

## Features

- All stainless steel construction
- Quiet operation
- Compact size
- Single mechanical seal
- High efficiency hydraulic design
- Stable head-flow curves for parallel operation

## Benefits

- Flanges in-line to simplify pipe layout.
- Suction and discharge pipes are both on the bottom half of the casing, allowing the pump to be maintained without disturbing the pipework.
- Low Nett Positive Suction Head protects the pump from cavitation damage.
- Non-overloading power characteristics.

## Operating range

- Discharge flange sizes up to 100 mm
- Maximum flowrate 22 l/sec
- Max generated pressure 400 metres at 2900 rpm
- Temperature range  $-15^{\circ}\text{C}$  to  $120^{\circ}\text{C}$
- Standard working pressure 16 bar (oval flange design) and 25 bar (circular flange design) <sup>(1)</sup>

<sup>(1)</sup> MSS6 working pressure 40 bar



## Applications

- **Utilities:** Water treatment and distribution
- **Building services:** Jockey pumps for pressure maintenance, booster duties and for boiler feed water.
- **Industrial:** Vehicle washing plant, high pressure water supply.
- **Process and Chemical works:** Water transfer, cooling water supply and general services.
- Horticulture and golf course watering.

## Operating pressure

Standard pumps are capable of a working pressure of 16 bar or 25 bar depending on the flange arrangement, and are all hydrostatically tested upon assembly to 24 bar or 37.5 bar respectfully. MSS6 pumps are designed for 40 bar working pressure.

## Mechanical seal

Carbon/Ceramic/EP single seal or Carbon/Silicon Carbide/EP single seal depending on the number of stages. Refer to page 2.

## Drivers

Pumps are generally supplied with a 3 phase electric motor. Single phase motors are available up to 2.2 kW. Alternative motor makes and spec-ifications are readily

available, including pump and motor combinations for 60 hz operation.

## Materials

All parts of the pump coming into contact with the pumped liquid are of stainless steel.

- Impellers, diffusers and sleeve: 304 SS
- Shafts 303 SS
- Bushes and spacers 303 SS
- Base plate and motor adaptor: Cast iron
- O ring gaskets EP rubber

Pumps are also available in 316 stainless steel.

## Further information

For further information on any APEX product, please contact the APEX sales office:

- ⇒ Tel: 0117 907 7555
- ⇒ Fax: 0117 907 7556
- ⇒ Email: enquiries@apexpumps.com

## Pump materials

Part	Standard materials	316 SS Version
Flanged casing	304 stainless steel	316 stainless steel 1.4404 <sup>(2)</sup>
Impellers	304 stainless steel	316 stainless steel 1.4404
Diffusers	304 stainless steel	316 stainless steel 1.4404
Outer sleeve	304 stainless steel	316 stainless steel 1.4404
Shaft	303 stainless steel	316 stainless steel 1.4401
Shaft protection bushes	Tungsten carbide	Tungsten carbide
Baseplate	Cast iron	Cast iron
Motor stool	Cast iron	Cast iron
Tie bars	High tensile steel	High tensile steel
Filling/Vent and drain plugs	Brass	316 stainless steel 1.4401

<sup>(2)</sup> MSS6 only available in 316 SS version. Flanged casing material is cast 316 stainless steel to DIN 1.4408.

## Flange sizes and maximum working pressure

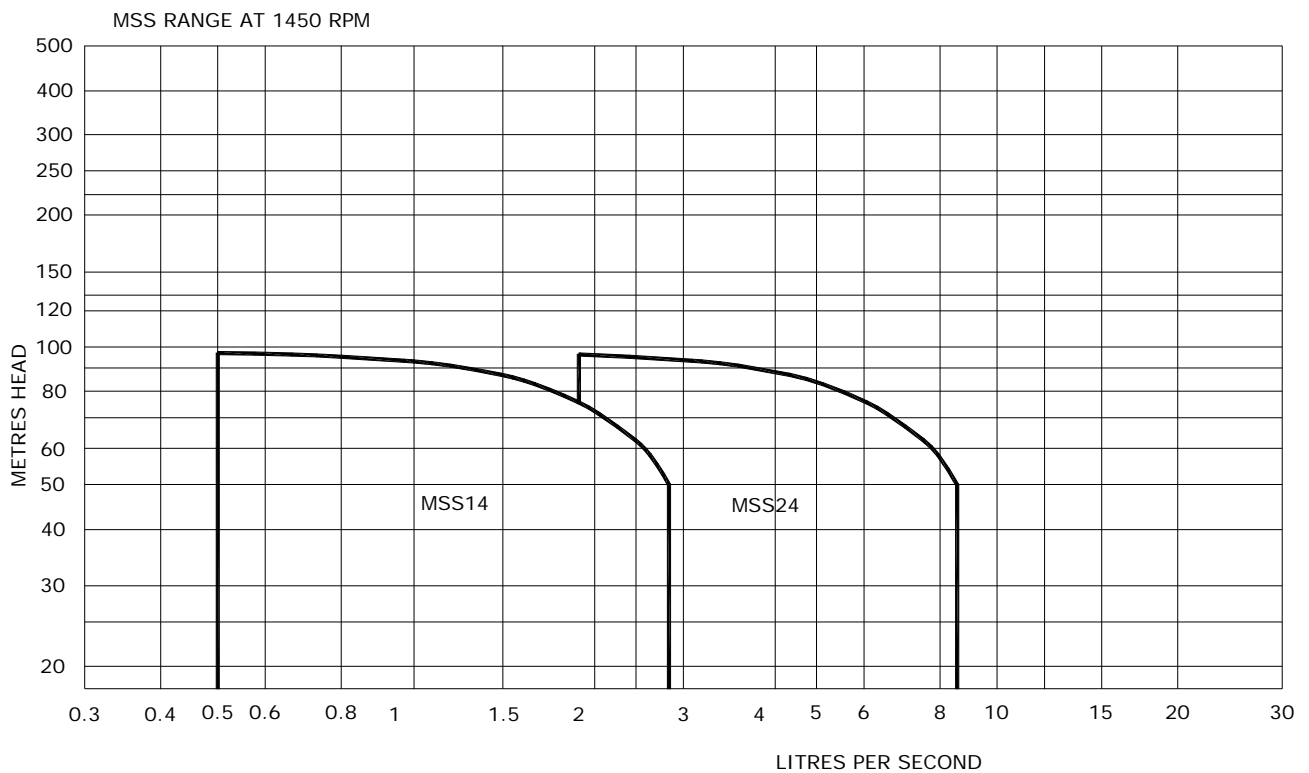
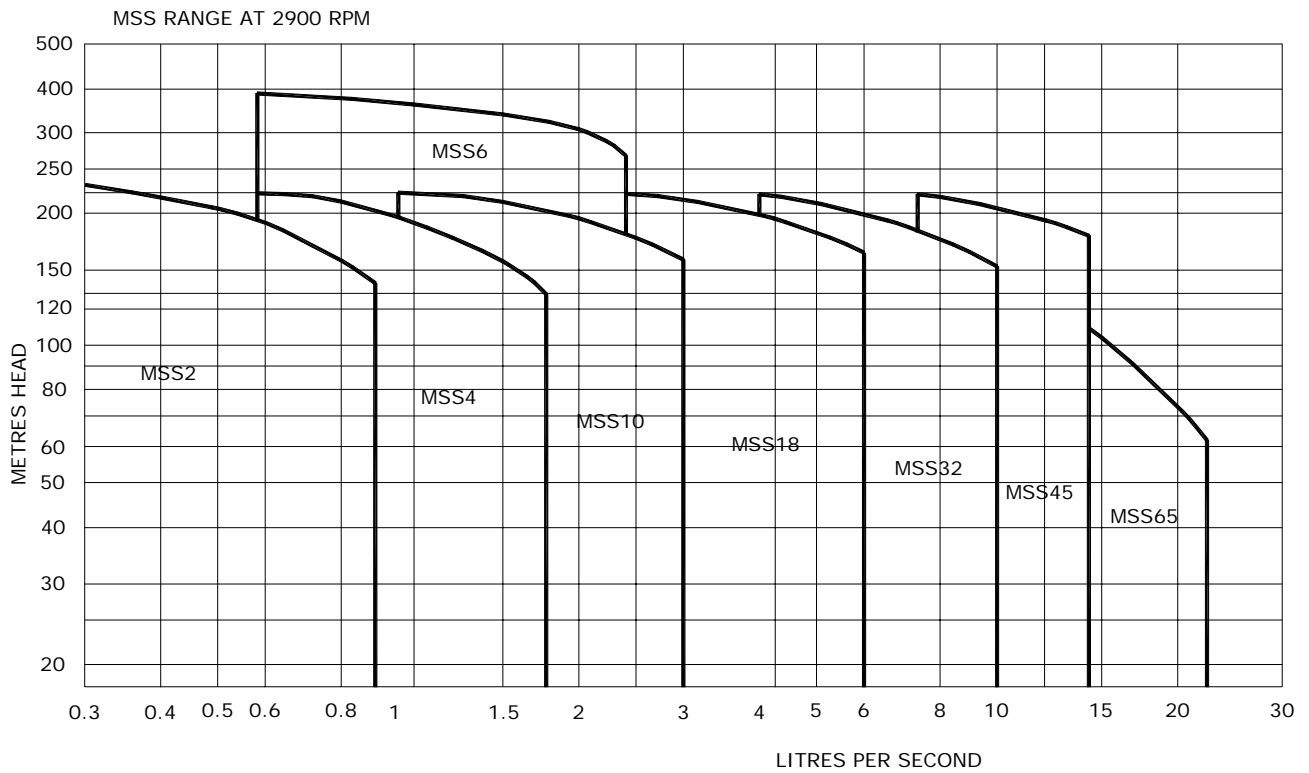
Pump size	No of stages	Flange type	Max working pressure
MSS2	1-15	1" BSP oval counter flange	16 bar
MSS2	16-25	25 mm circular flange to BS4504 PN25	25 bar
MSS4	1-15	1 1/4" oval counter flange	16 bar
MSS4	16-25	32 mm circular flange to BS4504 PN25	25 bar
MSS6	10-20	32 mm circular flange to BS4504 PN40	40 bar
MSS10	1-14	1 1/2" BSP oval counter flange	16 bar
MSS10	16-20	40 mm circular flange to BS4504 PN25	25 bar
MSS18	1-16	50 mm circular flange to BS4504 PN25	25 bar
MSS32	1-12	65 mm circular flange to BS4504 PN25	25 bar
MSS45	1-10	80 mm circular flange to BS4504 PN25	25 bar
MSS65	1-9	100 mm circular flange to BS4504 PN25	25 bar
MSS14	2-20	1 1/2" BSP oval counter flange	16 bar
MSS24	1-16	65 mm circular flange to BS4504 PN25	25 bar

## Mechanical seal standard materials

Pump size	No of stages	Standard mechanical seal materials
MSS2	1-10	Carbon vv Ceramic with EP elastomers
MSS2	11-25	Carbon vv Silicon Carbide with EP elastomers
MSS4	1-10	Carbon vv Ceramic with EP elastomers
MSS4	11-25	Carbon vv Silicon Carbide with EP elastomers
MSS6	10-20	Carbon vv Silicon Carbide with Viton elastomers
MSS10	1-8	Carbon vv Ceramic with EP elastomers
MSS10	9-20	Carbon vv Silicon Carbide with EP elastomers
MSS18	1-7	Carbon vv Ceramic with EP elastomers
MSS18	8-16	Carbon vv Silicon Carbide with EP elastomers
MSS32	1-12	Carbon vv Silicon Carbide with EP elastomers
MSS45	1-10	Carbon vv Silicon Carbide with EP elastomers
MSS65	1-6	Carbon vv Ceramic with EP elastomers
MSS65	7-9	Carbon vv Silicon Carbide with EP elastomers
MSS14	2-18	Carbon vv Ceramic with EP elastomers
MSS14	20	Carbon vv Silicon Carbide with EP elastomers
MSS24	1-16	Carbon vv Ceramic with EP elastomers

