



# Vertical Multistage Centrifugal Pumps



# SHINDO HAS CONSTANTLY DEVELOP THE CREDIBILITY TO SERVE THE INDUSTRY EFFICIENTLY.

SHINDO IS COMMITTED TO PROVIDE HIGH VALUE-ADDED PRODUCTS IN MINIMUM LEAD-TIME AND AT COST EFFECTIVE PRICING, TO HELP CUSTOMERS ACHIEVE ZERO DOWNTIME, PRODUCTION TARGET AND HELP ENHANCE A SAFER ENVIRONMENT.



## VERTICAL MULTISTAGE CENTRIFUGAL PUMPS

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## Application

In any application, the liquid to be pump by Shindo Vertical Multistage Centrifugal Pumps (VMS Series) must be thin, non-explosive and not containing solid particles. The liquid must not chemically attack the material of the pump. Any pumping liquids with a density or viscosity higher than water, motor with correspondingly higher output must be used, if required. Specifically, VMS Series are design for following applications:

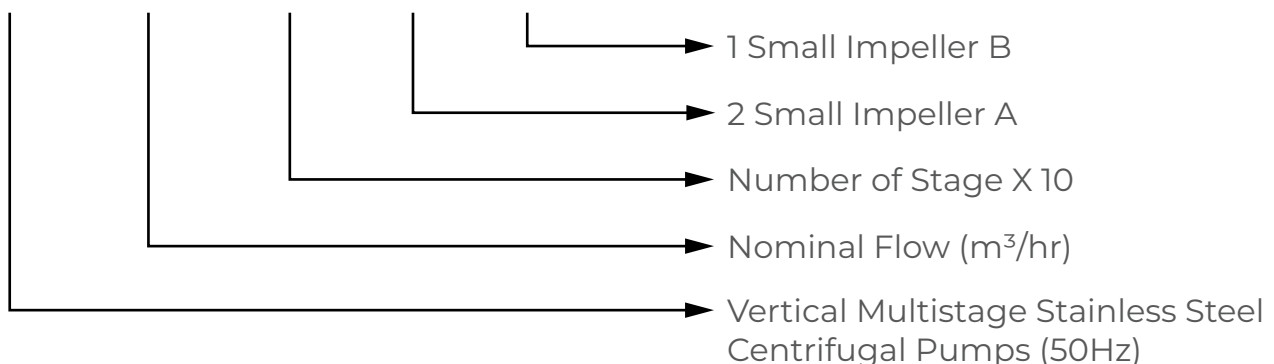
- ✕ Municipal Water Supply and Pressure Boosting
- ✕ Domestic Water Supply
- ✕ Boiler Feed and Condensate System
- ✕ Cooling Water System
- ✕ Irrigation and Dewatering
- ✕ Fire Fighting System
- ✕ Washing Plants and Washdown

Performance range for VMS series:

- ✕ Max. Capacity (Q) = 240m<sup>3</sup>/hr
- ✕ Max. Head (H) = 305m
- ✕ Min. Suction Pressure = According to NPSH add 0.5m water head
- ✕ Max. Ambient Temperature = 40°C
- ✕ Liquid Temperature:
  - ▶ Standard Design = -15°C to +90°C (Max)
  - ▶ Hot Water Design = -15°C to +120°C (Max)

## Model Code

**VMS 200 - 20 - 2A - B**



# Construction Design

## Hydraulic Parts

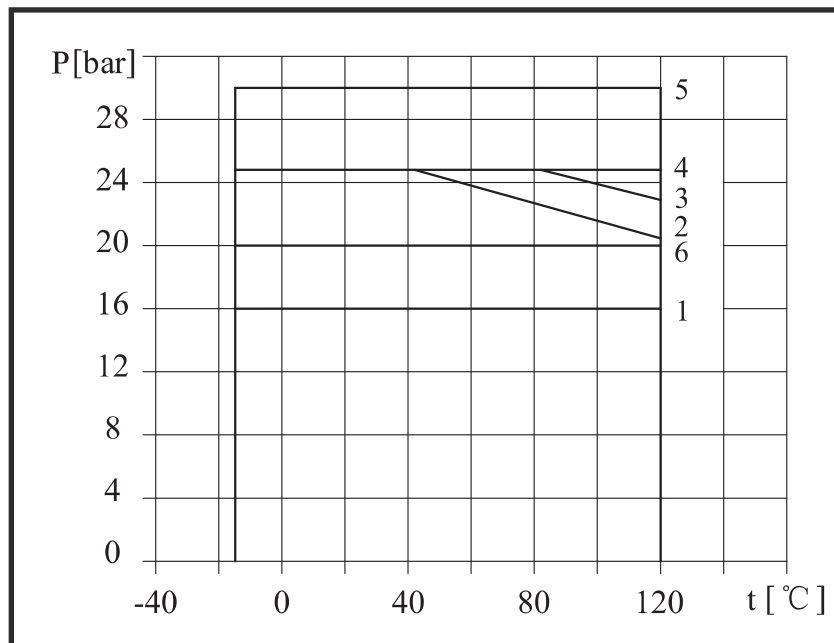
- ⊗ All wetted parts are made up of stainless steel (SS304).
- ⊗ The standard material of mechanical seal is Tungsten Carbide/Graphite/NBR.
- ⊗ VMS pump is design with in-line suction and discharge (Both are flange type).
- ⊗ The suction and discharge chamber is available in two types of material which are cast iron and stainless steel (SS304).

## Electric Motor

- ⊗ The pump is coupled with totally enclosed, fan-cooled squirrel-cage aluminum casing motor built-in thermal overload units.
- ⊗ IEC standard.
- ⊗ Insulation Class: F
- ⊗ Enclosure Class: IP55
- ⊗ Speed: 2900RPM
- ⊗ Standard Voltage: 1 x 220-240V, 50Hz  
3 x 220-240V/380-415V, 50Hz
- ⊗ Single phase motor is available up to 2.2kW only.

# Maximum Working Pressure

Model	Curve number
VMS1,2,3,4,5 Flange	2
VMS1,2,3,4,5 Oval Flange	1
VMS1,2,3,4,5 cutting ferrule pipe thread	2
VMS 8 to VMS20 Flange	3
VMS8 Oval Flange	1
VMS8 to 20 cutter ferrule , pipe thread	3
VMS32 cast iron type	
32-10-1~32-80	1*
32-90-2~32-160	5
VMS32 stainless steel type	5
VMS42 cast iron type	
42-10-1~42-60-2	1*
42-60-2~42-90	4*
42-100-2~42-130-2	5
VMS42 Stainless steel type	
42-10-1~42-90	4*
42-100-2~42-130-2	5
VMS65 cast iron type	
65-10-1~65-50-2	1**
65-50-1~65-80-1	4
VMS85 cast iron type	
85-10-1~85-40-2	1
85-40~85-60	4
VMS65,85 stainless steel type	4
VMS120,150,200	6



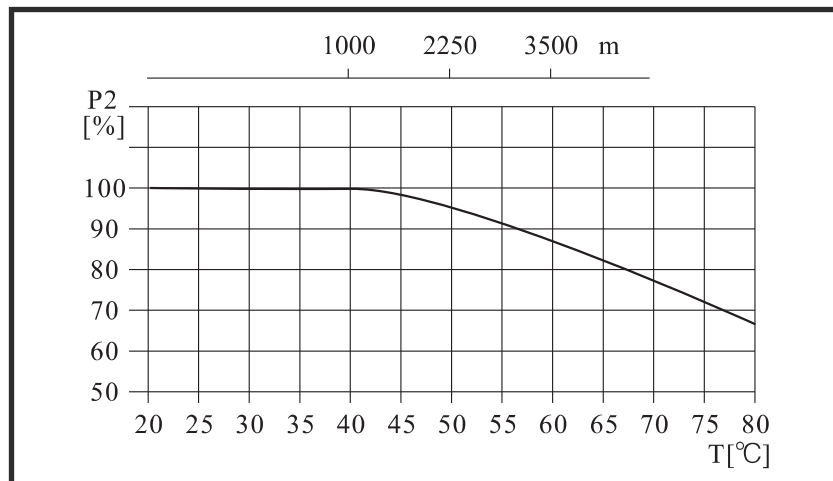
The above figure shows the limitation of pressure and temperature, shall be in the scopes as shown in the figure.

\* For curve 5, need to specify especially

\*\*For curve 4, need to specify especially

## Maximum Ambient Temperature

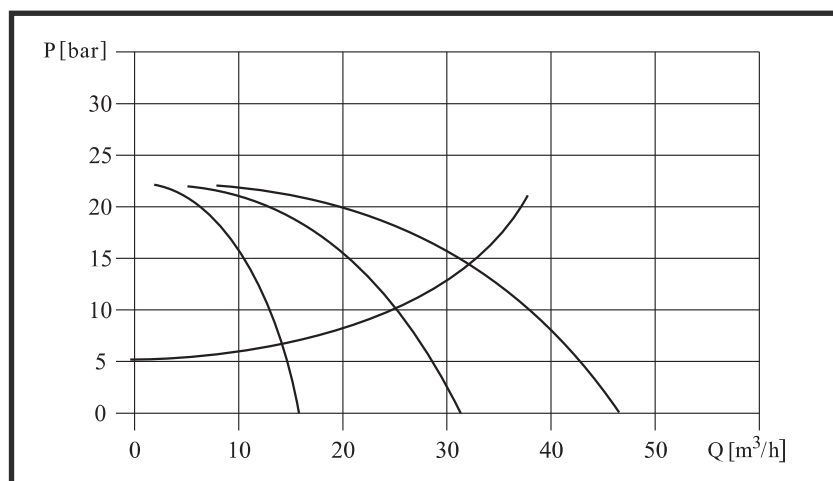
When the pump operates under ambient temperature higher than 40°C or under altitude higher than 1000m, because of low air density and poor cooling effects, the motor output power  $P_2$  will be decreased to certain extent. If the pump is operated under the above said condition, it should be equipped with motor of higher power.



## Operation in Parallel

Connecting several pumps in parallel running will benefit much more than running as single large pump.

- ⊗ Applicable to different working state necessary in a variable flow system.
- ⊗ Water can still be supply if one of the pump is in a failure mode because only part of the system flow is affected, the rest of the pumps still in working state.

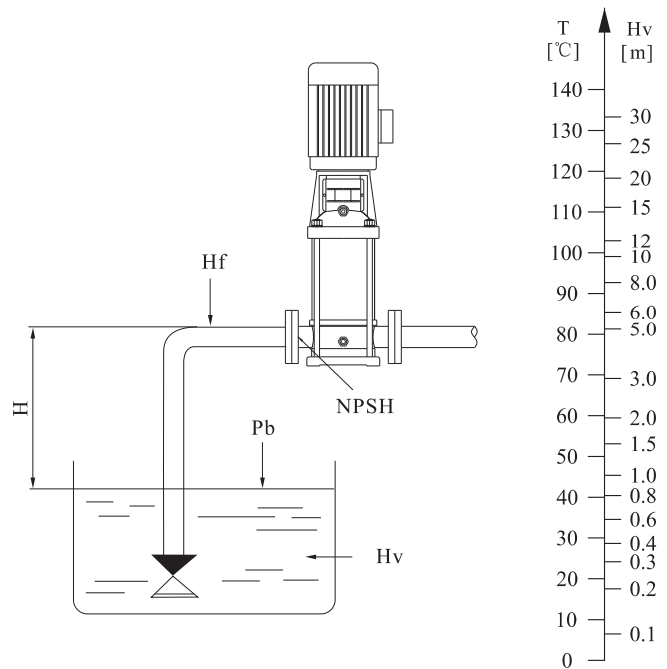


# Minimum Inlet Pressure NPSH

In case that the pressure in the pump is lower than vapor pressure of the liquid, cavitation will occur.

To avoid cavitation, a minimum pressure at the inlet side of the pump shall be guaranteed.

The maximum suction can be calculated with following formula:



$$H = Pb \times 10.2 - NPSH - Hf - Hv - Hs$$

<p>H = Maximum suction head (m)</p> <p>Pb = Atmospheric pressure (bar) - In a closed system, Pb means system pressure (bar).</p> <p>NPSH = Net positive suction head (m) - It can be read from the point of maximum flowrate shown on NPSH curve.</p>	<p>Hf = Pipeline losses at the inlet (m) - It is accordance with pipeline possible maximum flow.</p> <p>Hv = Vapor pressure of liquid (m) - It depends on the liquid temperature and vapor pressure value.</p> <p>Hs = Safety Margin (m) - Minimum 0.5m delivery head.</p>
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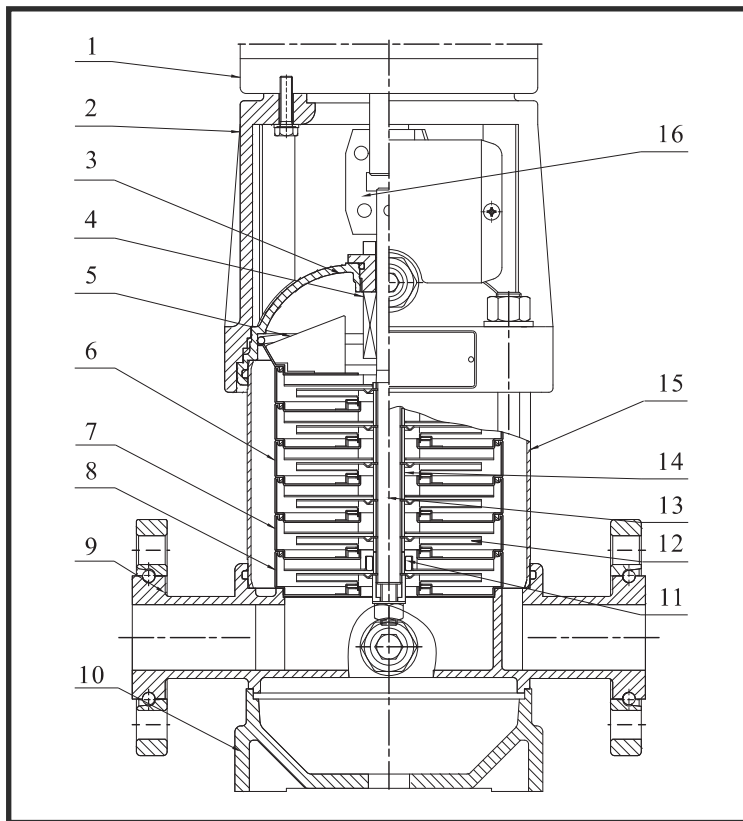
If the calculated result H is negative, the pump may run under maximum suction head. In case the calculated result H is negative, a delivery head of minimum inlet pressure is necessary.

Note: Normally, the above calculation will not be done. H is calculated in the following conditions:

1. The liquid temperature is comparatively higher.
2. Liquid flow exceeds rated value.
3. Suction head is comparatively large or inlet piping long.
4. System pressure is too low.
5. Bad inlet condition.

Note: Please check and ensure that the pump is not at cavitation state.

