PRODUCT CATALOG

E-Tech

4VSF SERIES 50 HZ

4" SUBMERSIBLE PUMPS

franklinwater.eu

Franklin Electric

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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" 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)
- Floating impellers to grant a better performance and longer life for the pump against abrasion
- Pumped liquid: chemically and mechanically non aggressive

GENERAL PUMP SPECIFICATION

- Rotation: counter clockwise when looking into the discharge
- Pump can work continuously in vertical or horizontal position
- Motor adapter in compliance with NEMA standard

PUMP SPECIFICATION

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

MOTOR SPECIFICATION

- For more information consult the product catalog of Submersible motors

AVAILABLE ON REQUEST

- Cooling shroud
- Discharge head 2" ½
- Double cable guard

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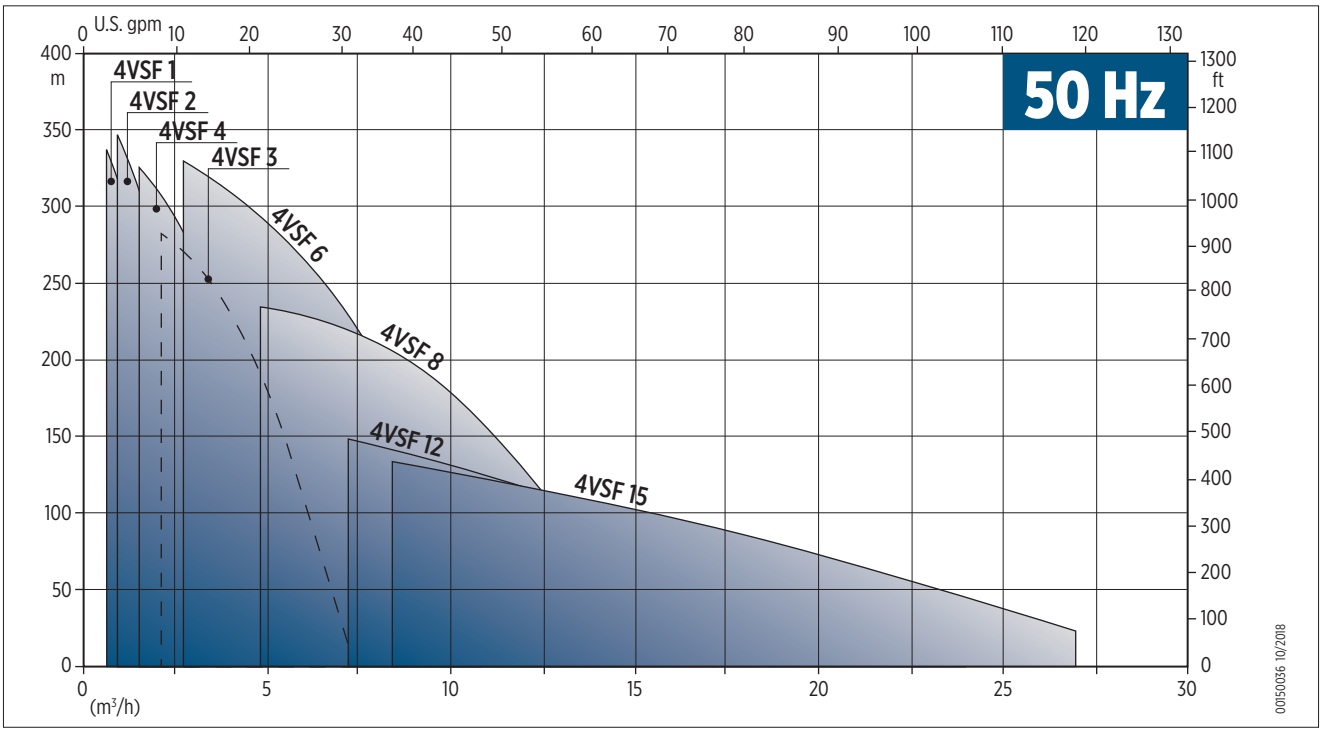
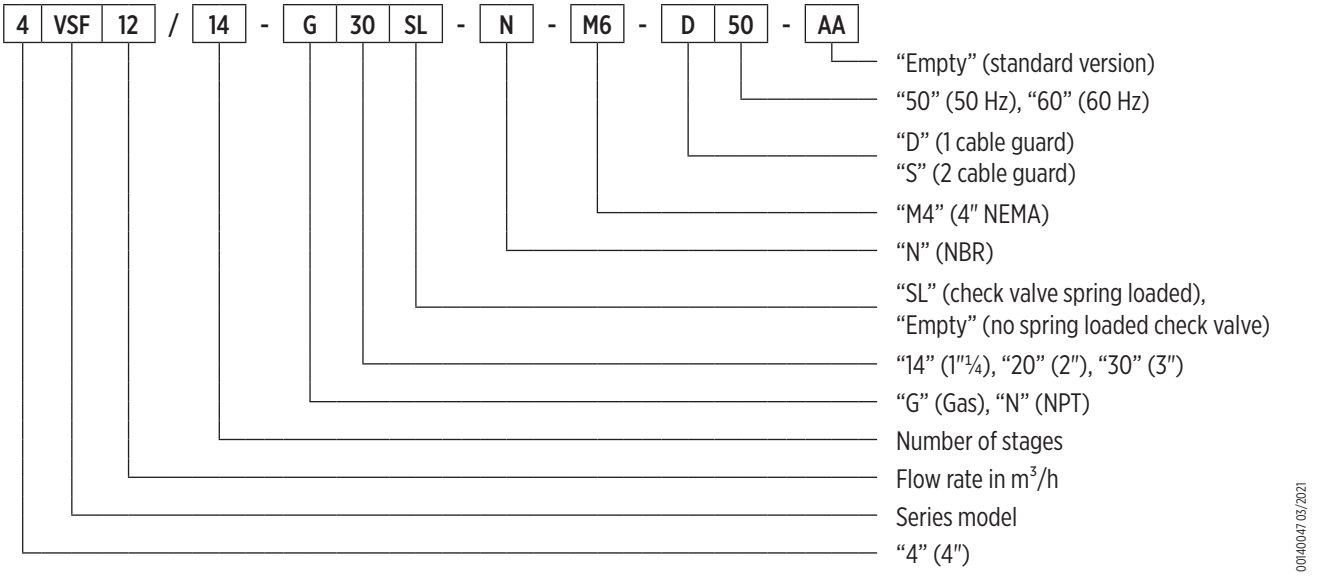
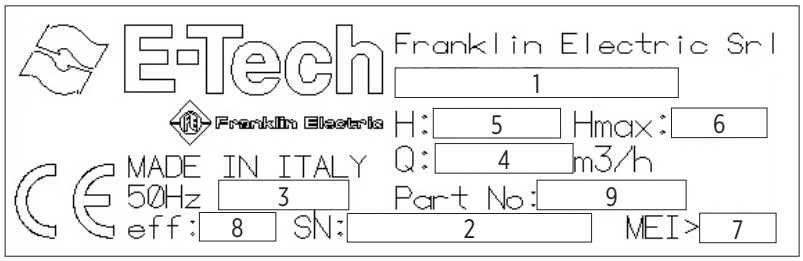
4VSF FAMILY CURVES



PUMP IDENTIFICATION CODE



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

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HYDRAULIC PERFORMANCE AT 50 HZ - 2850rpm