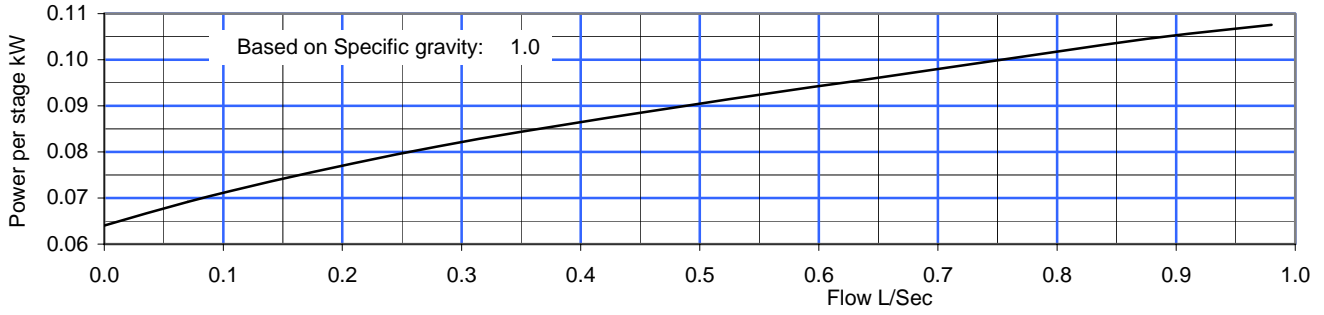
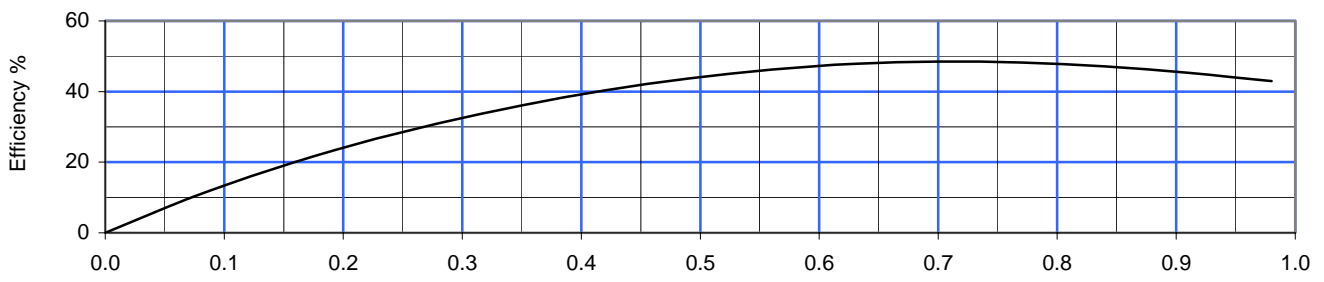
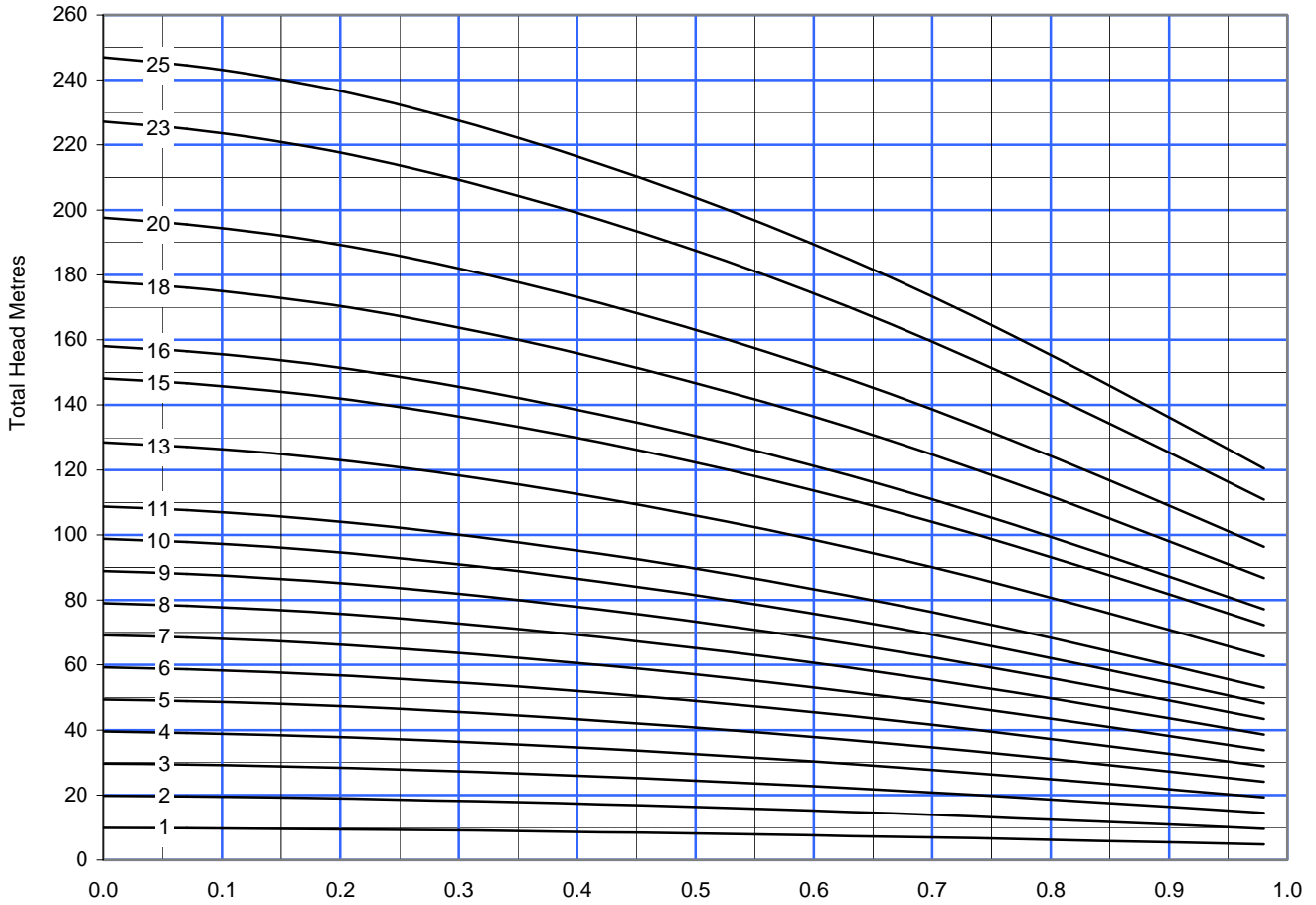
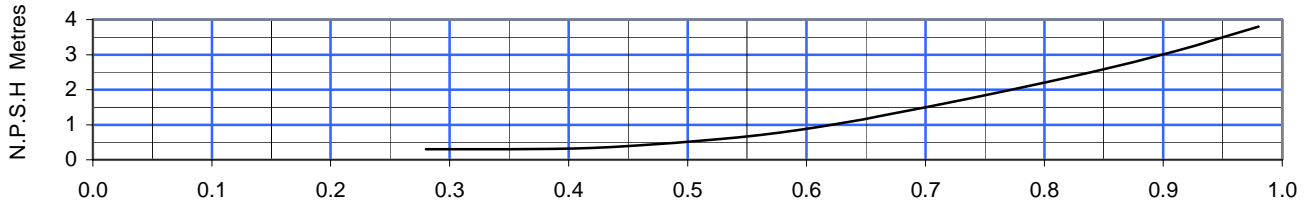
## Range chart 50 hz speeds

Refer to Apex for pump performance at 60 hz speeds.

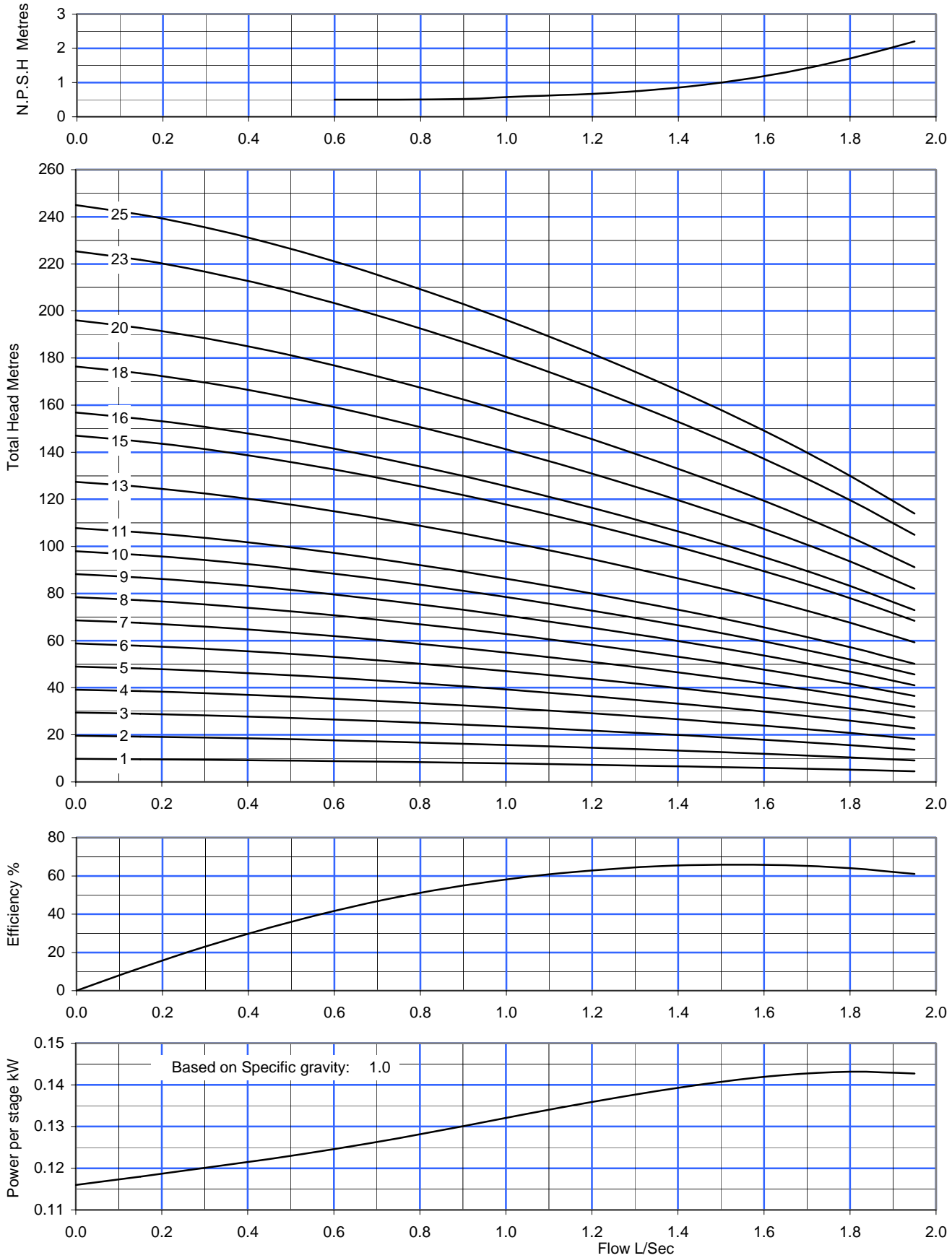


Vertical Multistage pump  
Performance curve

**APEX**PUMPS



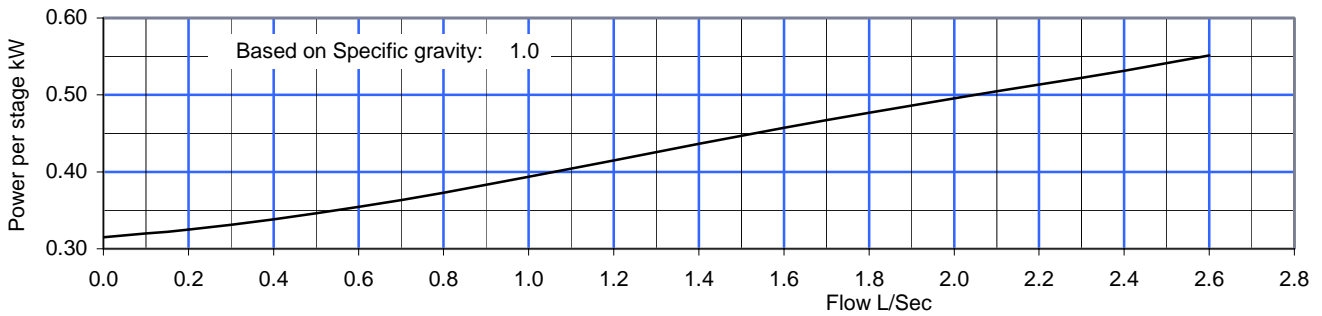
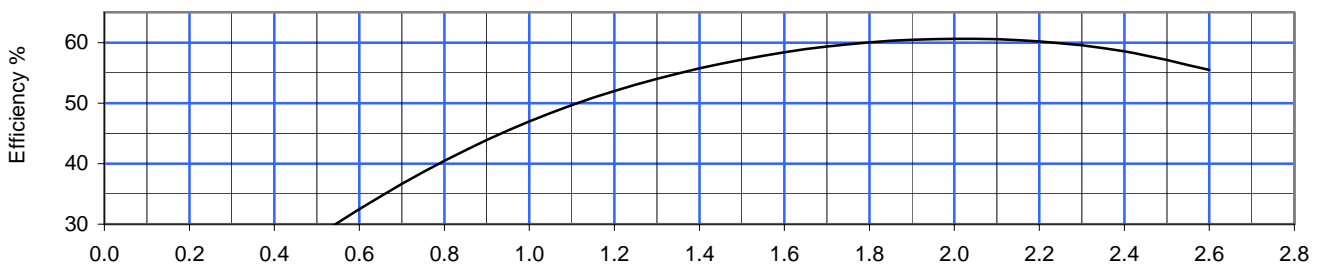
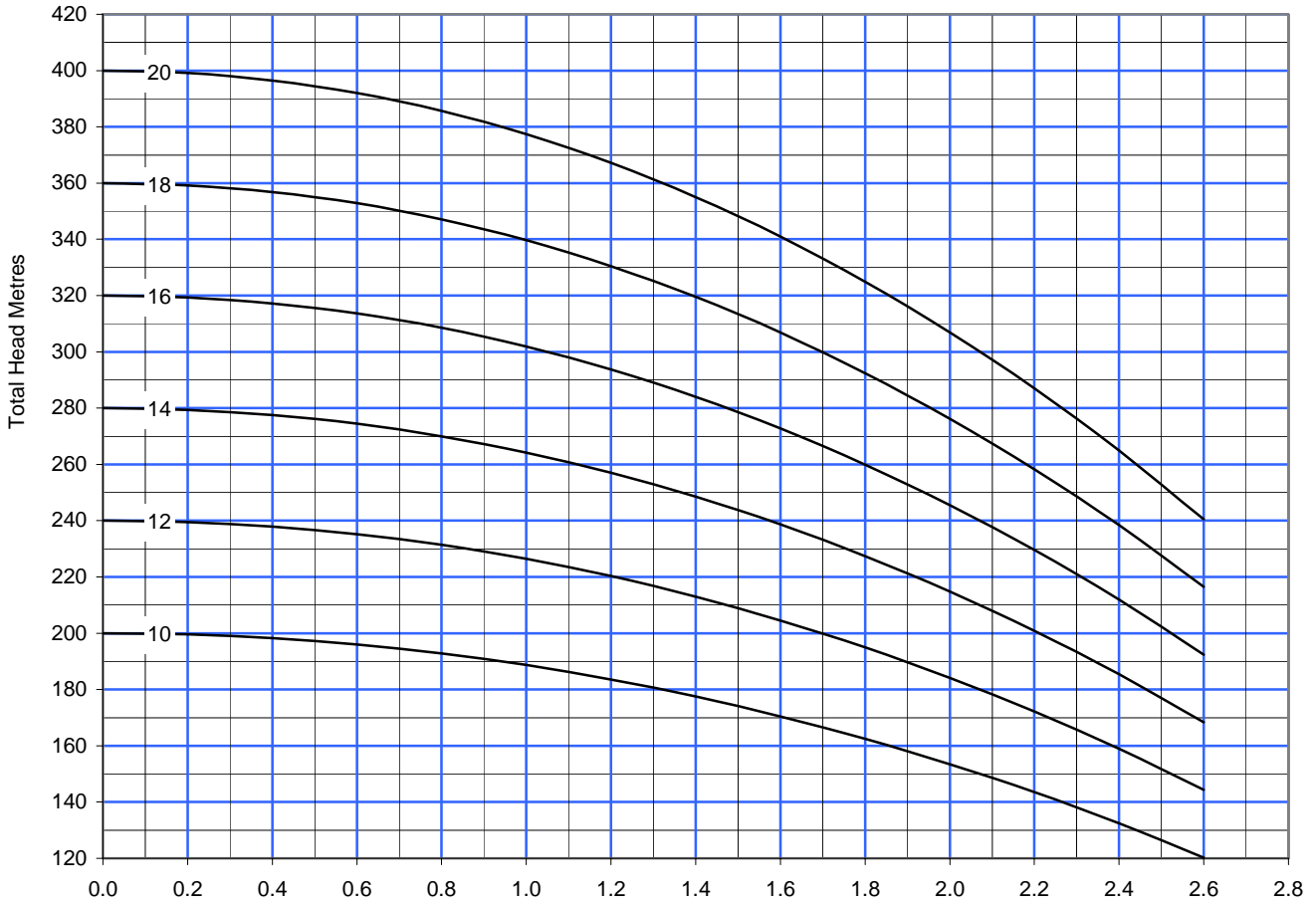
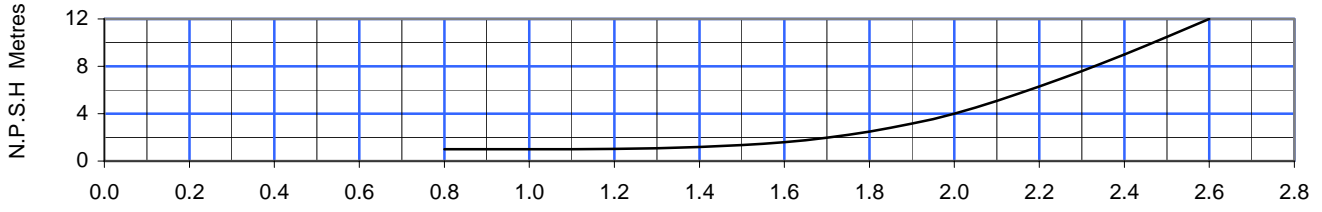
SUCTION DIA <b>25 mm</b>	DISCHARGE DIA <b>25 mm</b>	MAX PRESSURE <b>25 bar</b>	PUMP MODEL <b>MSS2</b>	SPEED <b>2850</b>
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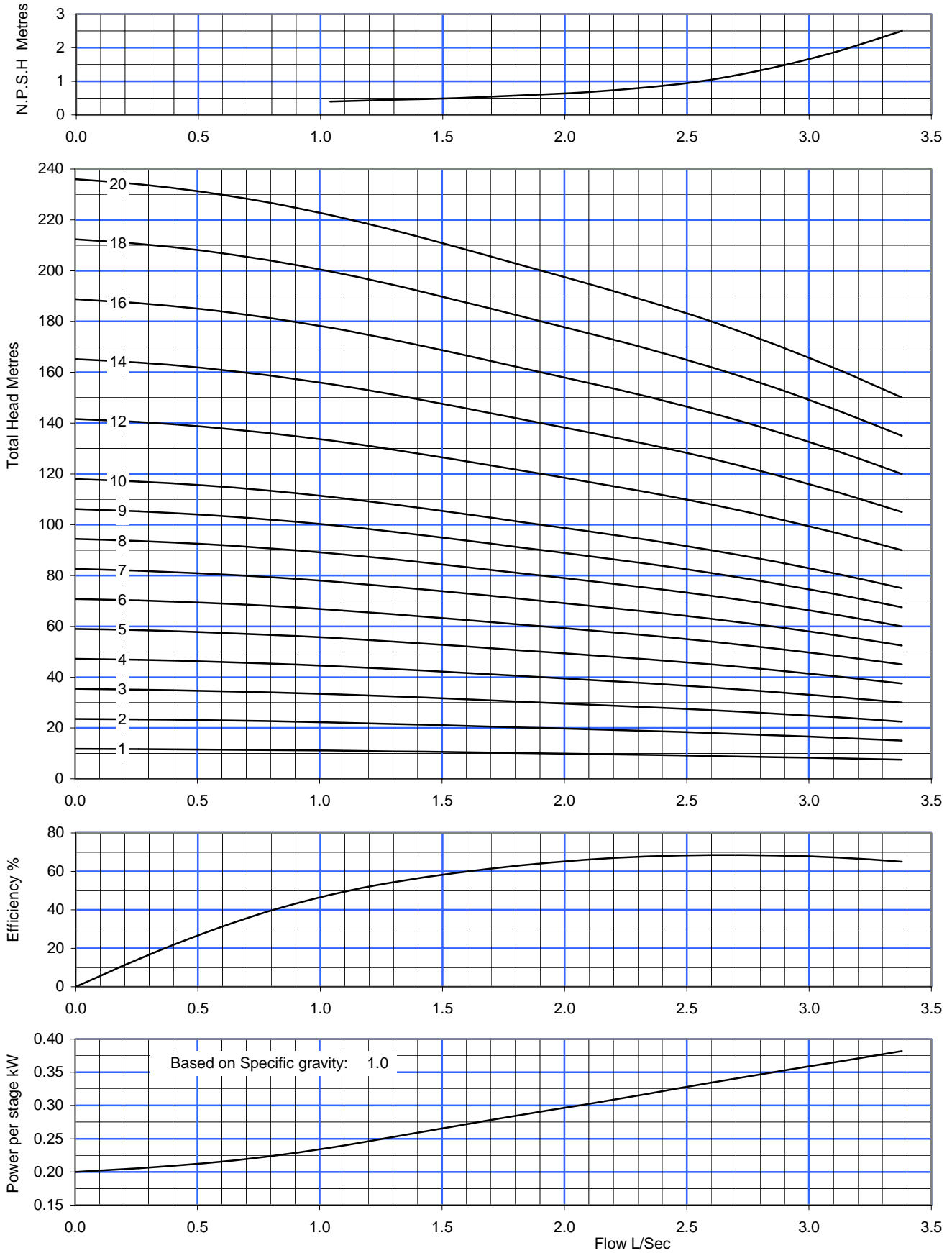
SUCTION DIA <b>32 mm</b>	DISCHARGE DIA <b>32 mm</b>	MAX PRESSURE <b>25 bar</b>	PUMP MODEL <b>MSS4</b>	SPEED <b>2850</b>
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Vertical Multistage pump  
Performance curve