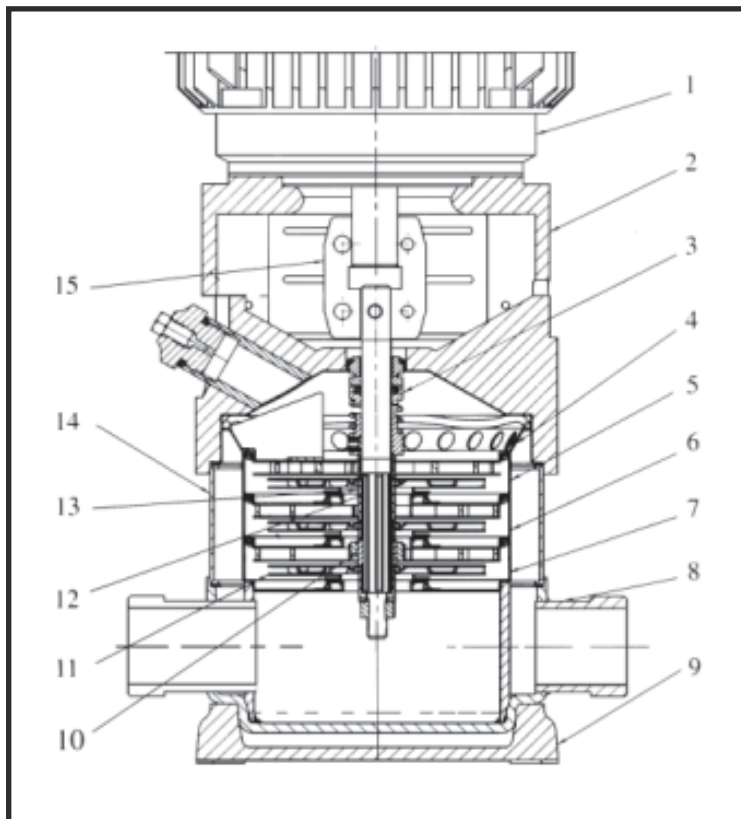
# General Arrangement Drawing



**VMS 1, 3, 5**

Item No.	Name	Material	AISI/ASTM
1	Motor		
2	Pump Head	Cast Iron	ASTM25B
3	Seal Base	Stainless Steel/Cast Iron	AISI304
4	Mechanical Seal		
5	Top Diffuser	Stainless Steel	AISI304
6	Diffuser	Stainless Steel	AISI304
7	Support Diffuser	Stainless Steel	AISI304
8	Inducer	Stainless Steel	AISI304
9	Inlet and Outlet Chamber	Stainless Steel/Cast Iron	AISI304/ASTM25B
10	Pump Base	Cast Iron	ASTM25B
11	Bearing	Tungsten Carbide	
12	Impeller	Stainless Steel	AISI304
13	Shaft	Stainless Steel	AISI304/AISI316L
14	Impeller Sleeve	Stainless Steel	AISI304
15	Cylinder	Stainless Steel	AISI304
16	Coupling	Carbon Steel	

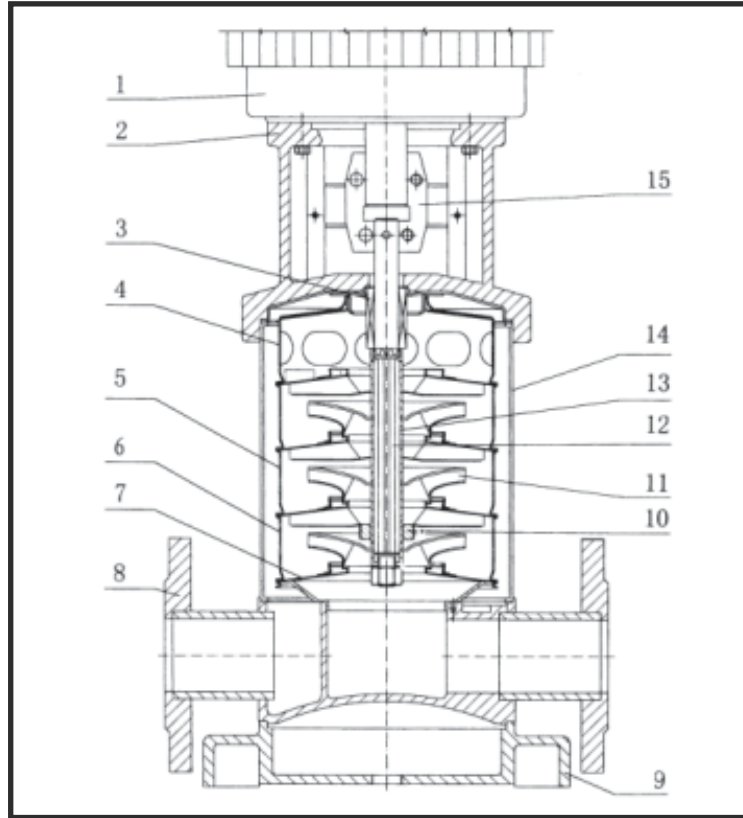
## General Arrangement Drawing



### VMS 2, 4

Item No.	Name	Material	AISI/ASTM
1	Motor		
2	Pump Head	Cast Iron	ASTM25B
3	Mechanical Seal	Tungsten Carbide/Graphite	
4	Discharge Diffuser	Stainless Steel	AISI304
5	Support Diffuser	Stainless Steel	AISI304
6	Diffuser	Stainless Steel	AISI304
7	Inducer	Stainless Steel	AISI304
8	Inlet and Outlet Chamber	Stainless Steel/Cast Iron	AISI304/ASTM25B
9	Pump Base	Cast iron	ASTM25B
10	Bearing	Tungsten Carbide	
11	Impeller	Stainless Steel	AISI304
12	Shaft	Stainless Steel	AISI304
13	Sleeve	Stainless Steel	AISI304
14	Cylinder	Stainless Steel	AISI304
15	Coupling	Alloy	
	Rubber Parts	FPM	

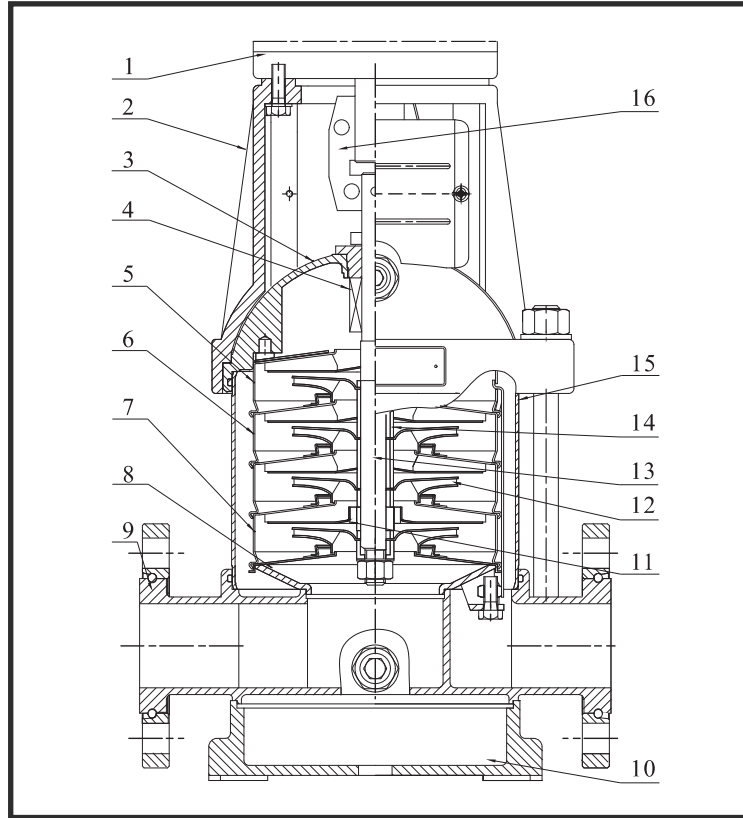
# General Arrangement Drawing



**VMS 8, 16**

Item No.	Name	Material	AISI/ASTM
1	Motor		
2	Pump Head	Cast Iron	ASTM25B
3	Mechanical Seal	Tungsten Carbide/Graphite	
4	Discharge Diffuser	Stainless Steel	AISI304
5	Support Diffuser	Stainless Steel	AISI304
6	Diffuser	Stainless Steel	AISI304
7	Inducer	Stainless Steel	AISI304
8	Inlet and Outlet Chamber	Stainless Steel/Cast Iron	AISI304/ASTM25B
9	Pump Base	Cast iron	ASTM25B
10	Bearing	Tungsten Carbide	
11	Impeller	Stainless Steel	AISI304
12	Shaft	Stainless Steel	AISI304
13	Sleeve	Stainless Steel	AISI304
14	Cylinder	Stainless Steel	AISI304
15	Coupling	Alloy	
	Rubber Parts	FPM	

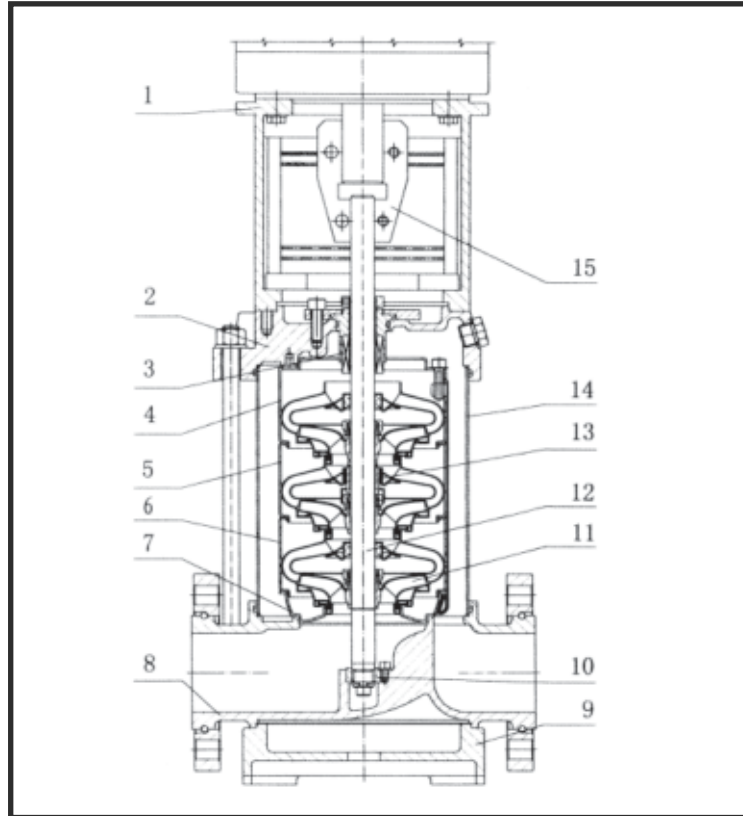
# General Arrangement Drawing



**VMS 10, 12, 15, 20**

Item No.	Name	Material	AISI/ASTM
1	Motor		
2	Pump Head	Cast Iron	ASTM25B
3	Seal Base	Stainless Steel/Cast Iron	AISI304
4	Mechanical Seal		
5	Top Diffuser	Stainless Steel	AISI304
6	Diffuser	Stainless Steel	AISI304
7	Support Diffuser	Stainless Steel	AISI304
8	Inducer	Stainless Steel	AISI304
9	Inlet and Outlet Chamber	Stainless Steel/Cast Iron	AISI304/ASTM25B
10	Pump Base	Cast Iron	ASTM25B
11	Bearing	Tungsten Carbide	
12	Impeller	Stainless Steel	AISI304
13	Shaft	Stainless Steel	AISI304/AISI316L
14	Impeller Sleeve	Stainless Steel	AISI304
15	Cylinder	Stainless Steel	AISI304
16	Coupling	Carbon Steel	

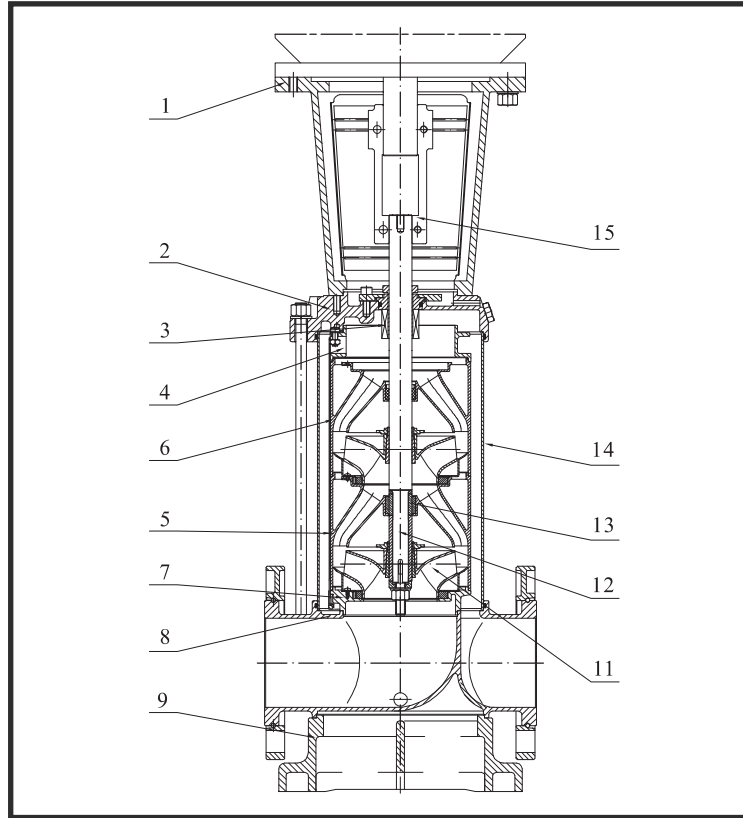
# General Arrangement Drawing



**VMS 32, 42, 65, 85**

Item No.	Name	Material	AISI/ASTM
1	Bracket	Cast Iron	ASTM25B
2	Pump Head	Cast Iron	ASTM25B
3	Mechanical Seal	Tungsten Carbide/Graphite	
4	Discharge Diffuser	Stainless Steel	AISI304
5	Support Diffuser	Stainless Steel	AISI304
6	Diffuser	Stainless Steel	AISI304
7	Inducer	Stainless Steel	AISI304
8	Inlet and Outlet Chamber	Stainless Steel/Cast Iron	AISI304/ASTM25B
9	Pump Base	Cast iron	ASTM25B
10	Bearing	Tungsten Carbide	
11	Impeller	Stainless Steel	AISI304
12	Shaft	Stainless Steel	AISI304
13	Sleeve	Stainless Steel	AISI304
14	Cylinder	Stainless Steel	AISI304
15	Coupling	Carbon Steel	
	Rubber Parts	FPM	

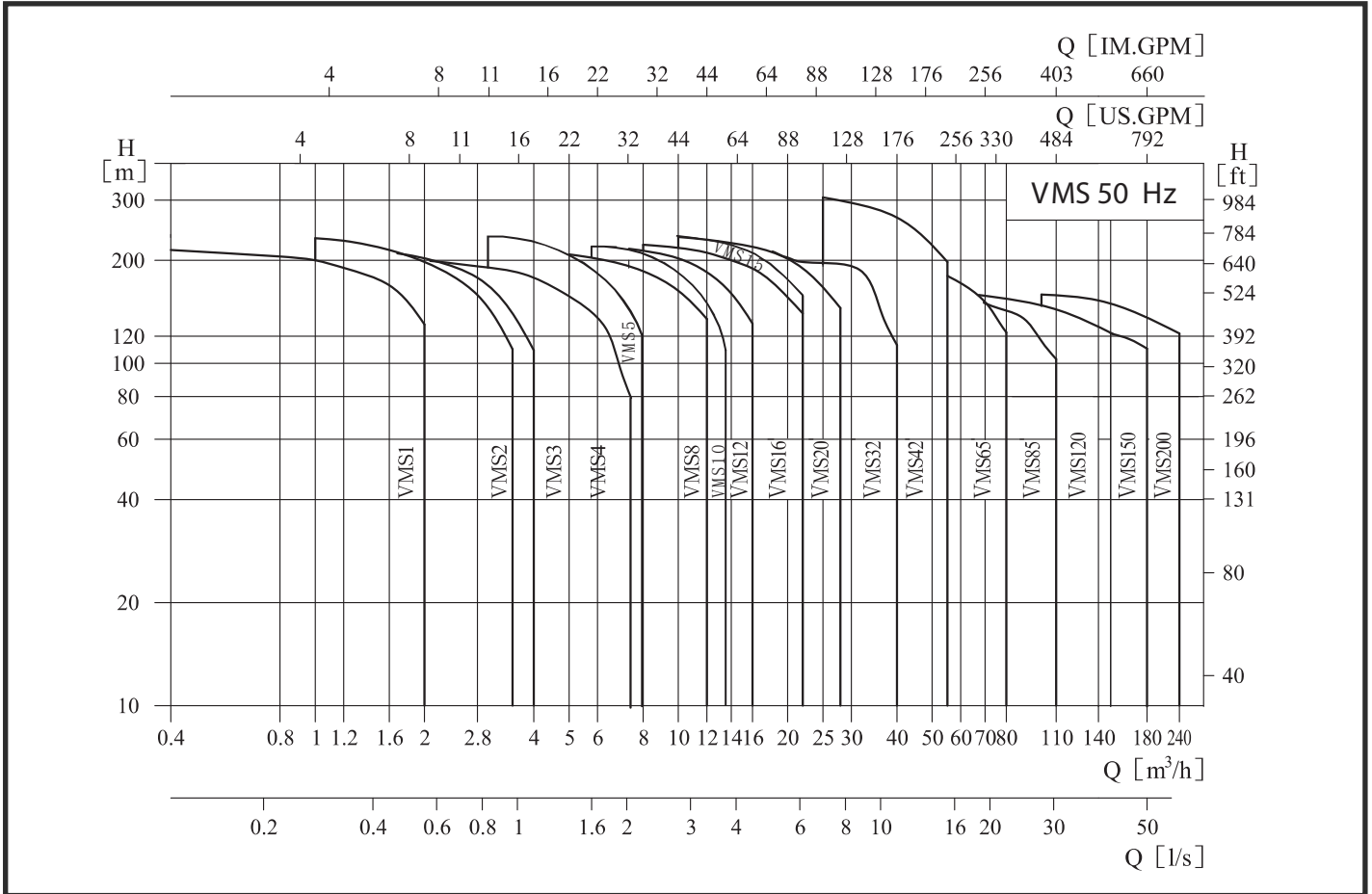
# General Arrangement Drawing



**VMS 120, 150, 200**

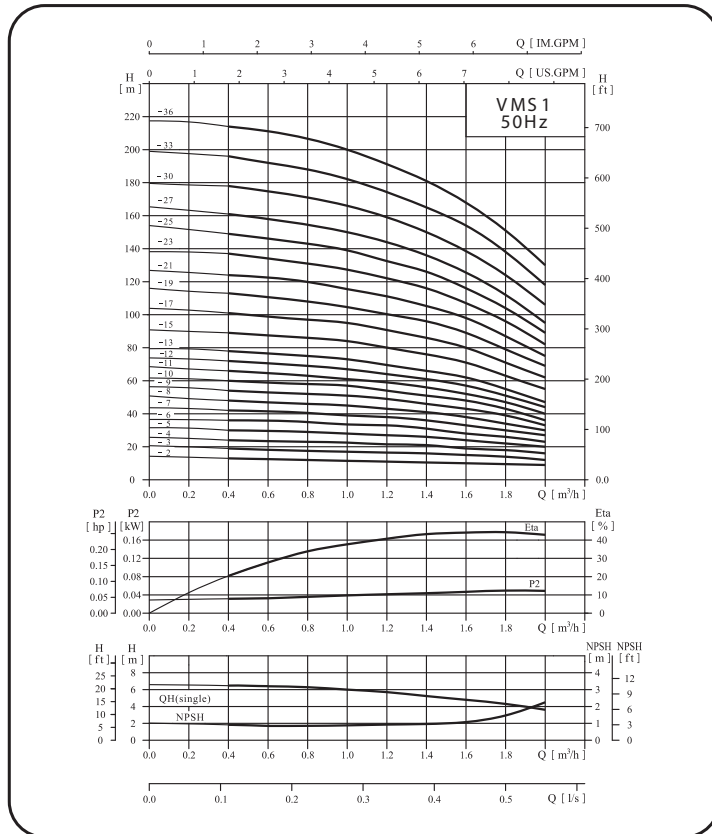
Item No.	Name	Material	AISI/ASTM
1	Bracket	Cast Iron	ASTM25B
2	Pump Head	Cast Iron	ASTM80-55-06
3	Mechanical Seal		
4	Discharge Diffuser	Stainless Steel	AISI304
5	Support Diffuser	Stainless Steel	AISI304
6	Diffuser	Stainless Steel	AISI304
7	Inducer	Stainless Steel	AISI304
8	Inlet and Outlet Chamber	Cast Iron	ASTM80-55-06
9	Pump Base	Cast iron	ASTM80-55-06
11	Impeller	Stainless Steel	AISI304
12	Shaft	Stainless Steel	AISI304
13	Bearing	Tungsten Carbide	
14	Cylinder	Stainless Steel	AISI304
15	Coupling	Carbon Steel	
	Rubber Parts	NBR	

