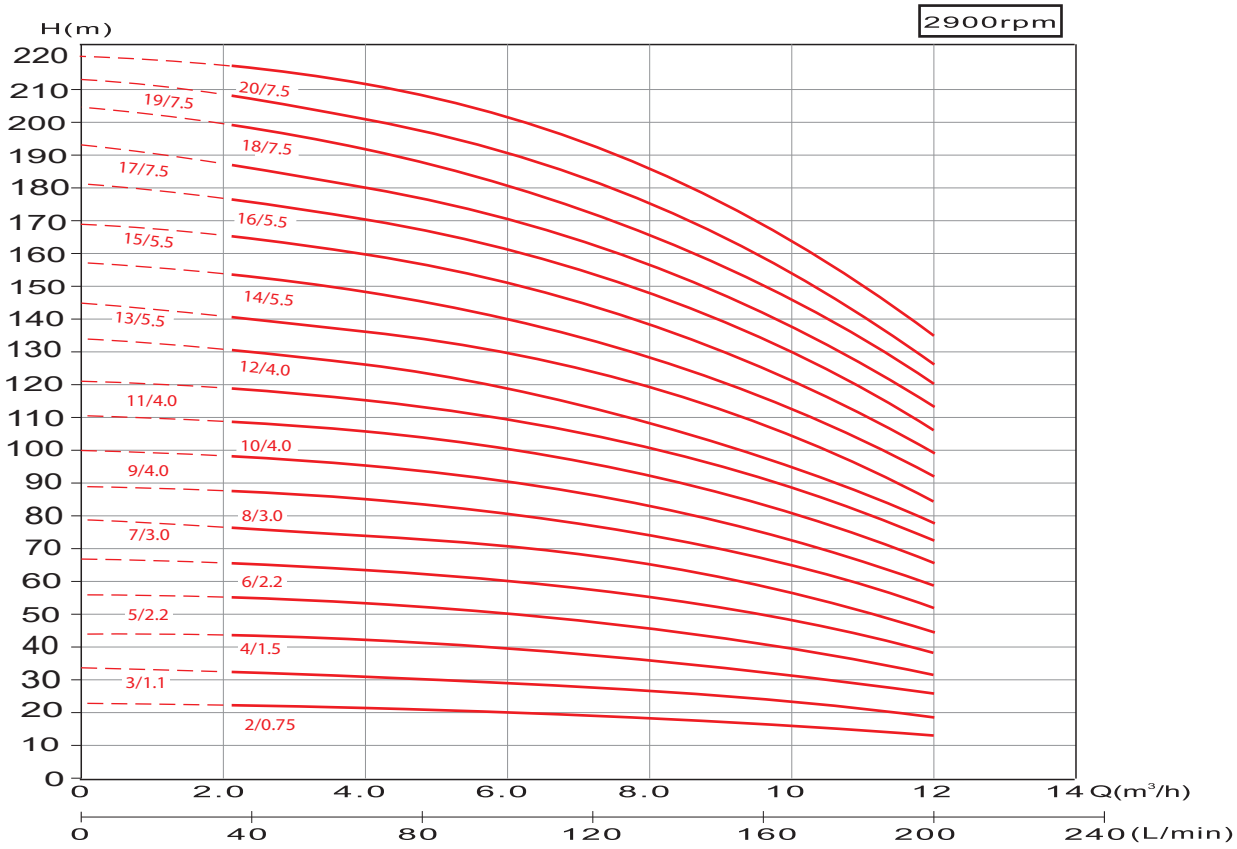
PERFORMANCE CURVE FOR VERTICAL MULTISTAGE 5 SERIES

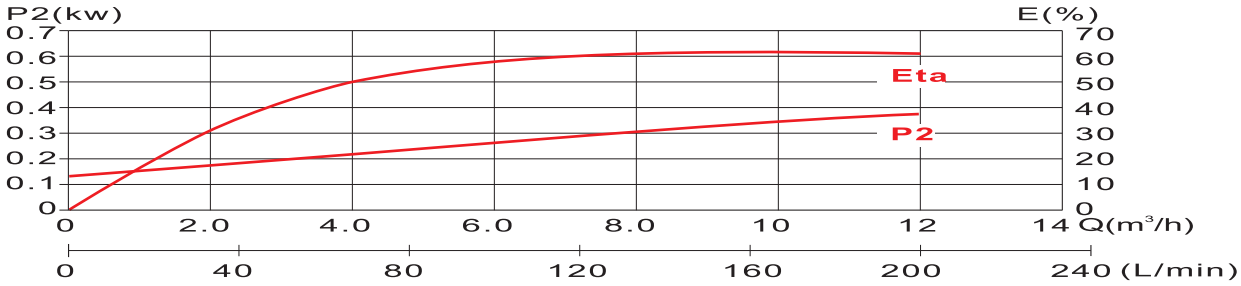
VMX 5

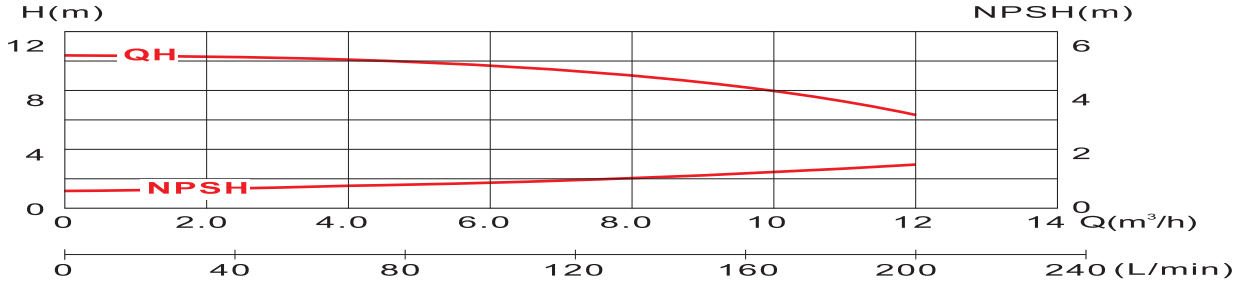


PERFORMANCE CURVE FOR VERTICAL MULTISTAGE 10 SERIES

VMX 10

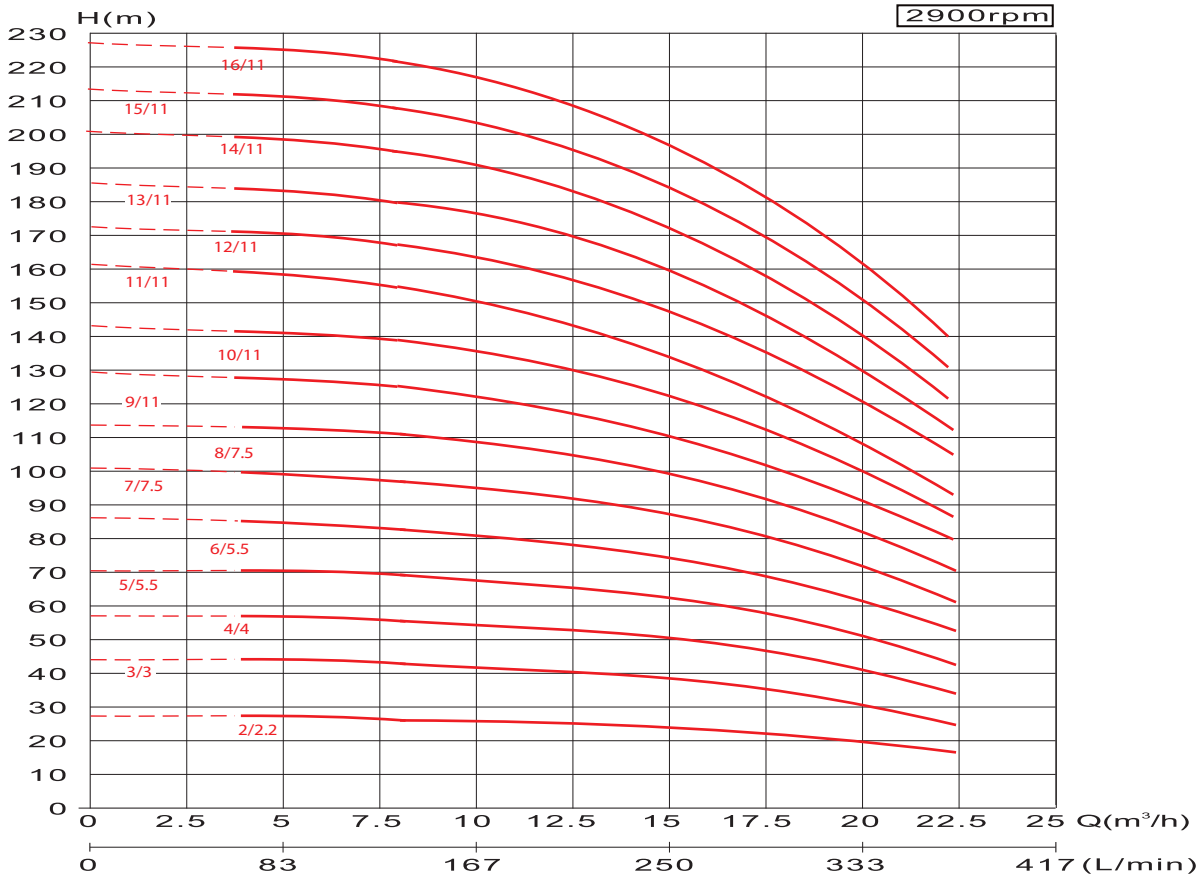


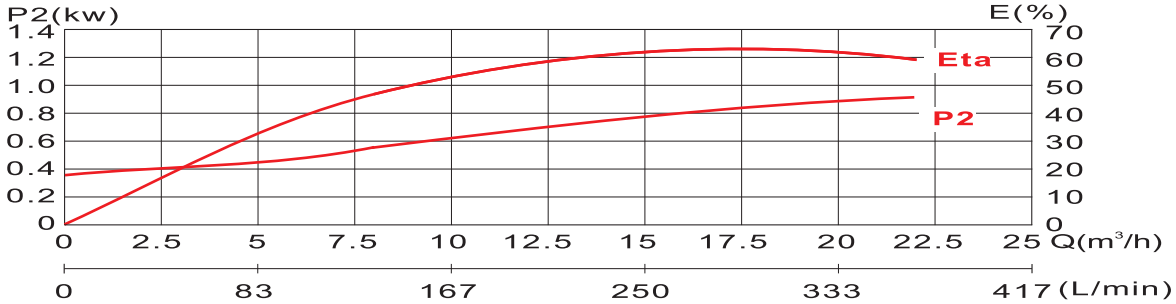


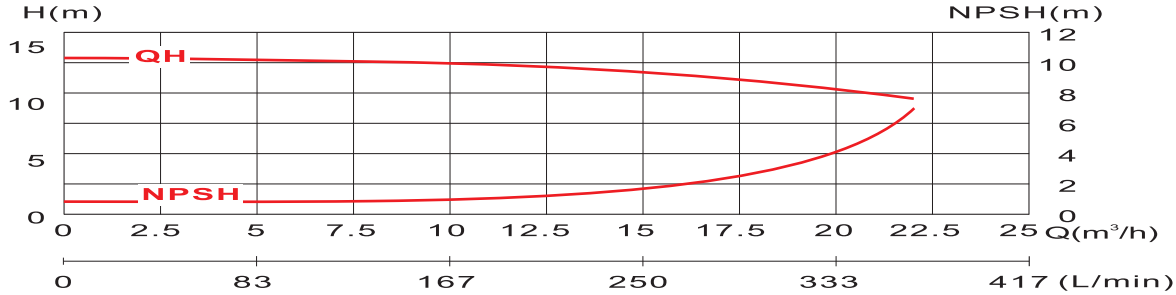


PERFORMANCE CURVE FOR VERTICAL MULTISTAGE 15 SERIES

VMX 15