**APEXPUMPS**



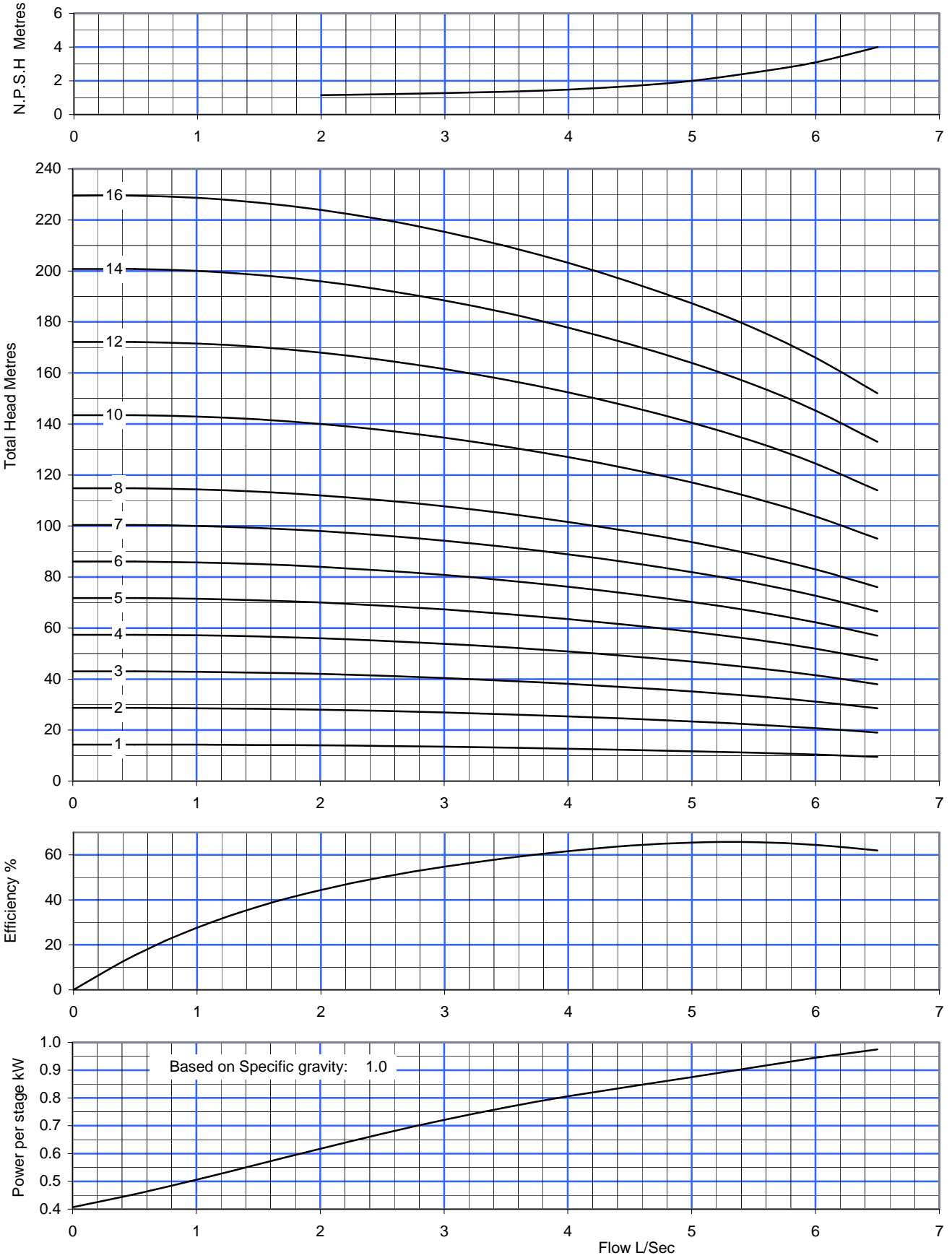
SUCTION DIA <b>32 mm</b>	DISCHARGE DIA <b>32 mm</b>	MAX PRESSURE <b>40 bar</b>	PUMP MODEL <b>MSS6</b>	SPEED <b>2850</b>
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SUCTION DIA <b>40 mm</b>	DISCHARGE DIA <b>40 mm</b>	MAX PRESSURE <b>25 bar</b>	PUMP MODEL <b>MSS10</b>	SPEED <b>2850</b>
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Vertical Multistage pump  
Performance curve

**APEXPUMPS**

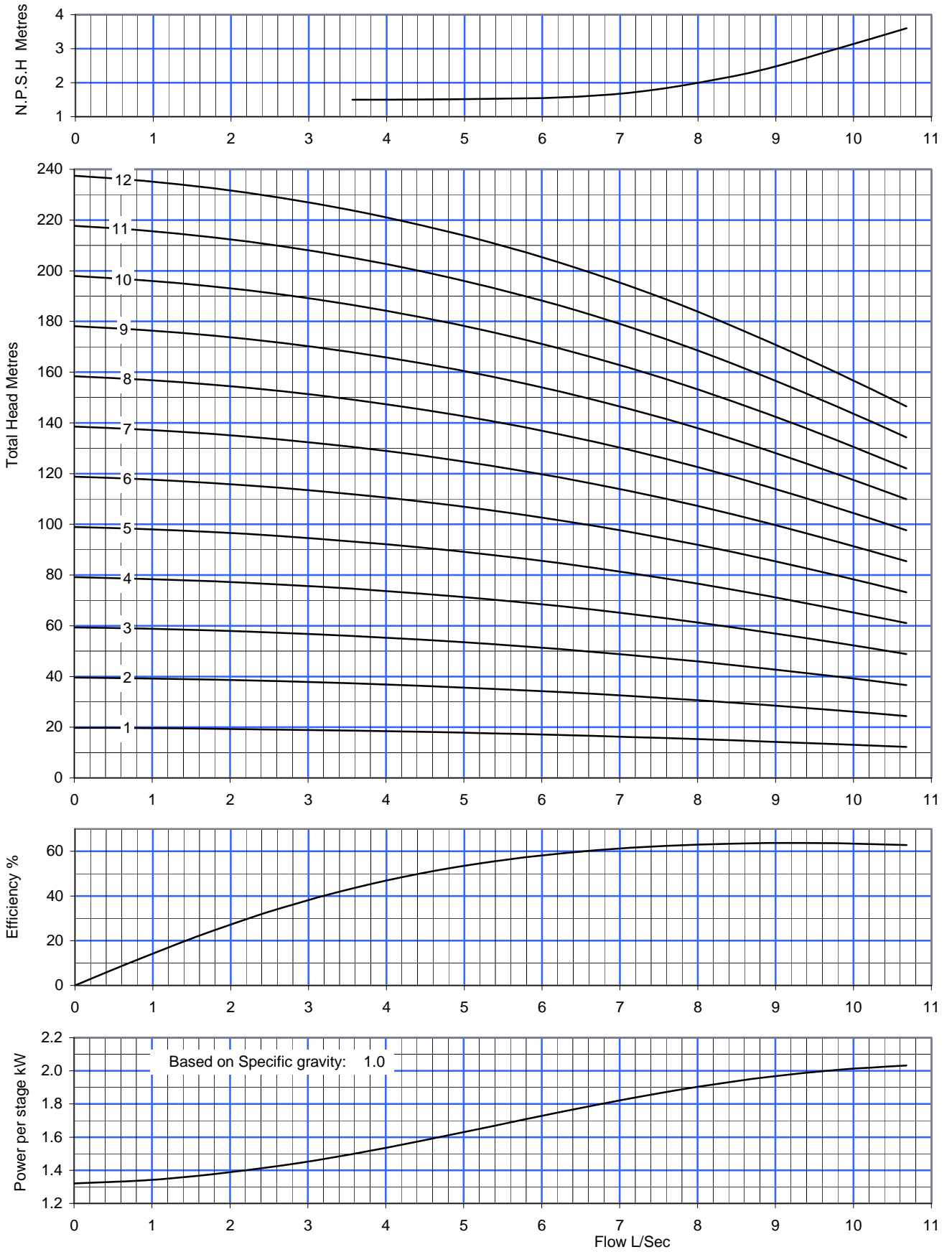


SUCTION DIA <b>50 mm</b>	DISCHARGE DIA <b>50 mm</b>	MAX PRESSURE <b>25 bar</b>	PUMP MODEL <b>MSS18</b>	SPEED <b>2850</b>
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Vertical Multistage pump  
Performance curve

