

MVS

Vertical Multi-staged Stainless Steel Pumps





MVS

Vertical Multi-staged Stainless Steel Pumps



Application

MVS is a multi-functional product, which can transport various media from tap water to industrial liquids, and is suitable for different temperature, flow and pressure ranges.

MVS is suitable for slightly corrosive liquids.

- Water supply: filtration and transmission in the water plant, water supply in the water plant, pressurization in the main pipe and pressurization in high-rise buildings.
- industrial pressurization: process water system, cleaning system, high-pressure flushing system and fire protection system.
- industrial liquid transportation: cooling and air conditioning system, boiler feed water and condensation system, machine tool matching, acid and alkali.
- water treatment: ultrafiltration system, reverse osmosis system, distillation system, separator and swimming pool.
- irrigation: farmland irrigation, sprinkler irrigation and drip irrigation.

Operating conditions

- A thin, clean, non flammable, explosive liquid that does not contain solid grains or fibers.
- Liquid temperature: -15°C to +120°C
- Ambient temperature: max. +40°C
- Altitude: up to 1000 M

Pump

MVS is a non self priming vertical multi-stage centrifugal pump with standard motor installed. The motor shaft is directly connected with the pump shaft through the pump head with a coupling. The pressure cylinder and flow passage components are fixed between the pump head and the water inlet and outlet section with bolts. The water inlet and outlet of the pump are in the same straight line at the pump bottom; The pump can be equipped with intelligent protector as required to effectively protect the pump from dry running, phase failure, overload, etc.

Motor

- the motor is totally enclosed, air-cooled two pole standard motor.
- protection grade: IP55
- insulation grade: F
- standard voltage: 50hz: 1 x 220-230/240V
3 x 200-220/346-380V
3 x 220-240/380/415V
3 x 380-415V

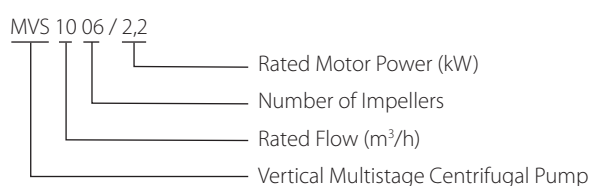
Performance curve

The following instructions apply to the curves shown later

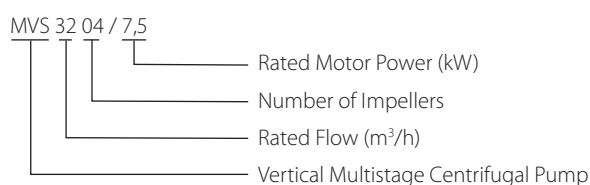
1. All curves are based on the measured values of the motor at constant speed of 2900 rpm or 2950 rpm.
2. The curve tolerance complies with ISO 9906:2012, grade 3B.
3. Water without air at 20°C is used for the test, and the kinematic viscosity is 1 mm/s
4. The use of the pump shall refer to the performance range of the bold curve to prevent overheating caused by too small flow and motor overload caused by too large flow.

Identification

MVS 4, 10, 16, 20



MVS 32, 42, 65, 85, 120



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Product Range

Explanation	MVS4	MVS10	MVS16	MVS20	MVS32	MVS42	MVS65	MVS85	MVS120
Rated Flow (m³/h)	4	10	15	20	32	42	65	85	120
Rated Flow (l/s)	1,1	2,78	4,17	5,6	8,9	11,7	18	24	33
Flow Range (m³/h)	1,5-7	5-13	8-22	10-28	16-40	25-55	30-80	50-110	60-150
Flow Range (l/s)	0,42-1,9	14-3,61	2,2-6,1	2,8-7,8	4,4-11,1	6,9-15,3	8,3-22,2	13,8-30,5	16,7-41,7
Max. Pressure (bar)	21	22	22	23	29	30	22	17	16
Motor Power (kW)	0,37-4	0,75-7,5	1,1-15	1,1-18,5	1,5-30	3,0-45	4,0-45	5,5-45	11-75
Temperature Range (°C)	-15 ~ +120								
Max. Efficiency (%)	57	68	70	69	73	75	76	77	74

Type

MVS	•	•	•	•	•	•	•	•	•
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MVS Pipeline Connection

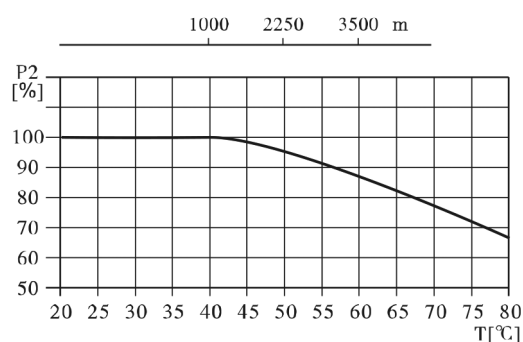
DIN Flange	DN32	DN40	DN50	DN50	DN65	DN80	DN100	DN100	DN125
Threaded Male	G 1 1/4"	G 1 1/2"	G2"	G2"					
Ferrule Joint	DN32	DN50	DN50	DN50					
Pipe Thread	ZG 1 1/4"	ZG2"	ZG2"	ZG2"					

Maximum working pressure

Model	Maximum working pressure (bar)
MVS 4 flange	25
MVS 4 waist flange	16
MVS 4 flange, ferrule, pipe thread	25
MVS 10, 16, 20 flange	25
MVS 10 waist flange	16
MVS 10, 16, 20 flange, ferrule, pipe thread	25
MVS32	30
MVS42	30
MVS65	25
MVS85	25
MVS120	20

Maximum ambient temperature

When the pump operates at an ambient temperature greater than 40°C or an altitude greater than 1000m, due to low air density and poor cooling effect, the motor output power P₂ will be reduced to a certain extent. When the pump operates under the above conditions, the motor power shall be increased.



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Minimum inlet pressure NPSH

If the pressure in the pump is lower than the vaporization pressure of the delivered liquid, cavitation may occur. To avoid cavitation, ensure that there is a minimum pressure at the inlet side of the pump, and the maximum suction lift HM can be calculated according to the following formula:

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

P_b = atmospheric pressure [bar]

(atmospheric pressure can be set to 1 bar)

In a closed system, P_b is the system pressure [bar]

NPSH net positive suction head [m]

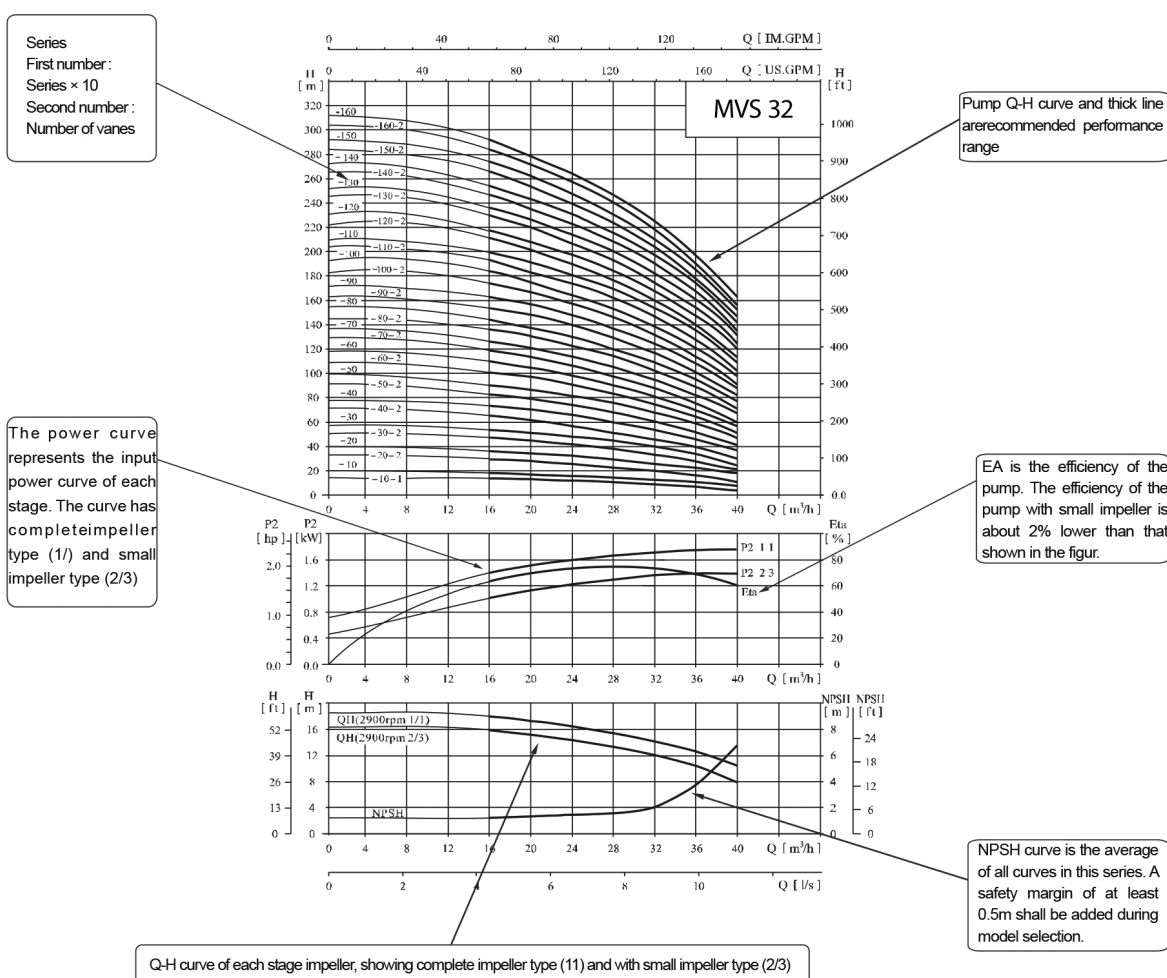
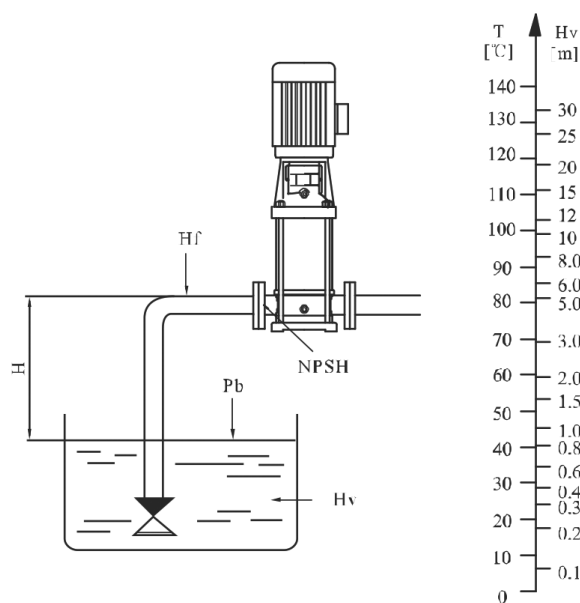
(It can be read from the maximum possible flow of the pump on the NPSH curve)

