



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 4VSF15 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

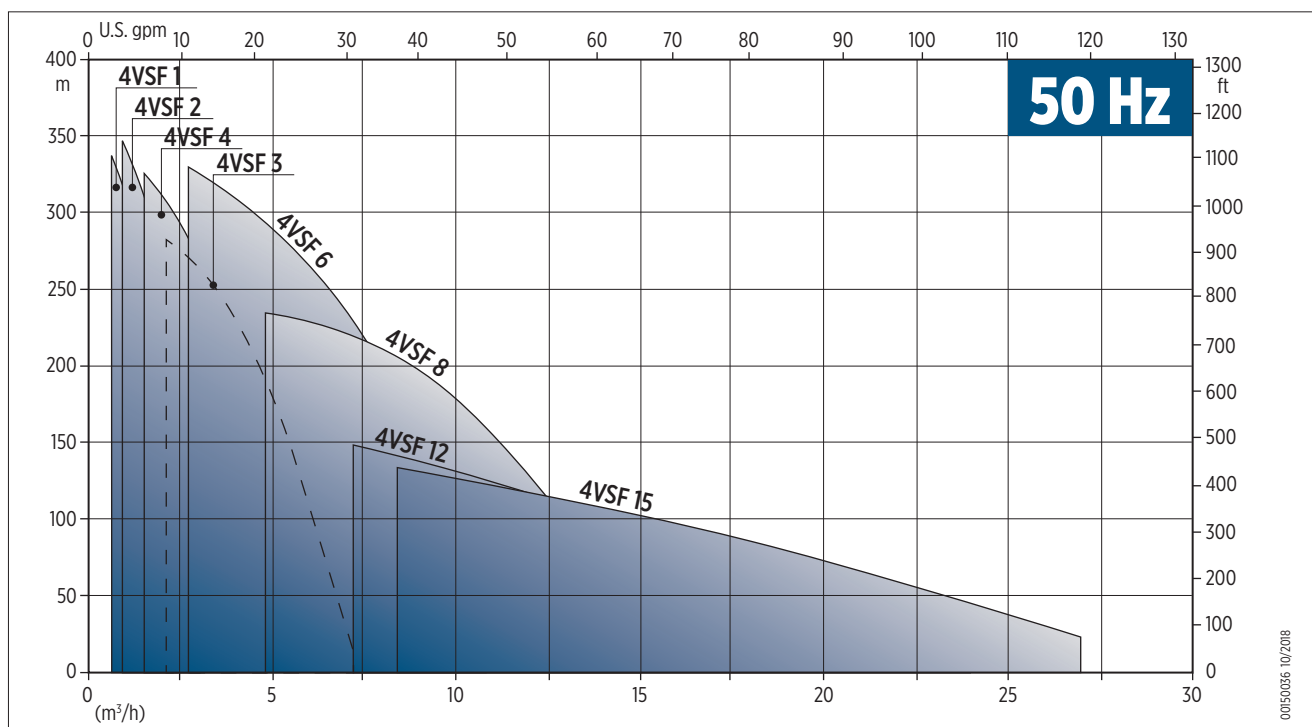
MOTOR SPECIFICATION

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

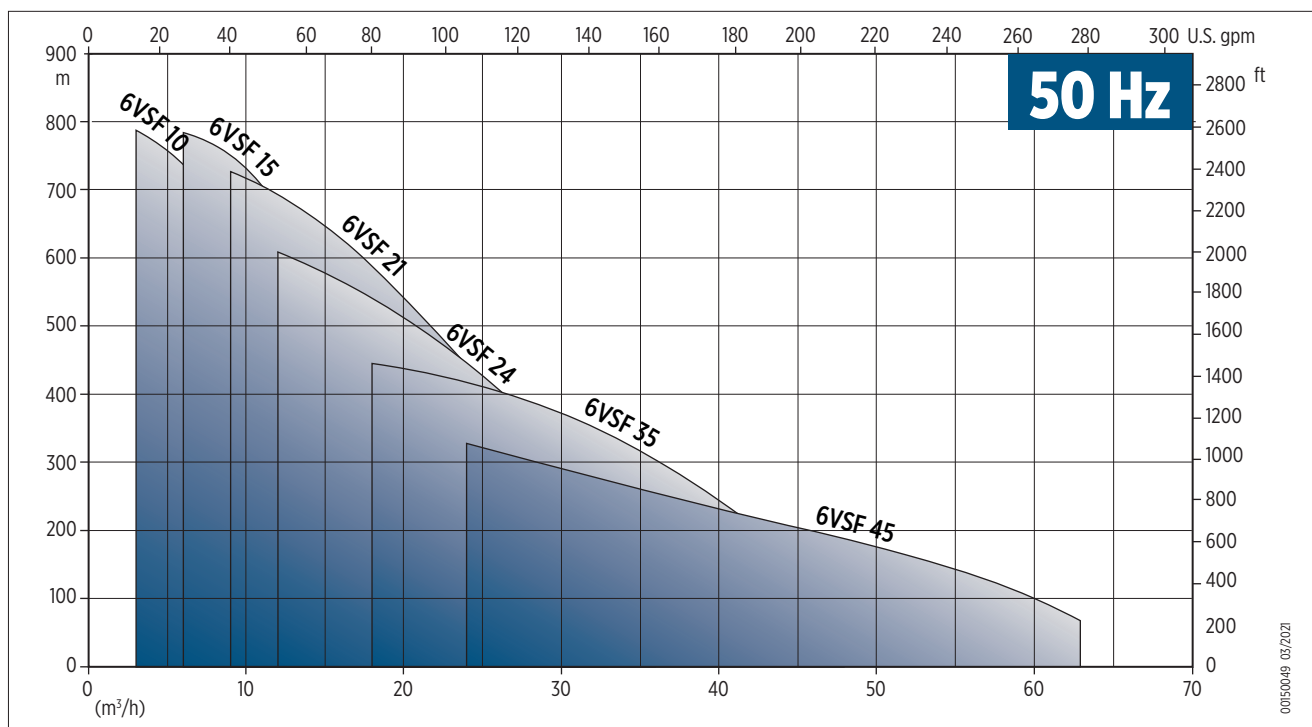
AVAILABLE ON REQUEST

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

4VSF FAMILY CURVES



6VSF FAMILY CURVES



PUMP IDENTIFICATION CODE

6 VSF 35 / 03 - G 30 SL - N - M6 - D 50 - AA

- “Empty” (standard version)
- “50” (50 Hz), “60” (60 Hz)
- “D” (1 cable guard)
- “S” (2 cable guard)
- “M4” (4" NEMA), “M6” (6" NEMA)
- “N” (NBR)
- “SL” (check valve spring loaded),
“Empty” (no spring loaded check valve)
- “14” (1¹/₄), “20” (2"), “30” (3")
- “G” (Gas), “N” (NPT)
- Number of stages
- Flow rate in m³/h
- Series model
- “4” (4"), “6” (6")

PUMP RATING PLATE


E-Tech Franklin Electric Srl
 1

 Franklin Electric H: 5 Hmax: 6
 Q: 4 m³/h
 MADE IN ITALY
 50Hz 3 Part No: 9
 eff: 8 SN: 2 MEI > 7

- 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																		
				m³/h 0	1	3	5	6	8	9	11	12	13.5	15	17	18	21	24	27	30	33	36
		l/min 0	17	50	75	100	125	150	175	200	225	250	275	300	350	400	450	500	550	600		
	[kW]	[HP]	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 15

Pump model	No. stages	Motor			Dimensions [mm]			Diameter [mm]			Weight [Kg]		
		Type	[Kw]	[HP]	L1	L2	Lt	Pump (PD)		Motor (MD)	Pump	Motor	Total
6VSF 15	05	E4 HT	3	4	477	477.2	954.2	140	-	95.25	8.9	17	25.9
	06		4	5.5	515	543.2	1058.2	140	-	95.25	9.5	20	29.5
	07		5.5	7.5	553	625.5	1178.5	140	-	95.25	10.1	26.6	36.7
	08		5.5	7.5	591	625.5	1216.5	140	-	95.25	10.8	26.6	37.4