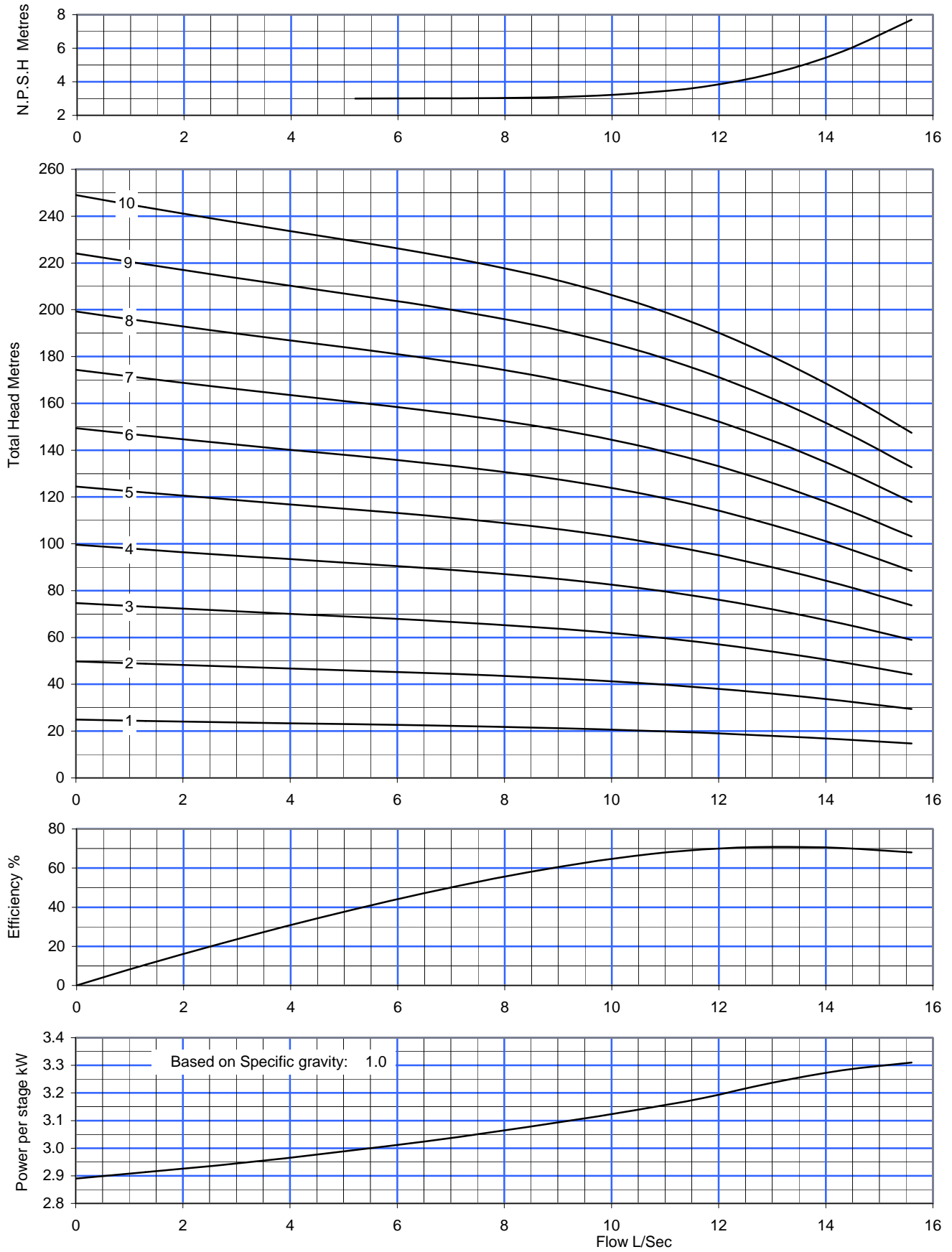
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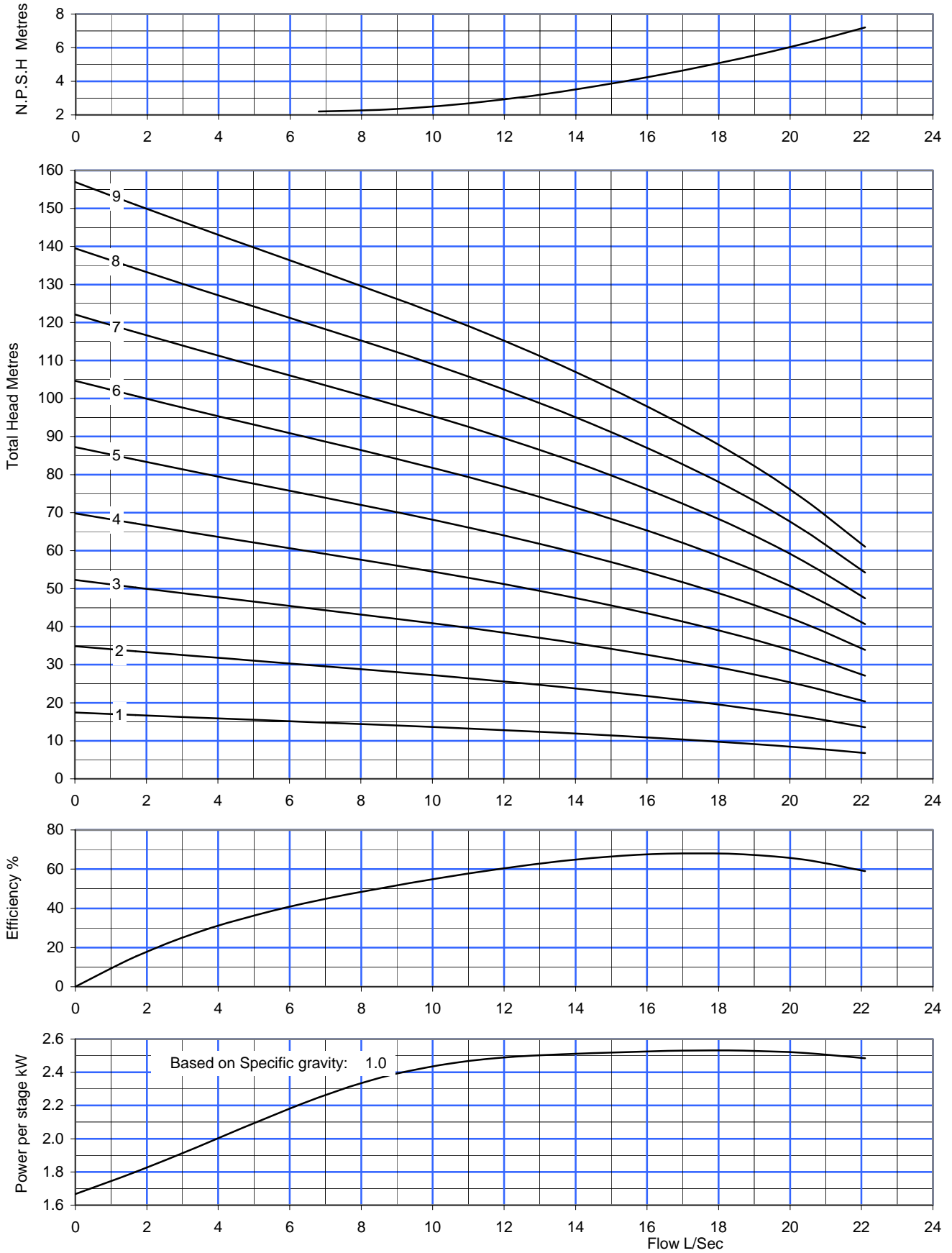
SUCTION DIA <b>65 mm</b>	DISCHARGE DIA <b>65 mm</b>	MAX PRESSURE <b>25 bar</b>	PUMP MODEL <b>MSS32</b>	SPEED <b>2850</b>
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Vertical Multistage pump  
Performance curve

**APEXPUMPS**



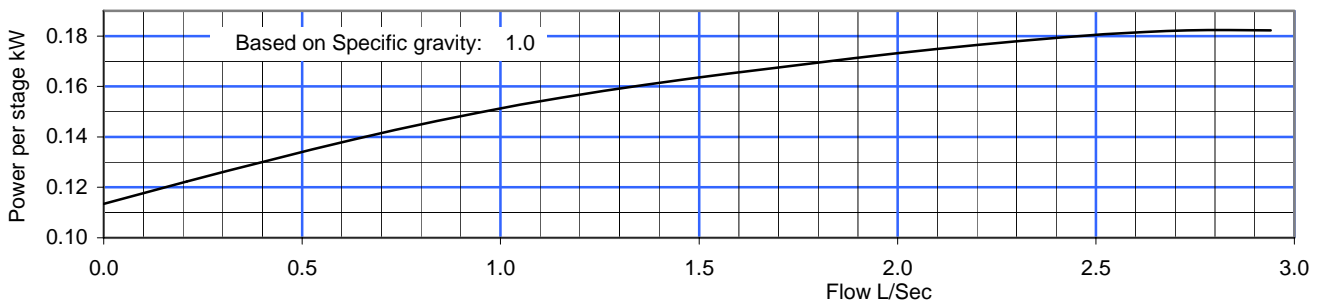
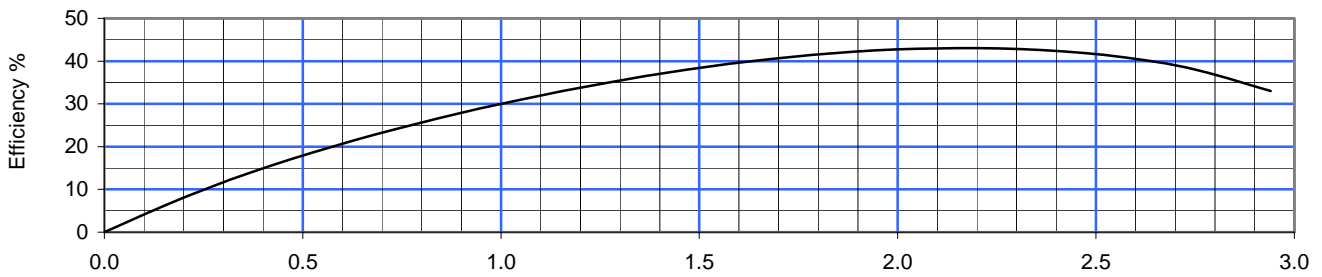
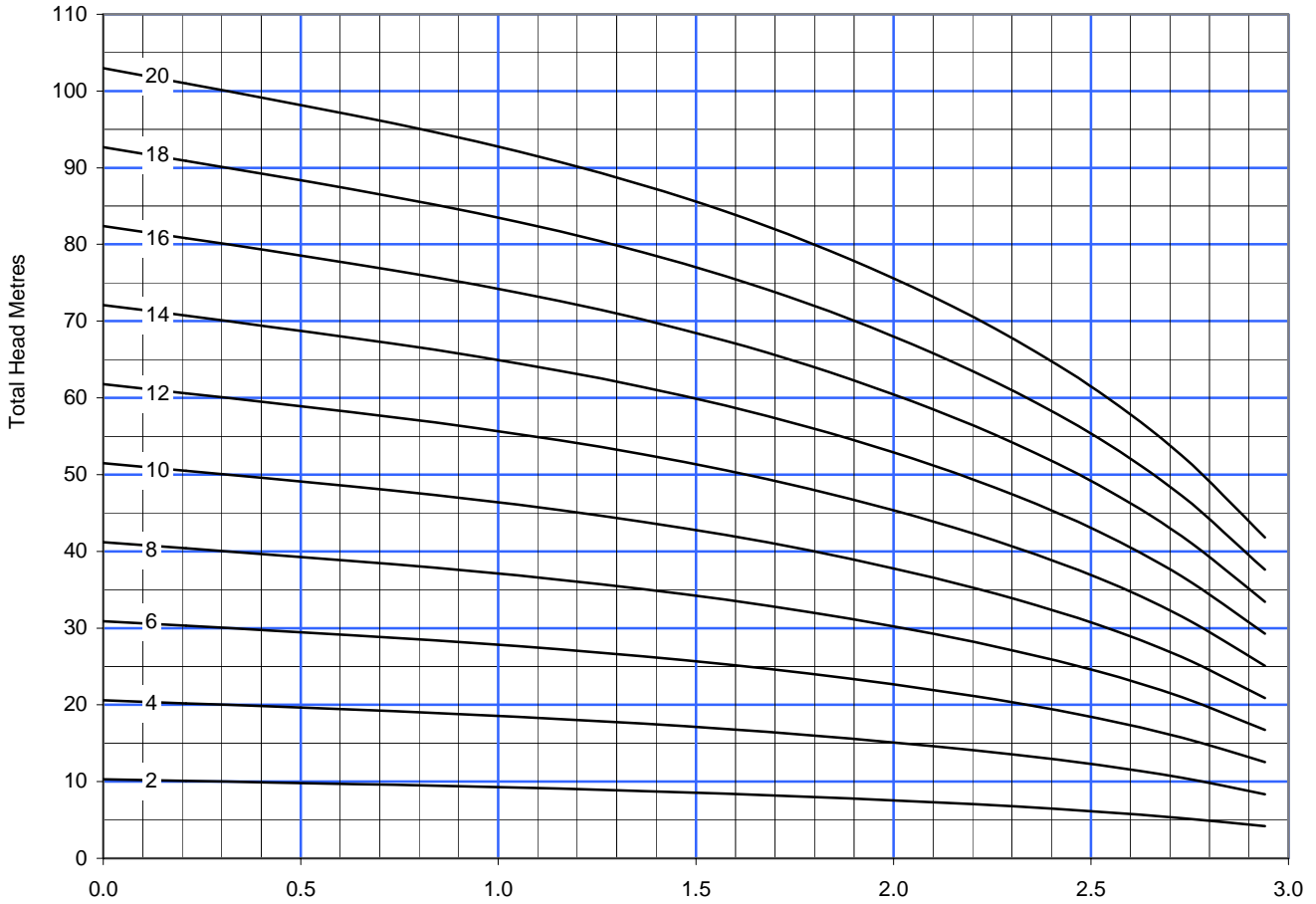
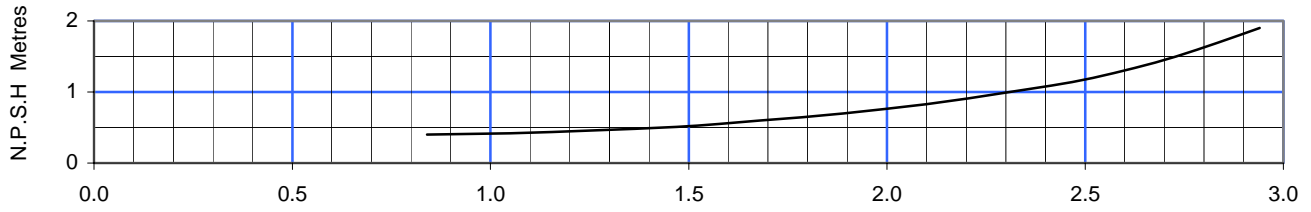
SUCTION DIA <b>80 mm</b>	DISCHARGE DIA <b>80 mm</b>	MAX PRESSURE <b>25 bar</b>	PUMP MODEL <b>MSS45</b>	SPEED <b>2850</b>
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SUCTION DIA <b>100 mm</b>	DISCHARGE DIA <b>100 mm</b>	MAX PRESSURE <b>25 bar</b>	PUMP MODEL <b>MSS65</b>	SPEED <b>2850</b>
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Vertical Multistage pump  
Performance curve

