



VSF SERIES 50 HZ

4"/6" SUBMERSIBLE PUMPS



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NOTE: Franklin Electric S.r.l. reserves the right to amend specification without prior notice

For the most up-to-date product information, visit franklinwater.eu.

4"/6" SUBMERSIBLE PUMPS

APPLICATION

- Municipal water works, fountains and waste water
- Water distribution and pressure boosting
- Irrigation and sprinkler systems, water treatment plants, filtration and reverse osmosis
- Industrial cooling and processing
- Mining industry, drainage and dewatering
- Fire-fighting equipment
- Water supply to and from tanks, reservoir and wells
- Lifting and distribution of a wide range of liquids
- Autoclave and cistern charge and discharge
- Turf and landscape
- Residential and farm wells and drainage
- General industry

FEATURES

- Compact, reliable and suited to operate in horizontal position
- 4": Built-in check valve to protect the pump against water hammer risk (for model 4VVF15 please contact Franklin Electric)
- 6": Built-in check valve, spring loaded for models with more than 19 stages, to protect the pump against water hammer risk
- Floating impellers to grant a better performance and longer life for the pump against abrasion (4" pumps)

GENERAL PUMP SPECIFICATION

- Pumped liquid: chemically and mechanically non aggressive
- Rotation: counter clockwise when looking into the discharge
- Pump can work continuously in vertical or horizontal position

PUMP SPECIFICATION

- Flow:
 - 4" pumps: up to 27 m³/h at 50 Hz
 - 6" pumps: up to 60 m³/h at 50 Hz
- Head:
 - 4" pumps: up to 641 m at 50 Hz
 - 6" pumps: up to 788 m at 50 Hz
- Pumped liquid: chemically and mechanically non aggressive
- Max water temperature: 4" pumps: 45 °C; 6" pumps: 30 °C
- Maximum allowable amount of sand:
 - 4" pumps: 250 g/m³; 6" pumps: 60 g/m³
- Maximum pump diameter (including cable guard):
 - 4" pumps: 98 mm; 6" pumps: 140 mm
- Outlet diameter:
 - 4" pumps: 1" ¼ for VSF 1-2-3-4, 2" for VSF 6-8-12-15
 - 6" pumps: 3"
- Motor support:
 - 4" pumps: supplied for connection to 4" motor
 - 6" pumps: supplied for connection to 4" motor up to 5.5 kW; from 7.5 kW to 6" motor
- Rotation: counter clockwise when looking into the discharge
- Pump can work continuously in vertical or horizontal position

