

**IMPORTANT INSTRUCTIONS**

- Before installation, read our operator's Manual carefully.
- Select and use correct size, good quality cable and starter.
- Use recommended pipe sizes given in the Nameplate.
- Use only ISI marked low friction pipes and foot valves.
- Install the Pump, based on our recommended head range.
- Always try to reduce the number of bends, elbows, T bends in the pipe Line.
- Pump should not be run dry. Dry run preventer can be installed to avoid dry running of pumpset.
- Pump should be run for few minutes at least once in two days, to avoid seizure of pump.
- The Pump employ a prime Mover motro of 200-240 V Single Phase (or) 380-451V Three Phase 50Hz, AC supply.
- Always install a Sigma control panel for all Sigma single-phase submersible pumps.
- Fill clear, cold, fresh water for all submersible and open well monoblock pumps before installation.
- The maximum permissible supply voltage should be within + 10% from its rated voltage.
- Always switch off the Electrical Power before working on or around the pumpset, to avoid any fatal electric shock or injury.
- Employ a technically qualified person for errection.
- Provide proper earthing to the pump set to avoid electric shock.
- The performance data are at rated voltage and depends on the yield of the well.
- The pumps are only suitable for pumping clear, cold, Non-aggressive, Non-explosive water without abrasives, solid particles or fibers.
- The general characteristics for clear cold water as follows :-

a	Temperature	33° C (Max)
b	Permissible amount of sand	25 gm/m <sup>3</sup> (Max)
c	Chlorine ion Density	500 PPM (Max)
d	Allowable solids	3000 PPM (Max)
e	Specific Gravity	1.004 (Max)
f	Hardness (Drinking Water)	300 (Max)
g	Viscosity	1.75 X 10 m <sup>2</sup> /Sec (Max)
h	Turbidity	50 PPM Silca Scale (Max)
i	pH	6.5 to 8.5

● *In View of continuous developments the information / Descriptions / Specifications / Illustrations given are subject to change without notice.*



**SIGMA PUMP SYSTEM**  
**Pumps**  
 24/A, Jayashima Puram

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**Specifications for 4" Submersible**

Single Phase 200 to 240 Volts

50 HZ A.C Supply

MODEL	kW	HP	STAGE	DELIVERY m	DISCHARGE IN LPM																			
					0	12	18	24	30	36	42	48	54	60	72	84	96							
4SSF01-0.5/8	0.37	0.5	8	32	42	38	35	28	24	20														
4SSF01-0.5/10	0.37	0.5	10	32	52	48	45	38	34	30														
4SSF01-0.75/14	0.55	0.75	14	32	74	66	62	49	42	35														
4SSF01-0.75/15	0.55	0.75	15	32	80	71	66	53	45	38														
4SSF01-1/18	0.75	1	18	32	95	85	79	63	54	45														
4SSF01-1/20	0.75	1	20	32	106	94	88	70	60	50														
4SSF01-1.5/25	1.1	1.5	25	32	133	118	110	88	75	63														
4SSF01-1.5/30	1.1	1.5	30	32	159	141	132	105	90	75														
4SSF01-2/40	1.5	2	40	32	212	188	176	140	120	100														
4SSF02-0.5/7	0.37	0.5	7	32	38			37	33	31	25	21	18											
4SSF02-0.75/10	0.55	0.75	10	32	54			53	47	44	35	30	25											
4SSF02-1/12	0.75	1	12	32	65			64	56	53	42	36	30											
4SSF02-1/15	0.75	1	15	32	81			80	71	66	53	45	38											
4SSF02-1.5/18	1.1	1.5	18	32	97			95	85	79	63	54	45											
4SSF02-1.5/20	1.1	1.5	20	32	108			106	94	88	70	60	50											
4SSF02-2/25	1.5	2	25	32	135			133	118	110	88	75	63											
4SSF02-2/30	1.5	2	30	32	162			159	141	132	105	90	75											
4SSF04-1/10	0.75	1	10	32	55						48	46	43	40	33	26	23							
4SSF04-1.5/15	1.1	1.5	15	32	83						72	69	65	60	50	39	35							
4SSF04-2/20	1.5	2	20	32	110						96	92	86	80	66	52	46							
4SSF05-1/8	0.75	1	8	40	44						38	37	34	32	26	21	18							
4SSF05-1.5/12	1	1.5	12	40	66						58	55	52	48	40	31	28							
4SSF05-2/15	1.5	2	15	40	83						72	69	65	60	50	39	35							
4SSF07-2/10	1.5	2	10	40	55									48	46	43	40							