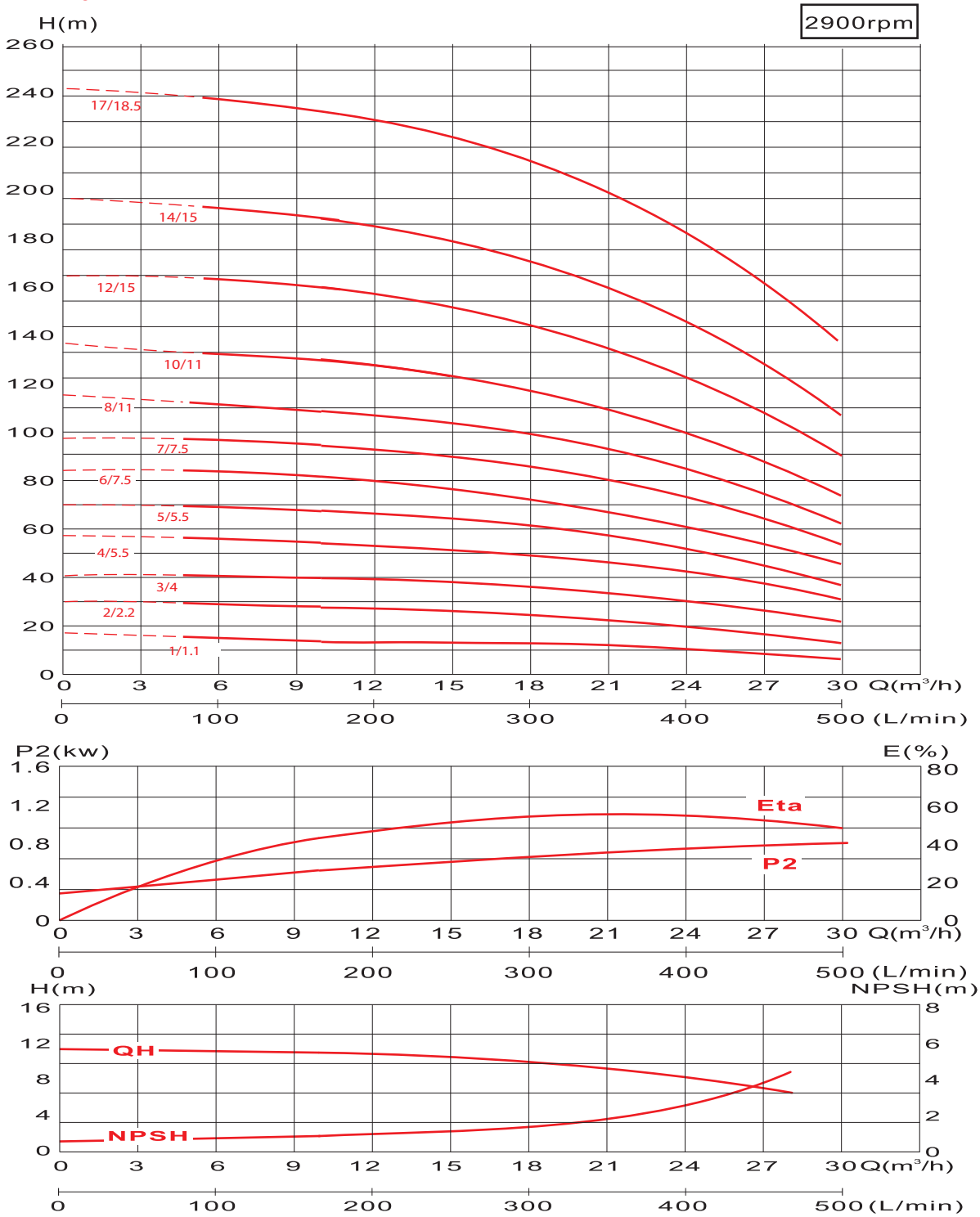






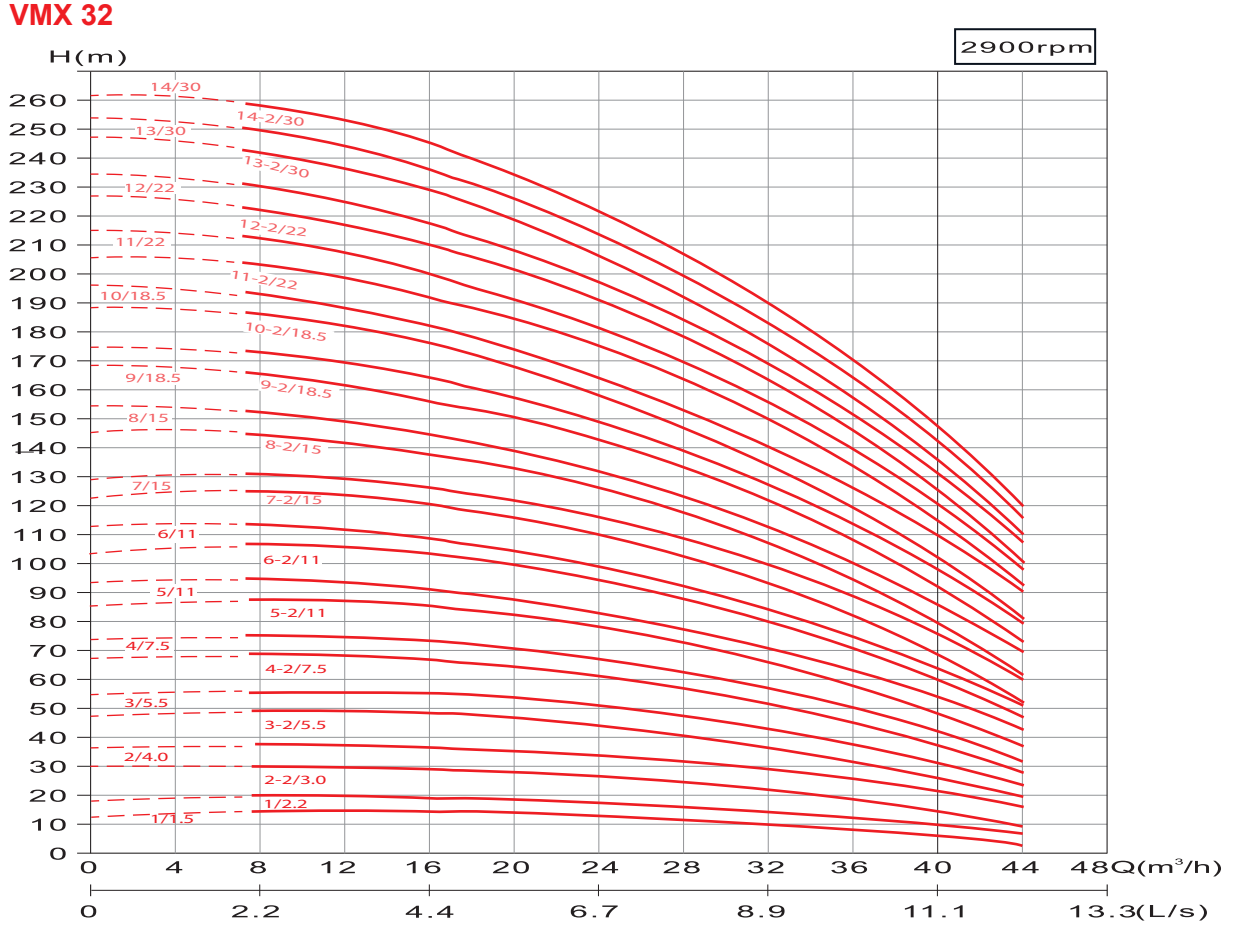
PERFORMANCE CURVE FOR VERTICAL MULTISTAGE 20 SERIES

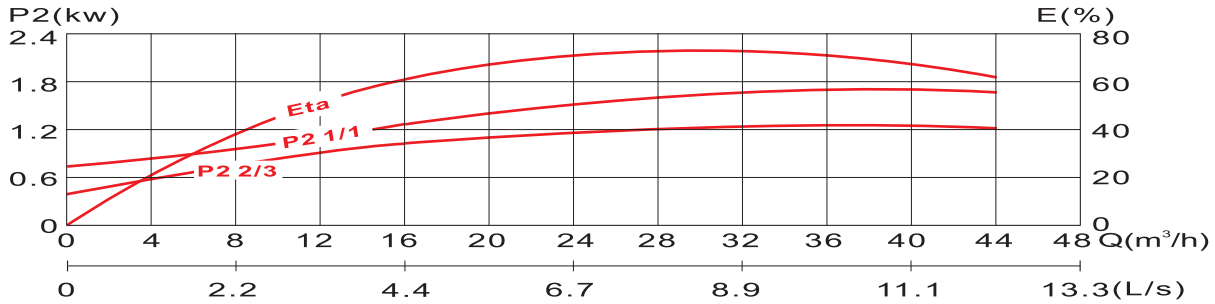
VMX 20

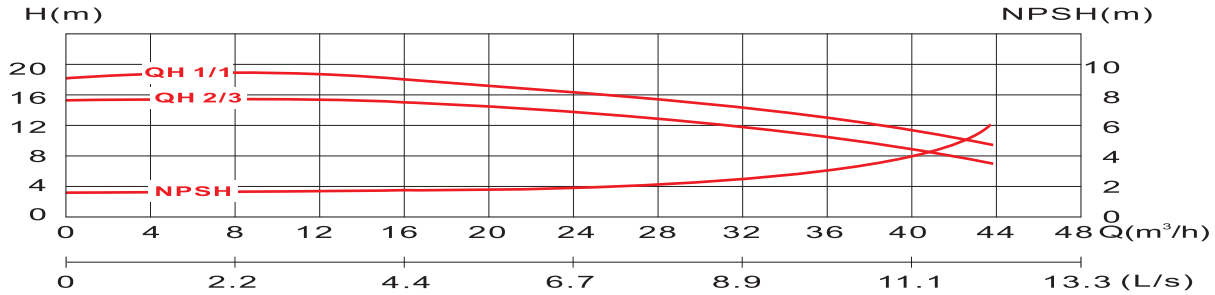


PERFORMANCE CURVE FOR VERTICAL MULTISTAGE 32 SERIES

VMX 32

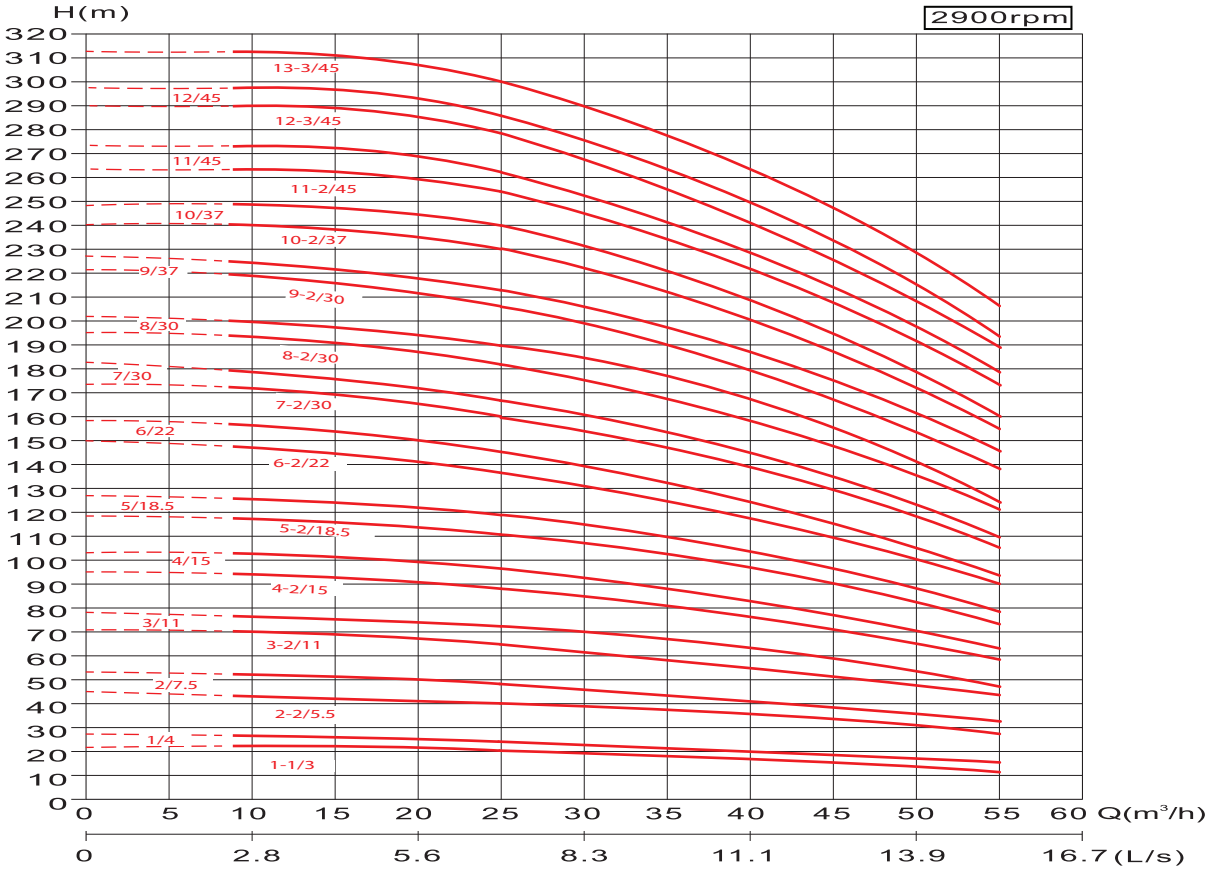


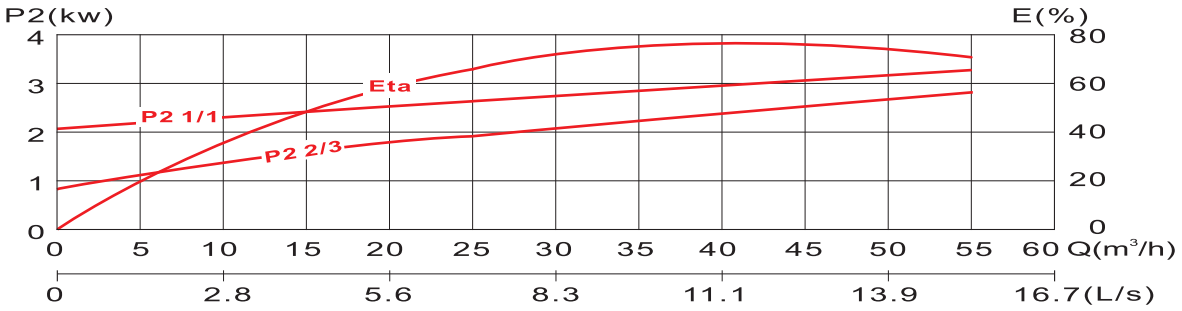


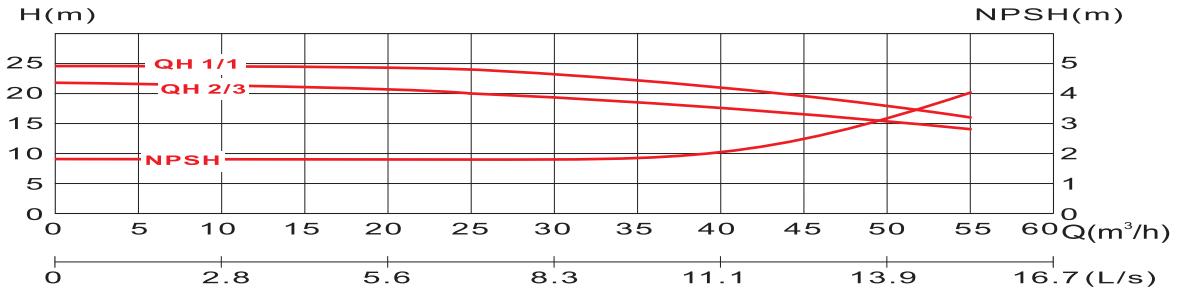