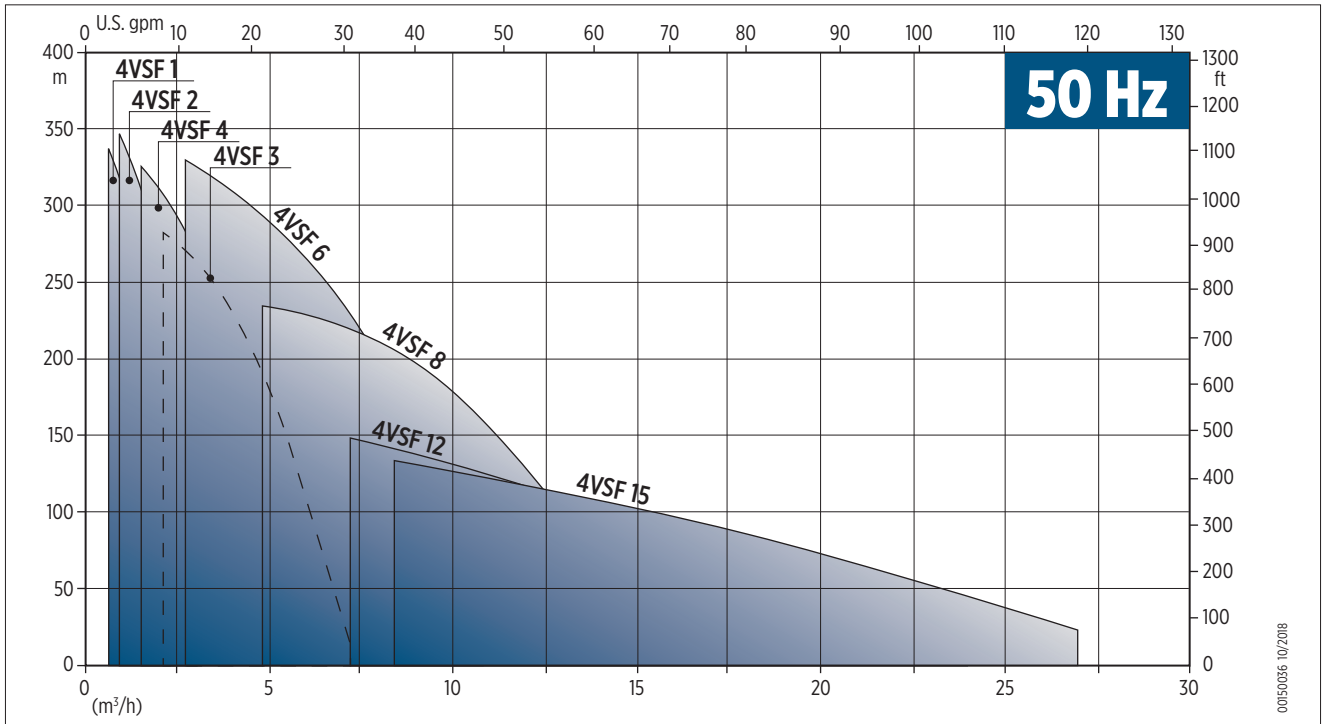
MOTOR SPECIFICATION

- Motor adapter in compliance with NEMA standard
- For more information consult the product catalog of Submersible motors