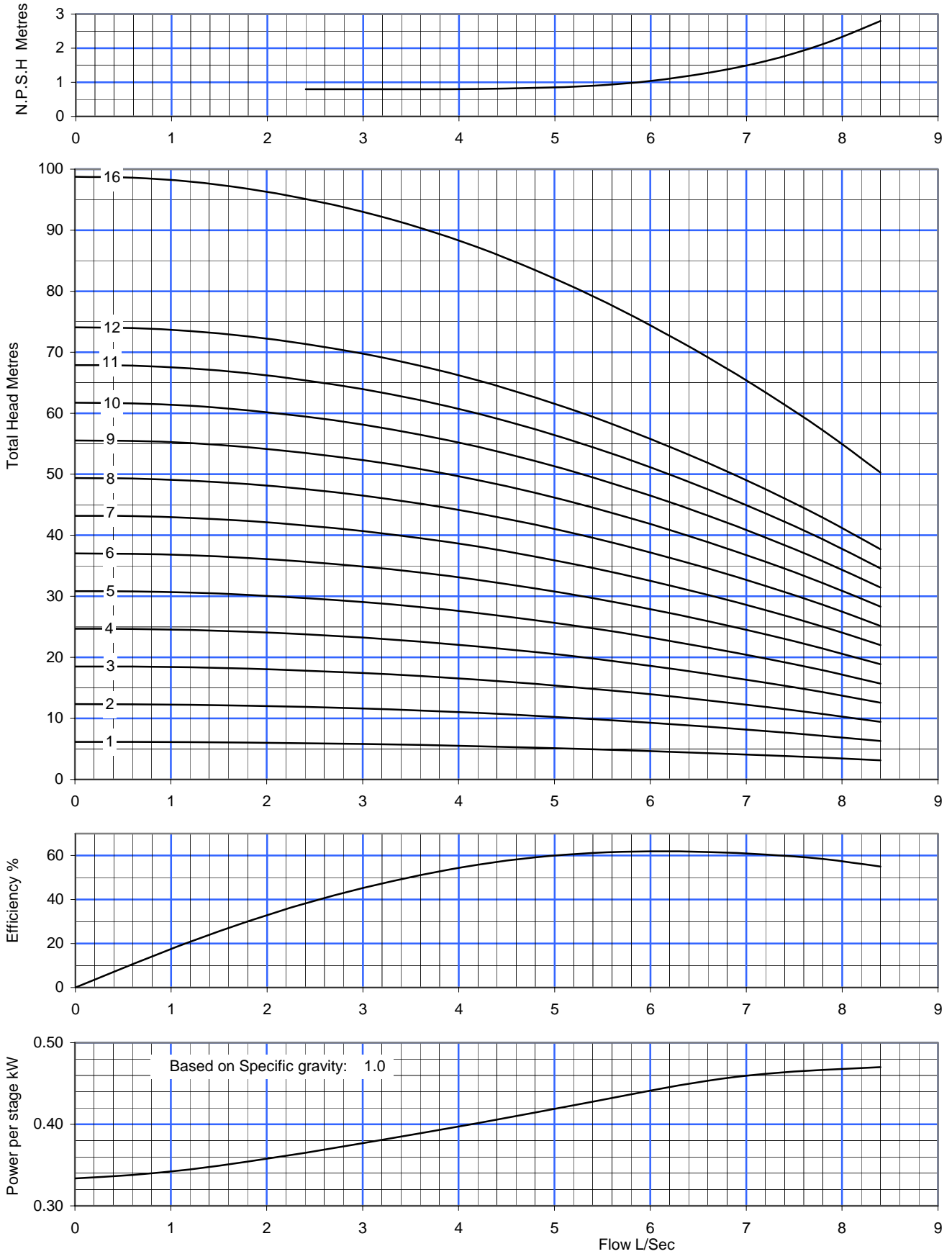
**APEXPUMPS**



SUCTION DIA <b>32 mm</b>	DISCHARGE DIA <b>32 mm</b>	MAX PRESSURE <b>16 bar</b>	PUMP MODEL <b>MSS14</b>	SPEED <b>1425</b>
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Vertical Multistage pump  
Performance curve

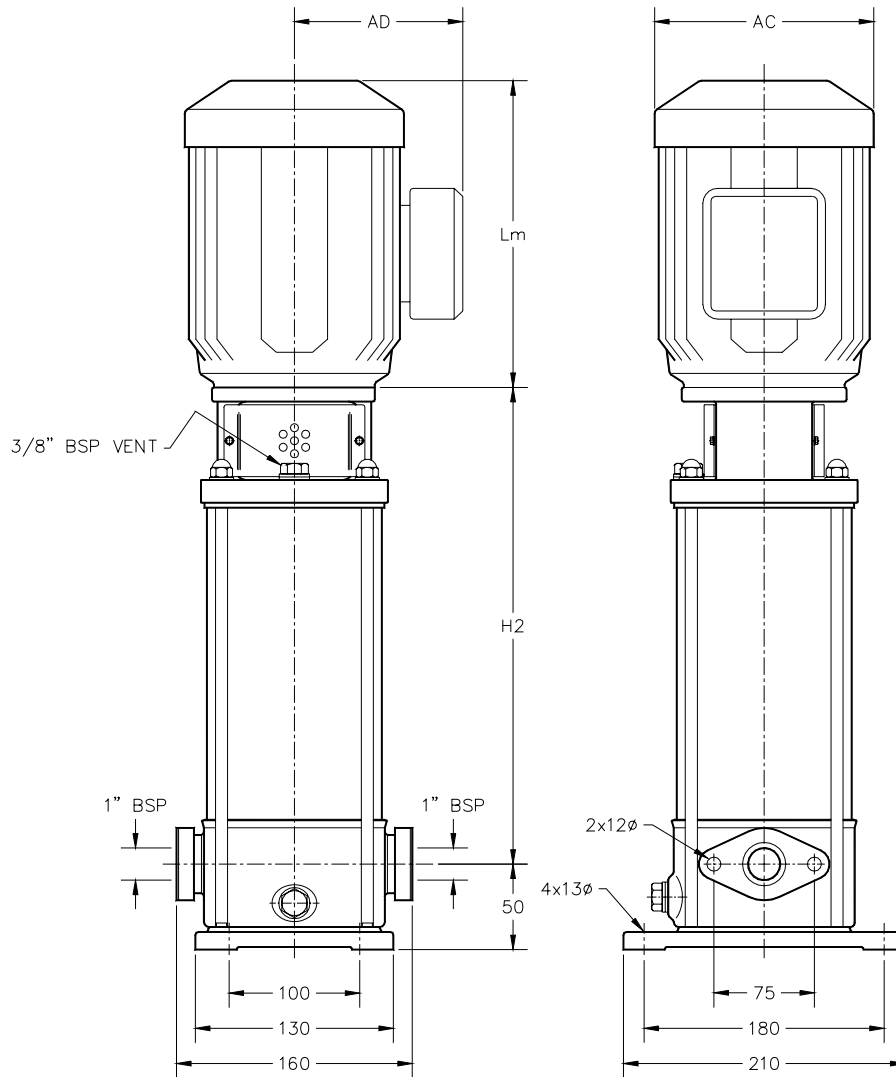
**APEX**PUMPS



SUCTION DIA <b>65 mm</b>	DISCHARGE DIA <b>65 mm</b>	MAX PRESSURE <b>25 bar</b>	PUMP MODEL <b>MSS24</b>	SPEED <b>1425</b>
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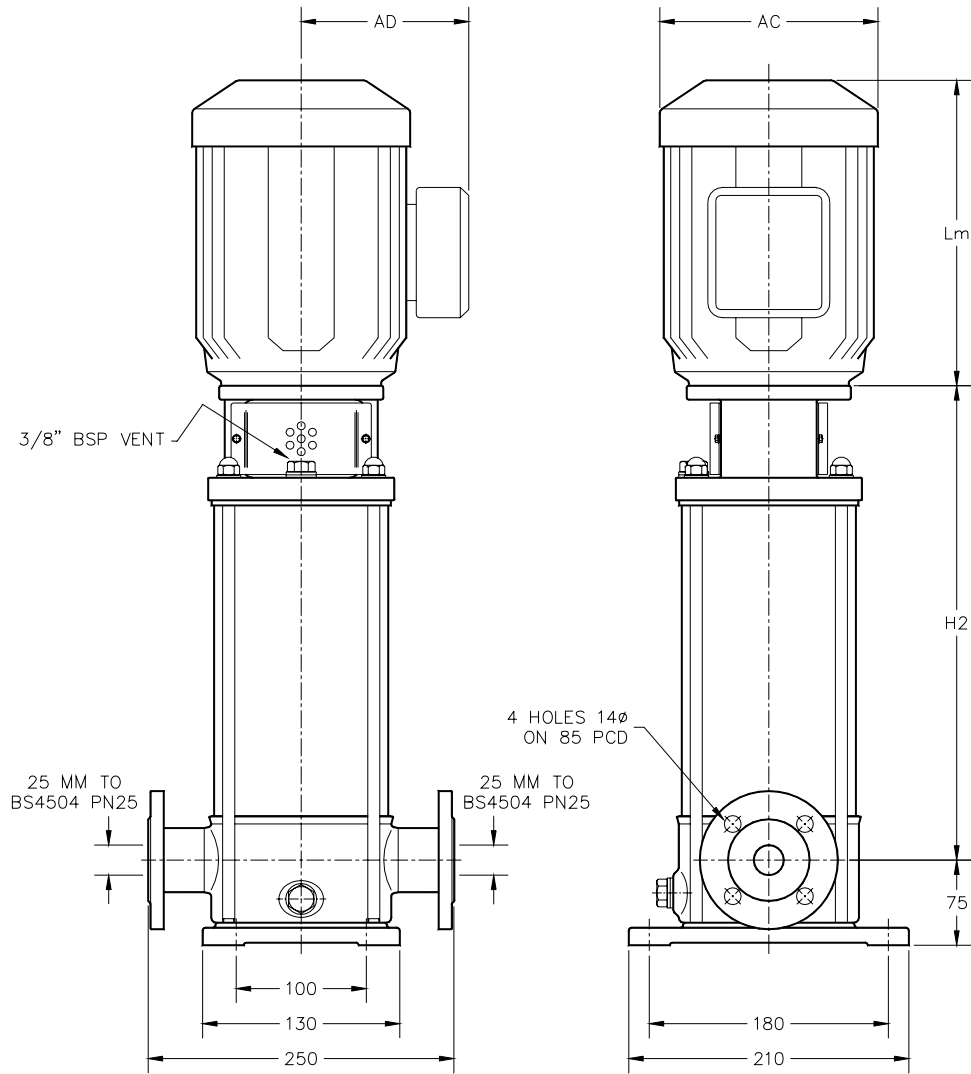
**APEX**PUMPS

## MSS2 Dimensions: Oval flange design (1-15 stages)



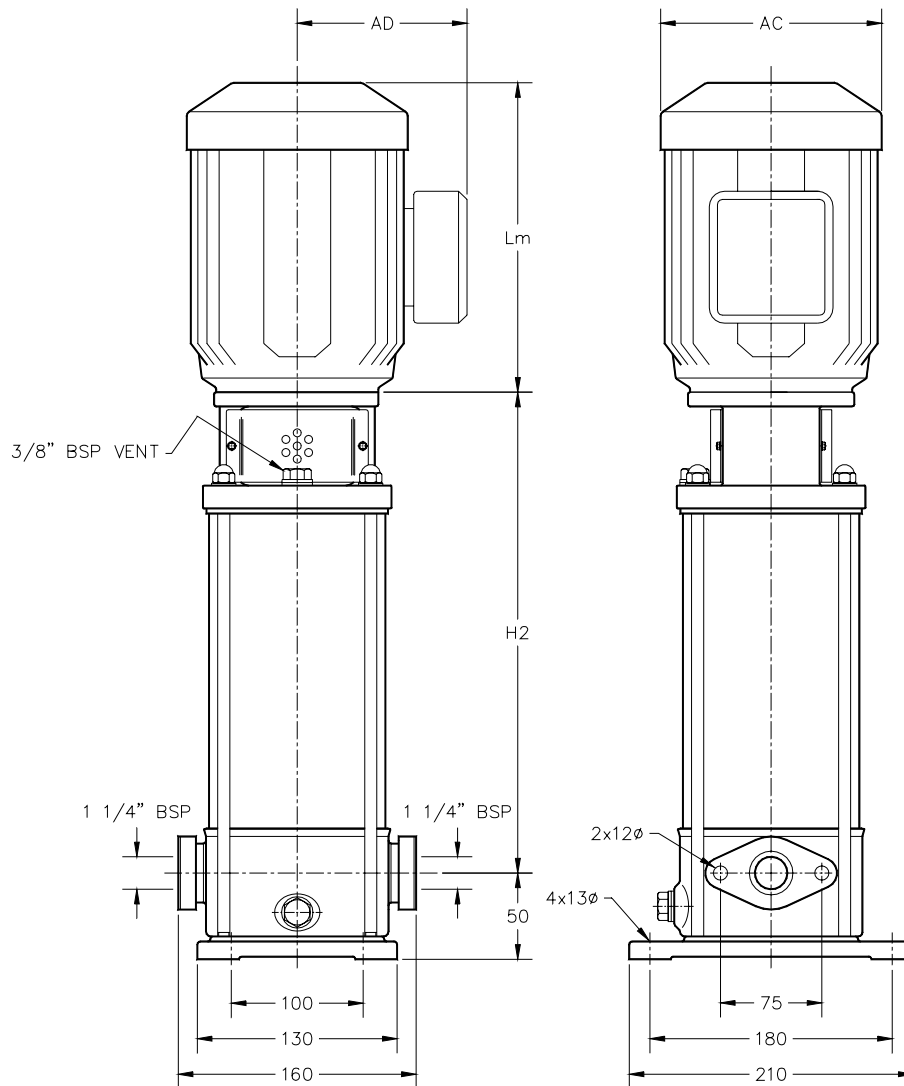
Pump size	No of Stages	Motor kW	H2	Lm	Current amps	AC	AD	Nett weight	Noise level @ 1 m dBa
MSS2-1	1	0.37	182	219	1.25	134	112	14	61
MSS2-2	2	0.37	182	219	1.25	134	112	14	61
MSS2-3	3	0.37	203	219	1.25	134	112	14	61
MSS2-4	4	0.55	224	243	1.75	134	112	16	62
MSS2-5	5	0.55	245	243	1.75	134	112	17	62
MSS2-6	6	0.75	276	234	2.2	150	120	19	66
MSS2-7	7	0.75	297	234	2.2	150	120	19	66
MSS2-8	8	1.1	318	264	2.95	150	120	22	68
MSS2-9	9	1.1	339	264	2.95	150	120	23	68
MSS2-10	10	1.1	360	264	2.95	150	120	23	68
MSS2-11	11	1.1	381	264	2.95	150	120	24	68
MSS2-13	13	1.5	433	256	3.9	180	142	28	70
MSS2-15	15	1.5	475	256	3.9	180	142	28	70