PERFORMANCE CURVE FOR VERTICAL MULTISTAGE 45 SERIES

VMX 45

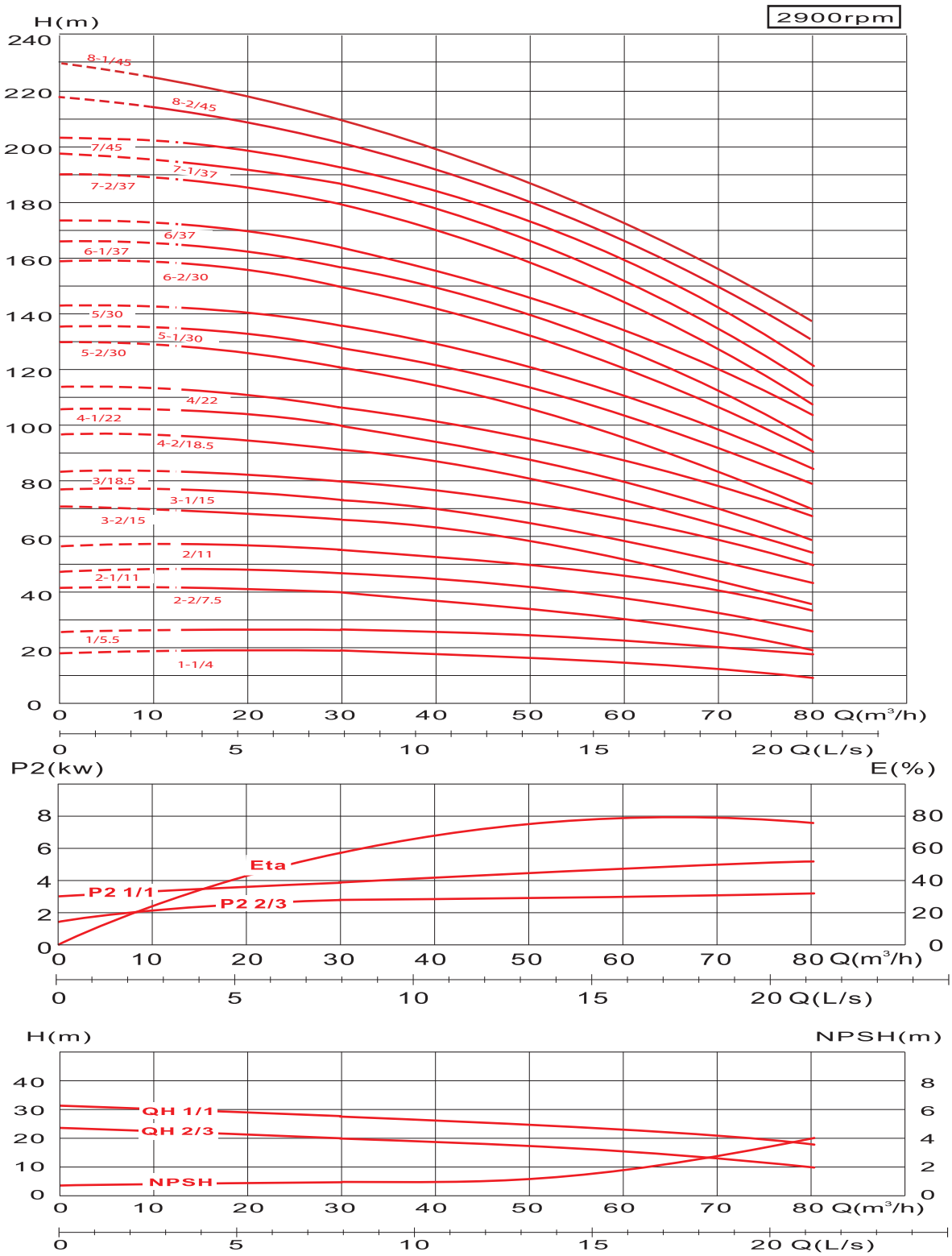






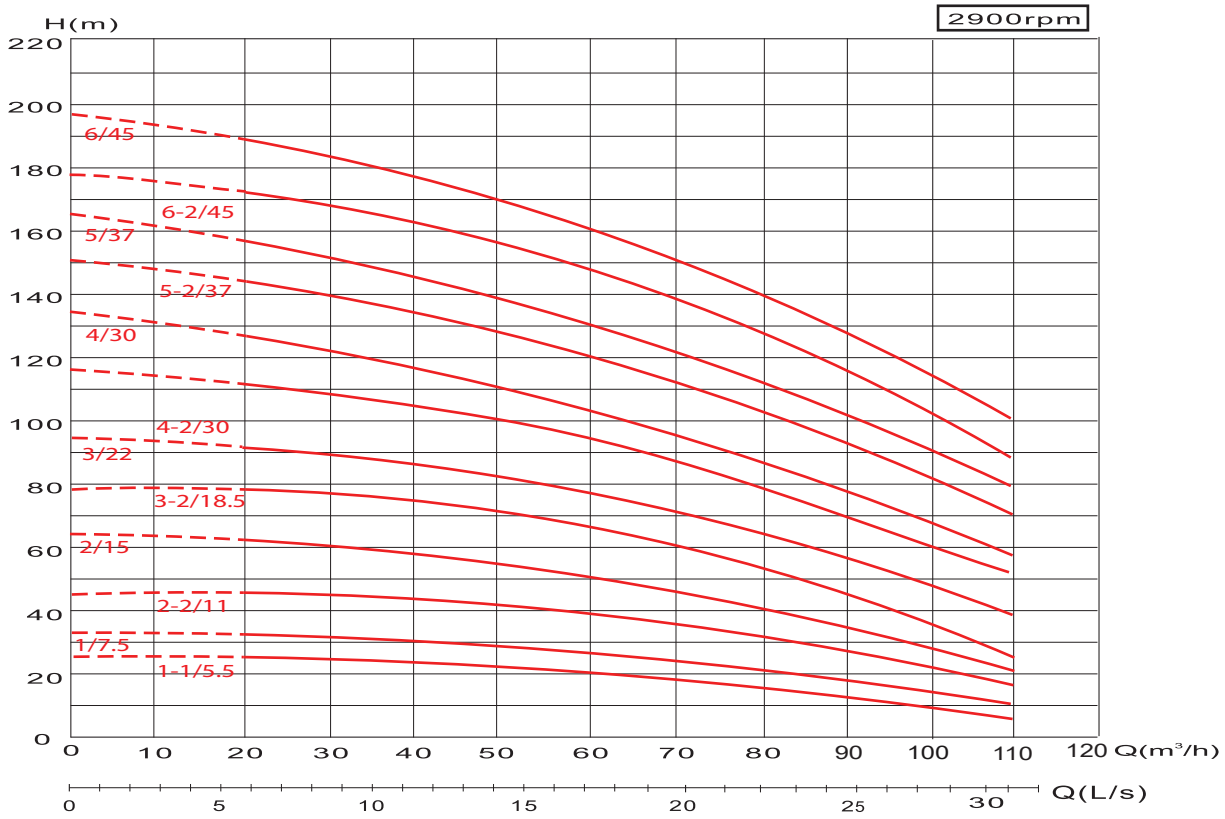
PERFORMANCE CURVE FOR VERTICAL MULTISTAGE 64 SERIES

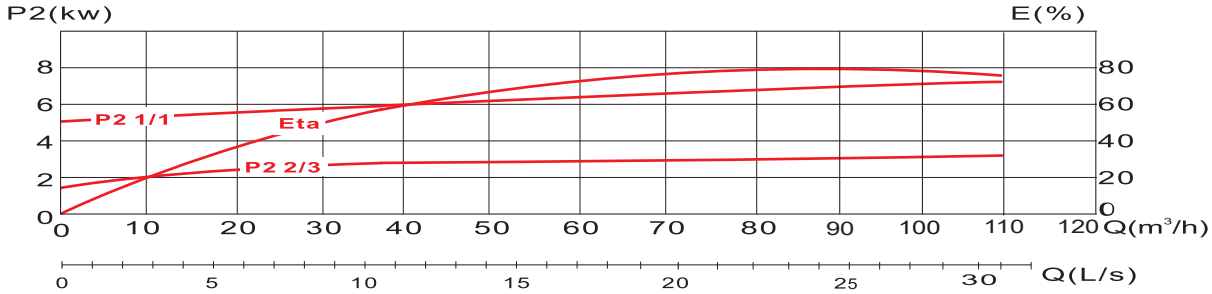
VMX 64

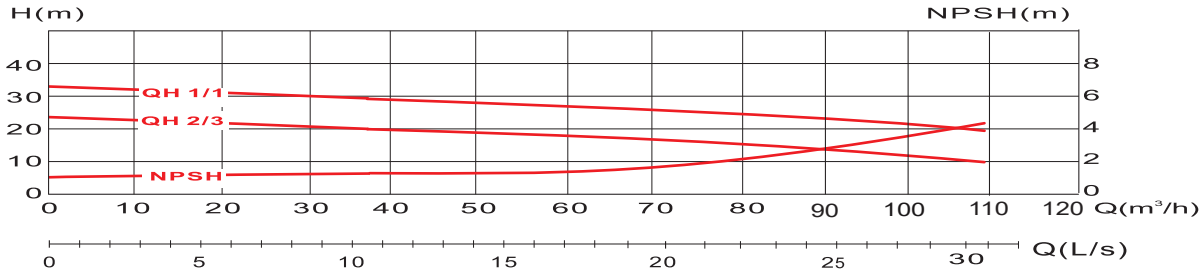


PERFORMANCE CURVE FOR VERTICAL MULTISTAGE 90 SERIES

VMX 90

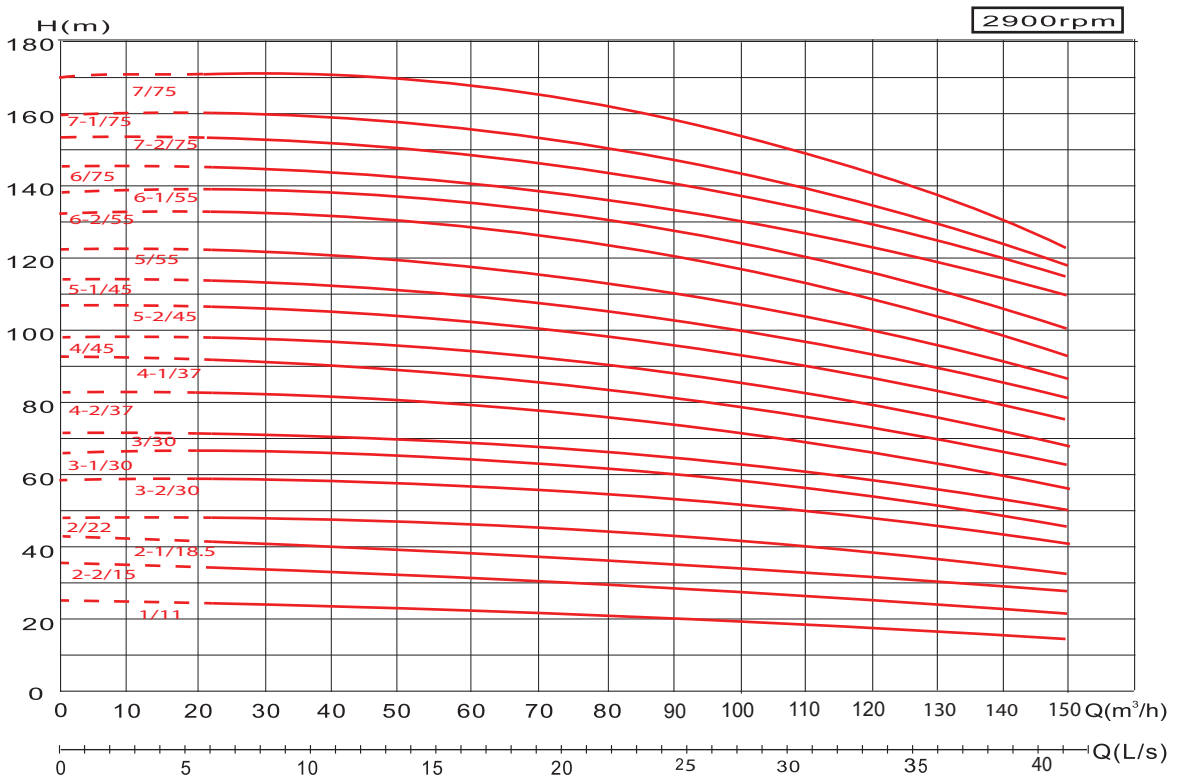


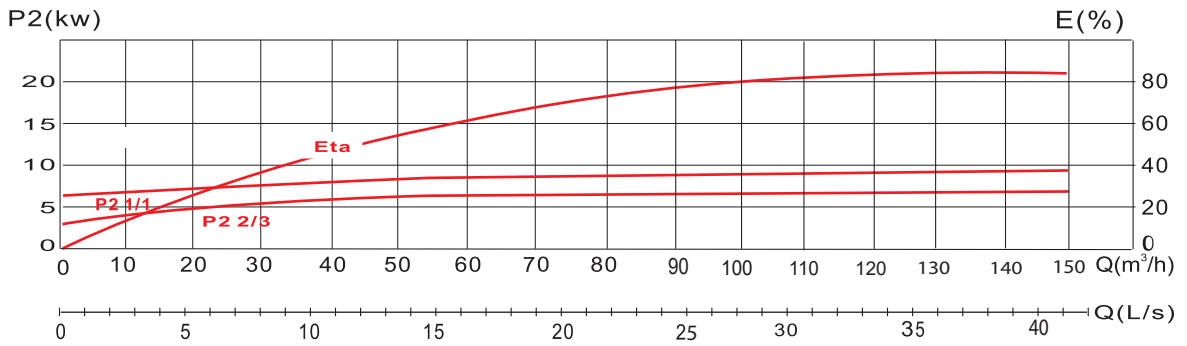