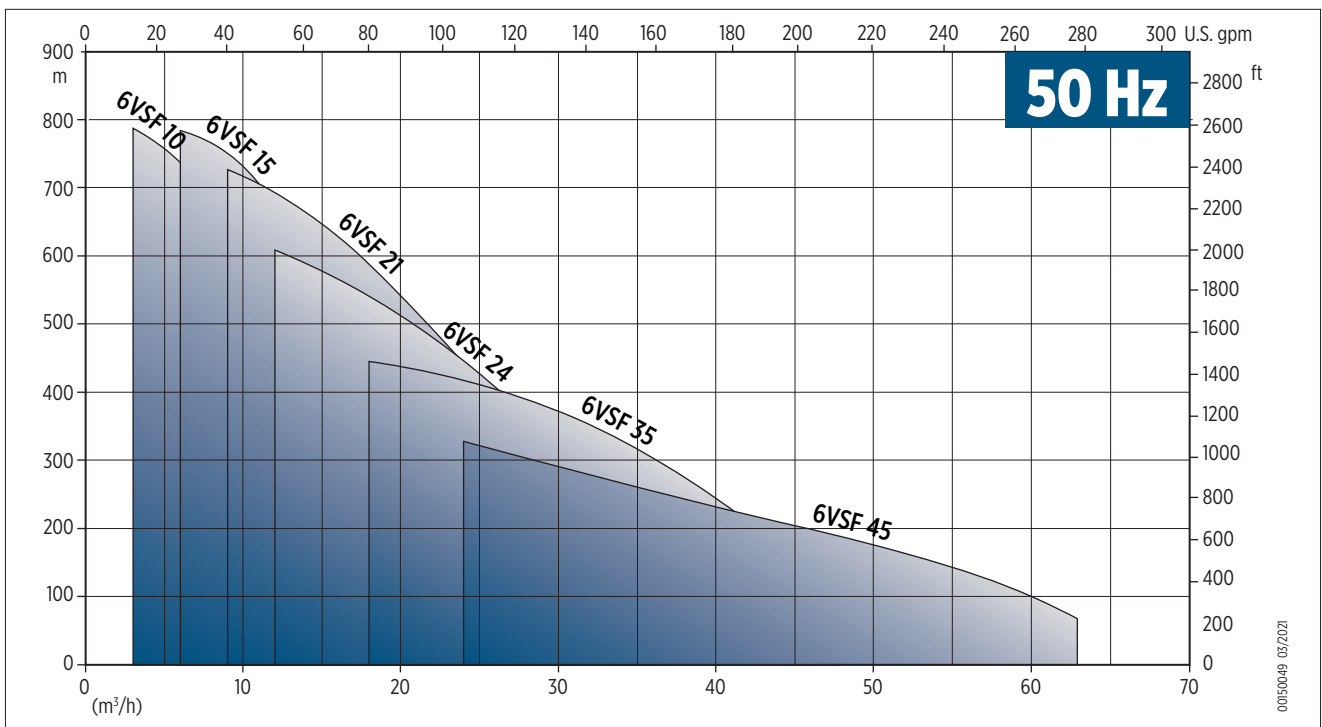
AVAILABLE ON REQUEST

- Spring loaded check valve for 6" pumps with less than 19 stages
- 6" motor support for 6VVF up to 5.5 kW
- Cooling shroud
- Discharge head 2" ½
- Double cable guard

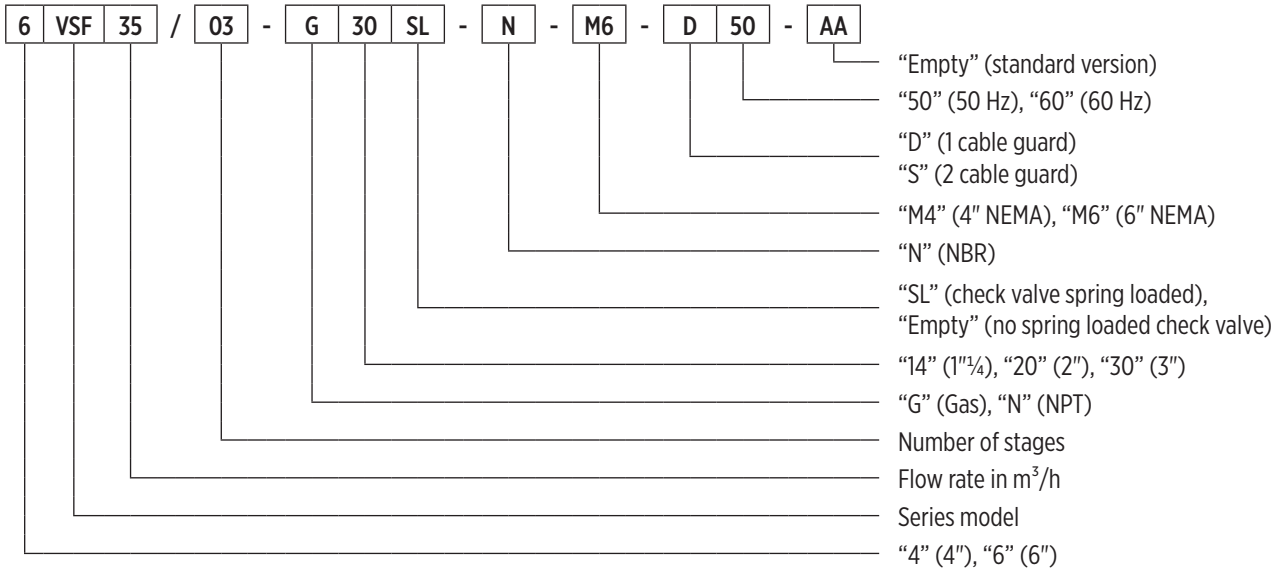
4VSF FAMILY CURVES



6VSF FAMILY CURVES

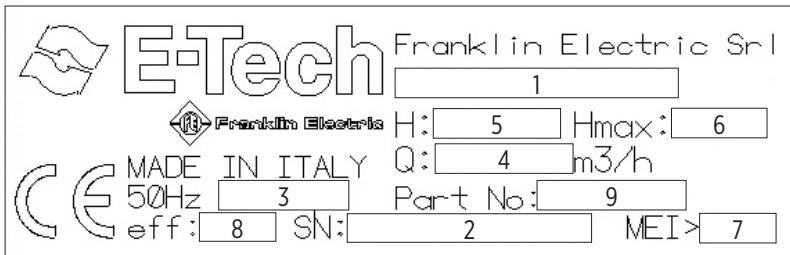


PUMP IDENTIFICATION CODE



00140047 03/2021

PUMP RATING PLATE



- 1) Model
- 2) Serial number
- 3) Nominal Rpm
- 4) Delivery range
- 5) Head range
- 6) Maximum head
- 7) MEI index
- 8) Hydraulic efficiency
- 9) Code