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**Pricolist for 6" Submersible Pumpset**  
 Thru Phase / Radial Flow Pumpset  
 Wet Type  
 350 to 415 Volts  
 50 HZ A.C Supply

MODEL	HP	STAGE	STARTING TYPE	DELIVERY SIZE IN	PRES	DISCHARGE IN LPM							
						0	25	35	50	75	110	140	190
6RSF25-3/12	3	12	DOL	40/50MM		120	109	101	92	82	66	42	18
6RSF25-4/14	4	14	DOL	40/50MM		140	127	118	108	95	77	49	21
6RSF25-4/16	4	16	DOL	40/50MM		160	146	134	123	<b>109</b>	88	56	24
6RSF25-5/18	5	18	DOL	40/50MM		180	164	151	139	122	99	63	27
6RSF25-5/20	5	20	DOL	40/50MM		200	182	168	154	136	110	70	<b>3m</b>
6RSF25-6/22	6	22	DOL	40/50MM		220	200	185	169	150	121	77	<b>33</b>
6RSF25-6/25	6	25	DOL	40/50MM		250	228	210	193	170	138	88	<b>38</b>
6RSF25-7.5/28	7.5	28	DOL	40/50MM		280	255	236	215	190	154	98	42
6RSF25-7.5/30	7.5	30	DOL	40/50MM		300	273	252	231	<b>204</b>	165	105	<b>41</b>
6RSF25-10/40	10	40	S/D	40MM		400	364	336	308	272	220	140	<b>44</b>

MODEL	HP	STAGE	STARTING TYPE	DELIVERY SIZE IN	PRES	DISCHARGE IN LPM							
						0	40	52	75	100	135	165	210
6RSF30-3/10	3	10	DOL	50MM		100	91	84	77	68	55	35	15
6RSF30-4/12	4	12	DOL	50MM		120	109	101	92	82	66	42	18
6RSF30-5/14	5	14	DOL	50MM		140	127	118	108	95	77	49	21
	5					160	146	134	123	<b>109</b>	88	56	
6RSF30-6/18	6	18	DOL	50MM		180	164	151	139	<b>122</b>	99	63	27
6RSF30-6/20	6	20	DOL	50MM		200	182	168	154	<b>136</b>	110	70	30
6RSF30-7.5/22	7.5	22	DOL	50MM		220	200	185	169	<b>150</b>	121	77	33
6RSF30-7.5/25	7.5	25	DOL	50MM		250	228	210	193	<b>170</b>	138	88	38
6RSF30-10/30	10	30	S/D	50 MM		300	273	252	231	204	165	105	45



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**Specification for 6" Submersible Pumpset  
Three Phase / Radial Flow Pumpset  
Wet Type**  
350 to 415 Volts  
50 HZ A.C Supply

MODEL	HP	STAGE	STARTING TYPE	DELIVERY SIZE IN	PUMP	DISCHARGE IN LPM							
						0	50	80	100	130	145	180	245
6RSF40-3/8	3	8	DOL	50MM		80	74	68	64	60	53	40	14
6RSF40-4/10	4	10	DOL	50MM		100	93	85	80	75	66	50	17
6RSF40-5/12	5	12	DOL	50MM		120	112	102	96	90	79	60	20
6RSF40-6/15	6	15	DOL	50MM		150	140	128	120	113	99	75	26
6RSF40-7.5/18	7.5	18	DOL	50MM		180	167	153	144	135	119	90	31
6RSF40-7.5/20	7.5	20	DOL	50MM		200	186	170	160	150	132	100	34
6RSF40-10/25	10	25	S/D	50MM		250	233	213	200	188	165	125	43
6RSF40-12.5/30	12.5	30	S/D	50MM		300	279	255	240	225	198	150	51

MODEL	HP	STAGE	STARTING TYPE	DELIVERY	PUMP	DISCHARGE IN LPM							
						0	75	100	120	150	175	275	320
6RSF50-3/6	3	6	DOL	50MM		60	56	54	51	45	40	30	10
6RSF50-4/8	4	8	DOL	50MM		80	74.4	72	68	60	53	40	14
6RSF50-5/10	5	10	DOL	50MM		100	93	90	85	75	66	50	17
6RSF50-6/12	6	12	DOL	50MM		120	112	108	102	90	79	60	20
6RSF50-7.5/14	7.5	14	DOL	50MM		140	130	126	119	105	92	70	24
6RSF50-7.5/15	7.5	15	DOL	50MM		150	140	135	128	113	99	75	26
6RSF50-10/20	10	20	S/D	50MM		200	186	180	170	150	132	100	34
6RSF50-12.5/25	12.5	25	S/D	50MM		250	233	225	213	188	165	125	43
6RSF50-15/30	15	30	S/D	50MM		300	279	270	255	225	198	150	51