### MSS2 Dimensions: Circular flange design (16-25 stages)



Pump size	No of Stages	Motor kW	H2	Lm	Current amps	AC	AD	Nett weight	Noise level @ 1 m dBa
MSS2-16	16	2.2	496	281	5.42	142	180	32	70
MSS2-18	18	2.2	538	281	5.42	142	180	33	70
MSS2-20	20	2.2	580	281	5.42	142	180	34	70
MSS2-23	23	3.0	653	314	6.91	155	206	43	70
MSS2-25	25	3.0	695	314	6.91	155	206	44	70

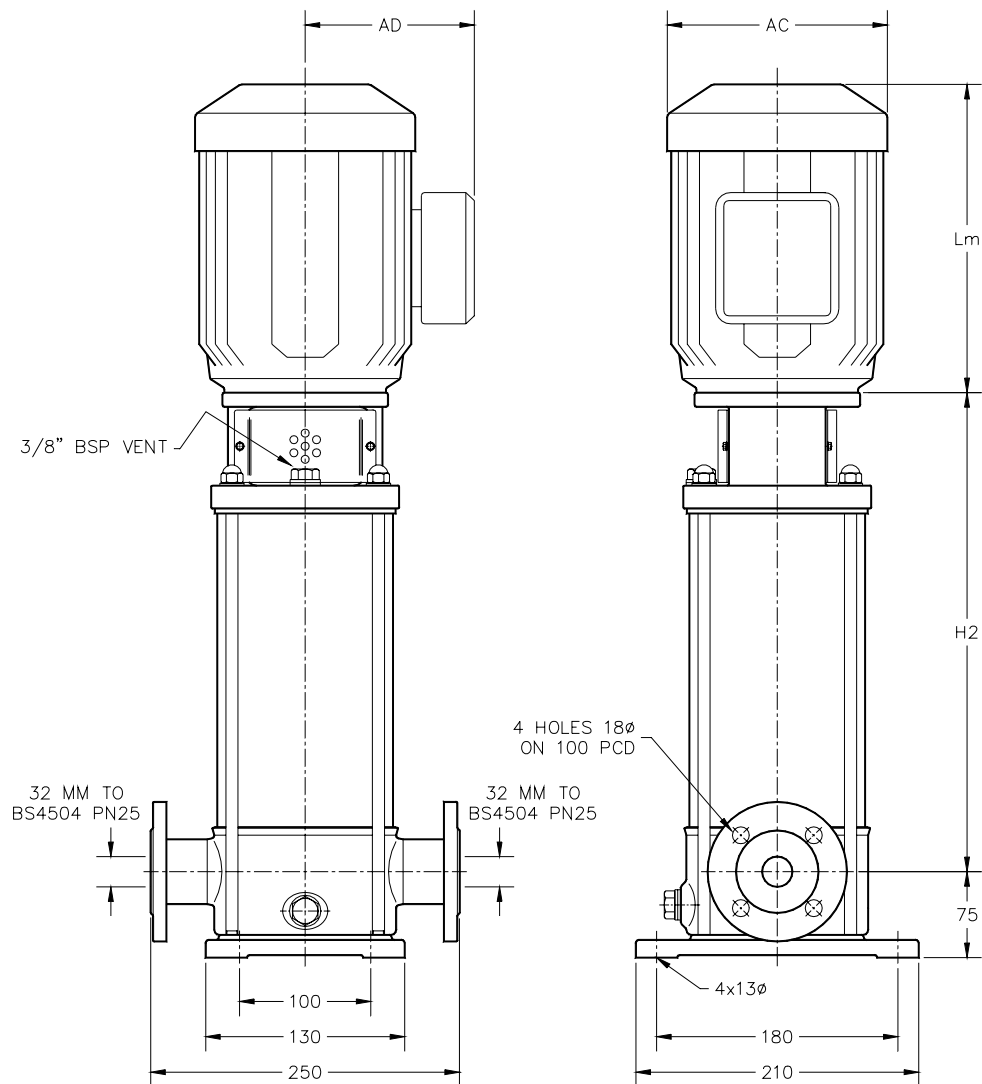
## MSS4 Dimensions: Oval flange design (1-15 stages)



Pump size	No of Stages	Motor kW	H2	Lm	Current amps	AC	AD	Nett weight	Noise level @ 1 m dBa
MSS4-1	1	0.37	182	219	1.25	134	112	14	61
MSS4-2	2	0.37	182	219	1.25	134	112	14	61
MSS4-3	3	0.55	203	243	1.75	134	112	16	62
MSS4-4	4	0.75	224	234	2.20	150	120	18	66
MSS4-5	5	0.75	245	234	2.20	150	120	18	66
MSS4-6	6	1.1	276	264	2.95	150	120	21	68
MSS4-7	7	1.1	297	264	2.95	150	120	22	70
MSS4-8	8	1.5	318	256	3.9	180	142	25	70
MSS4-9	9	1.5	339	256	3.9	180	142	26	70
MSS4-10	10	1.5	360	256	3.9	180	142	26	70
MSS4-11	11	2.2	381	281	5.42	180	142	29	70
MSS4-13	13	2.2	433	281	5.42	180	142	30	70
MSS4-15	15	2.2	475	281	5.42	180	142	31	70

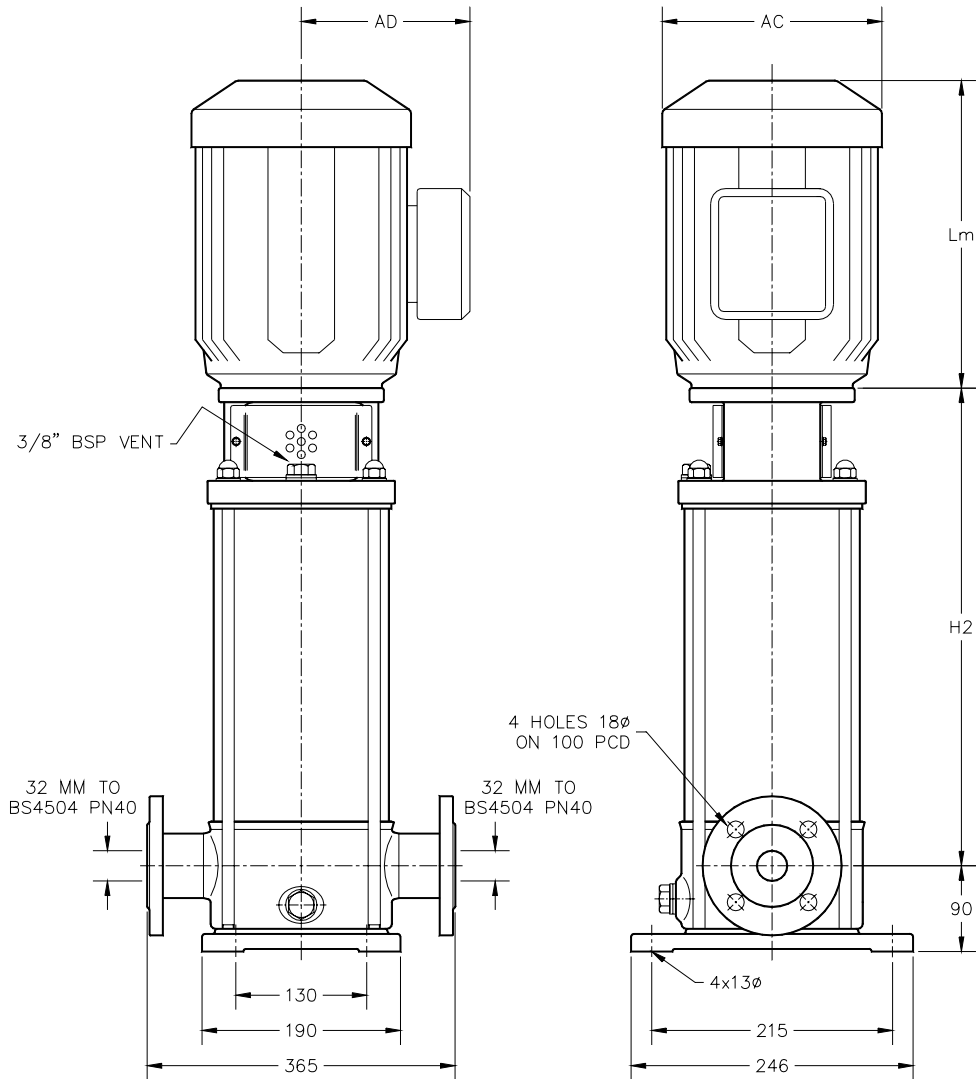


## MSS4 Dimensions: Circular flange design (16-25 stages)



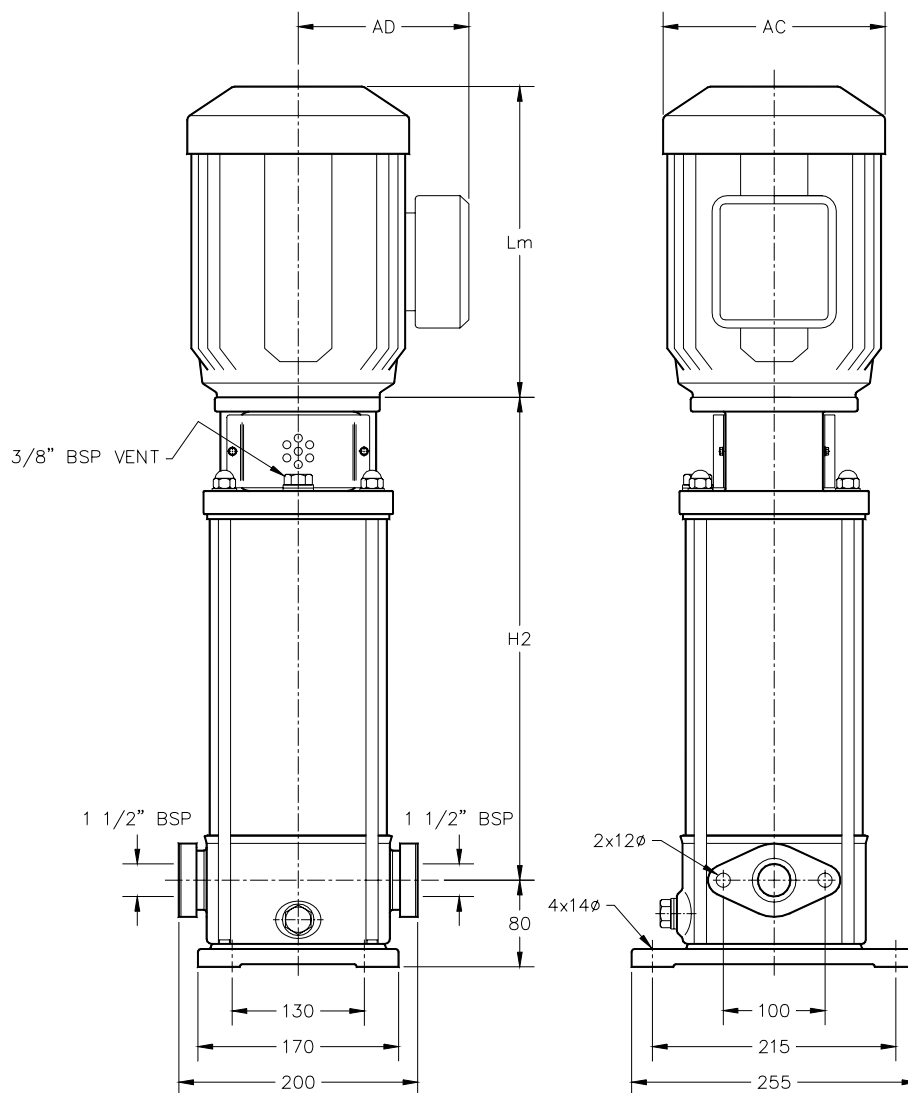
Pump size	No of Stages	Motor kW	H2	Lm	Current amps	AC	AD	Nett weight	Noise level @ 1 m dBa
MSS4-16	16	3.0	506	314	3.98	206	155	41	70
MSS4-18	18	3.0	548	314	3.98	206	155	42	70
MSS4-20	20	3.0	590	314	5.15	206	155	43	70
MSS4-23	23	4.0	653	323	5.15	233	168	53	73
MSS4-25	25	4.0	695	323	5.15	233	168	54	73

## MSS6 Dimensions: Circular flange design (10-20 stages)



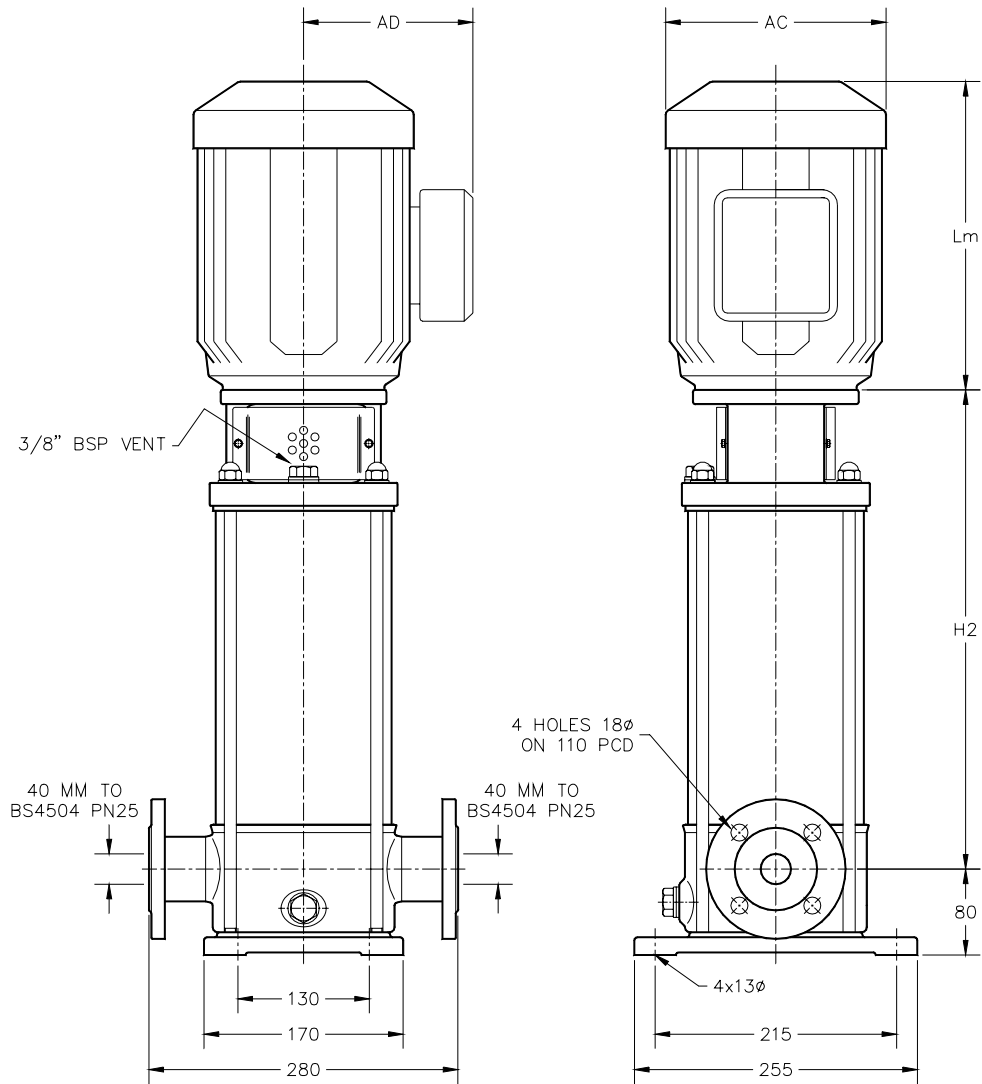
Pump size	No of Stages	Motor kW	H2	Lm	Current amps	AC	AD	Nett weight	Noise level @ 1 m dBa
MSS6-10	10	7.5	509	370	16.5	220	182	87	81
MSS6-12	12	7.5	568	370	16.5	220	182	90	82
MSS6-14	14	7.5	628	370	16.5	220	182	92	82
MSS6-16	16	11	718	510	26.5	310	215	179	83
MSS6-18	18	11	777	510	26.5	310	215	182	84
MSS6-20	20	11	837	510	26.5	310	215	201	85