# Selection Chart



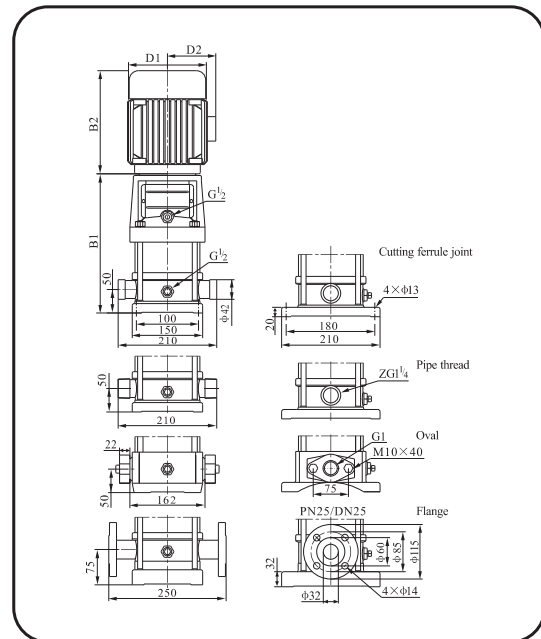
# Performance Curve

Performance curve ISO 9906 Annex A 2900rpm



## VMS 1

Installation sketch



Performance table

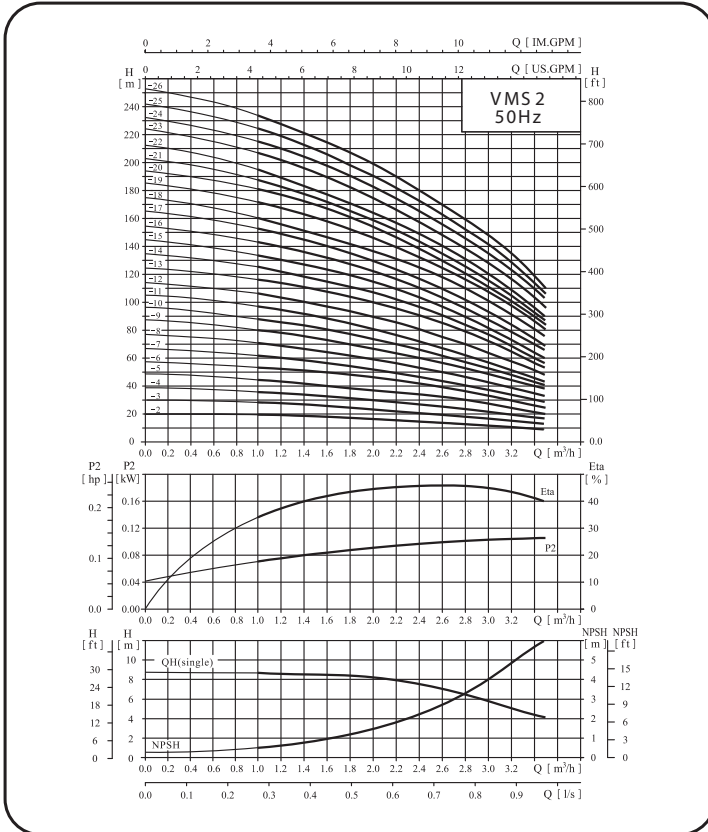
Model	Driving motor		Q (m³/h)	H (m)													
	(kw)	(hp)		0.4	0.6	0.8	1.0	1.2	1.4	1.6	1.8	2.0					
VMS1-20	0.37	0.5	13	12.5	12	11.5	11	10.5	10	9.5	9						
VMS1-30	0.37	0.5	19	18	17.5	17	16.5	16	15	14	12						
VMS1-40	0.37	0.5	24	23.5	23	22.5	21.5	21	19	18	16						
VMS1-50	0.37	0.5	30	29.6	29	28	27	26	24	22	20						
VMS1-60	0.37	0.5	36	35.5	35	33.5	33	31	28	26	23						
VMS1-70	0.37	0.5	42	41	40.5	39	38	36	33	30	27						
VMS1-80	0.55	0.75	48	47	46	45	43	41	38	34	30						
VMS1-90	0.55	0.75	54	53	52	51	49	46	43	39	33						
VMS1-100	0.55	0.75	60	59	58	57	54	51	48	43	36						
VMS1-110	0.55	0.75	66	65	63	61	59	56	52	47	40						
VMS1-120	0.75	1	72	71	69	67	64	61	57	51	44						
VMS1-130	0.75	1	78	77	75	73	69	66	62	55	47						
VMS1-150	0.75	1	89	88	86	84	79	76	71	63	55						
VMS1-170	1.1	1.5	101	99	97	95	89	86	80	71	62						
VMS1-190	1.1	1.5	113	110	108	106	99	96	89	79	69						
VMS1-210	1.1	1.5	124	122	120	117	110	106	98	87	75						
VMS1-230	1.1	1.5	137	133	131	128	121	116	107	96	82						
VMS1-250	1.5	2	149	145	143	139	131	126	116	104	89						
VMS1-270	1.5	2	161	157	155	150	141	136	125	112	95						
VMS1-300	1.5	2	178	175	171	166	157	150	139	124	106						
VMS1-330	2.2	3	196	192	188	183	173	165	154	137	118						
VMS1-360	2.2	3	214	210	205	200	190	181	169	151	130						

Size and weight

Model	Size(mm)					Weight (kg)
	B1	B2	B1+B2	D1	D2	
VMS1-20	258	210	468	148	117	20
VMS1-30	276	210	486	148	117	20
VMS1-40	294	210	504	148	117	21
VMS1-50	312	210	522	148	117	21
VMS1-60	330	210	540	148	117	22
VMS1-70	348	210	558	148	117	23
VMS1-80	366	210	576	148	117	24
VMS1-90	384	210	594	148	117	25
VMS1-100	402	210	612	148	117	26
VMS1-110	420	210	630	148	117	26
VMS1-120	448	245	693	170	142	29
VMS1-130	466	245	711	170	142	30
VMS1-150	502	245	747	170	142	31
VMS1-170	538	245	783	170	142	33
VMS1-190	574	245	819	170	142	34
VMS1-210	610	245	855	170	142	35
VMS1-230	646	245	891	170	142	36
VMS1-250	692	290	982	190	155	42
VMS1-270	728	290	1018	190	155	43
VMS1-300	782	290	1072	190	155	45
VMS1-330	836	290	1126	190	155	49
VMS1-360	890	290	1180	190	155	51

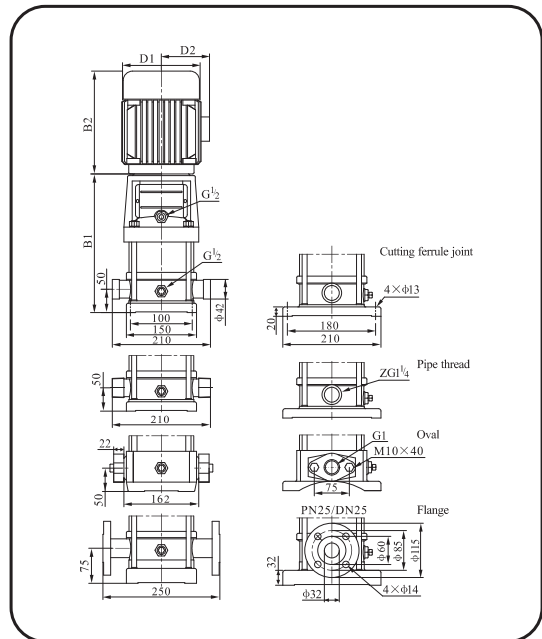
# Performance Curve

Performance curve ISO 9906 Annex A 2900rpm



## VMS 2

Installation sketch



Performance table

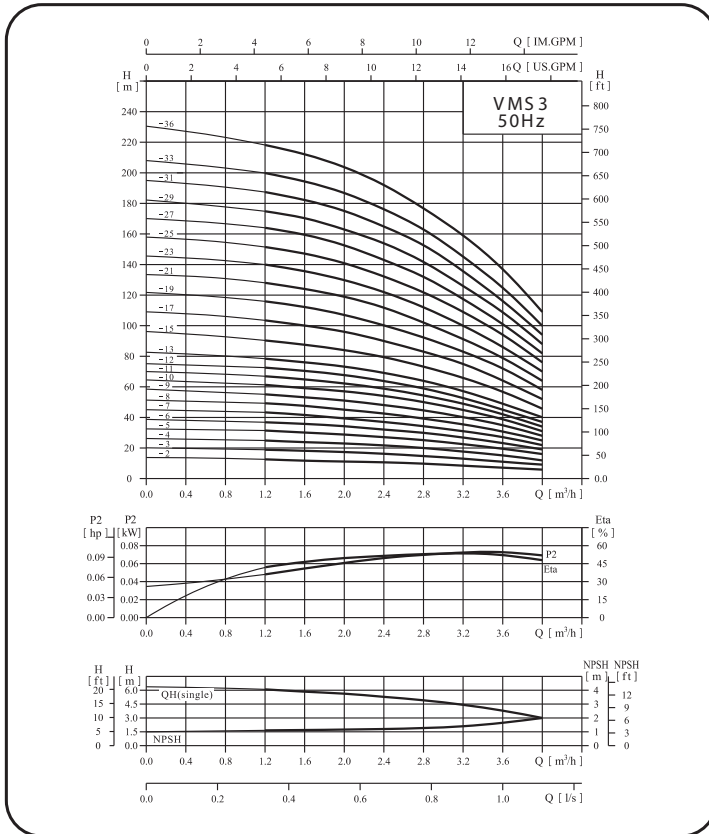
Model	Driving motor		Q (m³/h)	H (m)								
	(kw)	(hp)		1	1.2	1.6	2.0	2.4	2.8	3.2	3.5	
VMS2-20	0.37	0.5		18	17	16	15	13	12	10	8	
VMS2-30	0.37	0.5		27	26	24	22	20	18	15	12	
VMS2-40	0.55	0.75		36	35	33	30	26	24	20	16	
VMS2-50	0.55	0.75		45	43	40	37	33	30	24	20	
VMS2-60	0.75	1		53	52	50	45	40	36	30	24	
VMS2-70	0.75	1		63	61	57	52	47	41	35	28	
VMS2-90	1.1	1.5		80	78	73	67	61	54	45	37	
VMS2-110	1.1	1.5		98	95	89	82	73	64	54	44	
VMS2-130	1.5	2		116	114	106	98	89	78	65	52	
VMS2-150	1.5	2		134	130	123	112	100	90	73	60	
VMS2-180	2.2	3		161	157	148	136	121	108	91	76	
VMS2-220	2.2	3		197	192	180	165	148	130	110	90	
VMS2-260	3.0	4		232	228	214	198	179	158	130	110	

Size and weight

Model	Size(mm)					Weight (kg)
	B1	B2	B1+B2	D1	D2	
VMS2-20	258	210	468	148	117	20
VMS2-30	276	210	486	148	117	20
VMS2-40	294	210	504	148	117	22
VMS2-50	312	210	522	148	117	23
VMS2-60	340	245	585	170	142	26
VMS2-70	358	245	603	170	142	26
VMS2-90	394	245	639	170	142	28
VMS2-110	430	245	675	170	142	29
VMS2-130	476	290	766	190	155	35
VMS2-150	512	290	802	190	155	36
VMS2-180	566	290	856	190	155	41
VMS2-220	638	290	928	190	155	42
VMS2-260	720	315	1035	197	165	52

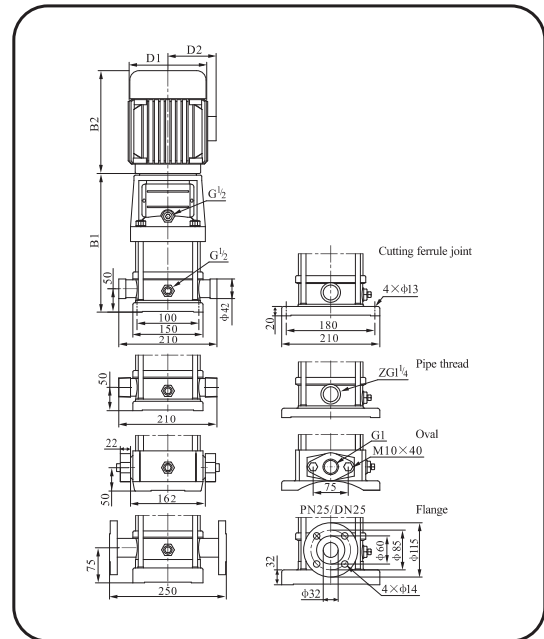
# Performance Curve

Performance curve ISO 9906 Annex A 2900rpm



## VMS 3

Installation sketch



Performance table

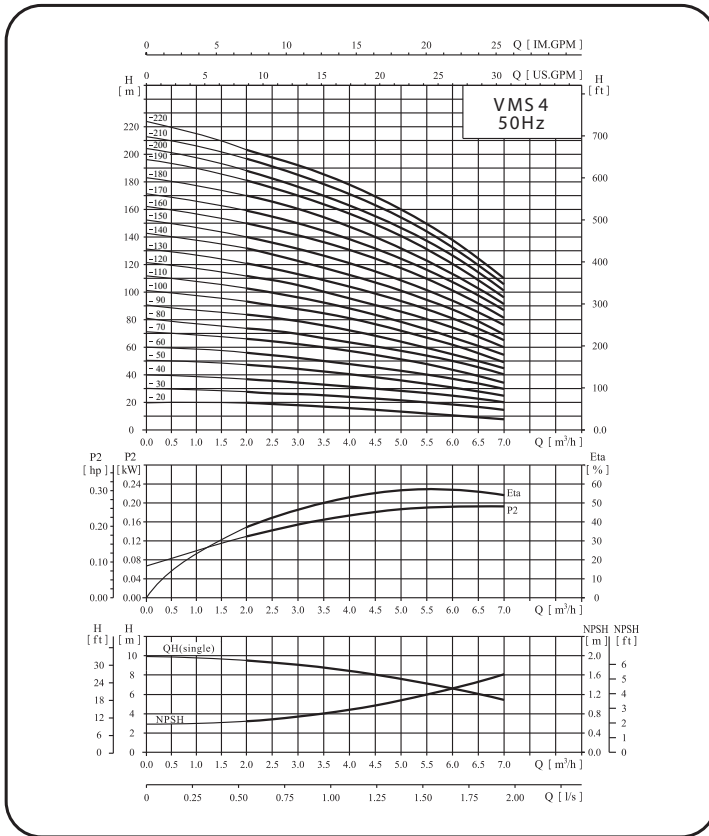
Model	Driving motor		Q (m³/h)	H (m)																
	(kw)	(hp)		1.2	1.6	2.0	2.4	2.8	3.0	3.2	3.6	4.0	1.2	1.6	2.0	2.4	2.8	3.0	3.2	3.6
VMS3-20	0.37	0.5	12.5	11.5	11	10.5	10	9	8	7	6	12.5	11.5	11	10.5	10	9	8	7	6
VMS3-30	0.37	0.5	19	18.5	17.5	16.5	15	14	13	11	9	19	18.5	17.5	16.5	15	14	13	11	9
VMS3-40	0.37	0.5	25	24	23	21.5	20	19	18	15	12	25	24	23	21.5	20	19	18	15	12
VMS3-50	0.37	0.5	31	30	29	27	25	23	22	19	16	31	30	29	27	25	23	22	19	16
VMS3-60	0.55	0.75	36	35	34	32	30	28	27	23	19	36	35	34	32	30	28	27	23	19
VMS3-70	0.55	0.75	43	41	39	37	34	32	31	27	22	43	41	39	37	34	32	31	27	22
VMS3-80	0.75	1	49	47	45	43	39	37	35	31	25	49	47	45	43	39	37	35	31	25
VMS3-90	0.75	1	55	53	51	48	45	42	40	35	28	55	53	51	48	45	42	40	35	28
VMS3-100	0.75	1	61	59	57	54	50	47	45	39	31	61	59	57	54	50	47	45	39	31
VMS3-110	1.1	1.5	67	64	61	58	54	51	49	42	34	67	64	61	58	54	51	49	42	34
VMS3-120	1.1	1.5	73	70	67	63	58	55	52	45	37	73	70	67	63	58	55	52	45	37
VMS3-130	1.1	1.5	78	76	73	69	64	60	57	49	40	78	76	73	69	64	60	57	49	40
VMS3-150	1.1	1.5	90	88	84	79	73	69	66	57	46	90	88	84	79	73	69	66	57	46
VMS3-170	1.5	2	103	100	96	90	83	79	75	64	52	103	100	96	90	83	79	75	64	52
VMS3-190	1.5	2	115	112	107	100	92	88	83	72	58	115	112	107	100	92	88	83	72	58
VMS3-210	2.2	3	128	124	119	112	102	98	91	79	64	128	124	119	112	102	98	91	79	64
VMS3-230	2.2	3	140	135	130	122	112	107	100	86	70	140	135	130	122	112	107	100	86	70
VMS3-250	2.2	3	151	147	141	131	122	116	109	94	76	151	147	141	131	122	116	109	94	76
VMS3-270	2.2	3	164	159	152	143	132	124	117	101	82	164	159	152	143	132	124	117	101	82
VMS3-290	2.2	3	175	170	163	153	142	133	126	109	88	175	170	163	153	142	133	126	109	88
VMS3-310	3.0	4	187	182	175	165	153	142	135	116	94	187	182	175	165	153	142	135	116	94
VMS3-330	3.0	4	199	194	187	176	163	151	145	125	100	199	194	187	176	163	151	145	125	100
VMS3-360	3.0	4	218	212	204	192	178	168	159	137	109	218	212	204	192	178	168	159	137	109