4VSF 1-2

Pump model	No. stages	RATED POWER		Q = DELIVERY											
				m³/h 0	0.3	0.6	0.9	1.2	1.5	1.8	2.1	2.4	2.7	3	6
				l/min 0	5	10	15	20	25	30	35	40	45	50	
		[kW]	[HP]	H = TOTAL M.HEAD OF WATER COLUMN [m]											
4VSF 1	11	0.37	0.5	63.5		59.0	55.0	50.5	43.0	35.0	26.0	15.0			
	16	0.55	0.75	90.5		85.5	80.0	72.0	62.5	51.0	37.0	20.5			
	22	0.75	1	124.5		117.5	109.5	99.0	86.0	70.0	50.5	26.0			
	32	1.1	1.5	181.0		171.0	159.5	144.0	124.5	101.5	73.5	41.0			
	42	1.5	2	237.5		224.5	209.0	189.0	163.5	133.0	96.0	54.0			
	63	2.2	3	356.0		336.5	313.5	293.0	245.5	199.5	144.5	81.0			
	Efficiency			-		27%	36%	42%	46%	45%	39%	27%			
4VSF 2	07	0.37	0.5	47.0			44.0	42.0	39.5	36.5	33.0	28.5	23.5	18.0	
	11	0.55	0.75	70.0			65.5	62.5	59.0	54.5	49.0	43.0	35.0	27.0	
	15	0.75	1	96.0			89.0	85.5	80.5	74.5	67.0	58.0	48.0	36.5	
	22	1.1	1.5	140.0			129.5	124.0	117.0	107.0	96.0	83.0	68.0	50.0	
	30	1.5	2	187.0			174.0	165.5	155.0	142.0	126.5	180.5	87.5	64.0	
	44	2.2	3	274.0			253.5	243.0	227.0	208.0	185.5	159.5	128.5	94.0	
	60	3	4	374.0			346.0	331.0	310.0	284.0	253.0	217.0	175.0	128.0	
	Efficiency			-			32%	40%	47%	51%	53%	52%	49%	41%	

Best efficiency point

4VSF 3-4

Pump model	No. stages	RATED POWER		Q = DELIVERY															
				m³/h 0	1.2	1.5	1.8	2.1	2.4	2.7	3	3.6	4.2	4.8	5.4	6	6.6	7.2	8.4
				l/min 0	20	25	30	35	40	45	50	60	70	80	90	100	110	120	140
		[kW]	[HP]	H = TOTAL M.HEAD OF WATER COLUMN [m]															
4VSF 3	05	0.37	0.5	32.5		31.0	30.5	30.0	29.0	27.5	26.0	22.5	18.0	12.5					
	07	0.55	0.75	45.5		43.5	43.0	41.5	40.0	38.5	36.5	31.5	25.5	17.5					
	10	0.75	1	65.0		62.5	61.0	59.5	57.5	55.0	52.0	45.0	36.0	25.0					
	15	1.1	1.5	96.5		91.0	89.0	87.0	83.5	80.0	76.0	65.5	52.5	36.0					
	20	1.5	2	129.0		121.5	119.0	115.5	111.0	106.5	101.0	87.0	69.0	47.5					
	30	2.2	3	193.0		182.5	178.5	173.5	167.0	160.0	151.5	130.5	103.0	71.5					
	40	3	4	257.0		241.0	235.5	228.0	219.5	209.5	198.0	170.0	134.0	90.0					
	54	4	5.5	346.5		325.5	317.5	307.5	296.5	282.5	267.0	229.0	181.0	121.5					
	Efficiency			-		45%	49%	54%	57%	60%	62%	61%	56%	42%					
4VSF 4	04	0.37	0.5	27.5				26.0	25.0	24.5	24.0	22.5	20.0	17.0	13.0	9.5	5.5	1.5	
	06	0.55	0.75	41.0				38.5	38.0	37.0	36.0	33.5	30.0	25.0	20.0	14.0	8.0	2.0	
	08	0.75	1	55.0				51.5	50.5	49.5	48.0	44.5	40.0	33.5	26.5	19.0	11.0	2.5	
	12	1.1	1.5	82.0				77.0	75.5	74.0	72.0	67.0	59.5	50.0	39.5	28.5	16.5	4.0	
	16	1.5	2	109.0				102.5	101.0	98.5	96.0	89.0	79.5	67.0	53.0	38.0	22.0	5.0	
	24	2.2	3	163.5				154.0	151.0	148.0	143.5	134.5	119.0	100.5	79.0	56.5	32.5	7.5	
	32	3	4	218.0				205.0	201.5	197.0	191.5	118.0	159.0	134.0	105.5	75.5	43.5	10.0	
	44	4	5.5	299.5				282.0	277.0	271.0	263.0	245.0	218.5	184.0	145.0	103.5	59.5	13.5	
	60	5.5	7.5	408				384.0	377.0	369.0	359.0	334.0	298.0	251.0	197.0	141.0	81.0	18.0	
	80	7.5	10	544				512.0	503.0	492.0	478.0	445.0	397.0	334.0	263.0	188.0	108.0	24.0	
	100	9.2	12.5	680				641.0	629.0	615.0	598.0	556.0	496.0	418.0	329.0	235.0	135.0	30.0	
	Efficiency							52%	56%	58%	61%	62%	62%	57%	48%	32%	-	-	

