

SERIES  
**TVMS** 60Hz

VERTICAL MULTISTAGE  
IN-LINE PUMPS



## Vertical Multistage In-line Pumps

## 1.Applications

TVMS vertical multistage in-line stainless steel pumps are designed for the following applications:

### a. Pumped Liquids

Thin, non-explosive liquids, not containing solid particles. The liquid must not attack the pump materials chemically. When pumping liquids with a density or viscosity higher than that of water, motor with correspondingly higher outputs must be used, if required.

### b. Application

- Municipal water supply and pressure boosting
- Domestic water supply
- Boiler feed and condensate systems
- Cooling water systems
- Irrigation and dewatering
- Fire fighting
- Washing plants and washdown

## 2. Model Code

TVM   (S)   200 - 40   2A - B

Name of Series: TVM (Vertical multistage stainless steel pumps)

Frequency: Blank = 50Hz, S = 60Hz

Nominal flow in m<sup>3</sup>/h

Number of stage x 10

2 small impeller A

1 small impeller B

### 3. Technical Data

a.Ambient Temperature

Maximum: +40°C

### b.Liquid Temperature

Standard design:-15°C to + 90°C (Max)

For hot water design:  $-15^{\circ}\text{C}$  to  $+120^{\circ}\text{C}$

## c.Min Suction Pressure

According to NPSH add 0.5m water head.

d. Electric Motor standard be supplied as:

50Hz,single phase 220V-240V or three phase

380V-415V, aluminum casing, IP55, class F.

60Hz,single phase 110V or three phase 220V,

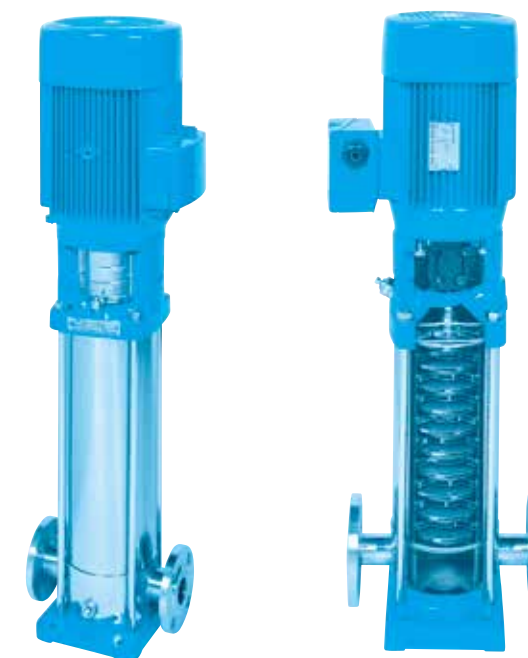
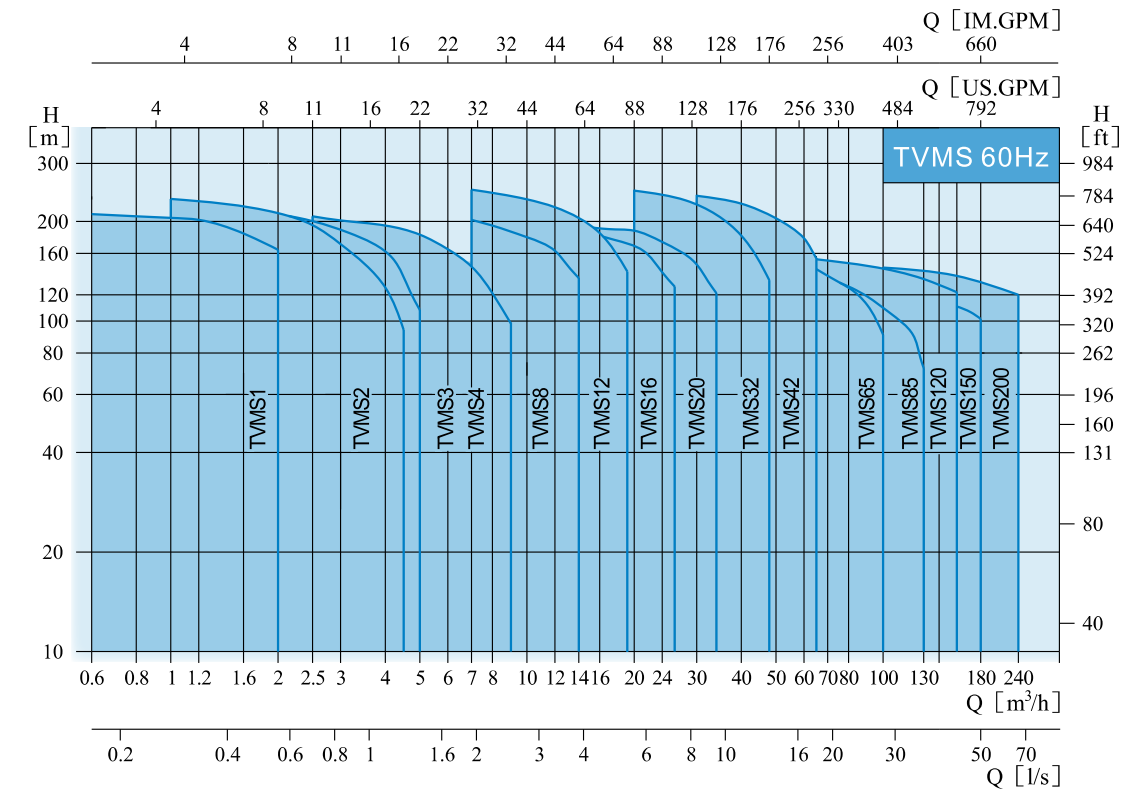
aluminum casing,IP55,class F.

NEMA standard motor on request

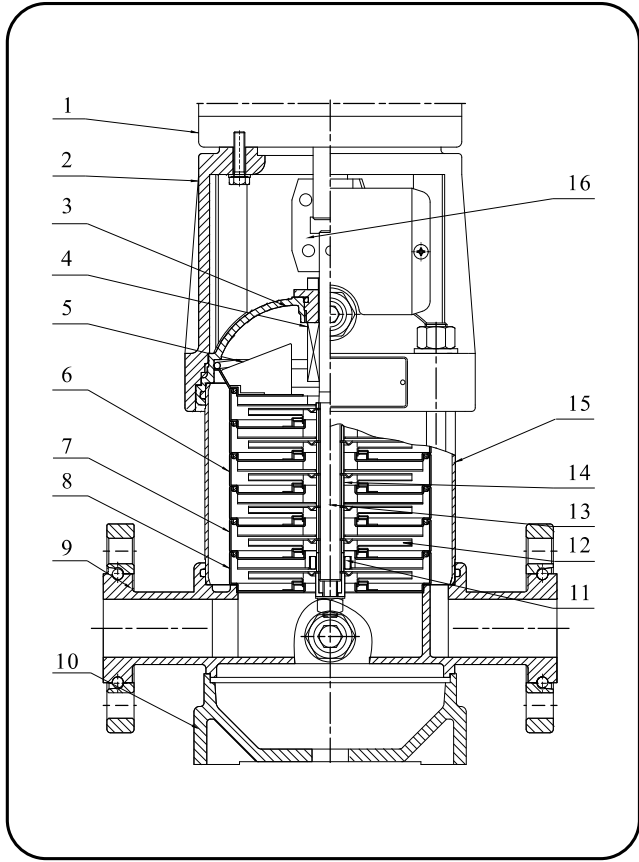
e.Pump's material can be supplied in 304,316 or

316L stainless steel.

## Selection Charts



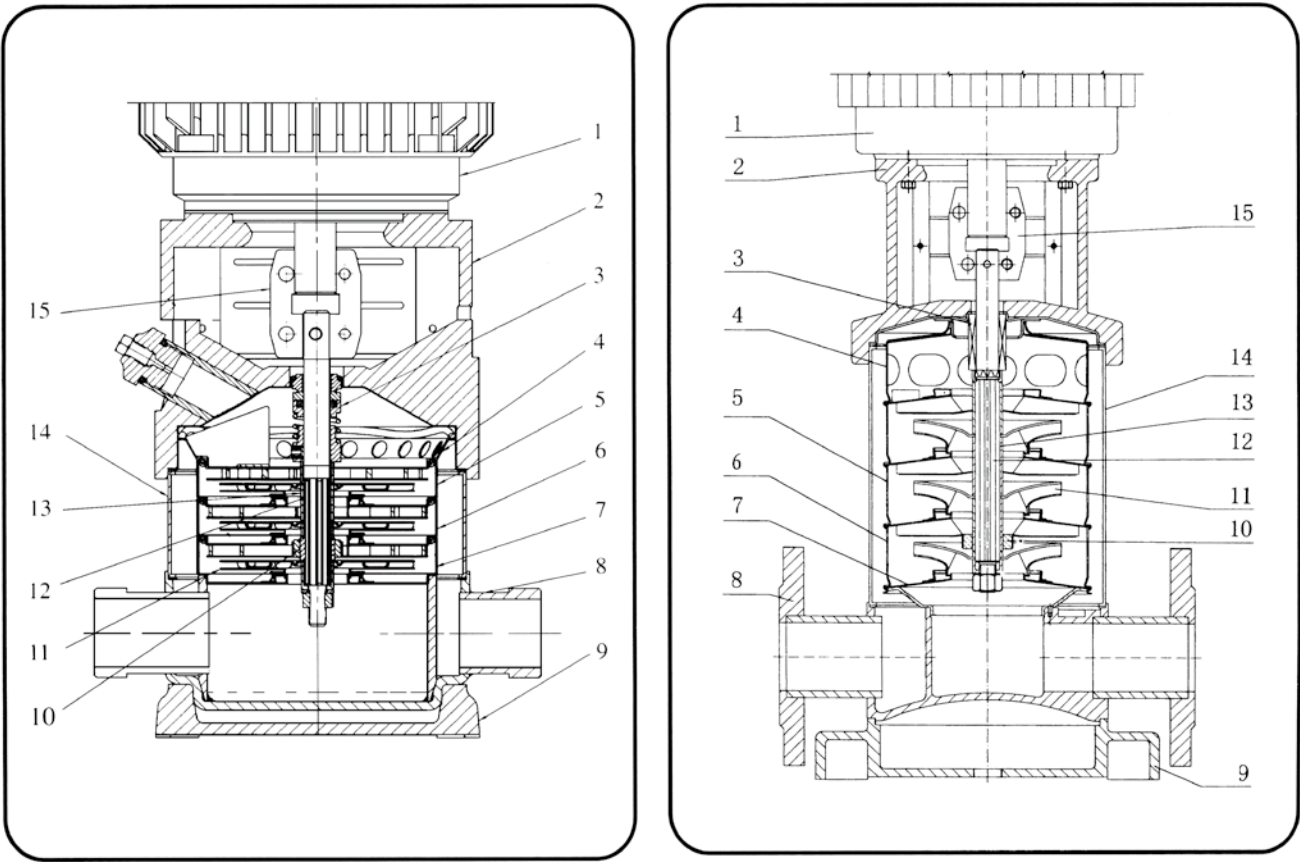
General Arrangement Drawing



TVMS1,3

Item No	Name	Material	AISI/ASTM
1	Motor		
2	Pump head	Cast iron	ASTM25B
3	Seal base	Stainless steel	AISI304
4	Mechanical seal	Tungsten carbide/Graphite	
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	Base plate	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