Size and weight

Model	Size(mm)					Weight (kg)
	B1	B2	B1+B2	D1	D2	
VMS3-20	258	210	468	148	117	20
VMS3-30	276	210	486	148	117	20
VMS3-40	294	210	504	148	117	21
VMS3-50	312	210	522	148	117	21
VMS3-60	330	210	540	148	117	23
VMS3-70	348	210	558	148	117	24
VMS3-80	376	245	621	170	142	27
VMS3-90	394	245	639	170	142	28
VMS3-100	412	245	657	170	142	28
VMS3-110	430	245	675	170	142	29
VMS3-120	448	245	693	170	142	30
VMS3-130	466	245	711	170	142	31
VMS3-150	502	245	747	170	142	32
VMS3-170	548	290	838	190	155	38
VMS3-190	584	290	874	190	155	39
VMS3-210	620	290	910	190	155	42
VMS3-230	656	290	946	190	155	43
VMS3-250	692	290	982	190	155	44
VMS3-270	728	290	1018	190	155	45
VMS3-290	764	290	1054	190	155	46
VMS3-310	810	315	1125	197	165	54
VMS3-330	846	315	1161	197	165	55
VMS3-360	900	315	1215	197	165	57

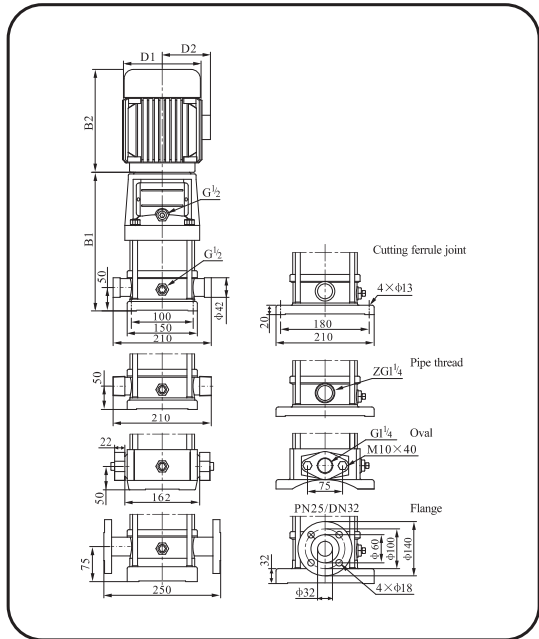
# Performance Curve

Performance curve ISO 9906 Annex A 2900rpm



## VMS 4

Installation sketch



Performance table

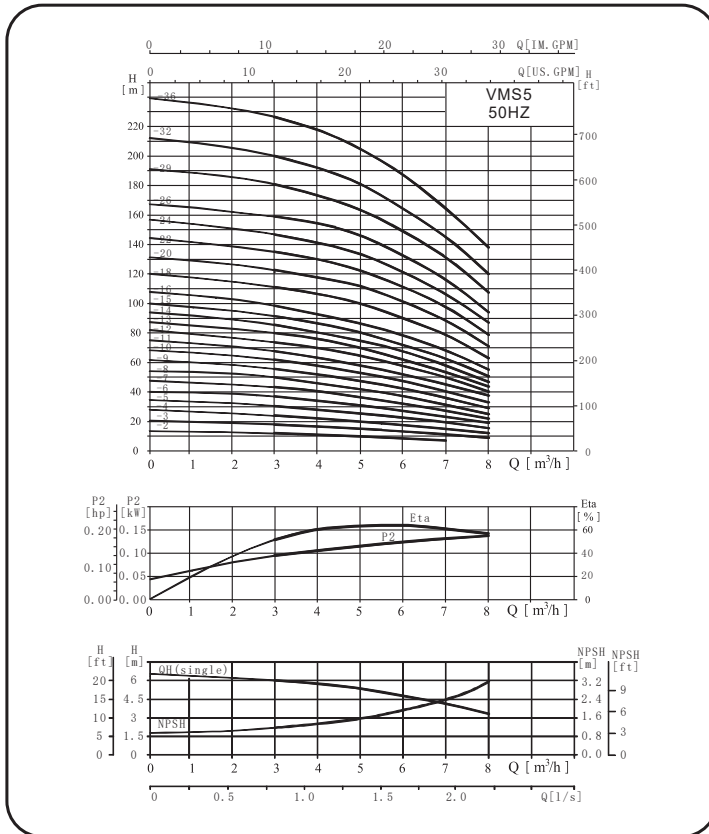
Model	Driving motor		Q (m³/h)	H (m)						
	(Kw)	(hp)		1.5	2.0	3.0	4.0	5.0	6.0	7.0
VMS4-20	0.37	0.5		19	18	17	15	13	10	8
VMS4-30	0.55	0.75		28	27	26	24	20	18	13
VMS4-40	0.75	1		38	36	34	32	27	24	19
VMS4-50	1.1	1.5		47	45	43	40	34	31	23
VMS4-60	1.1	1.5		56	54	52	48	41	37	28
VMS4-70	1.5	2		66	63	61	56	48	43	33
VMS4-80	1.5	2		74	72	70	64	55	50	38
VMS4-100	2.2	3		96	90	87	81	71	62	48
VMS4-120	2.2	3		114	108	104	95	85	75	58
VMS4-140	3.0	4		136	126	122	112	101	89	68
VMS4-160	3.0	4		152	144	140	129	115	101	78
VMS4-190	4.0	5.5		183	171	168	153	137	122	93
VMS4-220	4.0	5.5		211	200	192	178	160	138	108

Size and weight

Model	Size(mm)					Weight (kg)
	B1	B2	B1+B2	D1	D2	
VMS4-20	276	210	486	148	117	21
VMS4-30	303	210	513	148	117	22
VMS4-40	340	245	585	170	142	25
VMS4-50	367	245	612	170	142	27
VMS4-60	394	245	639	170	142	27
VMS4-70	431	290	721	190	155	33
VMS4-80	458	290	748	190	155	33
VMS4-100	512	290	802	190	155	37
VMS4-120	566	290	856	190	155	38
VMS4-140	630	315	945	197	165	46
VMS4-160	684	315	999	197	165	48
VMS4-190	765	335	1100	230	188	57
VMS4-220	846	335	1181	230	188	59

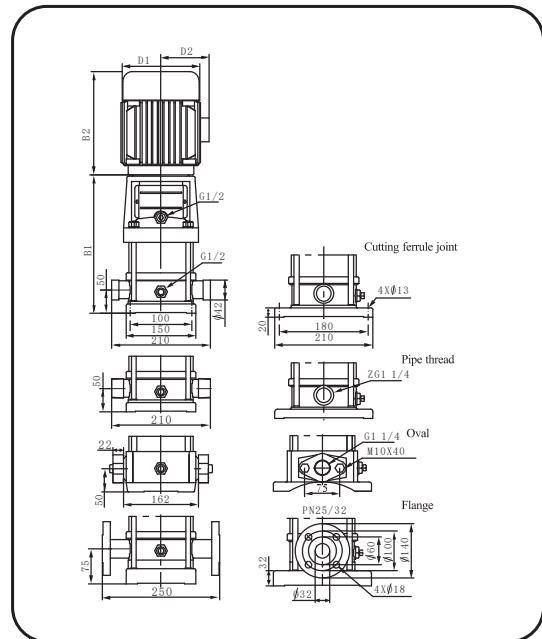
# Performance Curve

Performance curve ISO 9906 Annex A 2900rpm



## VMS 5

Installation sketch



Performance table

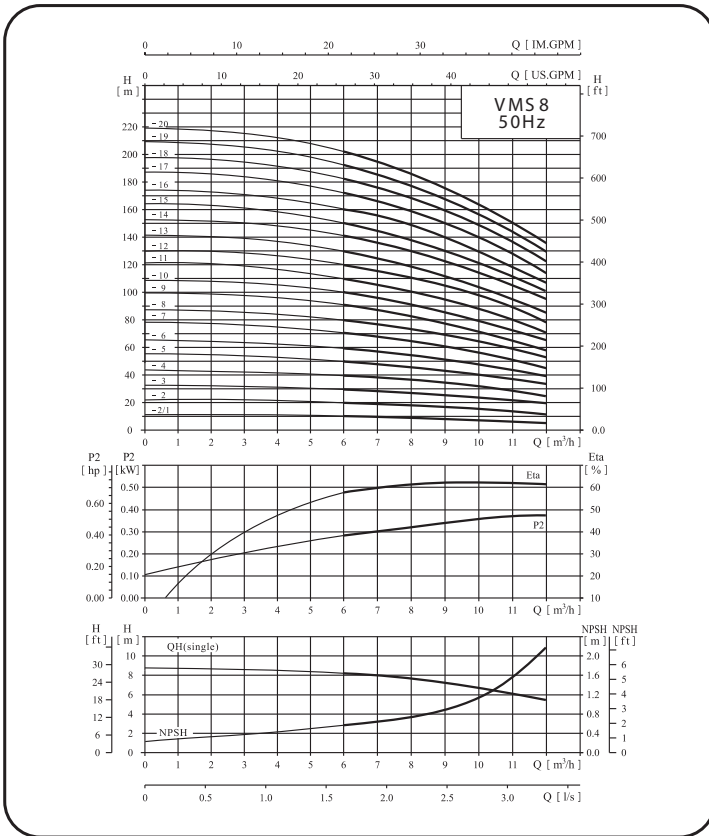
Model	Driving motor		Q (m <sup>3</sup> /h)	H (m)							
	(kW)	(HP)		3	4	5	6	7	8		
VMS5-20	0.37	0.5		12	11	10	9	7			
VMS5-30	0.55	0.75		18	17	15	14	11	9		
VMS5-40	0.55	0.75		24	22	20	18	15	12		
VMS5-50	0.75	1		31	28	26	23	19	16		
VMS5-60	1.1	1.5		37	35	32	27	23	19		
VMS5-70	1.1	1.5		43	41	37	33	27	22		
VMS5-80	1.1	1.5		50	47	43	38	32	25		
VMS5-90	1.5	2		56	53	48	43	37	29		
VMS5-100	1.5	2		62	59	54	48	41	34		
VMS5-110	2.2	3		68	64	59	53	46	38		
VMS5-120	2.2	3		74	70	65	58	50	41		
VMS5-130	2.2	3		80	76	70	62	54	44		
VMS5-140	2.2	3		86	81	75	68	58	47		
VMS5-150	2.2	3		92	87	81	73	63	51		
VMS5-160	2.2	3		99	93	87	79	69	55		
VMS5-180	3	4		111	106	100	90	79	63		
VMS5-200	3	4		123	118	112	102	89	71		
VMS5-220	4	5.5		135	130	123	112	99	79		
VMS5-240	4	5.5		147	142	134	122	107	87		
VMS5-260	4	5.5		159	155	146	133	116	94		
VMS5-290	4	5.5		181	174	164	149	131	107		
VMS5-320	5.5	7.5		200	193	181	164	145	120		
VMS5-360	5.5	7.5		227	219	205	188	165	138		

Size and weight

Model	Size(mm)					Weight (kg)
	B1	B2	B1+B2	D1	D2	
VMS5-20	276	225	501	148	117	26
VMS5-30	303	225	528	148	117	27
VMS5-40	330	225	555	148	117	27
VMS5-50	367	245	612	170	142	28
VMS5-60	394	245	639	170	142	29
VMS5-70	421	245	666	170	142	29
VMS5-80	448	245	693	170	142	30
VMS5-90	485	290	775	190	155	35
VMS5-100	512	290	802	190	155	36
VMS5-110	539	290	829	190	155	40
VMS5-120	566	290	856	190	155	41
VMS5-130	593	290	883	190	155	41
VMS5-140	620	290	910	190	155	42
VMS5-150	647	290	937	190	155	42
VMS5-160	684	290	974	190	155	43
VMS5-180	738	345	1083	197	165	50
VMS5-200	782	345	1127	197	165	51
VMS5-220	846	355	1201	230	188	59
VMS5-240	900	355	1255	230	188	60
VMS5-260	954	355	1309	230	188	61
VMS5-290	1035	355	1390	230	188	63
VMS5-320	1136	390	1526	260	208	85
VMS5-360	1244	390	1634	260	208	87

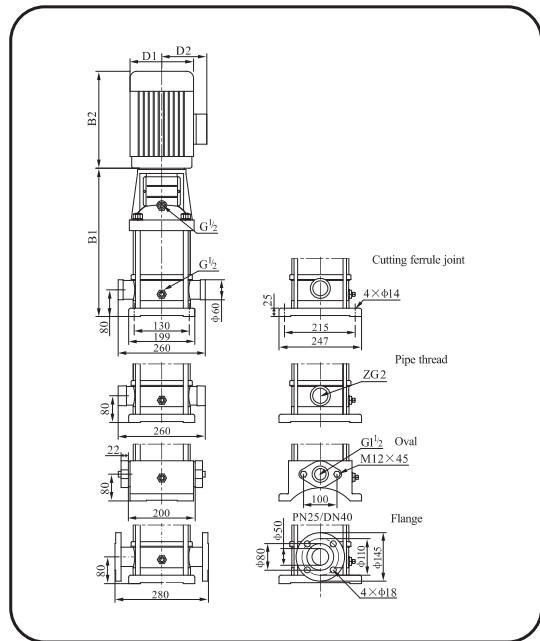
# Performance Curve

Performance curve ISO 9906 Annex A 2900rpm



**VMS 8**

Installation sketch



Performance table

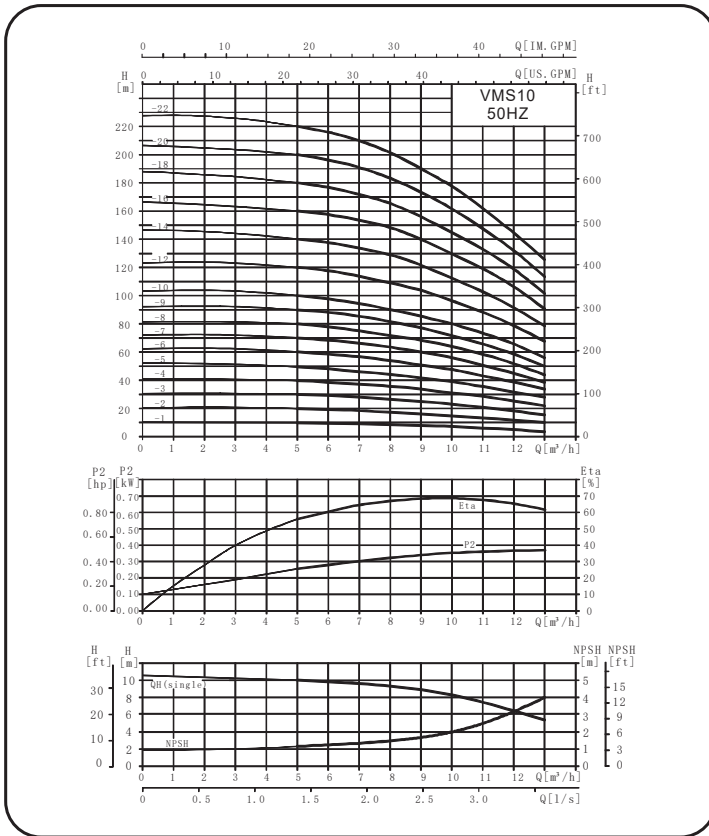
Model	Driving motor		Q (m³/h)	H (m)												
	(kw)	(hp)		5	6	7	8	9	10	11	12					
VMS8-20/1	0.75	1	10	9.5	9.3	9	8.5	8	7	6						
VMS8-20	0.75	1	20	19.5	19	18	17	16	14	13						
VMS8-30	1.1	1.5	30	29.5	28.5	27	25	24	21	19						
VMS8-40	1.5	2	41	39.5	38	36	34	32	28	26						
VMS8-50	2.2	3	52	50	48	45	42	40	36	32						
VMS8-60	2.2	3	62	60	57	54	51	48	43	39						
VMS8-80	3.0	4	83	80	77	73	69	65	58	52						
VMS8-100	4.0	5.5	104	100	97	92	87	81	73	65						
VMS8-120	4.0	5.5	124	120	116	111	104	92	87	78						
VMS8-140	5.5	7.5	145	141	136	130	122	113	102	92						
VMS8-160	5.5	7.5	166	161	156	148	139	130	118	106						
VMS8-180	7.5	10	187	182	175	167	157	146	134	120						
VMS8-200	7.5	10	208	202	195	186	175	163	150	135						

