

TERAL

Vertical Multistage Centrifugal Pumps

AVS Stainless steel
AISI304

AVSN Stainless steel
AISI316

AVSG Cast iron &
Stainless steel AISI304

50Hz



TERAL INC.

Japan since 1918
Advanced technology from Japan

Applications

Typical application of AVS, AVSN, AVSG series pumps

■ WATER SUPPLY AND PRESSURE BOOSTING

Pressure boosting in buildings, hotels, residential complexes
Pressure booster stations, supply of water networks
Pressure boosting for industrial water supply

■ LIGHT INDUSTRY

Washing and cleaning systems
Car washing facilities
Fire fighting systems
Machine tools (cooling lubricants)

■ HEATING, VENTILATION AND AIR-CONDITIONING

Boilers
Induction heating
Heat exchangers
Cooling towers and systems
Temperature control systems

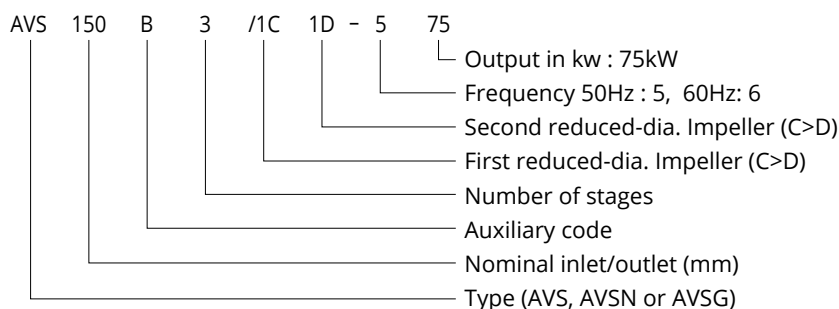
■ IRRIGATION AND AGRICULTURE

Greenhouses
Sprinkler Irrigation
Field Irrigation (flooding)

■ WATER TREATMENT

Water softeners and de-mineralization
Reverse Osmosis system
Filtration
Ultra-filtration systems

Identification Code

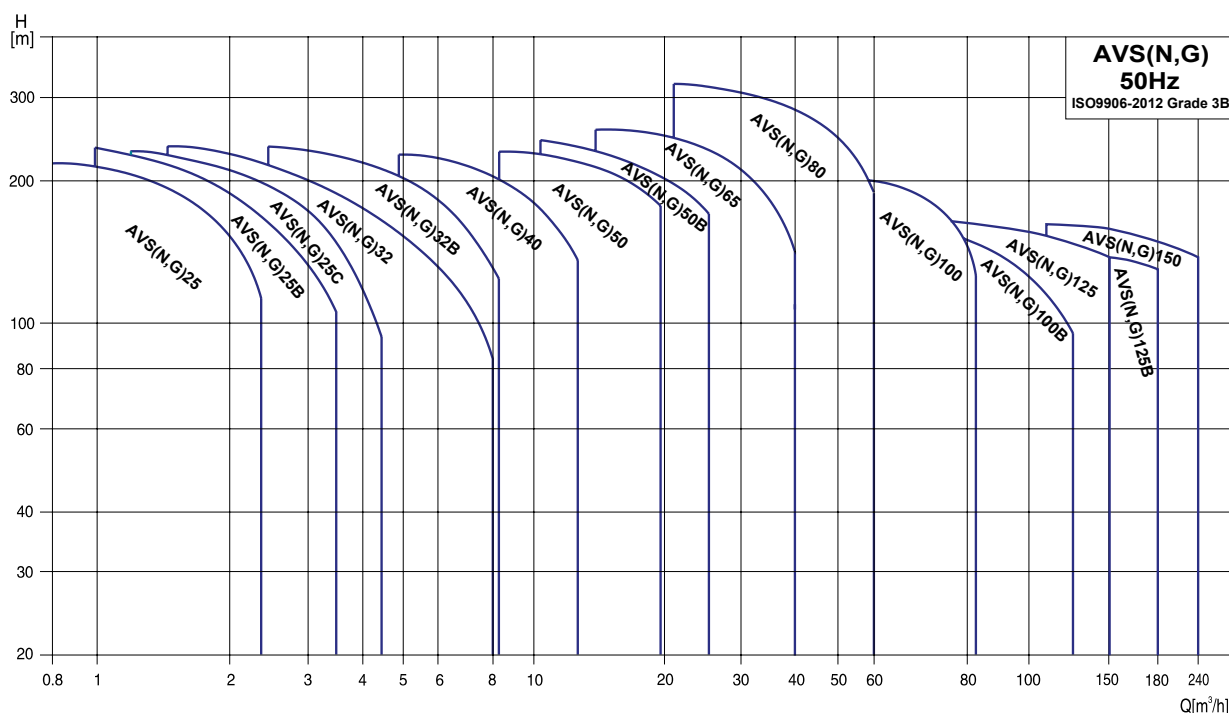


Example: 3/1C1D - 3:3 stages

1C: First reduced-dia. impeller (C): 1
1D: Second reduced-dia. Impeller (D): 1
Complete impeller: 1



Performance range



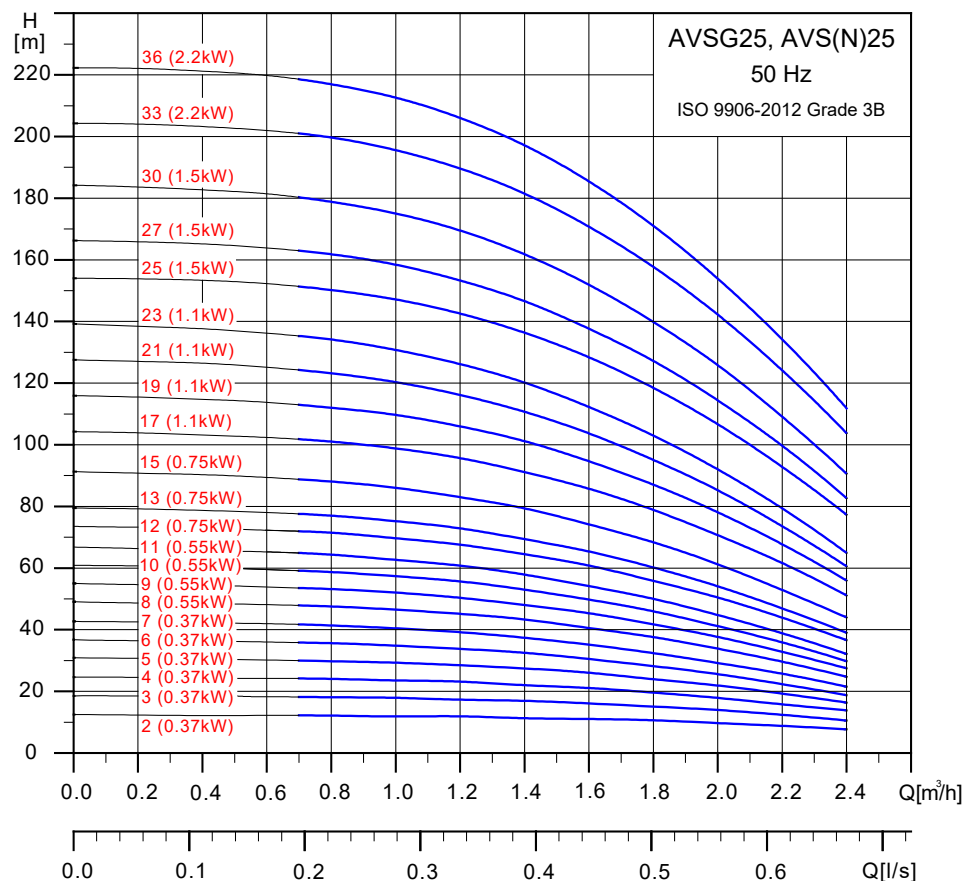
Standard specification

50Hz	AVS, AVSN, AVSG														
	25	25B	25C	32	32B	40	50	50B	65	80	100	100B	125	125B	150
Nominal inlet/outlet [mm]	25	25	25	32	32	40	50	50	65	80	100	100	125	125	150
Nominal flow [m³/h]	1	2	3	4	5	10	15	20	32	45	64	90	120	150	200
Flow range [m³/h]	0.7-2.4	1.0-3.5	1.2-4.5	1.5-8.0	2.5-8.5	5-13	8-23	10.5-29	15-40	22-58	30-85	45-120	60-150	80-180	100-240
Max. pressure [bar]	22	23	24	21	24	22	23	25	28	33	22	20	16	16	16
Handling fluid	Clear water (PH5.8~8.6, Chloride ion concentration 200mg/L or less) Liquid that does not contain slurry or solids, liquid is inflammable or non-corrosive														
Fluid temperature [°C]	-20°C~+120°C (No freezing)														
Motor power [kW]	0.37-2.2	0.37-3	0.37-3	0.37-4.0	0.37-5.5	0.75-7.5	1.1-15	1.1-18.5	1.5-30	3-45	4-45	5.5-45	11-75	11-75	18.5-110
Material															
AVS	Stainless steel: EN 1.4301/AISI 304/SUS304														
AVSN	Lower casing & Pump head: EN 1.4301/AISI 304/SC13														
AVSG	Stainless steel EN 1.4401/AISI 316/SUS316														
Motor	Pump body: Stainless steel EN 1.4301/AISI 304/SUS304														
Mains connection 3~[V/Hz] (Permissible voltage tolerance ± 10%)	0.37-4kW 220V/ 240V/ 380V/ 415V 50Hz From 5.5kW or above 380V/ 415V/ 660V/ 690V 50Hz														
Insulation class	F														
Enclosure class	IP 55														
Ambient temperature	Max 40°C														
Pipe Connection															
Flange	DN 25/32	DN 25/32	DN 25/32	DN 32	DN 32	DN 40	DN 50	DN 50	DN 65	DN 80	DN 100	DN 100	DN 125	DN 125	DN 150
Shaft Seal															
Mechanical Seal	Cartridge type: Tungsten carbide/Carbon + FKM														

Maximum operating and inlet pressure

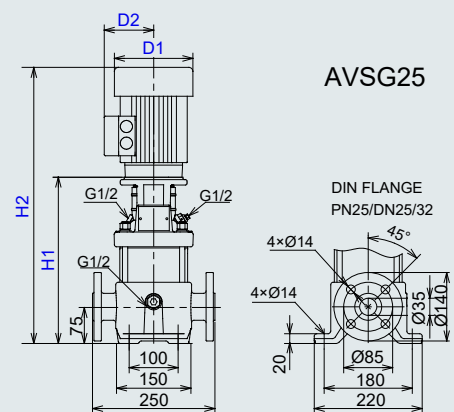
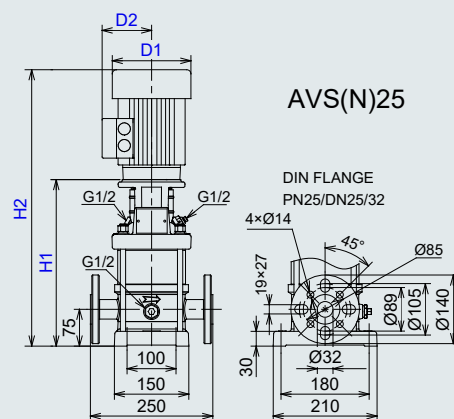
	Stages	Maximum Operating Pressure DIN Flange	Flange pressure rating (PN)	Stages	Maximum Inlet Pressures*
AVS, AVSN, AVSG 25	2 - 36	25 bar	PN 25	2 - 36	10 bar
AVS, AVSN, AVSG 25B	2 - 26	25 bar	PN 25	2	6 bar
				3 - 12	10 bar
				13 - 26	15 bar
AVS, AVSN, AVSG 25C	2 - 36	25 bar	PN 25	2 - 29	10 bar
				31 - 36	15 bar
				2	6 bar
AVS, AVSN, AVSG 32	2 - 22	25 bar	PN 25	3 - 11	10 bar
				12 - 22	15 bar
				2 - 16	10 bar
AVS, AVSN, AVSG 32B	2 - 36	25 bar	PN 25	18 - 36	15 bar
				2 - 6	8 bar
				7 - 22	10 bar
AVS, AVSN, AVSG 40	2 - 22	25 bar	PN 25	1 - 3	8 bar
AVS, AVSN, AVSG 50	1 - 17	25 bar	PN 25	4 - 17	10 bar
AVS, AVSN, AVSG 50B	1 - 17	25 bar	PN 25	1 - 3	8 bar
				4 - 17	10 bar
				1/1 - 4	4 bar
AVS, AVSN, AVSG 65	1/1 - 7	16 bar	PN 16	5/2 - 10	10 bar
	8/2 - 14	30 bar	PN 25-40	11 - 14	15 bar
	1/1 - 5	16 bar	PN 16	1/1 - 2	4 bar
AVS, AVSN, AVSG 80	6/2 - 11	30 bar	PN 25-40	3/2 - 5	10 bar
	12/2 - 13/2	33 bar		6/2 - 13/2	15 bar
	1/1 - 5	16 bar	PN 16	1/1 - 2/2	4 bar
AVS, AVSN, AVSG 100	6/2 - 8/1	30 bar	PN 25-40	2/1 - 4/2	10 bar
	1/1 - 4	16 bar	PN 16	4/1 - 8/1	15 bar
				1/1 - 1	4 bar
AVS, AVSN, AVSG 100B	5/2 - 6	30 bar	PN 25-40	2/2 - 3/2	10 bar
	1 - 7	20 bar	PN 25-40	3 - 6	15 bar
				1 - 2/1	10 bar
AVS, AVSN, AVSG 125	1/1 - 6	20 bar	PN 25-40	2 - 5/1	15 bar
				5 - 7	20 bar
				1/1 - 2/2	10 bar
AVS, AVSN, AVSG 125B	1/1 - 6	20 bar	PN 25-40	2/1 - 4/1	15 bar
				4 - 6	20 bar
				1/1D	10 bar
AVS, AVSN, AVSG 150	1/1D - 4	20 bar	PN 25-40	1/1C - 2/2C	15 bar
				2/1C - 4	20 bar

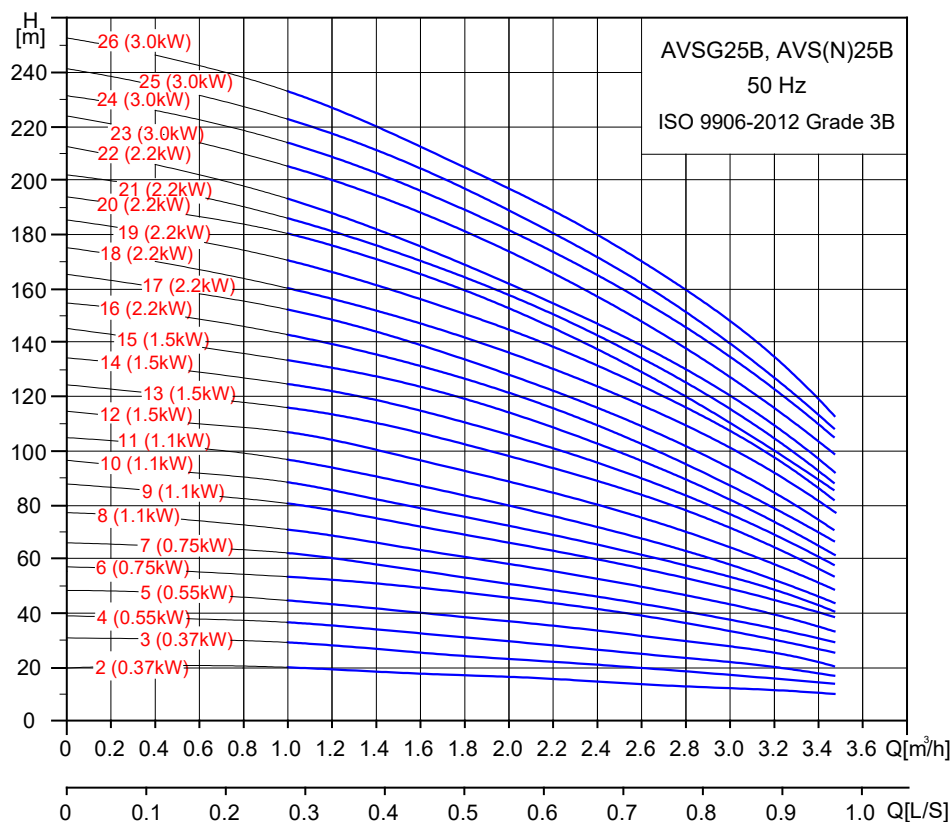
* Suction pressure ≤ Max. operating pressure - Pump shut off pressure.



