



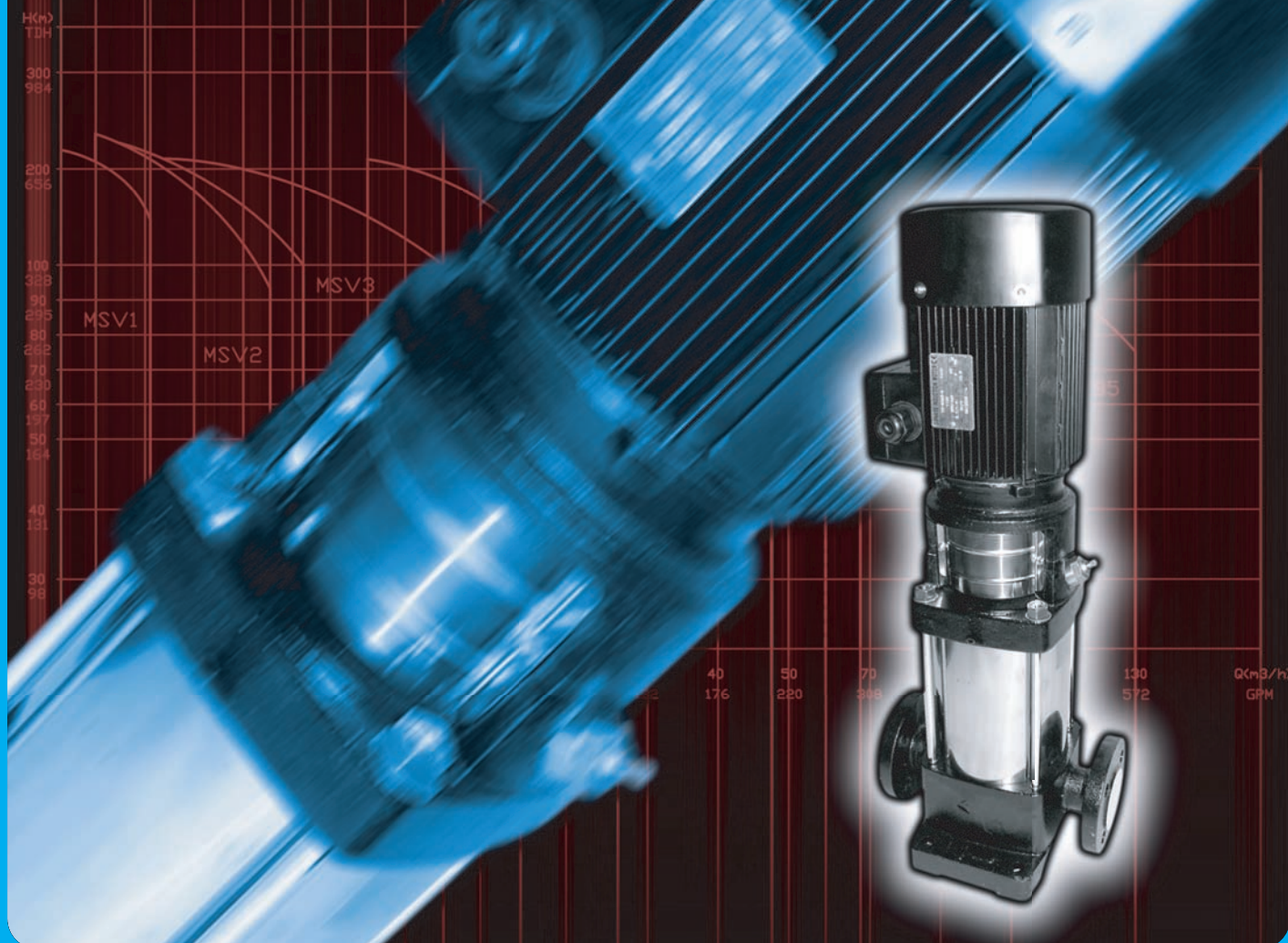
A RUTHMAN COMPANY

GUSHER®

Industrial and Coolant **Pumps**

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Stainless Steel Vertical Flanged **Pumps**



Ruthman... **Another Word** for Innovation





General Data

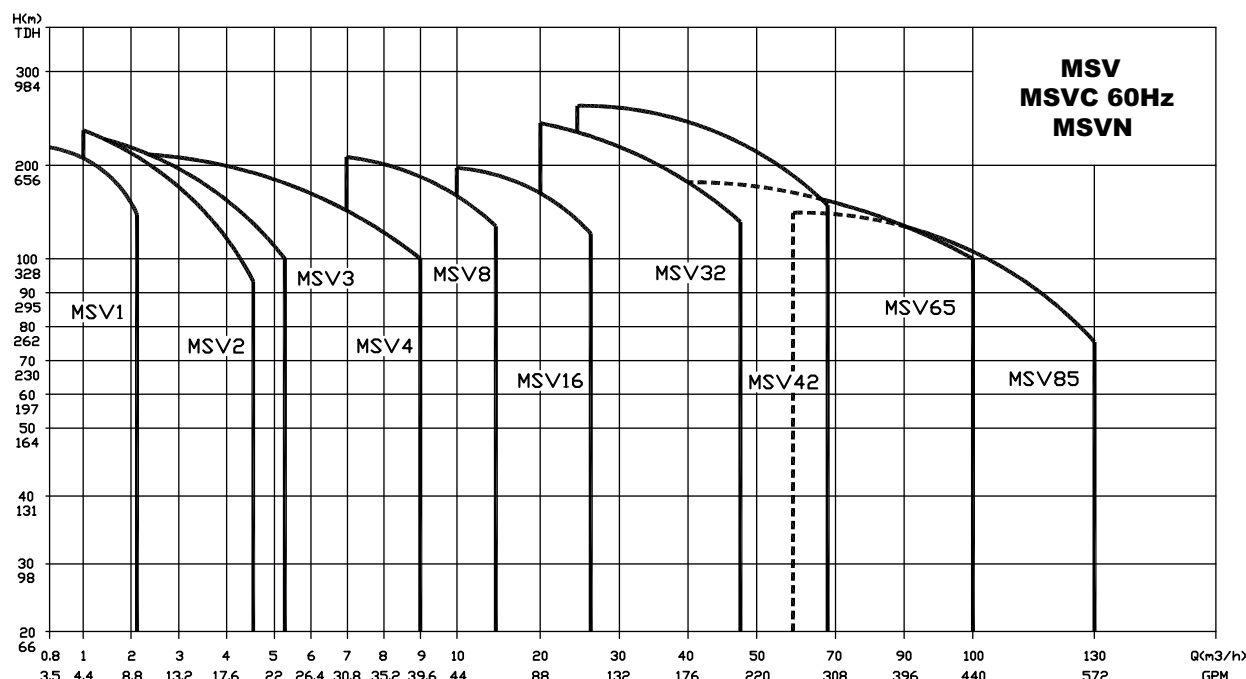
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MSV Performance Range

Performance curves apply to Series MSV, MSVC and MSVN Series



Product Range

Description	MSV1	MSV2	MSV3	MSV4	MSV8	MSV16	MSV32	MSV42	MSV65	MSV85
Rated flow [m³/h] GPM	1 4.4	2 8.8	3 13.2	4 17.6	8 35.2	16 70.4	32 140.8	42 184.9	65 286.2	85 374
Rated flow [l/s] GPS	.28 .07	.56 .15	.83 .22	1.1 .29	2.2 .58	4.4 1.16	8.9 2.35	12.5 3.3	17.8 4.7	25 6.6
Flow range [m³/h] GPM	.8-2.5 3.5-11	1-4.5 4.4-19.8	1.4-5 6.2-22	2.5-9 11-39.6	7-14 30.8-61.6	10-26 44-114.5	20-48 88-211.3	25-68 110-299.2	36-110 158.5-484	55-135 242-594
Flow range [l/s] GPS	.22-.78 .06-.21	.28-1.25 .07-.33	.39-1.5 .10-.40	.7-2.5 .18-.66	1.9-3.9 .5-1.03	2.8-7.2 .74-1.9	5.5-13.3 1.45-3.51	6.9-18.9 1.82-4.99	10-30.5 2.64-8.06	15.3-37.5 4.04-9.91
Max. pressure [bar] PSI	24 348	23.5 340.75	23 333.5	21 304.5	20 290	20 290	25 362.5	26 377	18 261	15 217.5
Motor power [kW] HP	.37-3 .5-4	.55-4 .74-5.4	.37-4 .5-5.4	.75-5.5 1-7.4	.75-11 1-14.8	2.2-18.5 3-24.8	3.0-30 4-40.2	5.5-45 7.4-60.3	7.5-45 10.1-60.3	11-45 14.8-60.3
Temperature range	-15°C~+120°C 5°F~248°F									
Max. efficiency [%]	44	46	54	59	64	70	76	78	80	81
Type										
MSV	•	•	•	•	•	•	•	•	•	•
MSVN/MSVC	•	•	•	•	•	•	•	•	•	•
MSVPipe connection										
DIN Flange	DN25	DN25	DN25	DN32	DN40	DN50	DN65	DN80	DN100	DN100
Oval Flange	G1	G1	G1	G1 1/4	G1 1/2					
MSVN/MSVC Pipe connection										
DIN Flange	DN25	DN25	DN25	DN32	DN40	DN50	DN65	DN80	DN100	DN100
Cutting ferrule joint	•	•	•	•	•	•				
Pipe thread	•	•	•	•	•	•				

Application

The MSV, MSVC and MSVN series of centrifugal pumps are multifunctional products designed to convey various fluids ranging from tap water to industrial liquids at different temperatures, flow rates and pressures. The MSV Series is designed for non-corrosive fluids, while the MSVC(304SS) and MSVN(316) are suitable for slightly corrosive liquids. Listed below is a sampling of applications:

- **Water Supply Systems:** Water filtration and transfer, and pressure boosting in high-rise buildings.
- **Industrial Booster Systems :** Process flow systems, cleaning systems, high-pressure washing systems, and fire fighting applications.
- **Industrial Liquid Transfer Systems :** HVAC systems, boiler water supply, condensing system, car wash systems, and alkalis.
- **Water Treatment Systems :** Ultrafiltration systems, reverse osmosis systems, distillation systems, separators, swimming pools.
- **Irrigation Agricultural:** Farmland irrigation, spray irrigation, dripping irrigation.

Operational Parameters

- Thin, clean, non-flammable and non-explosive liquids containing no solid granules and fibers.
- Liquid temperature:
Normal temperature type: +70°C, +158°F
Hot water type: +70°C... +120°C, 158°F...+248°F
- Ambient temperature: up to 40°C, 104°F
- Altitude: up to 1000m, 3280 ft.

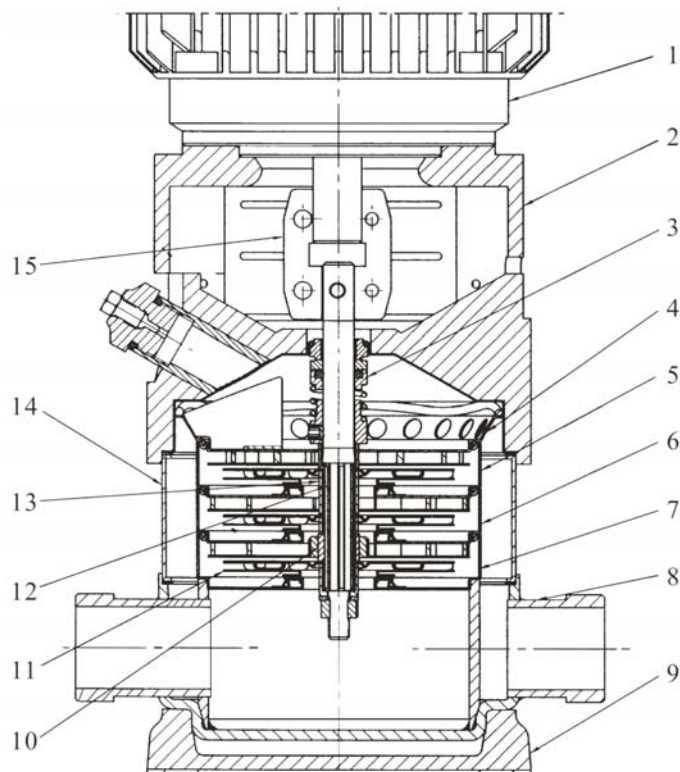
Pumps

MSV, MSVC and MSVN Series are vertical non-self priming multistage centrifugal pumps, coupled to a TEFC IP55 electric motor. The motor output shaft directly connects with the pump shaft through a coupling. The cylinder and flow passage components are assembled between the inlet and outlet heads using industrial grade connecting rods. The inlet and outlet are located at the pump bottom in the same plane, and designed for inline piping connections. The pump can be equipped to prevent dry-running conditions, phase loss, over and under voltage, over-current, plugged conditions, and outfitted with other sensory devices designed to protect the pump and process.

Electric Motors

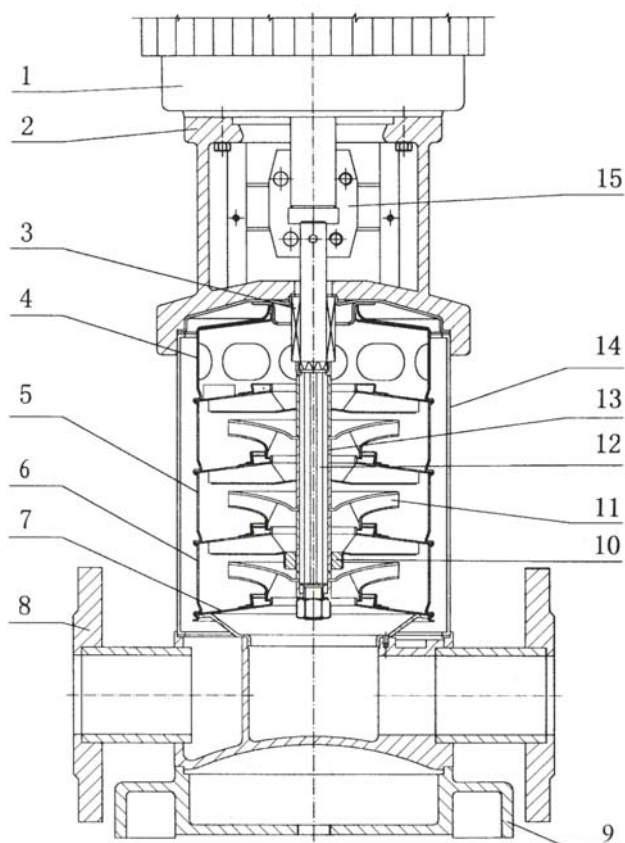
- **Total Enclosed Fan Cooled (TEFC) Standard**
- **Protection IEC: IP55**
- **Insulation Class: F**
- **Voltages in 60Hz:**
208/230, Single/Three Phase
208/230, Three Phase
230/460, Three Phase
575V, Contact Factory

Sectional View and Material Specifications MSV, MSVC, MSVN, 1,2,3,4



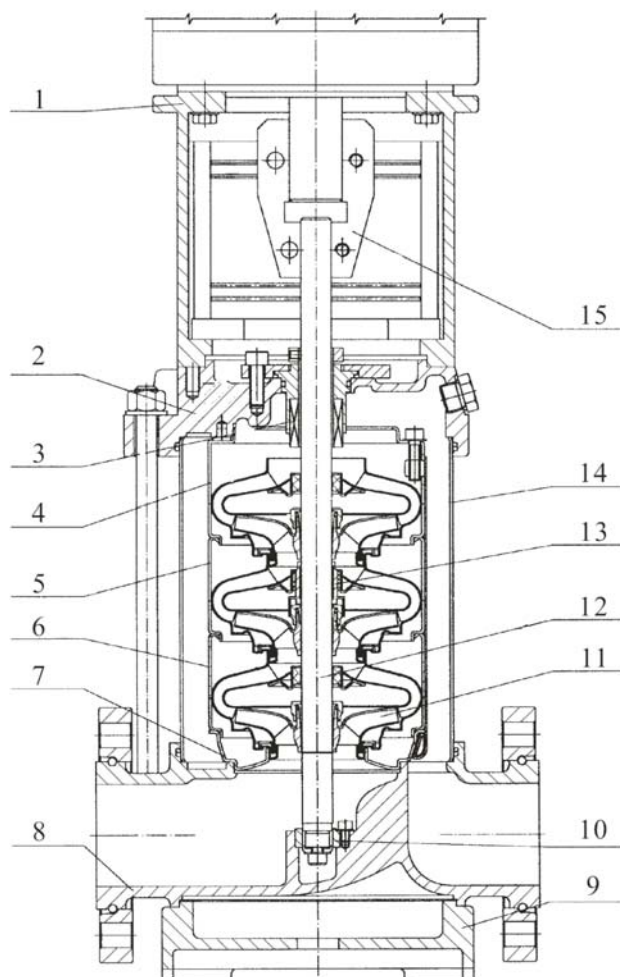
No.	Name	Material	AISI/ASTM
1	Electric motor	TEFC	IP55/IEC
2	Pump head	Cast iron	ASTM25B
3	Mechanical seal		
4	Water-out guide vane	Stainless steel	AISI304
5	Support guide vane	Stainless steel	AISI304
6	Guide vane	Stainless steel	AISI304
7	Inducer	Stainless steel	AISI304
9	Base frame	Cast iron	ASTM25B
10	Bearing	Tungsten carbide	
11	Impeller	Stainless steel	AISI304
12	Shaft	Stainless steel	AISI316
13	Impeller separating sleeve	Stainless steel	AISI304
14	Pressure-resistant cylinder	Stainless steel	AISI304
15	Coupling	Carbon steel	
	Rubber parts	FPM	
MSV			
8	Inlet and outlet section	Cast iron	ASTM25B
MSVC			
8	Inlet and outlet section	Stainless steel	AISI304
MSVN			
8	Inlet and outlet section	Stainless steel	AISI316