## MSS10 Dimensions: Oval flange design (1-14 stages)



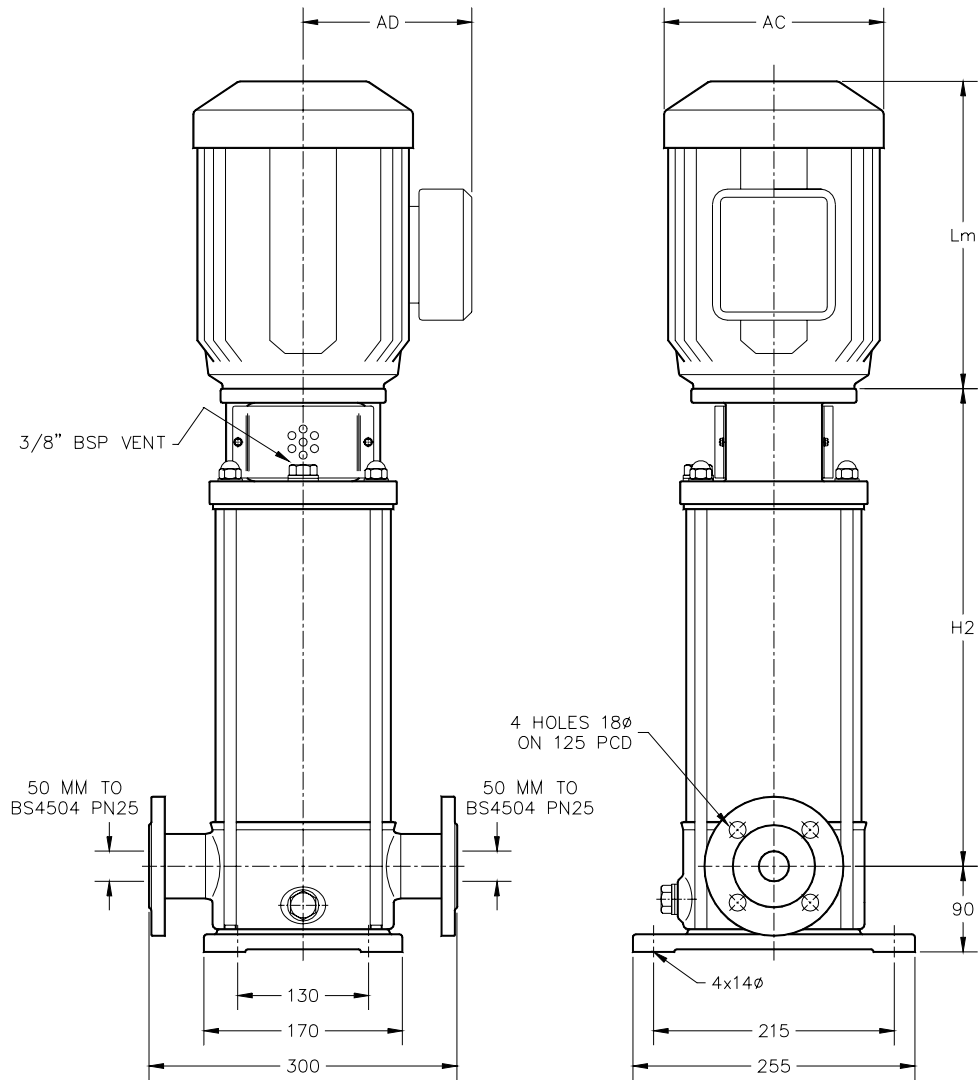
Pump size	No of Stages	Motor kW	H2	Lm	Current amps	AC	AD	Nett weight	Noise level @ 1 m dBa
MSS10-1	1	0.75	276	234	2.2	150	120	23	66
MSS10-2	2	0.75	276	234	2.2	150	120	23	66
MSS10-3	3	1.1	318	264	2.95	150	120	26	68
MSS10-4	4	1.5	433	256	3.90	174	142	29	70
MSS10-5	5	2.2	475	281	5.42	174	142	33	70
MSS10-6	6	2.2	475	281	5.42	174	142	33	70
MSS10-7	7	3.0	506	314	6.91	198	155	43	70
MSS10-8	8	3.0	506	314	6.91	198	155	44	70
MSS10-9	9	4.0	653	323	8.93	224	168	51	73
MSS10-10	10	4.0	653	323	8.93	224	168	51	73
MSS10-12	12	5.5	381	264	12.5	264	179	77	73
MSS10-14	14	5.5	433	256	12.5	264	179	83	73

## MSS10 Dimensions: Circular flange design (16-20 stages)



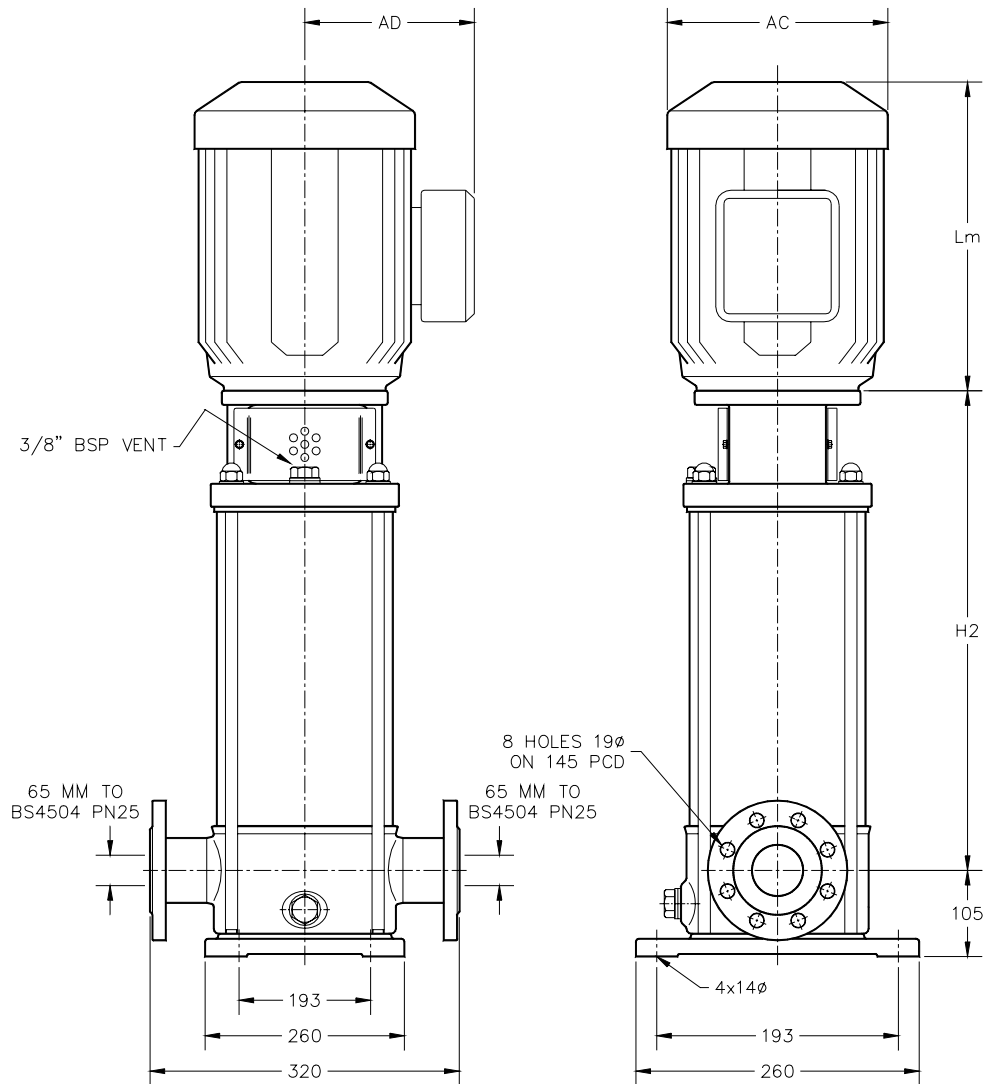
Pump size	No of Stages	Motor kW	H2	Lm	Current amps	AC	AD	Nett weight	Noise level @ 1 m dBa
MSS10-16	16	5.5	660	360	12.5	264	179	86	73
MSS10-18	18	7.5	714	360	16.7	264	179	95	74
MSS10-20	20	7.5	768	360	16.7	264	179	97	74

## MSS18 Dimensions: Circular flange design (1-16 stages)



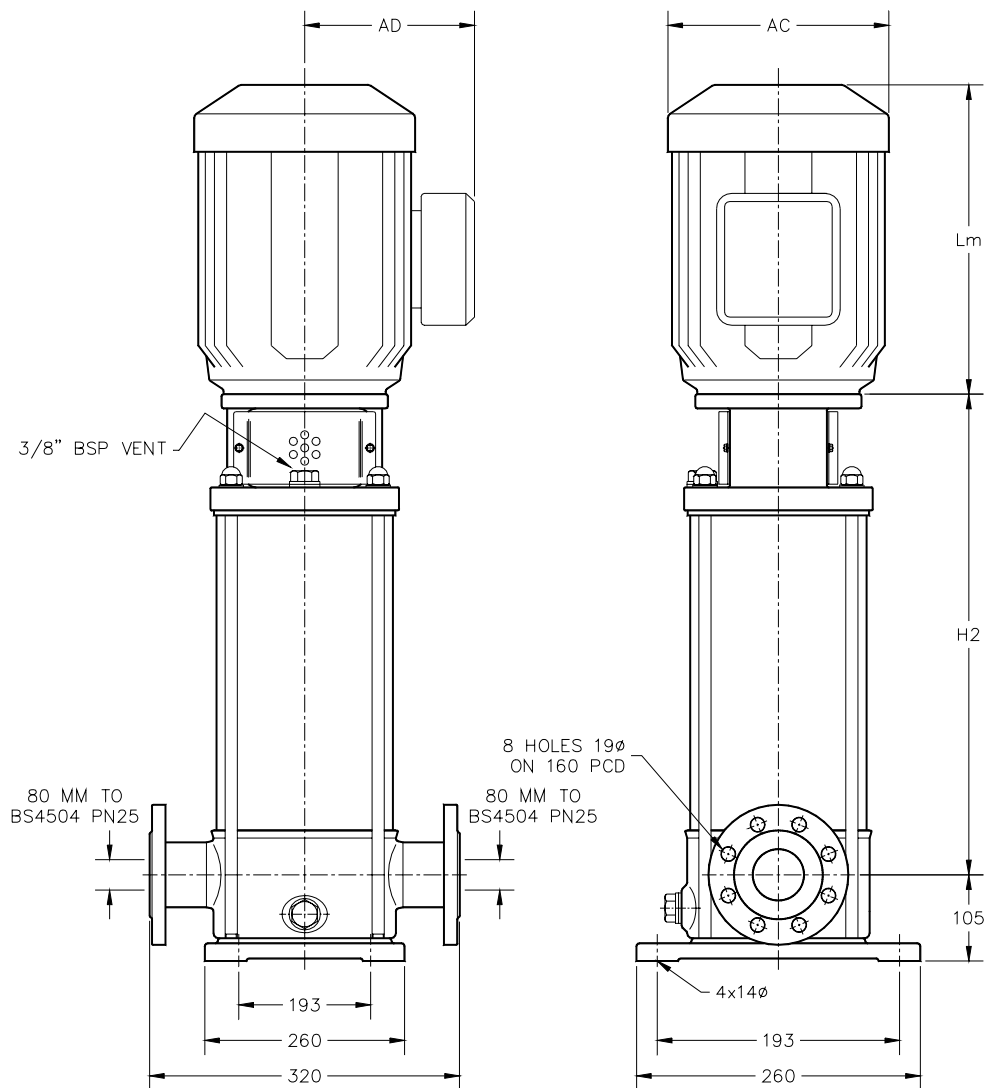
Pump size	No of Stages	Motor kW	H2	Lm	Current amps	AC	AD	Nett weight	Noise level @ 1 m dBa
MSS18-1	1	1.1	257	264	2.95	150	120	28	68
MSS18-2	2	2.2	267	281	5.42	174	142	33	70
MSS18-3	3	3.0	311	314	6.91	198	155	43	70
MSS18-4	4	4.0	346	323	8.93	224	168	50	73
MSS18-5	5	5.5	400	360	12.5	264	179	75	73
MSS18-6	6	5.5	435	360	12.5	264	179	81	73
MSS18-7	7	7.5	469	360	16.7	264	179	90	74
MSS18-8	8	7.5	504	360	16.7	264	179	91	74
MSS18-10	10	11	603	510	25.45	315	210	145	80
MSS18-12	12	11	672	510	25.4	315	210	147	81
MSS18-14	14	15	741	510	32.2	315	210	163	81
MSS18-16	14	15	810	510	32.2	315	210	165	81