Dimensions and Weights

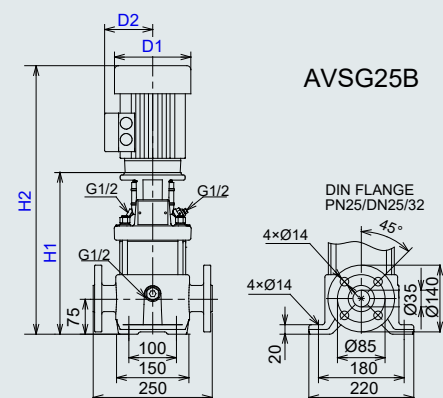
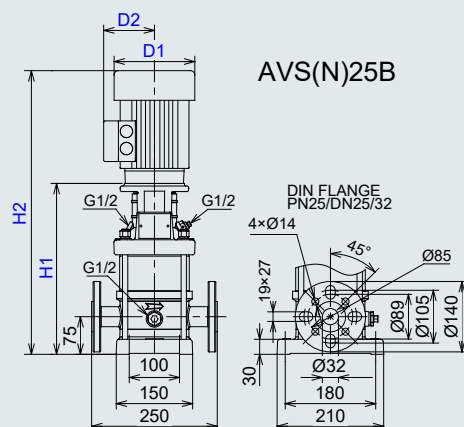
Model	P2 [kW]	AVS(N), AVSG		AVS(N)		AVSG		AVS(N)	AVSG
		D1	D2	H1	H2	H1	H2	Net Weight [Kg]	
		Dimension [mm]							
AVS(N,G) 252-5.37	0.37	130	105	282	496	282	496	20.4	20.4
AVS(N,G) 253-5.37	0.37	130	105	282	496	282	496	20.8	21.2
AVS(N,G) 254-5.37	0.37	130	105	300	514	300	514	21.2	21.8
AVS(N,G) 255-5.37	0.37	130	105	318	532	318	532	21.7	22.4
AVS(N,G) 256-5.37	0.37	130	105	336	550	336	550	22.2	23.0
AVS(N,G) 257-5.37	0.37	130	105	354	568	354	568	22.4	23.6
AVS(N,G) 258-5.55	0.55	130	105	372	586	372	586	23.9	24.4
AVS(N,G) 259-5.55	0.55	130	105	390	604	390	604	24.3	24.7
AVS(N,G) 2510-5.55	0.55	130	105	408	622	408	622	24.7	25.1
AVS(N,G) 2511-5.55	0.55	130	105	426	640	426	640	25.1	25.5
AVS(N,G) 2512-5.75	0.75	150	124.5	448	716	448	716	27.7	27.8
AVS(N,G) 2513-5.75	0.75	150	124.5	466	734	466	734	27.9	28.2
AVS(N,G) 2515-5.75	0.75	150	124.5	502	770	502	770	29.1	29.0
AVS(N,G) 2517-51.1	1.1	150	124.5	538	806	538	806	31.5	30.3
AVS(N,G) 2519-51.1	1.1	150	124.5	574	842	574	842	33.0	31.8
AVS(N,G) 2521-51.1	1.1	150	124.5	610	878	610	878	33.8	33.3
AVS(N,G) 2523-51.1	1.1	150	124.5	646	914	646	914	34.9	34.8
AVS(N,G) 2525-51.5	1.5	163.6	127.4	698	1016	698	1016	41.4	41.3
AVS(N,G) 2527-51.5	1.5	163.6	127.4	734	1052	734	1052	43.5	43.1
AVS(N,G) 2530-51.5	1.5	163.6	127.4	788	1106	788	1106	44.7	43.8
AVS(N,G) 2533-52.2	2.2	163.6	127.4	842	1160	842	1160	46.3	45.4
AVS(N,G) 2536-52.2	2.2	163.6	127.4	896	1214	896	1214	47.9	47.5

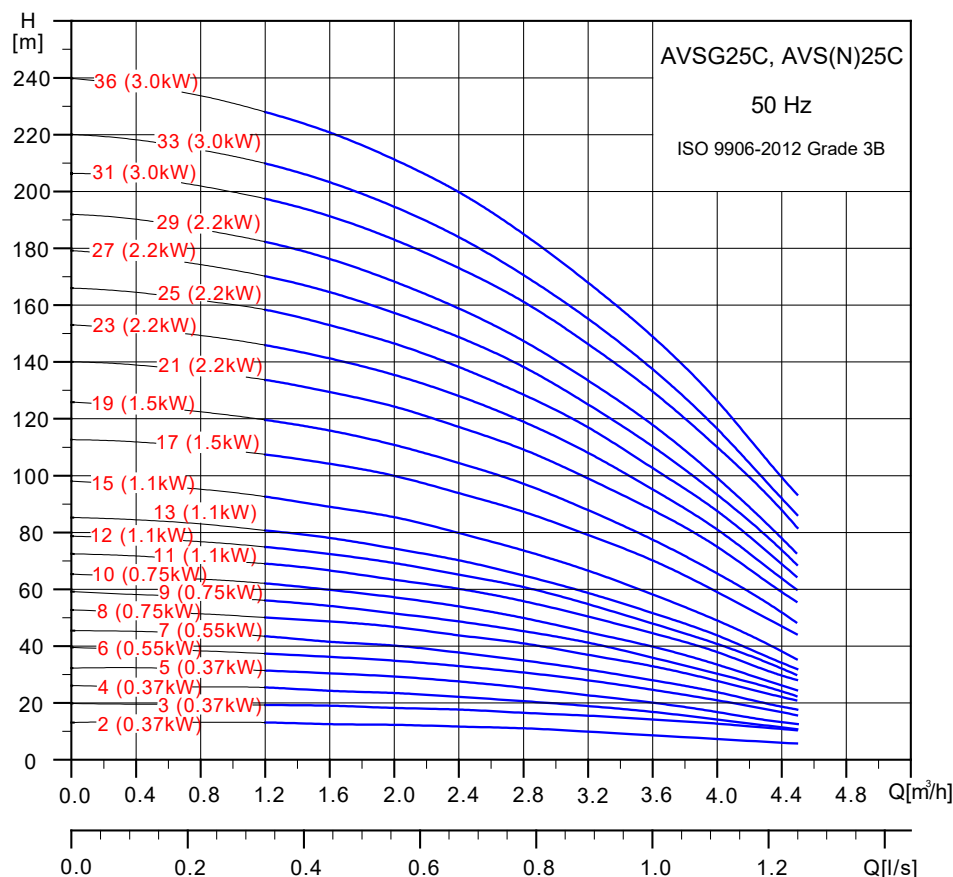




Dimensions and Weights

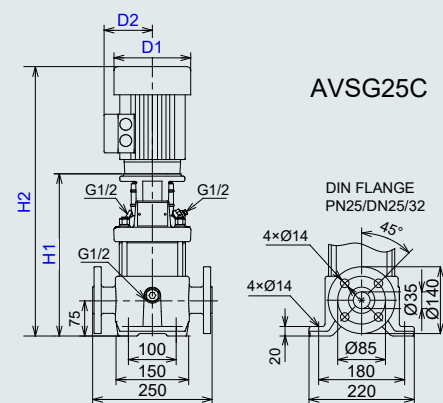
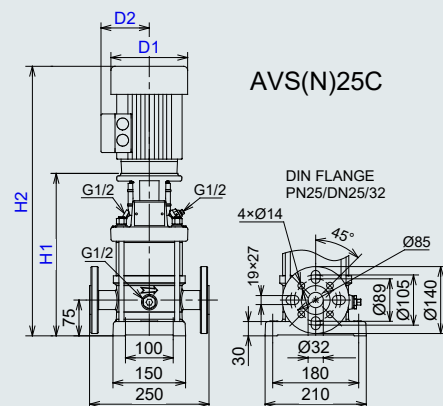
Model	P2 [kW]	AVS(N), AVSG		AVS(N)		AVSG		AVS(N)	AVSG
		D1	D2	H1	H2	H1	H2	Net Weight [Kg]	
		Dimension [mm]							
AVS(N,G) 25B2-5.37	0.37	130	105	282	496	282	496	22.3	20.9
AVS(N,G) 25B3-5.37	0.37	130	105	282	496	282	496	22.5	21.1
AVS(N,G) 25B4-5.55	0.55	130	105	300	514	300	514	22.6	22.2
AVS(N,G) 25B5-5.55	0.55	130	105	318	532	318	532	22.8	22.6
AVS(N,G) 25B6-5.75	0.75	149.6	124.5	340	608	340	608	26.6	25.3
AVS(N,G) 25B7-5.75	0.75	149.6	124.5	358	626	358	626	27.1	25.7
AVS(N,G) 25B8-51.1	1.1	150	124.5	376	644	376	644	29.1	27.7
AVS(N,G) 25B9-51.1	1.1	150	124.5	394	662	394	662	29.5	28.1
AVS(N,G) 25B10-51.1	1.1	150	124.5	412	680	412	680	30.0	28.6
AVS(N,G) 25B11-51.1	1.1	150	124.5	430	698	430	698	30.4	29.0
AVS(N,G) 25B12-51.5	1.5	163.6	127	464	782	464	782	35.8	35.4
AVS(N,G) 25B13-51.5	1.5	163.6	127	482	800	482	800	36.1	35.9
AVS(N,G) 25B14-51.5	1.5	163.6	127	500	818	500	818	37.7	36.3
AVS(N,G) 25B15-51.5	1.5	164	127	518	836	518	836	38.0	36.7
AVS(N,G) 25B16-52.2	2.2	164	127	536	854	536	854	40.9	39.6
AVS(N,G) 25B17-52.2	2.2	164	127	554	872	554	872	41.4	40.0
AVS(N,G) 25B18-52.2	2.2	164	127	572	890	572	890	41.8	40.4
AVS(N,G) 25B19-52.2	2.2	164	127	590	908	590	908	42.2	40.9
AVS(N,G) 25B20-52.2	2.2	164	127	608	926	608	926	42.7	41.3
AVS(N,G) 25B21-52.2	2.2	164	127	626	944	626	944	43.1	41.8
AVS(N,G) 25B22-52.2	2.2	164	127	644	962	644	962	46.6	42.2
AVS(N,G) 25B23-53.0	3.0	185.5	120	666	1006	666	1006	50.4	48.9
AVS(N,G) 25B24-53.0	3.0	185.5	120	684	1024	684	1024	50.8	49.4
AVS(N,G) 25B25-53.0	3.0	185.5	120	702	1042	702	1042	51.2	49.8
AVS(N,G) 25B26-53.0	3.0	185.5	120	720	1060	720	1060	51.6	50.3

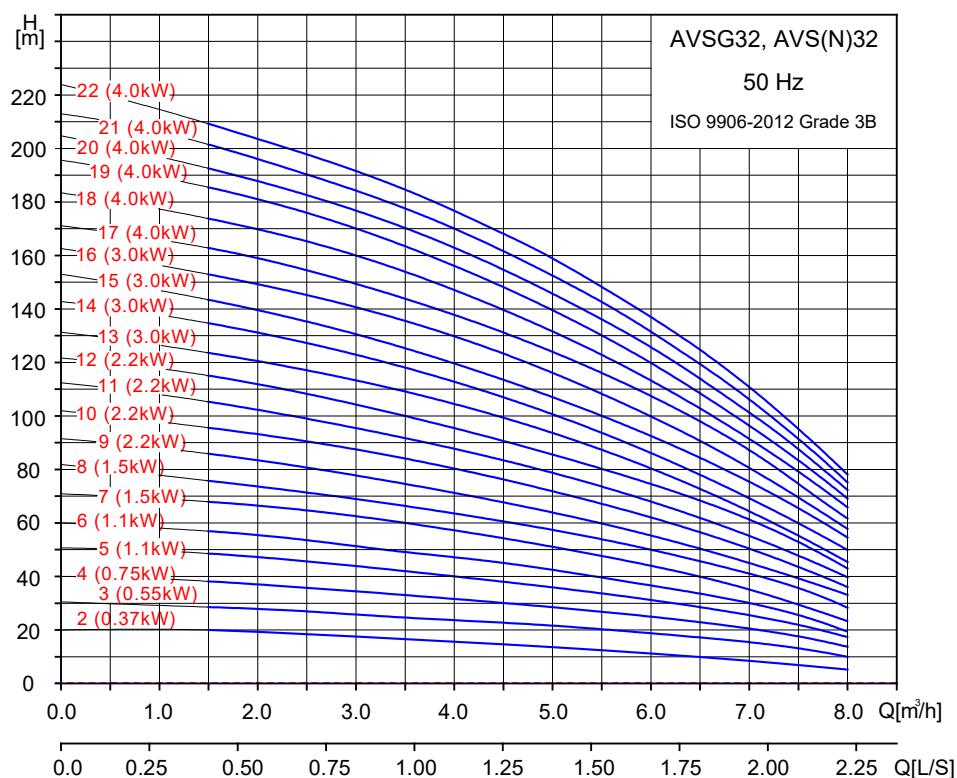




Dimensions and Weights

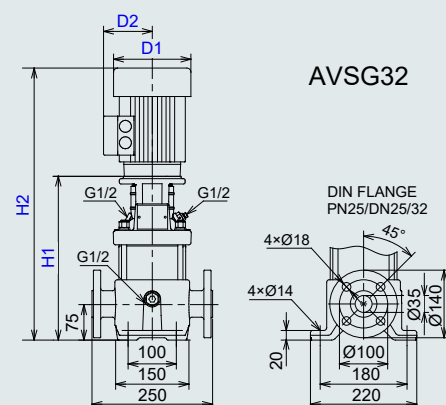
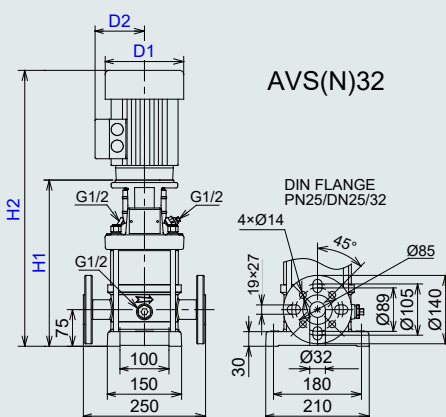
Model	P2 [kW]	AVS(N), AVSG		AVS(N)		AVSG		AVS(N)	AVSG
		D1	D2	H1	H2	H1	H2	Net Weight [Kg]	
		Dimension [mm]							
AVS(N,G) 25C2-5.37	0.37	130	105	282	496	282	496	20.6	21.0
AVS(N,G) 25C3-5.37	0.37	130	105	282	496	282	496	21.0	21.4
AVS(N,G) 25C4-5.37	0.37	130	105	300	514	300	514	21.4	21.8
AVS(N,G) 25C5-5.37	0.37	130	105	318	532	318	532	22.8	22.2
AVS(N,G) 25C6-5.55	0.55	130	105	336	550	336	550	23.2	23.2
AVS(N,G) 25C7-5.55	0.55	130	105	354	568	354	568	23.7	23.6
AVS(N,G) 25C8-5.75	0.75	150	124	376	644	376	644	25.0	25.5
AVS(N,G) 25C9-5.75	0.75	150	124	394	662	394	662	26.0	26.6
AVS(N,G) 25C10-5.75	0.75	150	124	412	680	412	680	27.0	27.2
AVS(N,G) 25C11-5.1	1.1	150	124	430	698	430	698	28.7	28.8
AVS(N,G) 25C12-5.1	1.1	150	124	448	716	448	716	29.4	29.7
AVS(N,G) 25C13-5.1	1.1	150	124	466	734	466	734	30.1	30.1
AVS(N,G) 25C15-5.1	1.1	150	124	502	770	502	770	32.1	30.7
AVS(N,G) 25C17-5.15	1.5	164	127	554	872	554	872	39.1	37.6
AVS(N,G) 25C19-5.15	1.5	164	127	590	908	590	908	40.1	39.0
AVS(N,G) 25C21-5.2.2	2.2	164	127	626	944	626	944	42.2	41.7
AVS(N,G) 25C23-5.2.2	2.2	164	127	662	980	662	980	43.4	42.4
AVS(N,G) 25C25-5.2.2	2.2	164	127	698	1016	698	1016	44.4	43.4
AVS(N,G) 25C27-5.2.2	2.2	164	127	734	1052	734	1052	46.4	44.4
AVS(N,G) 25C29-5.2.2	2.2	164	127	770	1088	770	1088	48.3	45.4
AVS(N,G) 25C31-5.3.0	3.0	186	120	810	1150	810	1150	52.3	52.1
AVS(N,G) 25C33-5.3.0	3.0	186	120	846	1186	846	1186	53.1	52.6
AVS(N,G) 25C36-5.3.0	3.0	186	120	900	1240	900	1240	54.7	53.8

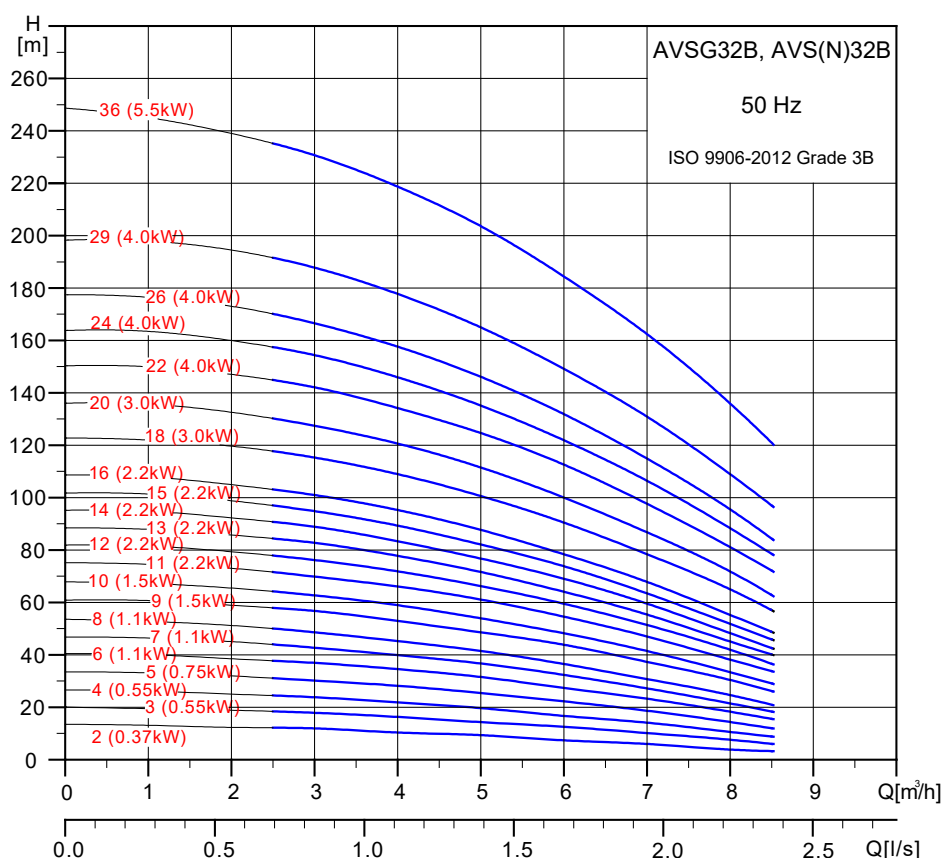




Dimensions and Weights

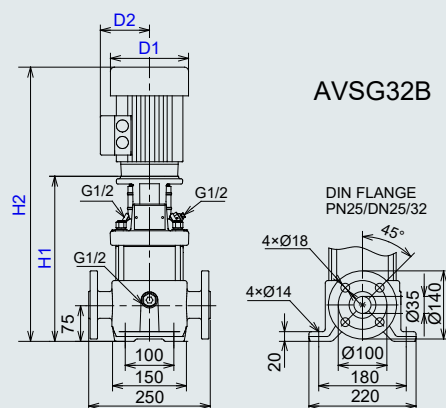
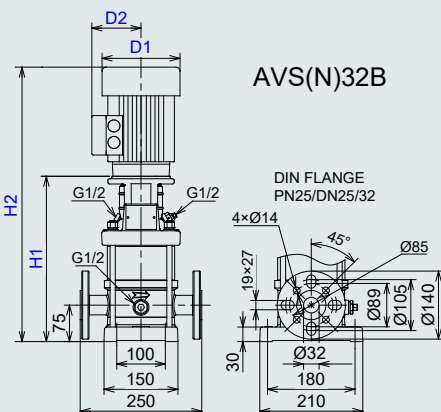
Model	P2 [kW]	AVS(N), AVSG		AVS(N)		AVSG		AVS(N)	AVSG
		D1	D2	H1	H2	H1	H2	Net Weight [Kg]	
		Dimension [mm]							
AVS(N,G) 322-5.37	0.37	130	105	282	496	282	496	22.4	20.4
AVS(N,G) 323-5.55	0.55	130	105	309	823	309	823	23.0	21.7
AVS(N,G) 324-5.75	0.75	150	125	340	608	340	608	25.2	24.5
AVS(N,G) 325-51.1	1.1	150	125	367	635	367	635	26.9	27.2
AVS(N,G) 326-51.1	1.1	150	125	394	662	394	662	27.3	27.4
AVS(N,G) 327-51.5	1.5	164	127	437	755	437	755	34.1	34.3
AVS(N,G) 328-51.5	1.5	164	127	464	782	464	782	34.7	35.5
AVS(N,G) 329-52.2	2.2	164	127	491	809	491	809	35.9	35.9
AVS(N,G) 3210-52.2	2.2	164	127	518	836	518	836	36.5	36.9
AVS(N,G) 3211-52.2	2.2	164	127	545	863	545	863	37.1	38.7
AVS(N,G) 3212-52.2	2.2	164	127	572	890	572	890	39.8	39.2
AVS(N,G) 3213-53.0	3.0	186	120	603	943	603	943	47.6	46.3
AVS(N,G) 3214-53.0	3.0	186	120	630	970	630	970	48.2	46.5
AVS(N,G) 3215-53.0	3.0	186	120	657	997	657	997	48.8	47.5
AVS(N,G) 3216-53.0	3.0	186	120	684	1024	684	1024	49.3	49.2
AVS(N,G) 3217-54.0	4.0	186	120	711	1051	711	1051	50.6	50.8
AVS(N,G) 3218-54.0	4.0	186	120	738	1078	738	1078	51.1	53.0
AVS(N,G) 3219-54.0	4.0	186	120	765	1105	765	1105	51.7	53.3
AVS(N,G) 3220-54.0	4.0	186	120	792	1132	792	1132	52.0	53.5
AVS(N,G) 3221-54.0	4.0	186	120	819	1159	819	1159	52.2	53.8
AVS(N,G) 3222-54.0	4.0	186	120	846	1186	846	1186	52.4	54.1