6" HYDRAULIC PERFORMANCE AT 50 HZ - 2900rpm

6VSF 10-15-21

Pump model	No. stages	RATED POWER		Q = DELIVERY																			
				m ³ /h 0	1	3	5	6	8	9	11	12	13.5	15	17	18	21	24	27	30	33	36	
		[kW]	[HP]	l/min 0	17	50	75	100	125	150	175	200	225	250	275	300	350	400	450	500	550	600	
				H = TOTAL M.HEAD OF WATER COLUMN [m]																			
6VSF 10	05	2.2	3	78		73	70	67	63	58	53	46	37	27	16								
	06	3.0	4	94		88	84	80	76	70	63	55	44	32	19								
	07	3.7	5	109		102	98	94	89	82	74	64	52	38	22								
	08	3.7	5	125		117	112	107	101	93	84	73	59	43	25								
	09	4.0	5.5	140		131	126	121	114	105	95	82	67	48	28								
	12	5.5	7.5	187		175	169	161	152	140	127	109	89	65	37								
	16	7.5	10	250		234	225	214	202	187	169	146	118	86	50								
	18	9.2	12.5	281		263	253	241	228	210	190	164	133	97	56								
	21	9.2	12.5	328		307	295	281	266	245	222	192	155	113	65								
	24	11.0	15	374		350	337	322	304	280	253	219	178	129	74								
	28	13.0	17.5	437		409	393	375	354	327	295	255	207	151	87								
	32	15.0	20	499		467	450	429	405	374	338	292	237	172	99								
	40	18.5	25	624		584	562	536	506	467	422	365	296	215	124								
	48	22.0	30	749		701	674	643	607	561	506	438	355	258	149								
54	26.0	35	842		788	759	724	683	631	570	492	400	291	167									
Efficiency		-		39%	47%	55%	61%	65%	65%	62%	54%	40%	-										
6VSF 15	05	3.0	4	79			75	74	71	68	64	58	52	45	37	15							
	06	4.0	5.5	94			90	88	86	81	76	70	63	54	44	17							
	07	5.5	7.5	110			106	103	100	95	89	82	73	63	51	20							
	08	5.5	7.5	126			121	118	114	109	102	93	83	72	58	23							
	09	5.5	7.5	141			136	133	128	122	115	105	94	81	66	26							
	12	7.5	10	188			181	177	171	163	153	140	125	108	88	35							
	15	9.2	12.5	236			226	221	214	204	191	175	156	135	110	44							
	18	11.0	15	283			271	265	257	244	229	210	188	162	131	52							
	21	13.0	17.5	330			317	309	299	285	267	245	219	189	153	61							
	24	15.0	20	377			362	354	342	326	306	280	250	216	175	70							
	30	18.5	25	471			452	442	428	407	382	350	313	269	219	87							
	35	22.0	30	550			528	516	499	475	446	408	365	314	256	102							
	40	26.0	35	628			603	589	570	543	509	466	417	359	292	116							
	45	30.0	40	707			679	663	641	611	573	524	469	404	329	131							
52	37.0	50	816			784	766	741	706	662	606	542	467	380	151								
Efficiency		-				54%	59%	64%	67%	68%	68%	64%	58%	46%	-								
6VSF 21	02	1.5	2	28						25	24	24	23	22	21	20	18	15	13	10	7		
	03	2.2	3	42						38	37	35	34	33	32	30	27	23	19	15	10		
	04	3.0	4	56						50	49	47	46	44	42	40	36	31	26	20	14		
	05	4.0	5.5	70						63	61	59	57	55	53	50	45	39	32	25	17		
	07	5.5	7.5	98						88	85	83	80	77	74	70	62	54	45	35	24		
	10	7.5	10	140						125	122	118	114	110	105	100	89	77	64	50	34		
	12	9.2	12.5	168						150	146	142	137	131	126	120	107	93	77	60	41		
	15	11.0	15	210						188	183	177	171	164	158	150	134	116	96	75	51		
	17	13.0	17.5	238						213	207	201	194	186	179	170	152	131	109	85	58		
	20	15.0	20	280						251	244	236	228	219	210	200	178	154	128	100	69		
	25	18.5	25	350						314	305	296	285	274	263	250	223	193	160	125	86		
	30	22.0	30	420						376	366	355	342	329	315	300	268	232	192	149	103		
	35	26.0	35	490						439	427	414	399	383	368	350	312	270	224	174	120		
	40	30.0	40	560						502	488	473	456	438	420	400	357	309	256	199	137		
50	37.0	50	700						627	610	591	571	548	525	500	446	386	320	249	172			
58	45.0	60	812						727	707	686	662	635	609	579	517	448	371	289	199			
Efficiency		-							41%	46%	51%	56%	59%	63%	65%	68%	67%	62%	52%	39%			

