



EBARA

CF1106UC

EBARA END SUCTION VOLUTE PUMPS

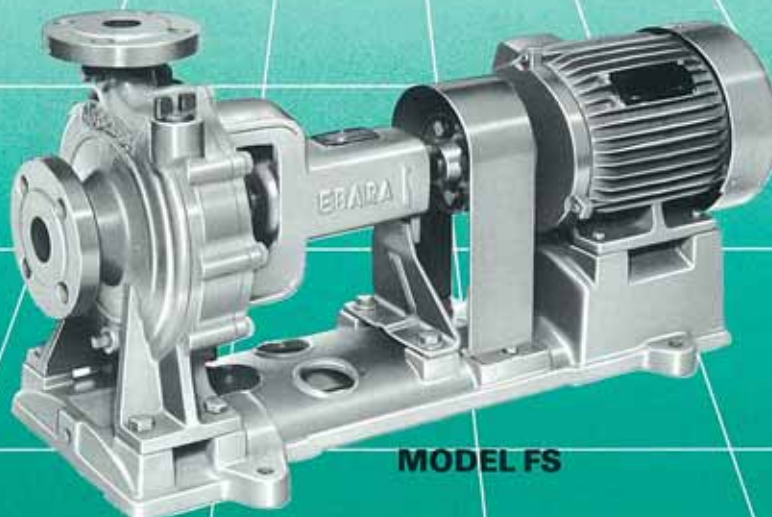
MODEL FS · IBL · FSD



MODEL FSD

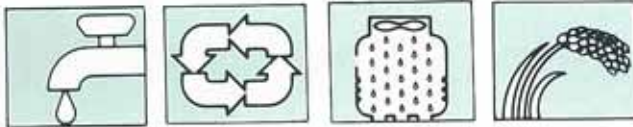


MODEL IBL



MODEL FS

APPLICATIONS



Water supply

Hot, cold water circulation

Cooling tower

Irrigation

FEATURES

1. Ease of maintenance. BPO (Back Pull Out) system permits assembly and overhaul of the impeller, shaft and bearings without removal of suction/discharge piping.
2. Top centerline discharge, foot support under casing for maximum resistance to misalignment and distortion from pipe loads.
3. Higher operating efficiency over a wider range of capacities, lowers operational cost.

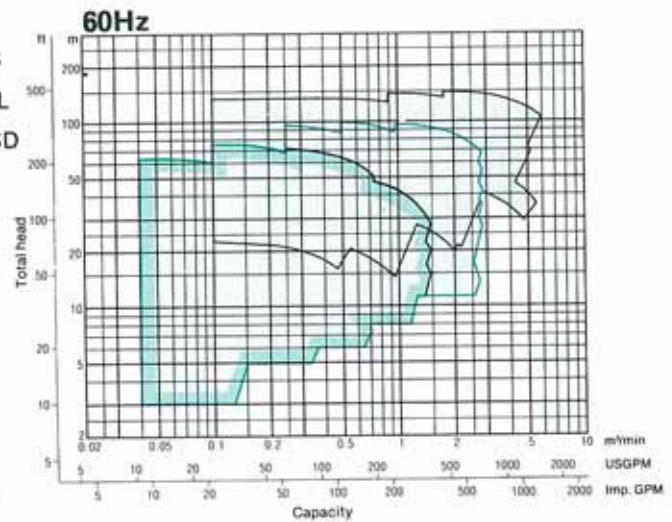
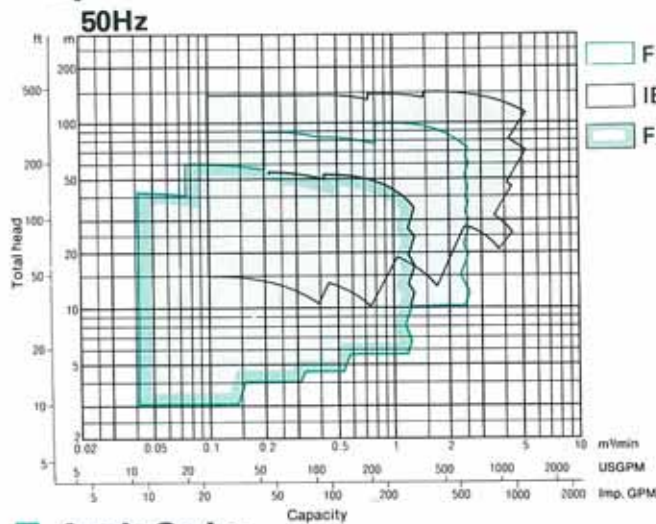
GENERAL SELECTION