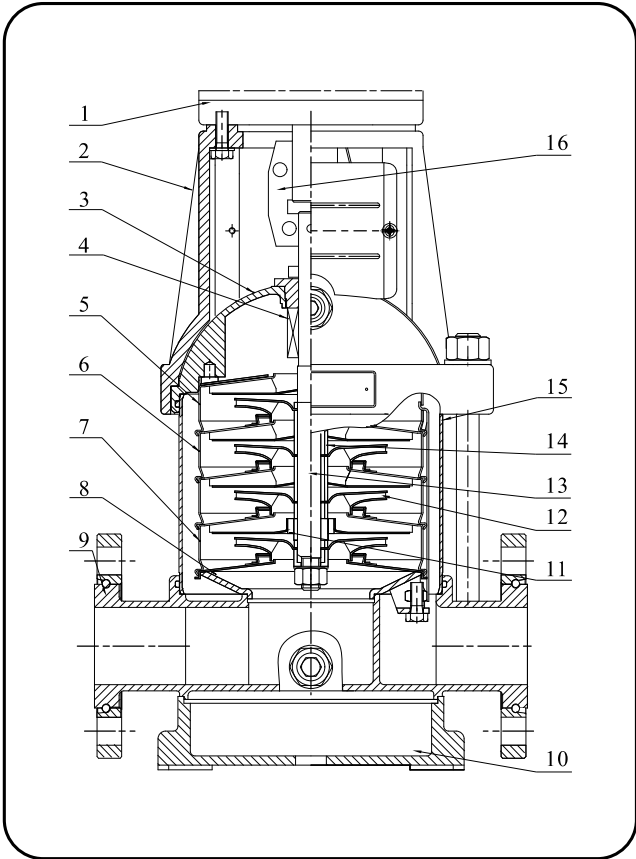
TVMS2,4

TVMS8,16

Item No	Name	Material	AISI/ASTM
1	Motor		
2	Motor base	Cast iron	ASTM25B
3	Mechanical seal	Tungsten carbide/Graphite	
4	Discharge diffuser	Stainless steel	304
5	Support diffuser	Stainless steel	304
6	Diffuser	Stainless steel	304
7	Inducer	Stainless steel	304
8	Suction & discharge head	Stainless steel/Cast iron	304/ASTM25B
9	Pump base	Cast iron	ASTM25B
10	Bearing	Tungsten carbide	
11	Impeller	Stainless steel	304
12	Shaft	Stainless steel	304
13	Sleeve	Stainless steel	304
14	Cylinder	Stainless steel	304
15	Coupling	Alloy	
	Rubber parts	FPM	

Cast iron suction & discharge head are available for TVMS16

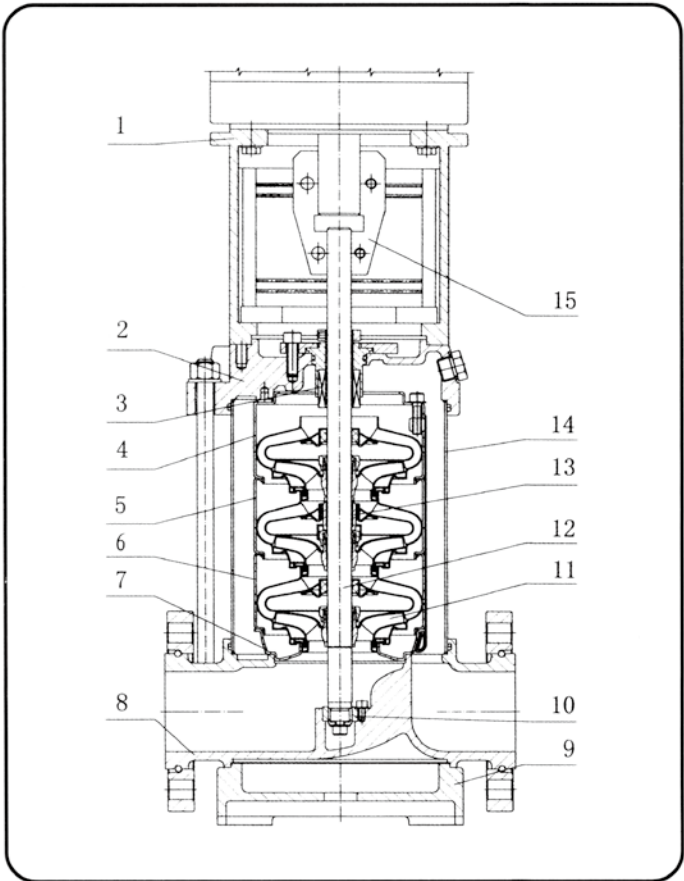
General Arrangement Drawing



TVMS12,20

Item No	Name	Material	AISI/ASTM
1	Motor		
2	Pump head	Cast iron	ASTM25B
3	Seal base	Stainless steel	AISI304
4	Mechanical seal	Tungsten carbide/Graphite	
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	Base plate	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	

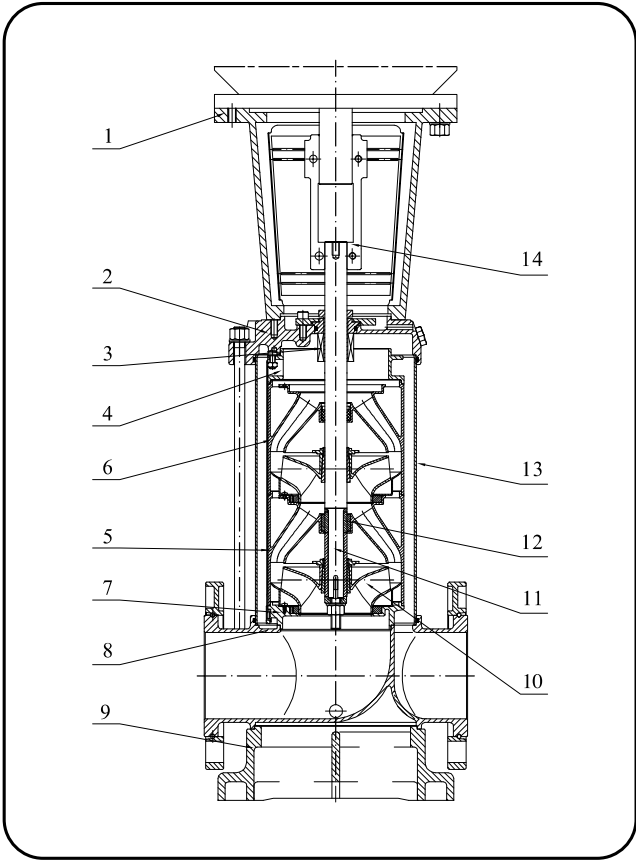
General Arrangement Drawing



TVMS32,42,65,85

Item No	Name	Material	AISI/ASTM
1	Motor base	Cast iron	ASTM25B
2	Pump head	Cast iron	ASTM25B
3	Mechanical seal	Tungsten carbide/Graphite	
4	Discharge diffuser	Stainless steel	304
5	Support diffuser	Stainless steel	304
6	Diffuser	Stainless steel	304
7	Inducer	Stainless steel	304
8	Suction & discharge head	Stainless steel /cast iron	304 /ASTM25B
9	Pump base	Cast iron	ASTM25B
10	Bearing	Tungsten carbide	
11	Impeller	Stainless steel	304
12	Shaft	Stainless steel	304
13	Sleeve	Stainless steel	304
14	Cylinder	Stainless steel	304
15	Coupling	Carbon steel	
	Rubber parts	FPM	

General Arrangement Drawing



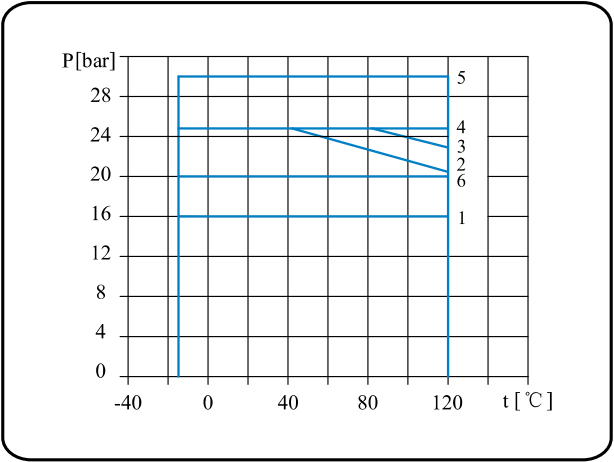
TVMS120,150,200

Item No	Name	Material	AISI/ASTM
1	Bracket	Cast iron	ASTM25B
2	Pump head	Cast iron	ASTM80-55-06
3	Mechanical seal	Tungsten carbide/Graphite	
4	Discharge	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	Base plate	Cast iron	ASTM80-55-06
10	Impeller	Stainless steel	AISI304
11	Shaft	Stainless steel	AISI304
12	Bearing	Tungsten carbide	
13	Cylinder	Stainless steel	AISI304
14	Coupling	Carbon steel	
	Rubber parts	NBR	

Max. Working Pressure

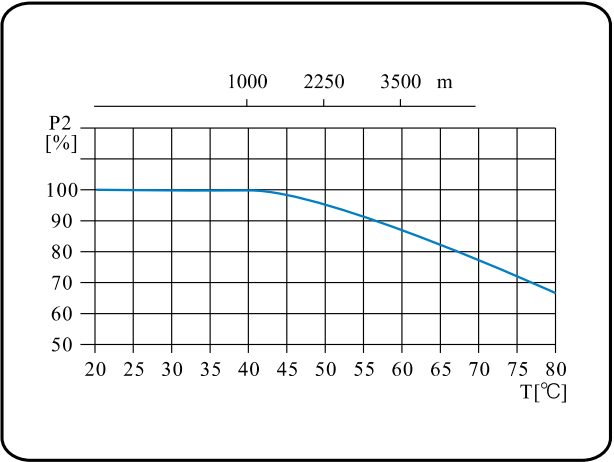
Model	Curve Number
TVMS1,3 Flange	2
TVMS1,3 Oval Flange	1
TVMS1,3	2
TVMS12,20 Flange	3
TVMS8 Oval Flange	1
TVMS12,20	3
TVMS32	
32-10-1~32-50-2	1
32-50~32-90-2	4
32-90~32-100-2	5
TVMS42	
42-10-1~42-30	1
42-40-2~42-60	4
42-70-2~42-70	5
TVMS65	
65-10-1~65-30	1
65-40-2~65-50-2	4
TVMS85	
85-10-1~85-30	1
85-40-2	4
TVMS120,150,200	6

The following figure shows the limitation of pressure and temperature, which shall be in the scope as shown in the figure.



Max. 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 P2 will be decreased to certain extent. If the pump is operated under the above-said conditions, it should be equipped with motor of higher power.





Minimum Inlet Pressure NPSH

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

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

$P_b$  = atmosphere pressure [bar]

(Can be set as 1 bar)

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)

$H_f$  = Pipeline loss at the inler [m]

$H_v$  = Steam 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 stroke  $H$ .

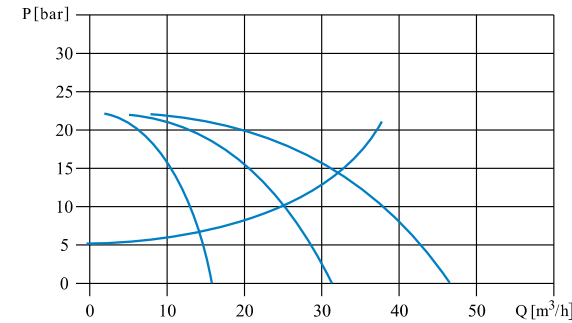
In case the calculated result  $H$  is negative, a delivery head of min. Inlet pressure is necessary.