Best efficiency point

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	2.10	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

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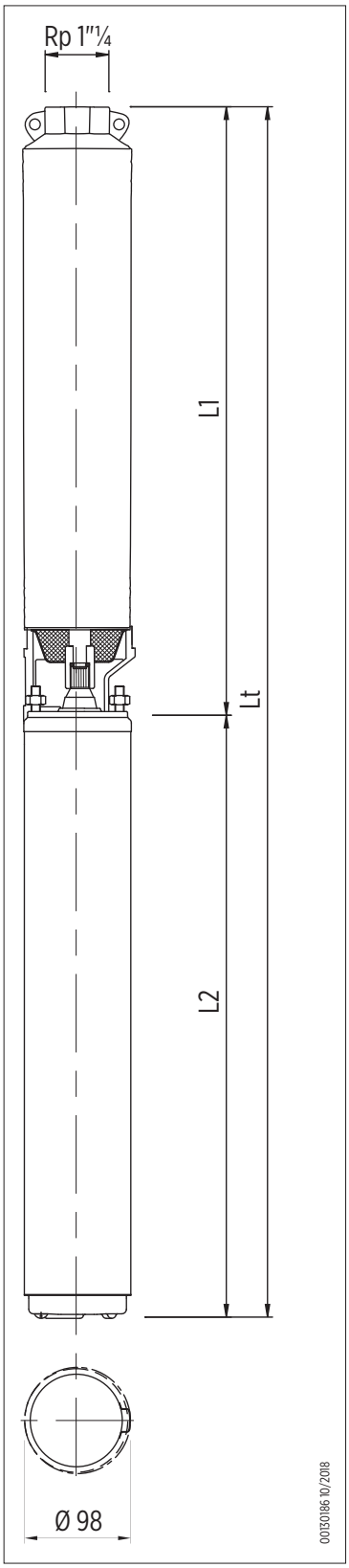
TECHNICAL DATA AT 50 HZ

