

ENGINEERING MANUAL

FST SERIES

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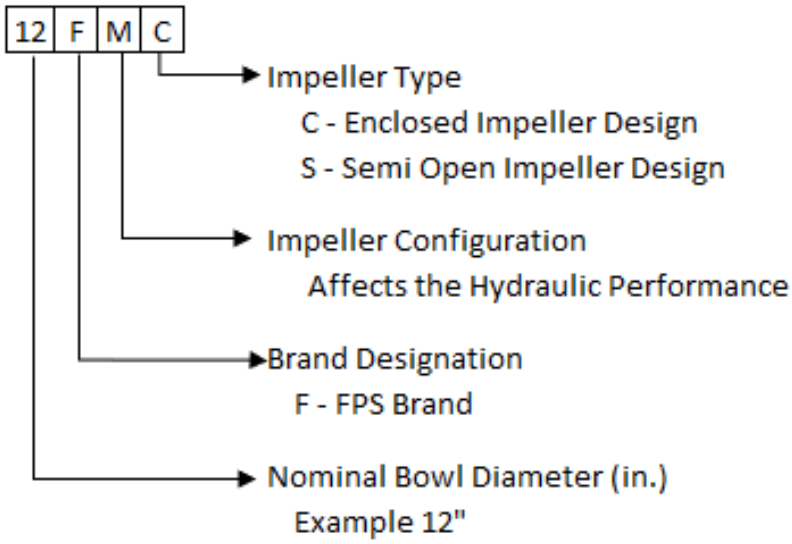
Franklin Electric

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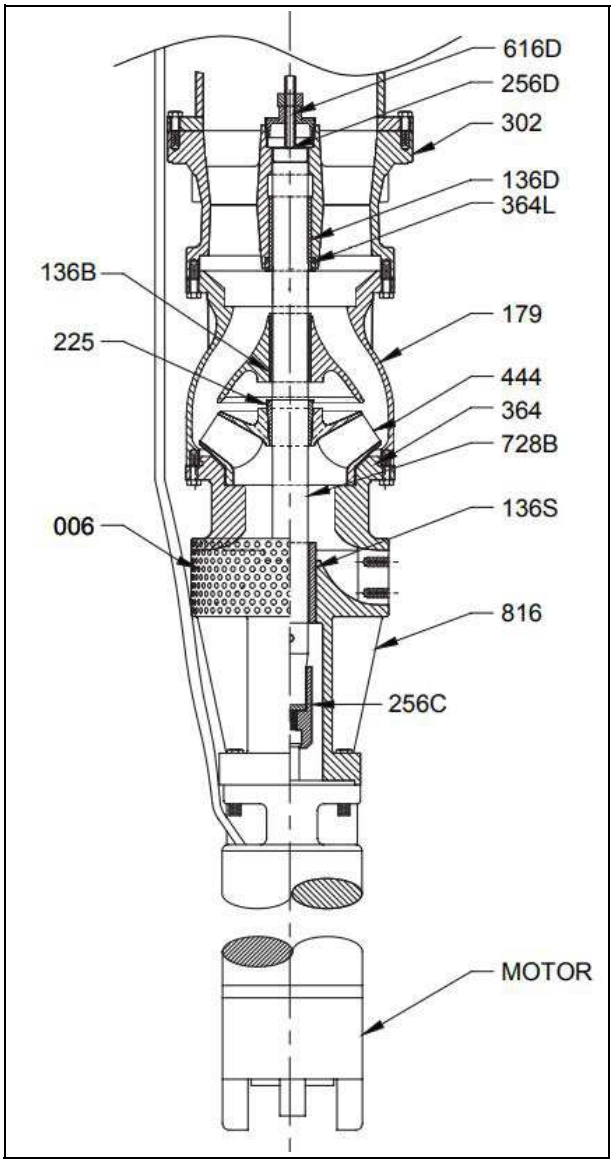
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FST SUBMERSIBLE MODEL NOMENCLATURE

FST - FPS branded submersible turbine product is offered in 6" to 12" configurations.