The pipeline loss [m]

H_v = vaporization pressure [m]

H_s = safety margin - Minimum 0.5m head

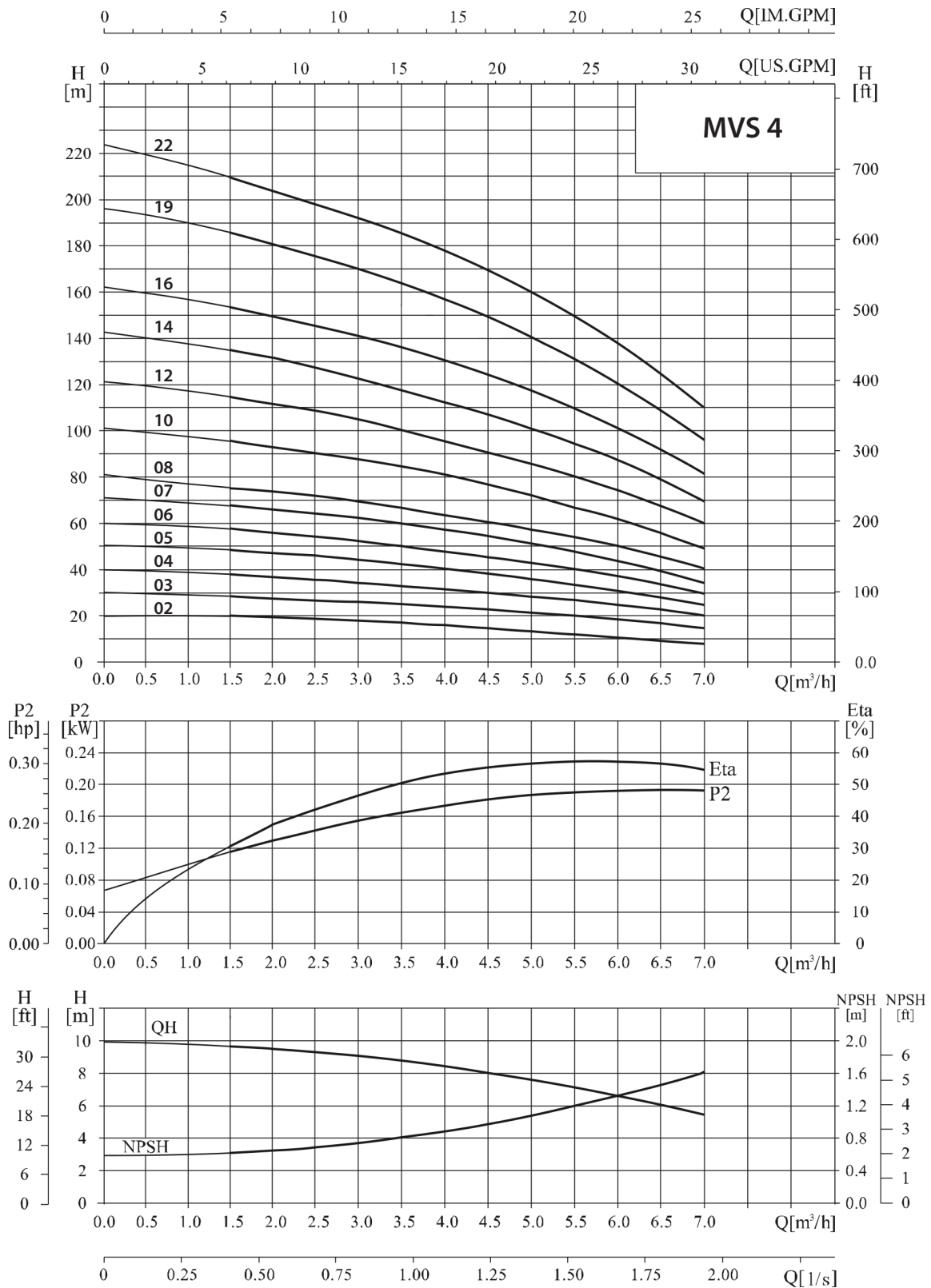
If the calculated value of H is positive, the pump can operate under the condition of maximum suction lift h . If the calculated value of H is negative, there must be a head of minimum inlet pressure H .



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Performance Curves

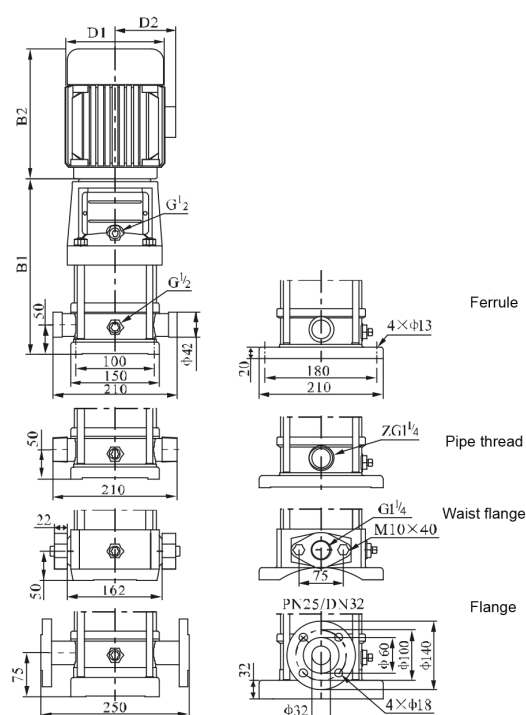


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Product Range

Model	Equipped motor (kW)	Q (m³/h)	1,5	2	3	4	5	6	7
MVS 402	0,37	H (m)	19	18	17	15	13	10	8
MVS 403	0,55		28	27	26	24	20	18	13
MVS 404	0,75		38	36	34	32	27	24	19
MVS 405	1,1		47	45	43	40	34	31	23
MVS 406	1,1		56	54	52	48	41	37	28
MVS 407	1,5		66	63	61	56	48	43	33
MVS 408	1,5		74	72	70	64	55	50	38
MVS 410	2,2		96	90	87	81	71	62	48
MVS 412	2,2		114	108	104	95	85	75	58
MVS 414	3		136	126	122	112	101	89	68
MVS 416	3		152	144	140	129	115	101	78
MVS 419	4		183	171	168	153	137	122	93
MVS 422	4		211	200	192	178	160	138	108