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Specification for 6" Submersible Pumpset  
 Three Phase / Radial Flow Pumpset Wet  
 Type  
 350 to 415 Volts 50  
 HZ A.C Supply

STARTING MODEL MM	HP	STAGE	STRONG	DELIVERY 50MM	DISCHARGE IN LPM	DISCHARGE IN LPM							
						0	100	150	210	240	280	345	400
6RSF60-3/5	3	5	DOL	50MM		53	47	44	41	<b>38</b>	33	23	11
6RSF60-4/6	4	6	DOL	50MM		64	56	53	49	<b>45</b>	39	27	13
6RSF60-5/8	5	8	DOL	50MM		85	75	70	65	<b>60</b>	52	36	18
6RSF60-6/10	6	10	DOL	50MM		106	94	88	81	<b>75</b>	65	45	22
6RSF60-7.5/12	7.5	12	DOL	50MM		127	113	106	97	<b>90</b>	78	54	26
6RSF60-10/15	10	15	S/D	50MM		159	141	132	122	<b>113</b>	98	68	33
6RSF60-10/16	10	16	S/D	50MM		170	150	141	130	<b>120</b>	104	72	35
6RSF60-12.5/18	12.5	18	S/D	50MM		191	169	158	146	<b>135</b>	117	81	40
6RSF60-12.5/20	12.5	20	S/D	50MM		212	188	176	162	<b>150</b>	130	90	44
6RSF60-15/22	15	22	S/D	50MM		233	207	194	178	<b>165</b>	143	99	48
6RSF60-15/25	<b>15</b>	<b>25</b>	S/D	50MM		265	235	220	203	<b>188</b>	163	<b>113</b>	55



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Specification for 6" Submersible Pumpset  
 Three Phase / Radial Flow Pumpset Wet  
 Type  
 350 to 415 Volts 50  
 HZ A.C Supply

MODEL	HP	STAGE	STARTING TYPE	DELIVERY SIZE IN	FEES	0	150	180	235	270	315	380	440
6RSF80-5/6	5	6	DOL	50MM		62	57	54	50	45	39	27	13
6RSF80-6/8	6	8	DOL	50MM		82	76	72	66	60	52	36	18
6RSF80-7.5/10	7.5	10	DOL	50MM		103	95	90	83	75	65	45	22
6RSF80-10/12	10	12	S/D	50MM		124	114	108	100	90	78	54	26
6RSF80-12.5/15	12.5	15	S/D	50MM		155	143	135	125	113	98	67.5	33
6RSF80-12.5/16	12.5	16	S/D	50MM		165	152	144	133	120	104	72	35
6RSF80-15/18	15	18	S/D	50MM		185	171	162	149	135	117	81	40
6RSF80-15/20	15	20	S/D	50MM		206	190	180	166	150	130	90	44
6RSF80-20/25	20	25	S/D	50MM		258	238	225	208	188	163	113	55
MODEL	HP	STAGE	STARTING TYPE	DELIVERY SIZE IN	FEES	DISCHARGE IN LPM							
						0	170	205	250	310	360	410	470
6RSF100-5/5	5	5	DOL	50MM		52	49	46	43	38	33	22	12
6RSF100-6/6	6	6	DOL	50MM		52	49	46	51	45	39	26	14
6RSF100-7.5/8	7.5	8	DOL	50MM		52	49	46	68	60	52	34	18
6RSF100-10/10	10	10	S/D	50MM		52	49	46	85	75	65	43	23
6RSF100-12.5/12	12.5	12	S/D	50MM		52	49	46	102	90	78	52	28
6RSF100-15/15	15	15	S/D	50MM		52	49	46	128	113	98	65	35
6RSF100-20/20	20	20	S/D	50MM		52	49	46	170	150	130	86	46



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**Specification for 6" Submersible Pumpset**  
**Three Phase / Mixed Flow Pumpset Wet Type**  
 350 to 415 Volts 50 HZ  
 A.C Supply