	FS	IBL	FSD
Construction	Motor directly coupled	Motor directly coupled	Motor close coupled
Working pressure (kgf/cm ²)	10	14	10
Max. suction pressure (kgf/cm ²)	10 - Shut off head 10	14 - Shut off head 10	10 - Shut off head 10
Construction Shaft seal	Packing Mechanical seal (option)	Packing Mechanical seal (option)	Mechanical seal
Shaft sleeve	No	Yes	No
Bearing	Sealed ball	Ball (oil bath)	Sealed ball

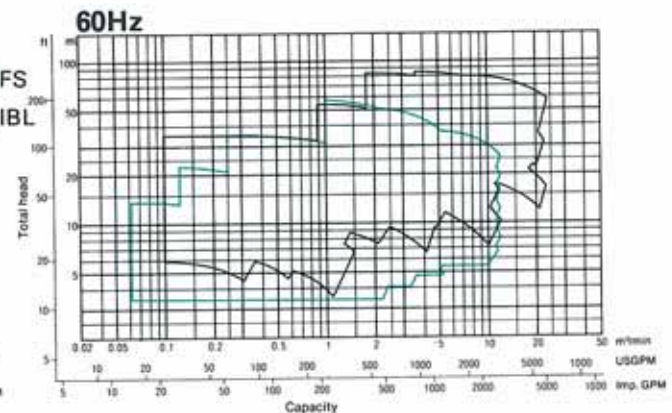
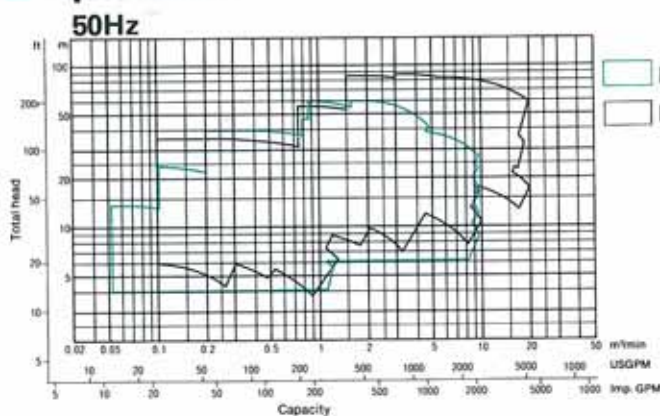
1 kgf/cm² = 0.0980665MPa

GENERAL SELECTION CHARTS

2 pole Series



4 pole Series



SELECTION – MODEL FS (Max. Working Pressure 10 kgf/cm²)