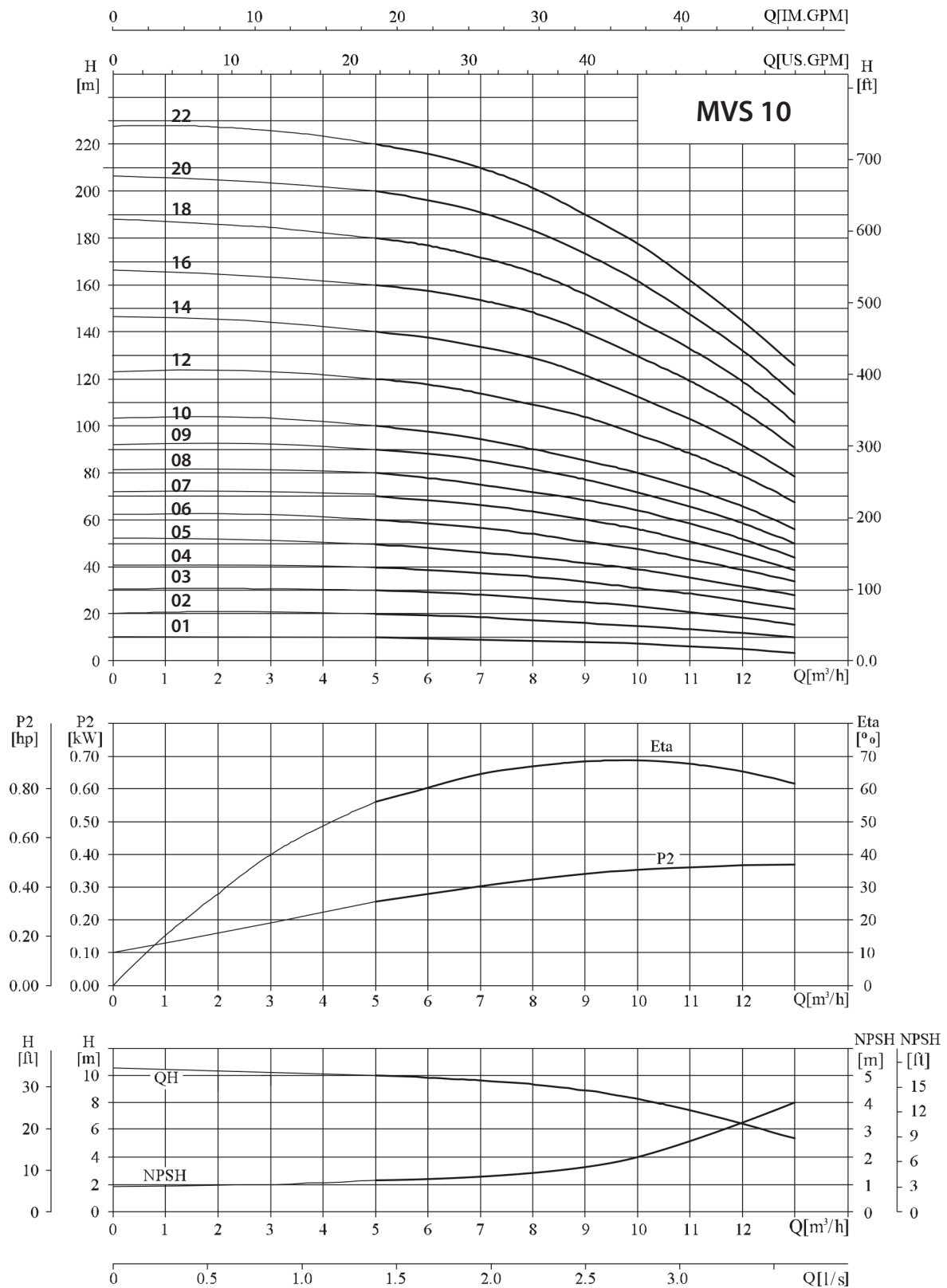


Model	Size (mm)					Weight (kg)
	B1	B2	B1+B2	D1	D2	
MVS 402	276	225	501	148	117	22
MVS 403	303	225	528	148	117	24
MVS 404	340	245	585	170	142	30
MVS 405	367	245	612	170	142	32
MVS 406	394	245	639	170	142	33
MVS 407	431	290	721	190	155	39
MVS 408	458	290	748	190	155	40
MVS 410	512	290	802	190	155	43
MVS 412	566	290	856	190	155	44
MVS 414	630	345	975	197	165	52
MVS 416	684	345	1029	197	165	54
MVS 419	765	355	1120	230	188	56
MVS 422	846	355	1201	230	188	59

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Performance Curves

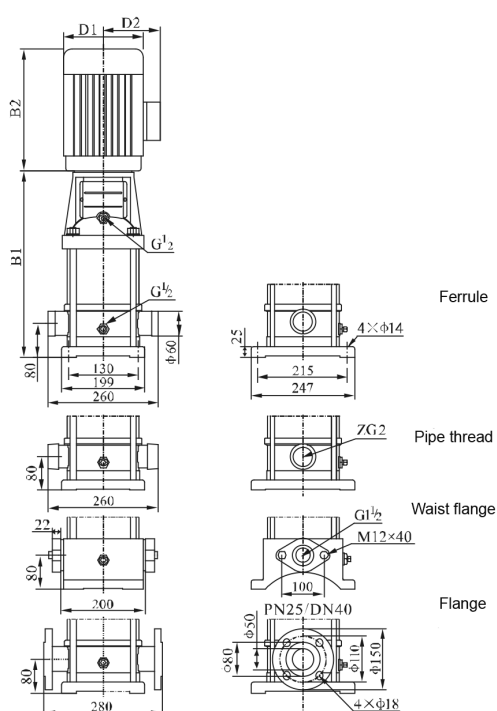


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Product Range

Model	Equipped motor (kW)	Q (m³/h)	5	6	7	8	9	10	11	12	13
MVS 1001	0,75	H (m)	9,7	9,3	8,9	8,3	7,7	7	6	5	4
MVS 1002	0,75		19,5	19	18	17	16	15	13,5	11,5	10
MVS 1003	1,1		29,5	29	28	27	25	23	21	18	16
MVS 1004	1,5		39,5	38,5	37,5	36	34	31	28	25	22
MVS 1005	2,2		49,5	48,5	47	44	42	39	35	32	28
MVS 1006	2,2		60	58	56	54	51	48	43	39	34
MVS 1007	3		70	68	66	63	60	56	51	45	39
MVS 1008	3		80	78	75	7	69	64	58	52	44
MVS 1009	3		90	87	85	81	77	72	66	58	50
MVS 1010	4		100	97	95	90	85	80	74	66	56
MVS 1012	4		120	117	114	109	104	96	89	79	68
MVS 1014	5,5		140	137	134	129	122	113	103	92	79
MVS 1016	5,5		160	158	153	148	140	129	119	106	91
MVS 1018	7,5		180	177	172	166	156	145	133	119	102
MVS 1020	7,5		200	196	191	184	173	162	147	132	114
MVS 1022	7,5		220	216	210	202	190	178	162	145	126