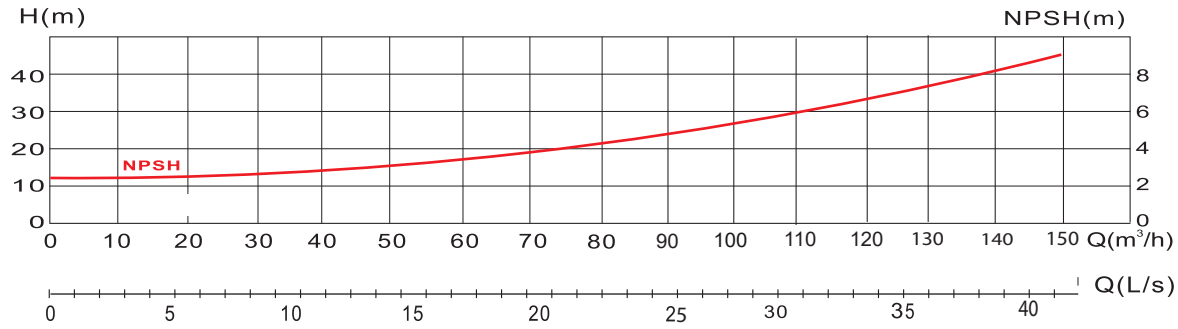


PERFORMANCE CURVE FOR VERTICAL MULTISTAGE 120 SERIES

VMX 120



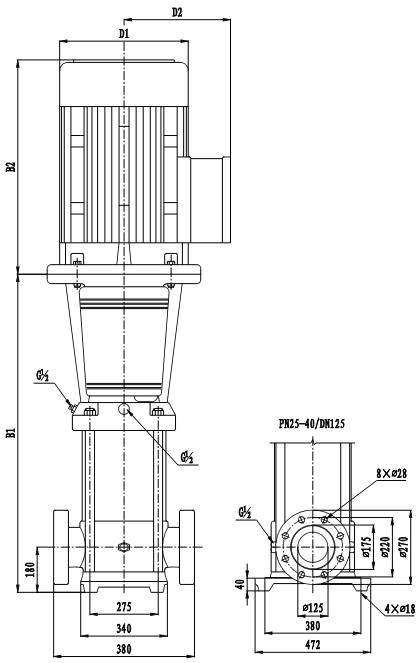




Performance table

Model	Motor(kw)	Q (m3/h)	60	70	80	90	100	110	120	130	140	150
VMX120-1	11	H (m)	22	21.8	21.6	21	20.5	19.5	18.5	17	16	15
VMX120-2-2	15		34	33.6	33	31	30.2	30	28.5	27	25	24
VMX120-2-1	18.5		41	40	39.5	38.5	37	36.5	34.5	32.5	30	27.5
VMX120-2	22		46	45	44.5	43.5	42.4	41	40	38	36	33.5