Operation In Parallel

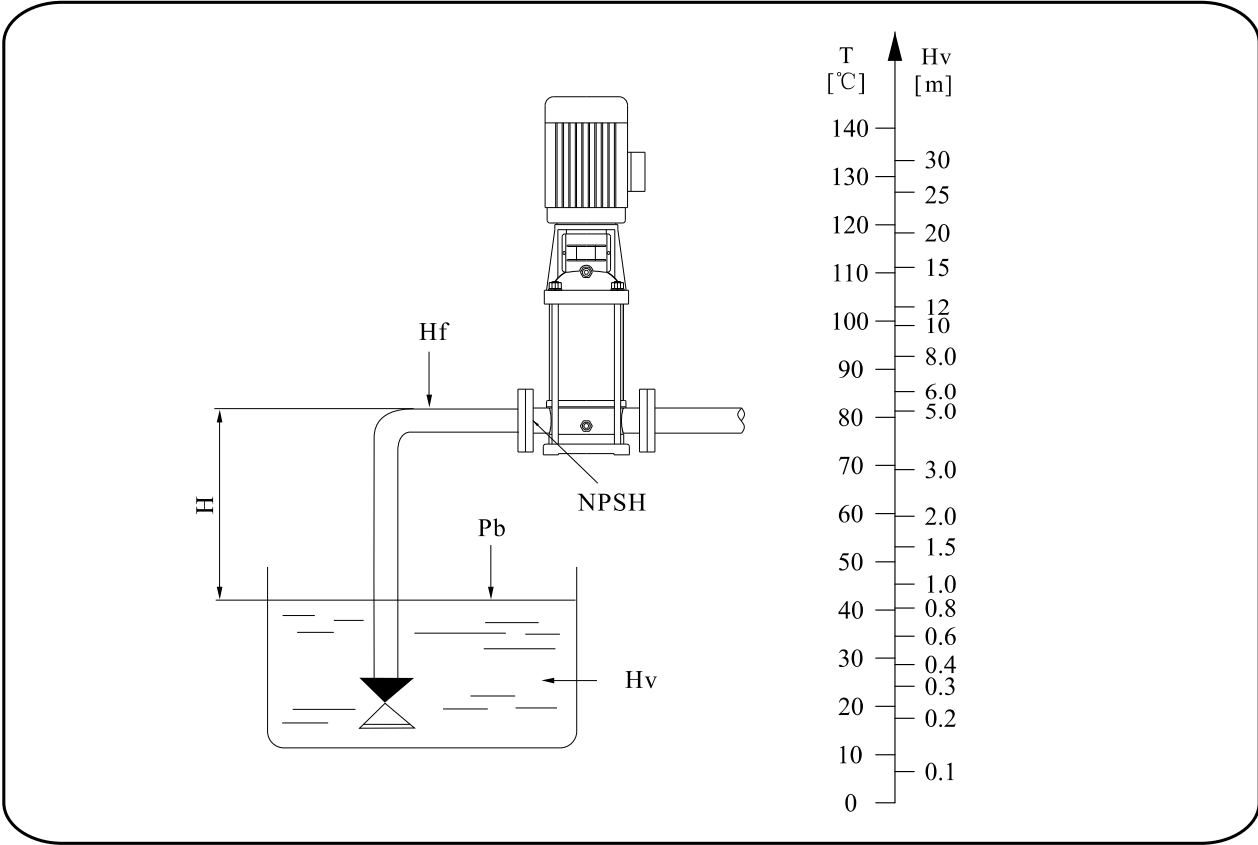
Connecting several pumps in parallel running will benefit much more than running a single large pump.

• Applicable to different working states necessary in a variable flow 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.



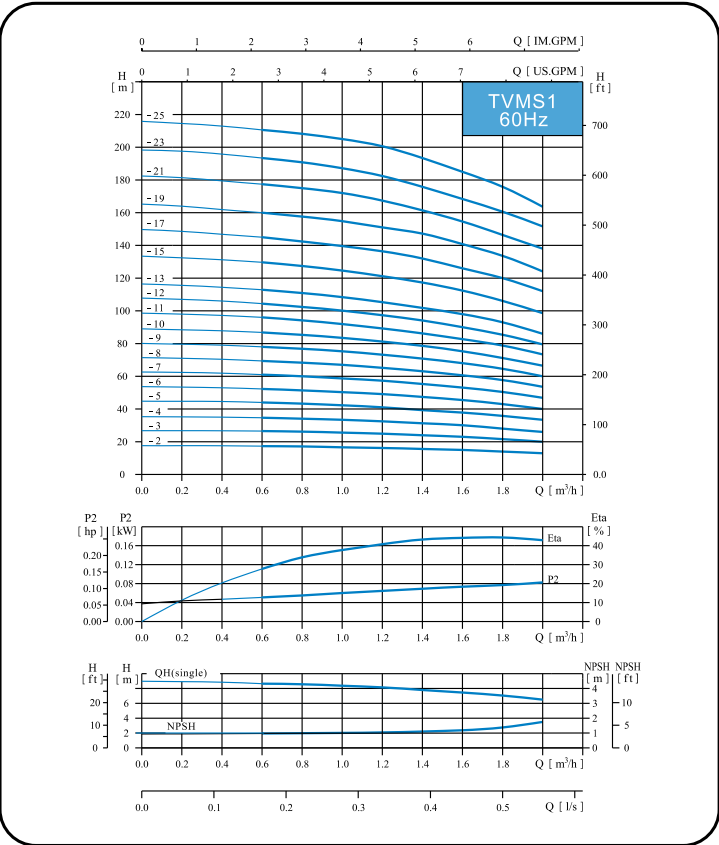
Two pumps or more can be connected in parallel running if necessary.



Check and ensure that the pump is not at cavitations state.

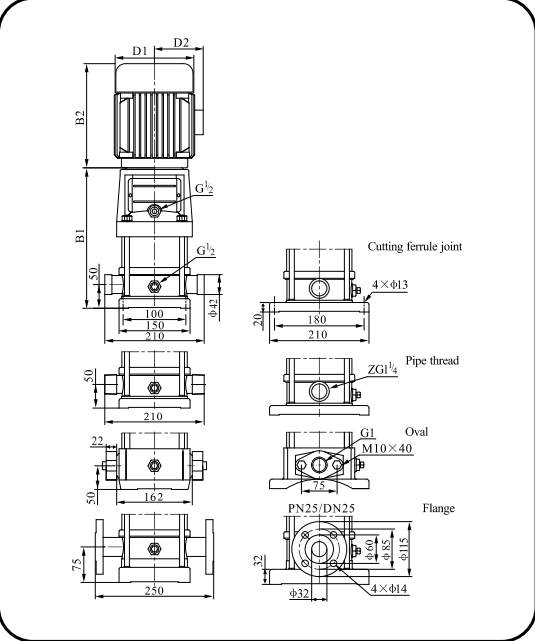
Technical Data

Performance Curve ISO9906 Annex A 3500rpm



TVMS 1

Installation Sketch



Performance Table

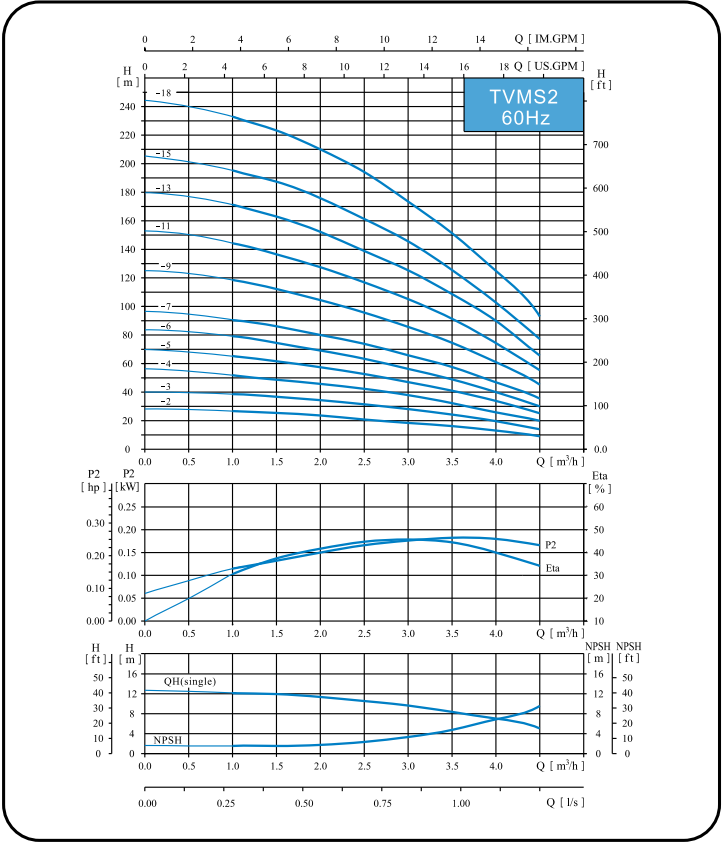
Model	Driving Motor		Q (m³/h)	H (m)							
	(kW)	(hp)		0.6	0.8	1	1.2	1.4	1.6	1.8	2
TVMS1-20	0.37	0.5		17.5	17	16.5	16	15.5	15	14	13
TVMS1-30	0.37	0.5		26.5	26	25	24	23	22	21	20
TVMS1-40	0.37	0.5		35	34	33	32	31	30	28	26
TVMS1-50	0.55	0.75		43	42	41	40	39	38	35	33
TVMS1-60	0.55	0.75		52	51	50	48	47	45	43	39
TVMS1-70	0.75	1		60	59	58	56	55	52	50	46
TVMS1-80	0.75	1		68	67	65	64	62	59	57	53
TVMS1-90	0.75	1		76	75	74	73	71	66	64	60
TVMS1-100	1.1	1.5		85	84	83	81	78	74	72	67
TVMS1-110	1.1	1.5		95	93	90	87	85	81	78	73
TVMS1-120	1.1	1.5		103	102	98	96	92	88	86	79
TVMS1-130	1.1	1.5		112	110	107	105	100	95	93	86
TVMS1-150	1.5	2		127	125	123	121	117	112	107	99
TVMS1-170	1.5	2		144	141	139	137	132	124	120	112
TVMS1-190	2.2	3		160	157	155	153	147	141	134	124
TVMS1-210	2.2	3		177	174	172	168	162	153	147	138
TVMS1-230	2.2	3		193	190	188	184	174	167	161	152
TVMS1-250	3	4		210	207	205	202	192	184	176	164

Size and Weight

Model	Size(mm)					Weight (kg)
	B1	B2	B1+B2	D1	D2	
TVMS1-20	258	210	468	148	117	20
TVMS1-30	276	210	486	148	117	20
TVMS1-40	294	210	504	148	117	21
TVMS1-50	312	210	522	148	117	22
TVMS1-60	330	210	540	148	117	23
TVMS1-70	358	245	603	170	142	26
TVMS1-80	376	245	621	170	142	27
TVMS1-90	394	245	639	170	142	28
TVMS1-100	412	245	657	170	142	29
TVMS1-110	430	245	675	170	142	29
TVMS1-120	448	245	693	170	142	30
TVMS1-130	466	245	711	170	142	31
TVMS1-150	512	290	802	190	155	37
TVMS1-170	548	290	838	190	155	38
TVMS1-190	584	290	874	190	155	41
TVMS1-210	620	290	910	190	155	42
TVMS1-230	656	290	946	190	155	43
TVMS1-250	702	315	1017	197	165	51

