



**EBARA**

Certified System  
Quality  
ISO 9001  
SAI GLOBAL  
Lic. No. QEC22090

SZ8001-V-R3

# EBARA MIX FLOW VOLUTE PUMP

MODEL SZ



## • APPLICATION

1. Irrigation.
2. Industrial Use.
3. Drainage.
4. Shrimp Ponds.
5. Flooding.

## • FEATURES

- 1. Highly efficient and economical.**  
Extremely high efficiency rate of 80%. Small drive motor required significantly reduces operating cost.
- 2. Trouble Free Operation.**  
Semi-open impeller guarantees clog free operation.
- 3. Large Capacity.**  
Changes in water level will have little effect on pump capacity. In fact, the higher the water volume, the less horsepower expended.  
Perfect for irrigation.
- 4. Simple Disassembly and Assembly.**  
Impeller can be easily inspected without removing driver.  
Simple to disassemble and assemble.

## • GENERAL SPECIFICATION

Type	Horizontal Shaft Mixed Flow Volute Pump
Impeller	Mixed Flow Open Type
Rotation	Counter Clock Wise When Viewed From End Shaft Coupling
Bearing Type	Sealed Ball Bearing: 200-250 SZ Ball Bearing Oil Bath Type: 300-500 SZ
Flange	JIS 10 kg/cm <sup>2</sup>
Nozzle Position :	Standard 200 - 250 (Side Suction - Top Discharge)  Standard 300 - 500 (Side Suction - Side Discharge)  Optional 300 - 350 (Side Suction - Top Discharge)
Liquid	River Water, Fresh Water
Temperature Liquid	Below 80 °C

# CONSTRUCTION BARE SHAFT PUMP

## 1. Model 200, 250 SZ

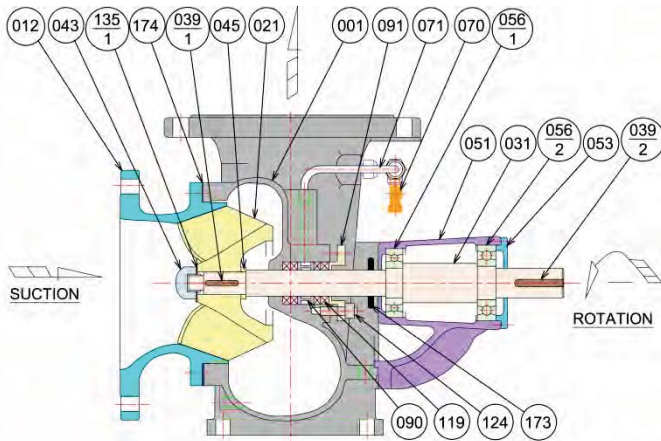


Figure A.

## 2. Model 300, 350, 400, 500 SZ

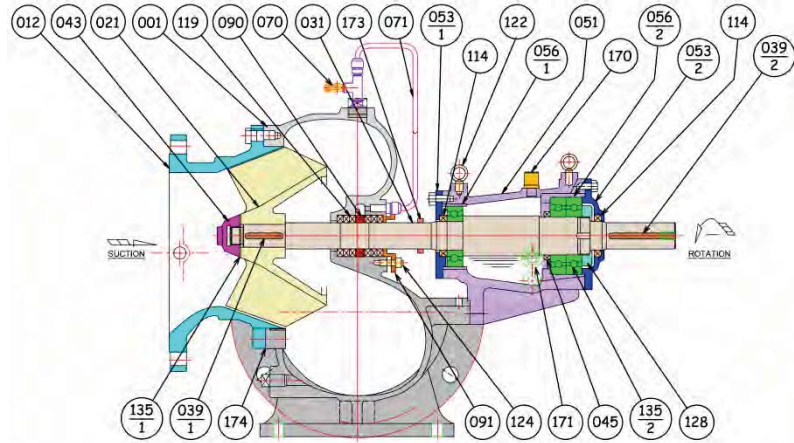


Figure B.