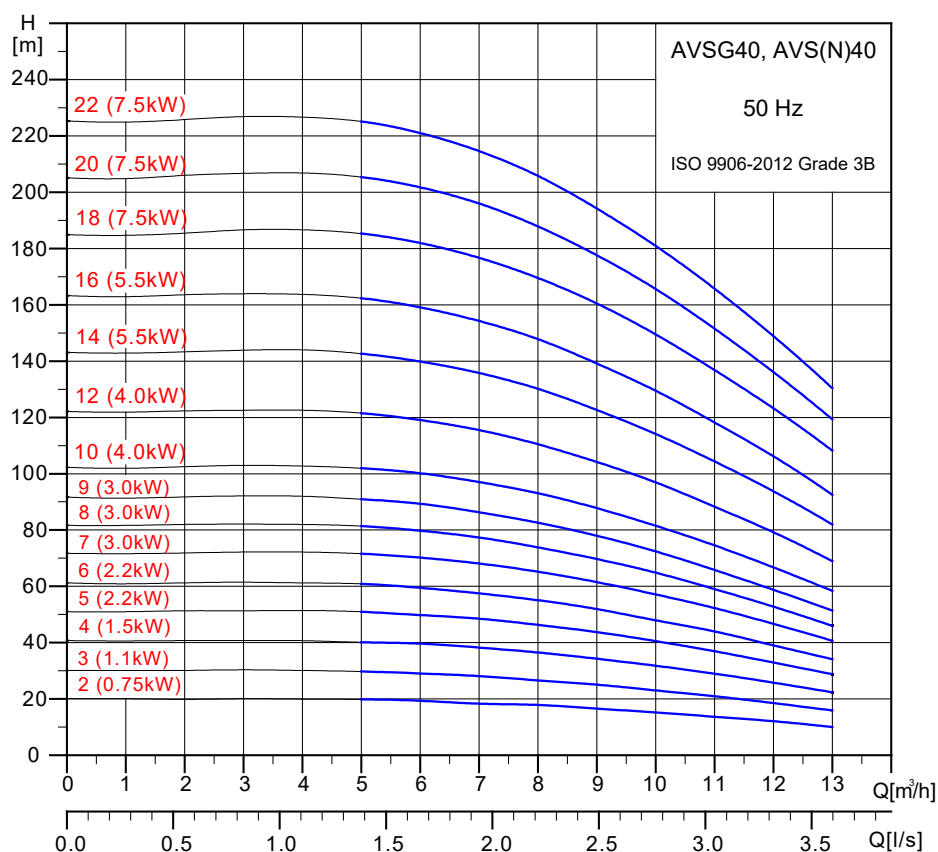




Dimensions and Weights

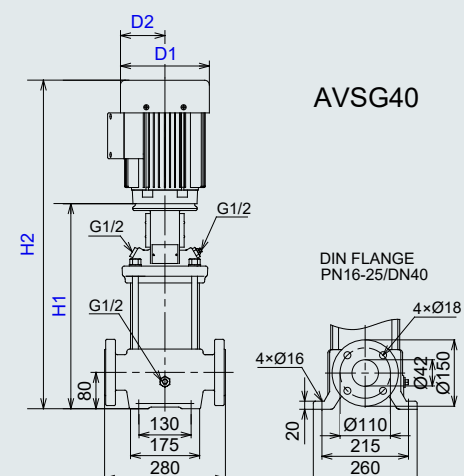
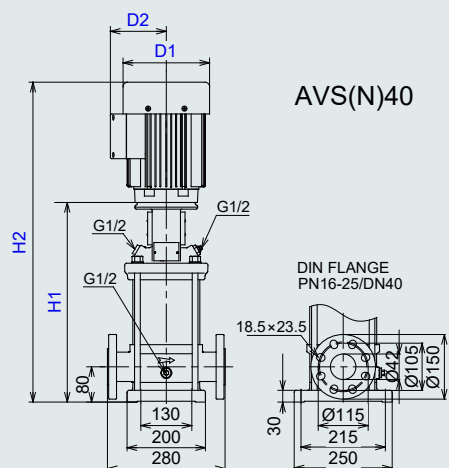
Model	P2 [kW]	AVS(N), AVSG		AVS(N)		AVSG		AVS(N)	AVSG
		D1	D2	H1	H2	H1	H2	Net Weight [Kg]	
		Dimension [mm]							
AVS(N,G) 32B2-5.37	0.37	130	105	282	496	282	496	20.9	20.6
AVS(N,G) 32B3-5.55	0.55	130	105	309	523	309	523	21.7	21.8
AVS(N,G) 32B4-5.55	0.55	130	105	336	550	336	550	22.7	22.4
AVS(N,G) 32B5-5.75	0.75	150	125	367	635	367	635	25.5	25.2
AVS(N,G) 32B6-51.1	1.1	150	125	394	662	394	662	27.6	26.8
AVS(N,G) 32B7-51.1	1.1	150	125	421	689	421	689	28.5	28.3
AVS(N,G) 32B8-51.1	1.1	150	125	448	716	448	716	29.1	29.1
AVS(N,G) 32B9-51.5	1.5	164	127	491	809	491	809	37.2	37.2
AVS(N,G) 32B10-51.5	1.5	164	127	518	836	518	836	37.8	37.6
AVS(N,G) 32B11-52.2	2.2	164	127	545	863	545	863	38.2	39.4
AVS(N,G) 32B12-52.2	2.2	164	127	572	890	572	890	39.9	39.6
AVS(N,G) 32B13-52.2	2.2	164	127	599	917	599	917	40.5	39.8
AVS(N,G) 32B14-52.2	2.2	164	127	626	944	626	944	40.9	40.8
AVS(N,G) 32B15-52.2	2.2	164	127	653	971	653	971	41.5	41.2
AVS(N,G) 32B16-52.2	2.2	164	127	680	998	680	998	42.4	42.4
AVS(N,G) 32B18-53.0	3.0	186	120	738	1078	738	1078	49.9	48.3
AVS(N,G) 32B20-53.0	3.0	186	120	792	1132	792	1132	51.3	48.9
AVS(N,G) 32B22-54.0	4.0	186	120	846	1186	846	1186	54.1	53.9
AVS(N,G) 32B24-54.0	4.0	186	120	900	1240	900	1240	55.4	55.3
AVS(N,G) 32B26-54.0	4.0	186	120	954	1294	954	1294	57.1	56.9
AVS(N,G) 32B29-54.0	4.0	186	120	1035	1375	1035	1375	58.7	59.8
AVS(N,G) 32B36-55.5	5.5	210	142	1249	1648	1249	1648	95.0	96.0

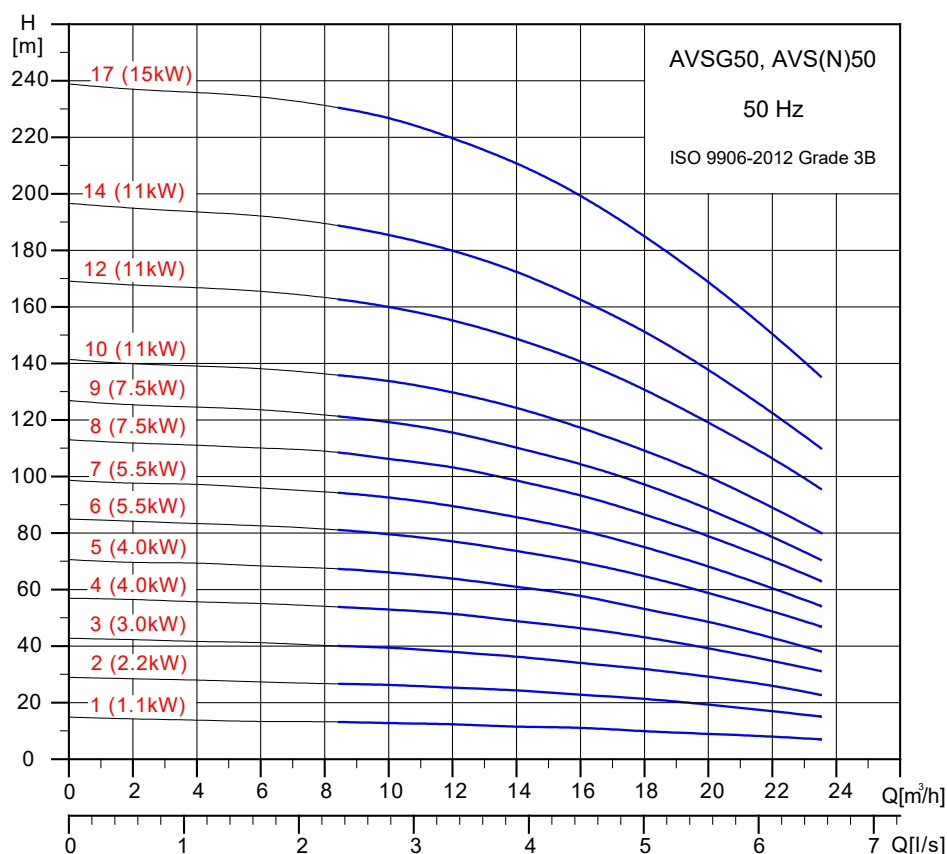




Dimensions and Weights

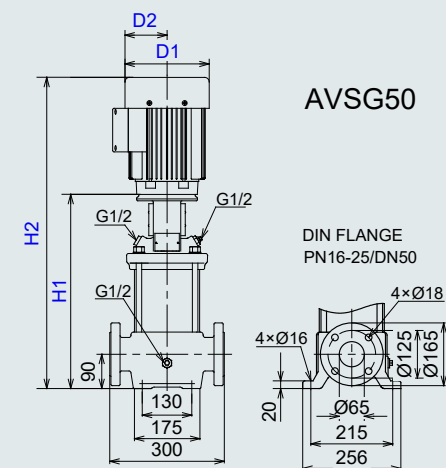
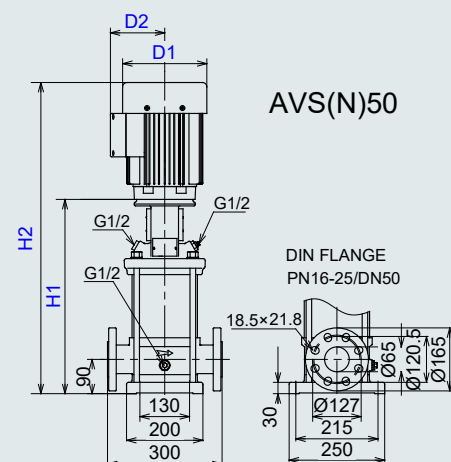
Model	P2 [kW]	AVS(N), AVSG		AVS(N)		AVSG		AVS(N)	AVSG
		D1	D2	H1	H2	H1	H2	Net Weight [Kg]	
		Dimension [mm]							
AVS(N,G) 402-5.75	0.75	150	125	353	621	351	619	35.7	37.8
AVS(N,G) 403-51.1	1.1	150	125	383	651	381	649	37.2	41.1
AVS(N,G) 404-51.5	1.5	164	127	429	747	427	745	45.9	48.4
AVS(N,G) 405-52.2	2.2	164	127	459	777	457	775	48.9	51.9
AVS(N,G) 406-52.2	2.2	164	127	489	807	487	805	49.2	52.5
AVS(N,G) 407-53.0	3.0	186	120	524	864	522	862	56.7	60.6
AVS(N,G) 408-53.0	3.0	186	120	554	894	552	892	57.2	62.1
AVS(N,G) 409-53.0	3.0	186	120	584	924	582	922	59.7	63.2
AVS(N,G) 4010-54.0	4.0	186	120	614	954	612	952	61.9	66.4
AVS(N,G) 4012-54.0	4.0	186	120	674	1014	672	1012	64.7	73.0
AVS(N,G) 4014-55.5	5.5	210	142	766	1163	764	1161	75.1	77.1
AVS(N,G) 4016-55.5	5.5	210	142	826	1223	824	1221	77.8	80.3
AVS(N,G) 4018-57.5	7.5	210	142	886	1283	884	1281	84.6	86.9
AVS(N,G) 4020-57.5	7.5	210	142	946	1343	944	1341	86.9	87.7
AVS(N,G) 4022-57.5	7.5	210	142	1006	1403	1004	1401	89.6	95.6

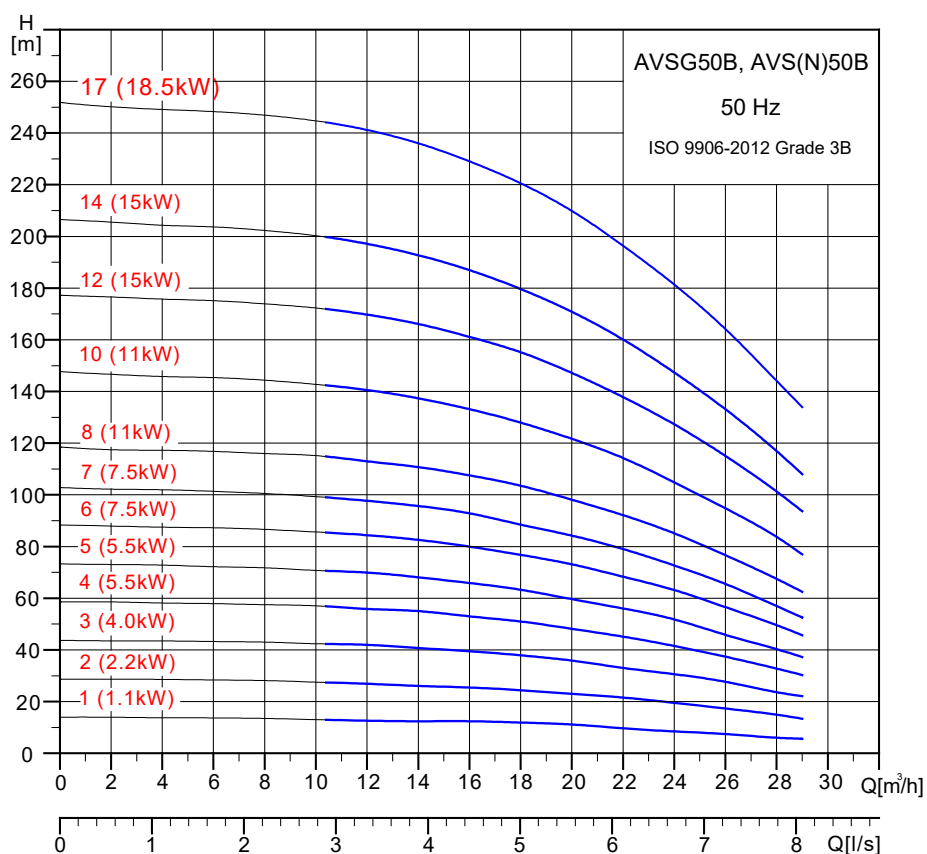




Dimensions and Weights

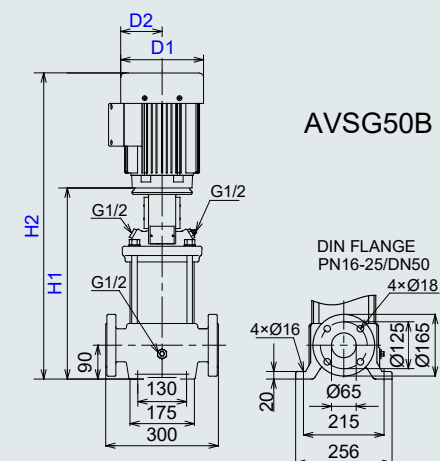
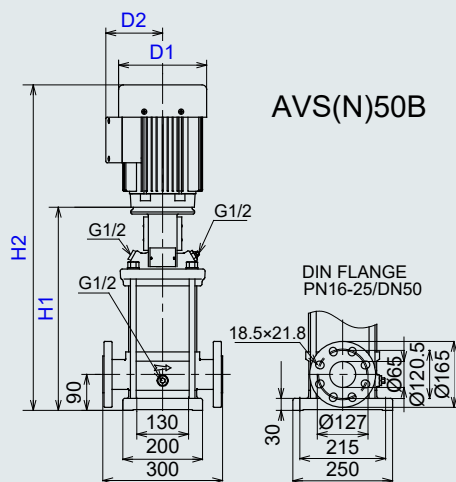
Model	P2 [kW]	AVS(N), AVSG		AVS(N)		AVSG		AVS(N)	AVSG
		D1	D2	H1	H2	H1	H2	Net Weight [Kg]	
		Dimension [mm]							
AVS(N,G) 501-51.1	1.1	150	125	352	620	354	622	33.6	44.9
AVS(N,G) 502-52.2	2.2	164	127	413	731	415	733	41.2	52.5
AVS(N,G) 503-53.0	3.0	186	120	463	803	465	805	53.9	60.9
AVS(N,G) 504-54.0	4.0	186	120	508	848	510	850	57.6	64.0
AVS(N,G) 505-54.0	4.0	186	120	553	893	555	895	60.1	65.1
AVS(N,G) 506-55.5	5.5	210	142	630	1027	632	1029	69.0	75.1
AVS(N,G) 507-55.5	5.5	210	142	675	1072	677	1074	70.7	76.1
AVS(N,G) 508-57.5	7.5	210	142	720	1117	722	1119	78.7	83.6
AVS(N,G) 509-57.5	7.5	210	142	765	1162	767	1164	80.2	83.8
AVS(N,G) 5010-511	11.0	254	175	887	1386	889	1388	127.2	133.2
AVS(N,G) 5012-511	11.0	254	175	977	1476	979	1478	130.2	134.7
AVS(N,G) 5014-511	11.0	254	175	1067	1566	1069	1568	132.2	137.2
AVS(N,G) 5017-515	15.0	254	175	1202	1701	1204	1703	150.8	155.8