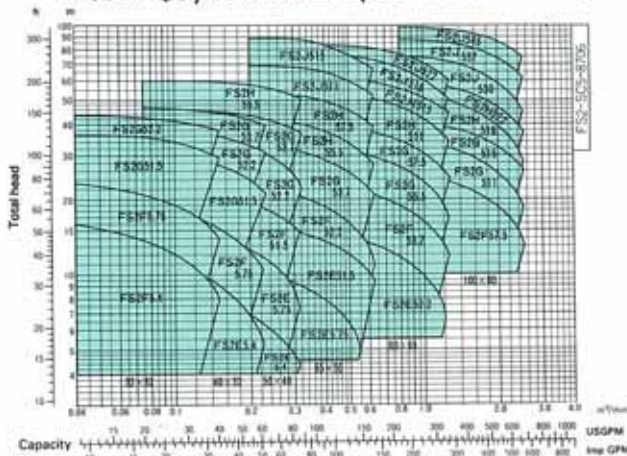
Specifications

	Model FS2 (2 pole motor driven)		Model FS4 (4 pole motor driven)			
			40 × 32 – 125 × 100		150 × 125, 200, 200 × 150 FS4	
	Standard	Optional	Standard	Optional	Standard	Optional
Liquid	Fresh water		Fresh water		Fresh water	
Temperature	0 – 80°C (32 – 176°F)		0 – 80°C (32 – 176°F)		0 – 100°C (32 – 212°F)	
Max suction pressure (kgf/cm ²)	FS2E, FS2F, FS2G 8.2 – Shut off head 10 FS2H, FS2J 10.2 – Shut off head 10	FS2E, FS2F, FS2G 10.2 – Shut off head 10	Except for FS4L 8.2 – Shut off head 10 FS4L 10.2 – Shut off head 10	Except for FS4L 10.2 – Shut off head 10	FS4H, FS4J, FS4K 8.2 – Shut off head 10 FS4L 10.2 – Shut off head 10	FS4H, FS4J, FS4K 10.2 – Shut off head 10
Re. NPSH	Except for 100 × 80 ...below 4 m 100 × 80 50Hz below 5 m 60Hz below 6 m		Below 4 m but 125 × 100 FS4K 60Hz...below 5 m		50Hz...below 5 m 60 Hz...below 6 m	
Synchronous speed	3000 min ⁻¹ /50Hz 3600 min ⁻¹ /60Hz		1500 min ⁻¹ /50Hz 1800 min ⁻¹ /60Hz		1500 min ⁻¹ /50Hz 1800 min ⁻¹ /60Hz	
Installation	Indoors	Outdoors	Indoors	Outdoors	Indoors	Outdoors
Materials Casing Impeller	Cast iron Cast iron FS2H, 2J.....Bronze but 32 × 32FS2F ...304 stainless steel 403 stainless steel	Bronze	Cast iron Cast iron but 125 × 100 FS4L ...Bronze	Bronze but 125 × 100 FS4L ...Ductile cast iron	Cast iron Cast iron but 150 × 125 FS4L ...Ductile cast iron	Bronze
Shaft Others	304 stainless steel 403 stainless steel	304 stainless steel All iron	403 stainless steel	304 stainless steel All iron	403 stainless steel	304 stainless steel All iron
Flange	JIS 10kgf/cm ² GR.F.		JIS 10kgf/cm ² GR.F.		JIS 10kgf/cm ² GR.F.	
Construction Stuffing box Bearing	Packing Sealed ball	Mechanical seal	Packing Sealed ball	Mechanical seal	Packing Sealed ball	Mechanical seal
Accessories	[With motor] Common base 1 Coupling 1set Coupling guard 1 Companion flange.1set		[With motor] Common base. 1 Coupling . . 1set Coupling guard1 Companion flange 1set		[With motor] Common base. 1 Coupling . . 1set Coupling guard1 Companion flange 1set	