No.	Part Name	Material	Qty/Unit
001	Casing	FC250	1
012	Suction Cover	FC250	1
021	Impeller	FC200	1
031	Shaft	S35C-N	1
039-1	Impeller Key	S45C	1
039-2	Pulley Key	S45C	1
043	Impeller Nut	FC200	1
045	Distance Ring	SS400	1
051	Bearing Housing	FC200	1
053-1	Bearing Cover	FC200	1
053-2	Bearing Cover	FC200	1
056-1	Ball Bearing		1
056-2	Ball Bearing		1
070	Air Vent		1 Set
071	Flushing Pipe		1 Set

No.	Part Name	Material	Qty/Unit
090	Lantern Ring	BC6	1
091	Gland	BC6	1
114	Oil Seal		2
119	Gland Packing	#6501L	1 Set
122	Eye Bolt	S20C	2
124	Gland Bolt	BS BMD2	2
128	Bearing Nut	SS400	1
135-1	Impeller Washer	Brass	1
135-2	Bearing Washer	SS400	1
170	Air Breather		1
171	Oil Level Gauge		1
173	Deflector	SS400/NR	1
174	Sheet Gasket	Valqua	1

# DIMENSIONS

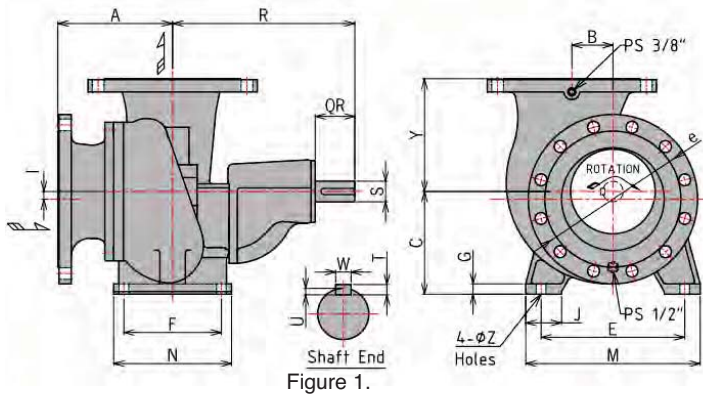


Figure 1.

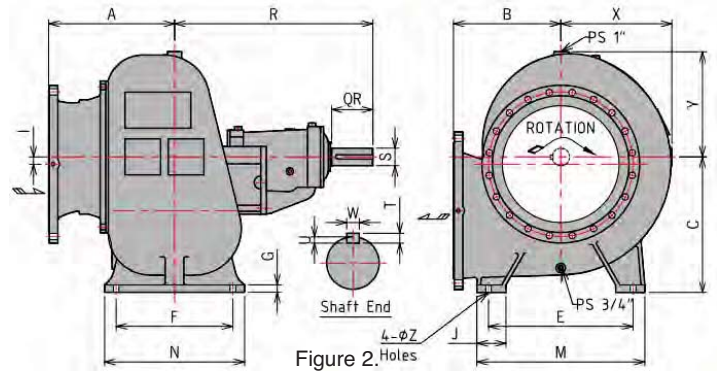
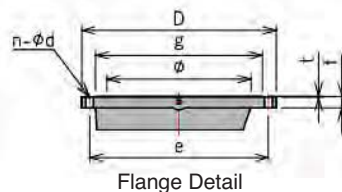


Figure 2.

MODEL	FIG.	PUMP DIMENSIONS													SHAFT DIMENSIONS					PUMP WEIGHT Kg	
		A	R	B	C	I	E	F	G	J	M	N	X	Y	Z	S	QR	T	U		W
200SZ	1	224	355	80	200	15	280	190	20	70	340	230	-	220	19	40	77	8	4.5	10	136
250SZ	1	289	380	100	240	15	330	235	22	80	400	280	-	260	19	40	78	8	4.5	10	145
300SZ	1	341	590	135	360	25	330	290	24	75	400	350	-	280	24	48	124	8	4.5	12	271
	2	341	590	280	360	25	330	290	24	75	400	350	280	257	24	48	124	8	4.5	12	220
350SZ	1	391	680	155	350	20	430	350	26	105	520	420	-	330	24	55	153	8	4.5	12	325
	2	391	680	330	420	20	410	350	26	90	490	420	330	307	24	55	153	8	4.5	12	310
400SZ	2	430	770	370	470	25	490	410	28	100	570	480	381	364	26	65	180	10	5	15	497
500SZ	2	540	850	460	580	31	620	500	32	125	720	600	476	451	26	75	180	12	6	18	840