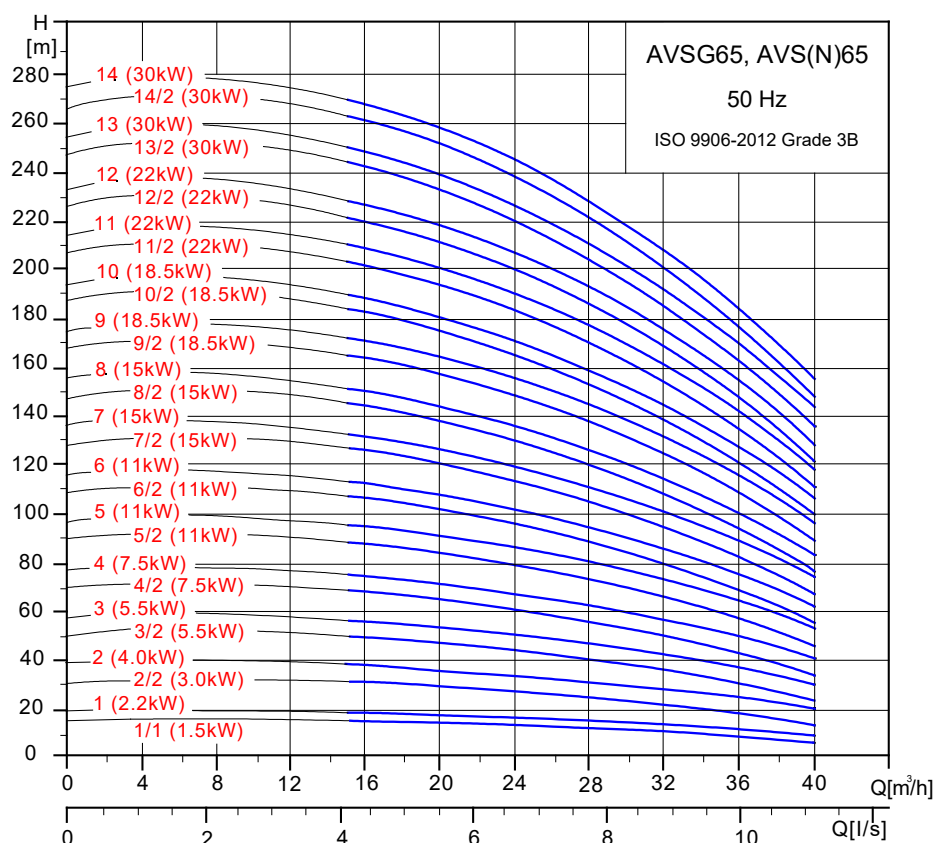




Dimensions and Weights

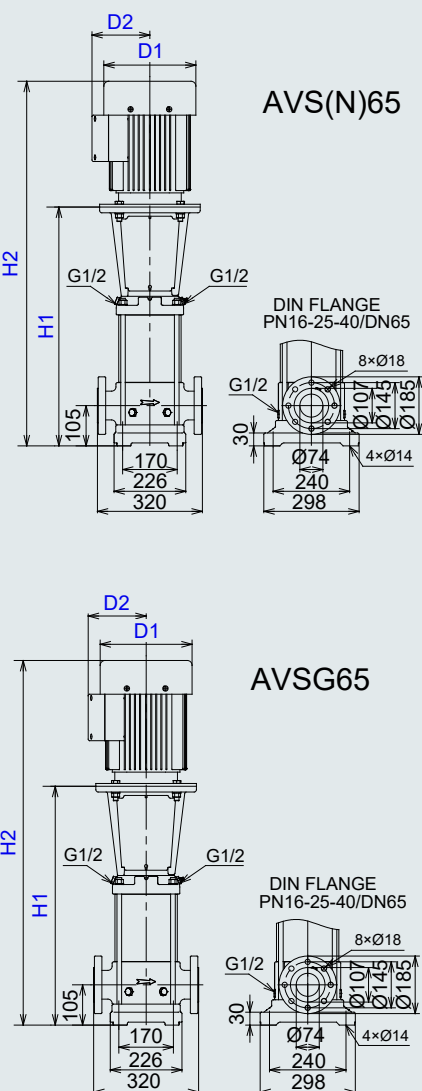
Model	P2 [kW]	AVS(N), AVSG		AVS(N)		AVSG		AVS(N)	AVSG
		D1	D2	H1	H2	H1	H2	Net Weight [Kg]	
		Dimension [mm]							
AVS(N,G) 50B1-51.1	1.1	150	125	352	620	354	622	44.5	44.9
AVS(N,G) 50B2-52.2	2.2	164	127	413	731	415	733	52.1	52.4
AVS(N,G) 50B3-54.0	4.0	186	120	463	803	465	805	57.4	59.2
AVS(N,G) 50B4-55.5	5.5	210	142	540	937	542	939	67.1	71.3
AVS(N,G) 50B5-55.5	5.5	210	142	585	982	587	984	69.1	73.9
AVS(N,G) 50B6-57.5	7.5	210	142	630	1027	632	1029	75.6	81.3
AVS(N,G) 50B7-57.5	7.5	210	142	675	1072	677	1074	77.6	82.1
AVS(N,G) 50B8-511	11.0	254	175	797	1296	799	1298	125.2	125.2
AVS(N,G) 50B10-511	11.0	254	175	887	1386	889	1388	128.2	133.2
AVS(N,G) 50B12-515	15.0	254	175	977	1476	979	1478	142.8	146.8
AVS(N,G) 50B14-515	15.0	254	175	1067	1566	1069	1568	145.8	151.8
AVS(N,G) 50B17-518	18.5	330	250	1202	1701	1204	1764	208.0	208.0

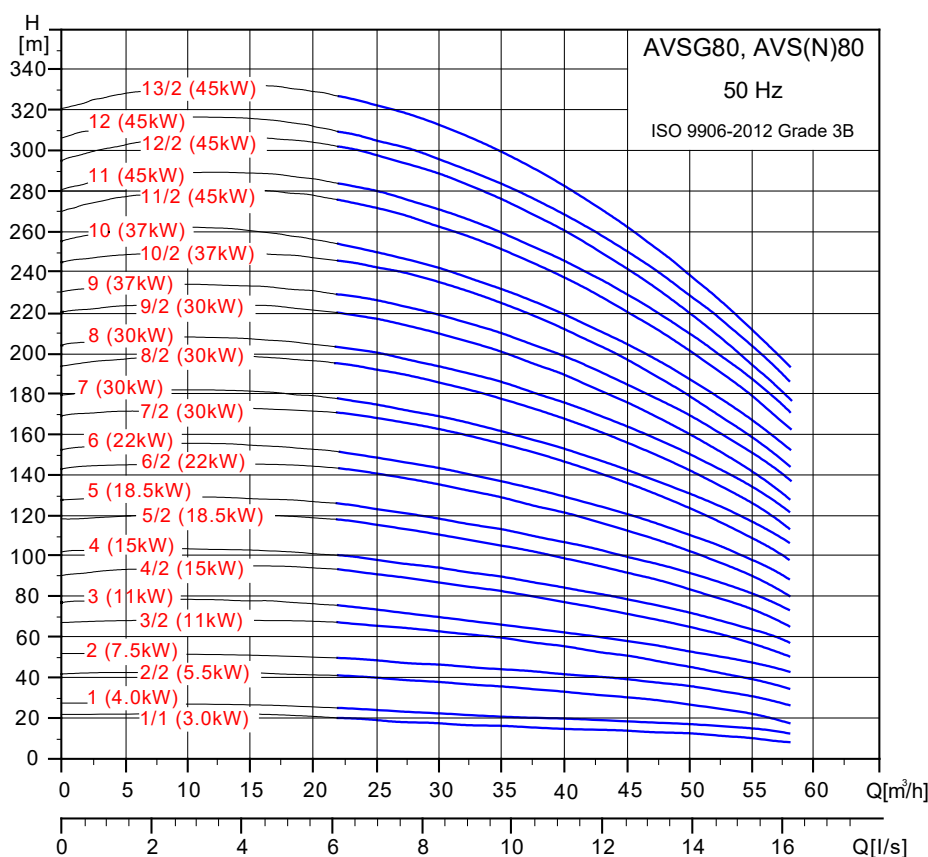




Dimensions and Weights

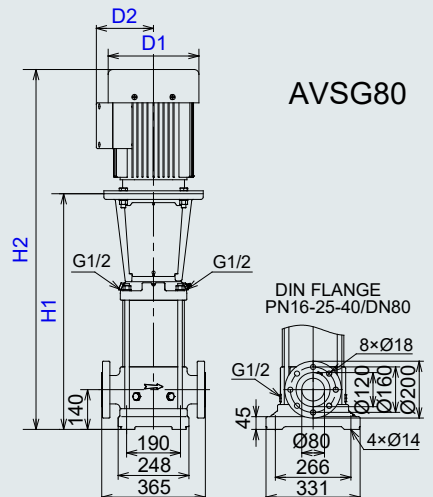
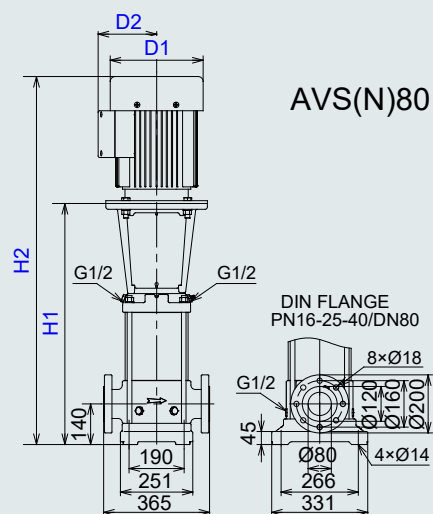
Model	P2 [kW]	AVS(N), AVSG		AVS(N)		AVSG		AVS(N)	AVSG
		D1	D2	H1	H2	H1	H2	Net Weight [Kg]	
		Dimension [mm]							
AVS(N,G) 651/1-51.5	1.5	164	127	455	773	455	773	60.2	61.6
AVS(N,G) 651-52.2	2.2	164	127	455	773	455	773	62.2	63.6
AVS(N,G) 652/2-53.0	3.0	186	120	525	865	525	865	70.5	72.6
AVS(N,G) 652-54.0	4.0	186	120	525	865	525	865	72.7	74.8
AVS(N,G) 653/2-55.5	5.5	210	142	645	1042	645	1042	100.8	100.5
AVS(N,G) 653-55.5	5.5	210	142	645	1042	645	1042	98.9	100.5
AVS(N,G) 654/2-57.5	7.5	210	142	715	1112	715	1112	107.1	108.6
AVS(N,G) 654-57.5	7.5	210	142	715	1112	715	1112	107.1	108.6
AVS(N,G) 655/2-511	11.0	254	175	895	1394	895	1394	128.2	149.2
AVS(N,G) 655-511	11.0	254	175	895	1394	895	1394	128.2	149.2
AVS(N,G) 656/2-511	11.0	254	175	965	1464	965	1464	132.2	152.1
AVS(N,G) 656-511	11.0	254	175	965	1464	965	1464	132.2	152.1
AVS(N,G) 657/2-515	15.0	254	175	1035	1534	1035	1534	165.3	167.5
AVS(N,G) 657-515	15.0	254	175	1035	1534	1035	1534	165.3	167.5
AVS(N,G) 658/2-515	15.0	254	175	1105	1604	1105	1604	167.7	170.5
AVS(N,G) 658-515	15.0	254	175	1105	1604	1105	1604	167.7	170.5
AVS(N,G) 659/2-518	18.5	330	250	1175	1735	1175	1735	219.1	221.6
AVS(N,G) 659-518	18.5	330	250	1175	1735	1175	1735	219.1	221.6
AVS(N,G) 6510/2-518	18.5	330	250	1245	1805	1245	1805	221.3	224.5
AVS(N,G) 6510-518	18.5	330	250	1245	1805	1245	1805	221.3	224.5
AVS(N,G) 6511/2-522	22.0	380	280	1315	1915	1315	1915	260.6	163.3
AVS(N,G) 6511-522	22.0	380	280	1315	1915	1315	1915	260.6	163.3
AVS(N,G) 6512/2-522	22.0	380	280	1385	1985	1385	1985	262.8	266.2
AVS(N,G) 6512-522	22.0	380	280	1385	1985	1385	1985	262.8	266.2
AVS(N,G) 6513/2-530	30.0	420	305	1455	2135	1455	2135	322.6	323.6
AVS(N,G) 6513-530	30.0	420	305	1455	2135	1455	2135	322.6	323.6
AVS(N,G) 6514/2-530	30.0	420	305	1525	2205	1525	2205	324.8	326.5
AVS(N,G) 6514-530	30.0	420	305	1525	2205	1525	2205	324.8	326.5