	09		5.5	7.5	629	625.5	1254.5	140	-	95.25	11.4	26.6	38
	05	E6	4	5.5	477	581.2	1058.2	140	143	135.52	8.9	38	46.9
	06		4	5.5	515	581.2	1096.2	140	143	135.52	9.5	38	47.5
	07		5.5	7.5	553	614.4	1167.4	140	143	135.52	10.1	41	51.1
	08		5.5	7.5	591	614.4	1205.4	140	143	135.52	10.8	41	51.8
	09		5.5	7.5	629	614.4	1243.4	140	143	135.52	11.4	41	52.4
	12		7.5	10	743	646.2	1389.2	140	143	135.52	13.3	44	57.3
	15		9.2	12.5	857	678.7	1535.7	140	143	135.52	15.2	47.5	62.7
	18		11	15	971	711.2	1682.2	140	143	135.52	17	50	67
	21		15	20	1100	776.2	1876.2	140	143	135.52	20.8	56	76.8
	24		15	20	1214	776.2	1990.2	140	143	135.52	22.8	56	78.8
	30		18.5	25	1494	841.5	2335.5	140	143	135.52	27.5	63	90.5
	35		22	30	1832	906.5	2738.5	140	143	135.52	37.9	68.5	106.4
	40		30	40	2022	1036.6	3058.6	140	143	135.52	41.5	83	124.5
	45		30	40	2212	1036.6	3248.6	140	143	135.52	45.1	83	128.1
	52		37	50	2582	1476.7	4058.7	140	143	135.52	51.9	118	169.9
	05	RW6	4	5.5	477	679	1156	140	143	142	8.9	43	51.9
	06		4	5.5	515	679	1194	140	143	142	9.5	43	52.5
	07		5.5	7.5	553	679	1232	140	143	142	10.1	43	53.1
	08		5.5	7.5	591	679	1270	140	143	142	10.8	43	53.8
	09		5.5	7.5	629	679	1308	140	143	142	11.4	43	54.4
	12		7.5	10	743	699	1442	140	143	142	13.3	45	58.3
	15		9.2	12.5	857	729	1586	140	143	142	15.2	49	64.2
	18		11	15	971	759	1730	140	143	142	17	53	70
	21		13	17.5	1100	809	1909	140	143	142	20.8	57	77.8
	24		15	20	1214	854	2068	140	143	142	22.8	61	83.8
	30		18.5	25	1494	899	2393	140	143	142	27.5	66	93.5
	35		22	30	1832	989	2821	140	143	142	37.9	77	114.9
	40		26	35	2022	1094	3116	140	143	142	41.5	88	129.5
	45		30	40	2212	1194	3406	140	143	142	45.1	98	143.1
	52		37	50	2582	1274	3856	140	143	142	51.9	105	156.9