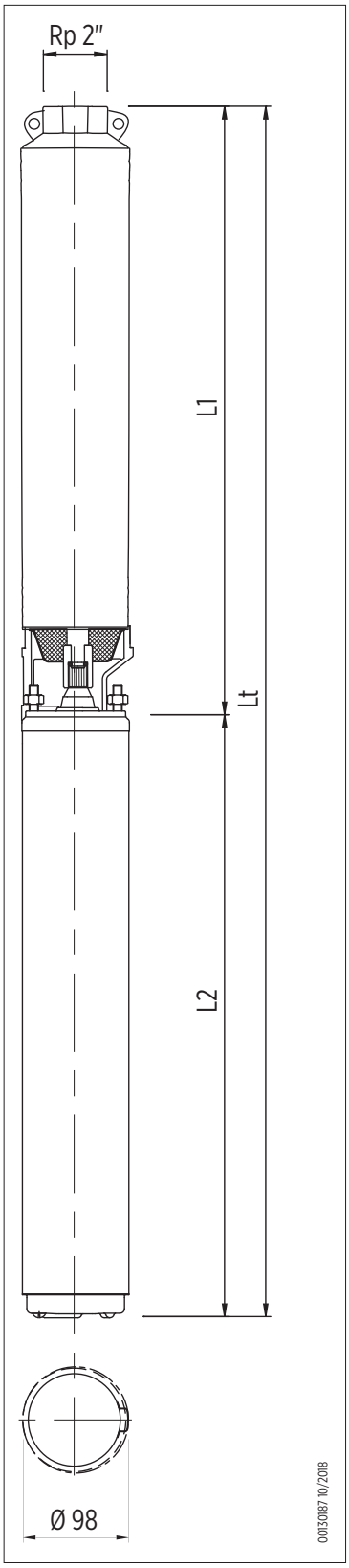
4VSF 1-2-3-4

Pump model	No. stages	Motor			Dimensions [mm]					Weight [Kg]				
					L1	L2		Lt		Pump	Motor		Total	
		Type	[Kw]	[HP]		1~	3~	1~	3~		1~	3~	1~	3~
4VSF 1	11	E4	0.37	0.5	349	252	238	601	587	3.4	7.2	5.6	10.6	9.0
	16	E4	0.55	0.75	449	277	252	726	701	4.4	8.4	9.4	12.8	13.8
	22	E4	0.75	1	569	298	272	867	841	5.5	9.3	7.3	14.8	12.9
	32	E4	1.1	1.5	800	322	298	1122	1098	7.9	10.5	8.6	18.4	16.5
	42	E4	1.5	2	1000	354	322	1354	1322	9.8	11.9	9.6	21.7	19.5
	63	E4	2.2	3	1451	452	354	1903	1805	14.3	16.7	11.1	31.1	25.5
4VSF 2	07	E4	0.37	0.5	270	252	238	522	508	2.7	7.2	5.6	9.9	8.3
	11	E4	0.55	0.75	349	277	252	626	601	3.5	8.4	9.4	11.9	12.9
	15	E4	0.75	1	430	298	272	728	702	4.4	9.3	7.3	13.7	11.7
	22	E4	1.1	1.5	569	322	298	891	867	5.8	10.5	8.6	16.3	14.4
	30	E4	1.5	2	728	354	322	1082	1050	7.4	11.9	9.6	19.3	17.0
	44	E4	2.2	3	1040	452	354	1492	1394	10.7	16.7	11.1	27.4	21.8
	60	E4	3	4	1391	-	409	-	1800	14.3	-	13.6	-	27.9
4VSF 3	05	E4	0.37	0.5	230	252	238	482	468	2.3	7.2	5.6	9.5	7.9
	07	E4	0.55	0.75	270	277	252	547	522	2.7	8.4	9.4	11.1	12.1
	10	E4	0.75	1	330	298	272	628	602	3.3	9.3	7.3	12.6	10.6
	15	E4	1.1	1.5	430	322	298	752	728	4.3	10.5	8.6	14.8	12.9
	20	E4	1.5	2	529	354	322	883	851	5.3	11.9	9.6	17.2	14.9
	30	E4	2.2	3	728	452	354	1180	1082	7.3	16.7	11.1	24.0	18.4
	40	E4	3	4	960	-	409	-	1369	9.8	-	13.6	-	23.4
	54	E4	4	5.5	1240	-	544	-	1784	12.6	-	20.0	-	32.6
4VSF 4	04	E4	0.37	0.5	218	252	238	470	456	2.1	7.2	5.6	9.4	7.8
	06	E4	0.55	0.75	262	277	252	539	514	2.6	8.4	9.4	11.0	12.0
	08	E4	0.75	1	306	298	272	604	578	3.0	9.3	7.3	12.3	11.3
	12	E4	1.1	1.5	393	322	298	715	691	3.8	10.5	8.6	14.3	12.4
	16	E4	1.5	2	481	354	322	835	803	4.7	11.9	9.6	16.6	14.3
	24	E4	2.2	3	657	452	354	1109	1011	6.4	16.7	11.1	23.1	17.5
	32	E4	3	4	864	-	409	-	1273	8.5	-	13.6	-	22.0
	44	E4	4	5.5	1128	-	544	-	1672	11.0	-	20.0	-	31.0
	60	E4	5.5	7.5	1511	-	653	-	2164	15.2	-	26.6	-	41.8
	80	E4	7.5	10	1984	-	731	-	2715	20	-	30.6	-	50.6
	100	E4	9.2	12.5	2457	-	856	-	3313	24.8	-	37.9	-	62.7