Size and weight

Model	Size(mm)					Weight (kg)
	B1	B2	B1+B2	D1	D2	
VMS8-20/1	347	245	592	170	142	32
VMS8-20	347	245	592	170	142	32
VMS8-30	377	245	622	170	142	34
VMS8-40	417	290	707	190	155	40
VMS8-50	447	290	737	190	155	44
VMS8-60	477	290	767	190	155	45
VMS8-80	547	315	862	197	165	53
VMS8-100	607	335	942	230	188	64
VMS8-120	667	335	1002	230	188	66
VMS8-140	747	430	1177	260	208	81
VMS8-160	807	430	1237	260	208	84
VMS8-180	867	430	1297	260	208	93
VMS8-200	927	430	1357	260	208	94

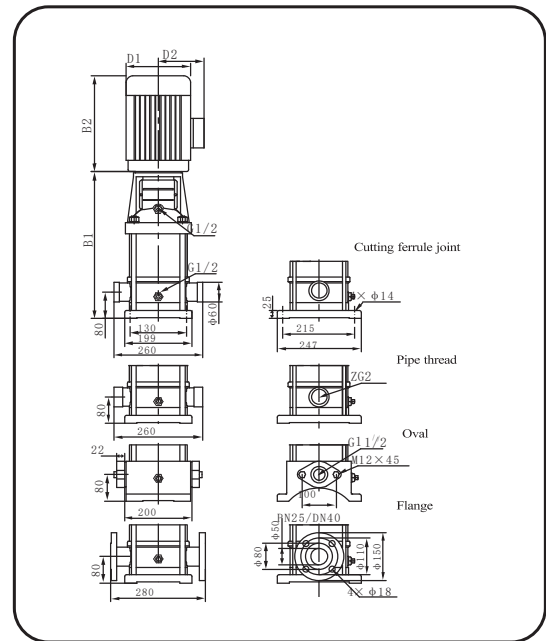
# Performance Curve

Performance curve ISO9906 Annex A 2900rpm



**VMS 10**

Installation sketch



Performance table

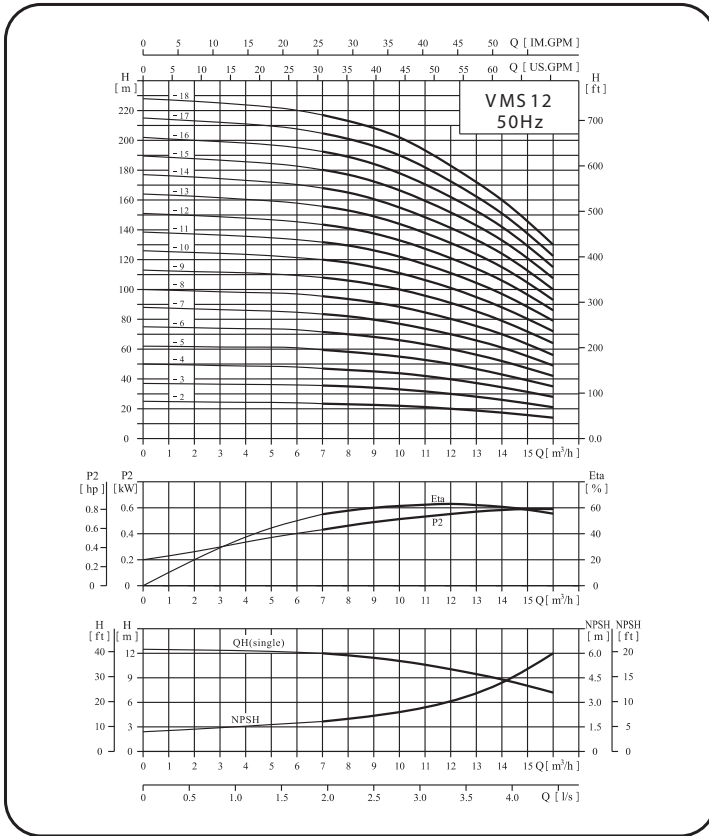
Model	Driving motor		Q (m³/h)	H (m)													
	(kW)	(HP)		5	6	7	8	9	10	11	12	13					
VMS10-10	0.75	1	9.7	9.3	8.9	8.3	7.7	7	6	5	4						
VMS10-20	0.75	1	19.5	19	18	17	16	15	13.5	11.5	10						
VMS10-30	1.1	1.5	29.5	29	28	27	25	23	21	18	16						
VMS10-40	1.5	2	39.5	38.5	37.5	36	34	31	28	25	22						
VMS10-50	2.2	3	49.5	48.5	47	44	42	39	35	32	28						
VMS10-60	2.2	3	60	58	56	54	51	48	43	39	34						
VMS10-70	3	4	70	68	66	63	60	56	51	45	39						
VMS10-80	3	4	80	78	75	73	69	64	58	52	44						
VMS10-90	3	4	90	87	85	81	77	72	66	58	50						
VMS10-100	4	5.5	100	97	95	90	85	80	74	66	56						
VMS10-120	4	5.5	120	117	114	109	104	96	89	79	68						
VMS10-140	5.5	7.5	140	137	134	129	122	113	103	92	79						
VMS10-160	5.5	7.5	160	158	153	148	140	129	119	106	91						
VMS10-180	7.5	10	180	177	172	166	156	145	133	119	102						
VMS10-200	7.5	10	200	196	191	184	173	162	147	132	114						
VMS10-220	7.5	10	220	216	210	202	190	178	162	145	126						

Size and weight

Model	Size(mm)					Weight (kg)
	B1	B2	B1+B2	D1	D2	
VMS10-10	347	225	572	170	142	40
VMS10-20	347	245	592	170	142	41
VMS10-30	377	245	622	170	142	43
VMS10-40	417	290	707	190	155	49
VMS10-50	447	290	737	190	155	53
VMS10-60	477	290	767	190	155	54
VMS10-70	517	345	862	197	165	64
VMS10-80	547	345	892	197	165	65
VMS10-90	577	345	922	197	165	66
VMS10-100	607	355	962	230	188	74
VMS10-120	667	355	1022	230	188	76
VMS10-140	747	390	1137	260	208	100
VMS10-160	807	390	1197	260	208	102
VMS10-180	867	390	1257	260	208	107
VMS10-200	927	390	1317	260	208	109
VMS10-220	987	390	1377	260	208	111

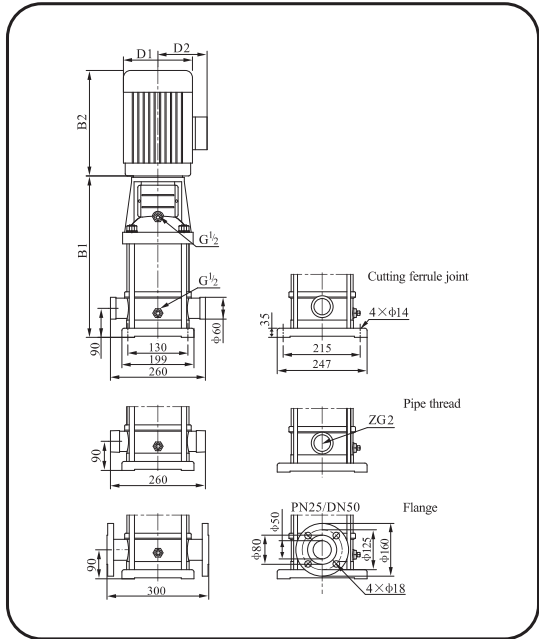
# Performance Curve

Performance curve ISO 9906 Annex A 2900rpm



## VMS 12

Installation sketch



Performance table

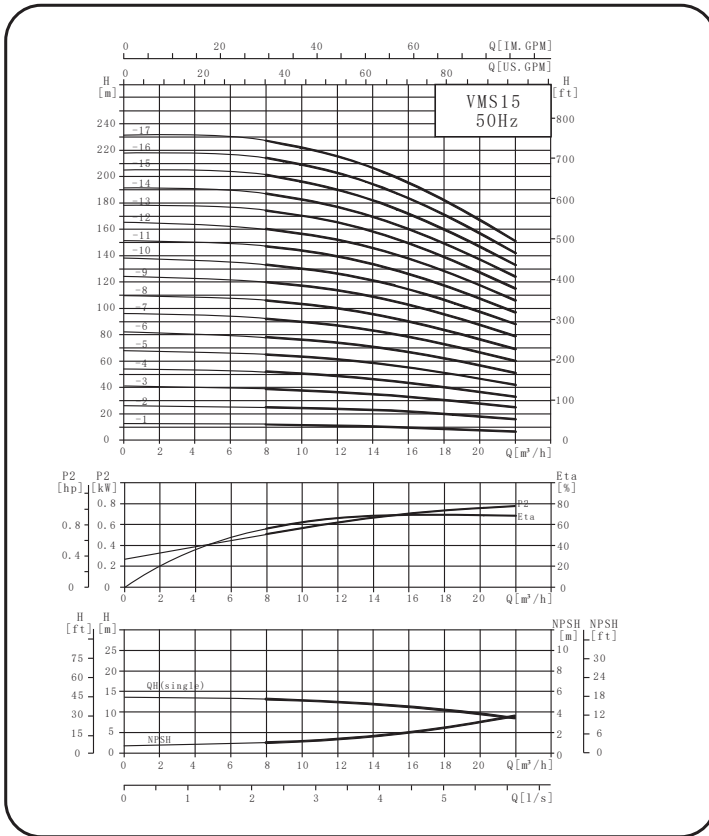
Model	Driving motor		Q (m³/h)	H (m)															
	(kw)	(hp)		7	8	9	10	11	12	13	14	15	16						
VMS12-20	1.5	2		23.5	23	22.5	22	21	20	18.5	17	15.5	14						
VMS12-30	2.2	3		35.5	35	34	33	31.5	30	28	26	23.5	21						
VMS12-40	3	4		47	46	45	44	42	40	37	34	31	28						
VMS12-50	3	4		59.5	58	56.5	55	52.5	50	46.5	43	39	35						
VMS12-60	4	5.5		71.5	70	68	66	63	60	56	52	47	42						
VMS12-70	5.5	7.5		83.5	82	79.5	77	73.5	70	65.5	61	55	49						
VMS12-80	5.5	7.5		95.5	94	91	88	84	80	75	70	63	56						
VMS12-90	5.5	7.5		108	106	103	100	95.5	91	85	79	71.5	64						
VMS12-100	7.5	10		120	118	114.5	111	106	101	94.5	88	80	72						
VMS12-120	7.5	10		143.5	141	137	133	127	121	113.5	106	96	86						
VMS12-140	11	15		168	165	160	155	148	141	132.5	124	112	100						
VMS12-160	11	15		192.5	189	183.5	178	170	162	152	142	128.5	115						
VMS12-180	11	15		217	213	207.5	202	192.5	183	171.5	160	145	130						

Size and weight

Model	Size(mm)					Weight (kg)
	B1	B2	B1+B2	D1	D2	
VMS12-20	367	290	657	190	155	39
VMS12-30	397	290	687	190	155	43
VMS12-40	437	315	752	197	165	51
VMS12-50	467	315	782	197	165	53
VMS12-60	497	335	832	230	188	61
VMS12-70	547	430	977	260	208	73
VMS12-80	577	430	1007	260	208	74
VMS12-90	607	430	1037	260	208	76
VMS12-100	637	430	1067	260	208	83
VMS12-120	697	430	1127	260	208	87
VMS12-140	845	490	1335	330	255	157
VMS12-160	905	490	1395	330	255	161
VMS12-180	965	490	1455	330	255	164

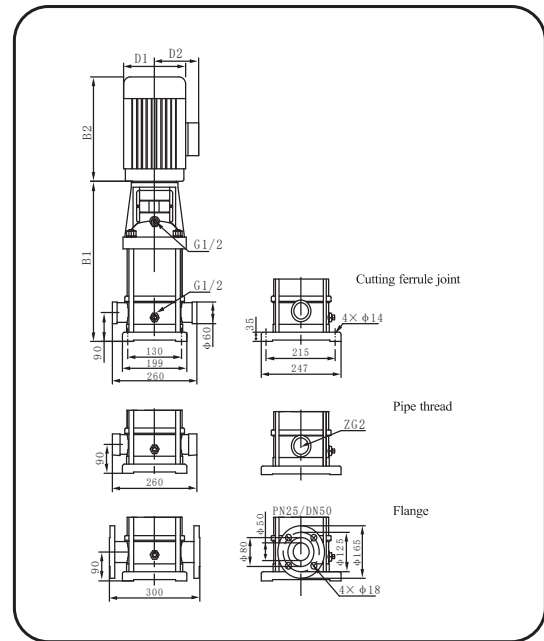
# Performance Curve

Performance curve ISO 9906 Annex A 2900rpm



## VMS 15

Installation sketch



Performance table

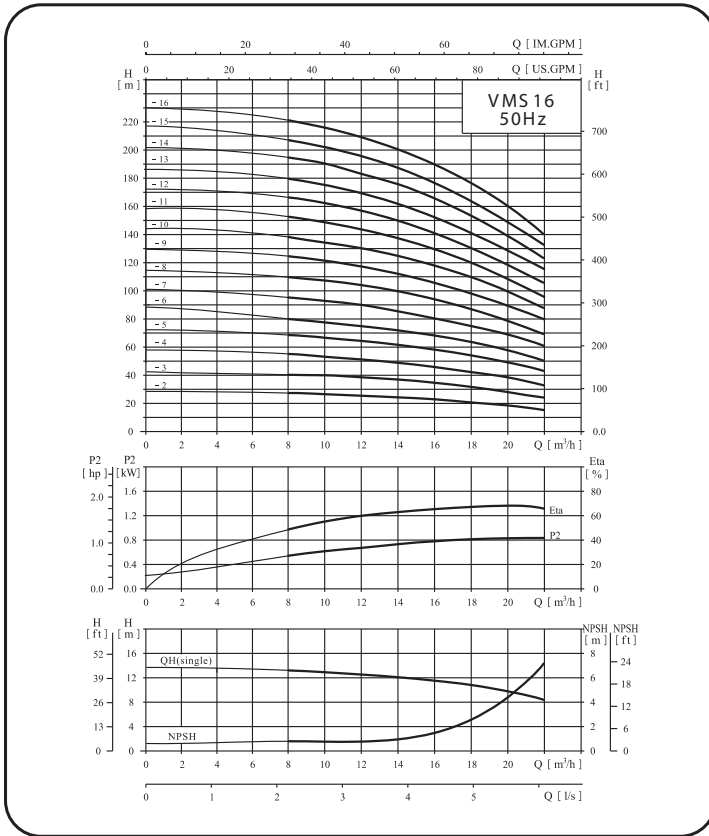
Model	Driving motor		Q (m³/h)	H (m)													
	(kW)	(HP)		8	10	12	14	15	16	18	20	22					
VMS15-10	1.1	1.5	12	11.5	11	10.5	10	9.5	8.5	7.5	6.5						
VMS15-20	2.2	3	25	24.5	24	23	22.5	21.5	20	18	16						
VMS15-30	3	4	39	38	37	35	34	33	30	28	25						
VMS15-40	4	5.5	52	51	49	46	45	44	40	37	33						
VMS15-50	4	5.5	65	63	61	59	57	55	51	47	42						
VMS15-60	5.5	7.5	78	76	74	71	69	67	62	57	51						
VMS15-70	5.5	7.5	92	90	87	83	81	79	73	67	60						
VMS15-80	7.5	10	106	103	100	96	93	90	84	77	69						
VMS15-90	7.5	10	120	117	114	109	106	103	95	87	79						
VMS15-100	11	15	133	130	126	121	118	114	106	97	88						
VMS15-120	11	15	160	157	152	146	142	138	128	117	106						
VMS15-140	11	15	187	182	177	169	165	160	149	137	124						
VMS15-170	15	20	227	222	215	206	201	195	182	167	151						