VMX120-3-2	30		57	56	55	53.5	52	51	49	46.5	43.5	41
VMX120-3-1	30		64	63	62	60	58.5	57.5	55.5	52	49	46
VMX120-3	30		69.5	68.5	67.5	66	64.4	62.5	61	57.5	54.5	51
VMX120-4-2	37		80.5	79	78	76	73.5	72	69	66	61.5	58
VMX120-4-1	37		87	86	84.5	82	80	78	76	72	68	64.5
VMX120-4	45		92.5	91	90	88	85.5	83	81	77	73	68.5
VMX120-5-2	45		104.5	103	101	99	96	93	90	85.5	80.5	75.5
VMX120-5-1	45		110.5	109	107.5	105	102	100	97	92	86.5	83
VMX120-5	55		115.5	114	113	110	107.5	104.5	101.5	96	91	86
VMX120-6-2	55		128	125.5	123	121	117.3	113.5	110	104.5	98.5	92.5
VMX120-6-1	55		134	132	130.5	127	124	121	118	111	105	100
VMX120-6	75		139	137	135	132	128.8	126	123	116	110	104
VMX120-7-2	75		151	148	145.5	143	138.6	134	130	123.5	116.5	109
VMX120-7-1	75		156.5	154	152	148.5	144.5	141	137.5	130	123	116.5
VMX120-7	75		162.5	160.5	158.5	155	151	148	145	137	129	123