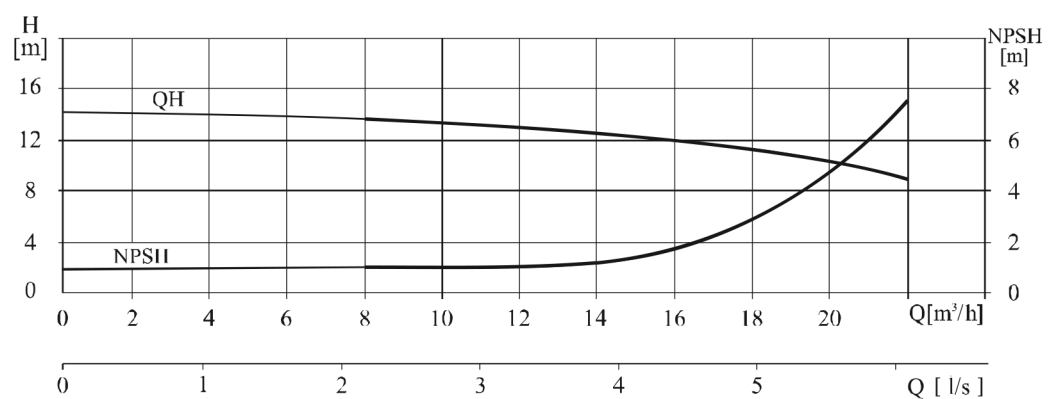
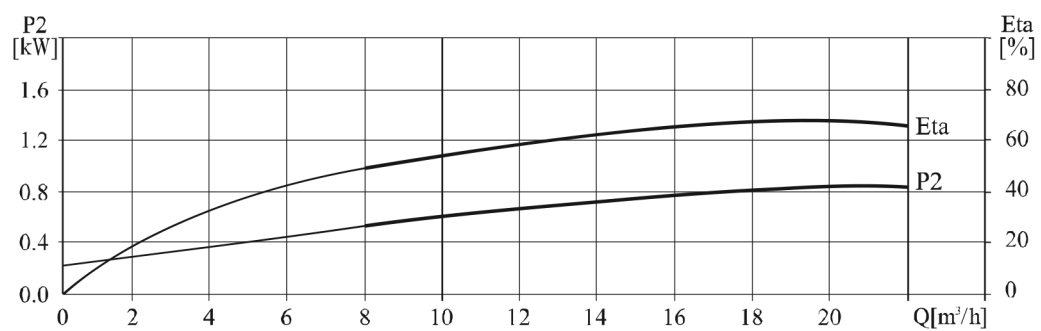
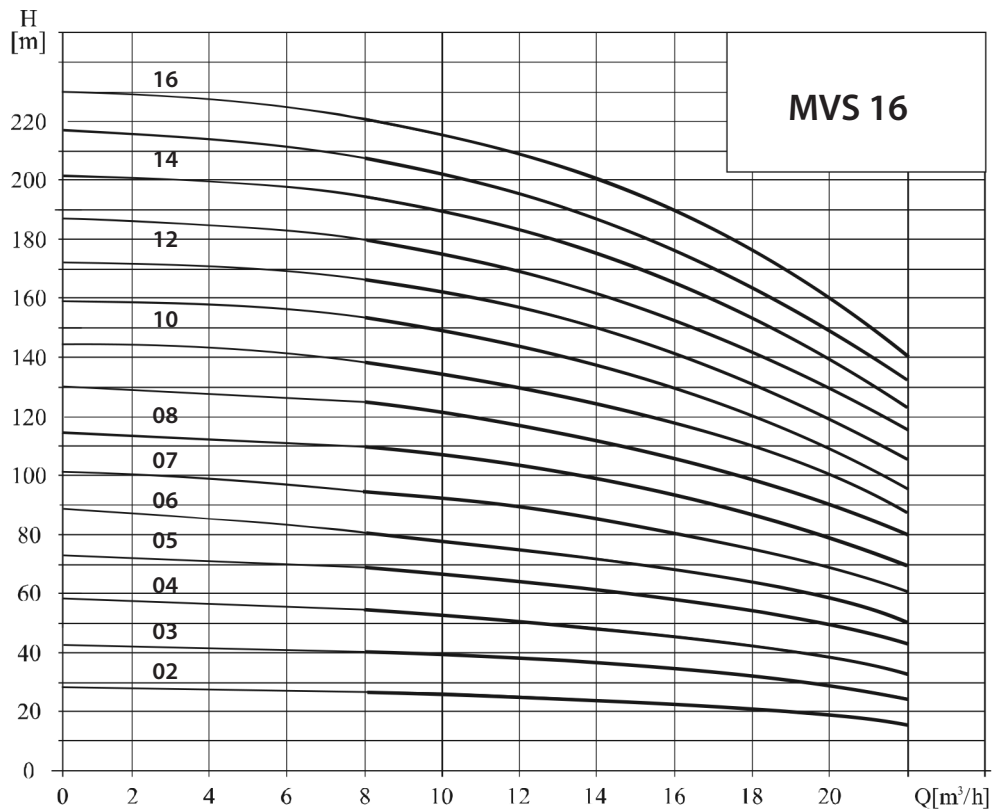


Model	Size (mm)					Weight (kg)
	B1	B2	B1+B2	D1	D2	
MVS 1001	347	245	592	170	142	40
MVS 1002	347	245	592	170	142	41
MVS 1003	377	245	622	170	142	43
MVS 1004	417	290	707	190	155	49
MVS 1005	447	290	737	190	155	53
MVS 1006	477	290	767	190	155	54
MVS 1007	517	345	862	197	165	64
MVS 1008	547	345	892	197	165	65
MVS 1009	577	345	922	197	165	66
MVS 1010	6007	355	6362	230	188	74
MVS 1012	667	355	1022	230	188	76
MVS 1014	747	390	1137	260	208	100
MVS 1016	807	390	1197	260	208	102
MVS 1018	867	390	1257	260	208	107
MVS 1020	927	390	1317	260	208	109
MVS 1022	987	390	1377	260	208	111

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Performance Curves

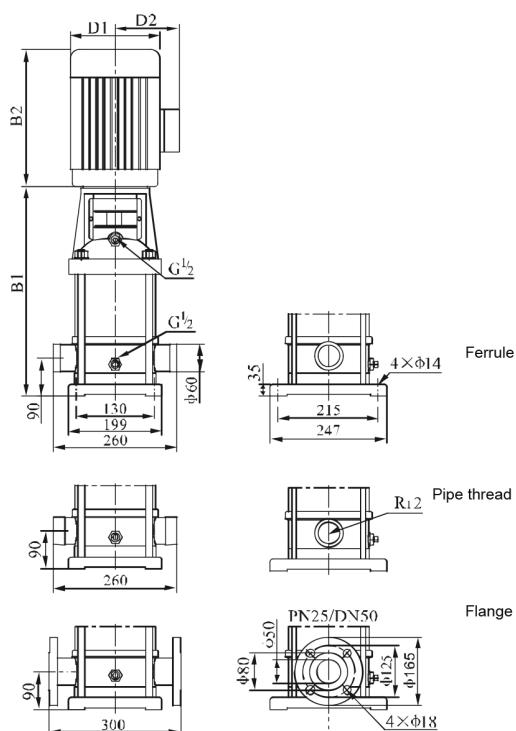


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Product Range

Model	Equipped motor (kW)	Q (m³/h)	8	10	12	14	16	18	20	22
MVS 1602	2,2	H (m)	27	26	25	24	22	21	19	16
MVS 1603	3		41	40	38	37	34	32	29	25
MVS 1604	4		54	53	52	49	46	43	38	34
MVS 1605	5,5		68	67	65	62	58	54	48	43
MVS 1606	5,5		82	80	78	74	70	64	58	52
MVS 1607	7,5		96	95	91	87	82	76	68	61
MVS 1608	7,5		110	108	104	99	94	86	77	70
MVS 1610	11		138	136	131	125	118	109	97	87
MVS 1612	11		166	162	157	150	141	130	116	105
MVS 1614	15		194	190	184	175	166	152	136	122
MVS 1616	15		222	217	210	200	189	174	156	140

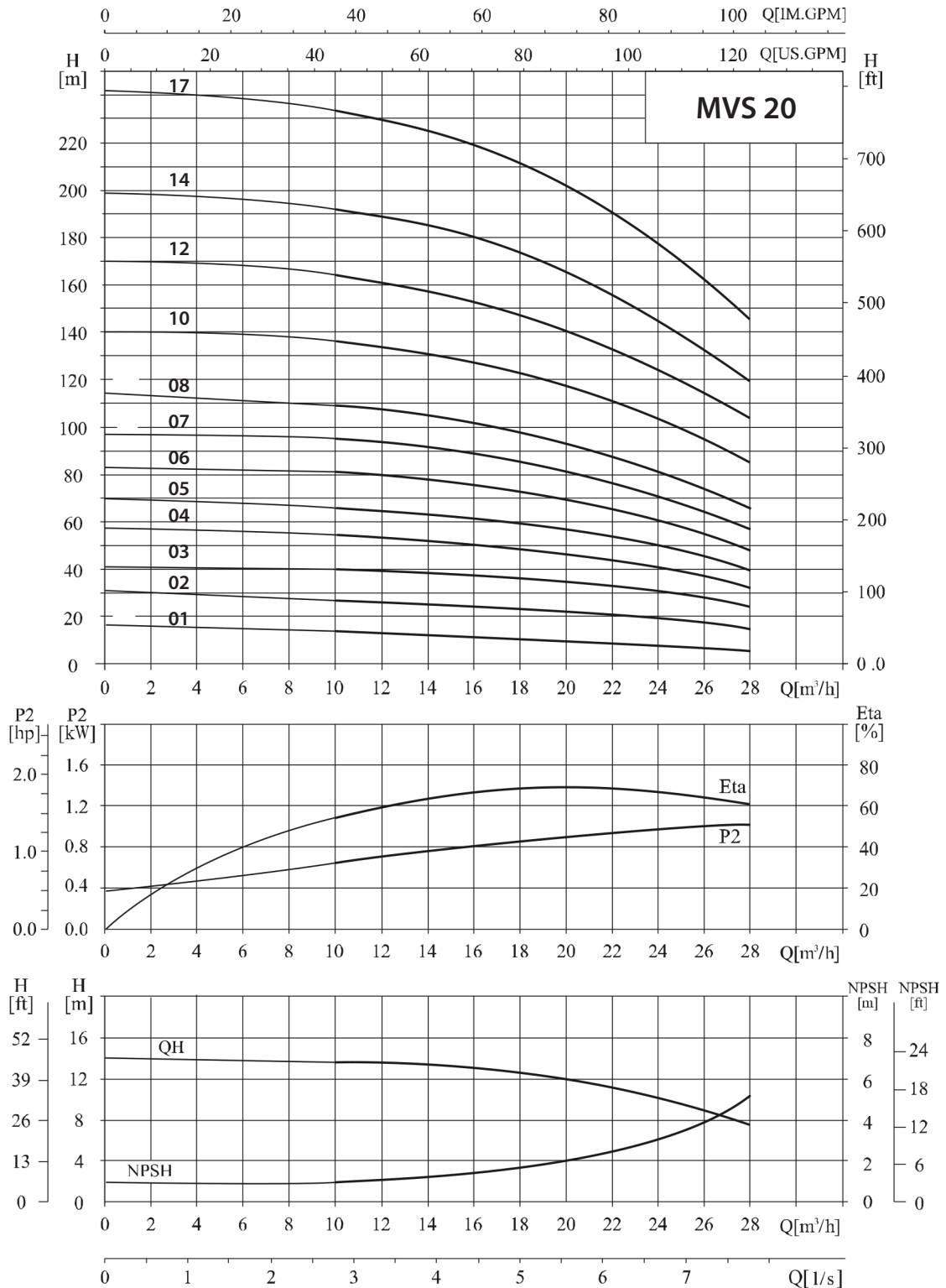


Model	Size (mm)					Weight (kg)
	B1	B2	B1+B2	D1	D2	
MVS 1602	397	290	687	190	155	42
MVS 1603	452	345	797	197	165	50
MVS 1604	497	355	852	230	188	59
MVS 1605	562	390	952	260	208	76
MVS 1606	607	390	997	260	208	77
MVS 1607	652	390	1042	260	208	84
MVS 1608	697	390	1087	260	208	86
MVS 1610	875	500	1375	330	255	158
MVS 1612	965	500	1465	330	255	161
MVS 1614	1055	500	1555	330	255	174
MVS 1616	1145	500	1645	330	255	178