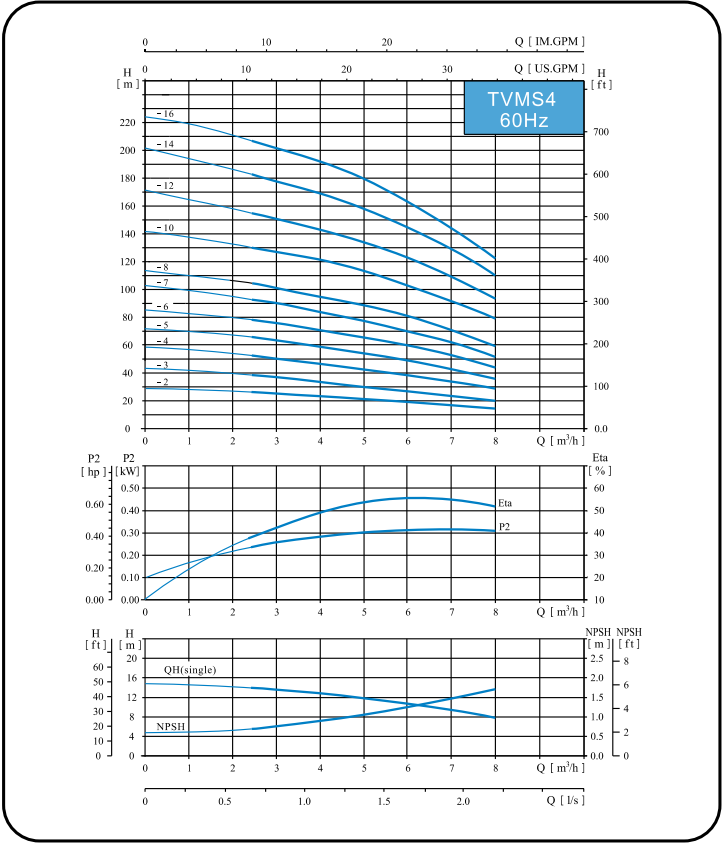
Technical Data

Performance Curve ISO9906 Annex A 3500rpm



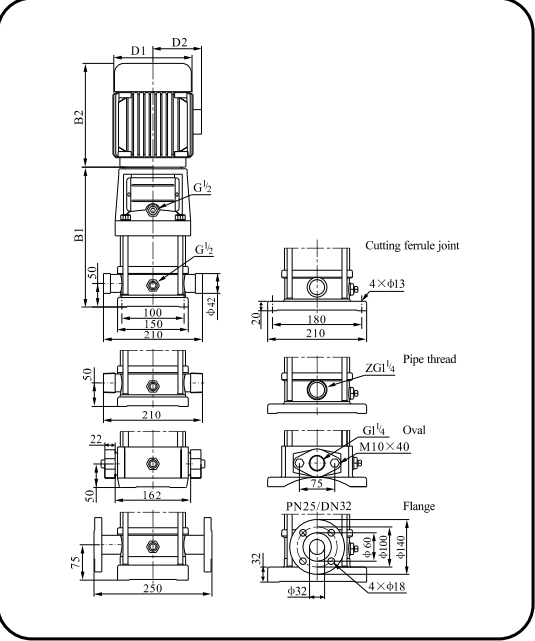
Technical Data

Performance Curve ISO9906 Annex A 3500rpm



TVMS 4

Installation Sketch



Performance Table

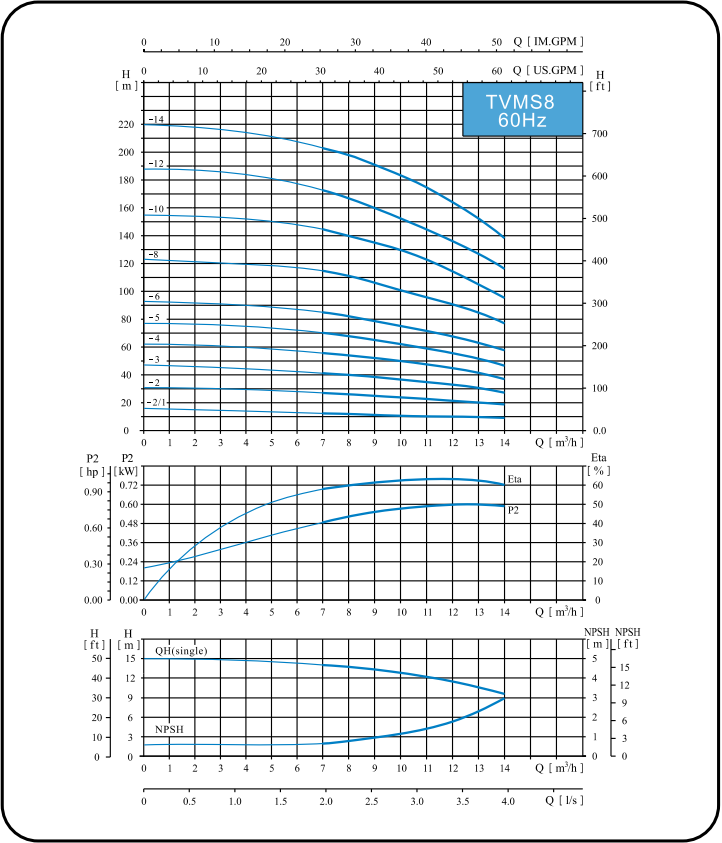
Model	Driving Motor		Q (m³/h)	H (m)							
	(kW)	(hp)		2.5	3	4	5	6	7	8	
TVMS4-20	0.75	1		26	25	23	21	19	16	14	
TVMS4-30	1.1	1.5		39	38	36	32	28	24	21	
TVMS4-40	1.5	2		52	50	48	44	38	35	31	
TVMS4-50	2.2	3		65	62	60	55	49	44	39	
TVMS4-60	2.2	3		78	75	72	67	59	54	47	
TVMS4-70	3	4		92	88	84	78	69	62	55	
TVMS4-80	3	4		104	100	95	90	79	72	63	
TVMS4-100	4	5.5		130	125	120	113	102	90	80	
TVMS4-120	4	5.5		156	150	145	136	122	109	96	
TVMS4-140	5.5	7.5		182	176	170	159	145	129	112	
TVMS4-160	5.5	7.5		207	201	196	183	165	146	128	

Size and Weight

Model	Size(mm)					Weight (kg)
	B1	B2	B1+B2	D1	D2	
TVMS4-20	286	245	531	170	142	24
TVMS4-30	313	245	558	170	142	25
TVMS4-40	350	290	640	190	155	31
TVMS4-50	376	290	667	190	155	34
TVMS4-60	404	290	694	190	155	35
TVMS4-70	441	315	756	197	165	42
TVMS4-80	468	315	783	197	165	42
TVMS4-100	522	335	857	230	188	51
TVMS4-120	576	335	911	230	188	52
TVMS4-140	650	430	1080	260	208	64
TVMS4-160	704	430	1134	260	208	66

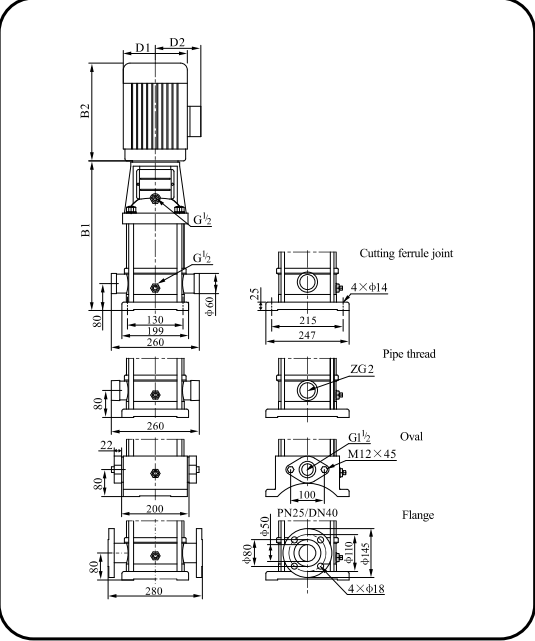
Technical Data

Performance Curve ISO9906 Annex A 3500rpm



TVMS 8

Installation Sketch



Performance Table

Model	Driving Motor		Q (m³/h)	H (m)							
	(kW)	(hp)		7	8	9	10	11	12	13	14
TVMS8-20/1	0.75	1		13	12	11.5	11	10.5	10	9.5	9
TVMS8-20	1.5	2		27	26	25	24	23	22	20	18
TVMS8-30	2.2	3		41	40	38	37	35	33	30	28
TVMS8-40	3	4		55	54	52	50	47	45	41	38
TVMS8-50	3	4		70	68	65	63	59	56	52	47
TVMS8-60	4	5.5		85	82	78	76	72	68	62	57
TVMS8-80	5.5	7.5		115	110	105	101	97	91	84	75
TVMS8-100	7.5	10		145	140	132	126	122	115	105	95
TVMS8-120	7.5	10		173	167	160	152	147	132	125	115
TVMS8-140	11	15		202	195	188	179	174	163	147	135

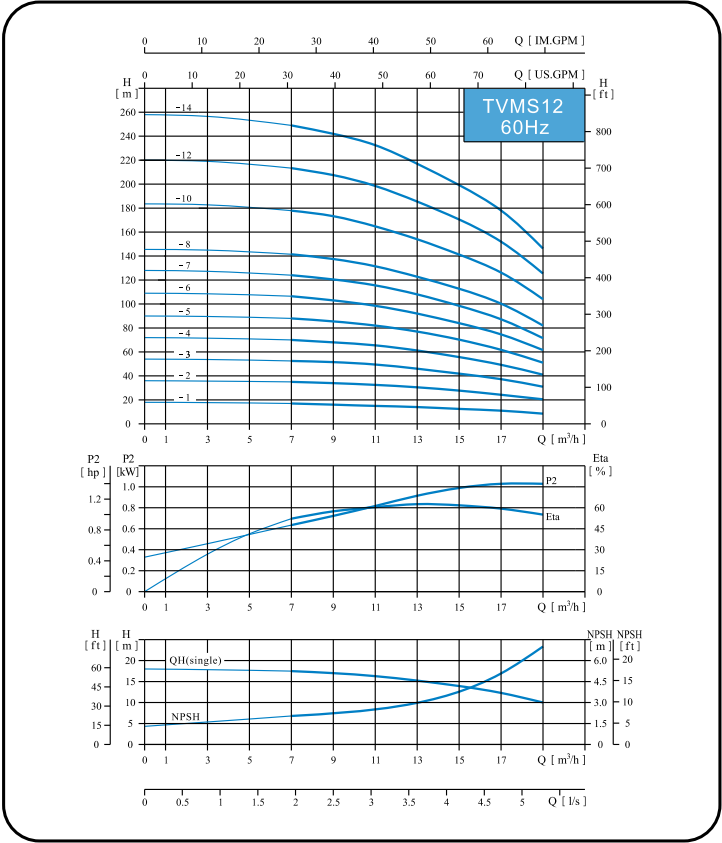
Size and Weight

Model	Size(mm)					Weight (kg)
	B1	B2	B1+B2	D1	D2	
TVMS8-20/1	347	245	592	170	142	32
TVMS8-20	357	290	647	190	155	38
TVMS8-30	387	290	677	190	155	41
TVMS8-40	427	315	742	197	165	49
TVMS8-50	457	315	772	197	165	50
TVMS8-60	487	335	822	230	188	58
TVMS8-80	567	430	997	260	208	71
TVMS8-100	627	430	1057	260	208	80
TVMS8-120	687	430	1117	260	208	82
TVMS8-140	835	490	1325	330	255	153