Model Description MSV, MSVC, MSVN, 8, 16



No.	Name	Material	AISI/ASTM
1	Electric motor	TEFC	IEC/IP55
2	Pump head	Cast iron	ASTM25B
3	Mechanical seal		
4	Water-out guide vane	Stainless steel	AISI304
5	Support guide vane	Stainless steel	AISI304
6	Guide vane	Stainless steel	AISI304
7	Inducer	Stainless steel	AISI304
9	Base frame	Cast iron	ASTM25B
10	Bearing	Tungsten carbide	
11	Impeller	Stainless steel	AISI304
12	Shaft	Stainless steel	AISI316
13	Impeller separating sleeve	Stainless steel	AISI304
14	Pressure-resistant cylinder	Stainless steel	AISI304
15	Coupling	Carbon steel	
	Rubber parts	FPM	
MSV			
8	Inlet and outlet section	Cast iron	ASTM25B
MSVC			
8	Inlet and outlet section	Stainless steel	AISI304
MSVN			
8	Inlet and outlet section	Stainless steel	AISI316

Sectional View and Material Specifications MSV, MSVC, MSVN, 32, 42, 65, 85

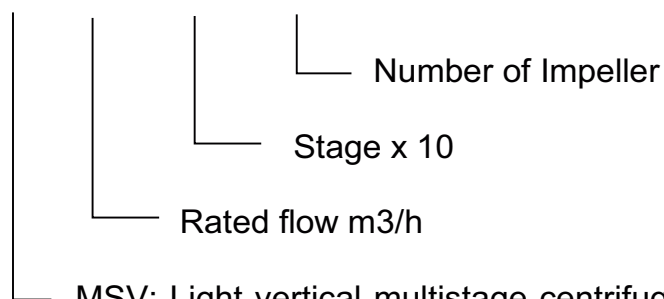


No	Name	Material	AISI / ASTM
1	Bracket	Cast iron	ASTM25B
3	Mechanical seal		
4	Water-out guide vane	Stainless steel	AISI304
5	Support guide vane	Stainless steel	AISI304
6	Guide vane	Stainless steel	AISI304
7	Inducer	Stainless steel	AISI304
9	Base framex	Cast iron	ASTM25B
10	Bottom bearing	Tungsten carbide	
11	Impeller	Stainless steel	AISI304
12	Shaft	Stainless steel	AISI316
13	Intermediate-shaft sleeve	Tungsten carbide	
14	Pressure-resistant cylinder	Stainless steel	AISI304
15	Coupling	Carbon steel	
	Rubber parts	FPM/EPDM	
MSV			
2	Pump head	Cast iron	ASTM25B
8	Inlet and outlet section	Cast iron	ASTM25B
MSVC			
2	Pump head	Stainless steel	AISI304
8	Inlet and outlet section	Stainless steel	AISI304
MSVN			
2	Pump head	Stainless steel	AISI316
8	Inlet and outlet section	Stainless steel	AISI316

Model Description

MSV, MSVC, MSVN, 1, 2, 3, 4, 8, 16

MSV 8 - 20 / 1



MSVC: Wetted materials of 304 Stainless Steel

MSVN: Wetted materials of 316 Stainless Steel

Maximum Inlet Pressure

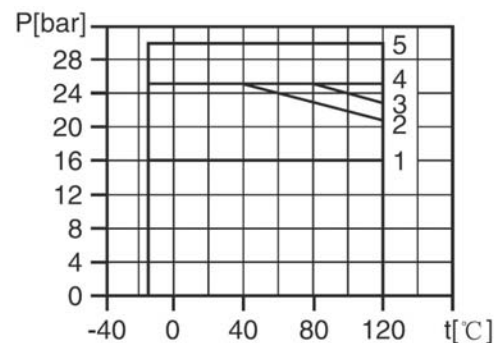
The maximum inlet pressure is shown in the table below. The actual inlet pressure plus the shut off pressure of the pump must be lower than the maximum. allowable working pressure.

Model	max. inlet pressure
MSV-MSVC-MSVN1 Series	
MSV-MSVC-MSVNN1-20 ~ 1-60	6 [bar]
MSV-MSVC-MSVN1-70 ~ 1-27	10 [bar]
MSV-MSVC-MSVN2 Series	
MSV-MSVC-MSVN2-20	6 [bar]
MSV-MSVC-MSVN2-30 ~ 2-70	10 [bar]
MSV-MSVC-MSVN2-90 ~ 2-180	15 [bar]
MSV-MSVC-MSVN3 Series	
MSV-MSVC-MSVN3-20 ~ 3-50	6 [bar]
MSVMSVC-MSVN3-60 ~ 3-190	10 [bar]
MSV-MSVC-MSVN3-200 ~ 3-250	15 [bar]
MSV-MSVC-MSVN4 Series	
MSV-MSVC-MSVN4-20	6 [bar]
MSV-MSVC-MSVN4-30 - 4-80	10 [bar]
MSV-MSVC-MSVN4-100 - 4-160	15 [bar]
MSV-MSVC-MSVN8	
MSV-MSVC-MSVN8-20/1 ~ 8-50	6 [bar]
MSV-MSVC-MSVN8-60 ~ 8-140	10 [bar]
MSV-MSVC-MSVN16	
MSV-MSVC-MSVNN16-20/1 ~ 16-20	6 [bar]
MSV-MSVC-MSVNN16-30 ~ 16-100	10 [bar]
MSV-MSVC-MSVN32	
MSV-MSVC-MSVN32-10-1 ~ 32-30-2	3 [bar]
MSV-MSVC-MSVN32-20 ~ 32-70	10 [bar]
MSV-MSVC-MSVN32-80-2 ~ 32-100-2	15 [bar]
MSV-MSVC-MSVN42	
MSV-MSVC-MSVN42-10-1 ~ 42-20-2	4 [bar]
MSV-MSVC-MSVN42-20 ~ 42-40-2	10 [bar]
MSV-MSVC-MSVN42-40 ~ 42-70	15 [bar]
MSV-MSVC-MSVN65	
MSV-MSVC-MSVN65-10-1 ~ 65-20-2	4 [bar]
MSV-MSVC-MSVN65-20 ~ 65-30-2	10 [bar]
MSV-MSVC-MSVN65-30 ~ 65-50-2	15 [bar]
MSV-MSVC-MSVN85	
MSV-MSVC-MSVN85-10-1 ~ 85-10	4 [bar]
MSV-MSVC-MSVN85-20-2 ~ 85-20	10 [bar]
MSV-MSVC-MSVN85-30-2 ~ 85-40-2	15 [bar]

Maximum Working Pressure

Model	Curve
MSV-MSVC-MSVN1	
MSV-MSVC-MSVN1-20 ~ 1-170	1
MSV-MSVC-MSVN1-190 ~ 1-250	2
MSV-MSVC-MSVNN2	
MSV-MSVC-MSVNN2-20 ~ 2-110	1
MSV-MSVC-MSVN2-130 ~ 2-180	2
MSV-MSVC-MSVN3	
MSV-MSVC-MSVNN3-20 ~ 3-150	1
MSV-MSVC-MSVN3-170 ~ 3-250	2
MSV-MSVC-MSVN4	
MSV-MSVC-MSVNN4-20 ~ 4-100	1
MSV-MSVC-MSVNN4-120 ~ 4-160	2
MSV-MSVC-MSVN8	
MSV-MSVC-MSVN8-20/1 ~ 8-80	1
MSV-MSVC-MSVN8-100 ~ 8-140	3
MSV-MSVC-MSVN16	
MSV-MSVC-MSVN16-20 ~ 16-60	1
MSV-MSVC-MSVNN16-70 ~ 16-100	3
MSV-MSVC-MSVN32	
MSV-MSVC-MSVN32-10-1 ~ 32-50-2	1
MSV-MSVC-MSVN32-50 ~ 32-90-2	4
MSV-MSVC-MSVN32-90 ~ 32-100-2	5
MSV-MSVC-MSVN42	
MSV-MSVC-MSVN42-10-1 - 42-30	1
MSV-MSVC-MSVN42-40-2 ~ 42-60	4
MSV-MSVC-MSVN42-70-2 ~ 42-70	5
MSV-MSVC-MSVN65	
MSV-MSVC-MSVN65-10-1 ~ 65-30	1
MSV-MSVC-MSVN65-40-2 ~ 65-50-2	4
MSV-MSVC-MSVN85	
MSV-MSVC-MSVN85-10-1 ~ 85-30	1
MSV-MSVC-MSVN85-40-2	4

The following figure shows the limitations of pressure and temperature, which shall be kept within the region as shown in the figure.



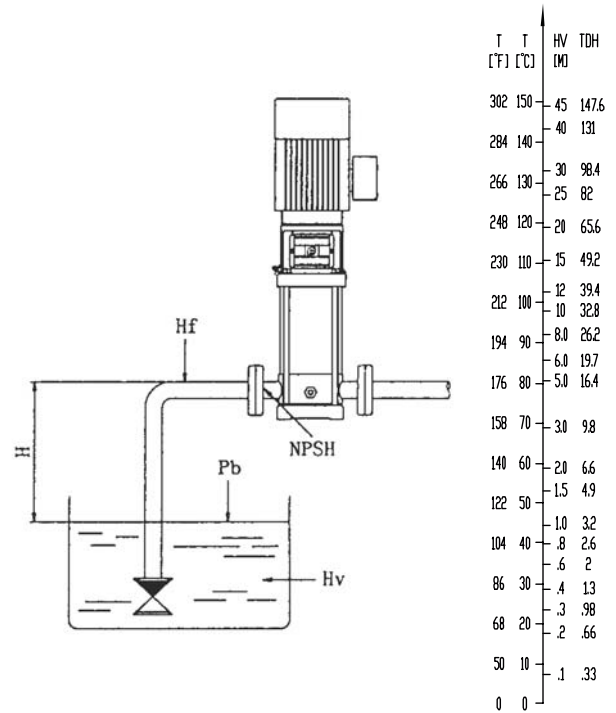
Minimum Inlet Pressure NPSH

In the event that the pressure in the pump is lower than the steam pressure used to convey liquid, cavitation will occur. To avoid cavitation, a minimum pressure at the inlet side of the pump shall be guaranteed. The maximum suction head can be calculated with following formula:

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

P_b = atmospheric pressure [bar] (can be set as 1bar)
 In a closed system, P_b means system pressure [bar]
 NPSH = Net positive suction head [m], It can be read out from the point of possible max. flow rate shown on NPSH curve
 H_f = Pipe and fitting friction loss at the inlet [m]
 H_v = Static pressure [m]
 H_s = Safety margin Minimum 0.5m delivery head

If the calculated result H is positive, the pump may run under the max. suction H . In case the calculated result H is negative, a minimum delivery head at the inlet pressure is necessary.

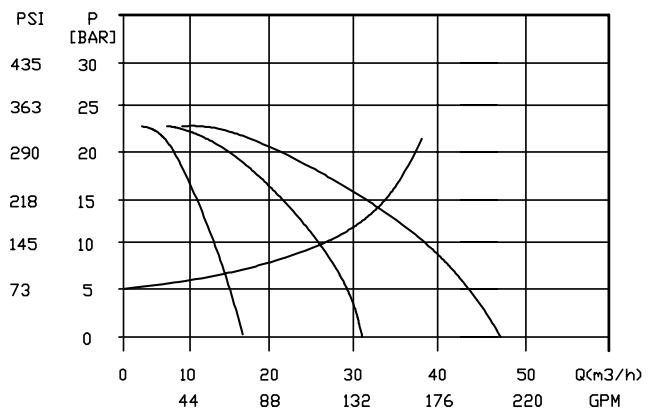


Ensure that the pump will not operate in conditions that create cavitation.

Parallel Operation

Connecting several pumps in parallel will increase the system output more than a single large pump.

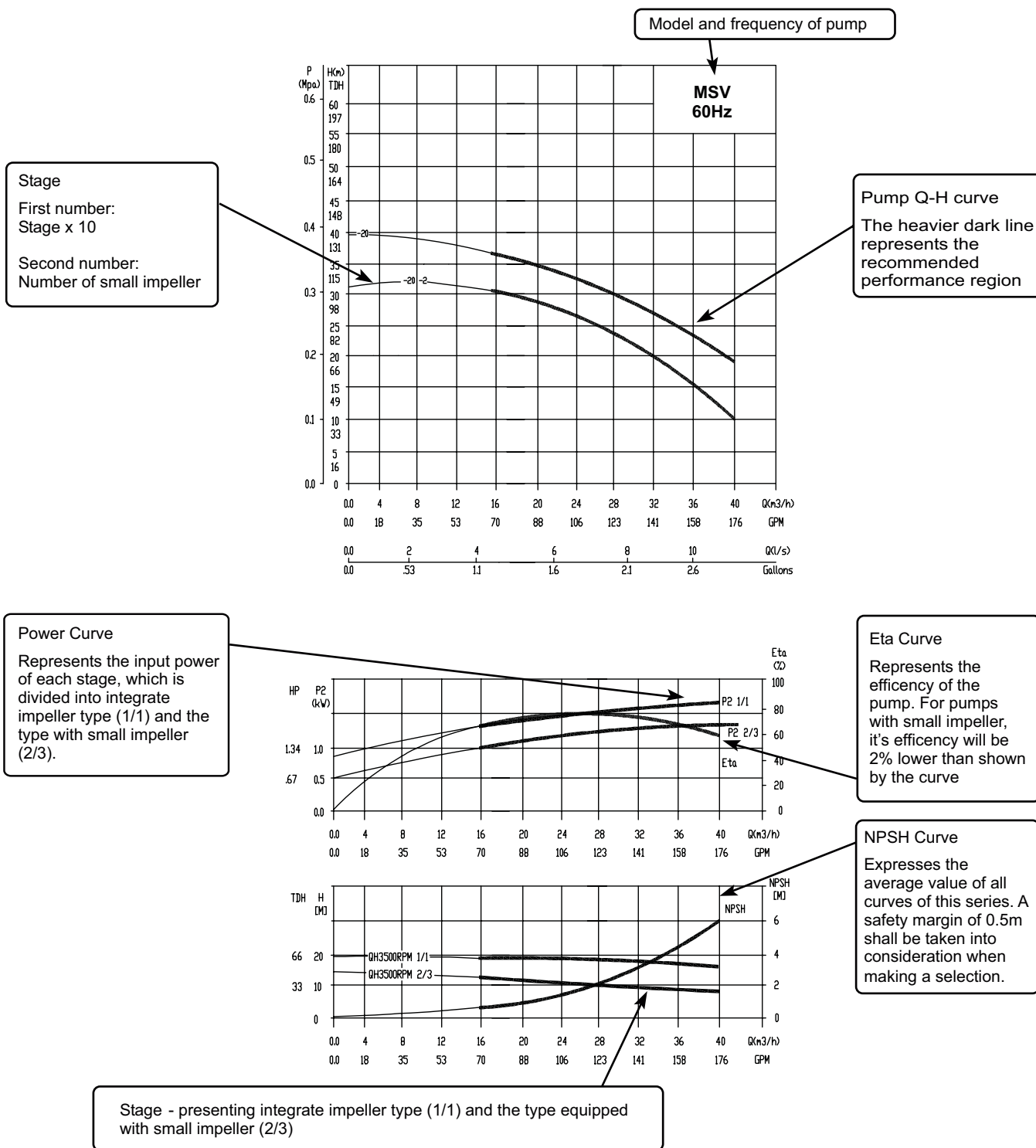
- Applicable to different working states necessary in a variable flow system.
- Increasing the possibility of water supply when the pump is in failure. Because in case of pump failure, only part of the system flow is effected.



Multiple pumps can be connected in parallel to increase system capacity demands.

Performance Curves

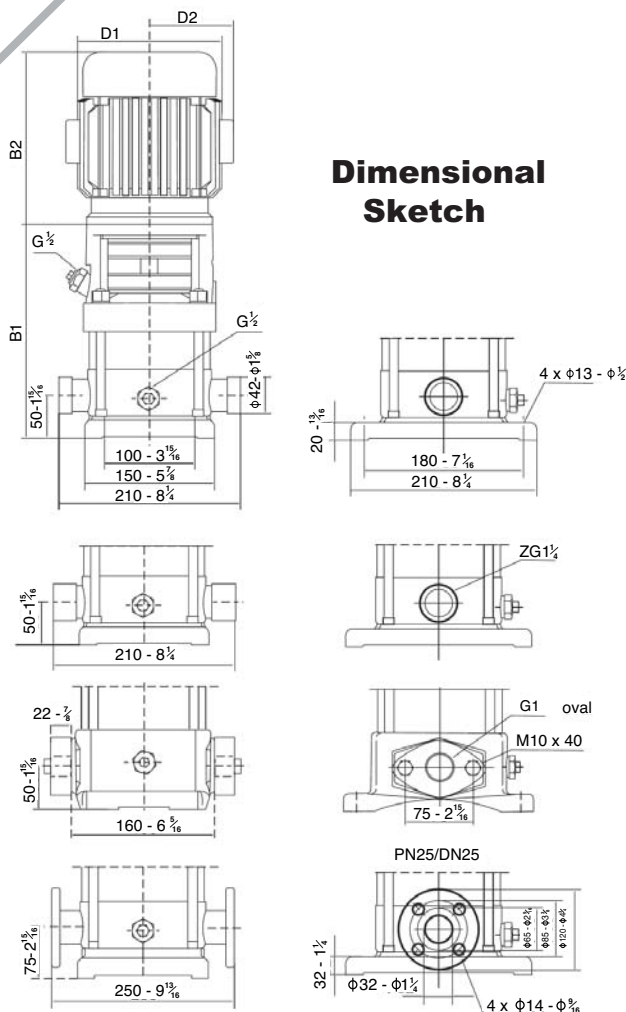
1. All the performance curves are based on the measured values of a motor at a constant speed of 3500 rpm.
2. Performance curve tolerances conform with ISO.
3. Measurement is with 20 °C air-free water, kinematic viscosity of 1mm² /sec.
4. Operation of the pump must be within the performance region shown by the heavier line on the performance curve to prevent overheating caused by insufficient flow or motor overloading caused by excessive flow rates.