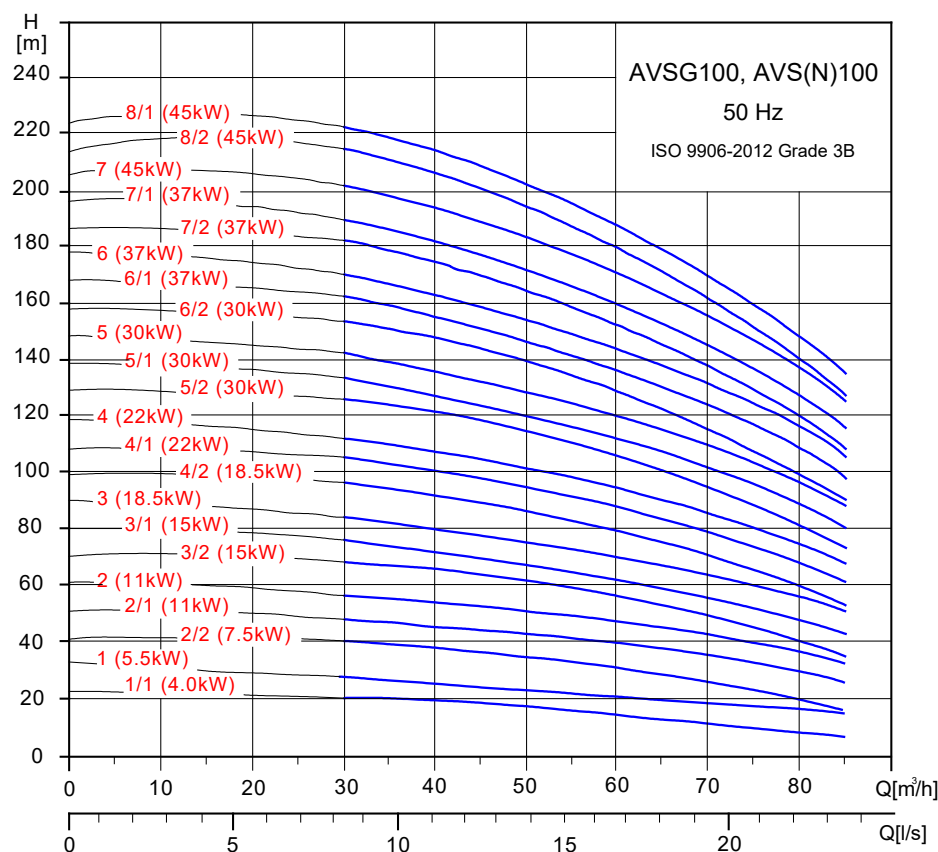




Dimensions and Weights

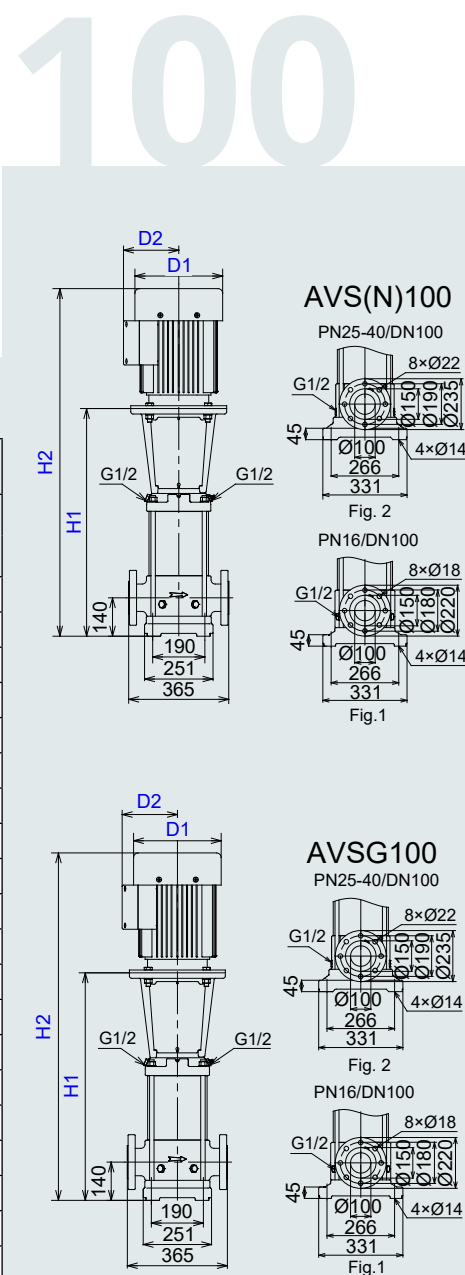
Model	P2 [kW]	AVS(N), AVSG		AVS(N)		AVSG		AVS(N)	AVSG
		D1	D2	H1	H2	H1	H2	Net Weight [Kg]	
		Dimension [mm]							
AVS(N,G) 801/1-53.0	3.0	186	120	560	900	560	900	77.8	81.0
AVS(N,G) 801-54.0	4.0	186	120	560	900	560	900	80.0	83.1
AVS(N,G) 802/2-55.5	5.5	210	142	640	1037	640	1037	105.8	111.2
AVS(N,G) 802-57.5	7.5	210	142	640	1037	640	1037	108.1	115.4
AVS(N,G) 803/2-511	11.0	254	175	830	1329	830	1329	153.0	157.6
AVS(N,G) 803-511	11.0	254	175	830	1329	830	1329	153.0	157.6
AVS(N,G) 804/2-515	15.0	254	175	910	1409	910	1409	169.1	173.0
AVS(N,G) 804-515	15.0	254	175	910	1409	910	1409	169.2	173.0
AVS(N,G) 805/2-518	18.5	330	250	990	1550	990	1550	220.9	225.0
AVS(N,G) 805-518	18.5	330	250	990	1550	990	1550	220.9	225.0
AVS(N,G) 806/2-522	22.0	380	280	1070	1670	1070	1670	260.5	264.8
AVS(N,G) 806-522	22.0	380	280	1070	1670	1070	1670	260.5	264.8
AVS(N,G) 807/2-530	30.0	420	305	1150	1830	1150	1830	318.6	352.2
AVS(N,G) 807-530	30.0	420	305	1150	1830	1150	1830	318.7	352.2
AVS(N,G) 808/2-530	30.0	420	305	1230	1910	1230	1910	322.1	328.2
AVS(N,G) 808-530	30.0	420	305	1230	1910	1230	1910	322.1	328.2
AVS(N,G) 809/2-530	30.0	420	305	1310	1990	1310	1990	325.9	330.9
AVS(N,G) 809-537	37.0	420	305	1310	1990	1310	1990	349.0	345.9
AVS(N,G) 8010/2-537	37.0	420	305	1390	2070	1390	2070	352.5	348.8
AVS(N,G) 8010-537	37.0	420	305	1390	2070	1390	2070	352.5	348.8
AVS(N,G) 8011/2-545	45.0	470	335	1470	2185	1470	2185	410.8	416.3
AVS(N,G) 8011-545	45.0	470	335	1470	2185	1470	2185	410.8	416.3
AVS(N,G) 8012/2-545	45.0	470	335	1550	2265	1550	2265	414.4	419.1
AVS(N,G) 8012-545	45.0	470	335	1550	2265	1550	2265	414.4	419.1
AVS(N,G) 8013/2-545	45.0	470	335	1630	2345	1630	2345	418.0	421.9

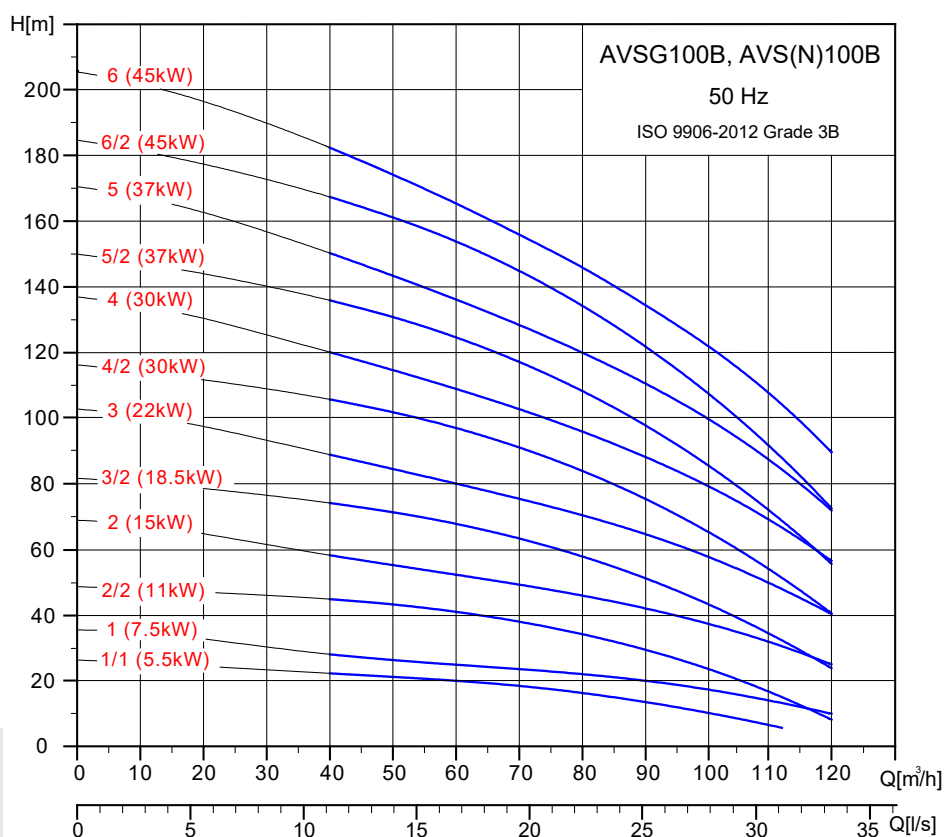




Dimensions and Weights

Model	P2 [kW]	Fig.	AVS(N), AVSG		AVS(N)		AVSG		AVS(N)	AVSG
			D1	D2	H1	H2	H1	H2	Net Weight [Kg]	
			Dimension [mm]							
AVS(N,G) 1001/1-54.0	4.0	1	186	124	563	903	563	903	82.0	84.4
AVS(N,G) 1001-55.5	5.5	1	210	142	563	903	563	903	104.7	110.1
AVS(N,G) 1002/2-57.5	7.5	1	210	142	645	1042	645	1042	113.7	117.3
AVS(N,G) 1002/1-511	11.0	1	254	175	755	1524	755	1524	151.4	156.0
AVS(N,G) 1002-511	11.0	1	254	175	755	1524	755	1524	152.2	156.0
AVS(N,G) 1003/2-515	15.0	1	254	175	838	1337	838	1337	168.0	171.8
AVS(N,G) 1003/1-515	15.0	1	254	175	838	1337	838	1337	168.8	171.8
AVS(N,G) 1003-518	18.5	1	330	250	838	1398	838	1398	217.0	221.0
AVS(N,G) 1004/2-518	18.5	1	330	250	920	1480	920	1480	220.7	223.9
AVS(N,G) 1004/1-522	22.0	1	380	280	920	1520	920	1520	256.8	261.0
AVS(N,G) 1004-522	22.0	1	380	280	920	1520	920	1520	256.8	261.0
AVS(N,G) 1005/2-530	30.0	1	420	305	1003	1683	1003	1683	315.1	321.5
AVS(N,G) 1005/1-530	30.0	1	420	305	1003	1683	1003	1683	315.1	321.5
AVS(N,G) 1005-530	30.0	1	420	305	1003	1683	1003	1683	315.4	321.5
AVS(N,G) 1006/2-530	30.0	2	420	305	1085	1765	1085	1765	318.1	324.5
AVS(N,G) 1006/1-537	37.0	2	420	305	1085	1765	1085	1765	341.2	339.5
AVS(N,G) 1006-537	37.0	2	420	305	1085	1765	1085	1765	341.2	339.6
AVS(N,G) 1007/2-537	37.0	2	420	305	1168	1848	1168	1848	344.9	342.9
AVS(N,G) 1007/1-537	37.0	2	420	305	1168	1848	1168	1848	345.0	342.5
AVS(N,G) 1007-545	45.0	2	470	335	1168	1848	1168	1848	399.7	407.3
AVS(N,G) 1008/2-545	45.0	2	470	335	1250	1965	1250	1965	403.6	410.7
AVS(N,G) 1008/1-545	45.0	2	470	335	1250	1965	1250	1965	403.6	410.4

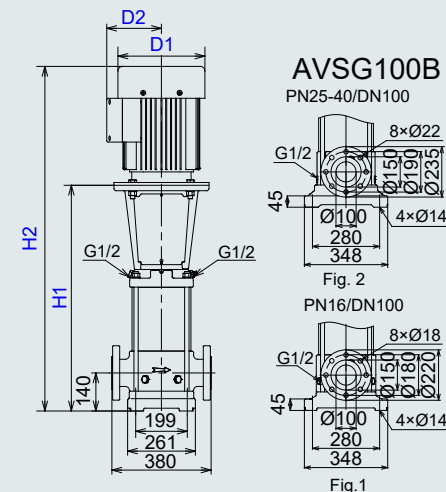
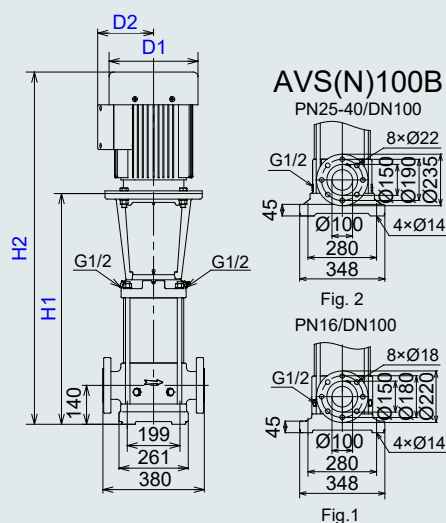


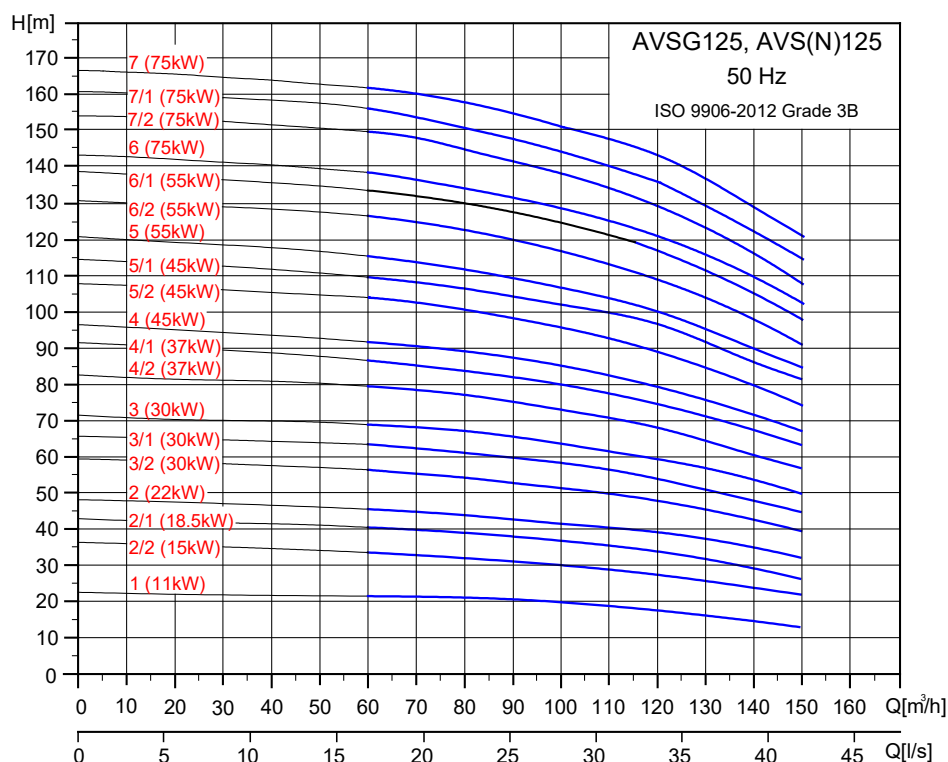


Dimensions and Weights

Model	P2 [kW]	Fig.	AVS(N), AVSG		AVS(N)		AVSG		AVS(N)	AVSG
			D1	D2	H1	H2	H1	H2	Net Weight [Kg]	
			Dimension [mm]							
AVS(N,G) 100B1/1-55.5	5.5	1	210	142	572.5	969.5	572.5	969.5	107.9	115.9
AVS(N,G) 100B1-57.5	7.5	1	210	142	572.5	969.5	572.5	969.5	113.1	121.1
AVS(N,G) 100B2/2-511	11.0	1	254	175	774.5	1273.5	774.5	1273.5	155.2	162.2
AVS(N,G) 100B2-515	15.0	1	254	175	774.5	1273.5	774.5	1273.5	167.8	174.8
AVS(N,G) 100B3/2-518	18.5	1	330	250	866.5	1426.5	866.5	1426.5	220.0	228.0
AVS(N,G) 100B3-522	22.0	1	380	280	866.5	1426.5	866.5	1426.5	256.0	264.0
AVS(N,G) 100B4/2-530	30.0	1	420	305	958.5	1638.5	958.5	1638.5	319.0	326.0
AVS(N,G) 100B4-530	30.0	1	420	305	958.5	1638.5	958.5	1638.5	319.0	326.0
AVS(N,G) 100B5/2-537	37.0	2	420	305	1051	1731	1051	1731	346.0	354.0
AVS(N,G) 100B5-537	37.0	2	420	305	1051	1731	1051	1731	346.0	354.0
AVS(N,G) 100B6/2-545	45.0	2	470	335	1143	1858	1143	1858	407.0	415.0
AVS(N,G) 100B6-545	45.0	2	470	335	1143	1858	1143	1858	407.0	415.0

100B

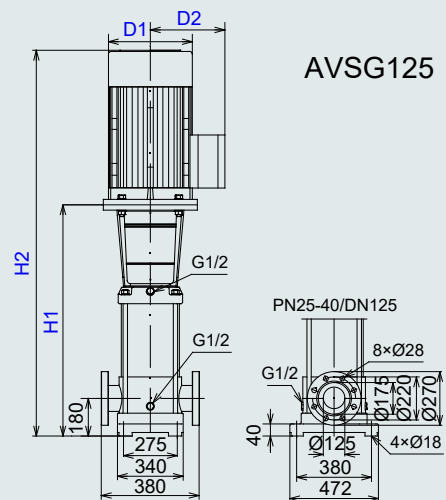
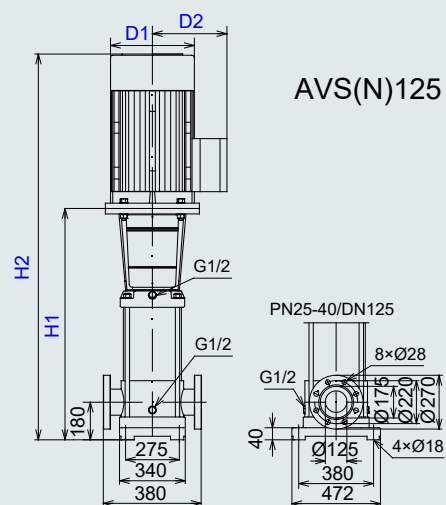


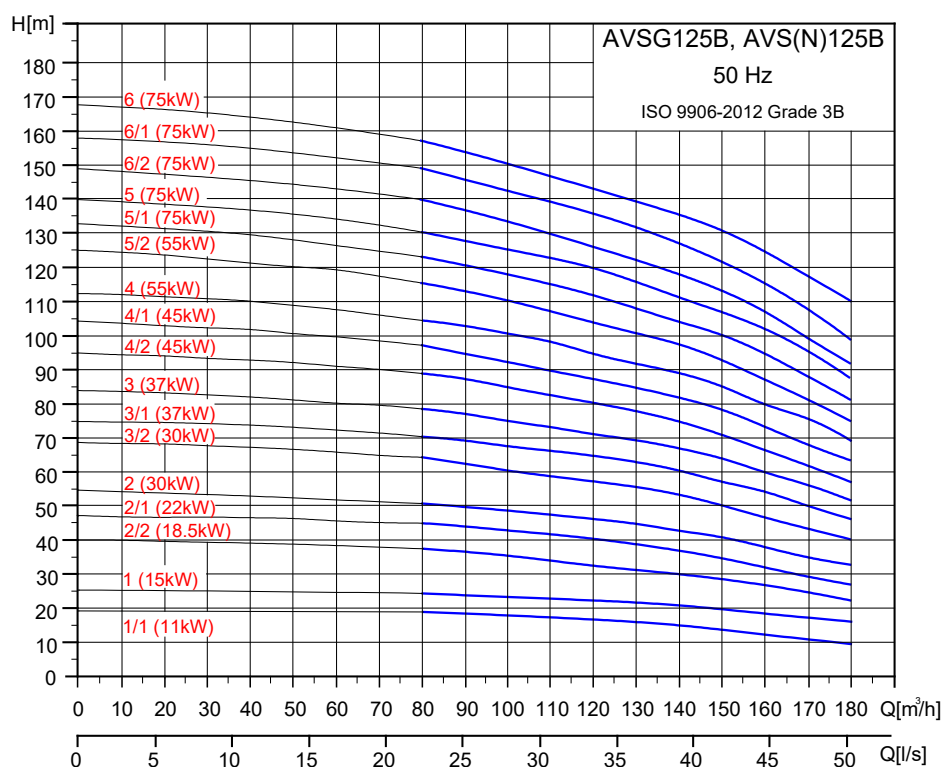


Dimensions and Weights

Model	P2 [kW]	AVS(N), AVSG		AVS(N)		AVSG		AVS(N)	AVSG
		D1	D2	H1	H2	H1	H2	Net Weight [Kg]	
		Dimension [mm]							
AVS(N,G) 1251-511	11	254	175	840	1339	840	1339	230	230
AVS(N,G) 1252/2-515	15	254	175	1000	1499	1000	1499	245	245
AVS(N,G) 1252/1-518	18.5	330	250	1000	1560	1000	1560	250	250
AVS(N,G) 1252-522	22	380	280	1000	1600	1000	1600	285	285
AVS(N,G) 1253/2-530	30	420	305	1160	1840	1160	1840	326	326
AVS(N,G) 1253/1-530	30	420	305	1160	1840	1160	1840	360	360
AVS(N,G) 1253-530	30	420	305	1160	1840	1160	1840	360	360
AVS(N,G) 1254/2-537	37	420	305	1320	2000	1320	2000	400	400
AVS(N,G) 1254/1-537	37	420	305	1320	2000	1320	2000	400	400
AVS(N,G) 1254-545	45	470	335	1320	2035	1320	2035	460	460
AVS(N,G) 1255/2-545	45	470	335	1480	2195	1480	2195	470	470
AVS(N,G) 1255/1-545	45	470	335	1480	2195	1480	2195	470	470
AVS(N,G) 1255-555	55	510	370	1510	2295	1510	2295	575	575
AVS(N,G) 1256/2-555	55	510	370	1670	2455	1670	2455	585	585
AVS(N,G) 1256/1-555	55	510	370	1670	2455	1670	2455	585	585
AVS(N,G) 1256-575	75	580	410	1670	2515	1670	2515	705	705
AVS(N,G) 1257/2-575	75	580	410	1830	2675	1830	2675	715	715
AVS(N,G) 1257/1-575	75	580	410	1830	2675	1830	2675	715	715
AVS(N,G) 1257-575	75	580	410	1830	2675	1830	2675	715	715