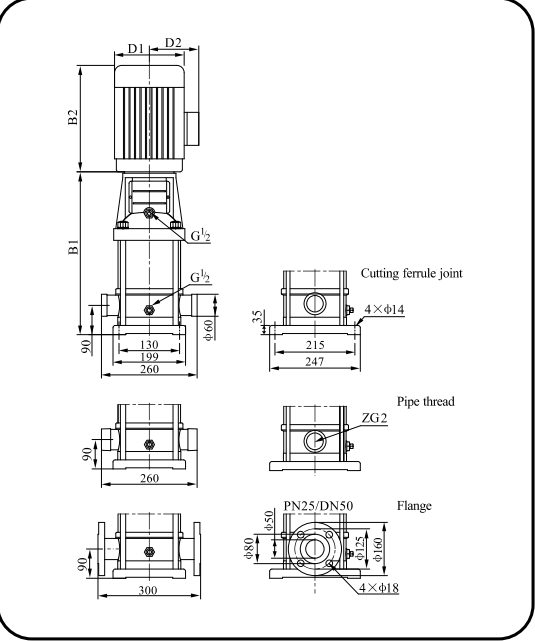
Technical Data

Performance Curve ISO9906 Annex A 3500rpm



TVMS 12

Installation Sketch



Performance Table

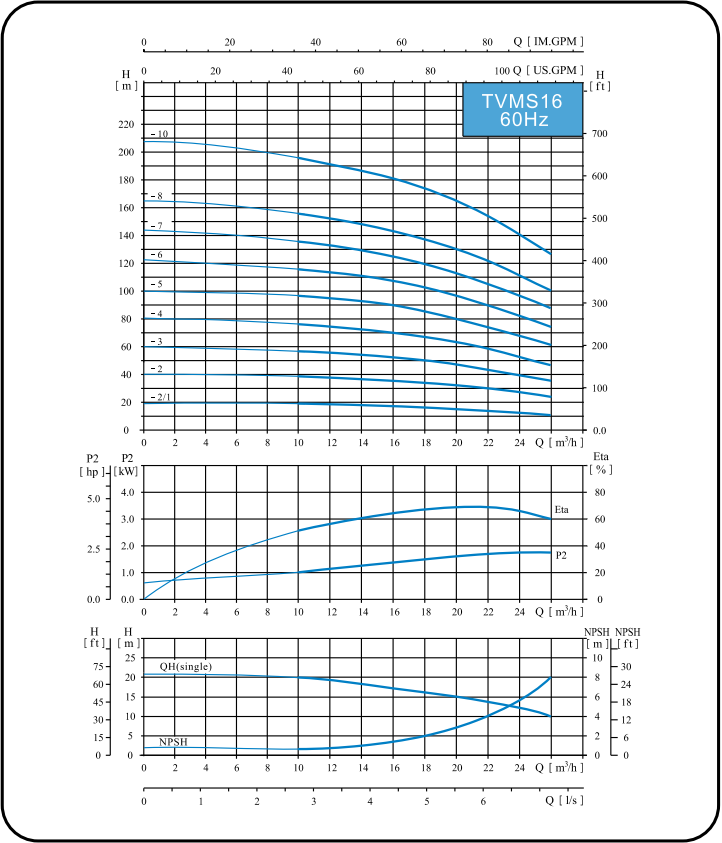
Model	Driving Motor		Q (m³/h)	7	9	11	12	13	15	17	19
	(kW)	(hp)									
TVMS12-10	1.1	1.5	H (m)	17	16	15	14.5	14	12.5	11	8.5
TVMS12-20	2.2	3		35	34	32.5	32	30.5	27	24.5	20.5
TVMS12-30	4	5.5		52.5	51.5	50	48	46	41.5	37.5	31
TVMS12-40	5.5	7.5		70	68	65.5	64	61.5	55	49.5	41
TVMS12-50	5.5	7.5		88	86	82	80	77	70	62	51
TVMS12-60	7.5	10		107	103	99	96	92	84	75	61
TVMS12-70	7.5	10		124	121	116	112	107	97	88	71
TVMS12-80	11	15		141	137	132	128	122	111	101	82
TVMS12-100	11	15		178	173	166	161	153	140	128	104
TVMS12-120	15	20		213	208	199	193	185	169	154	125
TVMS12-140	15	20		249	242	233	225	216	198	180	145

Size and Weight

Model	Size(mm)					Weight (kg)
	B1	B2	B1+B2	D1	D2	
TVMS12-10	357	245	602	170	142	32
TVMS12-20	367	290	657	190	155	41
TVMS12-30	407	335	742	230	188	56
TVMS12-40	457	430	887	260	208	69
TVMS12-50	487	430	917	260	208	71
TVMS12-60	517	430	947	260	208	77
TVMS12-70	547	430	977	260	208	78
TVMS12-80	665	490	1155	330	255	147
TVMS12-100	725	490	1215	330	255	151
TVMS12-120	785	490	1275	330	255	164
TVMS12-140	845	490	1335	330	255	167

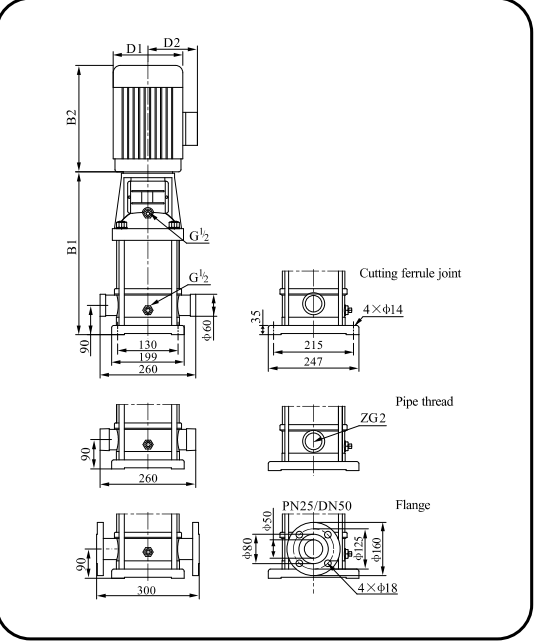
Technical Data

Performance Curve ISO9906 Annex A 3500rpm



TVMS 16

Installation Sketch



Performance Table

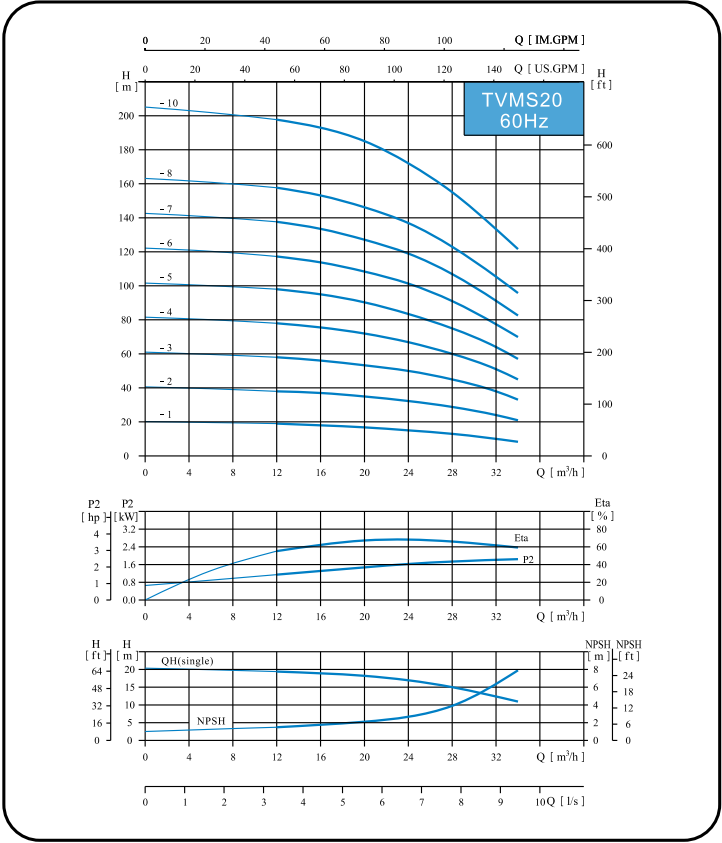
Model	Driving Motor		Q (m³/h)	10	12	14	16	18	20	22	24	26
	(kW)	(hp)										
TVMS16-20/10	2.2	3	H (m)	19	18.5	18	17	16	15	14	13	11
TVMS16-20	4	5.5		38	37	36	35	34	32	30	27	24
TVMS16-30	5.5	7.5		57	56	55	54	51	48	45	40	36
TVMS16-40	7.5	10		76	75	73	72	68	64	60	54	49
TVMS16-50	11	15		96	94	92	90	85	80	75	68	62
TVMS16-60	11	15		115	113	111	108	102	96	91	82	75
TVMS16-70	15	20		135	132	129	126	119	113	106	96	88
TVMS16-80	15	20		155	152	144	144	137	130	122	111	101
TVMS16-100	18.5	25		197	192	181	181	174	165	153	139	127

Size and Weight

Model	Size(mm)					Weight (kg)
	B1	B2	B1+B2	D1	D2	
TVMS16-20/10	397	290	687	190	155	42
TVMS16-20	407	335	742	230	188	56
TVMS16-30	472	430	902	260	208	68
TVMS16-40	517	430	947	260	208	75
TVMS16-50	650	490	1140	330	255	148
TVMS16-60	695	490	1185	330	255	150
TVMS16-70	740	490	1230	330	255	161
TVMS16-80	785	490	1275	330	255	163
TVMS16-100	875	550	1425	330	255	186

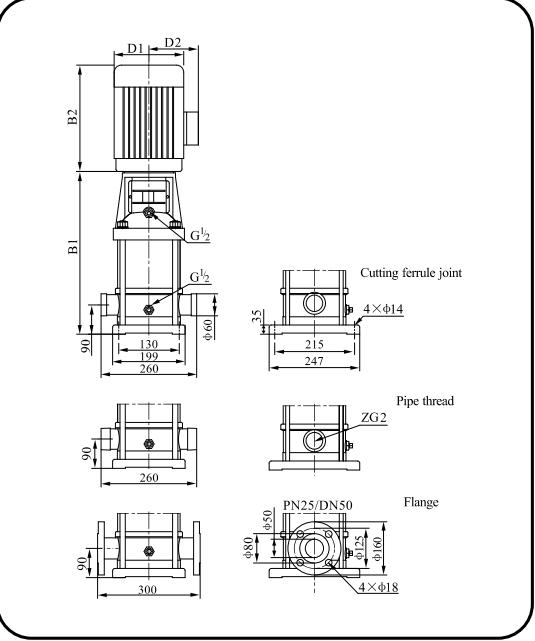
Technical Data

Performance Curve ISO9906 Annex A 3500rpm



TVMS 20

Installation Sketch



Performance Table

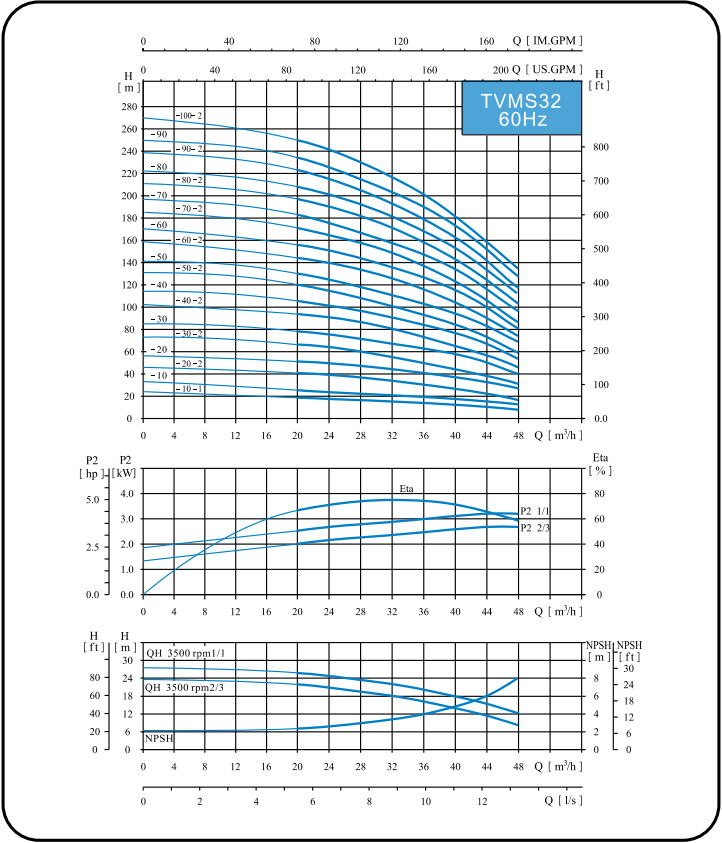
Model	Driving Motor		Q (m³/h)	H (m)						
	(kW)	(hp)		12	16	20	24	28	32	34
TVMS20-10	2.2	3	H (m)	19	18	17	15	13	10	8.5
TVMS20-20	4.0	5.5		38	37	35	32	29	24	21
TVMS20-30	5.5	7.5		58	56	53	50	45	38	33
TVMS20-40	7.5	10		78	75	72	67	60	51	45
TVMS20-50	11	15		98	94	90	85	75	64	57
TVMS20-60	11	15		118	113	108	102	91	77	70
TVMS20-70	15	20		138	133	127	119	107	91	83
TVMS20-80	15	20		158	153	146	137	123	105	96
TVMS20-100	18.5	25		198	193	185	172	155	133	122