MSV1 MSVC1 MSVN1

Remark: The data, tables, and sketches provided apply to the **MSV**, **MSVC** and **MSVN** versions of the pump.

Dimensional Sketch



Performance Table

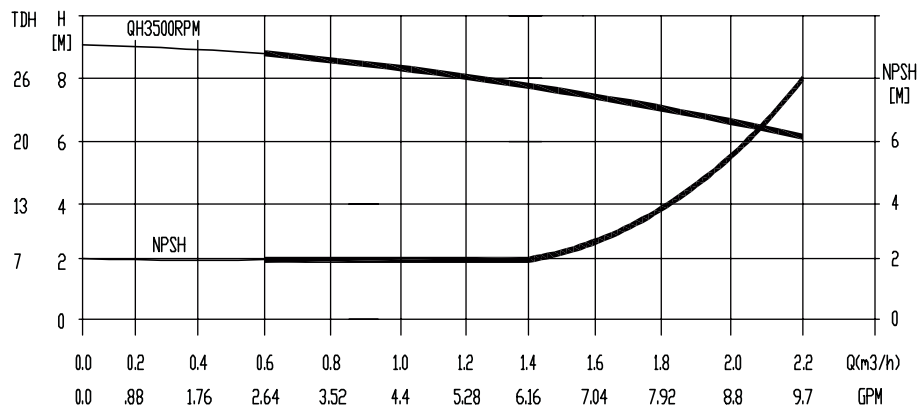
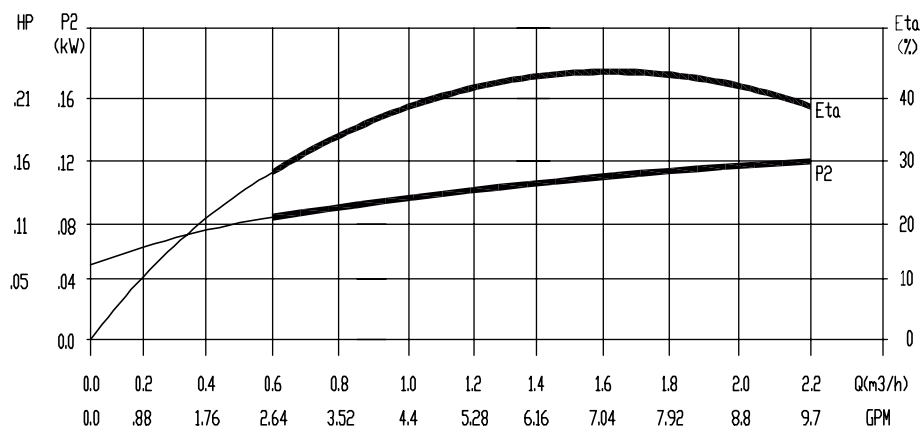
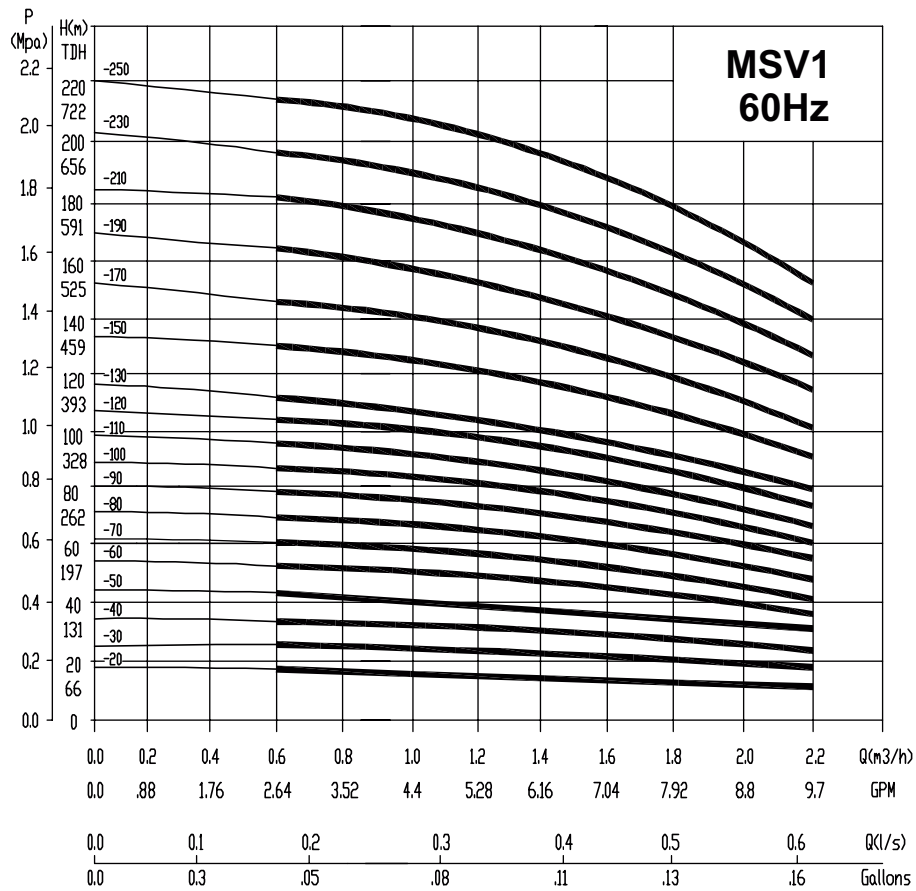
Model	(kW) HP	Q (m³/h) GPM	0.6 2.6	0.8 3.5	1 4.4	1.2 5.3	1.4 6.2	1.6 7	1.8 7.9	2 8.8	2.2 9.7
MSV1-20	.37 .5	HCM TDH	17.5 57	17 56	16.5 54	16 53	15.5 51	15 49	14.5 48	13.2 43	13 43
MSV1-30	.37 .5	HCM TDH	26.5 87	26 85	25.5 84	25 82	24 79	23 75	22 72	20.5 67	19 62
MSV1-40	.37 .5	HCM TDH	35 115	34 112	33 108	32 105	31 102	30 98	29 95	27 89	25 82
MSV1-50	.55 .74	HCM TDH	44 144	43 141	42 138	41 135	39 128	38 125	36 118	34 112	32 105
MSV1-60	.55 .74	HCM TDH	52 171	51 167	50 164	49 161	47 154	45 148	43 141	40 131	38 125
MSV1-70	.75 1	HCM TDH	61 200	60 197	59 194	57 187	55 180	53 174	51 167	47 154	43 141
MSV1-80	.75 1	HCM TDH	69 226	68 223	67 220	65 213	63 207	61 200	58 198	53 174	57 187
MSV1-90	.75 1	HCM TDH	78 256	77 253	75 246	73 240	71 233	68 223	65 213	60 197	55 180
MSV1-100	1.1 1.5	HCM TDH	87 285	85 279	83 272	81 266	78 256	75 246	72 236	67 220	61 200
MSV1-110	1.1 1.5	HCM TDH	96 315	94 308	92 302	89 292	86 282	83 272	79 259	73 240	67 220
MSV1-120	1.1 1.5	HCM TDH	104 341	102 335	100 328	97 318	94 308	90 295	86 282	79 259	72 236
MSV1-130	1.1 1.5	HCM TDH	113 371	111 364	108 354	105 345	102 335	98 322	93 305	86 282	79 259
MSV1-150	1.5 2	HCM TDH	130 427	127 417	124 407	121 397	117 384	113 371	107 351	99 325	90 295
MSV1-170	1.5 2	HCM TDH	147 482	144 472	141 463	137 449	132 433	126 413	120 394	112 367	103 338
MSV1-190	2.2 2.95	HCM TDH	164 538	161 538	157 515	153 502	147 482	141 463	134 440	124 407	114 374
MSV1-210	2.2 2.95	HCM TDH	181 594	178 584	174 571	170 558	164 538	158 518	149 489	138 453	126 413
MSV1-230	2.2 2.95	HCM TDH	198 650	195 640	191 627	186 610	179 587	171 561	163 535	152 499	140 459
MSV1-250	3 4	HCM TDH	214 702	211 692	207 679	202 663	195 640	186 610	176 577	164 538	152 499

Dimensions and Weight Table

Model	Size in MM-Inches					Weight KG/lbs.
	B1	B2	B1+B2	D1	D2	
MSV1-20	238 9.375	210 8.25	448 17.625	148 5.8125	117 4.625	20 44
MSV1-30	238 9.375	210 8.25	448 17.625	148 5.8125	117 4.625	20 44
MSV1-40	256 10.0625	210 8.25	466 18.3125	148 5.8125	117 4.625	20 44
MSV1-50	274 10.8125	210 8.25	484 19.0625	148 5.8125	117 4.625	22 49
MSV1-60	292 11.5	210 8.25	502 19.75	148 5.8125	117 4.625	22 49
MSV1-70	315 12.375	245 9.625	560 22	170 6.6875	142 5.5625	25 55
MSV1-80	333 13.125	245 9.625	578 22.75	170 6.6875	142 5.5625	25 55
MSV1-90	351 13.8125	245 9.625	596 23.4375	170 6.6875	142 5.5625	25 55
MSV1-100	369 14.5	245 9.625	614 24.125	170 6.6875	142 5.5625	28 62
MSV1-110	387 15.25	245 9.625	632 24.875	170 6.6875	142 5.5625	28 62
MSV1-120	410 16.125	245 9.625	655 25.75	170 6.6875	142 5.5625	28 62
MSV1-130	428 16.875	245 9.625	673 26.5	170 6.6875	142 5.5625	28 62
MSV1-150	476 18.75	290 11.4375	766 30.1875	190 7.5	155 6.125	30 66
MSV1-170	512 20.1875	290 11.4375	802 31.625	190 7.5	155 6.125	30 66
MSV1-190	548 21.5625	290 11.4375	838 33	190 7.5	155 6.125	35 77
MSV1-210	584 23	290 11.4375	874 34.4375	190 7.5	155 6.125	35 77
MSV1-230	620 24.4375	290 11.4375	910 35.875	190 7.5	155 6.125	40 88
MSV1-250	664 26.125	315 12.375	979 38.5	197 7.75	165 6.5	45 99

Performance Curves

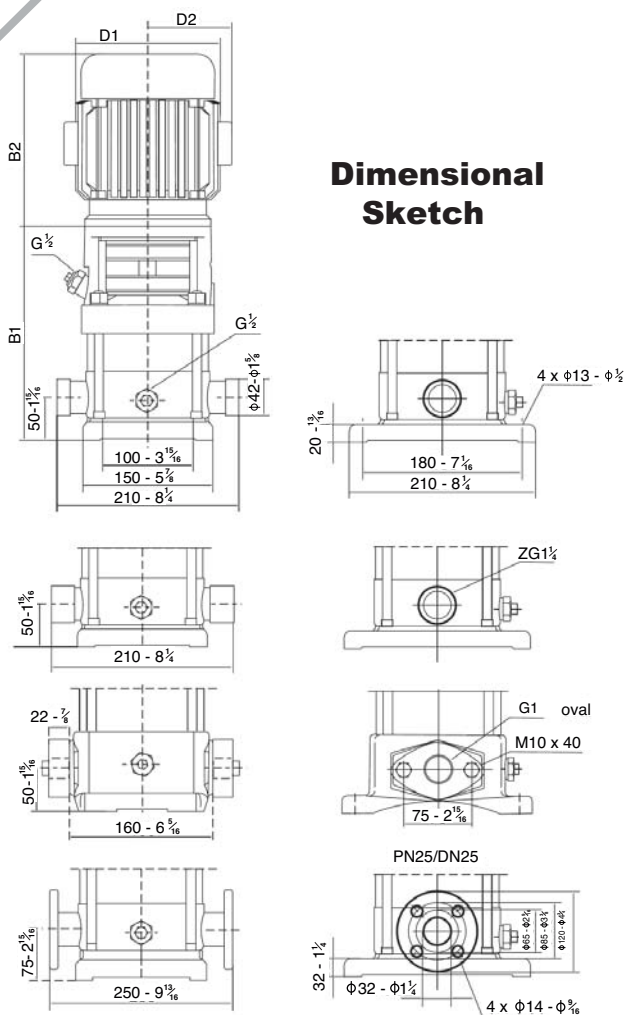
The performance curves apply to the MSV, MSVC and MSVN Series



MSV2 MSVC2 MSVN2

Remark: The data, tables, and sketches provided apply to the **MSV**, **MSVC** and **MSVN** versions of the pump.

Dimensional Sketch



Performance Table

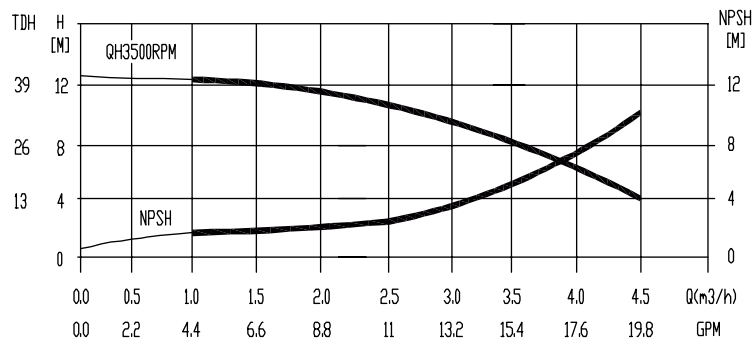
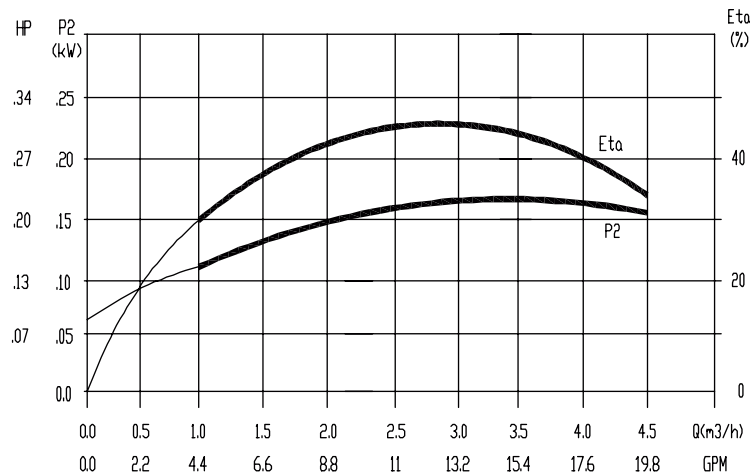
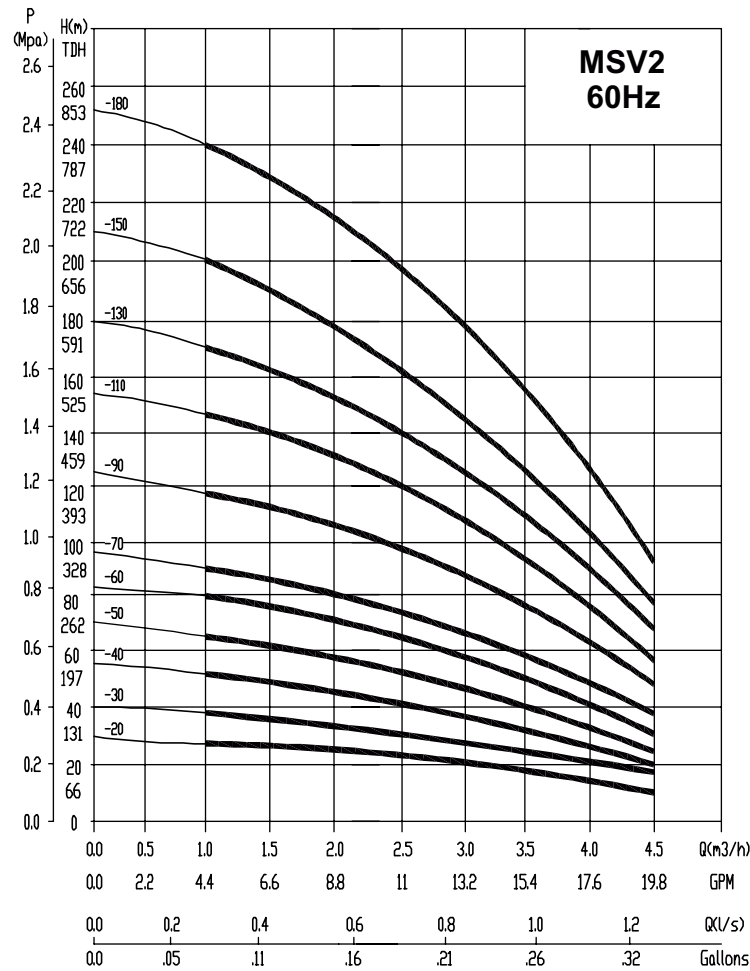
Model	(kW) HP	Q (m ³ /h) GPM	1	1.5	2	2.5	3	3.5	4	4.5
			4.4	6.6	8.8	11	13.2	15.4	17.6	19.8
MSV2-20	.55	HCM	26	24	22	21	19	16	12	9
	.74	TDH	85	79	72	69	62	52	39	30
MSV2-30	.75	HCM	39	36	34	31	27	24	19	15
	1	TDH	128	118	112	102	89	79	62	49
MSV2-40	1.1	HCM	52	48	45	42	36	32	26	20
	1.5	TDH	171	157	148	138	118	105	85	66
MSV2-50	1.1	HCM	65	61	57	52	46	41	33	25
	1.5	TDH	213	200	187	171	151	135	108	82
MSV2-60	1.1	HCM	78	74	69	63	56	49	40	30
	1.5	TDH	256	243	226	207	184	161	131	98
MSV2-70	1.5	HCM	92	86	81	74	66	57	47	35
	2	TDH	302	282	266	243	217	187	154	115
MSV2-90	2.2	HCM	118	111	104	95	86	76	61	45
	2.95	TDH	387	364	341	312	282	249	200	148
MSV2-110	2.2	HCM	144	137	128	117	106	91	75	55
	2.95	TDH	472	449	420	384	348	299	246	180
MSV2-130	3	HCM	171	163	152	81	78	75	72	67
	4	TDH	561	535	499	266	256	246	236	220
MSV2-150	3	HCM	198	188	176	161	146	125	104	77
	4	TDH	650	617	577	528	479	410	341	253
MSV2-180	4	HCM	238	228	212	195	175	151	126	94
	5.4	TDH	781	748	696	640	574	495	413	308