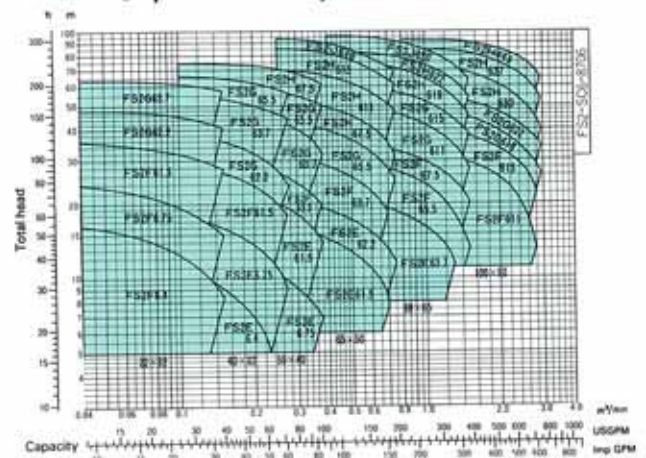
1 kgf/cm² = 0.0980665MPa

Selection Charts for 2 pole Models FS2

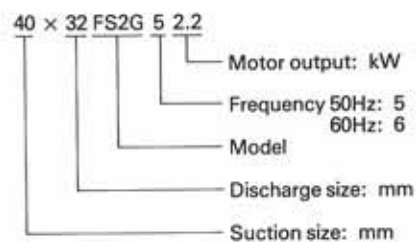
50Hz [Synchronous speed: 3000 min⁻¹]



60Hz [Synchronous speed: 3600 min⁻¹]