## MSS32 Dimensions: Circular flange design (1-12 stages)



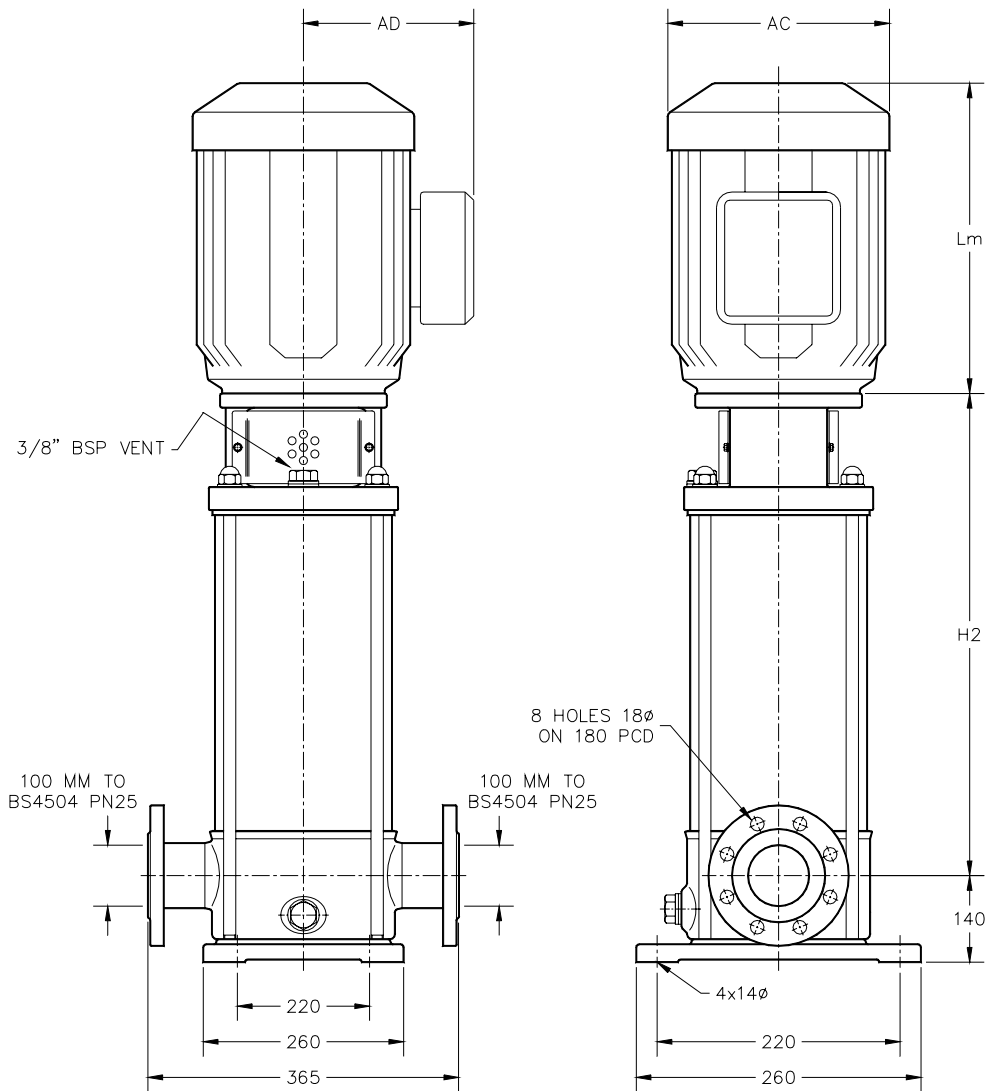
Pump size	No of Stages	Motor kW	H2	Lm	Current amps	AC	AD	Nett weight	Noise level @ 1 m dBa
MSS32-1	1	2.2	353	281	5.4	174	142	60	70
MSS32-2	2	4.0	401	323	8.9	224	156	76	73
MSS32-3	3	5.5	470	370	12.5	264	168	91	73
MSS32-4	4	7.5	518	370	16.1	264	168	97	74
MSS32-5	5	11	672	437	23.2	315	230	173	80
MSS32-6	6	11	720	437	23.2	315	230	175	80
MSS32-7	7	15	769	437	30.7	315	230	186	81
MSS32-8	8	15	817	437	30.7	315	230	188	81
MSS32-9	9	15	866	437	30.7	315	230	190	82
MSS32-10	10	18.5	914	477	32.3	315	230	209	82
MSS32-11	11	18.5	963	477	32.3	315	230	211	90
MSS32-12	12	22	1011	517	44.1	315	230	234	90

## MSS45 Dimensions: Circular flange design (1-10 stages)



Pump size	No of Stages	Motor kW	H2	Lm	Current amps	AC	AD	Nett weight	Noise level @ 1 m dBa
MSS45-1	1	4.0	257	314	8.9	224	120	75	73
MSS45-2	2	7.5	267	400	16.1	225	142	95	74
MSS45-3	3	11	311	510	23.2	312	155	170	80
MSS45-4	4	15	346	510	30.7	312	168	180	80
MSS45-5	5	18.5	400	595	32.3	312	179	199	82
MSS45-6	6	22	435	595	44.1	312	179	222	90
MSS45-7	7	30	469	695	52	438	179	323	78
MSS45-8	8	30	504	695	52	438	179	325	78
MSS45-9	9	37	603	695	64	438	210	347	78
MSS45-10	10	37	672	695	64	438	210	350	78

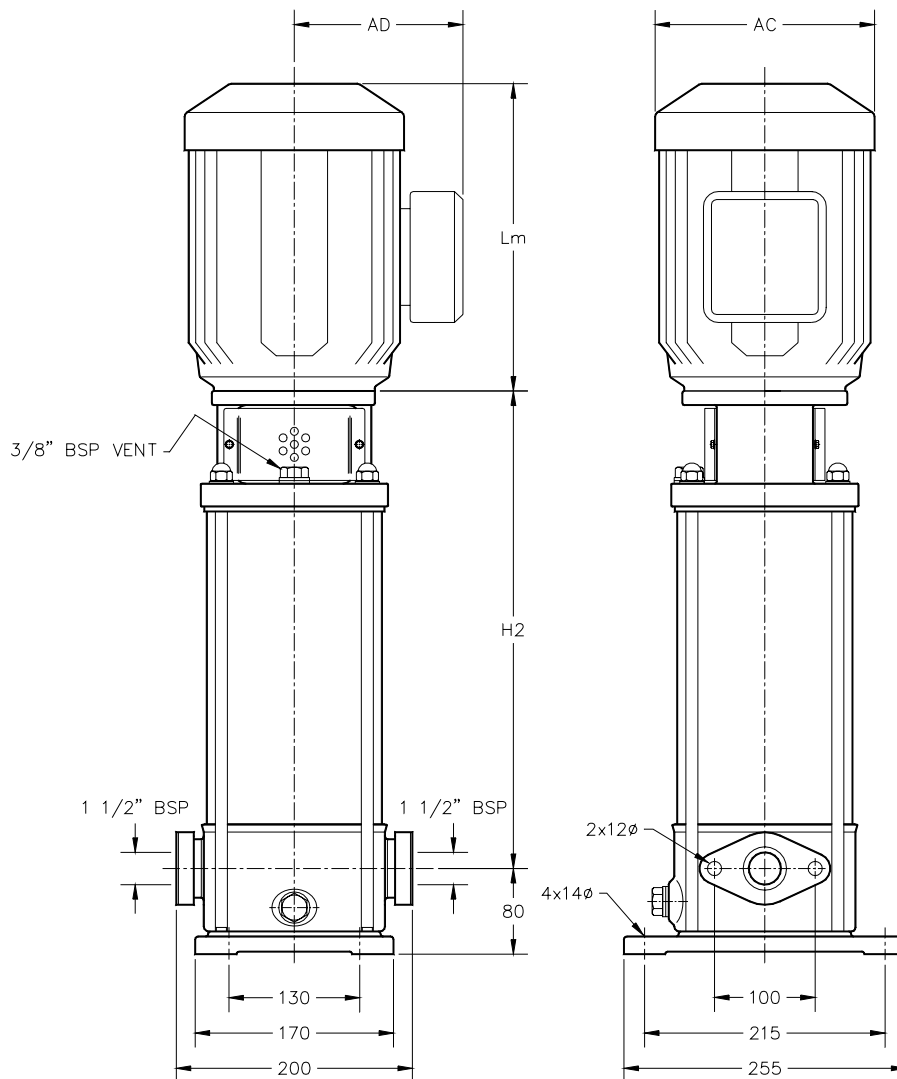
## MSS65 Dimensions: Circular flange design (1-9 stages)



Pump size	No of Stages	Motor kW	H2	Lm	Current amps	AC	AD	Nett weight	Noise level @ 1 m dBa
MSS65-1	1	3.0	430	314	6.91	155	198	75	70
MSS65-2	2	5.5	539	360	12.5	179	264	95	73
MSS65-3	3	7.5	628	400	15.7	179	264	101	74
MSS65-4	4	11.0	747	510	25.4	210	315	181	80
MSS65-5	5	15.0	836	510	32.2	210	315	200	81
MSS65-6	6	15.0	925	510	32.2	210	315	203	81
MSS65-7	7	18.5	1014	595	39.2	228	315	221	82
MSS65-8	8	22.0	1103	595	46.9	228	350	257	90
MSS65-9	9	22.0	1192	595	46.9	228	350	260	90

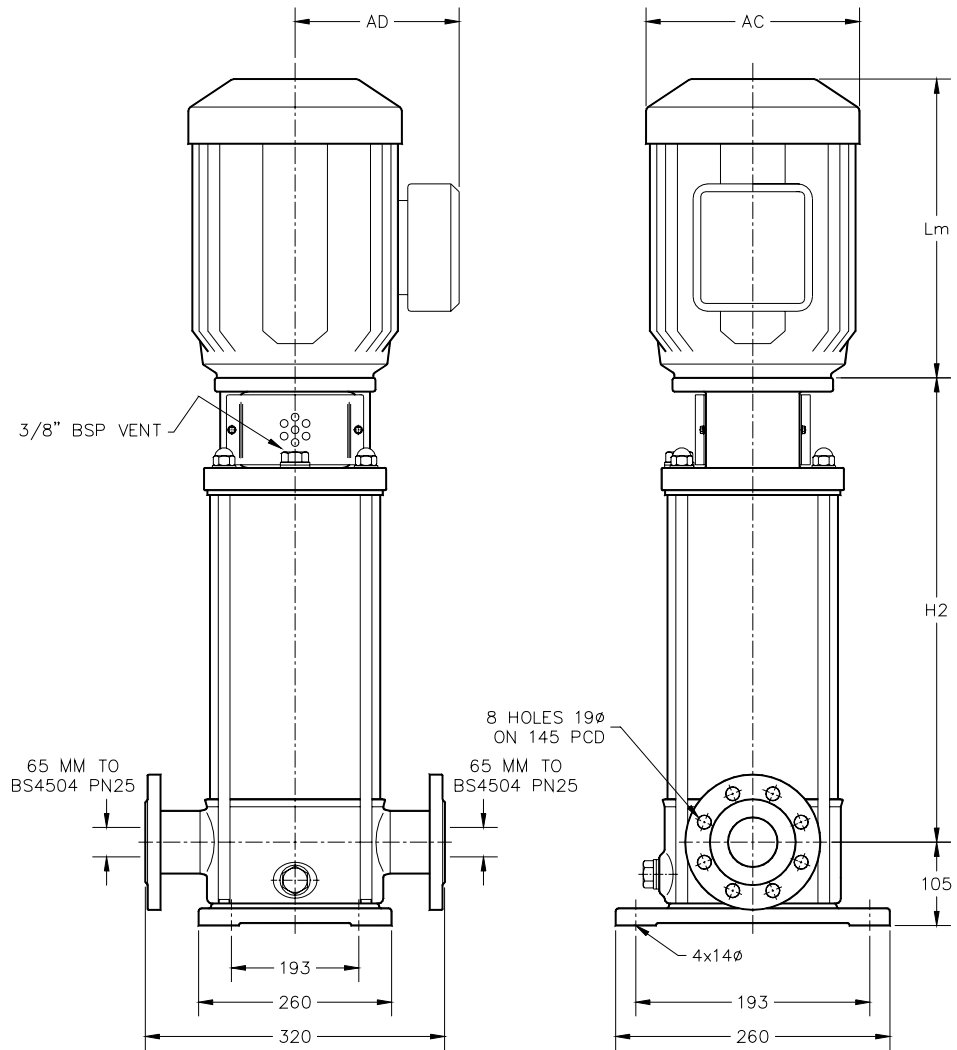


## MSS14 Dimensions: Oval flange design (2-20 stages)



Pump size	No of Stages	Motor kW	H2	Lm	Current amps	AC	AD	Nett weight	Noise level @ 1 m dBa
MSS14-2	2	0.55	242	234	1.73	150	120	23	54
MSS14-4	4	0.75	296	264	2.22	150	120	26	54
MSS14-6	6	1.1	360	227	3.0	176	114	31	55
MSS14-8	8	1.5	414	256	3.9	176	114	35	56
MSS14-10	10	2.2	478	281	5.7	196	126	45	56
MSS14-12	12	2.2	532	281	5.7	196	126	46	56
MSS14-14	14	3.0	586	314	7.7	198	155	49	57
MSS14-16	16	3.0	640	314	7.7	198	155	51	57
MSS14-18	18	4.0	694	323	10	224	168	62	58
MSS14-20	20	4.0	748	323	10	224	168	63	58

## MSS24 Dimensions: Circular flange design (1-16 stages)



Pump size	No of Stages	Motor kW	H2	Lm	Current amps	AC	AD	Nett weight	Noise level @ 1 m dBa
MSS24-1	1	1.1	353	227	3.0	176	114	59	55
MSS24-2	2	1.1	401	227	3.0	176	114	61	55
MSS24-3	3	1.5	448	256	3.9	176	114	63	56
MSS24-4	4	2.2	498	281	5.7	196	126	70	56
MSS24-5	5	2.2	547	281	5.7	196	126	72	56
MSS24-6	6	3.0	595	314	7.7	198	155	80	57
MSS24-7	7	3.0	644	314	7.7	198	155	82	57
MSS24-8	8	4.0	692	323	10	224	168	93	58
MSS24-9	9	4.0	741	323	10	224	168	96	58
MSS24-10	10	5.5	809	360	12.5	264	179	134	63
MSS24-11	11	5.5	858	360	12.5	264	179	137	63
MSS24-12	12	5.5	906	360	12.5	264	179	139	63
MSS24-16	16	7.5	1100	400	17.6	264	179	158	65

Apex Pumps  
Division of Apex Fluid Engineering Ltd  
Morley Road,  
Staple Hill,  
Bristol BS16 4QT  
United Kingdom.

Tel: 0117 907 7555  
Fax: 0117 907 7556

International telephone: +44 117 907 7555  
International facsimile: +44 117 907 7556

email: [enquiries@apexpumps.com](mailto:enquiries@apexpumps.com)  
[www.apexpumps.com](http://www.apexpumps.com)