4VSF 6-8-12-15

Pump model	No. stages	Motor			Dimensions [mm]					Weight [Kg]				
					L1	L2		Lt		Pump	Motor		Total	
		Type	[Kw]	[HP]		1~	3~	1~	3~		1~	3~	1~	3~
4VSF 6	04	E4	0.55	0.75	278	277	252	555	530	2.7	8.4	9.4	11.1	12.1
	06	E4	0.75	1	352	298	272	650	624	3.3	9.3	7.3	12.6	10.6
	09	E4	1.1	1.5	463	322	298	785	761	4.3	10.5	8.6	14.8	12.9
	12	E4	1.5	2	573	354	322	927	895	5.3	11.9	9.6	17.2	14.9
	18	E4	2.2	3	794	452	354	1246	1148	7.3	16.7	11.1	24.0	18.4
	24	E4	3	4	1048	-	409	-	1457	9.7	-	13.6	-	23.4
	34	E4	4	5.5	1416	-	544	-	1960	13.1	-	20.0	-	33.1
	45	E4	5.5	7.5	1853	-	653	-	2506	17.2	-	26.6	-	43.8
	60	E4	7.5	10	2411	-	731	-	3142	22.2	-	30.6	-	52.8
4VSF 8	04	E4	0.75	1	290	298	272	588	562	2.7	9.3	7.3	12.0	10.0
	06	E4	1.1	1.5	370	322	298	692	668	3.4	10.5	8.6	13.8	12.0
	08	E4	1.5	2	450	354	322	804	772	4.0	11.9	9.6	16.0	13.7
	12	E4	2.2	3	609	452	354	1061	963	5.5	16.7	11.1	22.1	16.6
	16	E4	3	4	769	-	409	-	1178	6.9	-	13.6	-	20.5
	22	E4	4	5.5	1040	-	544	-	1584	9.4	-	20.0	-	29.4
	30	E4	5.5	7.5	1360	-	653	-	2013	12.1	-	26.6	-	38.7
	39	E4	7.5	10	1758	-	731	-	2489	15.4	-	30.6	-	46.2
4VSF 12	05	E4	1.5	2	435	354	322	789	757	3.5	11.9	9.6	15.4	13.1
	07	E4	2.2	3	557	452	354	1009	911	4.4	16.7	11.1	21.1	15.5
	10	E4	3	4	740	-	409	-	1149	5.7	-	13.6	-	19.3
	14	E4	4	5.5	983	-	544	-	1527	7.5	-	20.0	-	27.5
	19	E4	5.5	7.5	1287	-	653	-	1940	9.7	-	26.6	-	36.3
	25	E4	7.5	10	1652	-	731	-	2383	12.4	-	30.6	-	43.0
4VSF 15	04	E4	1.1	1.5	447	322	298	724	700	2.6	10.5	8.6	13.1	11.2
	06	E4	1.5	2	580	354	322	824	792	3.5	11.9	9.6	15.4	13.1
	09	E4	2.2	3	781	452	354	1126	1028	4.9	16.7	11.1	21.6	16.0
	12	E4	3	4	982	-	409	-	1286	6.4	-	13.6	-	20.0
	16	E4	4	5.5	1249	-	544	-	1726	8.2	-	20.0	-	28.2
	22	E4	5.5	7.5	1651	-	653	-	2173	11.0	-	26.6	-	37.6
	30	E4	7.5	10	2188	-	731	-	2659	14.8	-	30.6	-	45.4



Franklin Electric

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Single member - Company subject to the control and coordination of Franklin Electric Co., Inc.
Franklin Electric reserves the right to amend specification without prior notice.