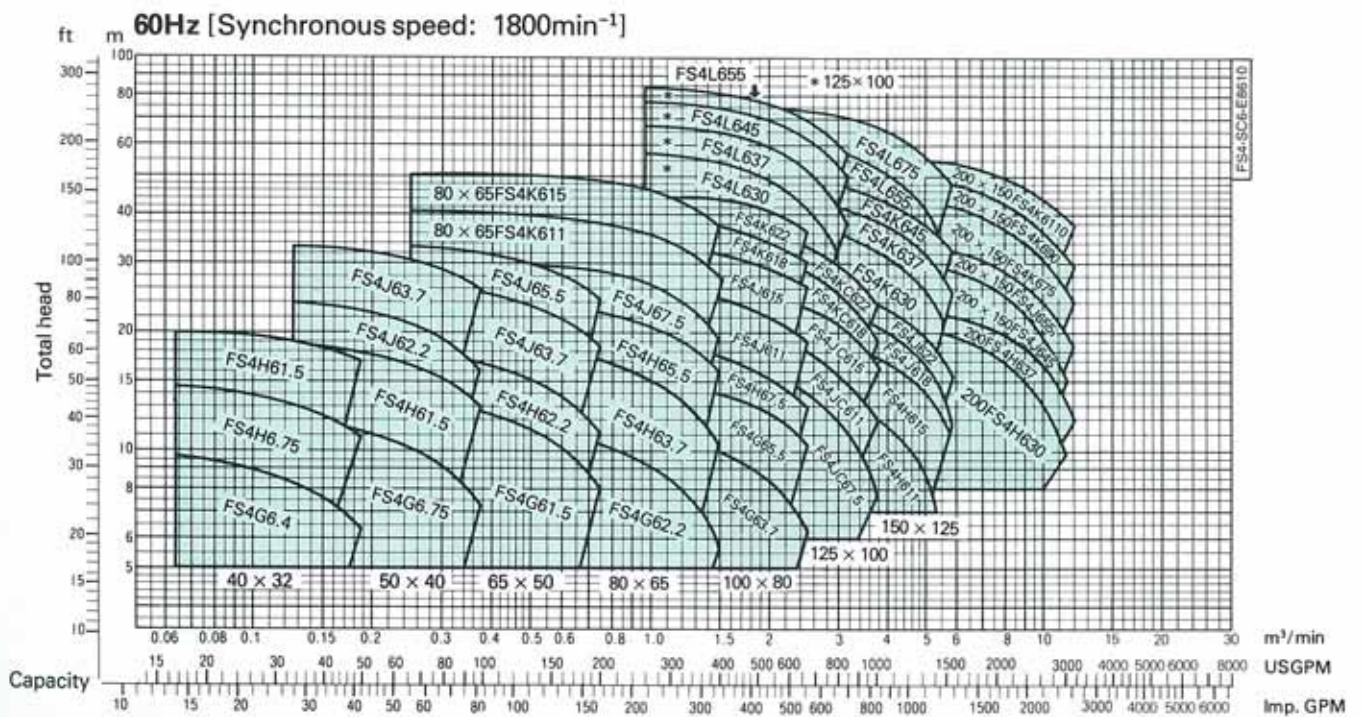
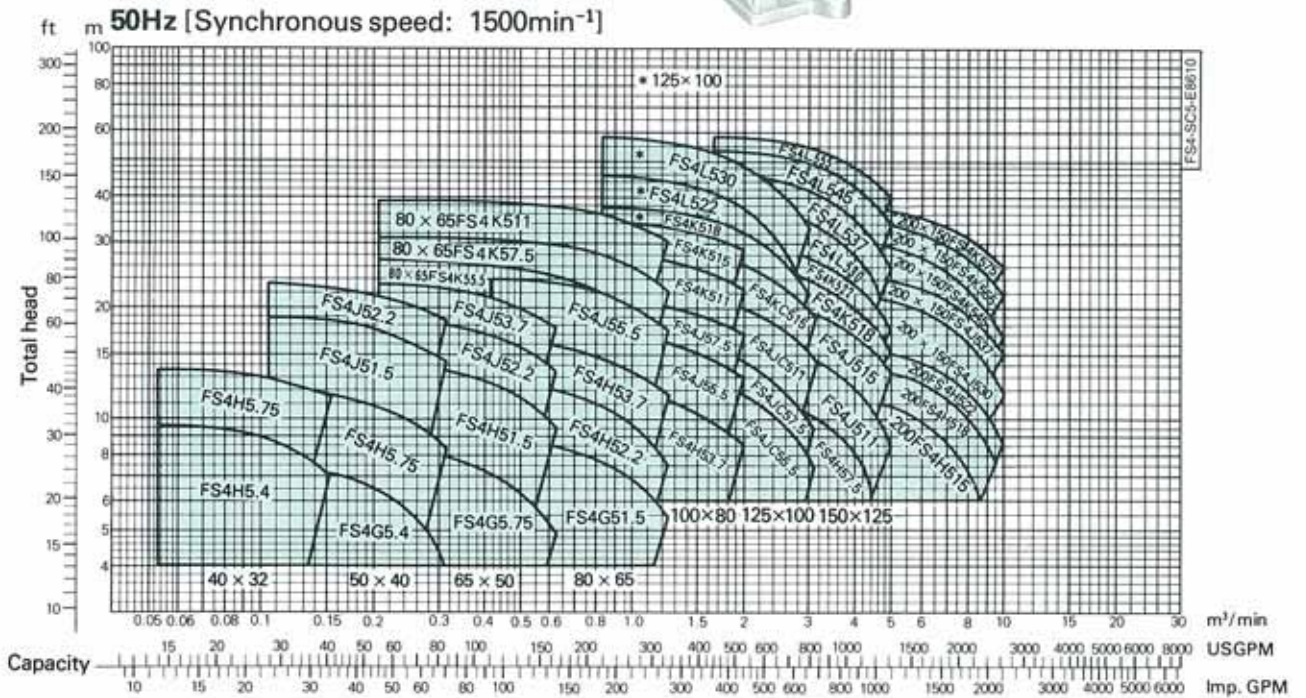


