



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 4VVSF15 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 6VVSF up to 5.5 kW
- Cooling shroud
- Discharge head 2" ½
- Double cable guard

4VSF 6-8

Pump model	No. stages	RATED POWER		Q = DELIVERY																	
				m³/h 0	2.4	2.7	3	3.6	4.2	4.8	5.4	6	6.6	7.2	8.4	9.6	10.8	12	13.5	15	16.5
				l/min 0	40	45	50	60	70	80	90	100	110	120	140	160	180	200	225	250	275
		[kW]	[HP]	H = TOTAL M.HEAD OF WATER COLUMN [m]																	
4VSF 6	04	0.55	0.75	26.5		23.0	22.5	22.0	21.0	20.5	19.5	18.5	17.5	16.0	12.5	8.5	4.0				
	06	0.75	1	40.0		34.5	34.0	33.0	32.0	30.5	29.0	28.0	26.0	24.0	18.5	12.5	6.0				
	09	1.1	1.5	60.0		51.5	50.5	49.0	47.5	46.0	44.0	41.5	39.0	35.5	28.0	19.0	9.0				
	12	1.5	2	77.0		67.5	66.5	64.5	62.5	60.5	58.0	55.5	52.0	47.5	37.0	25.0	12.0				
	18	2.2	3	116.0		101.0	100.0	96.5	94.0	90.5	87.0	83.0	77.5	71.0	55.5	37.5	18.0				
	24	3	4	154.5		135.0	133.0	129.0	125.0	121.0	115.5	110.5	103.5	94.5	74.0	50.0	23.5				
	34	4	5.5	210.0		187.0	184.0	178.5	173.0	166.5	159.0	150.0	140.5	129.0	101.5	67.0	27.0				
	45	5.5	7.5	265.5		241.0	238.5	232.0	224.0	215.0	203.5	190.5	176.0	160.5	124.5	79.0	31.0				
	60	7.5	10	370.0		329.5	325.0	315.0	305.0	293.5	280.0	265.0	248.0	227.0	179.0	118.0	47.0				
Efficiency						36%	40%	46%	52%	57%	60%	61%	62%	61%	53%	36%	-				
4VSF 8	04	0.75	1	26.0						23.5	23.0	22.5	22.0	21.5	20.0	18.0	15.0	12.0	8.0	4.0	
	06	1.1	1.5	39.0						35.5	35.0	34.0	33.5	32.0	30.0	28.0	23.0	18.5	12.0	5.5	
	08	1.5	2	52.5						47.0	46.5	45.5	44.5	43.0	40.0	36.0	30.5	24.5	16.0	7.5	
	12	2.2	3	78.5						71.0	69.5	68.0	66.5	64.5	60.0	53.5	45.5	36.5	23.5	11.0	
	16	3	4	104.5						94.5	93.0	91.0	88.7	86.0	80.0	71.5	61.0	49.0	31.5	14.5	
	22	4	5.5	144.5						129.0	127.5	125.5	123.5	120.5	113.0	101.5	88.0	69.5	44.0	16.5	
	30	5.5	7.5	196.8						176.0	173.5	171.0	168.0	164.5	154.0	138.5	119.5	94.5	60.0	22.0	
	39	7.5	10	262.5						234.5	231.5	228.0	224.0	219.5	205.5	185.0	159.5	126.0	80.0	29.5	
	Efficiency										47%	51%	54%	57%	59%	60%	59%	54%	47%	34%	-

Best efficiency point

4VSF 12*-15

Pump model	No. stages	RATED POWER		Q = DELIVERY																	
				m³/h 0	6.6	7.2	8.4	9.6	10.8	12	13.5	15	16.5	18	19.5	21	22.5	24	25.5	27	30
				l/min 0	110	120	140	160	180	200	225	250	275	300	325	350	375	400	425	450	500
		[kW]	[HP]	H = TOTAL M.HEAD OF WATER COLUMN [m]																	
4VSF 12	05	1.5	2	36.0		30.0	28.0	27.0	25.0	23.5	21.0	17.5	16.0	13.5	10.5	7.5	4.5	1.0			
	07	2.2	3	50.5		42.0	40.0	37.0	35.0	32.5	29.5	24.5	22.5	18.5	15.0	10.5	6.0	1.5			
	10	3	4	72.0		59.0	57.0	53.0	50.0	46.5	42.0	35.0	32.0	26.5	21.0	15.0	9.0	2.0			
	14	4	5.5	101.0		83.0	79.0	75.0	70.0	65.0	59.0	49.0	45.0	37.0	29.5	21.0	12.5	3.0			
	19	5.5	7.5	137.0		112.0	107.0	101.0	95.0	88.5	80.0	66.5	61.0	50.5	40.0	28.5	17.0	4.0			
	25	7.5	10	180.0		148.0	142.0	133.0	125.0	116.5	105.0	87.5	80.0	66.5	52.5	37.5	22.0	5.0			
Efficiency						38%	42%	44%	46%	46%	47%	45%	42%	37%	30%	22%	-	-			
4VSF 15	04	1.1	1.5	24.0		20.0	19.0	18.0	17.5	16.5	15.0	14.0	13.0	11.5	10.0	8.5	7.0	5.0	3.5		
	06	1.5	2	30.0		25.0	24.0	23.0	22.0	20.5	19.0	17.5	16.0	14.0	12.0	10.5	8.5	6.5	4.5		
	09	2.2	3	48.0		39.5	38.0	36.5	35.0	33.0	30.5	28.0	25.5	22.5	19.5	16.5	13.5	10.0	7.0		
	12	3	4	65.5		54.0	52.0	50.0	48.0	45.0	42.0	38.5	35.0	31.0	27.0	22.5	18.5	14.0	9.5		
	16	4	5.5	89.5		74.0	71.0	68.0	65.0	61.0	57.0	52.5	47.5	42.0	36.5	31.0	25.0	19.0	13.0		
	22	5.5	7.5	119.0		98.5	95.0	91.0	87.0	82.0	76.0	70.0	63.0	56.0	49.0	41.0	33.5	23.0	17.0		
	30	7.5	10	161.0		133.0	128.0	122.5	117.0	110.0	102.5	94.0	85.0	76.0	66.0	55.5	45.0	34.0	23.0		
Efficiency						46%	50%	55%	58%	61%	63%	64%	63%	62%	59%	55%	-	-	-		

Best efficiency point

* VSF12: For the European market product suitable only for fire-fighting application

6VSF 15

Pump model	No. stages	Motor			Dimensions [mm]			Diameter [mm]			Weight [Kg]		
					L1	L2	Lt	Pump (PD)		Motor (MD)	Pump	Motor	
		Type	[Kw]	[HP]		3-	3-	1 cable	2 cable			3-	3-
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	