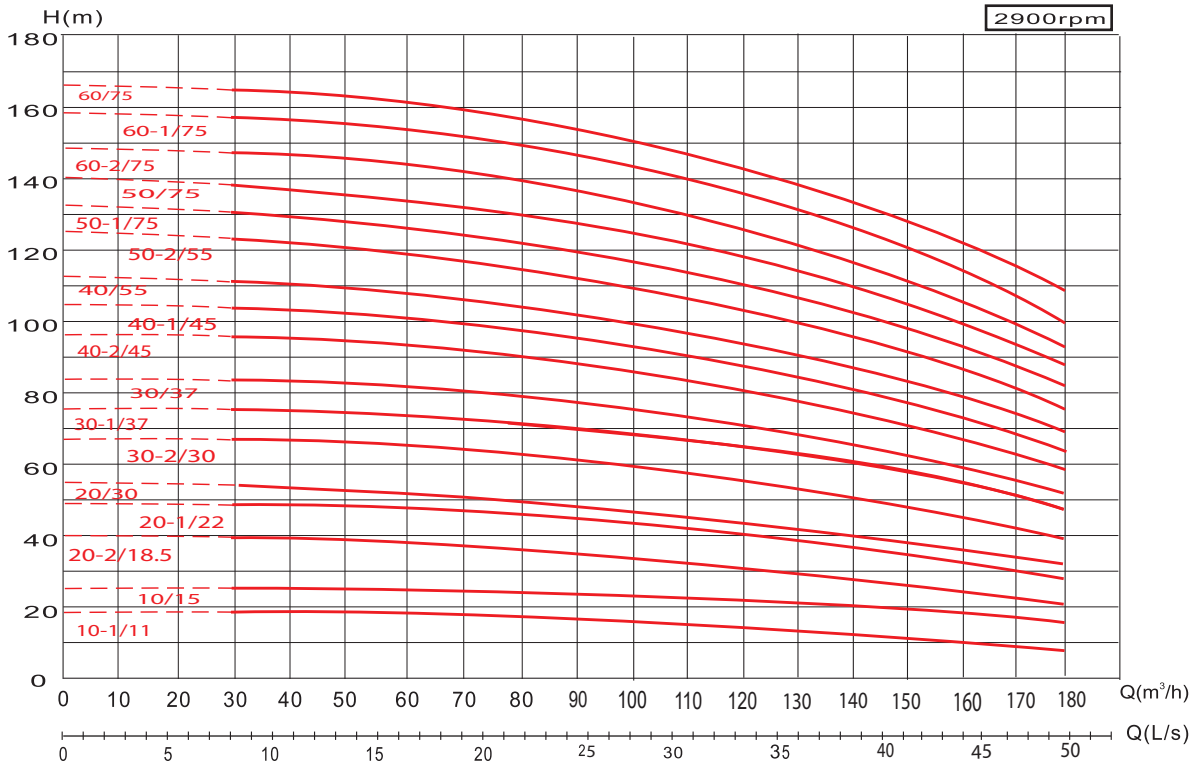
Installation sketch

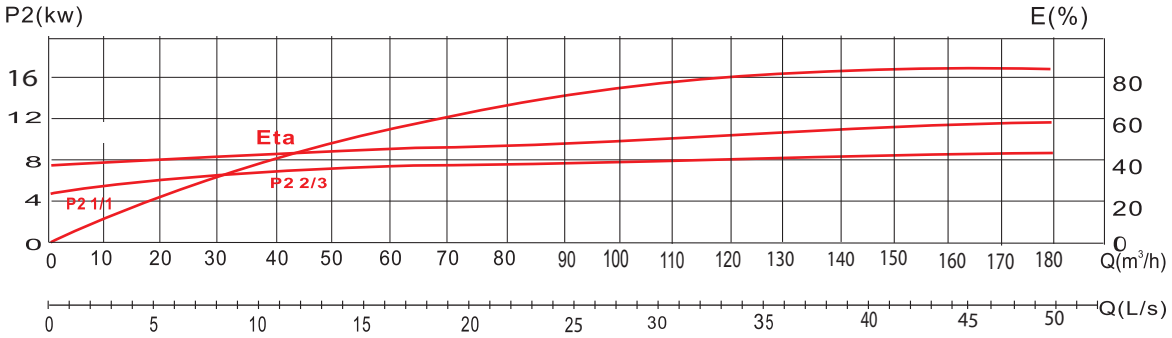


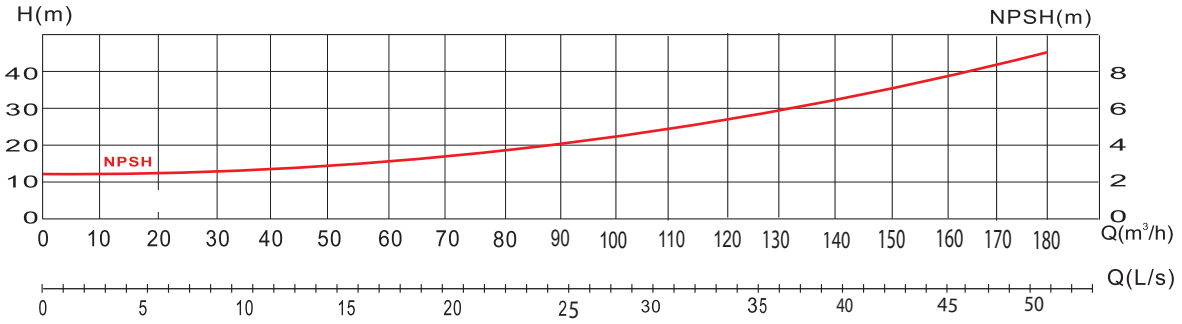
Model	Size(mm)					Weight (kg)
	B1	B2	B1+B2	D1	D2	
VMX120-1	840	490	1330	330	255	230
VMX120-2-2	1000	490	1490	330	255	245
VMX120-2-1	1000	550	1550	330	255	250
VMX120-2	1000	590	1590	360	285	285
VMX120-3-2	1160	660	1820	400	310	360
VMX120-3-1	1160	660	1820	400	310	360
VMX120-3	1160	660	1820	400	310	360
VMX120-4-2	1320	660	1980	400	310	400
VMX120-4-1	1320	660	1980	400	310	400
VMX120-4	1320	700	2020	460	340	460
VMX120-5-2	1480	700	2180	460	340	470
VMX120-5-1	1480	700	2180	460	340	470
VMX120-5	1510	770	2280	540	370	575
VMX120-6-2	1670	770	2440	540	370	585
VMX120-6-1	1670	770	2440	540	370	585
VMX120-6	1670	845	2515	580	410	705
VMX120-7-2	1830	845	2675	580	410	715
VMX120-7-1	1830	845	2675	580	410	715
VMX120-7	1830	845	2675	580	410	715

PERFORMANCE CURVE FOR VERTICAL MULTISTAGE 150 SERIES

VMX 150



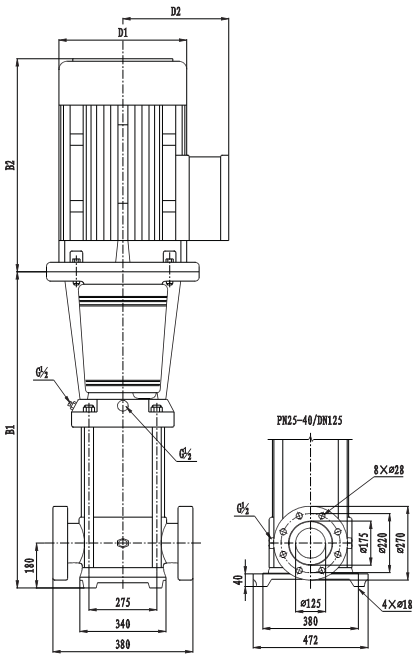




Performance table

Model	Motor(kw)	Q (m3/h)	80	90	100	110	120	130	140	150	160	170	180
VMX150-1-1	11	H (m)	18.3	17.8	17.3	17	16	15	14	12.5	11	10	8.5
VMX150-1	15		24	23	22.5	22	21.5	20.5	20	18.5	17	16	15
VMX150-2-2	18.5		37	35.5	34	33	32	31	29	27.5	26	23	21
VMX150-2-1	22		44.3	43	42	40	39	38.5	37.5	35	33	30	27
VMX150-2	30		50	49	48	47	45.5	44	42	40	37	34	32
VMX150-3-2	30		63.5	61	59	57.5	56	54.5	53	49	45.5	42	39
VMX150-3-1	37		70	68	67	65	63	62	60	56	53	49	45
VMX150-3	37		78	76.5	75	73	70.5	68	66	63	59	55	50.5
VMX150-4-2	45		89	87	84	81.5	79	77	74.5	70.5	65.5	60	56
VMX150-4-1	45		96.5	94	91.5	89	86.5	84	81.5	77	72.5	67	62
VMX150-4	55		104	102	100	97	95	91	88	84	79.5	74	68
VMX150-5-2	55		115.5	112	109	106	102.5	100	97	92	86	79	73.5
VMX150-5-1	75		122.5	119.5	117	113.5	111.5	107.5	104.5	99	93.5	87	80
VMX150-5	75		130	127.5	125	121	119	115	111.5	106.5	101	94.5	86.5
VMX150-6-2	75		140	137	133	130	126	121	118	112	106	98	91
VMX150-6-1	75		148.5	145	141.7	137.5	135	131	127	120.5	114.5	106.5	97.5
VMX150-6	75		157	153	149	145	142	139.5	137	130	123.5	116	109

Installation sketch



Model	Size(mm)					Weight (kg)
	B1	B2	B1+B2	D1	D2	
VMX150-1-1	840	490	1330	330	255	230
VMX150-1	840	490	1330	330	255	235
VMX150-2-2	1000	550	1550	330	255	250
VMX150-21	1000	590	1590	360	285	295
VMX150-20	1000	660	1660	400	310	350
VMX150-3-2	1160	660	1820	400	310	360
VMX150-3-1	1160	660	1820	400	310	360
VMX150-3	1160	660	1820	400	310	385
VMX150-4-2	1320	700	2020	460	340	460
VMX150-4-1	1320	700	2020	460	340	460
VMX150-4	1350	770	2120	540	370	560
VMX150-5-2	1510	770	2280	540	370	570
VMX150-5-1	1510	845	2355	580	410	690
VMX150-5	1510	845	2355	580	410	690
VMX150-6-2	1670	845	2515	580	410	700
VMX150-6-1	1670	845	2515	580	410	700
VMX150-6	1670	845	2515	580	410	700

LOAD LOSSES (PC) IN METERS (COLUMN OF WATER) FLOW RATE (V M/S)