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Performance Curves

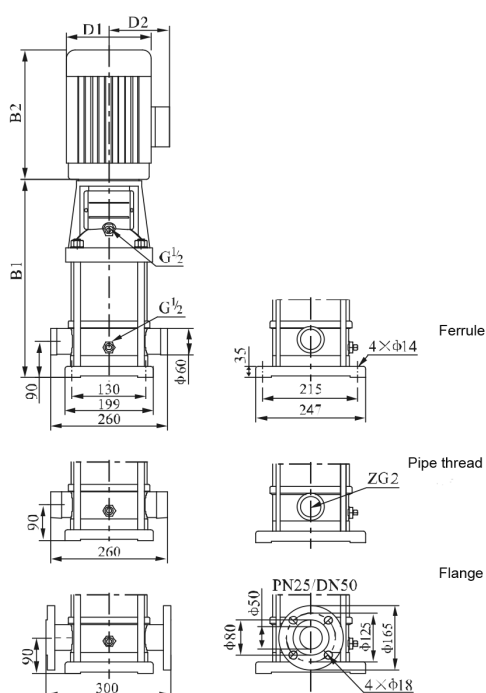


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Product Range

Model	Equipped motor (kW)	Q (m³/h)	10	12	14	16	18	20	22	24	26	28
MVS 2001	1,1	H (m)	13,5	13	12,5	12	11	10	9	8	7	6
MVS 2002	2,2		27	26,5	26	25	24	23	22	20	18	15
MVS 2003	4		40	39,5	39	38	37	35	33	30	27	24
MVS 2004	5,5		54	53	52	51	49	47	44	41	37	33
MVS 2005	5,5		67	66	64	62	60	58	55	50	45	40
MVS 2006	7,5		81	79	77	75	73	70	66	61	55	49
MVS 2007	7,5		95	93	91	89	86	82	77	71	65	58
MVS 2008	11		109	107	105	102	99	94	89	82	75	67
MVS 2010	11		136	134	131	128	124	118	111	103	95	85
MVS 2012	15		164	162	158	154	149	142	133	124	114	102
MVS 2014	15		192	189	185	180	174	166	156	145	133	119
MVS 2017	18,5		234	230	225	219	212	202	190	177	162	145

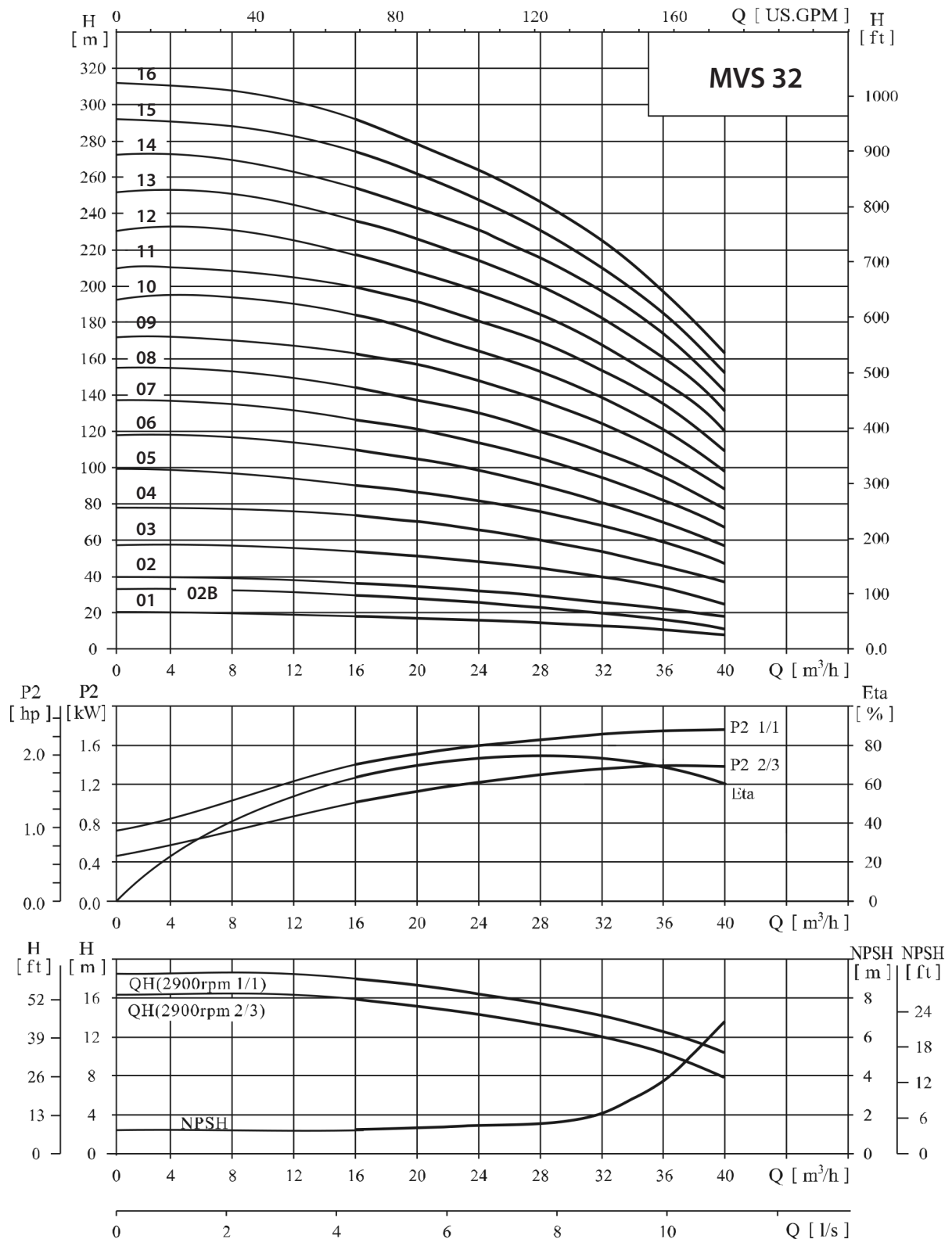


Model	Size (mm)					Weight (kg)
	B1	B2	B1+B2	D1	D2	
MVS 2001	387	245	632	170	142	33
MVS 2002	397	290	687	190	155	42
MVS 2003	452	355	807	230	188	58
MVS 2004	517	390	907	260	208	74
MVS 2005	562	390	952	260	208	75
MVS 2006	607	390	997	260	208	84
MVS 2007	652	390	1042	260	208	86
MVS 2008	785	500	1285	330	255	157
MVS 2010	875	500	1375	330	255	162
MVS 2012	965	500	1465	330	255	176
MVS 2014	1055	500	1555	330	255	178
MVS 2017	1190	550	1740	330	255	201