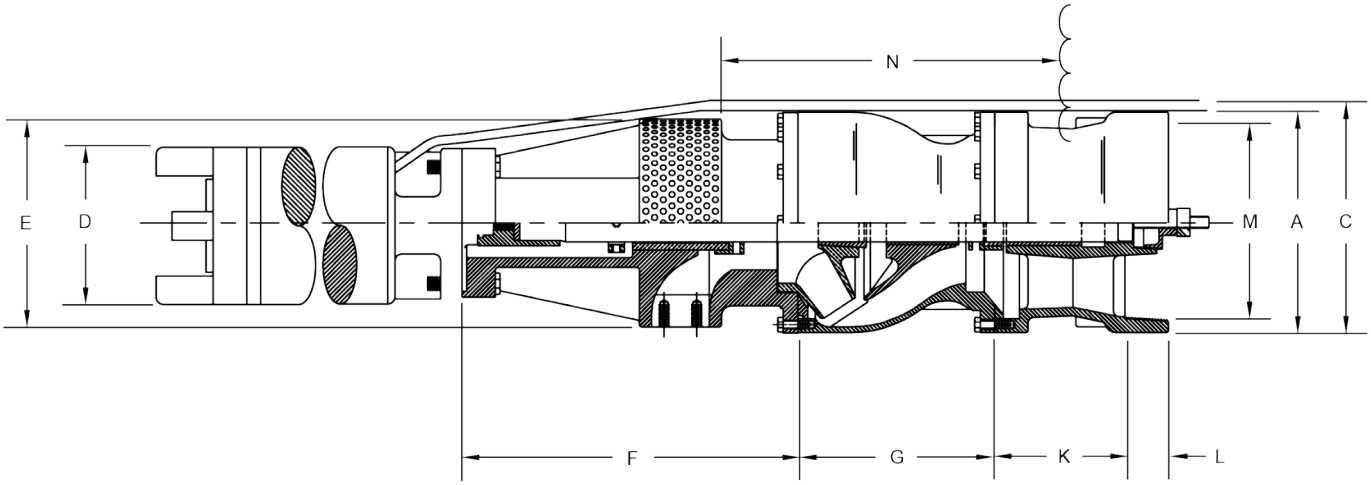
FST STANDARD MATERIAL OF CONSTRUCTION



Item	Description	Standard Material
006	Suction Screen	300 SS
136B	Bowl Bearing	Bronze
136D	Discharge Case Bearing	Bronze
136S	Suction Case Bearing	Bronze
179	Bowl	Cast Iron; Vitreous enamel, glass lined
225	Impeller Collet	Carbon Steel
302	Discharge Case	Ductile Iron
364	Bowl O-Ring	Viton
364L	Lip Seal	Rubber
444	Impeller	Investment Cast 304 SS
616D	Discharge Case Plug	Carbon Steel
728B	Bowl Shaft	416 SS
816	Suction Case	Cast Iron

BOWL DIMENSIONS

NOTE: The Min. Submergence value is from the bottom of the bell or suction case to the water level. This value is required to prevent vortices only. It may need to increase to provide adequate NPSHA.

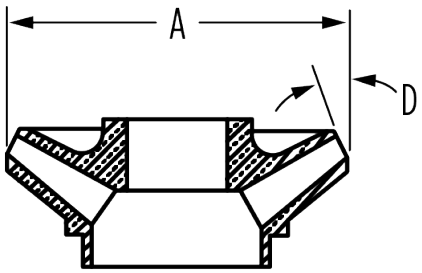


Model(s)	A	C	D	E	F	G	L	N
	Maximum Bowl Diameter	Bowl Diameter with Cable Guard	Motor Size	Motor Bracket Diameter	Motor Bracket Length	Add Stage Length	Discharge Thread Depth	Minimum Submergence
5FMC	5.5	5.688	4, 6	5.25	8.5 9.5	4.625	1.641	10
6FJC, 6FMC	5.875	6	4, 6	5.563	8.5 9.5	3.75	1.641	10
6FMC	5.875	6	4, 6	5.563	8.5 9.5	4.75	1.641	10
6FHC	5.813	6 6 6.5	4, 6, 8	5.63 5.63 7.375	8.5 9.5 13	4.75	1.641	10
6FXC, 6FYC	8.813	6 6.5	6, 8	5.563 7.375	8.5 9.5	4.75	1.641	20
6FWC	8.813	6 6.5	6, 8	5.563 7.375	8.5 9.5	4.75	1.641	10
7FMC, 7FHC	7.313	7.563 8.063	6, 8	7.125 7.375	11.688 13	7.063	1.75	18
8FJC, 8FLC	7.875	7.938 8.438	6, 8	7.5 7.5	11.688 13	5.625	1.406 1.513	18
8FKC, 8FMC	7.813	7.938 8.438	6, 8	7.5 7.5	11.688 13	5.625	1.406 1.513	18 22
8FEHC	7.688	7.938 8.438	6, 8	7.5 7.5	11.688 13	6.25	1.406 1.513	22
8FYC	7.875	7.938 8.438 8.438	6, 8, 10	7.5 7.5 9.125	11.563 13 13	7.5	1.513	28
9FLC	9.438	9.688 10.188 10.188	6, 8, 10	9.25 9.25 9.25	11.688 13 13	8.5	1.75 1.875	30
9FHC	9.438	10.188 10.188	8, 10	9.25 9.25	11.688 13	8.5	1.75 1.875	30
10FJC, 10FKC	9.875	10.438	6, 8, 10	9.5	15.125	7.25	1.625 1.875	32