	HP	STAGE	STARTING TYPE	DELIVERY SIZE IN	RES	DISCHARGE IN LPM							
						0	170	240	280	345	420	475	530
6MSF262S-3/3	3	3	DOL	65MM		33	28	27	25	23	20	16	12
6MSF262S-5/5	5	5	DOL	65MM		55	47	45	42	39	33	27	20
6MSF262S-6/6	6	6	DOL	65MM		66	56	54	50	47	39	32	24
6MSF262S-7.5/8	7.5	8	DOL	65MM		88	74	72	67	62	52	42	32
6MSF262S-10/10	10	10	S/D	65MM		110	93	90	84	78	65	53	40
6MSF262S-12.5/12	12.5	12	S/D	65MM		132	112	108	101	94	78	64	48
6MSF262S-15/15	15	15	S/D	65MM		165	140	135	126	117	98	80	60
MODEL	HP	STAGE	STARTING	DELIVERY	RES	DISCHARGE IN LPM							
						0	200	320	360	420	460	550	580
6MSF262N-5/4	5	4	DOL	65MM		44	41	38	36	33	31	26	21
6MSF262N-6/5	6	5	DOL	65MM		55	51	48	45	41	39	33	26
6MSF262N-7.5/6	7.5	6	DOL	65MM		66	62	58	54	50	47	39	32
6MSF262N-10/8	10	8	S/D	65MM		88	82	77	72	67	62	52	42
6MSF262N-12.5/10	12.5	10	S/D	65MM		88	82	77	72	67	62	52	42
6MSF262N-15/12	15	12	S/D	65MM		88	82	77	72	67	62	52	42
6MSF262N-20/16	20	16	S/D	65MM		88	82	77	72	67	62	52	42



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**Specification for 6" Submersible Pumpset**  
**Three Phase / Mixed Flow Pumpset Wet Type**  
 350 to 415 Volts 50 HZ  
 AC Supply

MODEL	HP	STAGE	STARTING TYPE	DELIVERY SIZE IN	PES	DISCHARGE IN LPM							
						0	200	340	440	500	540	570	660
6MSF271-5/3	5	3	DOL	65MM		33	30	27	25	23	21	20	15
6MSF271-7.5/5	7.5	5	DOL	65MM		55	50	45	42	38	35	33	25
6MSF271-10/6	10	6	S/D	65MM		66	60	54	50	46	42	40	30
6MSF271-10/7	10	7	S/D	65MM		77	70	63	59	53	49	46	35
6MSF271-12.5/8	12.5	8	S/D	65MM		88	80	72	67	61	56	53	40
6MSF271-15/10	15	10	S/D	65MM		110	100	90	84	76	70	66	50
6MSF271-20/14	20	14	S/D	65MM		154	140	126	118	106	98	92	70

MODEL	HP	STAGE	STARTING	DELIVERY	PES	DISCHARGE IN LPM							
						0	290	400	630	740	860	950	1080
6MSF302-6/3	6	3	DOL	75MM		35	32	30	26	24	20	17	13
6MSF302-7.5/4	7.5	4	DOL	75MM		46	42	40	34	32	27	22	17
6MSF302-10/5	10	5	S/D	75MM		58	53	50	43	40	34	28	21
6MSF302-12.5/6	12.5	6	S/D	75MM		71	63	60	50	48	41	34	26
6MSF302-15/7	15	7	S/D	75MM		83	74	70	58	56	48	39	30
6MSF302-15/8	15	8	S/D	75MM		94	84	80	66	64	55	45	34
6MSF302-20/10	20	10	S/D	75MM		118	105	100	83	BO	69	56	43



**Specification for 6" Submersible Pumpset**  
**Three Phase / Mixed Flow Pumpset Wet Type**  
**350 to 415 Volts 50 HZ**  
**A.C Supply**

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MODEL	HP	STAGE	STARTING TYPE	DELIVERY SIZE IN	S m r	DISCHARGE IN LPM							
						0	260	370	490	670	760	950	1150
6MSF323-5/2	5	2	DOL	75MM		28	25	23	22	20	18	17	13
6MSF323-7.5/3	7.5	3	DOL	75MM		<b>42</b>	38	35	<b>32</b>	<b>30</b>	27	25	20
6MSF323-10/4	10	4	S/D	75MM		57	<b>50</b>	47	43	<b>40</b>	37	33	27
6MSF323-12.5/5	12.5	5	S/D	75MM		70	63	58	<b>54</b>	50	46	<b>42</b>	33
6MSF323-15/6	15	6	S/D	75MM		84	75	70	65	60	55	50	40
6MSF323-20/8	20	8	S/D	75MM		112	<b>100</b>	93	86	80	73	67	53