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Performance Curves

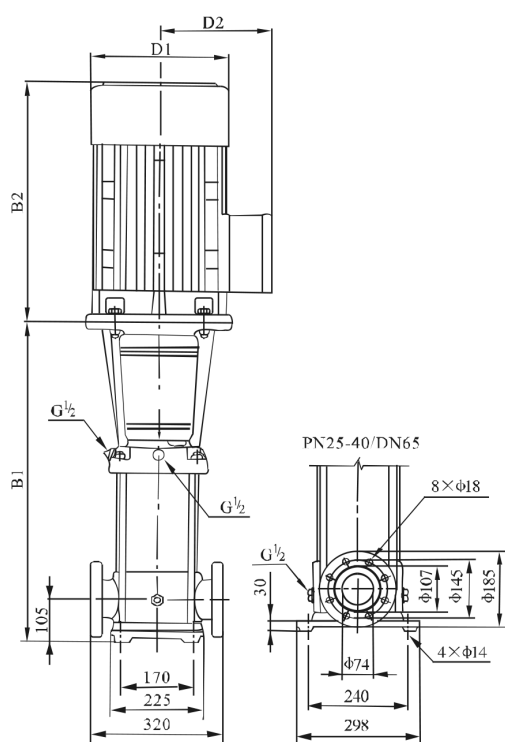


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Product Range

Model	Equipped motor (kW)	Q (m³/h)	16	20	24	28	32	36	40
MVS 3201	2,2	H (m)	18	17	15	14	13	11	8
MVS 3202B	3		29	28	26	23	20	16	11
MVS 3202	4		36	34	32	29	27	23	18
MVS 3203	5,5		54	51	48	44	40	35	27
MVS 3204	7,5		72	69	65	59	53	47	37
MVS 3205	11		90	86	81	74	67	59	47
MVS 3206	11		108	104	97	90	81	72	57
MVS 3207	15		126	121	113	105	95	85	67
MVS 3208	15		144	138	130	120	109	97	77
MVS 3209	18,5		162	156	147	136	124	109	88
MVS 3210	18,5		182	173	164	152	138	122	98
MVS 3211	22		200	191	180	168	153	135	109
MVS 3212	22		218	208	196	184	167	147	120
MVS 3213	30		237	225	213	200	181	160	131
MVS 3214	30		255	242	229	216	196	172	142
MVS 3215	30		274	260	246	231	210	185	152
MVS 3216	30		292	277	262	246	225	197	163

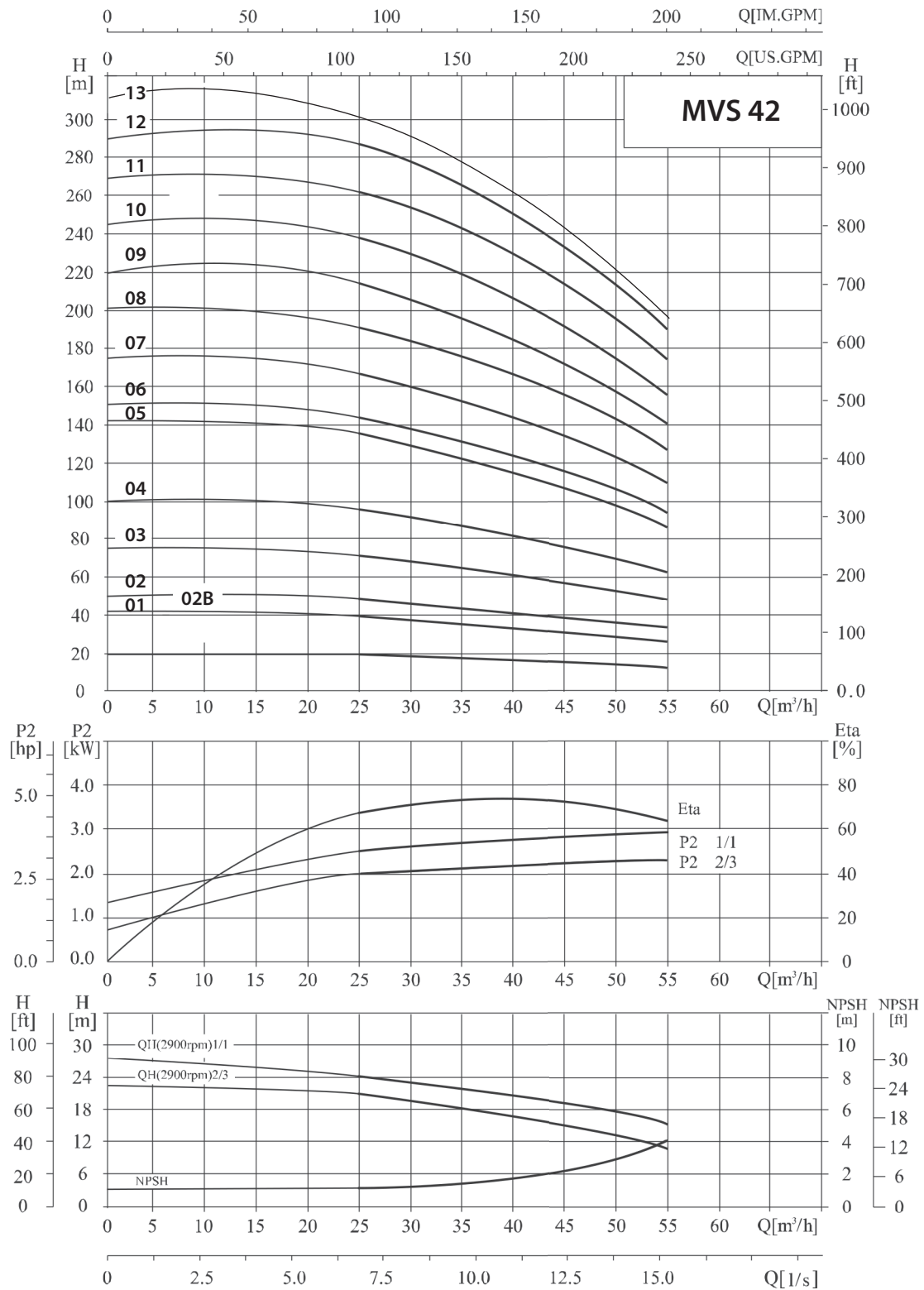


Model	Size (mm)					Weight (kg)
	B1	B2	B1+B2	D1	D2	
MVS 3201	505	290	795	190	165	63
MVS 3202	575	345	920	197	165	76
MVS 3203	645	390	1035	260	208	99
MVS 3204	715	390	1105	260	208	108
MVS 3205	890	500	1390	330	255	187
MVS 3206	960	500	1460	330	255	193
MVS 3207	1030	500	1530	330	255	205
MVS 3208	1100	500	1600	330	255	207
MVS 3209	1170	550	1720	330	255	226
MVS 3210	1240	550	1790	330	255	232
MVS 3211	1310	575	1885	360	285	278
MVS 3212	1380	575	1955	360	285	282
MVS 3213	1450	650	2100	400	310	343
MVS 3214	1520	650	2170	400	310	347
MVS 3215	1590	650	2240	400	310	350
MVS 3216	1660	650	2310	400	310	356

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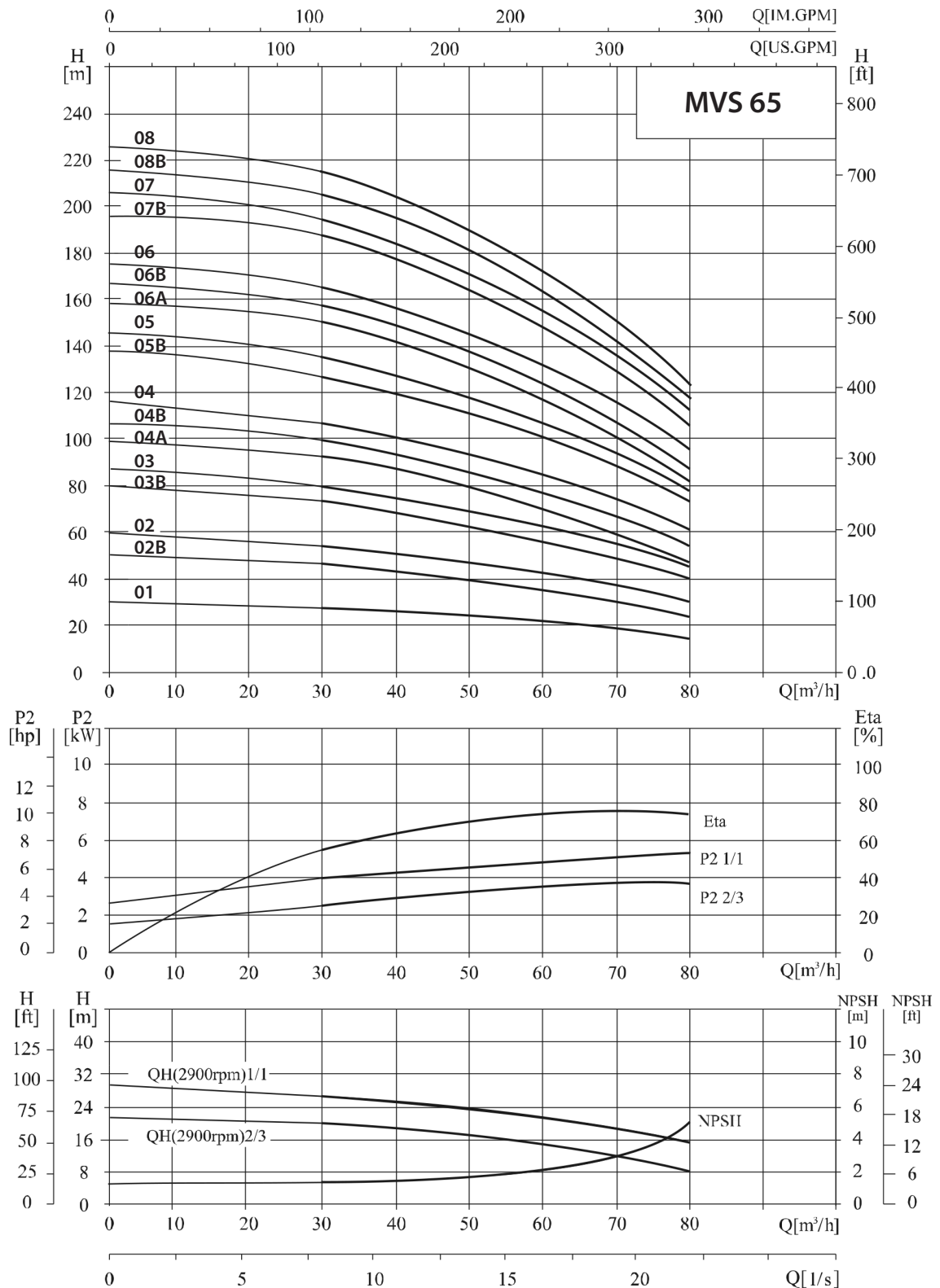
Performance Curves