Best efficiency point

6VSF 21

Pump model	No. stages	Motor			Dimensions [mm]			Diameter [mm]			Weight [Kg]			
					L1	L2	Lt	Pump (PD)		Motor (MD)	Pump	Motor		Total
		Type	[Kw]	[HP]		3-	3-	1 cable	2 cable			3-	3-	
6VSF 21	02	E4	1.5	2	401	321.2	722.2	140	-	95.25	7.5	5.58	13.08	
	03		2.2	3	458	422.2	880.2	140	-	95.25	8.3	15	23.3	
	04	E4 HT	3	4	515	477.2	992.2	140	-	95.25	9.2	17	26.2	
	05		4	5.5	572	543.2	1115.2	140	-	95.25	10.1	20	30.1	
	02	E6	4	5.5	401	581.2	982.2	140	143	135.52	7.5	38	45.5	
	03		4	5.5	458	581.2	1039.2	140	143	135.52	8.3	38	46.3	
	04		4	5.5	515	581.2	1096.2	140	143	135.52	9.2	38	47.2	
	05		4	5.5	572	581.2	1153.2	140	143	135.52	10.1	38	48.1	
	07		5.5	7.5	686	614.4	1300.4	140	143	135.52	11.8	41	52.8	
	10		7.5	10	857	646.2	1503.2	140	143	135.52	14.4	44	58.4	
	12		9.2	12.5	971	678.7	1649.7	140	143	135.52	16.1	47.5	63.6	
	15		11	15	1142	711.2	1853.2	140	143	135.52	18.7	50	68.7	
	17		15	20	1308	776.2	2084.2	140	143	135.52	21.2	56	77.2	
	20		15	20	1494	776.2	2270.2	140	143	135.52	25.9	56	81.9	
	25		18.5	25	1778	841.5	2619.5	140	143	135.52	30.4	63	93.4	
	30		22	30	2212	906.5	3118.5	140	143	135.52	42.7	68.5	111.2	
	35		30	40	2497	1036.6	3533.6	140	143	135.52	47.8	83	130.8	
	40		30	40	2886	1036.6	3922.6	140	143	135.52	54.5	83	137.5	
	50		37	50	3456	1476.7	4932.7	140	143	135.52	64.5	118	182.5	
	58		45	60	4164	1629.2	5793.2	140	143	135.52	78.7	130	208.7	
	02		RW6	4	5.5	401	679	1080	140	143	142	7.5	43	50.5
	03			4	5.5	458	679	1137	140	143	142	8.3	43	51.3
	04	4		5.5	515	679	1194	140	143	142	9.2	43	52.2	
	05	4		5.5	572	679	1251	140	143	142	10.1	43	53.1	
	07	5.5		7.5	686	679	1365	140	143	142	11.8	43	54.8	
	10	7.5		10	857	699	1556	140	143	142	14.4	45	59.4	
	12	9.2		12.5	971	729	1700	140	143	142	16.1	49	65.1	
	15	11		15	1142	759	1901	140	143	142	18.7	53	71.7	
17	13	17.5		1308	809	2117	140	143	142	21.2	57	78.2		
20	15	20		1494	854	2348	140	143	142	25.9	61	86.9		
25	18.5	25		1778	899	2677	140	143	142	30.4	66	96.4		
30	22	30		2212	989	3201	140	143	142	42.7	77	119.7		
35	26	35		2497	1094	3591	140	143	142	47.8	88	135.8		
40	30	40		2886	1194	4080	140	143	142	54.5	98	152.5		
50	37	50		3456	1274	4730	140	143	142	64.5	105	169.5		