Size and Weight

Model	Size(mm)					Weight (kg)
	B1	B2	B1+B2	D1	D2	
TVMS20-10	397	290	687	190	155	41
TVMS20-20	407	335	742	230	188	56
TVMS20-30	472	430	902	260	208	69
TVMS20-40	517	430	947	260	208	79
TVMS20-50	650	490	1140	330	255	148
TVMS20-60	695	490	1185	330	255	150
TVMS20-70	740	490	1230	330	255	162
TVMS20-80	785	490	1275	330	255	163
TVMS20-100	875	550	1425	330	255	187

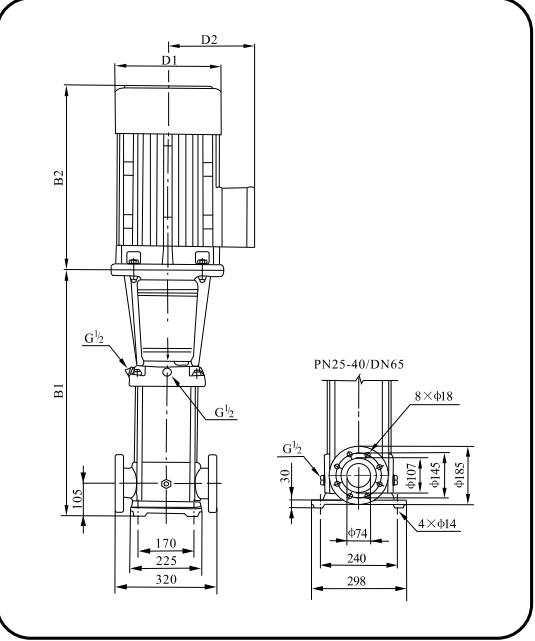
Technical Data

Performance Curve ISO9906 Annex A 3500rpm



TVMS 32

Installation Sketch



Performance Table

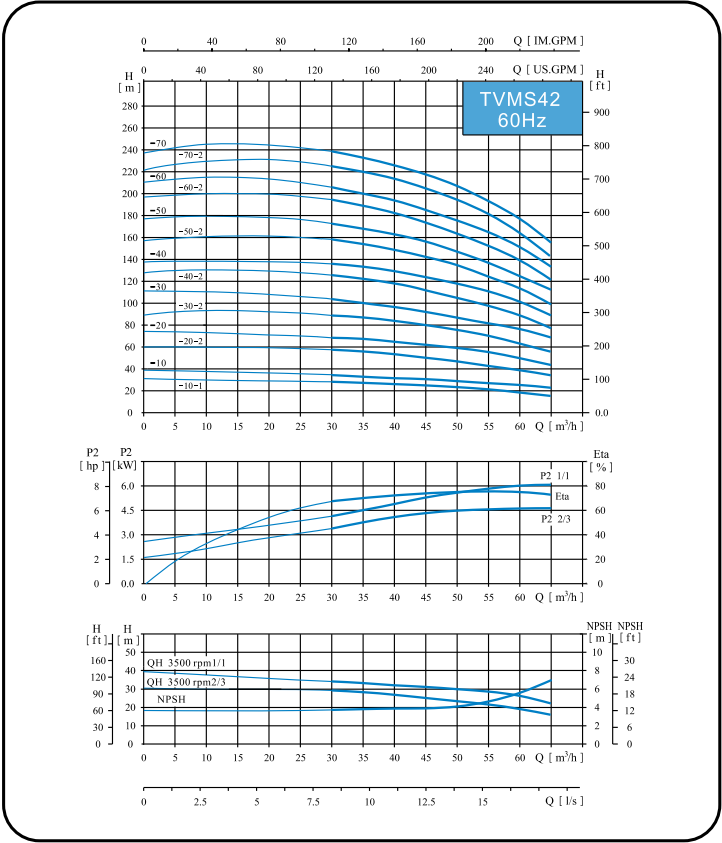
Model	Driving Motor		Q (m³/h)	20	24	28	32	36	40	44	48
	(kW)	(hp)									
TVMS32-10-1	3.0	4	H (m)	20	19	18	17	15	13	10	7
TVMS32-10	4.0	5.5		26	25	24	23	21	19	17	14
TVMS32-20-2	5.5	7.5		41	40	38	35	31	27	22	17
TVMS32-20	7.5	10		52	50	48	45	41	37	33	27
TVMS32-30-2	7.5	10		67	64	61	57	52	46	39	31
TVMS32-30	11	15		78	75	71	67	62	56	50	40
TVMS32-40-2	11	15		94	91	87	81	73	65	56	45
TVMS32-40	15	20		104	101	96	91	83	75	66	55
TVMS32-50-2	15	20		119	115	109	102	94	84	73	59
TVMS32-50	18.5	25		130	125	119	112	104	94	83	69
TVMS32-60-2	18.5	25		145	140	134	126	116	104	90	74
TVMS32-60	18.5	25		155	150	144	136	126	114	100	81
TVMS32-70-2	22	30		172	166	158	149	137	123	106	86
TVMS32-70	22	30		182	176	168	159	148	133	118	97
TVMS32-80-2	22	30		196	190	182	172	159	143	124	102
TVMS32-80	30	40		208	201	192	181	167	152	132	111
TVMS32-90-2	30	40		223	216	206	194	179	162	142	117
TVMS32-90	30	40		234	226	216	204	189	172	152	127
TVMS32-100-2	30	40		248	241	231	217	201	181	159	133

Size and Weight

Model	Size(mm)					Weight (kg)
	B1	B2	B1+B2	D1	D2	
TVMS32-10-1	505	315	820	197	165	73
TVMS32-10	505	335	840	230	188	81
TVMS32-20-2	575	430	1005	260	208	95
TVMS32-20	575	430	1005	260	208	101
TVMS32-30-2	645	490	1135	330	255	104
TVMS32-30	750	490	1240	330	255	172
TVMS32-40-2	820	490	1310	330	255	176
TVMS32-40	820	490	1310	330	255	186
TVMS32-50-2	890	490	1380	330	255	191
TVMS32-50	890	550	1440	330	255	211
TVMS32-60-2	960	550	1510	330	255	216
TVMS32-60	960	550	1510	330	255	216
TVMS32-70-2	1030	590	1620	360	285	255
TVMS32-70	1030	590	1620	360	285	255
TVMS32-80-2	1100	590	1690	400	310	259
TVMS32-80	1100	660	1760	400	310	315
TVMS32-90-2	1170	660	1830	400	310	319
TVMS32-90	1170	660	1830	400	310	319
TVMS32-100-2	1240	660	1900	400	310	324

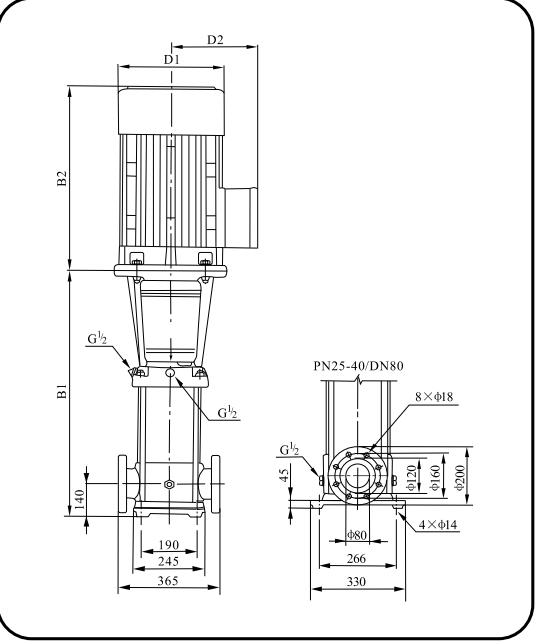
Technical Data

Performance Curve ISO9906 Annex A 3500rpm



TVMS 42

Installation Sketch



Performance Table

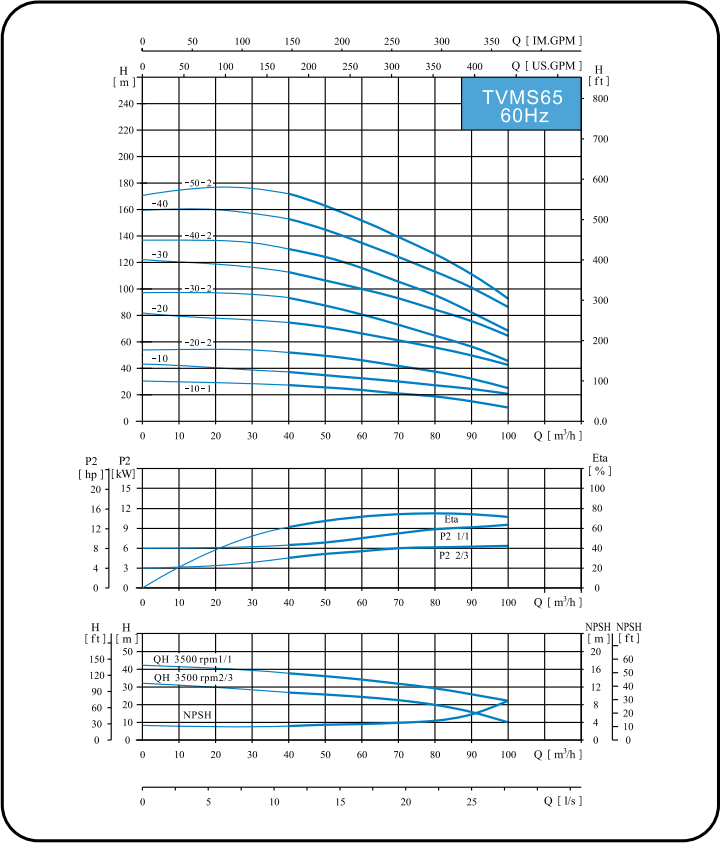
Model	Driving Motor		Q (m³/h)	30	35	40	42	45	50	55	60	65
	(kW)	(hp)										
TVMS42-10-1	5.5	7.5	H (m)	29	28	27	26	25	23	21	19	16
TVMS42-10	7.5	10		34	33	32	31.5	30	29	27	25	22
TVMS42-20-2	11	15		57	55	53	52	49	46	43	38	33
TVMS42-20	15	20		69	67	65	63	61	59	55	50	44
TVMS42-30-2	18.5	25		90	88	85	83	80	75	72	63	55
TVMS42-30	18.5	25		102	100	97	95	92	88	82	76	68
TVMS42-40-2	22	30		125	121	118	115	112	105	98	89	78
TVMS42-40	30	40		136	133	129	126	123	117	112	102	89
TVMS42-50-2	30	40		159	154	149	146	142	134	121	115	99
TVMS42-50	30	40		171	166	161	158	154	145	138	126	112
TVMS42-60-2	37	50		194	188	182	178	173	163	155	139	122
TVMS42-60	37	50		205	200	193	190	186	176	166	152	134
TVMS42-70-2	45	60		227	220	213	210	205	193	182	165	144
TVMS42-70	45	60		239	232	226	221	216	204	194	178	157