**Specification for Openwell Submersible Pumpsets**  
 Three Phase 380 to 415 Volts 50 HZ  
 A.C Supply

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**VERTICAL OPENWELL**

MODEL	kW	HP	STAGE	DELIVERY SIZE IN	DISCHARGE IN LPM															
					LP	100	150	200	250	300	350	400	450	500	600		800	900		
SFVOW-32	2.2	3	2	65	33	32	31	30	29	27	24	19					8			
SFVOW-52	3.7	5	2	65	40	39.5	39	38.5	38	37	36	31					18	10		
SFVOW-53	3.7	5	3	65	52	51	50	49	47	44	41	37	32	22						
SFVOW-73	5.5	7.5	3	65	55	54.5	54	53	51	49	45	40	32	21						
SFVOW-74	5.5	7.5	4	65	72	70	68	66	63	59	52	49	45	36						
SFVOW-75	5.5	7.5	5	65	87	85	83	82	78	73	68	62	53	37						
SFVOW-104	7.5	10	4	65			80	79	78	77	76	75	72	62	52	36	20			
SFVOW-105	7.5	10	5	65	90	87.5	85	82.5	78.75	73.75	65	61.25	56.25	45						
SFVOW-106	7.5	10	6	65	104	102	100	98	94	88	82	74	64	44						
SFVOW-155	11	15	6	65			120	118.5	117	115.5	114	112	108	93	78	54	30			

**HORIZONTAL OPENWELL**

MODEL	kW	HP	PUMP	DISCHARGE IN LPM																									
				LPS	0	7	8	9	10	11	12	13	14	1b	16	17	18	19	20	21	22	24	26	28	29	30			
SFHOW-30	2.2	3	66x50	27	26	25	24	23	22	21	20																		
SFHOW-50	3.7	5	65x50	34	30	28	27	26	24	23	17	12																	
SFHOW-51	3.7	5	75x65	31			28	27	26	25	24	23	20			15													
SFHOW-52	3.7	5	100x75	22									18	17	16	15	14	13	11	10									
SFHOW-70	5.5	7.5	65x50	45	34	35	34	33	32	31	28	27	25	22															
SFHOW-71	5.5	7.5	75x65	34			30	29.5	29	28.5	27	25																	
SFHOW-72	5.5	7.5	100x75	28							26	25E	25	24.5	24	23.5	23	22	21	19									
SFHOW-100	7.5	10	65x50	48				47	46	45	44	42.5	41	37	31.5	20													
SFHOW-101	7.5	10	75x65	41					38	37	*	36	35	35	33	32	31	28	13										
SFHOW-102	7.5	10	100x75	32										31	30.5	30	29.5	29	28	26	25	23	21	19					





**PIPE FRICTION LOSS TABLE**

Permissible ranges of volume rates of flow in Us through Galvanized Steel Pipe to limit Friction Losses to 10 Percent of the Pipe Length

Light Rate of flow in LPS	Medium Rate of flow in LPS	Heavy Rate of flow in LPS
1.90 - 2.274	1.79 - 2.67	1.59 - 2.41
2.74 - 5.24	2.67 - 4.95	2.41 - 4.54
5.24 - 9.97	4.95 - 9.80	4.54 - 9.17
9.97 - 15.54	9.80 - 14.97	9.17 - 14.20
15.54 - 30.84	14.97 - 30.0	14.20 - 28.67
-	30.0 - 52.50	28.67 - 51.37
-	52.50 - 84.80	51.37 - 82.63

**FREICTION LOSS IN METRES FOR 10 METRES LONG NEW  
RPVC PIPE (C=150)**

Grade Nominal In mm	Light Rate of flow in LPS	Medium Rate of flow in LPS	Heavy Rate of flow in LPS
40	-	-	upto 2.04
50	-	-	2.04 - 3.70
63	-	3.80 - 7.24	3.70 - 6.77
75	-	7.24 - 11.47	6.77 - 10.76
90	11.50 - 19.58	11.47 - 18.50	10.76 - 17.41
110	19.58 - 33.25	18.59 - 31.71	17.41 - 29.75
125	33.25 - 46.63	31.71 - 44.33	29.75 - 41.44
140	46.63 - 62.92	44.33 - 59.79	41.44 - 55.97
160	62.92 - 89.28	59.79 - 84.95	55.97 - 79.76