Symbols



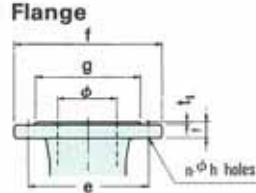
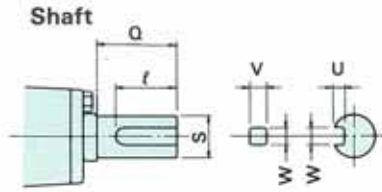
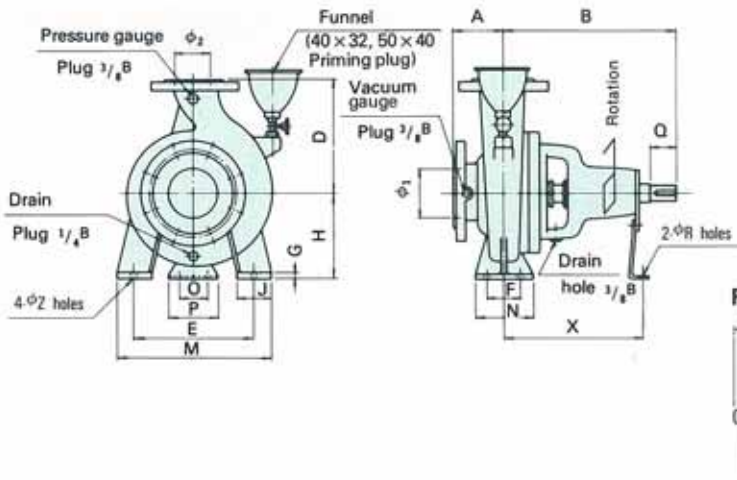
SELECTION — MODEL FS (Max. Working Pressure 10 kgf/cm²)

Selection Charts for 4 pole Models FS4



DIMENSIONS

Model FS Bare Shaft Pumps



Unit: mm

Size $\phi_1 \phi_2$	g	e	f	t	l_1	n	h
32	80	100	135	20	2	4	19
40	85	105	140	20	2	4	19
50	100	120	155	20	2	4	19
65	120	140	175	22	2	4	19
80	130	150	185	22	2	4	19
100	155	175	210	24	2	8	19
125	185	210	250	24	2	8	23
150	215	240	280	26	2	8	23
200	265	290	330	26	2	12	23