Size and Weight

Model	Size(mm)					Weight (kg)
	B1	B2	B1+B2	D1	D2	
TVMS42-10-1	561	430	992	260	208	101
TVMS42-10	561	430	992	260	208	106
TVMS42-20-2	748	490	1238	330	255	178
TVMS42-20	748	490	1238	330	255	188
TVMS42-30-2	828	550	1378	330	255	213
TVMS42-30	828	550	1378	330	255	213
TVMS42-40-2	908	590	1498	360	285	253
TVMS42-40	908	660	1568	400	310	309
TVMS42-50-2	988	660	1648	400	310	313
TVMS42-50	988	660	1648	400	310	313
TVMS42-60-2	1068	660	1728	400	310	340
TVMS42-60	1068	660	1728	400	310	340
TVMS42-70-2	1148	700	1848	460	340	404
TVMS42-70	1148	700	1848	460	340	404

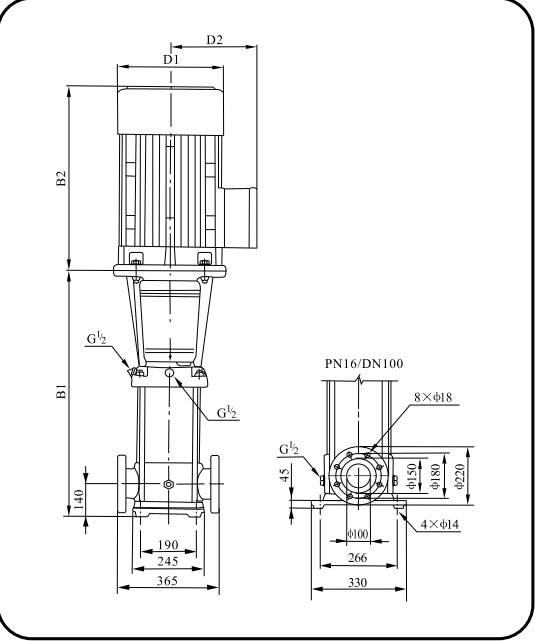
Technical Data

Performance Curve ISO9906 Annex A 3500rpm



TVMS 65

Installation Sketch



Performance Table

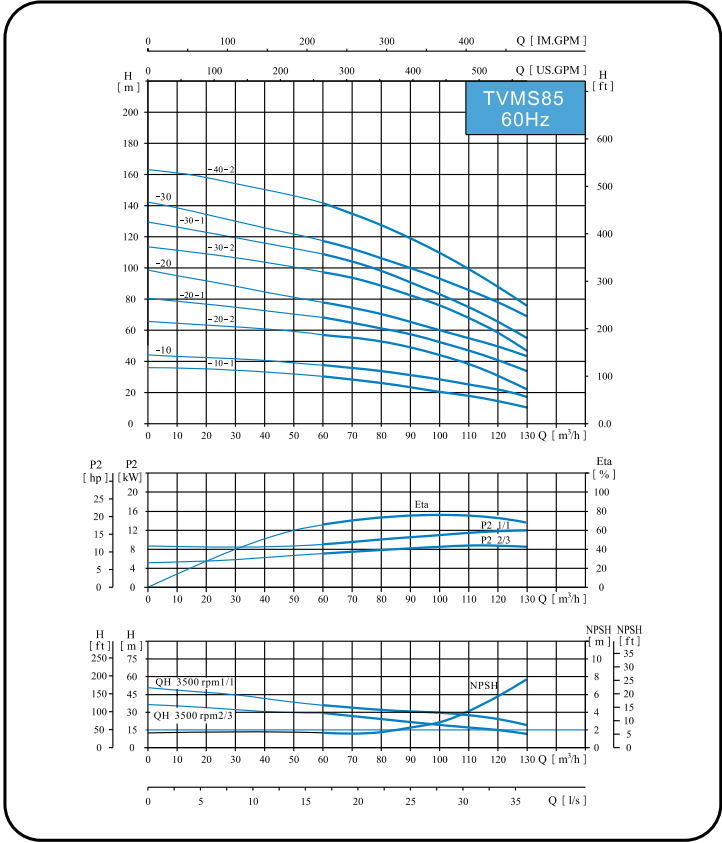
Model	Driving Motor		Q (m³/h)	H (m)							
	(kW)	(hp)		40	50	60	65	70	80	90	100
TVMS65-10-1	7.5	10	H (m)	26	25	23	22	21	18	14	10
TVMS65-10	11	15		37	35	33	32	31	28	24	21
TVMS65-20-2	15	20		53	50	47	44	42	37	31	23
TVMS65-20	22	30		74	72	67	64	62	57	51	42
TVMS65-30-2	22	30		93	88	80	76	72	65	56	45
TVMS65-30	30	40		112	108	100	96	93	86	77	65
TVMS65-40-2	37	50		130	124	115	110	103	94	83	66
TVMS65-40	45	60		152	144	135	130	123	114	102	86
TVMS65-50-2	45	60		172	162	151	144	137	126	112	91

Size and Weight

Model	Size(mm)					Weight (kg)
	B1	B2	B1+B2	D1	D2	
TVMS65-10-1	561	430	991	260	208	109
TVMS65-10	671	490	1161	330	255	177
TVMS65-20-2	754	490	1244	330	255	187
TVMS65-20	754	590	1344	360	285	248
TVMS65-30-2	836	590	1426	360	285	252
TVMS65-30	836	660	1496	400	310	313
TVMS65-40-2	919	660	1579	400	310	336
TVMS65-40	919	700	1619	460	340	398
TVMS65-50-2	1001	700	1701	460	340	402

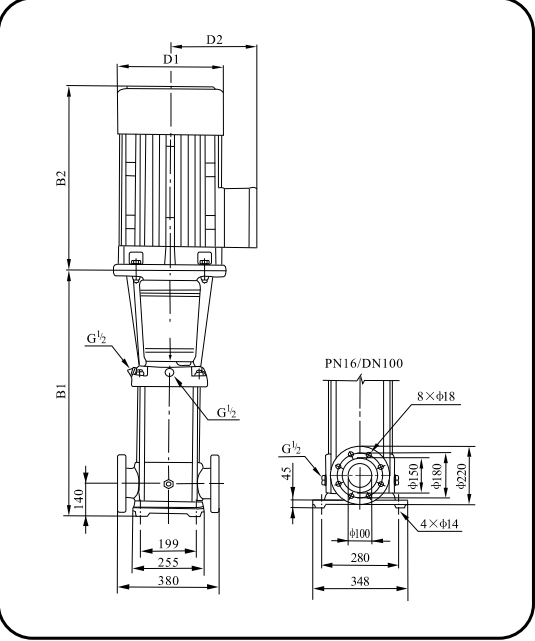
Technical Data

Performance Curve ISO9906 Annex A 3500rpm



TVMS 85

Installation Sketch



Performance Table

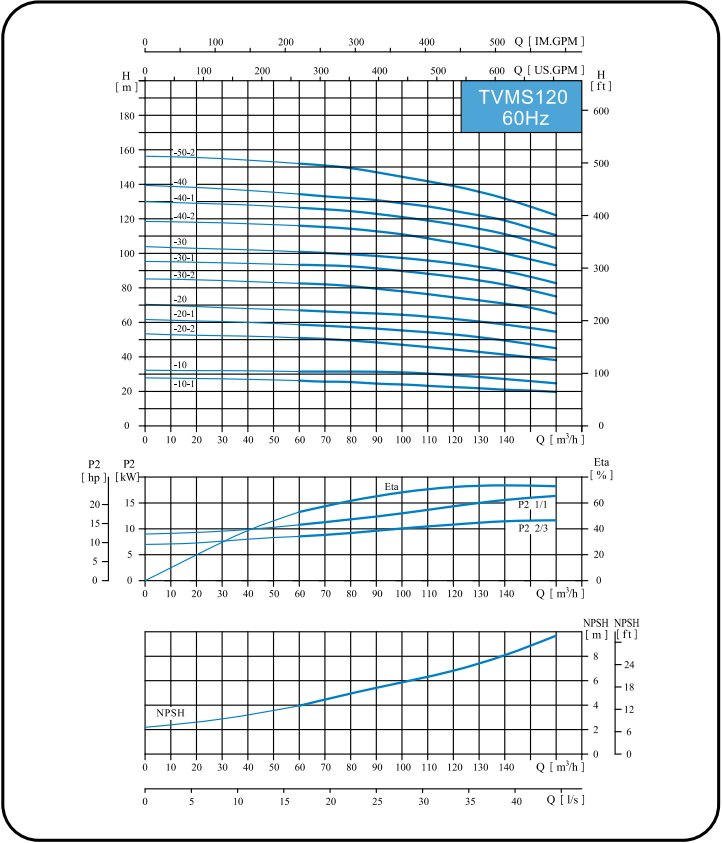
Model	Driving Motor		Q (m³/h)	H (m)									
	(kW)	(hp)		60	70	80	85	90	100	110	120	130	
TVMS85-10-1	11	15		31	27	25	24	23	21	18	14	9	
TVMS85-10	15	20		36	35	33	31	30	29	26	23	18	
TVMS85-20-2	18.5	25		59	57	54	51	48	44	39	32	22	
TVMS85-20-1	22	30		67	65	62	59	57	51	47	41	33	
TVMS85-20	30	40		76	73	69	66	64	60	56	52	44	
TVMS85-30-2	37	50		98	94	88	85	82	75	69	59	46	
TVMS85-30-1	37	50		108	104	98	94	90	83	78	69	56	
TVMS85-30	45	60		116	111	105	102	97	93	88	79	69	
TVMS85-40-2	45	60		141	135	128	124	118	109	102	89	72	

Size and Weight

Model	Size(mm)					Weight (kg)
	B1	B2	B1+B2	D1	D2	
TVMS85-10-1	571	490	1061	330	255	177
TVMS85-10	571	490	1061	330	255	188
TVMS85-20-2	773	550	1323	330	255	211
TVMS85-20-1	773	590	1363	360	285	248
TVMS85-20	773	660	1433	400	310	304
TVMS85-30-2	865	660	1525	400	310	330
TVMS85-30-1	865	660	1525	400	310	330
TVMS85-30	865	700	1565	460	340	392
TVMS85-40-2	957	700	1657	460	340	396

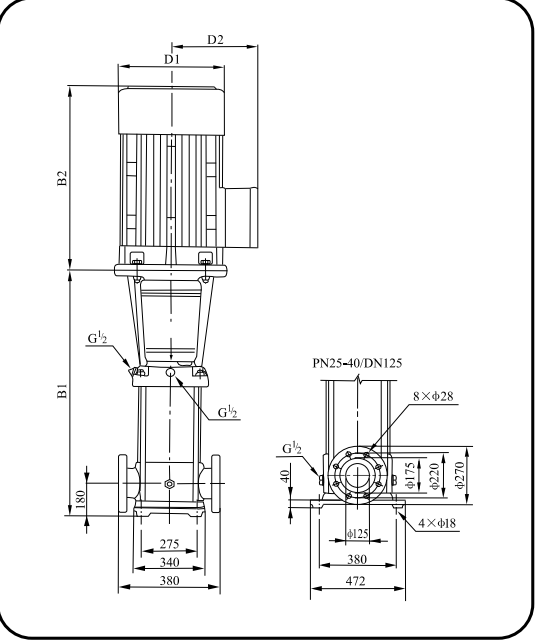
Technical Data

Performance Curve ISO9906 Annex A 3540rpm



TVMS 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	160			
TVMS120-10-1	15	20		26.5	26	25	24.5	23.8	23	22.5	21.5	21.3	21	20			
TVMS120-10	18.5	25		30.8	30.7	30.7	30.5	30.3	29.5	28.8	27.6	26.4	25.4	24.4			
TVMS120-20-2	30	40		51.5	50.5	49.5	47.5	46	45.5	44.8	43	41	39.7	38.5			
TVMS120-20-1	30	40		58.3	58	57.3	56	54.7	54	53	51.5	50	47.4	45			
TVMS120-20	37	50		66.3	66	65.7	65	64.4	63	62	60.7	59.6	57	54.6			
TVMS120-30-2	45	60		83	82	81	79.5	78	76	74.5	73.5	71	68.5	65			
TVMS120-30-1	45	60		91.3	91	90.4	89	87.7	86	84.4	82	80	76.7	73.3			
TVMS120-30	55	75		100.3	100	99.4	98.3	97.3	95.5	94	92	90	86.3	82.7			
TVMS120-40-2	75	100		116	115.5	114	113	111	109	105.5	104	100	97	93			
TVMS120-40-1	75	100		126	125.4	124.6	122.6	120.6	118.5	116.5	114	111.3	107	103			
TVMS120-40	75	100		134	133	132	131	129.5	127.5	125	122	119	114.5	109.5			
TVMS120-50-2	75	100		152	151	149.7	147	144	141.5	139	135.5	132	127	122			