125

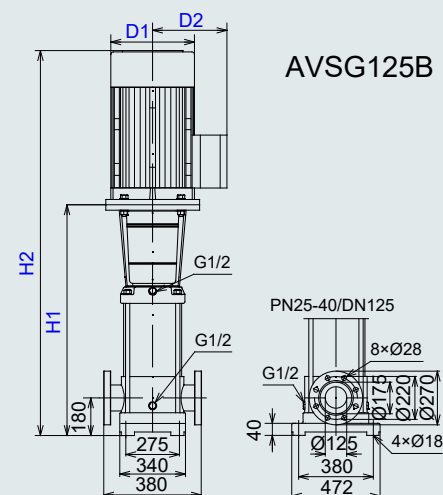
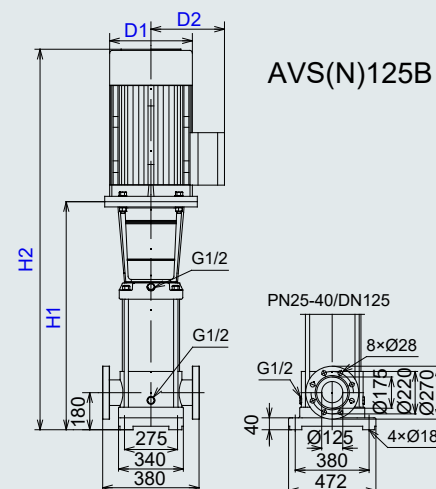


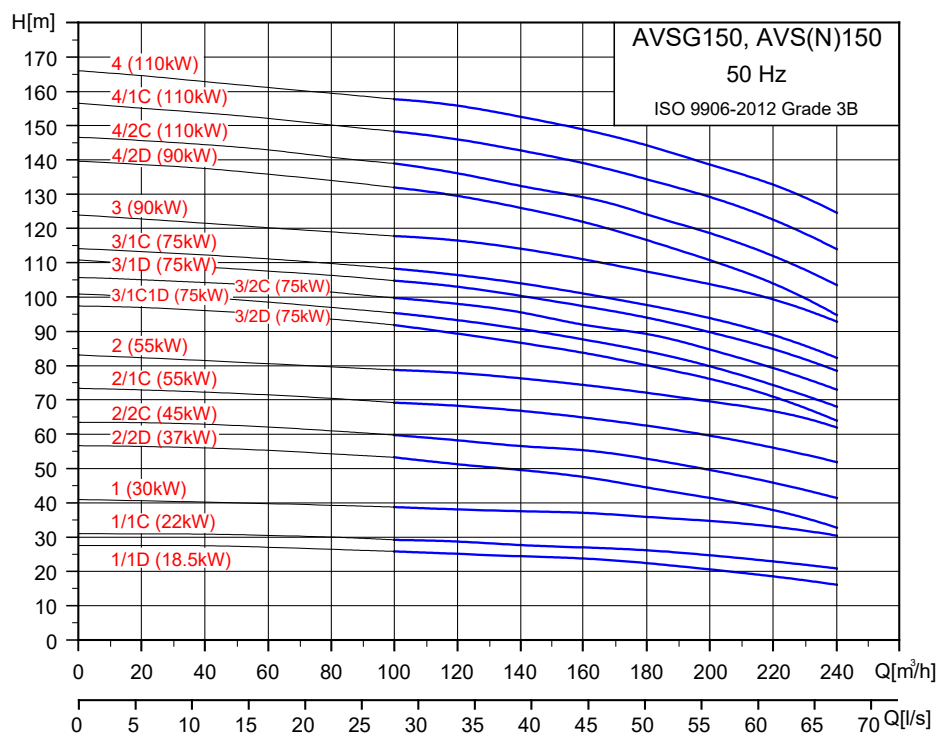


Dimensions and Weights

Model	P2 [kW]	AVS(N), AVSG		AVS(N)		AVSG		AVS(N)	AVSG
		D1	D2	H1	H2	H1	H2	Net Weight [Kg]	
		Dimension [mm]							
AVS(N,G) 125B1/1-511	11	254	175	840	1339	840	1339	230	230
AVS(N,G) 125B1-515	15	254	175	840	1339	840	1339	235	235
AVS(N,G) 125B2/2-518	18.5	330	250	1000	1560	1000	1560	250	250
AVS(N,G) 125B2/1-522	22	380	280	1000	1600	1000	1600	295	295
AVS(N,G) 125B2-530	30	420	305	1000	1680	1000	1680	317	317
AVS(N,G) 125B3/2-530	30	420	305	1160	1840	1160	1840	360	360
AVS(N,G) 125B3/1-537	37	420	305	1160	1840	1160	1840	360	360
AVS(N,G) 125B3-537	37	420	305	1160	1840	1160	1840	385	385
AVS(N,G) 125B4/2-545	45	470	335	1320	2035	1320	2035	460	460
AVS(N,G) 125B4/1-545	45	470	335	1320	2035	1320	2035	460	460
AVS(N,G) 125B4-555	55	510	370	1350	2135	1350	2135	560	560
AVS(N,G) 125B5/2-555	55	510	370	1510	2295	1510	2295	570	570
AVS(N,G) 125B5/1-575	75	580	410	1510	2355	1510	2355	690	690
AVS(N,G) 125B5-575	75	580	410	1510	2355	1510	2355	690	690
AVS(N,G) 125B6/2-575	75	580	410	1670	2515	1670	2515	700	700
AVS(N,G) 125B6/1-575	75	580	410	1670	2515	1670	2515	700	700
AVS(N,G) 125B6-575	75	580	410	1670	2515	1670	2515	700	700

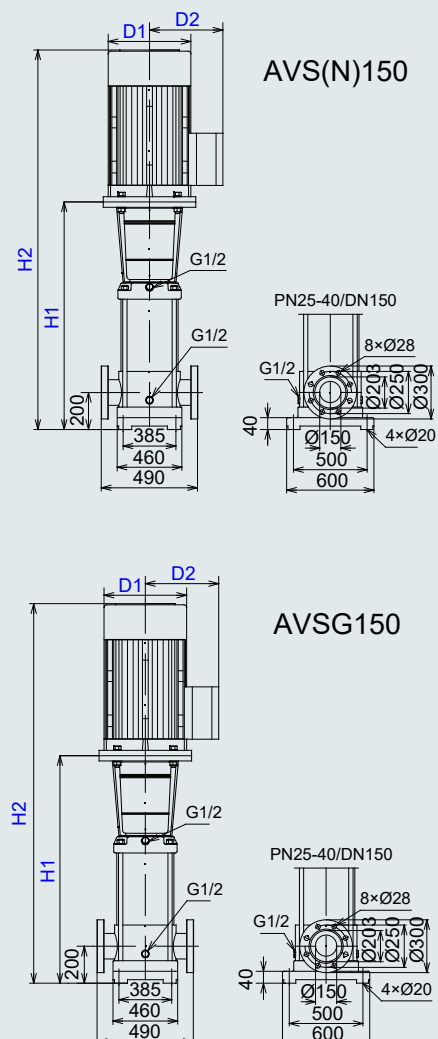
125B





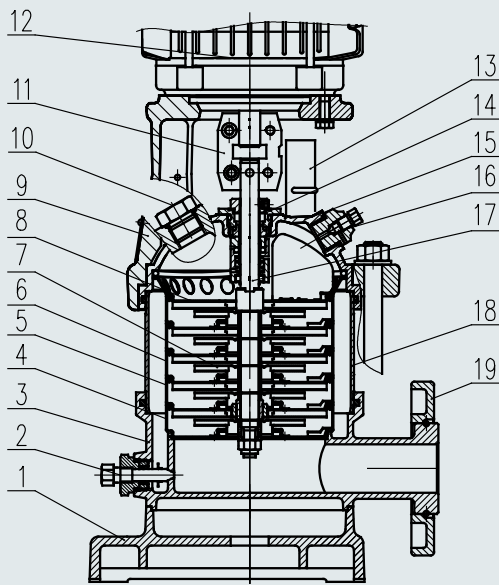
Dimensions and Weights

Model	P2 [kW]	AVS(N), AVSG		AVS(N)		AVSG		AVS(N)	AVSG
		D1	D2	H1	H2	H1	H2	Net Weight [Kg]	
		Dimension [mm]							
AVS(N,G) 1501/1D-518	18,5	330	250	907	1467	907	1467	311	311
AVS(N,G) 1501/1C-522	22	380	280	907	1467	907	1467	347	347
AVS(N,G) 1501-530	30	420	305	907	1587	907	1587	403	403
AVS(N,G) 1502/2D-537	37	420	305	1101	1781	1101	1781	447	447
AVS(N,G) 1502/2C-545	45	470	335	1101	1816	1101	1816	504	504
AVS(N,G) 1502/1C-555	55	510	370	1131	1916	1131	1916	595	595
AVS(N,G) 1502-555	55	510	370	1131	1916	1131	1916	595	595
AVS(N,G) 1503/2D-575	75	580	410	1325	2170	1325	2170	748	748
AVS(N,G) 1503/1C1D-575	75	580	410	1325	2170	1325	2170	748	748
AVS(N,G) 1503/2C-575	75	580	410	1325	2170	1325	2170	748	748
AVS(N,G) 1503/1D-575	75	580	410	1325	2170	1325	2170	748	748
AVS(N,G) 1503/1C-575	75	580	410	1325	2170	1325	2170	748	748
AVS(N,G) 1503-590	90	580	410	1325	2220	1325	2220	817	817
AVS(N,G) 1504/2D-590	90	580	410	1519	2414	1519	2414	830	830
AVS(N,G) 1504/2C-5110	110	645	530	1519	2619	1519	2619	1180	1180
AVS(N,G) 1504/1C-5110	110	645	530	1519	2619	1519	2619	1180	1180
AVS(N,G) 1504-5110	110	645	530	1519	2619	1519	2619	1180	1180

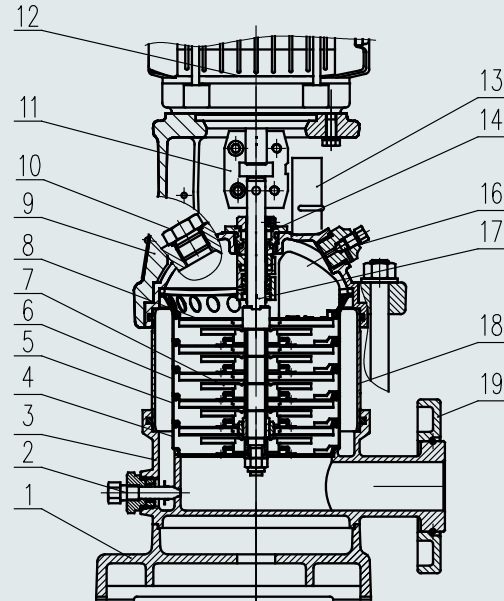


Sectional View and Materials

AVS(N) 25/25B/25C/32/32B



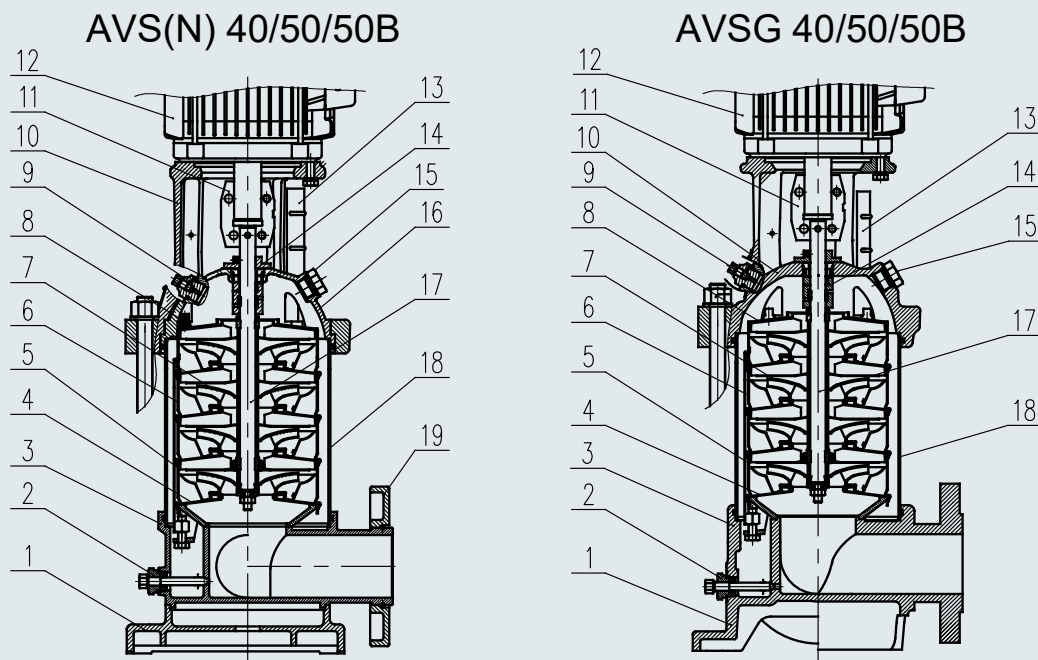
AVSG 25/25B/25C/32/32B



No.	Name	Material	AVS25, 25B, 25C, 32, 32B			AVSN25, 25B, 25C, 32, 32B			AVSG25, 25B, 25C, 32, 32B		
			EUROPE	USA	JIS	EUROPE	USA	JIS	EUROPE	USA	JIS
1	Base	Cast iron	EN-GL-200	ASTM 30B	FC200	EN-GL-200	ASTM 30B	FC200	EN-GL-200	ASTM 30B	FC200
2	Drain plug	Stainless steel	1.4301	AISI 304	SUS304	1.4401	AISI 316	SUS316	1.4301	AISI 304	SUS304
3	Lower casing	Stainless steel	1.4301	AISI 304	SCS13	1.4401	AISI 316	SCS14	EN-GL-200	ASTM 30B	FC200
4	Intermediate casing	Stainless steel	1.4301	AISI 304	SUS304	1.4401	AISI 316	SUS316	1.4301	AISI 304	SUS304
5	Intermediate casing with bearing	Stainless steel	1.4301	AISI 304	SUS304	1.4401	AISI 316	SUS316	1.4301	AISI 304	SUS304
6	Intermediate casing	Stainless steel	1.4301	AISI 304	SUS304	1.4401	AISI 316	SUS316	1.4301	AISI 304	SUS304
7	Impeller	Stainless steel	1.4301	AISI 304	SUS304	1.4401	AISI 316	SUS316	1.4301	AISI 304	SUS304
8	Intermediate casing	Stainless steel	1.4301	AISI 304	SUS304	1.4401	AISI 316	SUS316	1.4301	AISI 304	SUS304
9	Frame	Cast iron	EN-GL-200	ASTM 30B	FC200	EN-GL-200	ASTM 30B	FC200	EN-GL-200	ASTM 30B	FC200
10	Priming plug	Stainless steel	1.4301	AISI 304	SUS304	1.4401	AISI 316	SUS316	1.4301	AISI 304	SUS304
11	Coupling	Cast iron	400-18S	ASTM-60-40-18	FCD400	400-18S	ASTM-60-40-18	FCD400	EN-GL-200	ASTM 30B	FC200
12	Motor	-	-			-			-		
13	Coupling guard	Stainless steel	1.4301	AISI 304	SUS304	1.4401	AISI 316	SUS316	1.4301	AISI 304	SUS304
14	Mechanical seal	Tungsten carbide/ Carbon + Rubber	WC/C+FKM			WC/C+FKM			WC/C+FKM		
15	Upper casing	Stainless steel	1.4301	AISI 304	SCS13	1.4401	AISI 316	SCS14	-		
16	Air vent valve	Stainless steel	1.4301	AISI 304	SUS304	1.4401	AISI 316	SUS316	1.4301	AISI 304	SUS304
17	Shaft	Stainless steel	1.4301	AISI 304	SUS304	1.4401	AISI 316	SUS316	1.4301	AISI 304	SUS304
18	Outer casing	Stainless steel	1.4301	AISI 304	SUS304	1.4401	AISI 316	SUS316	-		
		Carbon steel casting	-			-			G17Mn5	ASTM-485-275 (70-40)	SC480
19	Flange	Carbon steel casting	G17Mn5	SC480	SC480	G17Mn5	ASTM-485-275 (70-40)	SC480	G17Mn5	ASTM-485-275 (70-40)	SC480

The table above shows equivalent materials for European, American and Japanese standards