Size and weight

Model	Size(mm)					Weight (kg)
	B1	B2	B1+B2	D1	D2	
VMS15-10	387	245	632	170	142	33
VMS15-20	397	290	687	190	155	42
VMS15-30	452	345	797	197	165	51
VMS15-40	497	355	852	230	188	60
VMS15-50	542	355	897	230	188	62
VMS15-60	607	390	997	260	208	78
VMS15-70	652	390	1042	260	208	80
VMS15-80	697	390	1087	260	208	86
VMS15-90	742	390	1132	260	208	88
VMS15-100	875	500	1375	330	255	157
VMS15-120	965	500	1465	330	255	161
VMS15-140	1055	500	1555	330	255	165
VMS15-170	1190	500	1690	330	255	178

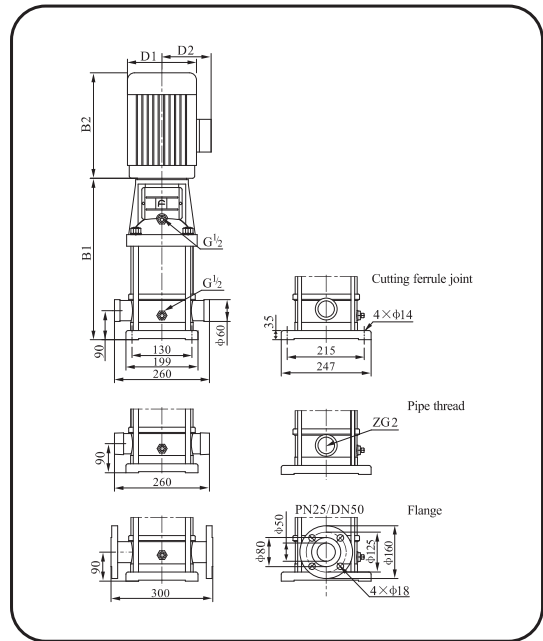
# Performance Curve

Performance curve ISO 9906 Annex A 2900rpm



**VMS 16**

Installation sketch



Performance table

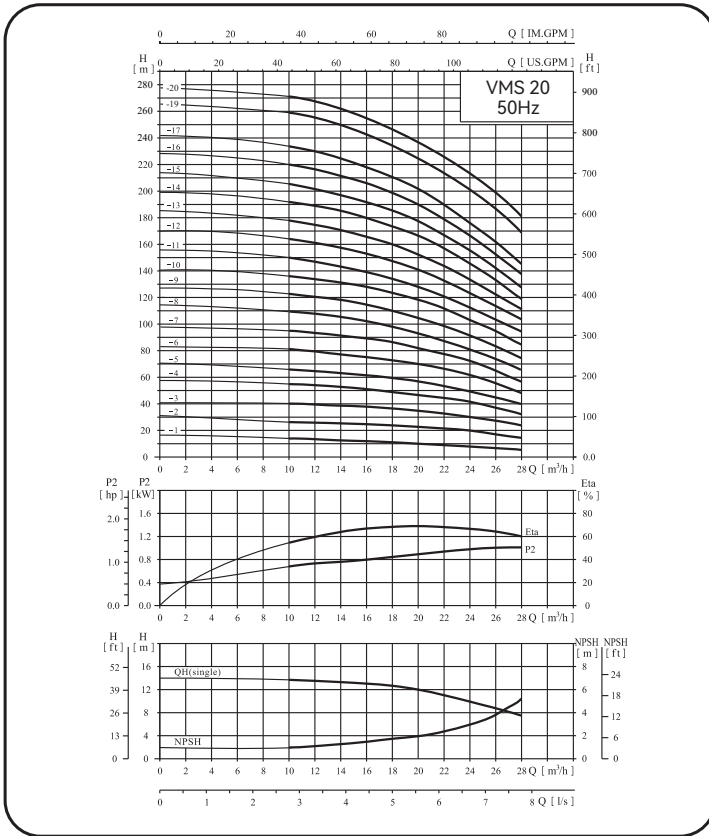
Model	Driving motor		Q (m³/h)	H (m)							
	(kw)	(hp)		8	10	12	14	16	18	20	22
VMS16-20	2.2	3		27	26	25	24	22	21	19	16
VMS16-30	3.0	4		41	40	38	37	34	32	29	25
VMS16-40	4.0	5.5		54	53	52	49	46	43	38	34
VMS16-50	5.5	7.5		68	67	65	62	58	54	48	43
VMS16-60	5.5	7.5		82	80	78	74	70	64	58	52
VMS16-70	7.5	10		96	95	91	87	82	76	68	61
VMS16-80	7.5	10		110	108	104	99	94	86	77	70
VMS16-100	11	15		138	136	131	125	118	109	97	87
VMS16-120	11	15		166	162	157	150	141	130	116	105
VMS16-140	15	20		194	190	184	175	166	152	136	122
VMS16-160	15	20		222	217	210	200	189	174	156	140

Size and weight

Model	Size(mm)					Weight (kg)
	B1	B2	B1+B2	D1	D2	
VMS16-20	397	290	687	190	155	42
VMS16-30	452	315	767	197	165	50
VMS16-40	497	335	832	230	188	59
VMS16-50	562	430	992	260	208	76
VMS16-60	607	430	1037	260	208	77
VMS16-70	652	430	1082	260	208	84
VMS16-80	697	430	1127	260	208	86
VMS16-100	875	490	1365	330	255	158
VMS16-120	965	490	1455	330	255	161
VMS16-140	1055	490	1545	330	255	174
VMS16-160	1145	490	1635	330	255	178

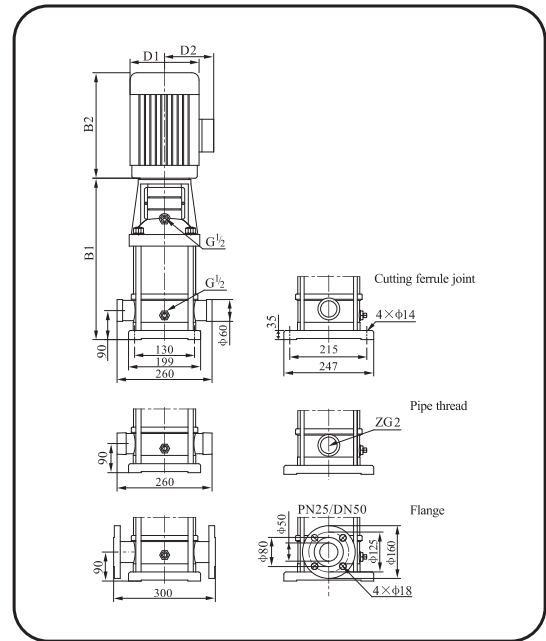
# Performance Curve

Performance curve ISO 9906 Annex A 2900rpm



## VMS 20

Installation sketch



Performance table

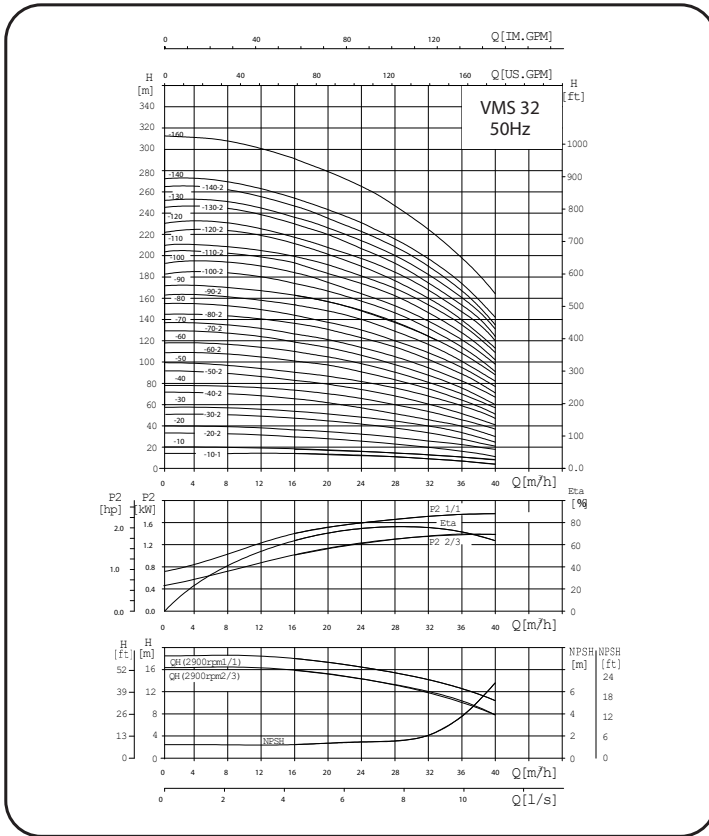
Model	Driving Motor		Q (m³/hr)	H(m)									
	(kW)	(hp)		10	12	14	16	18	20	22	24	26	28
VMS20-10	1.1	1.5		13.5	13	12.5	12	11	10	9	8	7	6
VMS20-20	2.2	3.0		27	26.5	26	25	24	23	22	20	18	15
VMS20-30	4.0	5.5		40	39.5	39	38	37	35	33	30	27	24
VMS20-40	5.5	7.5		54	53	52	51	49	47	44	41	37	33
VMS20-50	5.5	7.5		67	66	64	62	60	58	55	50	45	40
VMS20-60	7.5	10		81	79	77	75	73	70	66	61	55	49
VMS20-70	7.5	10		95	93	91	89	86	82	77	71	65	58
VMS20-80	11	15		109	107	105	102	99	94	89	82	75	67
VMS20-100	11	15		136	134	131	128	124	118	111	103	95	85
VMS20-120	15	20		164	162	158	154	149	142	133	124	114	102
VMS20-140	15	20		192	189	185	180	174	166	156	145	133	119
VMS20-170	18.5	25		234	230	225	219	212	202	190	177	162	145
VMS20-190	22	30		259	254	249.5	244	235.5	226	214	201	186	169
VMS20-200	22	30		271	266	261.5	256	247.5	238	226	213	198	181

Size and weight

Model	Size (mm)					Weight (kg)
	B1	B2	B1+B2	D1	D2	
VMS20-10	387	245	632	170	142	33
VMS20-20	397	290	687	190	155	42
VMS20-30	452	335	787	230	188	58
VMS20-40	517	430	947	260	208	74
VMS20-50	562	430	992	260	208	76
VMS20-60	607	430	1037	260	208	82
VMS20-70	652	430	1082	260	208	84
VMS20-80	785	490	1275	330	255	153
VMS20-100	875	490	1365	330	255	157
VMS20-120	965	490	1455	330	255	170
VMS20-140	1055	490	1545	330	255	172
VMS20-170	1190	550	1740	330	255	195
VMS20-190	1280	575	1855	360	285	255
VMS20-200	1325	575	1900	360	285	257

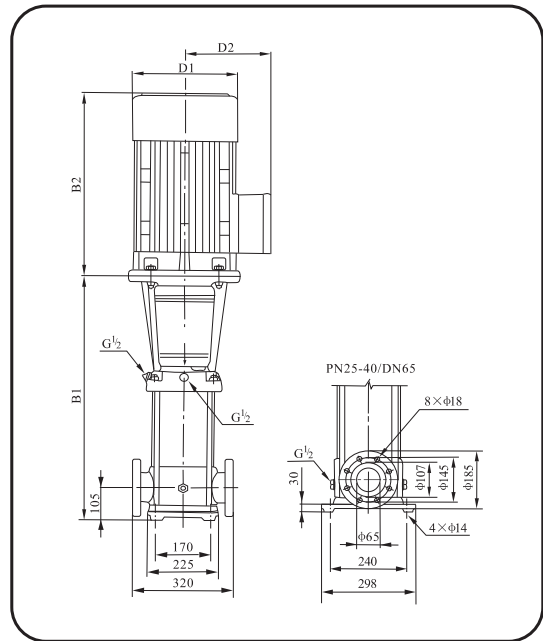
# Performance Curve

Performance curve ISO 9906 Annex A 2900rpm



## VMS 32

Installation sketch



Performance table

Model	Driving motor		Q (m³/h)	H (m)						
	(kw)	(hp)		16	20	24	28	32	36	40
VMS32-10-1	1.5	2		14	13	12	11	9	7	4
VMS32-10	2.2	3		18	17	15	14	13	11	8
VMS32-20-2	3.0	4		29	28	26	23	20	16	11
VMS32-20	4.0	5.5		36	34	32	29	27	23	18
VMS32-30-2	5.5	7.5		47	44	41	38	33	28	21
VMS32-30	5.5	7.5		54	51	48	44	40	35	27
VMS32-40-2	7.5	10		65	62	58	53	46	40	30
VMS32-40	7.5	10		72	69	65	59	53	47	37
VMS32-50-2	11	15		83	79	74	68	60	52	41
VMS32-50	11	15		90	86	81	74	67	59	47
VMS32-60-2	11	15		101	97	90	83	74	65	51
VMS32-60	11	15		108	104	97	90	81	72	57
VMS32-70-2	15	20		119	114	107	98	88	78	60
VMS32-70	15	20		126	121	113	105	95	85	67
VMS32-80-2	15	20		136	131	123	114	102	90	71
VMS32-80	15	20		144	138	130	120	109	97	77
VMS32-90-2	18.5	25		154	148	140	129	117	102	82
VMS32-90	18.5	25		162	156	147	136	124	109	88
VMS32-100-2	18.5	25		175	166	157	146	131	115	91
VMS32-100	18.5	25		182	173	164	152	138	122	98
VMS32-110-2	22	30		193	184	173	164	146	128	102
VMS32-110	22	30		200	191	180	168	153	135	109
VMS32-120-2	22	30		211	201	189	178	160	140	113

Size and weight

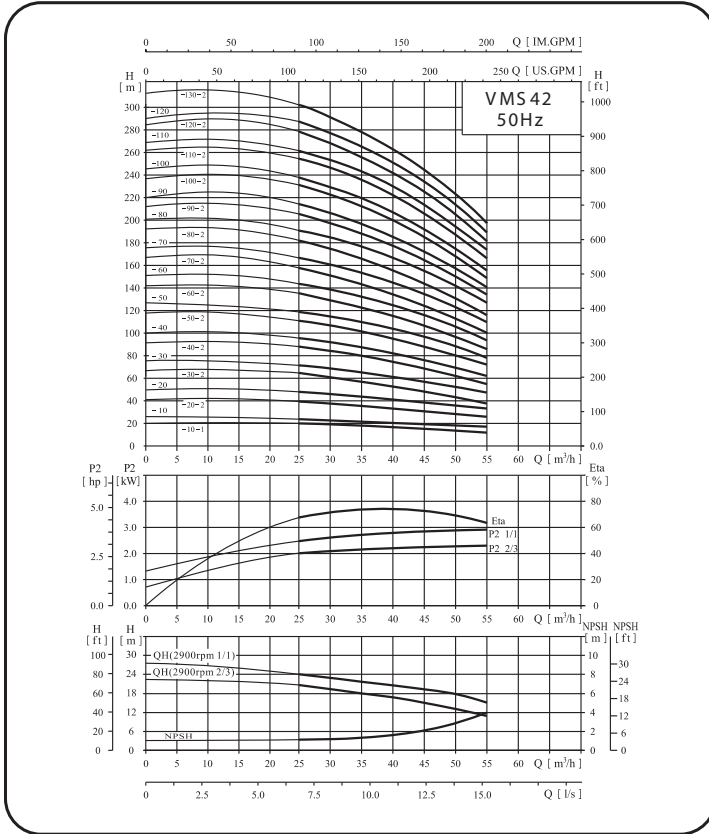
Model	Size (mm)					Weight (kg)
	B1	B2	B1+B2	D1	D2	
VMS32-10-1/VMS32-10	505	290	795	190	155	64/68
VMS32-20-2/VMS32-20	575	315/335	890/910	197/230	165/180	77/85
VMS32-30-2/VMS32-30	645	430	1075	260	208	100
VMS32-40-2/VMS32-40	715	430	1145	260	208	109
VMS32-50-2/VMS32-50	890	490	1380	330	255	181
VMS32-60-2/VMS32-60	960	490	1450	330	255	185
VMS32-70-2/VMS32-70	1030	490	1520	330	255	199
VMS32-80-2/VMS32-80	1100	490	1590	330	255	203
VMS32-90-2/VMS32-90	1170	550	1720	330	255	222
VMS32-100-2/VMS32-100	1240	550	1790	330	255	227
VMS32-110-2/VMS32-110	1310	590	1900	360	285	272
VMS32-120-2/VMS32-120	1380	590	1970	360	285	276
VMS32-130-2/VMS32-130	1450	660	2110	400	310	337
VMS32-140-2/VMS32-140	1520	660	2180	400	310	341
VMS32-160	1660	650	2310	400	310	380

Performance table

Model	Driving motor		Q (m³/h)	H (m)						
	(kw)	(hp)		16	20	24	28	32	36	40
VMS32-120	22	30		218	208	196	184	167	147	120
VMS32-130-2	30	40		230	218	206	193	174	153	124
VMS32-130	30	40		237	225	213	200	181	160	131
VMS32-140-2	30	40		247	235	222	210	189	165	135
VMS32-140	30	40		255	242	229	216	196	172	142
VMS32-160	30	40		290	279	264	245	223	198	164