### FLANGE DIMENSIONS (JIS 10K)

Size	D	g	e	n-φd	T	f
200 (8")	330	265	290	12-φ23	26	2
250 (10")	400	325	355	12-φ25	30	2
300 (12")	445	370	400	16-φ25	32	3
350 (14")	490	415	445	16-φ25	34	3
400 (16")	560	475	510	16-φ27	36	3
500 (20")	675	585	620	20-φ27	40	3

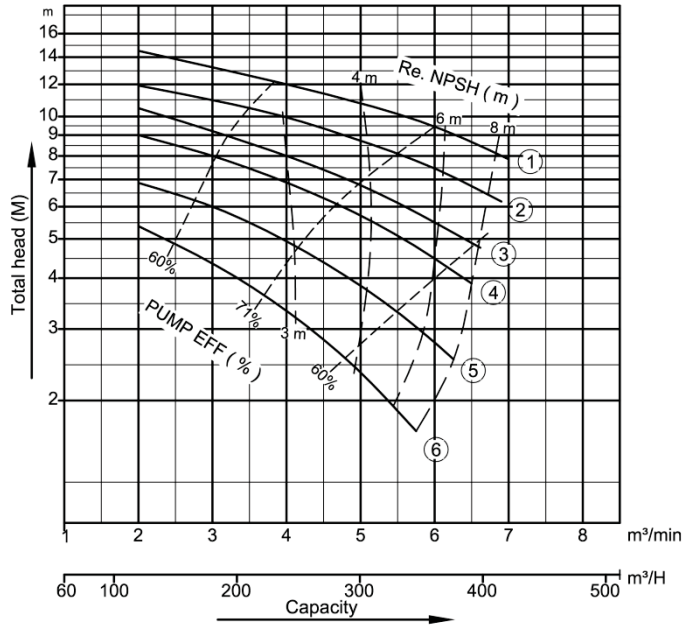


Flange Detail



# PERFORMANCE CURVE

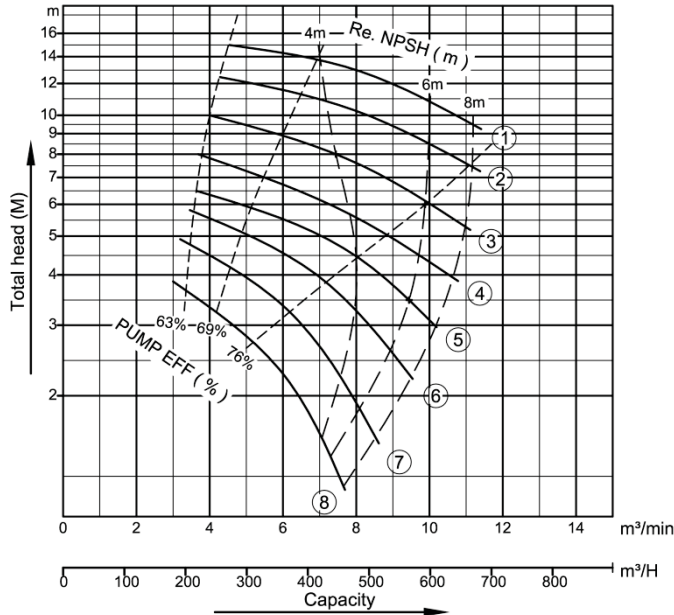
## 1. Model 200 SZ



Pump Rotation, and Power Requirement

Curve No	Pump Rotation (Rpm)	Motor Output (kW)	Engine Output (HP)
1	1750	15	20
2	1600	11	15
3	1500	11	13
4	1400	7.5	10
5	1250	5.5	7.5
6	1100	3.7	5.5