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Performance Curves

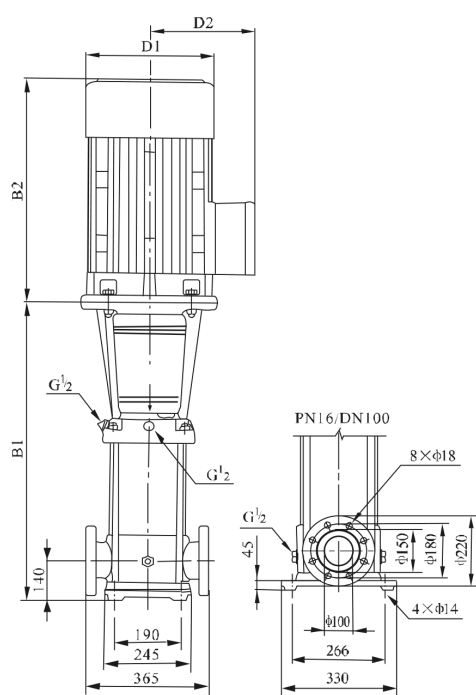


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Product Range

Model	Equipped motor (kW)	Q (m³/h)	30	40	50	60	65	70	80
MVS 6501	5,5	H (m)	27	25	23	21	20	18	15
MVS 6202B	7,5		39	36	33	29	26	23	17
MVS 6502	11		53	51	47	43	40	37	30
MVS 6503B	15		73	69	63	57	53	48	39
MVS 6503	18,5		80	76	70	64	60	55	46
MVS 6504A	18,5		92	84	80	71	66	60	47
MVS 6504B	22		100	94	87	78	73	67	54
MVS 6504	22		107	101	94	85	80	74	61
MVS 6505B	30		128	121	112	102	95	87	71
MVS 6505	30		136	129	119	109	102	94	78
MVS 6506A	30		150	142	131	118	110	101	81
MVS 6506B	37		157	149	138	125	117	108	88
MVS 6506	37		164	156	145	132	124	115	95
MVS 6507B	37		186	176	163	148	139	128	106
MVS 6507	45		193	183	170	155	146	135	112
MVS 6508B	45		207	196	182	164	154	142	116
MVS 6508	45		215	203	189	171	161	149	123

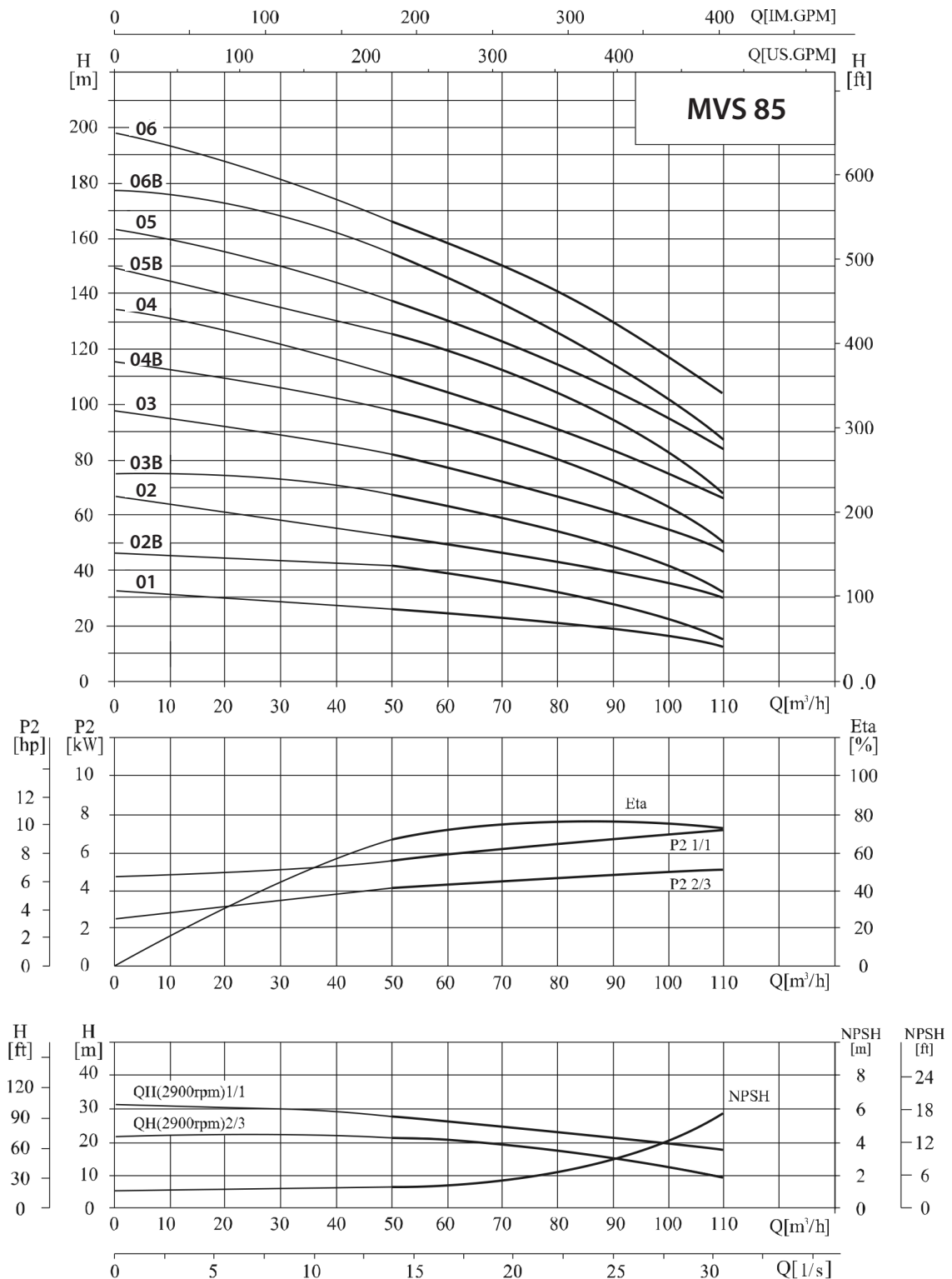


Model	Size (mm)					Weight (kg)
	B1	B2	B1+B2	D1	D2	
MVS 6501	561	390	951	260	208	110
MVS 6202B	644	390	1034	260	208	115
MVS 6502	754	500	1254	330	255	197
MVS 6503B	836	500	1336	330	255	207
MVS 6503	836	550	1386	330	255	232
MVS 6504A	919	550	1469	330	255	239
MVS 6504B	919	575	1494	360	285	272
MVS 6504	919	575	1494	360	285	272
MVS 6505B	1001	650	1651	400	310	334
MVS 6505	1001	650	1651	400	310	335
MVS 6506A	1084	650	1734	400	310	340
MVS 6506B	1084	650	1734	400	310	365
MVS 6506	1084	650	1734	400	310	365
MVS 6507B	1166	650	1816	400	310	370
MVS 6507	1166	685	1851	460	340	437
MVS 6508B	1248	685	1933	460	340	440
MVS 6508	1248	685	1933	460	340	440