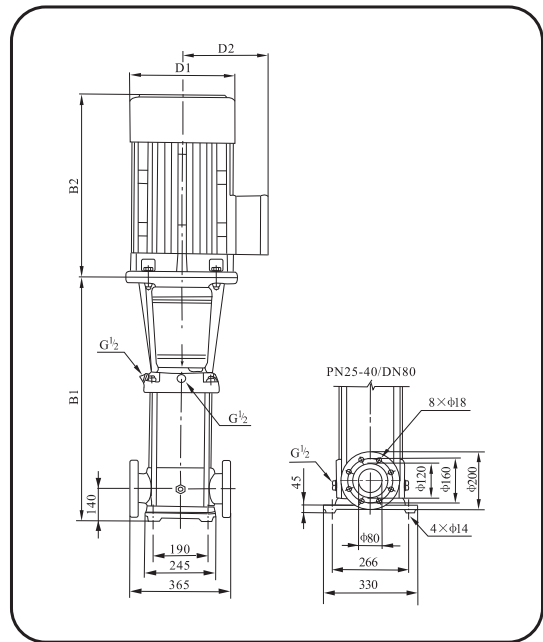
# Performance Curve

Performance curve ISO 9906 Annex A 2900rpm



**VMS 42**

Installation sketch



Performance table

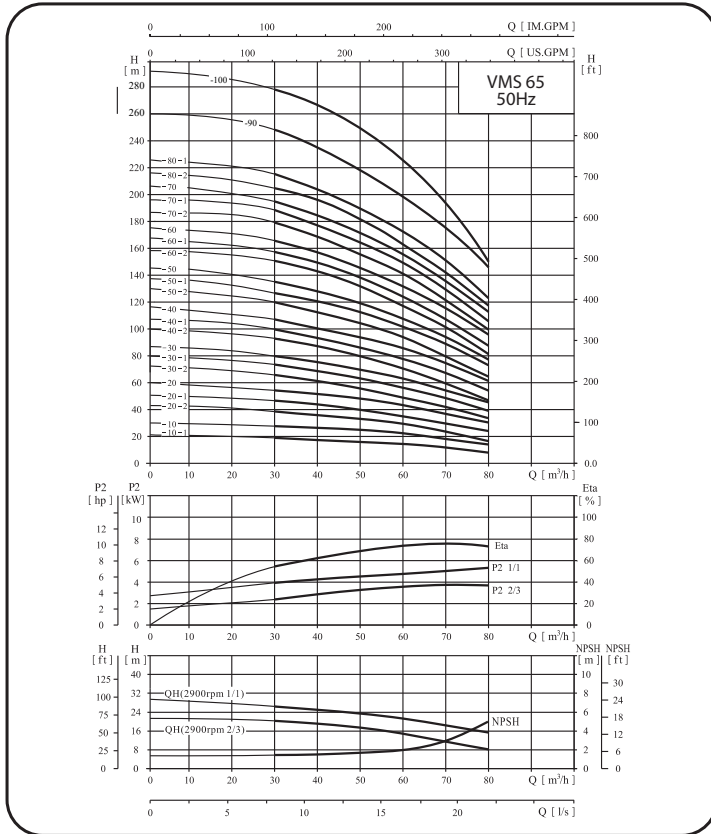
Model	Driving motor		Q (m³/h)	H (m)							
	(kw)	(hp)		25	30	35	40	42	45	50	55
VMS42-10-1	3.0	4		20	19	18	17	16	15	13	11
VMS42-10	4.0	5.5		24	23	22	21	20	19	18	16
VMS42-20-2	5.5	7.5		40	38	36	33	32	30	27	23
VMS42-20	7.5	10		48	46	44	42	41	39	35	31
VMS42-30-2	11	15		63	61	58	54	52	50	44	38
VMS42-30	11	15		71	69	66	63	61	58	53	47
VMS42-40-2	15	20		87	84	80	75	73	69	62	54
VMS42-40	15	20		95	92	88	84	81	78	71	62
VMS42-50-2	18.5	25		111	107	102	96	93	88	80	69
VMS42-50	18.5	25		119	115	110	105	101	97	88	78
VMS42-60-2	22	30		135	130	124	117	113	108	97	85
VMS42-60	22	30		143	138	132	125	122	116	106	93
VMS42-70-2	30	40		158	152	146	138	134	127	115	100
VMS42-70	30	40		166	161	154	146	142	135	124	109
VMS42-80-2	30	40		182	175	168	159	154	146	133	116
VMS42-80	30	40		190	184	176	167	162	154	141	124
VMS42-90-2	30	40		205	198	190	180	174	166	150	132
VMS42-90	37	50		214	207	198	188	183	174	159	140
VMS42-100-2	37	50		230	221	212	200	194	185	168	147
VMS42-100	37	50		238	230	220	209	203	193	177	155
VMS42-110-2	45	60		255	246	236	223	217	206	188	165
VMS42-110	45	60		263	255	244	232	225	214	196	173
VMS42-120-2	45	60		280	270	259	245	238	226	206	181
VMS42-120	45	60		289	280	268	255	247	236	216	190
VMS42-130-2	45	60		305	294	282	267	259	247	225	198

Size and weight

Model	Size(mm)					Weight (kg)
	B1	B2	B1+B2	D1	D2	
VMS42-10-1						
VMS42-10	561	315/335	876/896	197/230	165/188	83/90
VMS42-20-2						
VMS42-20	641	430	1071	260	208	105/110
VMS42-30-2						
VMS42-30	826	490	1316	330	255	183
VMS42-40-2						
VMS42-40	906	490	1396	330	255	197
VMS42-50-2						
VMS42-50	986	550	1536	330	255	221
VMS42-60-2						
VMS42-60	1066	590	1656	360	285	261
VMS42-70-2						
VMS42-70	1146	660	1806	400	310	320
VMS42-80-2						
VMS42-80	1226	660	1886	400	310	324
VMS42-90-2						
VMS42-90	1306	660	1966	400	310	328/352
VMS42-100-2						
VMS42-100	1386	660	2046	400	310	355
VMS42-110-2						
VMS42-110	1466	700	2166	450	345	426
VMS42-120-2						
VMS42-120	1546	700	2246	450	345	432
VMS42-130-2						
VMS42-130-2	1626	700	2326	450	345	438

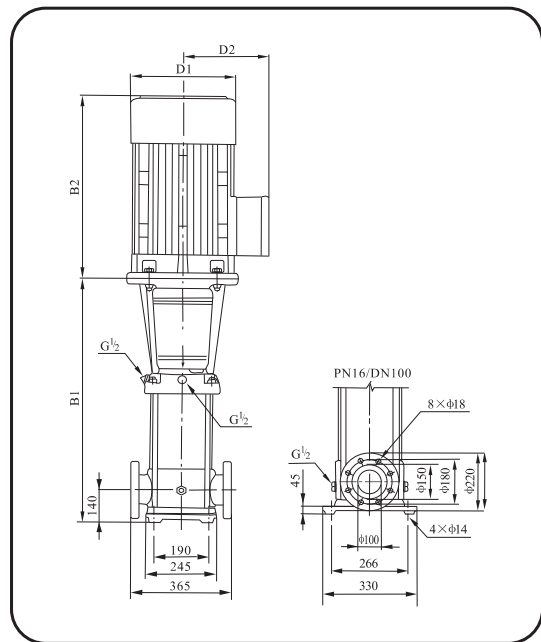
# Performance Curve

Performance curve ISO 9906 Annex A 2900rpm



## VMS 65

Installation sketch



Performance table

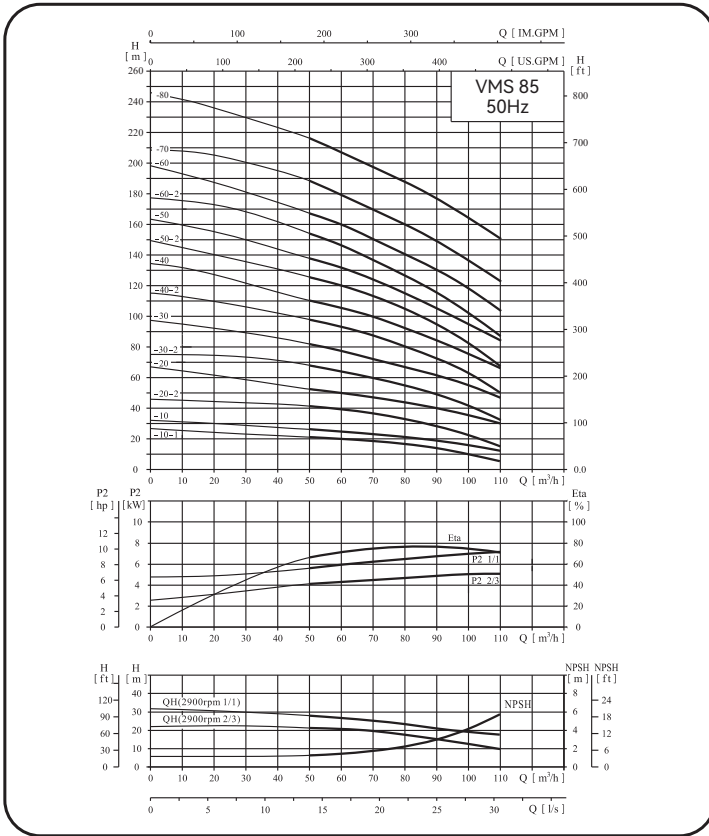
Model	Driving Motor		Q (m³/hr)	H (m)							
	(kW)	(hp)		30	40	50	60	65	70	80	
VMS65-10-1	4.0	5.5	19	18	16	14	13	11	8		
VMS65-10	5.5	7.5	27	25	23	21	20	18	15		
VMS65-20-2	7.5	10	39	36	33	29	26	23	17		
VMS65-20-1	11	15	46	44	40	36	33	30	24		
VMS65-20	11	15	53	51	47	43	40	37	30		
VMS65-30-2	15	20	66	62	56	50	46	41	32		
VMS65-30-1	15	20	73	69	63	57	53	48	39		
VMS65-30	18.5	25	80	76	70	64	60	55	46		
VMS65-40-2	18.5	25	92	87	80	71	66	60	47		
VMS65-40-1	22	30	100	94	87	78	73	67	54		
VMS65-40	22	30	107	101	94	85	80	74	61		
VMS65-50-2	30	40	121	114	105	95	88	80	64		
VMS65-50-1	30	40	128	121	112	102	95	87	71		
VMS65-50	30	40	136	129	119	109	102	94	78		
VMS65-60-2	30	40	150	142	131	118	110	101	81		
VMS65-60-1	37	50	157	149	138	125	117	108	88		
VMS65-60	37	50	164	156	145	132	124	115	95		
VMS65-70-2	37	50	179	169	156	141	132	121	99		
VMS65-70-1	37	50	186	176	163	148	139	128	106		
VMS65-70	45	60	193	183	170	155	146	135	112		
VMS65-80-2	45	60	207	196	182	164	154	142	116		
VMS65-80-1	45	60	215	203	189	171	161	149	123		
VMS65-90	55	75	249	235	218	199	188	174	144		
VMS65-100	55	75	275	260	244	225	213	200	171		

Size and weight

Model	Size(mm)					Weight (kg)
	B1	B2	B1+B2	D1	D2	
VMS65-10-1	561	335	896	230	188	93
VMS65-10	561	430	991	260	208	105
VMS65-20-2	644	430	1074	260	208	110
VMS65-20-1	754	490	1244	330	255	182
VMS65-20	754	490	1244	330	255	182
VMS65-30-2	836	490	1326	330	255	196
VMS65-30-1	836	490	1326	330	255	197
VMS65-30	836	550	1386	330	255	221
VMS65-40-2	919	550	1469	330	255	225
VMS65-40-1	919	590	1509	360	285	258
VMS65-40	919	590	1509	360	285	258
VMS65-50-2	1001	660	1661	400	310	319
VMS65-50-1	1001	660	1661	400	310	320
VMS65-50	1001	660	1661	400	310	325
VMS65-60-2	1084	660	1744	400	310	349
VMS65-60-1	1084	660	1744	400	310	349
VMS65-60	1084	660	1744	400	310	353
VMS65-70-2	1166	660	1826	400	310	353
VMS65-70-1	1166	660	1826	400	310	420
VMS65-70	1166	700	1866	460	340	424
VMS65-80-2	1248	700	1948	460	340	424
VMS65-80-1	1248	700	1948	460	340	424
VMS65-90	1331	760	2091	540	370	500
VMS65-100	1414	760	2174	540	370	526

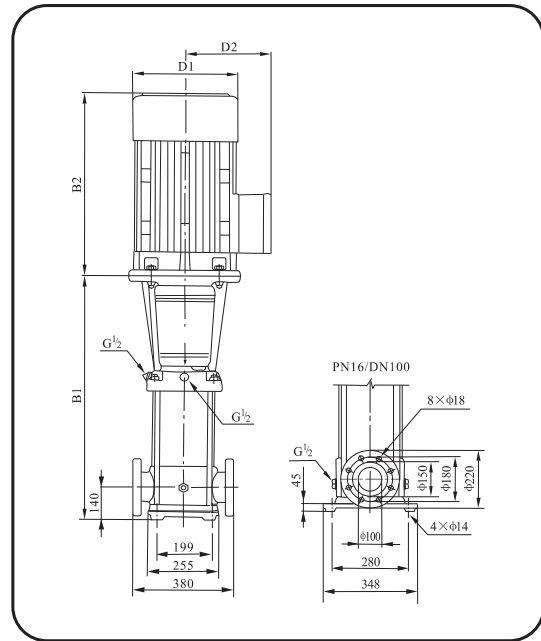
# Performance Curve

Performance curve ISO 9906 Annex A 2900rpm



## VMS 85

Installation sketch



Performance table

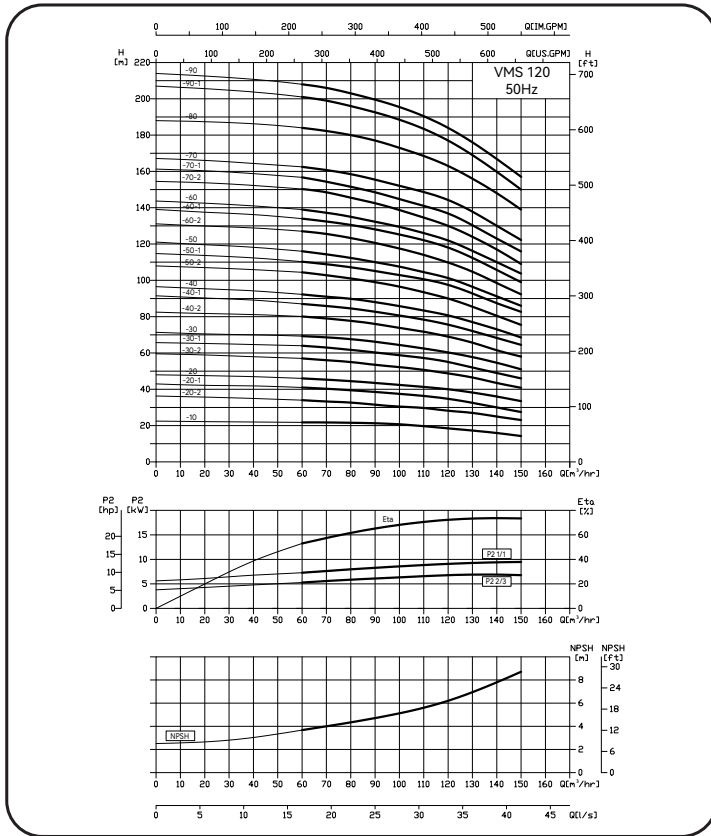
Model	Driving Motor		Q (m³/hr)	H(m)													
	(kW)	(hp)		50	60	70	80	85	90	100	110						
VMS85-10-1	5.5	7.5	22	19	17	16	14	13	10	6							
VMS85-10	7.5	10	25	24	22	21	20	19	16	12							
VMS85-20-2	11	15	41	39	36	32	30	28	22	15							
VMS85-20	15	20	53	50	47	44	41	40	36	30							
VMS85-30-2	18.5	25	68	65	60	55	52	49	41	32							
VMS85-30	22	30	81	77	72	67	64	62	55	48							
VMS85-40-2	30	40	98	93	87	80	75	72	62	50							
VMS85-40	30	40	110	105	100	92	86	84	76	66							
VMS85-50-2	37	50	126	120	113	104	98	93	81	68							
VMS85-50	37	50	139	131	124	115	110	106	94	83							
VMS85-60-2	45	60	155	148	139	129	122	117	102	86							
VMS85-60	45	60	168	160	150	141	134	130	117	103							
VMS85-70	55	75	187	179	169	160	155	149	136	122							
VMS85-80	55	75	216	208	198	189	184	178	165	151							