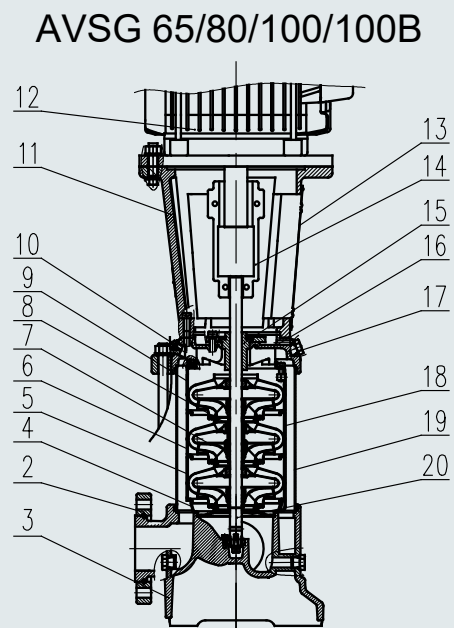
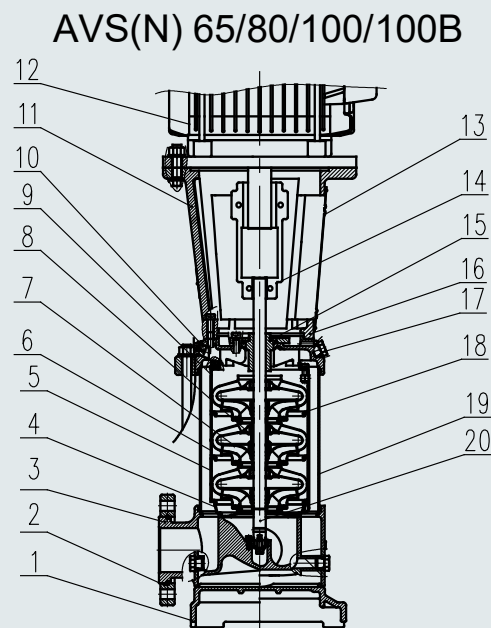
Sectional View and Materials



No.	Name	Material	AVS40, 50, 50B			AVSN40, 50, 50B			AVSG40, 50, 50B		
			EUROPE	USA	JIS	EUROPE	USA	JIS	EUROPE	USA	JIS
1	Base	Cast iron	EN-GL-200	ASTM 30B	FC200	EN-GL-200	ASTM 30B	FC200	EN-GL-200	ASTM 30B	FC200
2	Drain plug	Stainless steel	1.4301	AISI 304	SUS304	1.4401	AISI 316	SUS316	1.4301	AISI 304	SUS304
3	Lower casing	Stainless steel	1.4301	AISI 304	SCS13	1.4401	AISI 316	SCS14	-		
		Cast iron	-			-			EN-GL-200	ASTM 30B	FC200
4	Suction cover	Stainless steel	1.4301	AISI 304	SUS304	1.4401	AISI 316	SUS316	1.4301	AISI 304	SUS304
5	Intermediate casing with bearing	Stainless steel	1.4301	AISI 304	SUS304	1.4401	AISI 316	SUS316	1.4301	AISI 304	SUS304
6	Intermediate casing	Stainless steel	1.4301	AISI 304	SUS304	1.4401	AISI 316	SUS316	1.4301	AISI 304	SUS304
7	Impeller	Stainless steel	1.4301	AISI 304	SUS304	1.4401	AISI 316	SUS316	1.4301	AISI 304	SUS304
8	Intermediate casing	Stainless steel	1.4301	AISI 304	SUS304	1.4401	AISI 316	SUS316	1.4301	AISI 304	SUS304
9	Air vent valve	Stainless steel	1.4301	AISI 304	SUS304	1.4401	AISI 316	SUS316	1.4301	AISI 304	SUS304
10	Frame	Cast iron	EN-GL-200	ASTM 30B	FC200	EN-GL-200	ASTM 30B	FC200	EN-GL-200	ASTM 30B	FC200
11	Coupling	Cast iron	400-18S	ASTM-60-40-18	FCD400	400-18S	ASTM-60-40-18	FCD400	400-18S	ASTM-60-40-18	FC400
12	Motor	-	-			-			-		
13	Coupling guard	Stainless steel	1.4301	AISI 304	SUS304	1.4401	AISI 316	SUS316	1.4301	AISI 304	SUS304
14	Mechanical seal	Tungsten carbide/ Carbon + Rubber	WC/C+FKM			WC/C+FKM			WC/C+FKM		
15	Priming plug	Stainless steel	1.4301	AISI 304	SUS304	1.4401	AISI 316	SUS316	1.4301	AISI 304	SUS304
16	Upper casing	Stainless steel	1.4301	AISI 304	SCS13	1.4401	AISI 316	SCS14	-		
17	Shaft	Stainless steel	1.4301	AISI 304	SUS304	1.4401	AISI 316	SUS316	1.4301	AISI 304	SUS304
18	Outer casing	Stainless steel	1.4301	AISI 304	SUS304	1.4401	AISI 316	SUS316	1.4301	AISI 304	SUS304
19	Flange	Carbon steel casting	G17Mn5	ASTM-485-275 (70-40)	SC480	G17Mn5	ASTM-485-275 (70-40)	SC480	-		

The table above shows equivalent materials for European, American and Japanese standards

Sectional View and Materials

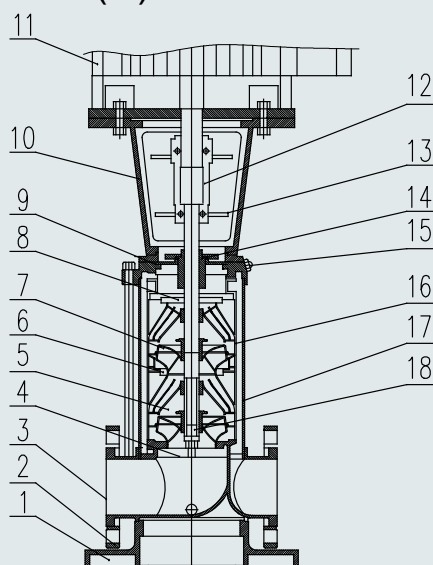


No.	Name	Material	AVS65, 80, 100, 100B			AVSN65, 80, 100, 100B			AVSG65, 80, 100, 100B		
			EUROPE	USA	JIS	EUROPE	USA	JIS	EUROPE	USA	JIS
1	Base	Cast iron	EN-GL-200	ASTM 30B	FC200	EN-GL-200	ASTM 30B	FC200	-		
2	Flange	Carbon steel casting	G17Mn5	ASTM-485-275 (70-40)	SC480	G17Mn5	ASTM-485-275 (70-40)	SC480	G17Mn5	ASTM-485-275 (70-40)	SC480
3	Lower casing	Stainless steel	1.4301	AISI 304	SCS13	1.4401	AISI 316	SCS14	-		
		Cast iron	-			-			EN-GL-200	ASTM 30B	FC200
4	Suction cover	Stainless steel	1.4301	AISI 304	SUS304	1.4401	AISI 316	SUS316	1.4301	AISI 304	SUS304
5	Intermediate casing with bearing	Stainless steel	1.4301	AISI 304	SUS304	1.4401	AISI 316	SUS316	1.4301	AISI 304	SUS304
6	Intermediate casing	Stainless steel	1.4301	AISI 304	SUS304	1.4401	AISI 316	SUS316	1.4301	AISI 304	SUS304
7	Impeller	Stainless steel	1.4301	AISI 304	SUS304	1.4401	AISI 316	SUS316	1.4301	AISI 304	SUS304
8	Bearing sleeve	Stainless steel casting and tungsten carbide	1.4301 + WC	AISI 304 + WC	SCS14A + WC	1.4401 + WC	AISI 316 + WC	SCS14A + WC	1.4301 + WC	AISI 304 + WC	SCS14A + WC
9	Intermediate casing	Stainless steel	1.4301	AISI 304	SUS304	1.4401	AISI 316	SUS316	1.4301	AISI 304	SUS304
10	Frame	Stainless steel	1.4301	AISI 304	SUS304	1.4401	AISI 316	SUS316	1.4301	AISI 304	SUS304
11	Air vent valve	Cast iron	EN-GL-200	ASTM 30B	FCD200	EN-GL-200	ASTM 30B	FC200	EN-GL-200	ASTM 30B	FC200
12	Motor	-	-			-			-		
13	Coupling guard	Stainless steel	1.4301	AISI 304	SUS304	1.4401	AISI 316	SUS316	1.4301	AISI 304	SUS304
14	Coupling	Cast iron	400-18S	ASTM-60-40-18	FCD400	400-18S	ASTM-60-40-18	FCD400	400-18S	ASTM-60-40-18	FCD400
15	Mechanical seal	Tungsten carbide/Carbon + Rubber	WC/C+FKM			WC/C+FKM			WC/C+FKM		
16	Upper casing	Stainless steel	1.4301	AISI 304	SCS13	1.4401	AISI 316	SCS14	1.4301	AISI 304	SUS304
17	Priming plug	Stainless steel	1.4301	AISI 304	SUS304	1.4401	AISI 316	SUS316	1.4301	AISI 304	SUS304
18	Band	Stainless steel	1.4301	AISI 304	SUS304	1.4401	AISI 316	SUS316	1.4301	AISI 304	SUS304
19	Outer casing	Stainless steel	1.4301	AISI 304	SUS304	1.4401	AISI 316	SUS316	1.4301	AISI 304	SUS304
20	Shaft	Stainless steel	1.4301	AISI 304	SUS304	1.4401	AISI 316	SUS316	1.4301	AISI 304	SUS304

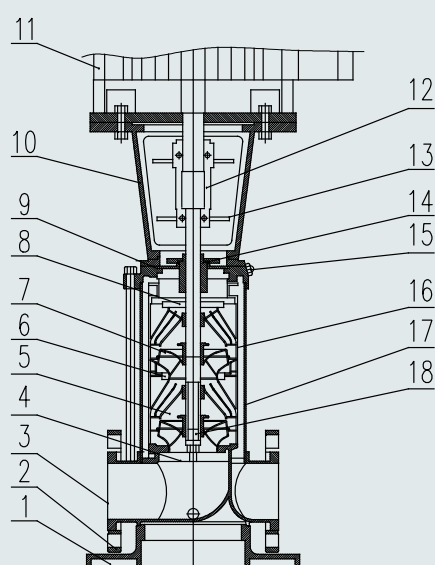
The table above shows equivalent materials for European, American and Japanese standards

Sectional View and Materials

AVS(N) 125/125B/150



AVSG 125/125B/150



No.	Name	Material	AVS125, 125B, 150			AVSN125, 125B, 150			AVSG125, 125B, 150		
			EUROPE	USA	JIS	EUROPE	USA	JIS	EUROPE	USA	JIS
1	Base	Cast iron	EN-GL-200	ASTM 30B	FC200	EN-GL-200	ASTM 30B	FC200	EN-GL-200	ASTM 30B	FC200
2	Flange	Carbon steel casting	G17Mn5	ASTM-485-275 (70-40)	SC480	G17Mn5	ASTM-485-275 (70-40)	SC480	G17Mn5	ASTM-485-275 (70-40)	SC480
3	Lower casing	Stainless steel	1.4301	AISI 304	SCS13	1.4401	AISI 316	SCS14	-		
		Cast iron	-			-			EN-GL-200	ASTM 30B	FC200
4	Suction cover	Stainless steel	1.4301	AISI 304	SUS304	1.4401	AISI 316	SUS316	1.4301	AISI 304	SUS304
5	Intermediate casing	Stainless steel	1.4301	AISI 304	SUS304	1.4401	AISI 316	SUS316	1.4301	AISI 304	SUS304
6	Intermediate casing with bearing	Stainless steel	1.4301	AISI 304	SUS304	1.4401	AISI 316	SUS316	1.4301	AISI 304	SUS304
7	Impeller	Stainless steel	1.4301	AISI 304	SUS304	1.4401	AISI 316	SUS316	1.4301	AISI 304	SUS304
8	Intermediate casing	Stainless steel	1.4301	AISI 304	SUS304	1.4401	AISI 316	SUS316	1.4301	AISI 304	SUS304
9	Upper casing	Stainless steel	1.4301	AISI 304	SCS13	1.4401	AISI 316	SCS14	-		
		Cast iron	-			-			EN-GL-200	ASTM 30B	FC200
10	Frame	Cast iron	EN-GL-200	ASTM 30B	FC200	EN-GL-200	ASTM 30B	FC200	EN-GL-200	ASTM 30B	FC200
11	Motor	-	-			-			-		
12	Coupling	Cast iron	400-18S	ASTM-60-40-18	FCD400	400-18S	ASTM-60-40-18	FCD400	400-18S	ASTM-60-40-18	FCD400
13	Coupling guard	Stainless steel	1.4301	AISI 304	SUS304	1.4401	AISI 316	SUS316	1.4301	AISI 304	SUS304
14	Mechanical seal	Tungsten carbide/ Carbon + Rubber	WC/C+FKM			WC/C+FKM			WC/C+FKM		
15	Priming plug	Stainless steel	1.4301	AISI 304	SUS304	1.4401	AISI 316	SUS316	1.4301	AISI 304	SUS304
16	Band	Stainless steel	1.4301	AISI 304	SUS304	1.4401	AISI 316	SUS316	1.4301	AISI 304	SUS304
17	Outer casing	Stainless steel	1.4301	AISI 304	SUS304	1.4401	AISI 316	SUS316	1.4301	AISI 304	SUS304
18	Shaft	Stainless steel	1.4301	AISI 304	SUS304	1.4401	AISI 316	SUS316	1.4301	AISI 304	SUS304

The table above shows equivalent materials for European, American and Japanese standards

Motor Data

50Hz

IE2 Motor Type					Nominal current in [A]			
HP	KW	Pole	Flange	Frame	3~220 V	3~240 V	3~380 V	3~415 V
0.5	0.37	2	V18	71M	1.6	1.5	1.0	0.9
0.75	0.55			71M	2.3	2.1	1.4	1.2
1.0	0.75			80M	3.1	2.8	1.8	1.6
1.5	1.1			80M	4.4	4.0	2.5	2.3
2.0	1.5			90S	5.8	5.3	3.3	3.1
3.0	2.2			90L	8.2	7.5	4.7	4.3
4.0	3.0			100L	10.7	9.8	6.2	5.7
5.5	4.0			112M	13.9	12.8	8.1	7.4
7.5	5.5			-	3~380 V	3~415 V	3~660 V	3~690 V
10	7.5			132S	10.9	10.0	6.3	6.0
15	11	V1	V1	132S	14.5	13.3	8.4	8.0
20	15			160M	21.0	19.2	12.1	11.6
25	18.5			160M	28.8	26.0	16.3	15.9
30	22			160L	34.7	31.8	20.0	19.1
40	30			180M	41.1	37.6	23.7	22.6
50	37			200L	55.7	51.0	32.1	30.7
60	45			200L	68.3	62.5	39.3	37.6
75	55			225M	82.7	75.7	47.6	45.5
100	75			250M	101.0	92.5	58.2	55.6
120	90			280S	137.0	125.4	78.9	75.4
147	110			280M	163.0	149.3	93.8	89.8
				315S	197.0	180.4	113.4	108.5

Nominal current is for reference only

Motor Type									Mounting Dimension [mm]						
HP	kW	Pole	Flang	IE	Frame	Bearing		Fig	D	E	M	N	P	S	T
						Load side	Opposite side								
0.5	0.37	2	V18	IE 2/3	71M	6202ZZ CM	6202ZZ CM	1	14 ^{+0.008} _{-0.003}	30	85	70	105	4-M6	2.5
0.75	0.55			IE 2/3	71M	6202ZZ CM	6202ZZ CM	1	14 ^{+0.008} _{-0.003}	30	85	70	105	4-M6	2.5
1.0	0.75			IE 2/3	80M	6204ZZ C3	6204ZZ C3	1	19 ^{+0.009} _{-0.004}	40	100	80	120	4-M6	3.0
1.5	1.1			IE 2/3	80M	6204ZZ C3	6204ZZ C3	1	19 ^{+0.009} _{-0.004}	40	100	80	120	4-M6	3.0
2.0	1.5			IE 2/3	90S	6305ZZ C3	6205ZZ C3	1	24 ^{+0.009} _{-0.004}	50	115	95	140	4-M8	3.0
3.0	2.2			IE 2/3	90L	6305ZZ C3	6205ZZ C3	1	24 ^{+0.009} _{-0.004}	50	115	95	140	4-M8	3.0
4.0	3.0			IE 2/3	100L	6306ZZ C3	6206ZZ C3	1	28 ^{+0.009} _{-0.004}	60	130	110	160	4-M8	3.5
5.5	4.0			IE 2/3	112M	6306ZZ C3	6206ZZ C3	1	28 ^{+0.009} _{-0.004}	60	130	110	160	4-M8	3.5
7.5	5.5			IE 2	132S	7308BW	6206ZZ C3	1	38 ^{+0.018} _{+0.002}	80	165	130	200	4-M10	3.5
				IE 3		7308BW	6208ZZ C3	1	38 ^{+0.018} _{+0.002}	80	165	130	200	4-M10	3.5
10	7.5	V1	V1	IE 2	132S	7308BW	6306ZZ C3	1	38 ^{+0.018} _{+0.002}	80	165	130	200	4-M10	3.5
				IE 3		7308BW	6208ZZ C3	1	38 ^{+0.018} _{+0.002}	80	165	130	200	4-M10	3.5
15	11.0			IE 2	160M	7309BW	6208ZZ C3	2	42 ^{+0.018} _{+0.002}	110	300	250	350	4-Φ18.5	5.0
				IE 3		7309BW	6309ZZ C3	2	42 ^{+0.018} _{+0.002}	110	300	250	350	4-Φ18.5	5.0
20	15.0			IE 2	160M	7309BW	6208ZZ C3	2	42 ^{+0.018} _{+0.002}	110	300	250	350	4-Φ18.5	5.0
				IE 3		7309BW	6309ZZ C3	2	42 ^{+0.018} _{+0.002}	110	300	250	350	4-Φ18.5	5.0
25	18.5			IE 2/3	160L	7309BW	6309ZZ C3	2	42 ^{+0.018} _{+0.002}	110	300	250	350	4-Φ18.5	5.0
30	22			IE 2/3	180M	7311BW	6311ZZ C3	2	48 ^{+0.018} _{+0.002}	110	300	250	350	4-Φ18.5	5.0
40	30			IE 2/3	200L	7312BW	6312ZZ C3	2	55 ^{+0.030} _{+0.011}	110	350	300	400	8-Φ18.5	5.0
50	37			IE 2/3	200L	7312BW	6312ZZ C3	2	55 ^{+0.030} _{+0.011}	110	350	300	400	8-Φ18.5	5.0
60	45			IE 2/3	225M	7313BW	6313ZZ C3	2	55 ^{+0.030} _{+0.011}	110	400	350	450	8-Φ18.5	5.0
75	55			IE 2/3	250M	7314BW	6314ZZ C3	2	60 ^{+0.030} _{+0.011}	140	500	450	550	8-Φ18.5	5.0
100	75			IE 2/3	280S	7314BW	6314ZZ C3	2	65 ^{+0.030} _{+0.011}	140	500	450	550	8-Φ18.5	5.0
120	90			IE 2/3	280M	7314BW	6314ZZ C3	2	65 ^{+0.030} _{+0.011}	140	500	450	550	8-Φ18.5	5.0
147	110			IE 2/3	315S	7317BW	6317C3	2	65 ^{+0.030} _{+0.011}	140	600	550	660	8-Φ24	6.0

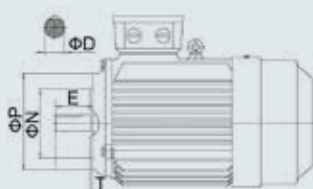


Fig. 1

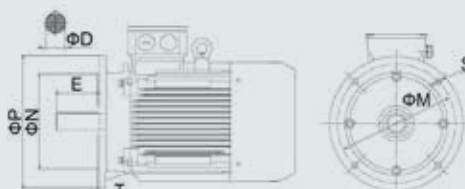


Fig. 2

Precaution & Warning

Precaution

Be sure to observe these precautions since they include important instructions about safety.