Dimensions and Weight Table

Model	Size in MM-Inches					Weight KG/lbs.
	B1	B2	B1+B2	D1	D2	
MSV2-20	238	210	448	148	117	20
	9.375	8.25	17.625	5.8125	4.625	44
MSV2-30	238	245	483	170	142	20
	9.375	9.625	19	6.6875	5.5625	44
MSV2-40	256	245	501	170	142	25
	10.0625	9.625	19.6875	6.6875	5.5625	55
MSV2-50	274	245	519	170	142	25
	10.8125	9.625	20.4375	6.6875	5.5625	55
MSV2-60	297	245	542	170	142	25
	11.6875	9.625	21.3125	6.6875	5.5625	55
MSV2-70	325	290	615	170	155	30
	12.8125	11.4375	24.25	6.6875	6.125	66
MSV2-90	361	290	651	190	155	35
	14.1875	11.4375	25.625	7.5	6.125	77
MSV2-110	397	290	687	190	155	35
	15.625	11.4375	27.0625	7.5	6.125	77
MSV2-130	450	315	765	197	165	40
	17.6875	12.375	30.0625	7.75	6.5	88
MSV2-150	486	315	801	197	165	40
	19.125	12.375	31.5	7.75	6.5	88
MSV2-180	540	335	875	230	185	45
	21.25	13.1875	34.4375	9.0625	7.25	99

Performance Curves

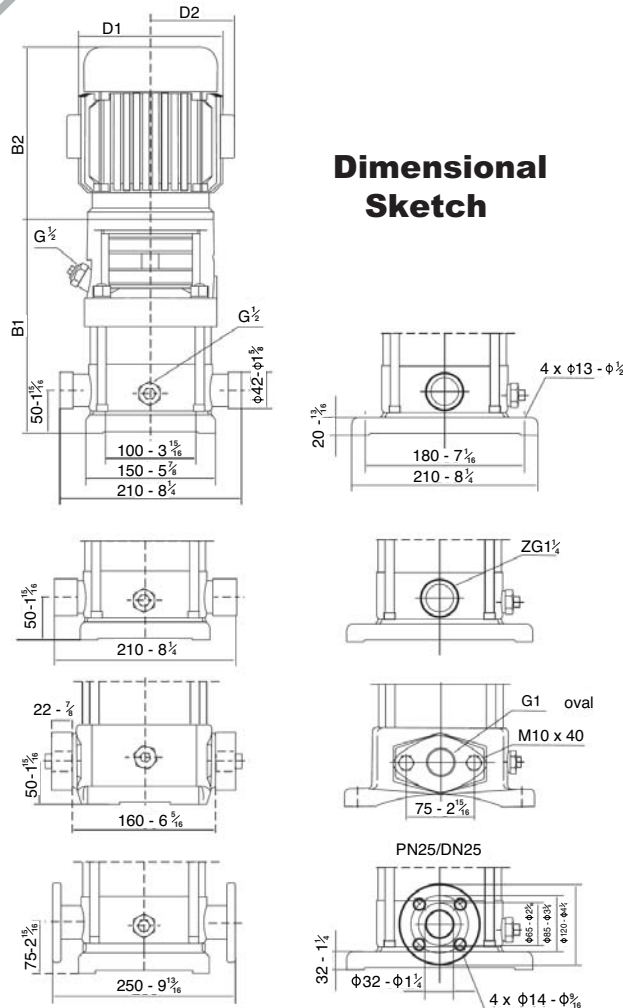
The performance curves apply to the MSV, MSVC and MSVN Series



MSV3 MSVC3 MSVN3

Remark: The data, tables, and sketches provided apply to the **MSV**, **MSVC** and **MSVN** versions of the pump.

Dimensional Sketch



Performance Table

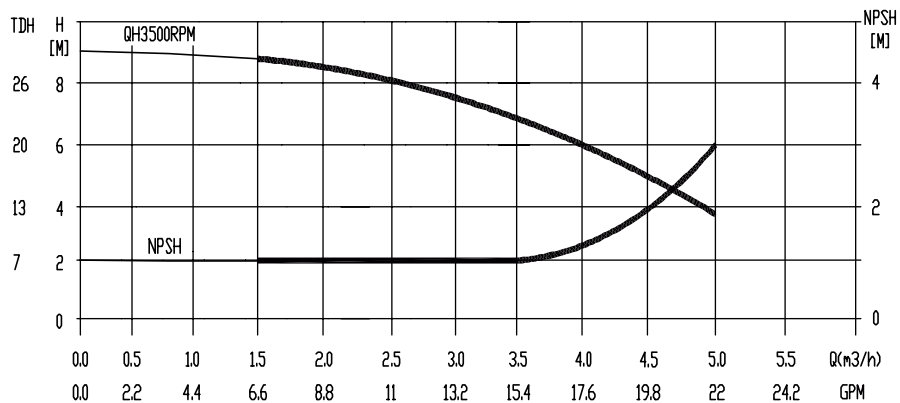
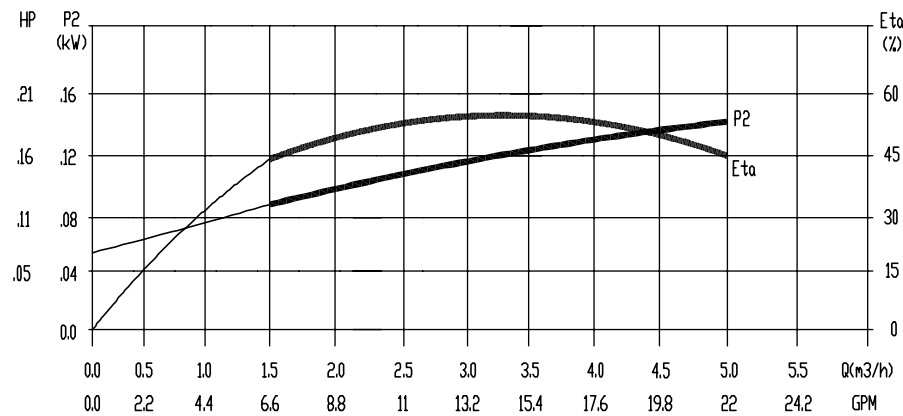
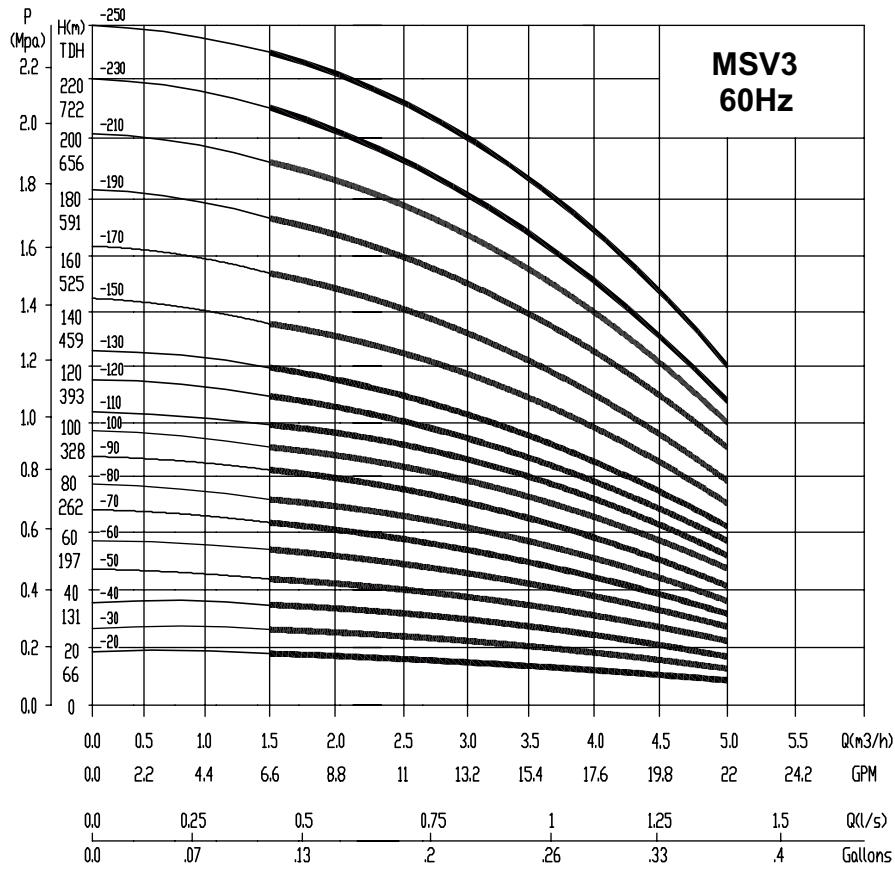
Model	(kW) HP	0 GPM	1.5 6.6	2 8.8	2.5 11	3 13.2	3.5 15.4	4 17.6	4.5 19.8	5 22
MSV3-20	.37 .5	HQD TDH	17.5 57	17 56	16 52	15 49	13.5 44	11.5 38	10 33	7 23
MSV3-30	.55 .74	HQD TDH	26.5 87	25.5 84	24.5 80	23 75	20.5 67	18.5 61	15.5 51	12 39
MSV3-40	.55 .74	HQD TDH	35 115	34 112	32 105	30 98	27.5 90	24.5 80	21 69	16.5 54
MSV3-50	.75 1	HQD TDH	44.5 146	43 141	41 135	38.5 126	35.5 116	32 105	27.5 90	22 72
MSV3-60	1.1 1.5	HQD TDH	54 177	52 171	50 164	46.5 153	43 141	38.5 126	33 108	27 89
MSV3-70	1.1 1.5	HQD TDH	62.5 205	60.5 199	57.5 189	54 177	49.5 162	44.5 146	38.5 126	31 102
MSV3-80	1.1 1.5	HQD TDH	71 233	69 226	65.5 215	61 200	56 184	50 164	43 141	38 125
MSV3-90	1.5 2	HQD TDH	81.5 267	79 259	75.5 248	71 233	65.5 215	59 194	50 164	41 135
MSV3-100	1.5 2	HQD TDH	90.5 297	87.5 287	83.5 274	78.5 258	72 236	65 213	56 184	46 151
MSV3-110	1.5 2	HQD TDH	99.5 326	96 315	91.5 300	86 282	79 259	71 233	61 200	50 164
MSV3-120	2.2 2.95	HQD TDH	110 361	106 348	101 331	95 312	87.5 287	79 259	68 223	56 184
MSV3-130	2.2 2.95	HQD TDH	119 390	115 377	109 358	103 338	94.5 310	85 279	74 243	60.5 199
MSV3-150	2.2 2.95	HQD TDH	136 446	131 430	125 410	118 387	108 354	97 318	84 276	69 226
MSV3-170	2.2 2.95	HQD TDH	154 505	148 486	141 463	133 436	122 400	109 358	94 308	77 253
MSV3-190	3 4	HQD TDH	174 571	168 551	160 525	150 492	139 456	125 410	108 354	89 292
MSV3-210	3 4	HQD TDH	191 627	185 607	176 577	166 545	153 502	137 449	119 390	97 318
MSV3-230	3 4	HQD TDH	209 686	202 663	192 630	181 594	166 545	149 489	129 423	106 348
MSV3-250	4 5.4	HQD TDH	229 751	222 728	212 696	199 653	184 604	165 541	144 472	119 390

Dimensions and Weight Table

Model	Size in MM-Inches					Weight KG/lbs.
	B1	B2	B1+B2	D1	D2	
MSV3-20	238	210	448	148	117	20
	9.375	8.25	17.625	5.8125	4.625	44
MSV3-30	238	210	448	148	117	20
	9.375	8.25	17.625	5.8125	4.625	44
MSV3-40	256	210	466	148	117	20
	10.0625	8.25	18.3125	5.8125	4.625	44
MSV3-50	279	245	524	170	142	22
	11	9.625	20.625	6.6875	5.5625	49
MSV3-60	297	245	542	170	142	25
	11.6875	9.625	21.3125	6.6875	5.5625	55
MSV3-70	315	245	560	170	142	25
	12.375	9.625	22	6.6875	5.5625	55
MSV3-80	333	245	578	170	142	25
	13.125	9.625	22.75	6.6875	5.5625	55
MSV3-90	368	290	658	190	155	30
	14.5	11.4375	25.9375	7.5	6.125	66
MSV3-100	386	290	676	190	155	30
	15.1875	11.4375	26.625	7.5	6.125	66
MSV3-110	404	290	694	190	155	30
	15.875	11.4375	27.3125	7.5	6.125	66
MSV3-120	422	290	712	190	155	35
	16.625	11.4375	28.0625	7.5	6.125	77
MSV3-130	440	290	730	190	155	35
	17.3125	11.4375	28.75	7.5	6.125	77
MSV3-150	476	290	766	190	155	35
	18.75	11.4375	30.1875	7.5	6.125	77
MSV3-170	512	290	802	190	155	35
	20.1875	11.4375	31.625	7.5	6.125	77
MSV3-190	556	315	871	197	165	40
	21.875	12.375	34.25	7.75	6.5	88
MSV3-210	592	315	907	197	165	40
	23.3125	12.375	35.6875	7.75	6.5	88
MSV3-230	628	315	943	197	165	40
	24.75	12.375	37.125	7.75	6.5	88
MSV3-250	664	335	999	230	188	55
	26.125	13.1875	39.3125	9.0625	7.375	110

Performance Curves

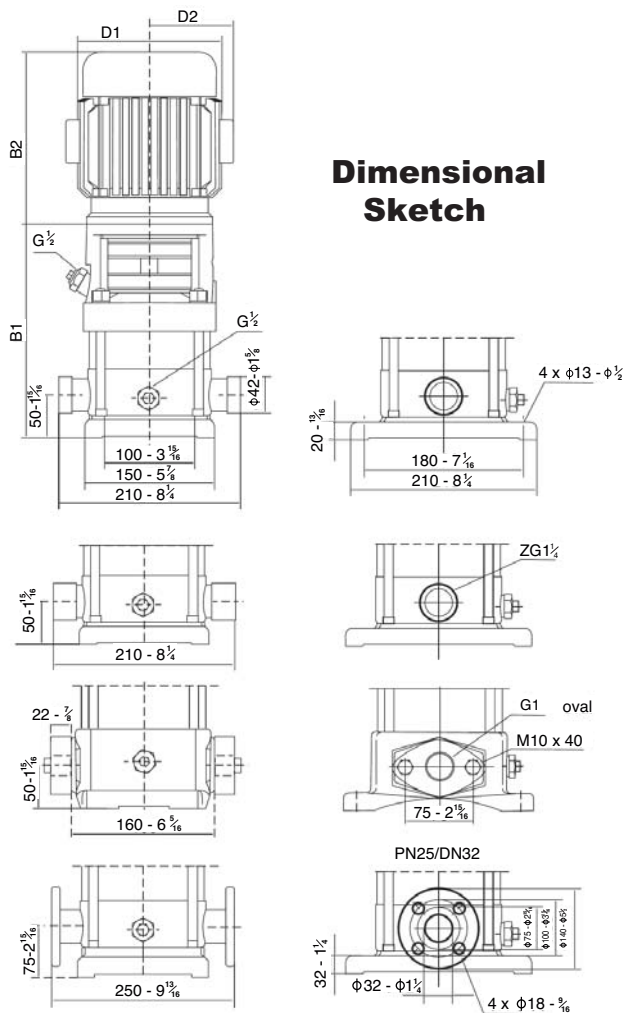
The performance curves apply to the MSV, MSVC and MSVN Series



MSV4 MSVC4 MSVN4

Remark: The data, tables, and sketches provided apply to the **MSV**, **MSVC** and **MSVN** versions of the pump.