Size and weight

Model	Size (mm)					Weight (kg)
	B1	B2	B1+B2	D1	D2	
VMS85-10-1	571	430	1001	260	208	105
VMS85-10	571	430	1001	260	208	110
VMS85-20-2	773	490	1263	330	255	181
VMS85-20	773	490	1263	330	255	192
VMS85-30-2	865	550	1415	330	255	215
VMS85-30	865	590	1455	360	285	252
VMS85-40-2	957	660	1617	400	310	312
VMS85-40	957	660	1617	400	310	312
VMS85-50-2	1049	660	1709	400	310	336
VMS85-50	1049	660	1709	400	310	336
VMS85-60-2	1141	700	1841	460	340	407
VMS85-60	1141	700	1841	460	340	407
VMS85-70	1233	770	2003	485	358	509
VMS85-80	1325	760	2085	540	370	570

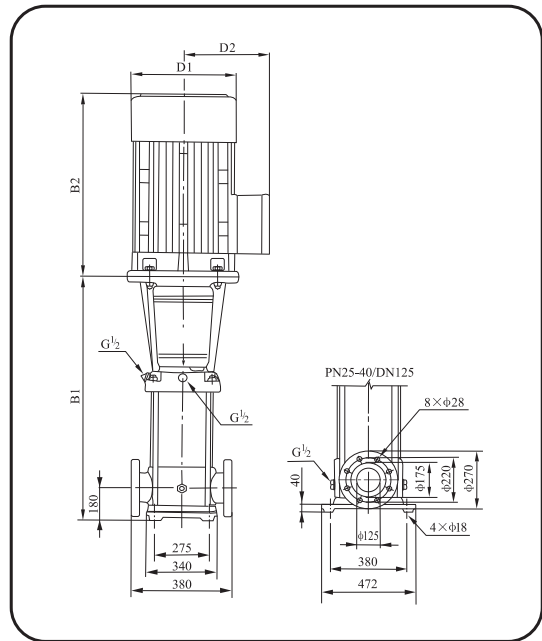
# Performance Curve

Performance curve ISO 9906 Annex A 2950rpm



## VMS 120

Installation sketch



Performance table

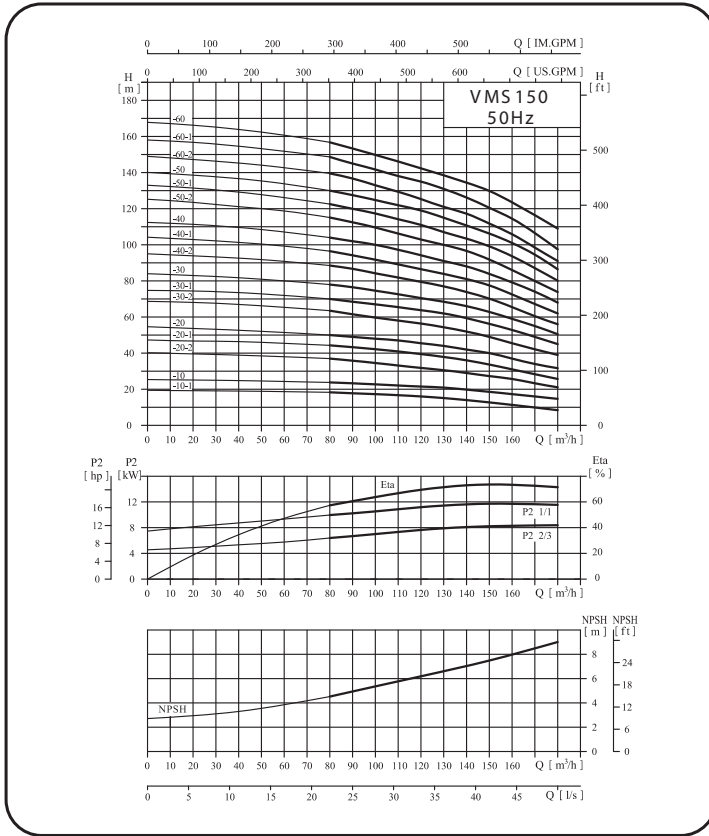
Model	Driving motor		Q (m³/h)	H (m)										
	(kw)	(hp)		60	70	80	90	100	110	120	130	140	150	
VMS120-10	11	15		22	21.8	21.6	21	20.5	19.5	18.5	17	16	15	
VMS120-20-2	15	20		34	33.6	33	31	30.2	30	28.5	27	25	24	
VMS120-20-1	18.5	25		41	40	39.5	38.5	37	36.5	34.5	32.5	30	27.5	
VMS120-20	22	30		46	45	44.5	43.5	42.4	41	40	38	36	33.5	
VMS120-30-2	30	40		57	56	55	53.5	52	51	49	46.5	43.5	41	
VMS120-30-1	30	40		64	63	62	60	58.5	57.5	55.5	52	49	46	
VMS120-30	30	40		69.5	68.5	67.5	66	64.4	62.5	61	57.5	54.5	51	
VMS120-40-2	37	50		80.5	79	78	76	73.5	72	69	66	61.5	58	
VMS120-40-1	37	50		87	86	84.5	82	80	78	76	72	68	64.5	
VMS120-40	45	60		92.5	91	90	88	85.5	83	81	77	73	68.5	
VMS120-50-2	45	60		104.5	103	101	99	96	93	90	85.5	80.3	75.5	
VMS120-50-1	45	60		110.5	109	107.5	105	102	100	97	92	86.5	83	
VMS120-50	55	75		115.5	114	113	110	107.5	104.5	101.5	96	91	86	
VMS120-60-2	55	75		128	125.5	123	121	117.3	113.5	110	104.5	98.5	92.5	
VMS120-60-1	55	75		134	132	130.5	127	124	121	118	111	105	100	
VMS120-60	75	100		139	137	135	132	128.8	126	123	116	110	104	
VMS120-70-2	75	100		151	148	145.5	143	138.6	134	130	123.5	116.5	109	
VMS120-70-1	75	100		156.5	154	152	148.5	144.5	141	137.5	130	123	116.5	
VMS120-70	75	100		162.5	160.5	158.5	155	151	148	145	137	129	123	
VMS120-80	90	125		184	183	180	177	173	169	163	156	148	139	
VMS120-90-1	110	150		201	199	196	192.3	188.5	183.7	177	169	159.5	150	
VMS120-90	110	150		208	206	203	199.3	195.5	190.7	184	176	166.5	157	

Size and weight

Model	Size (mm)					Weight (kg)
	B1	B2	B1+B2	D1	D2	
VMS120-10	840	490	1330	330	255	230
VMS120-20-2	1000	490	1490	330	255	245
VMS120-20-1	1000	550	1550	330	255	250
VMS120-20	1000	590	1590	360	285	285
VMS120-30-2	1160	660	1820	400	310	360
VMS120-30-1	1160	660	1820	400	310	360
VMS120-30	1160	660	1820	400	310	360
VMS120-40-2	1320	660	1980	400	310	400
VMS120-40-1	1320	660	1980	400	310	400
VMS120-40	1320	700	2020	460	340	460
VMS120-50-2	1480	70	2180	460	340	470
VMS120-50-1	1480	700	2180	460	340	470
VMS120-50	1510	770	2280	540	370	575
VMS120-60-2	1670	770	2440	540	370	585
VMS120-60-1	1670	770	2440	540	370	585
VMS120-60	1670	845	2515	580	410	705
VMS120-70-2	1830	845	2675	580	410	715
VMS120-70-1	1830	845	2675	580	410	715
VMS120-70	1830	845	2675	580	410	715
VMS120-80	1990	895	2885	580	410	730
VMS120-90-1	2150	1040	3290	645	530	750
VMS120-90	2150	1140	3290	645	550	750

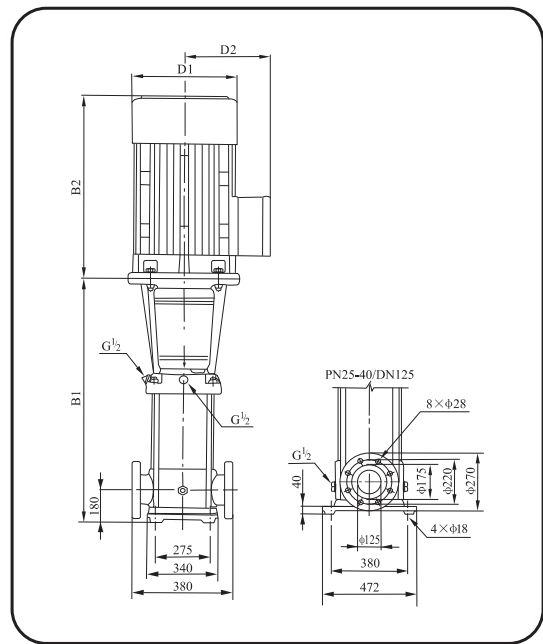
# Performance Curve

Performance curve ISO 9906 Annex A 2950rpm



**VMS 150**

Installation sketch



Performance table

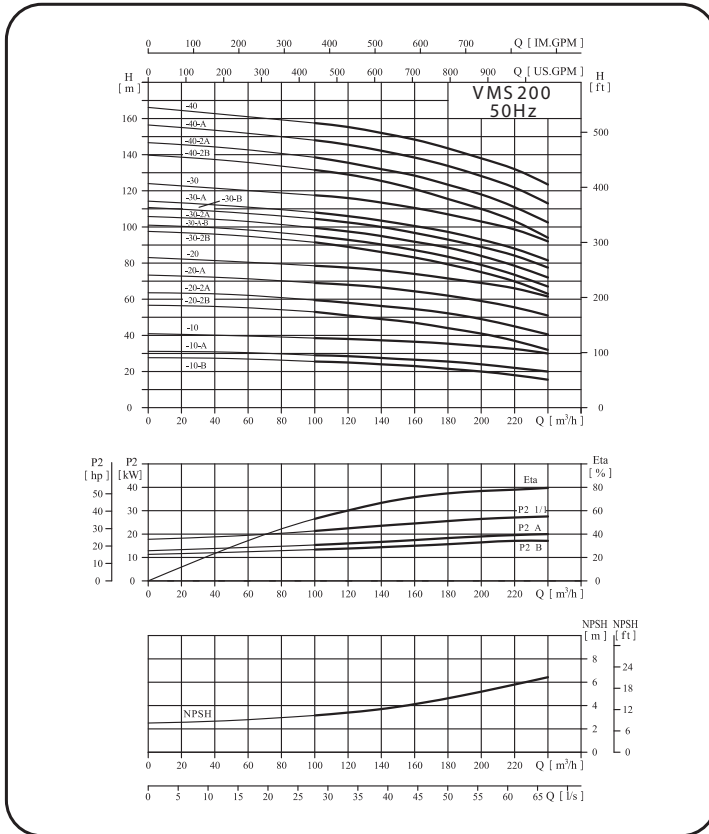
Model	Driving motor		Q (m³/h)	H (m)											
	(kw)	(hp)		80	90	100	110	120	130	140	150	160	170	180	
VMS150-10-1	11	15	18.3	17.8	17.3	17	16	15	14	12.5	11	10	8.5		
VMS150-10	15	20	24	23	22.5	22	21.5	20.5	20	18.5	17	16	15		
VMS150-20-2	18.5	25	37	35.5	34	33	32	31	29	27.5	26	23	21		
VMS150-20-1	22	30	44.3	43	42	40	39	38.5	37.5	35	33	30	27		
VMS150-20	30	40	50	49	48	47	45.5	44	42	40	37	34	32		
VMS150-30-2	30	40	63.5	61	59	57.5	56	54.5	53	49	45.5	42	39		
VMS150-30-1	37	50	70	68	67	65	63	62	60	56	53	49	45		
VMS150-30	37	50	78	76.5	75	73	70.5	68	66	63	59	55	50.5		
VMS150-40-2	45	60	89	87	84	81.5	79	77	74.5	70.5	65.5	60	56		
VMS150-40-1	45	60	96.5	94	91.5	89	86.5	84	81.5	77	72.5	67	62		
VMS150-40	55	75	104	102	100	97	95	91	88	84	79.5	74	68		
VMS150-50-2	55	75	115.5	112	109	106	102.5	100	97	92	86	79	73.5		
VMS150-50-1	75	100	122.5	119.5	117	113.5	111.5	107.5	104.5	99	93.5	87	80		
VMS150-50	75	100	130	127.5	125	121	119	115	111.5	106.5	101	94.5	86.5		
VMS150-60-2	75	100	140	137	133	130	126	121	118	112	106	98	91		
VMS150-60-1	75	100	148.5	145	141.7	137.5	135	131	127	120.5	114.5	106.5	97.5		
VMS150-60	75	100	157	153	149	145	142	139.5	137	130	123.5	116	109		

Size and weight

Model	Size(mm)					Weight (kg)
	B1	B2	B1+B2	D1	D2	
VMS150-10-1	840	490	1330	330	255	230
VMS150-10	840	490	1330	330	255	235
VMS150-20-2	1000	550	1550	330	255	250
VMS150-20-1	1000	590	1590	360	285	295
VMS150-20	1000	660	1660	400	310	350
VMS150-30-2	1160	660	1820	400	310	360
VMS150-30-1	1160	660	1820	400	310	360
VMS150-30	1160	660	1820	400	310	385
VMS150-40-2	1320	700	2020	460	340	460
VMS150-40-1	1320	700	2020	460	340	460
VMS150-40	1350	770	2120	540	370	560
VMS150-50-2	1510	770	2280	540	370	570
VMS150-50-1	1510	845	2355	580	410	690
VMS150-50	1510	845	2355	580	410	690
VMS150-60-2	1670	845	2515	580	410	700
VMS150-60-1	1670	845	2515	580	410	700
VMS150-60	1670	845	2515	580	410	700

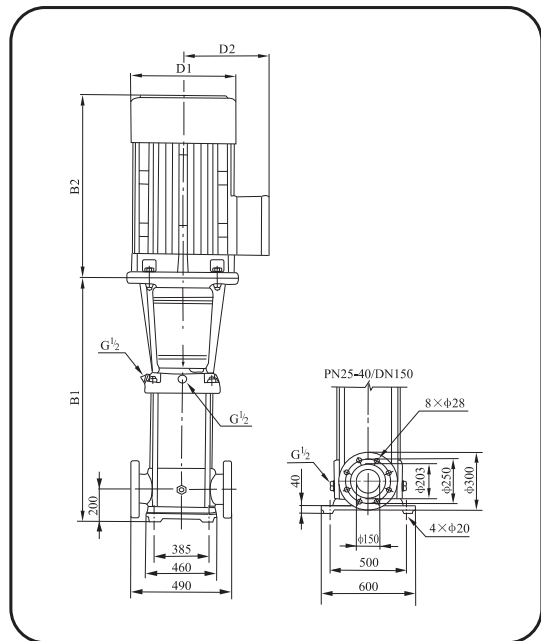
# Performance Curve

Performance curve ISO 9906 Annex A 2950rpm



**VMS 200**

Installation sketch



Performance table

Model	Driving motor		Q (m³/h)	H (m)							
	(kw)	(hp)		100	120	140	160	180	200	220	240
VMS200-10-B	18.5	25		25.5	25	24	23	21.5	20	18	15.5
VMS200-10-A	22	30		29	28.5	27.5	26.5	25.5	24	22	20
VMS200-10	30	40		38.5	38	37.5	36.5	35	34	32.5	30
VMS200-20-2B	37	50		53	51	49	47	44	41	37	32
VMS200-20-2A	45	60		59.5	58	56	54	52.5	49	44.5	40.5
VMS200-20-A	55	75		69	68	66	64	62	59	55.5	51
VMS200-20	55	75		78.5	77.5	76	74	71.5	69	66	61.5
VMS200-30-2B	75	100		91.5	89	86.5	83.5	79	75	70	63
VMS200-30-A-B	75	100		95	93	90	87	83.5	79	73.5	67
VMS200-30-2A	75	100		99.5	97.5	94.5	91.5	89	84	78.5	72
VMS200-30-B	75	100		104.5	102.5	100	97	93	89	84.5	77.5
VMS200-30-A	75	100		108	106	103.5	100.5	97.5	93	88	81.5
VMS200-30	90	120		117.5	116	113.5	110.5	107	103	99	92
VMS200-40-2B	90	120		131.5	129	125.5	121	115.5	110	103.5	94
VMS200-40-2A	110	150		138.5	136	132	128	124	118	111	102.5
VMS200-40-A	110	150		148	145.5	142.5	138	134	128	122	113
VMS200-40	110	150		157.5	155.5	152.5	148	143.5	138	132.5	123.5

Size and weight

Model	Size(mm)					Weight (kg)
	B1	B2	B1+B2	D1	D2	
VMS200-10-B	907	550	1457	330	255	311
VMS200-10-A	907	590	1497	360	285	347
VMS200-10	907	660	1567	400	310	403
VMS200-20-2B	1101	660	1761	400	310	447
VMS200-20-2A	1101	700	1801	460	340	504
VMS200-20-A	1131	770	1901	540	370	595
VMS200-20	1131	770	1901	540	370	595
VMS200-30-2B	1325	845	2170	580	410	748
VMS200-30-A-B	1325	845	2170	580	410	748
VMS200-30-2A	1325	845	2170	580	410	748
VMS200-30-B	1325	845	2170	580	410	748
VMS200-30-A	1325	845	2170	580	410	748
VMS200-30	1325	895	2220	580	410	817
VMS200-40-2B	1519	895	2414	580	410	830
VMS200-40-2A	1519	1140	2659	645	550	1180
VMS200-40-A	1519	1140	2659	645	550	1180
VMS200-40	1519	1140	2659	645	550	1180