2 pole

Unit: mm

Size $\phi_1 \phi_2$	Model	Pump													Shaft						Ball bearing	Packing Valqua # 1134	Weight (Mass) kg		
		A	B	D	E	F	G	H	J	M	N	O	P	R	X	Z	S	Q	r	U				V	W
32	32 x 32FS2F	65	200	140	140	56	10	112	50	190	80	—	—	—	12	19	28	25	3.5	6	6	6204UU	3-15 x 27 x 6	13	
	32 x 32FS2G	80	280	160	190	70	10	132	50	240	100	80	120	17	205	15	19	40	31	3.5	6	6	6304UU	4-20 x 36 x 8	20
	40 x 32FS2E	65	200	125	125	56	10	100	40	160	80	—	—	—	12	19	28	25	3.5	6	6	6204UU	3-15 x 27 x 6	12	
40	40 x 32FS2F	65	200	140	140	56	10	112	50	190	80	—	—	—	12	19	28	25	3.5	6	6	6204UU	3-15 x 27 x 6	13	
	40 x 32FS2G	80	280	160	190	70	12	132	50	240	100	80	120	17	205	15	19	40	31	3.5	6	6	6304UU	4-20 x 36 x 8	20
	50 x 40FS2E	65	200	140	140	56	10	112	50	190	80	—	—	—	12	19	28	25	3.5	6	6	6204UU	3-15 x 27 x 6	13	
50	50 x 40FS2F	80	360	140	140	70	10	112	50	190	100	110	150	17	285	15	24	50	44	4	7	8	6305UU	4-20 x 36 x 8	21
	50 x 40FS2G	80	360	160	190	70	10	132	50	240	100	110	150	17	285	15	24	50	44	4	7	8	6305UU	4-20 x 36 x 8	27
	50 x 40FS2H	80	360	180	190	70	12	160	50	240	100	110	150	17	285	15	24	50	44	4	7	8	6305UU	4-25 x 41 x 8	26
65	65 x 50FS2E	80	360	140	140	70	10	112	50	190	100	80	120	17	205	15	19	40	31	3.5	6	6	6304UU	4-20 x 36 x 8	17
	65 x 50FS2F	80	360	140	160	70	10	112	50	210	100	110	150	17	285	15	24	50	44	4	7	8	6305UU	4-20 x 36 x 8	23
	65 x 50FS2G	80	360	160	190	70	12	132	50	240	100	110	150	17	285	15	24	50	44	4	7	8	6305UU	4-20 x 36 x 8	23
80	80 x 50FS2E	100	360	180	212	70	12	160	50	265	100	110	150	17	285	15	24	50	44	4	7	8	6305UU	4-25 x 41 x 8	29
	80 x 50FS2F	100	360	225	250	95	14	180	65	320	125	110	150	17	285	15	24	50	44	4	7	8	6305UU	4-25 x 41 x 8	37
	80 x 50FS2G	100	360	250	280	95	14	180	65	320	125	110	150	17	285	15	24	50	44	4	7	8	6305UU	4-25 x 41 x 8	37
100	80 x 65FS2E	100	360	160	190	70	10	132	50	240	100	80	120	17	205	15	19	40	31	3.5	6	6	6304UU	4-20 x 36 x 8	20
	80 x 65FS2F	100	360	160	190	70	10	132	50	240	100	110	150	17	285	15	24	50	44	4	7	8	6305UU	4-25 x 41 x 8	25
	80 x 65FS2G	100	360	180	212	70	12	160	50	265	100	110	150	17	285	15	24	50	44	4	7	8	6305UU	4-25 x 41 x 8	28
100	80 x 65FS2H	100	360	200	212	70	12	160	50	265	100	110	150	17	285	15	24	50	44	4	7	8	6305UU	4-25 x 41 x 8	32
	80 x 65FS2J	100	360	225	250	95	14	180	65	320	125	110	150	17	285	15	32	80	68	5	8	10	6307UU	4-35 x 51 x 8	43
	100 x 80FS2E	100	360	180	212	95	14	180	65	280	125	110	150	17	285	15	24	50	44	4	7	8	6305UU	4-25 x 41 x 8	30
200	100 x 80FS2G	100	360	200	212	95	14	180	65	280	125	110	150	17	285	15	24	50	44	4	7	8	6305UU	4-25 x 41 x 8	33
	100 x 80FS2H	100	360	225	250	95	15	180	65	320	125	110	150	17	285	15	32	80	68	5	8	10	6307UU	4-35 x 51 x 8	43
	100 x 80FS2J	100	360	250	280	120	15	200	80	360	160	110	150	17	285	19	32	80	68	5	8	10	6307UU	4-35 x 51 x 8	53