Dimensional Sketch



Performance Table

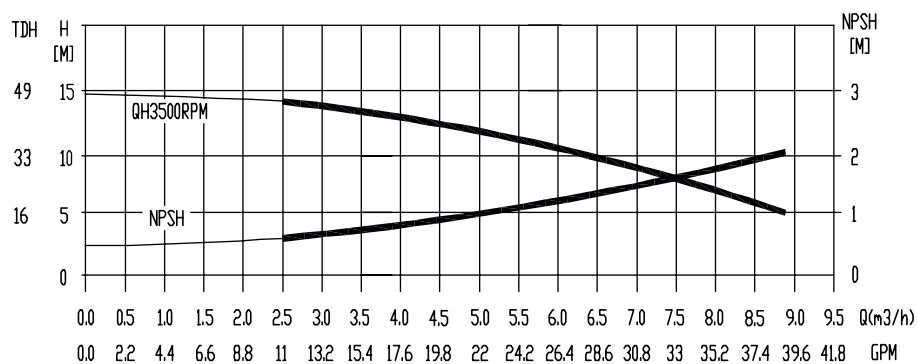
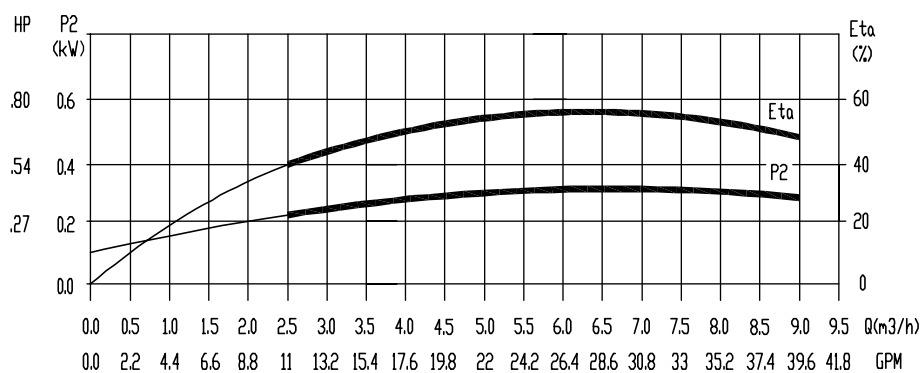
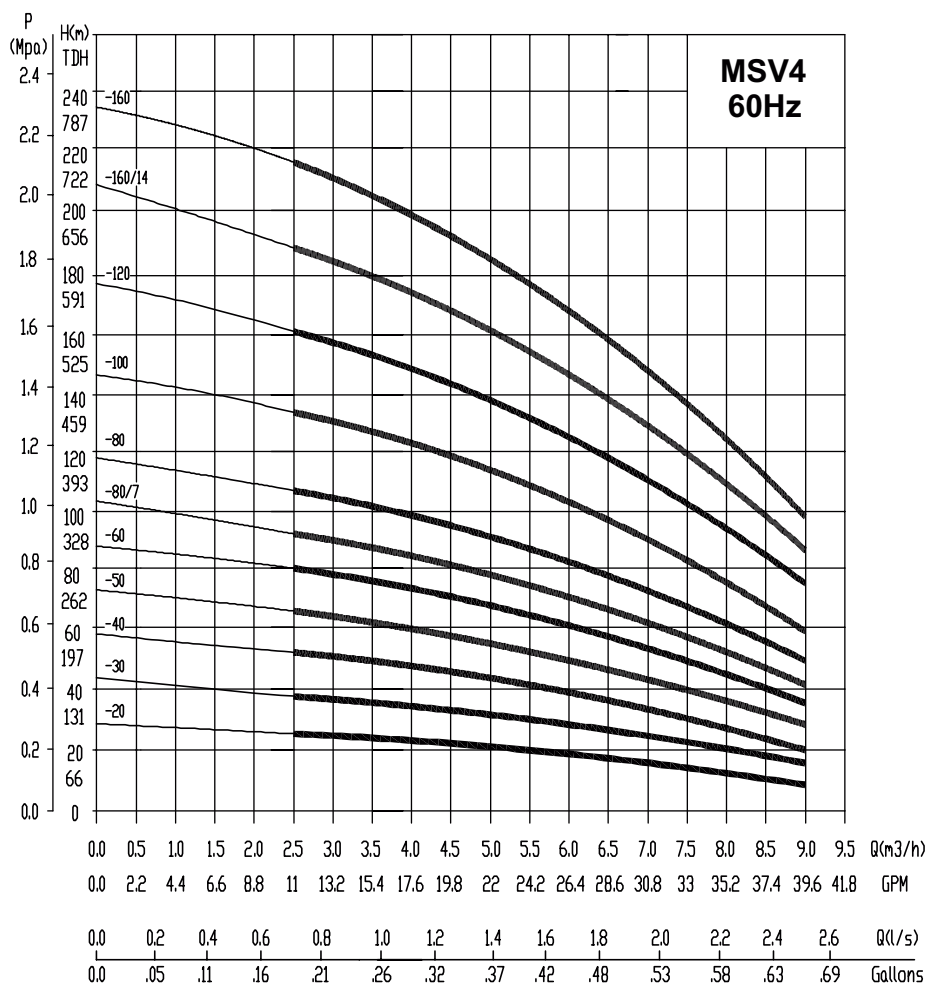
Model	(kW) HP	Q (m³/h) GPM	2.5 11	3 13.2	4 8.8	5 22	6 26.4	7 30.8	8 35.2	9 39.6
MSV4-20	.75	HCM	26	25	23	21	19	16	14	11
	1	TDH	85	82	75	69	62	52	46	36
MSV4-30	1.1	HCM	40	39	36	32	30	26	22	18
	1.5	TDH	131	128	118	105	98	85	72	59
MSV4-40	1.5	HCM	53	52	48	44	41	35	31	24
	2	TDH	174	171	157	144	135	115	102	79
MSV4-50	2.2	HCM	66	65	60	55	51	44	39	30
	2.95	TDH	217	213	197	180	167	144	128	98
MSV4-60	2.2	HCM	80	78	73	67	61	54	47	36
	2.95	TDH	262	256	240	220	200	177	154	118
MSV4-70	3	HCM	93	91	85	78	71	63	55	42
	4	TDH	305	299	279	256	233	207	180	138
MSV4-80	3	HCM	107	104	97	90	82	73	63	49
	4	TDH	351	341	318	295	269	240	207	161
MSV4-100	4	HCM	134	130	121	113	103	92	80	61
	5.4	TDH	440	427	397	371	338	302	262	200
MSV4-120	4	HCM	161	156	145	136	125	111	96	74
	5.4	TDH	528	512	476	446	410	364	315	243
MSV4-140	5.5	HCM	188	183	170	159	146	130	112	86
	7.4	TDH	617	600	558	522	479	427	367	282
MSV4-160	5.5	HCM	215	210	196	183	168	149	128	99
	7.4	TDH	705	689	643	600	551	489	420	325

Dimensions and Weight Table

Model	Size in MM-Inches					Weight KG/lbs.
	B1	B2	B1+B2	D1	D2	
MSV4-20	241	245	486	170	142	20
	9.5	9.625	19.125	6.6875	5.5625	44
MSV4-30	271	245	516	170	142	20
	10.6875	9.625	20.3125	6.6875	5.5625	44
MSV4-40	312	290	602	190	155	25
	12.3125	11.4375	23.75	7.5	6.125	55
MSV4-50	340	290	630	190	155	30
	13.375	11.4375	24.8125	7.5	6.125	66
MSV4-60	367	290	657	190	155	35
	14.4375	11.4375	25.875	7.5	6.125	77
MSV4-70	402	315	717	197	165	40
	15.8125	12.375	28.1875	7.75	6.5	88
MSV4-80	429	315	744	197	165	40
	16.875	12.375	29.25	7.75	6.5	88
MSV4-100	482	335	817	230	188	45
	19	13.1875	32.1875	9.0625	7.375	99
MSV4-120	536	335	871	230	188	45
	21.125	13.1875	34.3125	9.0625	7.375	99
MSV4-140	611	430	1041	260	208	70
	24.0625	16.9375	41	10.25	8.1875	154
MSV4-160	665	430	1095	260	208	70
	26.1875	16.9375	43.125	10.25	8.1875	154

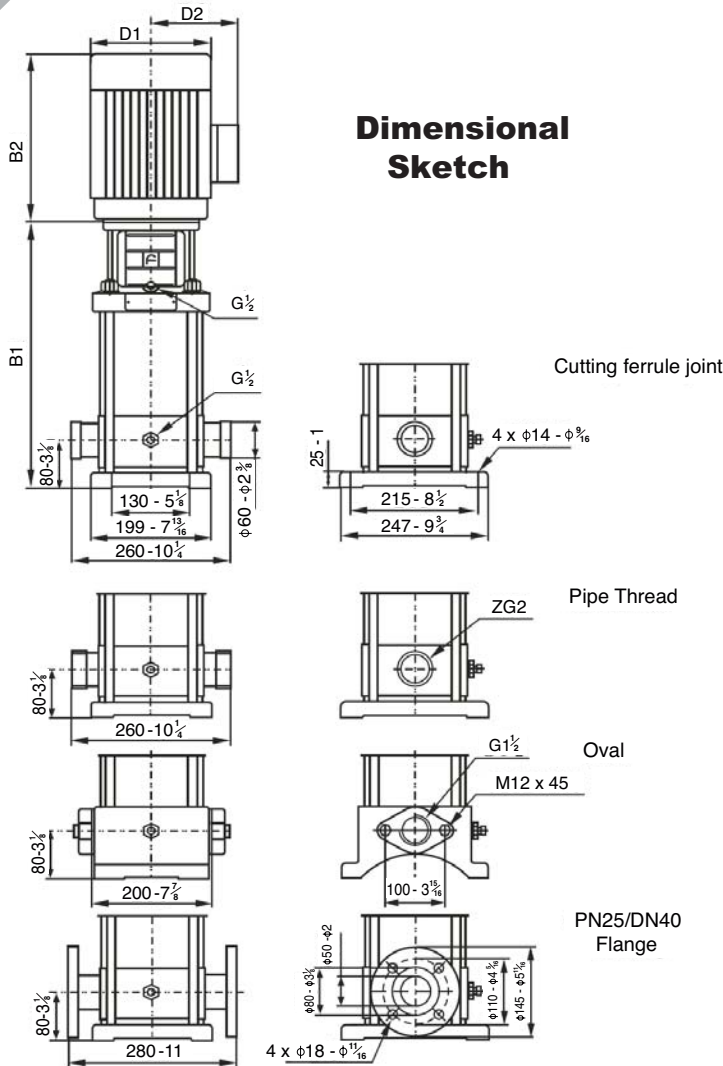
Performance Curves

The performance curves apply to the MSV, MSVC and MSVN Series



MSV8 MSVC8 MSVN8

Remark: The data, tables, and sketches provided apply to the **MSV**, **MSVC** and **MSVN** versions of the pump.



Performance Table

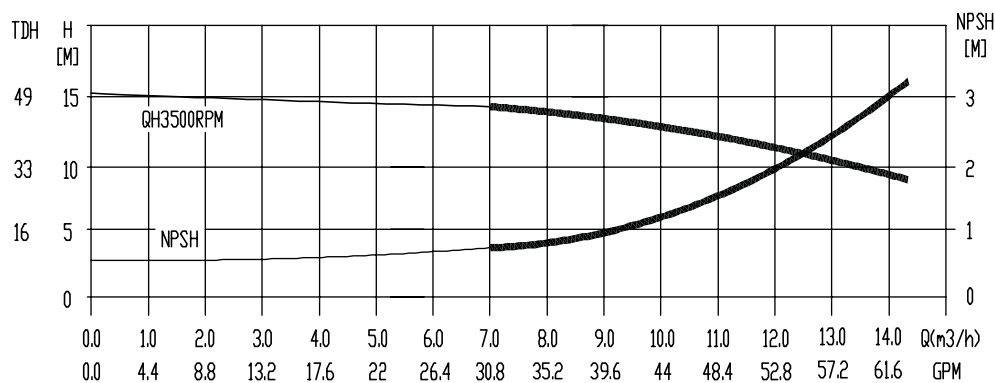
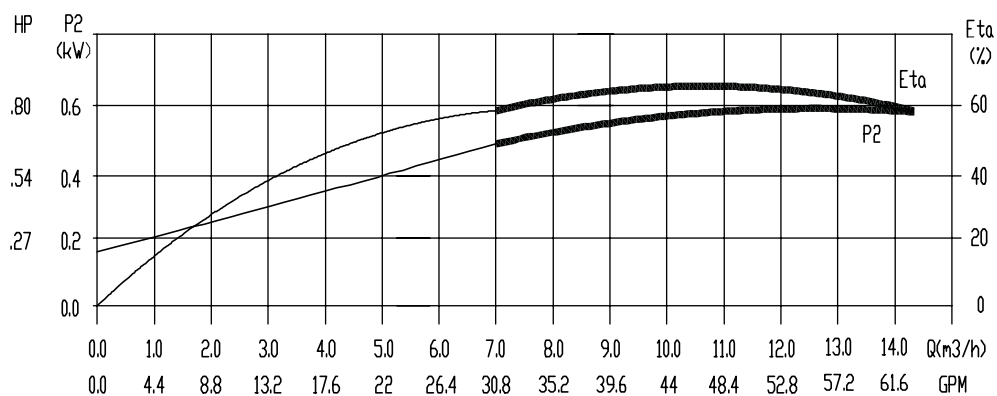
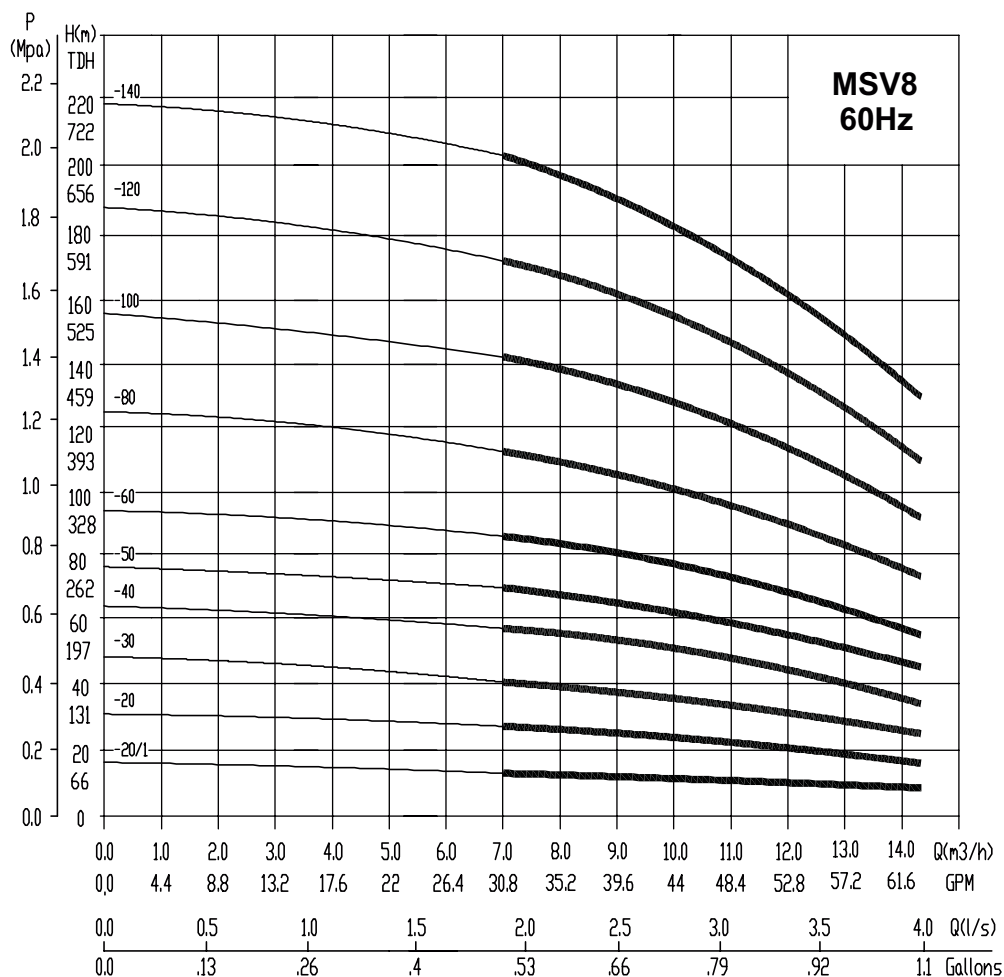
Model	(kW) HP	Q (m ³ /h) GPM	7	8	9	10	11	12	13	14
MSV8-20/1	.75 1	HCM TDH	13 43	12 39	11.5 38	11 36	10.5 34	10 33	9.5 31	9 30
MSV8-20	1.5 2	HCM TDH	27 89	26 85	25 82	24 79	23 75	22 72	20 66	18 59
MSV8-30	2.2 2.95	HCM TDH	41 135	40 131	38 125	37 121	35 115	33 108	31 102	28 92
MSV8-40	3 4	HCM TDH	55 180	54 177	52 171	50 164	47 154	45 148	42 138	38 125
MSV8-50	3 4	HCM TDH	70 230	68 223	65 213	63 207	59 194	56 184	52 171	48 157
MSV8-60	4 5.4	HCM TDH	85 279	82 269	78 256	76 249	72 236	68 223	63 207	58 190
MSV8-80	5.5 7.4	HCM TDH	115 377	111 364	105 345	101 331	97 318	91 299	85 279	78 256
MSV8-100	7.5 10.1	HCM TDH	145 476	140 459	132 433	126 413	122 400	115 377	107 351	98 322
MSV8-120	7.5 10.1	HCM TDH	175 574	169 554	160 525	152 499	148 486	139 456	129 423	118 387
MSV8-140	11 14.75	HCM TDH	205 673	198 650	188 617	179 587	174 571	163 535	152 499	139 456

Dimensions and Weight Table

Model	Size in MM-Inches					Weight KG/lbs.
	B1	B2	B1+B2	D1	D2	
MSV8-20/1	350 13.75	245 9.625	595 23.375	170 6.6875	142 5.5625	25 55
MSV8-20	360 14.1875	290 11.4375	650 25.625	190 7.5	155 6.125	30 66
MSV8-30	390 15.375	290 11.4375	680 26.8125	192 7.5625	155 6.125	35 77
MSV8-40	430 16.9375	315 12.375	745 29.3125	197 7.75	165 6.5	40 88
MSV8-50	460 18.125	315 12.375	775 30.5	197 7.75	165 6.5	45 99
MSV8-60	490 19.3125	335 13.1875	825 32.5	230 9.0625	188 7.375	50 110
MSV8-80	570 22.4375	430 16.9375	1000 39.375	230 9.0625	188 7.375	75 165
MSV8-100	630 24.8125	430 16.9375	1060 41.75	260 10.25	208 8.1875	85 187
MSV8-120	690 27.1875	430 16.9375	1120 44.125	260 10.25	208 8.1875	85 187
MSV8-140	780 30.6875	490 19.3125	1270 50	330 13	255 10.0625	130 287