 DANGER	
 	After turning on the main power supply, do not touch the current-carrying parts.
	A high voltage is applied to the current-carrying parts, and there is a significant danger if you receive an electric shock.

 WARNING			
	Properly transport the product according to lifting instructions.		While the pump is lifted, do not use the equipment or carry out any work to it.
	Otherwise, it may cause the equipment to fall, resulting in injury and/or breakage.		Otherwise, it may cause the equipment to fall, resulting in injury and/or breakage.
	The pump should be operated by only those who are authorized by the site manager.	 	Installation, maintenance and inspection must be carried out only by personnel who have been trained to handle the pump.
	Operation by unskilled personnel may lead to an unforeseen accident.		Operation by unskilled personnel may lead to an unforeseen accident.
 	Only qualified personnel such as licensed electrical engineers are allowed to carry out electric work.	 	Use high-quality wiring equipment and devices, and carry out wiring work safely and securely according to the technical standards for electrical facilities, as well as the indoor wiring regulations.
	Otherwise, it may lead to electric shock, fire, failure, etc.		Otherwise, it may lead to electric shock, fire, etc.
 	Before starting wiring work, make sure to turn off the main power supply and confirm that the pilot lamp is turned off.	 	Be sure to install a ground fault interrupter at the primary power supply.
	Otherwise, it may lead to electric shock.		Otherwise, it may cause electric shock, fire, etc.
	Securely install the ground wire and make sure to carry out grounding work.		Do not connect the ground wire to a gas pipe or water pipe.
	Otherwise, electrical leakage or electric shock may result.		Such connection is illegal and leads to electric shock, explosion and/or fire.
 	Make sure that all electric wires are securely connected.	 	Before carrying out maintenance/inspection work, be sure to stop the pump, and turn off the main power supply.
	Otherwise, it may cause fire and/or electric shock.		Otherwise, electric shock, injury, breakage, water leakage, etc. may result.
	Before starting the equipment or carrying out maintenance/inspection work, ensure that all the relevant operators are informed of the operation and that there are no workers in the dangerous zone.	 	In the case of a power failure, turn off the main power supply.
	Otherwise, it may cause an unforeseen accident.		Otherwise, when the power is restored, the pump suddenly starts, which may cause injury.
 	When checking smooth rotation of the pump shaft, be sure to disconnect the main power supply before rotating it by hand.		Do not perform idling or operation with insufficient priming.
	Otherwise, it may result in injury and/or breakage.		Otherwise, the internal parts may be damaged by a heat shock.
 	Do not put your finger or any foreign objects into openings or rotating part of the motor during operation.		Do not continue shut-off operation more than 1 minute.
	Otherwise, injury and/or breakage may result.		Otherwise, the temperature and pressure in the pump rise, and it may get broken.
 	Do not remove the coupling guard except during maintenance. Do not perform operation when the coupling guard is removed.	 	For work such as replacement of parts, repairs, or inspection that requires disassembly of the equipment, be sure to contact a specialized vendor or the service center designated by TERAL.
	Otherwise, injury and/or breakage may result.		If unskilled personnel carry out work that requires special knowledge, it may lead to an accident and/or failure.
	Do not operate the equipment if it does not run normally or abnormal condition is observed in parts, components, and others.		Do not operate the equipment in an explosive atmosphere.
	Otherwise, it may lead to injury, failure and/or various accidents.		Otherwise, it may lead to injury, failure and/or various accidents.

⚠ CAUTION

	Use the equipment within its specified product specifications.		Do not use the product alone in a place directly related to important equipment or maintenance of life.
	Otherwise, it may cause electric shock, fire, water leakage, failure, etc.		Water supply may be stopped in the case of a failure. Be sure to keep a standby machine.
	Do not modify the product.		Do not give a shock to the pump when transporting or carrying in it.
	The warranty does not cover an accident or a failure caused by a modification of the product.		Otherwise, breakage may result.
	Check the upside and the downside, and carefully unpack the product with particular attention to the nails.		Install the equipment in the environment in strict compliance with the installation instructions.
	Otherwise, injury and/or breakage may result.		Otherwise, a premature failure may result.
	Check that the floor surface at the installation location is treated with waterproof materials and equipped with a drainage system.		Before operation, thoroughly clean (flush) the inside of the piping.
	Otherwise, serious damage may result when water leakage occurs.		Otherwise, foreign objects may enter from the piping system, and an accident or failure of the pump may be caused by the supplied mixed liquid.
	Do not leave any tools and other objects on the top of the pump during operation.		Do not step on the pump or the piping.
	Otherwise, injury and/or breakage may result.		Otherwise, injury and/or breakage may result.
	Do not touch any part of the pump during operation unless absolutely necessary.	 	Do not touch the pump if handled liquid is hot.
			You may burn your hands because it is hot.
	Operate the controls carefully.		Do not start and stop the pump too frequently. (Up to 5 times per 1 h)
	Otherwise, it may result in injury and/or breakage.		Otherwise, a premature failure of the pump may result.
	Do not cover the motor with cloth, etc.		Do not water the motor.
	Otherwise, overheat or fire may result.		Otherwise, electric shock, electric leakage, failure, etc. may result.
 	Do not touch the motor while it is running or immediately after it has stopped.		Be sure to carry out inspection according to the maintenance checklist.
	Otherwise, you may suffer burn due to its hot surface.		Otherwise, failures cannot be prevented, which raises the risk of accidents.
	Before disassembly, close both the suction and discharge sluice valves, and then discharge pressured water from the pump and the piping.		If there is any alarm or any abnormality that cannot be resolved, immediately contact us or your service company.
	Otherwise, water may spurt out, leading to an accident.		Otherwise, it may lead to an accident.
	Replace the packing and O-rings during an overhaul.		If the product is not used for a long time, turn off the power, discharge internal water, and then store the product.
	Otherwise, it may cause water leakage.		Otherwise, cracking, etc. may be caused by freezing.

Installation & Operation

Precautions for connecting the ducts

 CAUTION 	Before piping work, remove the dust caps from the suction side and the discharge side of the casing of the pump. If the pump is operated with them attached, the pump, pipes, etc. may be damaged.
 CAUTION 	Do not screw the pipe when the companion flange is attached to the pump. The pump may be damaged.

1. Remove the dust caps from the suction side and the discharge side of the casing of the pump
2. Be sure to install pipe supports so that the weight of pipes, etc. is not applied on the main body of the pump

 CAUTION 	If the weight of pipes, etc. is applied on the pump, the casing may be damaged.
--	---

3. The connection flanges of the suction/discharge parts of the pump are loose flanges. Connect the pipe after checking the table below while carefully avoiding uneven tension that the flange fits in the retaining ring of the casing part as shown in the figure below. Tighten the bolts at the recommended torque shown in the table below while carefully avoiding uneven tension.

Table: Recommended tightening torque for flanges

Pump type	Recommended tightening torque
AVS/AVSN/AVSG 25, 25B, 25C, 32, 32B, 40, 50, 50B, 65	70 N • m
AVS/AVSN/AVSG 80, 100, 100B, 125, 125B, 150	90 N • m

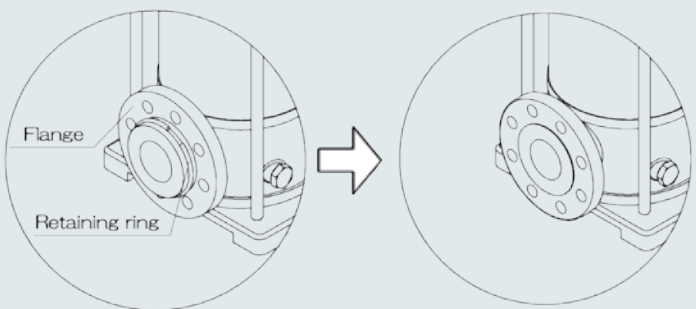


Figure: Suction/discharge flanges

4. In order to reduce the transmission of vibration and noise, attach vibration-isolating joint(s) to the discharge side or both the suction side and the discharge side of the pump.
5. Do not install any elbow near the suction port or the discharge port of the pump.
6. The suction pipe must be made as short and straight as possible.
7. Carefully attach joints, etc. to the suction pipe so as not to allow the entry of air.
8. Ensure that the diameter of the suction pipe is equal to or larger than that of the pump.

 CAUTION 	Ensure that the diameter of the suction pipe is equal to or larger than that of the pump. If the suction pipe is small, cavitation may occur.
--	---

9. For inflow operation
(9-1) For inflow operation, attach a sluice valve to the suction pipe as shown in the figure.
The maintenance of the pump can be performed without the need to discharge water from the tank and the pipe.

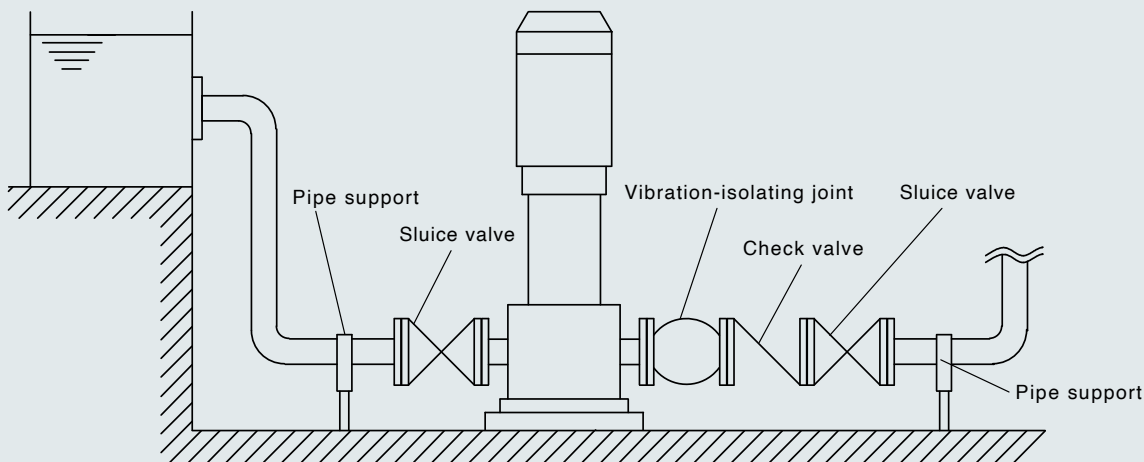


Figure: Example of construction for inflow operation

Installation & Operation

Precautions for connecting the ducts

- 10. For suction operation
- (10-1) The suction pipe must be made as short and straight as possible, and no sluice valve must be attached. Do not use any inverted-U-shaped loop (that includes ascending and descending lines) for the piping system.
- (10-2) Provide the suction pipe with a rising gradient of 1:100 or more toward the pump to prevent air from being trapped.
- (10-3) If the diameter of the suction pipe is larger than that of the suction port of the pump, use an eccentric reducer to prevent air from being trapped.
The diameter of the suction pipe can be up to 2 sizes larger than that of the pump.
- (10-4) Attach a foot valve with a strainer to the end of the suction pipe so as not to suck any foreign objects, etc.
Immerse the foot valve in water and set it at a depth of at least twice the diameter of the pipe from the surface of water to prevent the suction of air. In addition, ensure that it is set above 500 mm or more from the bottom of water.



Properly install the foot valve vertically. If it is installed obliquely, the valve does not open or close properly, which may impair the function of the foot valve.

- (10-5) If the suction operation is performed using two or more pumps, do not connect each suction pipe to another pipe.
 - (10-6) Attach a sluice valve and a check valve to the discharge pipe. If water hammer occurs, attach a buffer type check valve.
 - (10-7) If there is a convex part in the discharge pipe, ensure that air can be released. Do not attach an air vent valve to a place where there is a negative pressure, such as the suction pipe.
11. After construction work, be sure to clean the inside of the water receiving tank so that foreign objects will not be sucked into the pump.

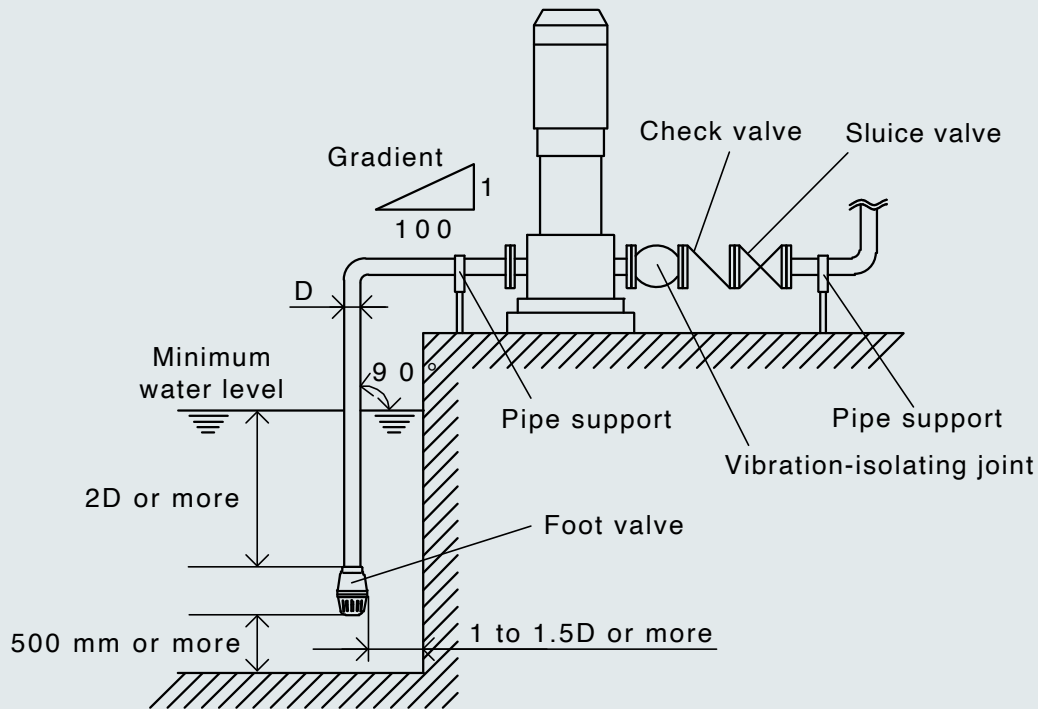


Figure: Example of construction for suction operation

TERAL

Pumps and Fans



End-suction Pumps



In-Line Pumps



Horizontal Multistage Pumps



Horizontal Split Case Pumps



Freshwater &
Sewage Submersible Pumps



Variable Speed Systems



Vertical Multistage
Pumps



Coolant Pumps



Ring Blowers



Centrifugal Fans

Teral Inc.

Head Office 230, Moriwake, Miyuki-cho, Fukuyama-city, Hiroshima, 720-0003, Japan
Tel: +81-84-955-1111 Fax: +81-84-955-5777

Tokyo Office TERAL Koraku Bldg., 2-3-27, Koraku, Bunkyo-ku, Tokyo, 112-0004, Japan
Tel: +81-3-3818-6890 Fax: +81-3-3818-6790

Teral Asia Limited

Room 1001, 10/F., Olympia Plaza, 255 King's Road, North Point, Hong Kong
Tel: +852-2571-0282 Fax: +852 2571-0619 E-mail: sales@teraliasia.com

Teral General Machine (Shanghai) Co., Ltd.

No. 285, Yuan Qu Road (N), Bei Qiao, Min Hang District, Shanghai 201109, China
Tel: +86-21-6490-9128 Fax: +86-21-6490-9126

Teral Thai Co., Ltd. / Teral Trading & Service Co., Ltd.

150 Moo 16 Udomsorayuth Rd., T.Bangkrasan, A.Bangpa-In, Ayutthaya 13160 Thailand
Tel: +66-3522-0640-2, +66-3525-8543-4 Fax: +66-3522-0643

Teral Malaysia Sdn Bhd

10, Jalan SS13/6A, Subang Jaya Industrial Estate 47500,
Subang Jaya, Selangor D.E, Malaysia
Tel: +60-3-5611 5775 Fax: +60-3-5612 5775 E-mail: sales.my@teraliasia.com

Teral Vietnam Limited Liability Company

9th Floor, LADECO Building, No. 266 Doi Can Street, Lieu Giai Ward,
Ba Dinh District, Hanoi city, Vietnam
Tel: +84.43.935.2790 Fax: +84.43.935.2800 E-mail: sales.vn@teraliasia.com

PT. TeralIndonesia Pumps and Fans

KomplekPergudanganTaman Tekno., Blok G3 No. 08, J.L. BSD SektorXI,
SetuTangerang Selatan, Banten, Indonesia 15314
Tel: +62-21-29665778 Fax: +62-21-75673913 E-mail: sales1.id@teraliasia.com

Affiliated Sister Company:

Atai Fuji Motor Co., Ltd. (Ring Blowers & Coolant Pumps)

No. 32, Sec 2, Chang-Hsing Rd., Lu-Chu Hsiang, Taoyuan Hsien, Taiwan, R.O.C.
Tel: +886-3-321-3030 Fax: +886-3-321-7890

Teral Middle East

1806-002, 18th floor, BB1, Mazaya Business Avenue, JLT, Dubai, UAE. PO Box 414781
Tel: +971-(0)43699039 Email: sales.me@teraliasia.com

Teral Pumps & Fans North America Ltd.

Suite #197, 800-15355 24th Ave., Surrey, BC, CANADA V4A 2H9
Tel: +1-(604) 839-1008 E-mail: salesamerica@teraliasia.com

www.teral.net