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Performance Curves

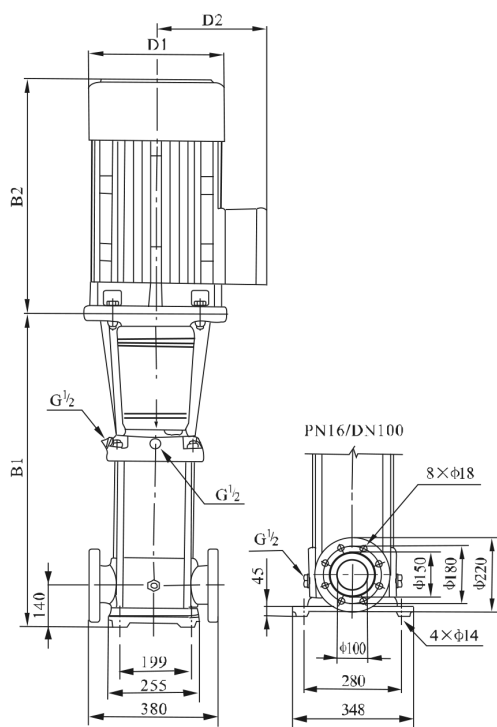


MVS

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Product Range

Model	Equipped motor (kW)	Q (m ³ /h)	50	60	70	80	85	90	100	110
MVS 8501	7,5	H (m)	25	24	22	21	20	19	16	12
MVS 8502B	11		41	39	36	32	30	28	22	15
MVS 8502	15		53	50	47	44	41	40	36	30
MVS 8503B	18,5		68	65	60	55	52	49	41	32
MVS 8503B	22		81	77	72	67	64	62	55	48
MVS 8504B	30		98	93	87	80	75	72	62	50
MVS 8504	30		110	105	100	92	86	84	76	66
MVS 8505B	37		126	120	113	104	98	93	81	68
MVS 8505	37		139	131	124	115	110	106	94	83
MVS 8506B	45		155	148	139	129	122	117	110	86
MVS 8506	45		168	160	150	141	134	130	117	103

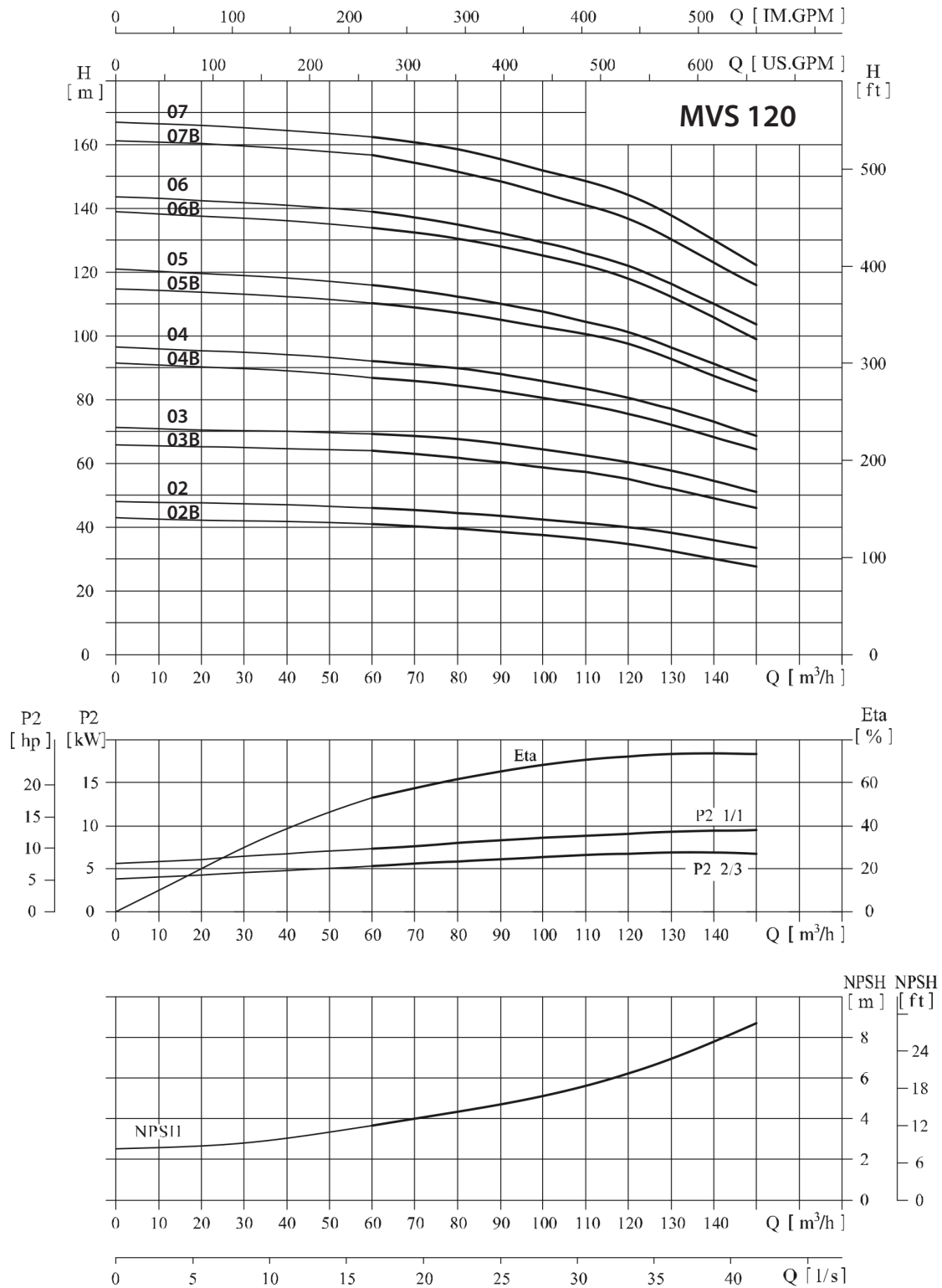


Model	Size (mm)					Weight (kg)
	B1	B2	B1+B2	D1	D2	
MVS 8501	571	390	961	260	208	115
MVS 8502B	773	500	1273	330	255	185
MVS 8502	773	500	1273	330	255	202
MVS 8503B	865	550	1415	330	255	225
MVS 8503B	865	575	1440	360	285	268
MVS 8504B	957	650	1607	400	310	328
MVS 8504	957	650	1607	400	310	328
MVS 8505B	1049	650	1699	400	310	351
MVS 8505	1049	650	1699	400	310	351
MVS 8506B	1141	685	1826	460	340	428
MVS 8506	1141	685	1826	460	340	428

MVS

Vertical Multi-staged Stainless Steel Pumps

Performance Curves

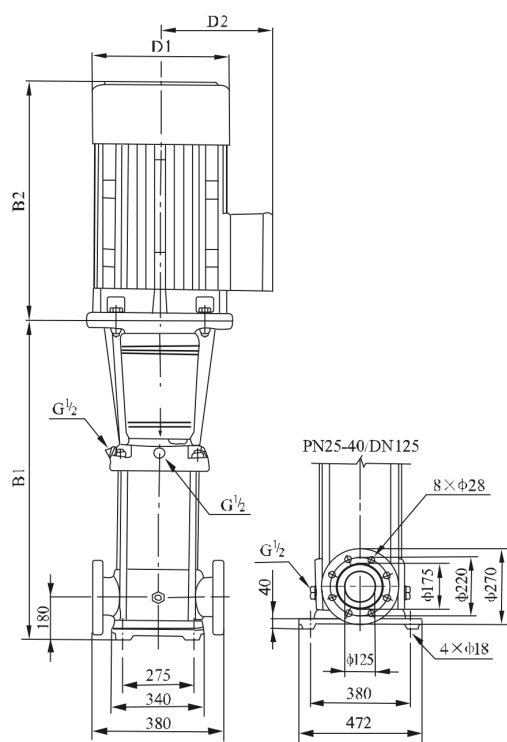


MVS

Vertical Multi-staged Stainless Steel Pumps

Product Range

Model	Equipped motor (kW)	Q (m³/h)	60	70	80	90	100	110	120	130	140	150
MVS 12002B	18,5	H (m)	41	40	39,5	38,5	37	36,5	34,5	32,5	30	27,5
MVS 12002	22		46	45	44,5	43,2	42,4	41	40	38	36	33,5
MVS 12003B	30		64	63	62	60	58,5	57,5	55,5	52	49	46
MVS 12003	30		69,5	68,5	67,5	66	64,4	62,5	61	57,5	54,5	51
MVS 12004B	37		87	86	84,5	82	80	78	76	72	68	64,5
MVS 12004	45		92,5	91	90	88	85,5	83	81	77	73	68,5
MVS 12005B	45		110,5	109	107,5	105	102	100	97	92	86,5	83
MVS 12005	55		115,5	114	113	110	107,5	104,5	101,5	96	91	86
MVS 12006B	55		134	132	130,05	127	124	121	118	111	105	100
MVS 12006	75		139	137	135	132	128,8	126	123	116	110	104
MVS 12007B	75		156,5	154	152	148,5	144,5	141	137,5	130	123	116,5
MVS 12007	75		162,5	160,5	158,5	155	151	148	145	137	129	123



Model	Size (mm)					Weight (kg)
	B1	B2	B1+B2	D1	D2	
MVS 12002B	1000	550	1550	330	255	263
MVS 12002	1000	575	1575	360	285	310
MVS 12003B	1160	650	1810	400	310	375
MVS 12003	1160	650	1810	400	310	375
MVS 12004B	1320	650	1970	400	310	405
MVS 12004	1320	685	2005	460	340	501
MVS 12005B	148	685	833	460	340	509
MVS 12005	1510	760	2270	540	370	632
MVS 12006B	1670	760	2430	540	370	641
MVS 12006	1670	845	2515	580	410	757
MVS 12007B	1830	845	2675	580	410	766
MVS 12007	1830	845	2675	580	410	766



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