Capacity		Internal diameter in mm																									
m³/h		25	32	40	50	60	70	80	90	100	125	150	175	200	225	250	275	300	350	400	450	500	600	700	800	900	1000
3	Pc% Vm/s	17 1.70	6 1.03	1.6 0.67	0.54 0.43	0.25 0.29	0.13 0.22	0.06 0.16	0.03 0.13	0.02 0.10																	
6	Pc% Vm/s		24 2.06	6 1.34	2 0.85	0.9 0.58	0.43 0.44	0.21 0.32	0.13 0.26	0.08 0.20	0.026 0.13																
9	Pc% Vm/s			12.5 2.08	4.3 1.32	1.8 0.89	0.9 0.65	0.46 0.5	0.25 0.39	0.15 0.32	0.06 0.20																
12	Pc% Vm/s			20 2.76	7 0.76	32 1.19	1.5 0.88	0.75 0.67	0.44 0.53	0.25 0.43	0.09 0.27	0.03 0.18															
15	Pc% Vm/s				12 2.2	5.2 1.49	2.4 1.1	1.25 0.87	0.7 0.66	0.42 0.54	0.15 0.34	0.06 0.24															
18	Pc% Vm/s				17 2.64	7 1.78	3.5 1.3	1.7 1	1 0.78	0.6 0.64	0.2 0.4	0.08 0.28															
21	Pc% Vm/s				22 3.35	8.8 2.08	4.2 1.54	2.2 1.17	1.3 0.93	0.75 0.75	0.26 0.48	0.1 0.32	0.05 0.24														
24	Pc% Vm/s					12 2.38	5.7 1.76	3 1.34	1.7 1.06	1 0.86	0.36 0.54	0.14 0.36	0.07 0.28														
27	Pc% Vm/s					14 2.7	7 1.97	3.5 1.45	2 1.17	1.25 0.96	0.42 0.6	0.17 0.42	0.08 0.31														
30	Pc% Vm/s					17 2.98	8.2 2.2	4.2 1.74	2.5 1.32	1.5 1.08	0.5 0.68	0.2 0.48	0.09 0.34														
36	Pc% Vm/s					25 3.58	12 2.63	6.3 2	3.5 1.58	2 1.28	0.75 0.52	0.3 0.57	0.14 0.42	0.07 0.32													
42	Pc% Vm/s						16 3.07	8.5 2.34	4.5 1.85	2.7 1.5	0.85 0.96	0.33 0.66	0.18 0.48	0.08 0.37													
48	Pc% Vm/s						21 3.51	10 2.68	6 2.12	3.6 1.75	1.2 1.08	0.45 0.72	0.22 0.56	0.12 0.43	0.06 0.37												
54	Pc% Vm/s						25 3.94	13.5 3	7.6 2.34	4.5 1.92	1.5 1.2	0.55 0.84	0.28 0.63	0.14 0.48	0.08 0.38												
60	Pc% Vm/s							16 3.32	9 2.64	5.5 2.16	1.8 1.36	0.7 0.96	0.33 0.68	0.17 0.53	0.1 0.42												
75	Pc% Vm/s							24 4.17	14 3.31	8 2.68	2.76 1.72	1 1.18	0.48 0.87	0.24 0.67	0.14 0.53	0.08 0.43											
90	Pc% Vm/s								20 3.97	12.5 3.24	3.8 2.04	1.45 1.44	0.74 1.02	0.36 0.8	0.2 0.63	0.14 0.51	0.08 0.42										
105	Pc% Vm/s								26 4.6	16.5 3.74	5.3 2.41	1.95 1.66	0.9 1.22	0.47 0.93	0.27 0.74	0.16 0.59	0.1 0.49										
120	Pc% Vm/s									21.5 4.31	6.9 4.72	2.6 1.93	1.2 1.35	0.61 1.06	0.36 0.84	0.2 0.68	0.14 0.56	0.08 0.47									
135	Pc% Vm/s									26 4.81	9 1.07	3.3 2.43	1.5 1.56	0.76 1.19	0.45 0.95	0.25 0.76	0.17 0.63	0.1 0.53									
150	Pc% Vm/s										11 3.44	4 2.36	1.9 1.74	0.95 1.34	0.55 1.05	0.3 0.86	0.21 0.70	0.12 0.59	0.06 0.43								
165	Pc% Vm/s										13 3.75	4.7 2.61	2.2 1.94	1.13 1.46	0.65 1.15	0.37 0.94	0.24 0.77	0.15 0.65	0.08 0.48								
180	Pc% Vm/s										15.2 4.09	5.5 2.83	2.6 2.08	1.3 1.59	0.76 1.26	0.43 1.02	0.29 0.84	0.18 0.71	0.09 0.52								
210	Pc% Vm/s										21 4.70	7.4 3.32	3.5 2.43	1.8 1.86	1.1 1.49	0.6 1.19	0.37 0.98	0.24 0.82	0.12 0.61	0.06 0.47							
240	Pc% Vm/s											9.4 3.78	4.3 2.77	2.3 2.12	1.3 1.68	0.75 1.36	0.48 1.12	0.3 0.95	0.15 0.69	0.08 0.53							
270	Pc% Vm/s											12 4.26	5.5 3.13	2.8 2.39	1.62 1.90	0.9 1.53	0.58 1.26	0.35 1.07	0.18 0.78	0.09 0.59							
300	Pc% Vm/s											14 4.75	7.5 3.47	3.4 2.66	2 2.10	1.1 1.71	0.74 1.40	0.46 0.18	0.22 0.86	0.11 0.67	0.07 0.53						
360	Pc% Vm/s												9 4.15	4.7 3.17	2.8 2.53	1.6 2.04	1 1.68	0.65 1.41	0.32 1.04	0.16 0.79	0.09 0.63	0.05 0.51					
420	Pc% Vm/s												11.6 4.86	6.2 3.72	3.5 2.94	2 2.37	1.3 1.96	0.82 1.64	0.41 1.22	0.21 0.94	0.12 0.76	0.07 0.59	0.03 0.41				
480	Pc% Vm/s													8.5 4.24	4.9 3.36	2.9 2.72	1.9 2.24	1.2 1.90	0.6 1.36	0.3 1.06	0.17 0.84	0.09 0.69	0.04 0.47				
540	Pc% Vm/s													14 4.78	6.5 3.80	3.7 3.06	2.35 2.52	1.52 2.13	0.75 1.56	0.38 1.19	0.22 0.94	0.12 0.76	0.05 0.53				
600	Pc% Vm/s													12.2 5.30	7.4 4.20	4.3 3.40	2.7 2.81	1.7 2.36	0.9 1.73	0.45 1.34	0.25 1.06	0.13 0.86	0.055 0.61	0.024 0.44			
660	Pc% Vm/s														9 4.61	5.2 3.76	3.3 3.07	2.1 2.59	1.1 1.89	0.54 1.46	0.3 0.15	0.16 0.93	0.06 0.65	0.03 0.48			
720	Pc% Vm/s														10 5.05	6 4.08	3.8 3.37	2.5 2.84	1.3 2.08	0.62 1.65	0.35 1.26	0.19 1.02	0.075 0.71	0.035 0.52			
780	Pc% Vm/s															7.3 4.43	4.5 3.65	3 3.08	1.5 2.26	0.75 1.73	0.42 1.36	0.23 1.11	0.08 0.77	0.04 0.56			
840	Pc% Vm/s															8 4.76	5.4 3.95	3.4 3.31	1.7 2.43	0.85 1.86	0.48 1.47	0.26 1.19	0.1 0.83	0.047 0.61			
900	Pc% Vm/s															9 5.1	5.8 4.22	3.75 3.54	1.9 2.60	0.96 2.00	0.53 1.57	0.29 1.27	0.11 0.88	0.053 0.65			
960	Pc% Vm/s																6.5 4.49	4.3 3.78	2.1 2.77	2.1 2.13	0.6 1.68	0.32 1.36	0.12 0.95	0.06 0.70			
1020	Pc% Vm/s																7.2 4.76	4.6 4.01	2.45 2.94	1.2 2.26	0.67 1.78	0.35 1.44	0.14 1.00	0.065 0.77	0.033 0.54		
1080	Pc% Vm/s																	5.4 4.26	2.8 3.12	1.4 2.38	0.78 1.86	0.43 1.53	0.16 1.06	0.073 0.78	0.037 0.57		
1140	Pc% Vm/s																	6 4.49	3.2 3.29	1.53 2.53	0.86 1.99	0.45 1.65	0.175 1.12	0.08 0.84	0.043 0.61	0.037 0.52	
1200	Pc% Vm/s																	6.5 4.72	3.4 3.45	1.7 2.68	0.93 2.12	0.5 1.72	0.19 1.23	0.09 0.98	0.046 0.63	0.04 0.54	0.025 0.4

Discharge diameter

Suction diameter diameter

NOTES

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