Performance Curves

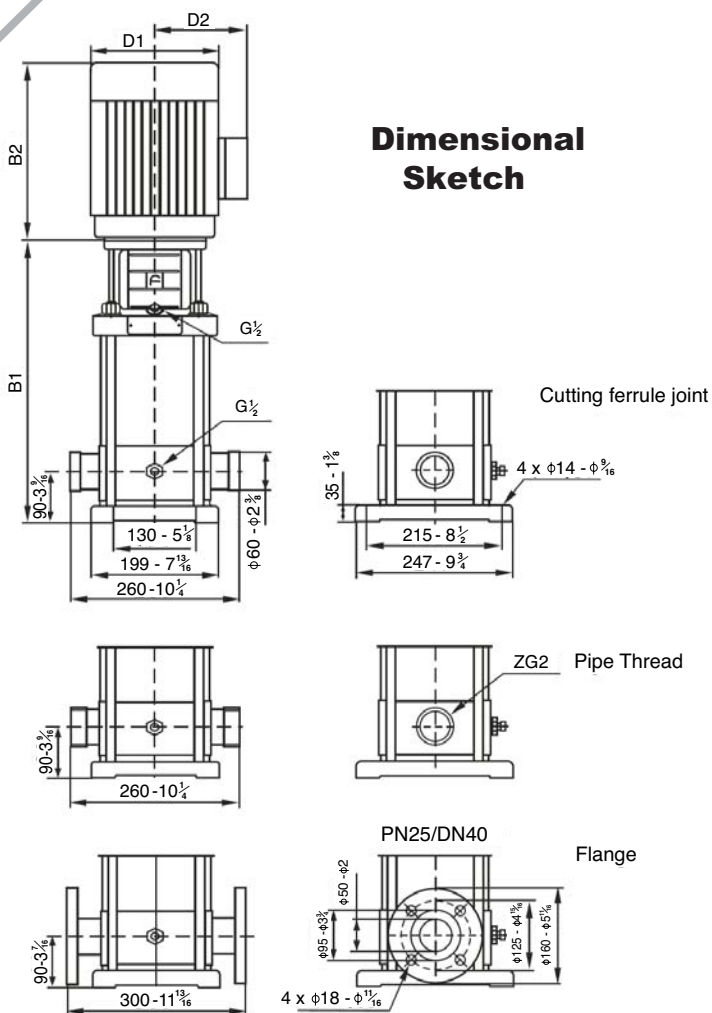
The performance curves apply to the MSV, MSVC and MSVN Series



MSV16 MSVC16 MSVN16

Remark: The data, tables, and sketches provided apply to the **MSV**, **MSVC** and **MSVN** versions of the pump.

Dimensional Sketch



Performance Table

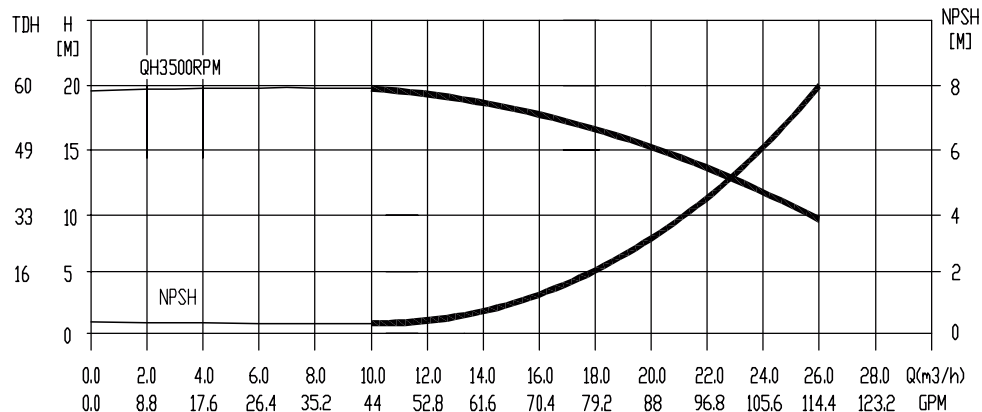
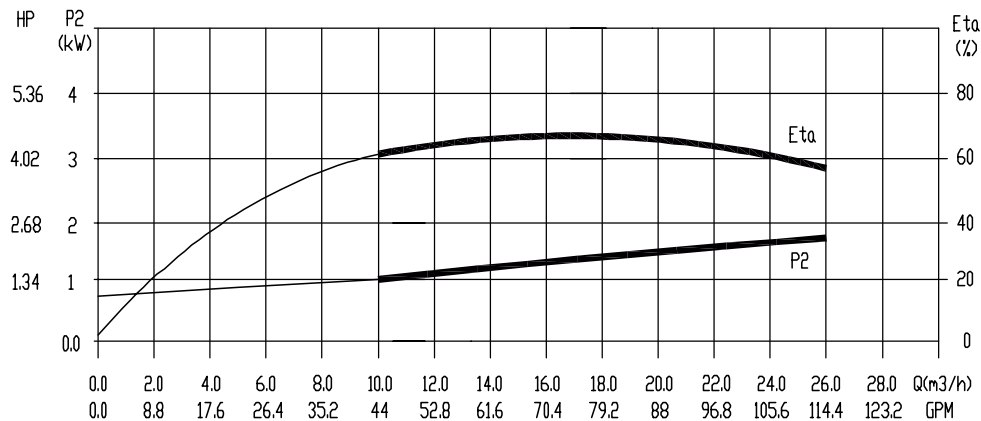
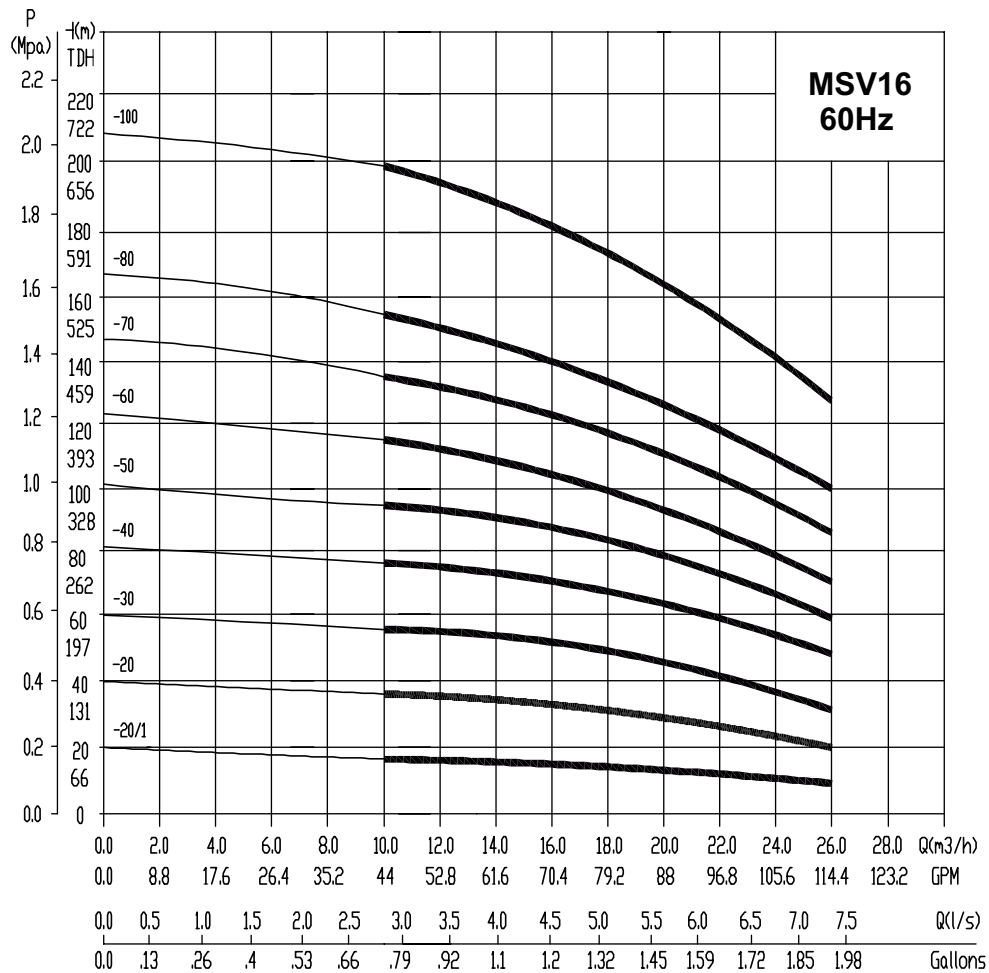
Model	(kW) HP	Q (m³/h) GPM	10 44	12 52.8	14 61.6	16 70.4	18 79.2	20 88	22 96.8	24 105.6	26 114.4
MSV16-20/1	2.2 2.95	H(M) TDH	19 62	18.5 61	18 59	17 56	16 52	15 49	14 46	13 43	11 36
MSV16-20	4 5.4	H(M) TDH	38 125	37.5 123	37 121	36 118	34 112	32 105	30 98	27 89	24 79
MSV16-30	5.5 7.4	H(M) TDH	57 187	56 184	55 180	54 177	51 167	48 157	45 148	40 131	36 118
MSV16-40	7.5 10.1	H(M) TDH	76 249	75 246	73 240	72 236	68 223	64 210	60 197	54 177	49 161
MSV16-50	11 14.75	H(M) TDH	96 315	94 308	92 302	90 295	85 279	80 262	75 246	68 223	62 203
MSV16-60	11 14.75	H(M) TDH	115 377	113 371	111 364	108 354	102 335	96 315	91 299	82 269	75 246
MSV16-70	15 20.1	H(M) TDH	135 443	132 433	129 423	126 413	119 390	113 371	106 348	96 315	88 289
MSV16-80	15 20.1	H(M) TDH	155 509	152 499	148 486	144 472	137 449	130 427	122 400	111 364	101 331
MSV16-100	18.5 24.8	H(M) TDH	197 646	192 630	187 614	181 594	174 571	165 541	153 502	141 463	127 417

Dimensions and Weight Table

Model	Size in MM-Inches					Weight KG/lbs.
	B1	B2	B1+B2	D1	D2	
MSV16-20/1	400 15.75	290 11.4375	690 27.1875	190 7.5	155 6.125	40 88
MSV16-20	410 16.125	335 13.1875	745 29.3125	230 9.0625	188 7.375	50 110
MSV16-30	475 18.6875	430 16.9375	905 35.625	260 10.25	208 8.1875	70 154
MSV16-40	520 20.5	430 16.9375	950 37.4375	260 10.25	208 8.1875	80 176
MSV16-50	595 23.4375	490 19.3125	1085 42.75	330 13	255 10.0625	140 309
MSV16-60	640 25.1875	490 19.3125	1130 44.5	330 13	255 10.0625	145 320
MSV16-70	685 27	490 19.3125	1175 46.3125	330 13	255 10.0625	160 353
MSV16-80	730 28.75	490 19.3125	1220 48.0625	330 13	255 10.0625	160 353
MSV16-100	820 32.3125	550 21.6875	1370 54	330 13	255 10.0625	190 419

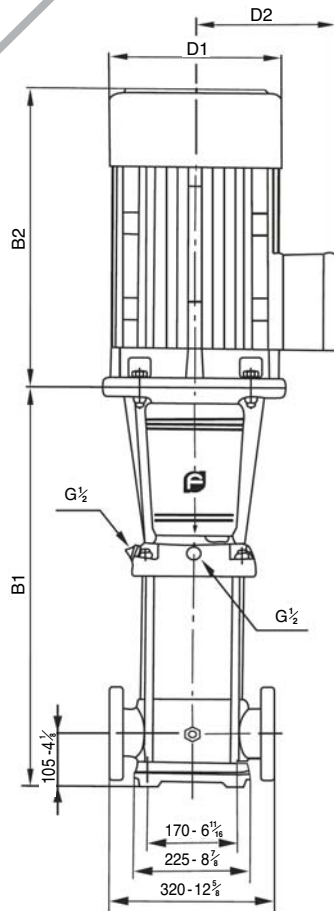
Performance Curves

The performance curves apply to the MSV, MSVC and MSVN Series

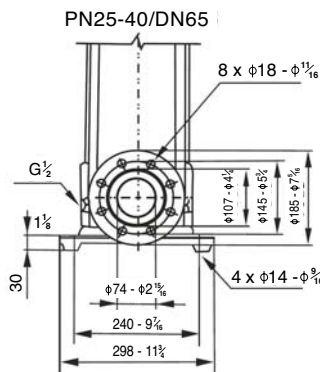


MSV32 MSVC32 MSVN32

Remark: The data, tables, and sketches provided apply to the **MSV**, **MSVC** and **MSVN** versions of the pump.



**Dimensional
Sketch**



Performance Table

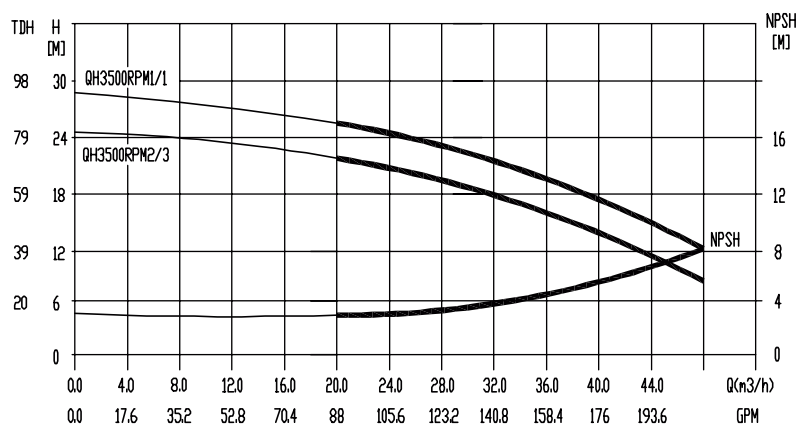
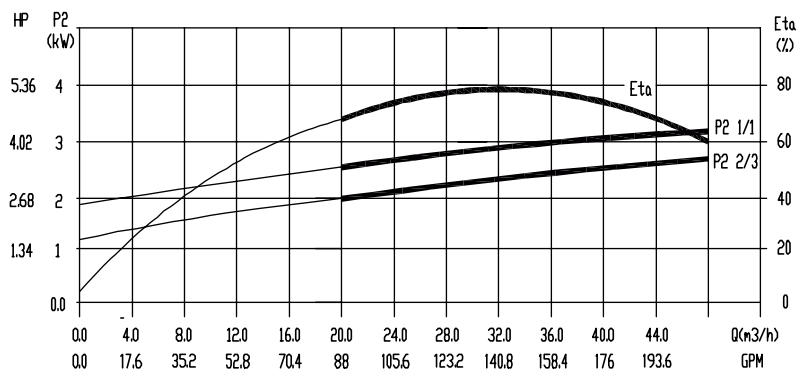
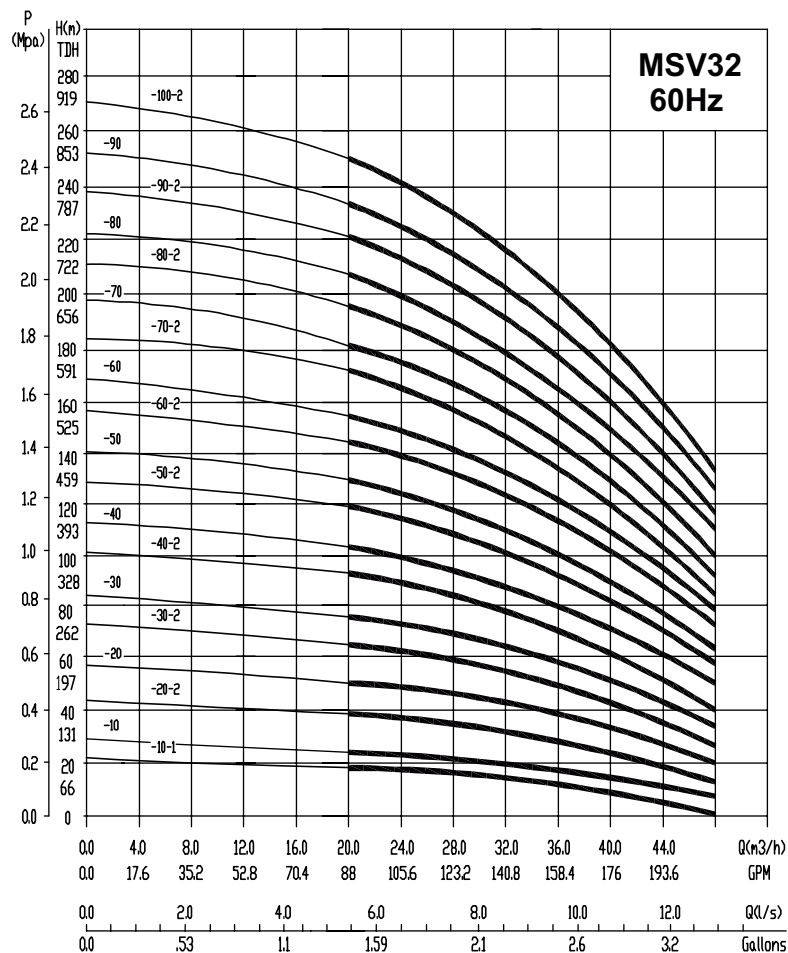
Model	(kW) HP	Q (m³/h) GPM	20 88	24 105.6	28 123.2	32 140.8	36 158.4	40 176	44 193.6	48 193.6
MSV32-10-1	3 4	HOD TDH	20 66	19 62	18 59	17 56	15 49	13 43	10 33	7 23
MSV32-10	4 5.4	HOD TDH	26 85	25 82	24 79	23 75	21 69	19 62	17 56	14 46
MSV32-20-2	5.5 7.4	HOD TDH	41 135	40 131	38 125	35 115	31 102	27 89	22 72	17 56
MSV32-20	7.5 10.1	HOD TDH	52 171	50 164	48 157	45 148	41 135	37 121	33 108	27 89
MSV32-30-2	7.5 10.1	HOD TDH	67 220	64 210	61 200	57 187	52 171	46 151	39 128	31 102
MSV32-30	11 14.75	HOD TDH	78 256	75 246	71 233	67 220	62 203	56 184	50 164	40 131
MSV32-40-2	11 14.75	HOD TDH	94 308	91 299	87 285	81 266	73 240	65 213	56 184	45 148
MSV32-40	15 20.1	HOD TDH	104 341	101 331	96 315	91 299	83 272	75 246	66 217	55 180
MSV32-50-2	15 20.1	HOD TDH	119 390	115 377	109 358	102 335	94 308	84 276	73 240	59 194
MSV32-50	18.5 24.8	HOD TDH	130 427	125 410	119 390	112 367	104 341	94 308	83 272	69 226
MSV32-60-2	18.5 24.8	HOD TDH	105 345	140 459	134 440	126 413	116 381	104 341	90 295	74 243
MSV32-60	18.5 24.8	HOD TDH	155 509	150 492	144 472	136 446	126 413	114 374	100 328	81 266
MSV32-70-2	22 29.5	HOD TDH	172 564	166 545	158 518	149 489	137 449	123 404	106 348	86 282
MSV32-70	22 29.5	HOD TDH	182 597	176 577	168 551	159 522	148 486	133 436	118 387	97 318
MSV32-80-2	22 29.5	HOD TDH	196 643	190 623	182 597	172 564	159 522	143 469	124 407	102 335
MSV32-80	30 40.2	HOD TDH	208 682	201 659	192 630	181 594	167 548	152 499	132 433	111 364
MSV32-90-2	30 40.2	HOD TDH	223 732	216 709	206 676	194 637	179 587	162 532	142 466	117 384
MSV32-90	30 40.2	HOD TDH	234 768	226 742	216 709	204 669	189 620	172 564	152 499	127 417
MSV32-100-2	30 40.2	HOD TDH	248 814	241 791	231 758	217 712	201 659	181 594	159 522	133 436