BOWL DIMENSIONS

Model(s)	A	C	D	E	F	G	L	N
	Maximum Bowl Diameter	Bowl Diameter with Cable Guard	Motor Size	Motor Bracket Diameter	Motor Bracket Length	Add Stage Length	Discharge Thread Depth	Minimum Submergence
10FLC, 10FMC	9.625	10.438	6, 8, 10	9.5	15.125	7	1.625 1.875	36
10FWC	9.875	10.138	6, 8, 10, 12	9.5	15.125	8.5	1.875	28
10FYC	9.875	10.438	8, 10, 12	9.5	15.125	8.5	1.875	40
10FZC	9.875	10.438	8, 10, 12	9.5	15.125	8.5	1.85	30
11FLC, 11FHC	11.188	11.938	8, 10, 12	9.5	15.125	9.875	1.85	30
11FMC	11.188	11.938	8, 10	9.5	15.125	9.875	1.85	30

IMPELLER ENGINEERING DATA



Model (s)	Diameter (A) (in.)		Standard Lateral (in.)	MAX Sphere (in.)	Eye Area (in. ^ 2)	Weight (lb)	Trim Angle (D) (degree)
	Max	Min					
5FMC	4.125	3.875	0.25	0.375	3.03	1.7	20
6FJC	4.688	3.688	0.375	0.125	2.41	1.8	0
6FJC	4.688	3.75	0.438	0.188	3.12	2.15	27
6FMC	4.688	3.75	0.375	0.188	3.65	2.38	20
6FXC	4.625	4.25	0.625	0.188	5.02	2.15	30
6FWC	4.688	4.313	0.438	0.5	6.88	2.65	35
6FYC	4.688	4.313	0.25	0.5	7.51	2.35	30
7FMC	5.688	5.125	0.625	0.75	11.3	5	18
7FHC	5.688	5.375	0.625	0.75	11.3	5.25	18
8FJC	6.313	5.25	0.438	0.25	3.65	5.75	0
8FLC	6.313	4.875	0.438	0.25	4.64	5.75	0
8FKC	6.313	5.5	0.438	0.375	5.72	5.5	18
8FMC	6.313	5.5	0.438	0.375	6.5	5	27.5
8FEHC	6.313	5.75	0.375	0.625	8.33	5	29.5
8FYC	6.365	5.5	0.375	1.125	15.9	5.25	37
9FLC, 9FHC	7.415	6.938	0.875	0.75	12.4	8.2	17
10FJC	7.725	6.797	0.5	0.438	7.89	9.25	25.5
10FKC	7.725	6.797	0.5	0.438	7.89	9.5	25.5
10FLC	7.688	6.875	0.563	0.5	10.2	9.75	20
10FMC	7.688	6.875	0.625	0.625	11.7	8.5	26
10FHC	8.25	6.75	0.625	0.875	19.4	11	33.25
10FWC	8.25	6.75	0.875	0.875	19.4	11.5	33.25
10FYC	8.25	6.75	0.75	0.875	19.4	11	33.25
10FZC	8.25	7.125	0.5	1.438	26.7	9.75	42
11FLC, 11FMC, 11FHC	8.813	8.188	0.75	0.75	17.7	13.3	23
12FDC	9.313	8.375	0.625	0.625	15.9	14.25	25
12FJC	9.5	8	0.625	0.5	15.9	14.5	25
12FIC	9.313	8.5	0.625	0.625	19.1	15	23
12FKC	9.313	7.938	0.625	0.625	18.1	16	23
12FNC	9.703	8.25	0.625	0.75	14.1	12.5	26
12FLC	9.375	7.75	0.875	0.625	20.1	15.5	21.5
12FGC	9.5	8.75	1	0.625	20.1	17.5	24
12FMC	9.375	8	0.75	0.625	20.1	15	21.5
12FHC	9.563	8.75	0.75	0.75	32.4	11.5	30
12FXC	9.563	8.75	0.875	1	36.6	15.25	26.5