4 pole

Unit: mm

Size $\phi_1 \phi_2$	Model	Pump													Shaft						Ball bearing	Packing Valqua # 1134	Weight (Mass) kg		
		A	B	D	E	F	G	H	J	M	N	O	P	R	X	Z	S	Q	r	U				V	W
40	40 x 32FS4G	80	360	160	190	70	10	132	50	240	100	110	150	17	285	15	19	40	31	3.5	6	6	6305UU	4-20 x 36 x 8	24
	40 x 32FS4H	80	360	180	190	70	12	160	50	240	100	110	150	17	285	15	24	50	44	4	7	8	6305UU	4-25 x 41 x 8	27
	50 x 40FS4G	80	360	160	190	70	12	132	50	240	100	110	150	17	285	15	19	40	31	3.5	6	6	6305UU	4-20 x 36 x 8	24
50	50 x 40FS4H	100	360	180	212	70	12	160	50	265	100	110	150	17	285	15	24	50	44	4	7	8	6305UU	4-25 x 41 x 8	29
	50 x 40FS4J	100	360	225	250	95	14	180	65	320	125	110	150	17	285	15	24	50	44	4	7	8	6305UU	4-25 x 41 x 8	37
	85 x 50FS4G	100	360	180	212	70	12	160	50	265	100	110	150	17	285	15	24	50	44	4	7	8	6305UU	4-25 x 41 x 8	27
65	85 x 50FS4H	100	360	200	212	70	12	160	50	265	100	110	150	17	285	15	24	50	44	4	7	8	6305UU	4-25 x 41 x 8	33
	85 x 50FS4J	100	360	225	250	95	14	180	65	320	125	110	150	17	285	15	32	80	68	5	8	10	6307UU	4-35 x 51 x 8	48
	80 x 65FS4G	100	360	200	212	95	14	180	65	280	125	110	150	17	285	15	24	50	44	4	7	8	6305UU	4-25 x 41 x 8	34
80	80 x 65FS4H	100	360	225	250	95	15	180	65	320	125	110	150	17	285	15	32	80	68	5	8	10	6307UU	4-35 x 51 x 8	47
	80 x 65FS4J	100	470	250	280	120	15	200	80	360	160	110	150	17	370	19	32	80	68	5	8	10	6307UU	4-35 x 51 x 8	59
	80 x 65FS4K	125	470	280	315	120	16	225	80	400	160	110	150	17	370	20	32	80	68	5	8	10	6307UU	4-35 x 51 x 8	61
100	100 x 80FS4G	125	360	225	250	95	14	180	65	320	125	110	150	17	285	16	32	80	68	5	8	10	6307UU	4-35 x 51 x 8	59
	100 x 80FS4H	125	470	250	280	95	14	180	65	345	125	110	150	17	370	16	32	80	68	5	8	10	6307UU	4-35 x 51 x 8	64
	100 x 80FS4J	125	470	280	315	120	16	225	80	400	160	110	150	17	370	20	32	80	68	5	8	10	6307UU	4-35 x 51 x 8	76
125	100 x 80FS4K	125	470	315	315	120	16	250	80	400	160	110	150	17	370	20	32	80	68	5	8	10	6307UU	4-35 x 51 x 8	101
	125 x 100FS4K	140	470	315	315	120	16	250	80	400	160	110	150	17	370	20	32	80	68	5	8	10	6307UU	4-35 x 51 x 8	98
	125 x 100FS4L	140	530	355	400	150	20	280	100	500	200	110	150	17	370	24	42	110	106	5	8	12	6309UU	5-45 x 65 x 10	160
150	125 x 100FS4JC	140	470	280	315	120	16	225	80	400	160	110	150	17	370	20	32	80	68	5	8	10	6307UU	4-35 x 51 x 8	79
	125 x 100FS4KC	140	470	315	315	120	16	250	80	400	160	110	150	17	370	20	32	80	68	5	8	10	6307UU	4-35 x 51 x 8	104
	150 x 125FS4H	140	470	315	315	120	15	250	80	400	160	110	150	17	370	20	32	80	68	5	8	10	6307UU	4-35 x 51 x 8	98
200	150 x 125FS4J	140	470	355	400	150	16	250	80	400	160	110	150	17	370	20	32	80	68	5	8	10	6307UU	4-35 x 51 x 8	105
	150 x 125FS4K	140	530	355	400	150	16	280	100	500	200	110	150	17	370	24	42	110	106	5	8	12	6309UU	5-45 x 65 x 10	143
	150 x 125FS4L	140	530	400	400	150	20	315	100	500	200	110	150	17	370	24	42	110	106	5	8	12	6309UU	5-45 x 65 x 10	177
200	200FS4H	180	530	375	400	150	18	280	100	500	200	110	150	17	370	24	42	110	106	5	8	12	6309UU	5-45 x 65 x 10	157
	200 x 150FS4J	160	530	375	400	150	18	280	100	500	200	110	150	17	370	24	42	110	106	5	8	12	6309UU	5-45 x 65 x 10	163
200	200 x 150FS4K	160	670	400	450	15																			