Dimensions and Weight Table

Model	Size in MM-Inches					Weight KG/lbs.
	B1	B2	B1+B2	D1	D2	
MSV32-10-1	505 19.875	315 12.4375	820 32.3125	197 7.75	165 6.5	85 187
MSV32-10	505 19.875	335 13.1875	840 33.0625	230 9.0625	188 7.375	95 209
MSV32-20-2	575 22.625	430 16.9375	1005 39.5625	260 10.25	208 8.1875	105 231
MSV32-20	575 22.625	430 16.9375	1005 39.5625	260 10.25	208 8.1875	115 254
MSV32-30-2	645 25.4375	490 19.3125	1135 44.75	330 13	255 10.0625	120 265
MSV32-30	750 29.5	490 19.3125	1240 48.8125	330 13	255 10.0625	175 386
MSV32-40-2	820 32.3125	490 19.3125	1310 51.625	330 13	255 10.0625	180 397
MSV32-40	820 32.3125	490 19.3125	1310 51.625	330 13	255 10.0625	210 463
MSV32-50-2	890 35.0625	490 19.3125	1380 54.375	330 13	255 10.0625	220 485
MSV32-50	890 35.0625	550 21.6875	1440 56.75	330 13	255 10.0625	240 529
MSV32-60-2	960 37.8125	550 21.6875	1510 59.5	330 13	255 10.0625	250 551
MSV32-60	960 37.8125	550 21.6875	1510 59.5	330 13	255 10.0625	250 551
MSV32-70-2	1030 40.5625	590 23.25	1620 63.8125	360 14.1875	285 11.25	285 628
MSV32-70	1030 40.5625	590 23.25	1620 63.8125	360 14.1875	285 11.25	285 628
MSV32-80-2	1100 43.3125	590 23.25	1690 66.5625	400 15.75	310 12.25	290 639
MSV32-80	1100 43.3125	660 26	1760 69.3125	400 15.75	310 12.25	330 728
MSV32-90-2	1170 46.0625	660 26	1830 72.0625	400 15.75	310 12.25	340 750
MSV32-90	1170 46.0625	660 26	1830 72.0625	400 15.75	310 12.25	340 750
MSV32-100-2	1240 48.8125	660 26	1900 74.8125	400 15.75	310 12.25	350 772

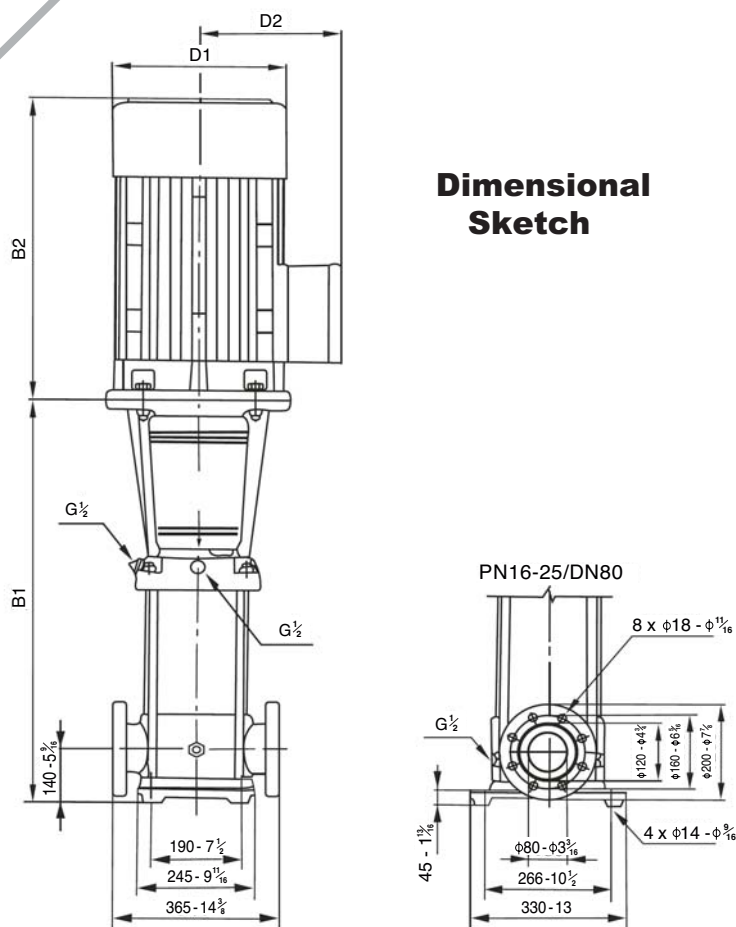
Performance Curves

The performance curves apply to the MSV, MSVC and MSVN Series



MSV42 MSVC42 MSVN42

Dimensional Sketch



Remark: The data, tables, and sketches provided apply to the **MSV**, **MSVC** and **MSVN** versions of the pump.

Performance Table

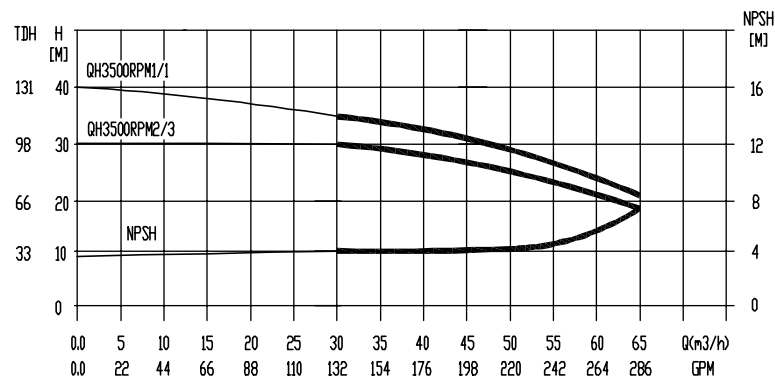
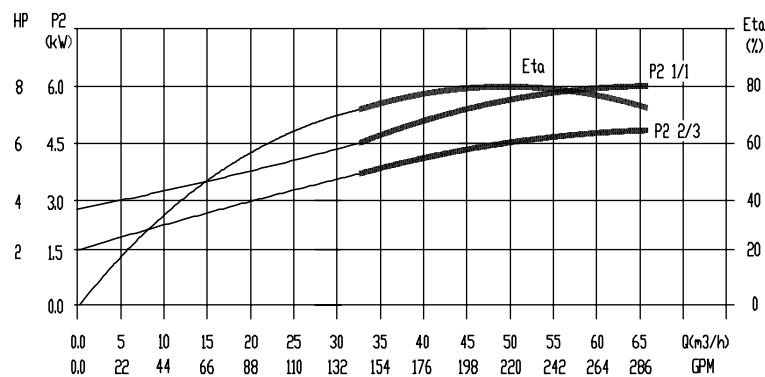
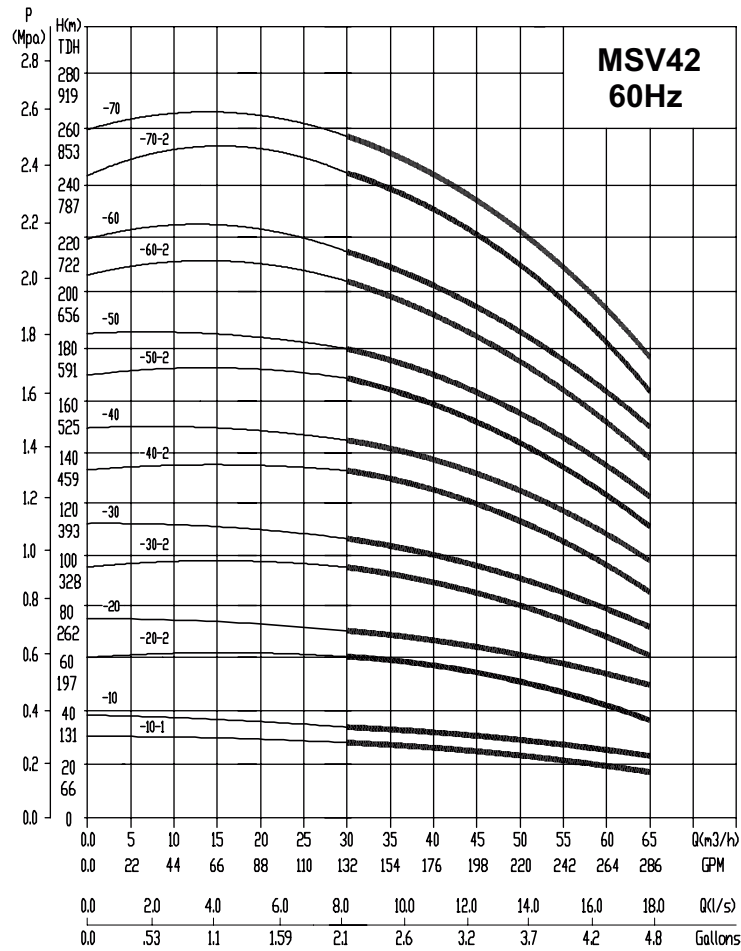
Model	(kW) HP	Q (m³/h) GPM	30 132	35 154	40 176	42 184.8	45 198	50 220	55 242	60 264	65 286
MSV42-10-1	5.5	HCM	29	28	27	26.5	26	24	21	19	16
	7.4	TDH	95	92	89	87	85	79	69	62	52
MSV42-10	7.5	HCM	34	33	32	31.5	31	29	27	25	22
	10.1	TDH	112	108	105	103	102	95	89	82	72
MSV42-20-2	11	HCM	60	58	56	55	53	50	45	40	35
	14.75	TDH	197	190	184	180	174	164	148	131	115
MSV42-20	15	HCM	70	68	66	65	63	60	56	52	47
	20.1	TDH	230	223	217	213	207	197	184	171	154
MSV42-30-2	18.5	HCM	95	93	89	87	85	80	74	67	59
	24.8	TDH	312	305	292	285	279	262	243	220	194
MSV42-30	18.5	HCM	106	104	100	98	96	90	84	78	70
	24.8	TDH	348	341	328	322	315	295	276	256	230
MSV42-40-2	22	HCM	131	128	123	120	117	110	102	93	83
	29.5	TDH	430	420	404	394	384	361	335	305	272
MSV42-40	30	HCM	144	141	136	133	130	124	116	107	97
	40.23	TDH	472	463	446	436	427	407	381	351	318
MSV42-50-2	30	HCM	169	164	159	156	152	143	133	122	110
	40.23	TDH	554	538	522	512	499	469	436	400	361
MSV42-50	30	HCM	180	175	169	166	162	154	144	134	121
	40.23	TDH	591	574	554	545	532	505	472	440	397
MSV42-60-2	37	HCM	205	200	193	189	184	174	163	149	134
	49.6	TDH	673	656	633	620	604	571	535	489	440
MSV42-60	37	HCM	215	210	203	199	195	185	174	161	147
	49.6	TDH	705	689	666	653	640	607	571	528	482
MSV42-70-2	45	HCM	245	239	231	226	221	209	195	180	162
	60.3	TDH	804	784	758	742	725	686	640	591	532
MSV42-70	45	HCM	257	250	242	237	232	220	207	191	174
	60.3	TDH	843	820	794	778	761	722	679	627	571

Dimensions and Weight Table

Model	Size in MM-Inches					Weight KG/lbs.
	B1	B2	B1+B2	D1	D2	
MSV42-10-1	561	430	992	260	208	108
	22.125	16.9375	39.0625	10.25	8.1875	238
MSV42-10	561	430	992	260	208	113
	22.125	16.9375	39.0625	10.25	8.1875	249
MSV42-20-2	748	490	1238	330	255	154
	29.4375	19.3125	48.75	13	10.0625	340
MSV42-20	748	490	1238	330	255	187
	29.4375	19.3125	48.75	13	10.0625	412
MSV42-30-2	828	550	1378	330	255	201
	32.625	21.6875	54.3125	13	10.0625	443
MSV42-30	828	550	1378	330	255	201
	32.625	21.6875	54.3125	13	10.0625	443
MSV42-40-2	908	590	1498	360	285	258
	35.75	23.25	59	14.1875	11.25	569
MSV42-40	908	660	1568	400	310	336
	35.75	26	61.75	15.75	12.25	741
MSV42-50-2	988	660	1648	400	310	341
	38.875	26	64.875	15.75	12.25	752
MSV42-50	988	660	1648	400	310	341
	38.875	26	64.875	15.75	12.25	752
MSV42-60-2	1068	660	1728	400	310	365
	42.0625	26	68.0625	15.75	12.25	805
MSV42-60	1068	660	1728	400	310	365
	42.0625	26	68.0625	15.75	12.25	805
MSV42-70-2	1148	700	1848	460	340	435
	45.1875	27.5625	72.75	18.125	13.375	959
MSV42-70	1148	700	1848	460	340	435
	45.1875	27.5625	72.75	18.125	13.375	959

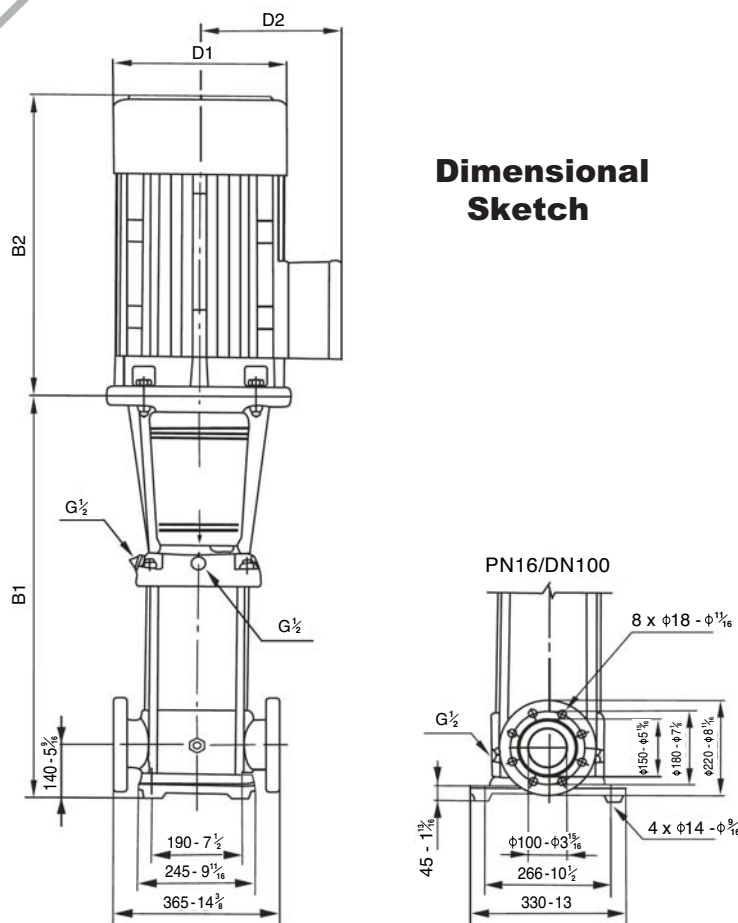
Performance Curves

The performance curves apply to the MSV, MSVC and MSVN Series



MSV65 MSVC65 MSVN65

Dimensional Sketch



Remark: The data, tables, and sketches provided apply to the **MSV**, **MSVC** and **MSVN** versions of the pump.