IMPELLER ENGINEERING DATA

Model (s)	Diameter (A) (in.)		Standard Lateral (in.)	MAX Sphere (in.)	Eye Area (in. ^ 2)	Weight (lb)	Trim Angle (D) (degree)
	Max	Min					
12FWC	10.063	9.063	0.75	1.375	29.7	21	30.5
12FYC	9.797	8.634	0.875	1.5	38	19	35

SHAFT LENGTH DATA

Cast Iron Submersible Shaft Lengths

Model	Shaft	First Stage	Additional Stage	Setup Tool	Motor
5FMC	1 in.	15.094	4.625	1.625	4 in.
6FJC	3/4 in.	14.219	3.75	1.625	4 in.
6FM, H, X, W, Y/C	1 in.	15.219	4.75	1.625	4 in.
6FJC	3/4 in.	13.719	3.75	3	6 in.
6FM, H, X, W, Y/C	1 in.	14.719	4.75	3	6 in.
7FM, H/C	1-3/16 in.	19.375	7.063	3	6 in.
8FJ,L,K,M / C	1 in.	17.688	5.625	3	6 in.
8FEH / C	1-3/16 in.	18.313	6.25	3	6 in.
8FY / C	1-3/16 in.	19.563	7.5	3	6 in.
9FL,H / C	1-1/2 in.	21.938	8.5	3	6 in.
7FM, H / C	1-3/16 in.	19.813	7.063	3.8125	8 in.
8FJ,L,K,M / C	1 in.	18.125	5.625	3.8125	8 in.
8FEH / C	1-3/16 in.	18.750	6.25	3.8125	8 in.
8FY / C	1-3/16 in.	20	7.5	3.8125	8 in.
9FL,H / C	1-1/2 in.	22.375	8.5	3.8125	8 in.
10FJ,K / C	1-1/2 in.	23.25	7.25	3.8125	8 in. & 10 in. A
10FL,M,H / C	1-1/2 in.	23	7	3.8125	8 in. & 10 in. A
10FW,Y,Z / C	1-11/16 in.	24.875	8.5	3.8125	8 in. & 10 in. A
11FL,M,H / C	1.688 in.	26.25	9.875	3.8125	8 in. & 10 in. A
10FJ,K / C	1-1/2 in.	22.25	7.25	4.8125	10 in B, 12 in & 14 in
10FL,M,H / C	1-1/2 in.	22	7	4.8125	10 in B, 12 in & 14 in
10FW,Y,Z / C	1-11/16 in.	23.875	8.5	4.8125	10 in B, 12 in & 14 in
11FL,M,H / C	1.688 in.	25.25	9.875	4.8125	10 in B, 12 in & 14 in

Stainless Steel Submersible Stage Lengths

Model	Shaft	Number of Stages										Add Stage	Setup Tool	Motor
		1	2	3	4	5	6	7	8	9	10			
F-6J,L	3/4 in.	0	0	0	0	0	0	0	0	0	0	0	1.625	4 in. or 6in.
F-6X	1 in.	13.875	18.625	23.375	28.125	32.875	37.625	42.375	47.125	51.875	56.625	4.75	1.625	4 in.
F-6M, H,W,Y	1 in.	13.75	18.375	23	27.625	32.25	36.875	41.5	46.125	50.75	55.375	4.625	1.625	4 in.
F-6X	1 in.	13.5	18.25	23	27.75	32.5	37.25	42	46.75	51.5	56.25	4.75	3	6 in.
F-6M, H,W,Y	1 in.	13.375	18	22.625	27.25	31.875	36.5	41.125	45.75	50.375	55	4.625	3	6 in.

NOTES

NOTES



For technical assistance, parts, or repair, please contact:

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