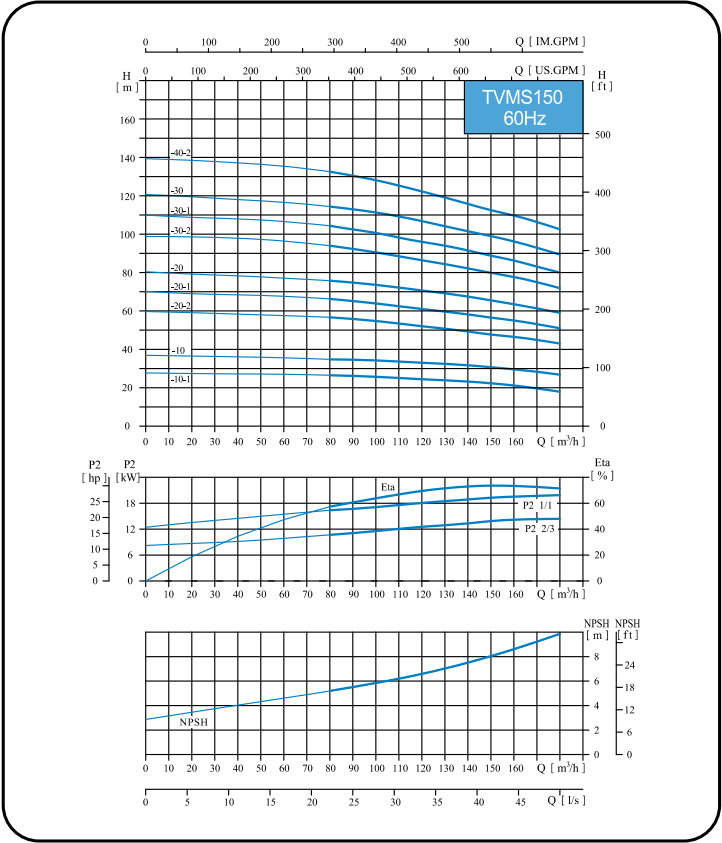
Size and Weight

Model	Size(mm)					Weight (kg)
	B1	B2	B1+B2	D1	D2	
TVMS120-10-1	840	490	1330	330	255	235
TVMS120-10	840	550	1390	330	255	250
TVMS120-20-2	1000	660	1660	400	310	350
TVMS120-20-1	1000	660	1660	400	310	350
TVMS120-20	1000	660	1660	400	310	380
TVMS120-30-2	1160	700	1860	460	340	445
TVMS120-30-1	1160	700	1860	460	340	445
TVMS120-30	1190	770	1960	510	370	545
TVMS120-40-2	1350	845	2195	580	410	675
TVMS120-40-1	1350	845	2195	580	410	675
TVMS120-40	1350	845	2195	580	410	675
TVMS120-50-2	1510	845	2355	580	410	690



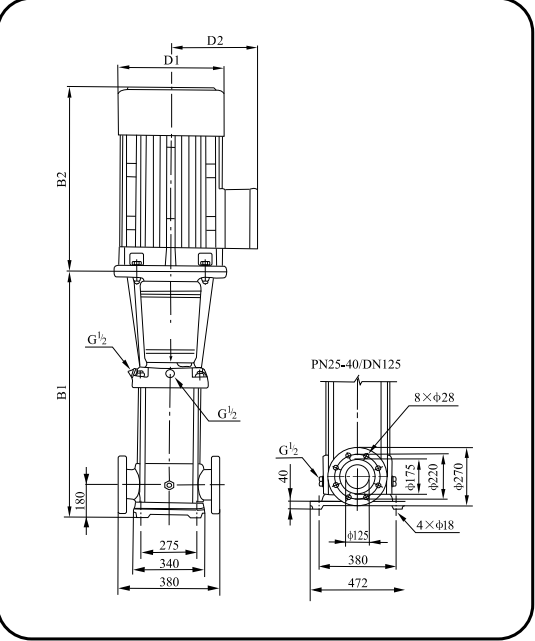
Technical Data

Performance Curve ISO9906 Annex A 3540rpm



TVMS 150

Installation Sketch



Performance Table

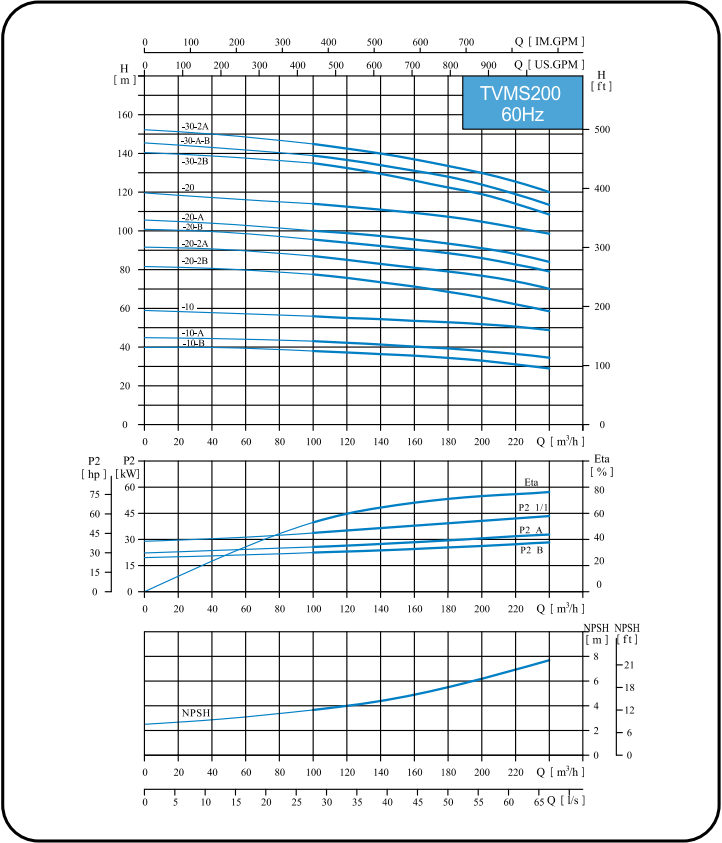
Model	Driving Motor		Q (m³/h)	80	90	100	110	120	130	140	150	160	170	180
	(kW)	(hp)												
TVMS150-10-1	15	20	H (m)	26.5	26	25.7	25	24.3	23.8	23.2	22.3	21.2	19.5	18
TVMS150-10	22	30		35	34.5	34	33.6	33	32.3	31.7	30.7	29.6	28	27
TVMS150-20-2	30	40		57	55.5	53	52	51.3	50	49	48	47	45	43
TVMS150-20-1	37	50		67	65	63.5	62	61	60	58.5	56	55	53	51
TVMS150-20	45	60		75.5	74.5	73.6	72	70.4	69	67.5	65.5	63.5	61	59
TVMS150-30-2	55	75		94	92	90.5	88.4	86.4	83.8	81	80	78	75.3	72.5
TVMS150-30-1	75	100		104	102.5	100	98	96	94	92	89	87	84	80
TVMS150-30	75	100		114.4	113	111.3	109	106.5	104	101.5	99	96	93	89.4
TVMS150-40-2	75	100		133	130.3	127.6	124.6	121.7	118.3	115	112.5	110	106.3	102.5

Size and Weight

Model	Size(mm)					Weight (kg)
	B1	B2	B1+B2	D1	D2	
TVMS150-10-1	840	490	1330	330	255	235
TVMS150-10	840	590	1430	360	285	280
TVMS150-20-2	1000	660	1660	400	310	360
TVMS150-20-1	1000	660	1660	400	310	380
TVMS150-20	1000	700	1700	460	340	435
TVMS150-30-2	1190	770	1960	510	370	545
TVMS150-30-1	1190	845	2035	580	410	665
TVMS150-30	1190	845	2035	580	410	665
TVMS150-40-2	1350	845	2195	580	410	680

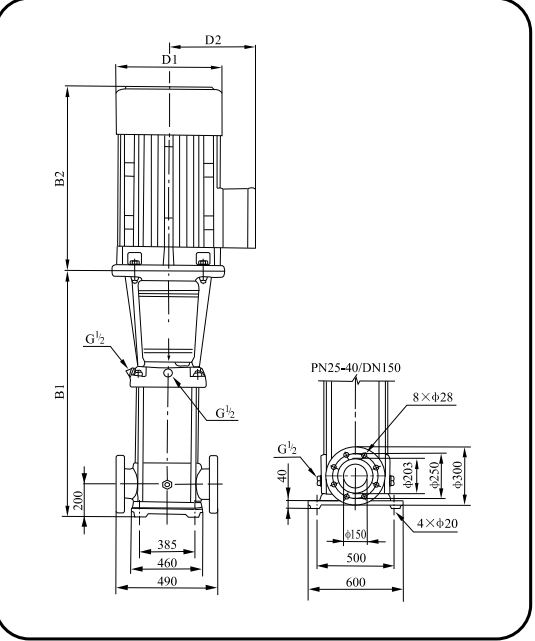
Technical Data

Performance Curve ISO9906 Annex A 3540rpm



TVMS 200

Installation Sketch



Performance Table

Model	Driving Motor		Q (m³/h)	100	120	140	160	180	200	220	240
	(kW)	(hp)									
TVMS200-10-B	30	40	H (m)	38	37	36.5	35.5	34	33	31	29
TVMS200-10-A	37	50		43	42	41.5	40	39	38	36.5	34.5
TVMS200-10	45	60		56	55	54.5	53.5	53	52	50.5	48.5
TVMS200-20-2B	55	75		77.5	75.5	73.5	71	68.5	66	62	58.5
TVMS200-20-2A	75	100		87	85	83	81	79	77	74	70
TVMS200-20-B	75	100		95.5	93.5	92.5	90.5	88.5	86	82.5	79
TVMS200-20-A	90	120		100	98.5	97.5	95.5	93.5	91	88	84
TVMS200-20	90	120		114	112.5	111	109.5	107.5	105	101.5	98.5
TVMS200-30-2B	110	150		135	132.5	129.5	126	122.5	119	114	108.5
TVMS200-30-A-B	110	150		139	136.5	134	131	128	124	119	113.5
TVMS200-30-2A	110	150		145	142.5	140	137	133.5	130	125.5	120

Size and Weight

Model	Size(mm)					Weight (kg)
	B1	B2	B1+B2	D1	D2	
TVMS200-10-B	907	660	1567	400	310	403
TVMS200-10-A	907	660	1567	400	310	426
TVMS200-10	907	700	1607	450	345	484
TVMS200-20-2B	1131	770	1901	540	370	595
TVMS200-20-2A	1131	845	1976	580	410	718
TVMS200-20-B	1131	845	1976	580	410	718
TVMS200-20-A	1131	895	2026	580	410	787
TVMS200-20	1131	895	2026	580	410	787
TVMS200-30-2B	1325	1140	2465	645	550	1158
TVMS200-30-A-B	1325	1140	2465	645	550	1158
TVMS200-30-2A	1325	1140	2465	645	550	1158







Product images and specifications may differ from actual products due to improvements. The OO series and model OO are indicated with our series/model codes in this catalog.

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