Performance Table

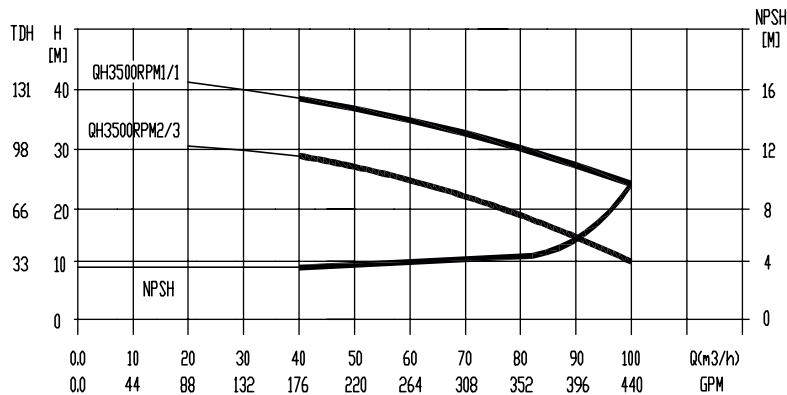
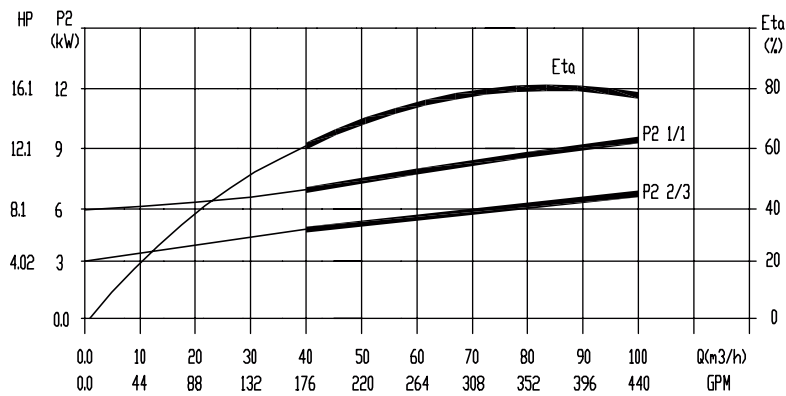
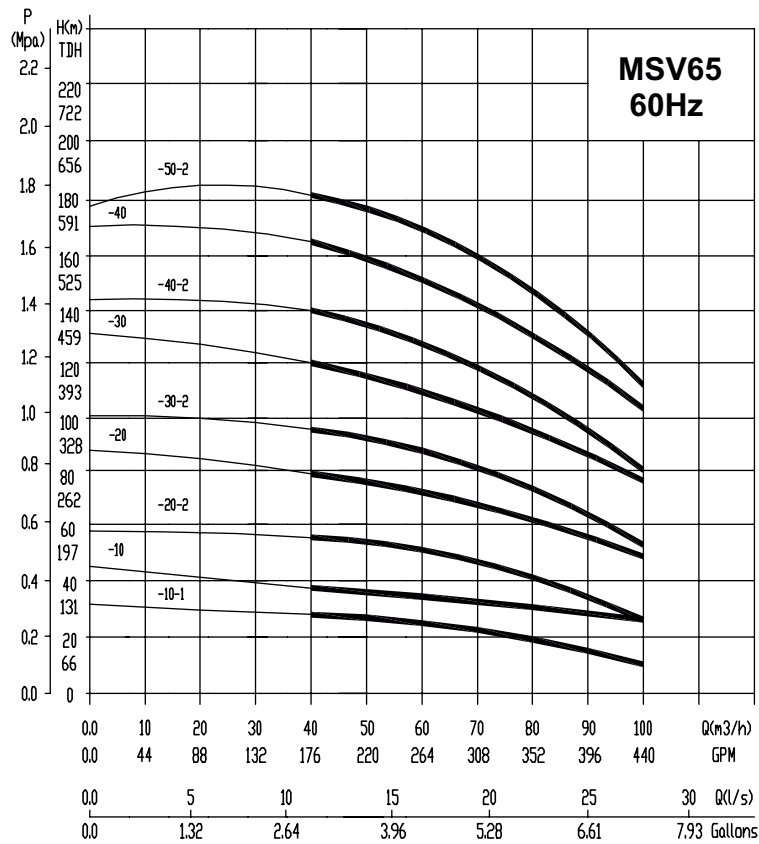
Model	(kW) HP	Q (m³/h) GPM	40	50	60	65	70	80	90	100
MSV65-10-1	7.5	HCM	28	27	25	24	23	19	15	10
	10.1	TDH	92	89	82	79	75	62	49	33
MSV65-10	11	HCM	38	37	35	34	33	30	27	24
	14.75	TDH	125	121	115	112	108	98	89	79
MSV65-20-2	15	HCM	57	55	52	50	47	41	33	25
	20.1	TDH	187	180	171	164	154	135	108	82
MSV65-20	22	HCM	79	75	72	70	68	63	57	50
	29.5	TDH	259	246	236	230	223	207	187	164
MSV65-30-2	22	HCM	97	93	88	85	81	73	64	53
	29.5	TDH	318	305	289	279	266	240	210	174
MSV65-30	30	HCM	120	115	110	107	104	96	87	77
	40.23	TDH	394	377	361	351	341	315	285	253
MSV65-40-2	37	HCM	139	134	127	123	118	108	96	81
	49.6	TDH	456	440	417	404	387	354	315	266
MSV65-40	45	HCM	164	158	151	147	142	131	119	104
	60.3	TDH	538	518	495	482	466	430	390	314
MSV65-50-2	45	HCM	182	177	169	164	159	146	130	112
	60.3	TDH	597	581	554	538	522	479	427	367

Dimensions and Weight Table

Model	Size in MM-Inches					Weight KG/lbs.
	B1	B2	B1+B2	D1	D2	
MSV65-10-1	561	430	991	260	208	115
	22.125	16.9375	39.0625	10.25	8.1875	254
MSV65-10	671	490	1161	330	255	152
	26.4375	19.3125	45.75	13	10.0625	335
MSV65-20-2	754	490	1244	330	255	190
	29.6875	19.3125	49	13	10.0625	423
MSV65-20	754	590	1344	360	285	252
	29.6875	23.25	52.9375	14.1875	11.25	556
MSV65-30-2	836	590	1426	360	285	257
	32.9375	23.25	56.1875	14.1875	11.25	567
MSV65-30	836	660	1496	400	310	335
	32.9375	26	58.9375	15.75	12.25	739
MSV65-40-2	919	660	1579	400	310	360
	36.1875	26	62.1875	15.75	12.25	794
MSV65-40	919	700	1619	460	340	425
	36.1875	27.5625	63.75	18.125	13.375	937
MSV65-50-2	1001	700	1701	460	340	430
	39.4375	27.5625	67	18.125	13.375	948

Performance Curves

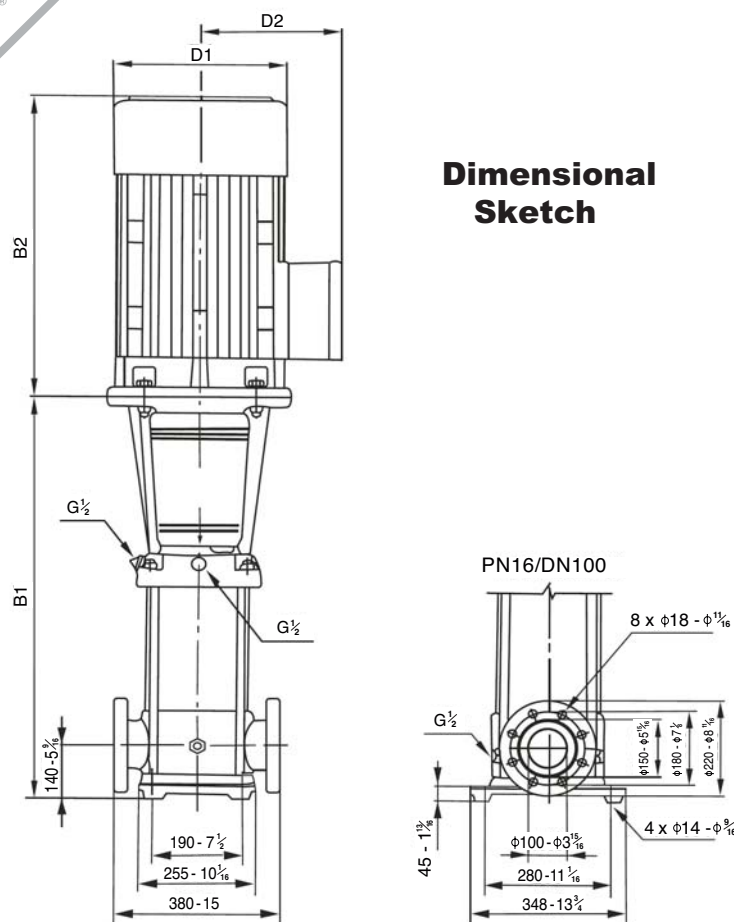
The performance curves apply to the MSV, MSVC and MSVN Series



MSV85 MSVC85 MSVN85

Remark: The data, tables, and sketches provided apply to the **MSV**, **MSVC** and **MSVN** versions of the pump.

Dimensional Sketch



Performance Table

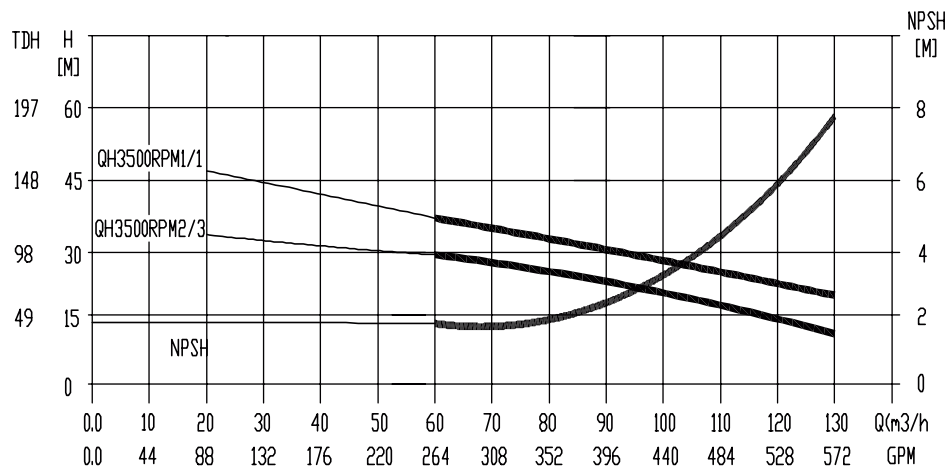
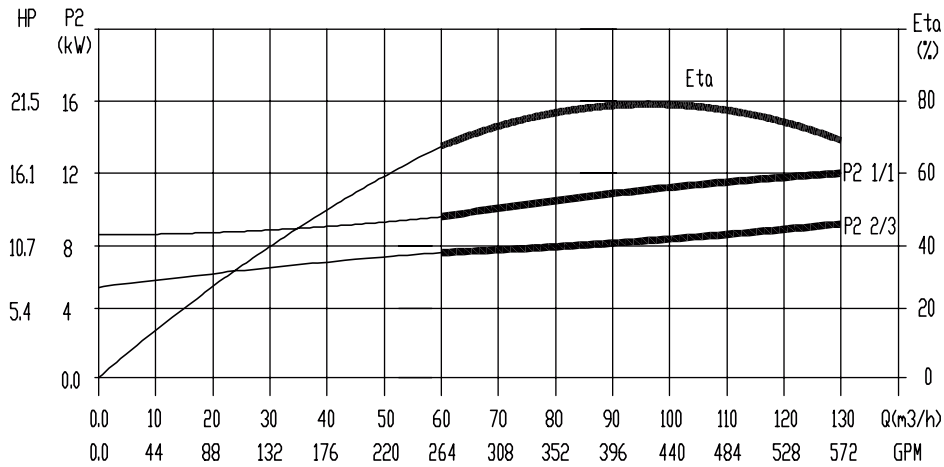
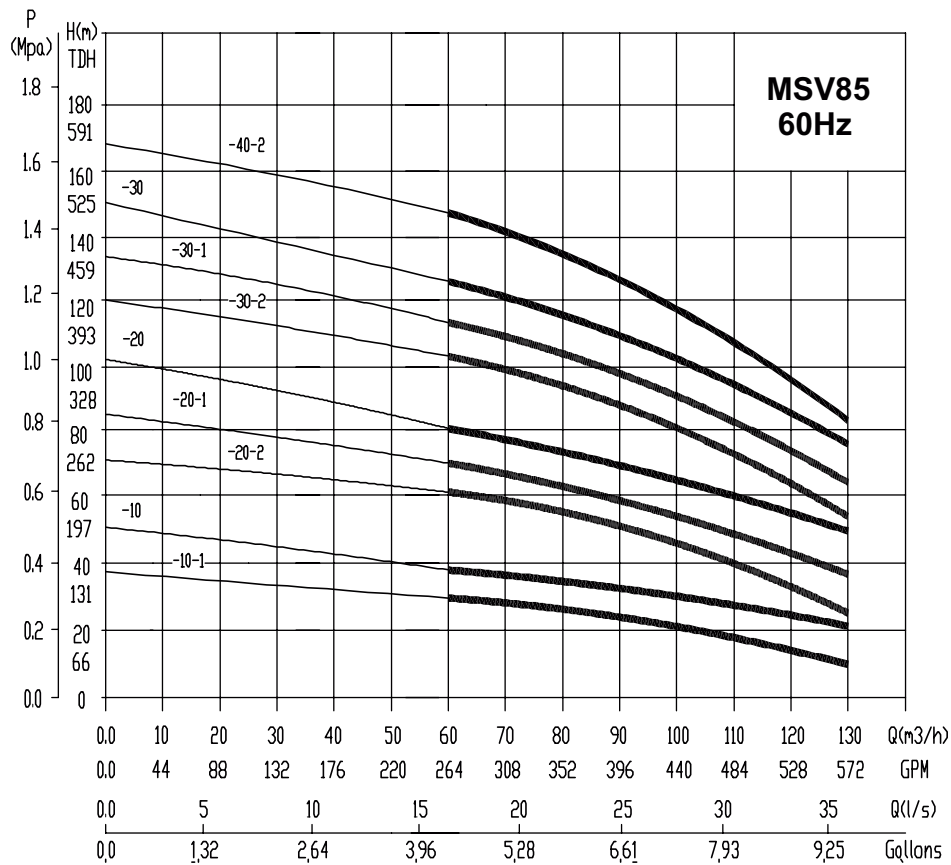
Model	(kW) HP	Q (m³/h) GPM	60 264	70 308	80 352	85 374	90 396	100 440	110 484	120 528	130 572
MSV85-10-1	11 14.75	HCM TDH	31 102	29 95	28 92	27 89	26 85	23 75	20 66	16 54	10 33
MSV85-10	15 20.1	HCM TDH	38 125	36 118	35 115	34 112	33 108	31 102	29 95	26 85	22 72
MSV85-20-2	18.5 24.8	HCM TDH	62 203	60 197	56 184	54 177	52 171	48 157	41 135	35 115	26 85
MSV85-20-1	22 29.5	HCM TDH	71 233	68 223	65 213	63 207	61 200	56 184	50 164	44 144	37 121
MSV85-20	30 40.23	HCM TDH	81 266	77 253	74 243	72 236	70 230	66 217	62 203	56 184	50 164
MSV85-30-2	37 49.6	HCM TDH	104 341	100 328	95 312	92 302	89 292	83 272	75 246	65 213	55 180
MSV85-30-1	37 49.6	HCM TDH	114 374	110 361	104 341	101 331	98 322	91 299	83 272	75 246	64 210
MSV85-30	45 60.3	HCM TDH	125 410	120 394	115 377	112 367	109 358	102 335	94 308	86 282	76 249
MSV85-40-2	45 60.3	HCM TDH	147 482	142 466	135 443	131 430	127 417	118 387	108 354	96 315	83 272

Dimensions and Weight Table

Model	Size in MM-Inches					Weight KG/lbs.
	B1	B2	B1+B2	D1	D2	
MSV85-10-1	571 22.5	490 19.3125	1061 41.8125	330 13	255 10.0625	184 406
MSV85-10	571 22.5	490 19.3125	1061 41.8125	330 13	255 10.0625	184 406
MSV85-20-2	773 30.4375	550 21.6875	1323 52.125	330 13	255 10.0625	264 582
MSV85-20-1	773 30.4375	590 23.25	1363 53.6875	360 14.1875	285 11.25	264 582
MSV85-20	773 30.4375	660 26	1433 56.4375	400 15.75	310 12.25	329 725
MSV85-30-2	865 34.0625	660 26	1525 60.0625	400 15.75	310 12.25	363 800
MSV85-30-1	865 34.0625	660 26	1525 60.0625	400 15.75	310 12.25	363 800
MSV85-30	865 34.0625	700 27.5625	1565 61.625	460 18.125	340 13.375	363 800
MSV85-40-2	957 37.6875	700 27.5625	1657 65.25	460 18.125	340 13.375	430 948

Performance Curves

The performance curves apply to the MSV, MSVC and MSVN Series





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Wanting to carry on the tradition of quality and reliability started by his father, Thomas R. Ruthman joined the company in 1949. In the early 1990's Thomas R. Ruthman's son, Thomas G. Ruthman joined the company, continuing this same tradition. Maintaining the reputation of Gusher Pumps by innovation and customer service, the company has grown to service companies worldwide.

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