## 2. Model 250 SZ

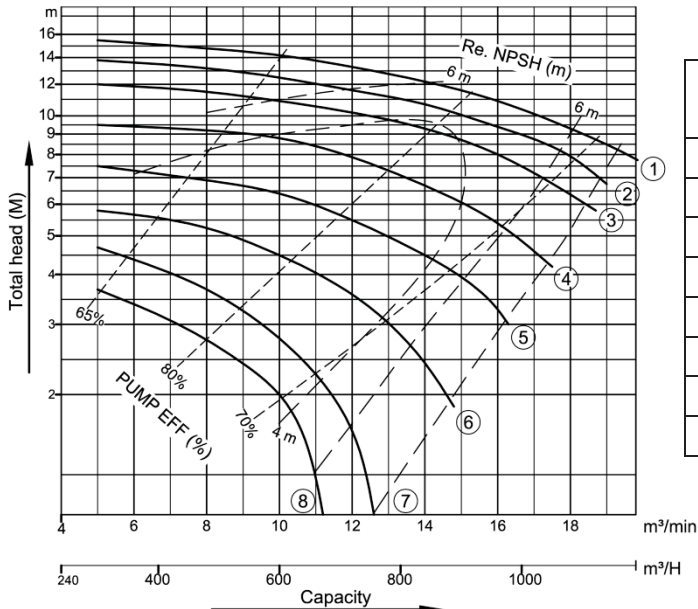


Pump Rotation, and Power Requirement

Curve No	Pump Rotation (Rpm)	Motor Output (kW)	Engine Output (HP)
1	1450	30	40
2	1320	22	30
3	1180	15	20
4	1060	11	15
5	980	11	13.5
6	900	7.5	10
7	830	5.5	7.5
8	750	3.7	5

Note :  
No. 1 Direct Couple with electric motor

## 3. Model 300 SZ

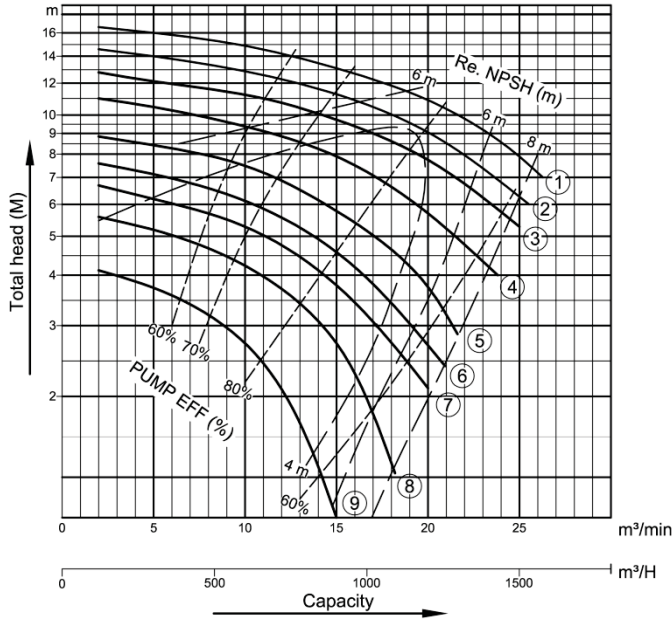


Pump Rotation, and Power Requirement

Curve No	Pump Rotation (Rpm)	Motor Output (kW)	Engine Output (HP)
1	1240	45	60
2	1170	37	50
3	1100	30	40
4	980	22	30
5	880	15	20
6	780	11	15
7	690	7.5	10
8	620	5.5	7.5

● **PERFORMANCE CURVE**

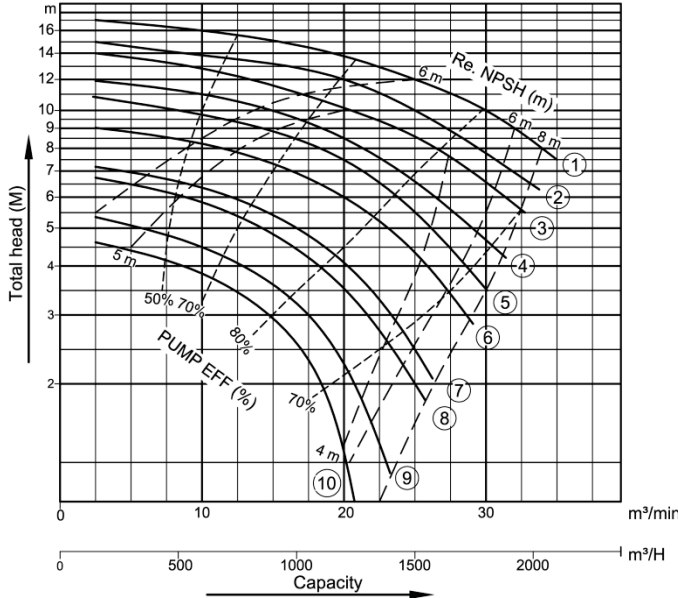
**4. Model 350 SZ**



Pump Rotation, and Power Requirement

Curve No	Pump Rotation (Rpm)	Motor Output (kW)	Engine Output (HP)
1	1070	55	75
2	1010	45	60
3	950	37	50
4	880	30	40
5	795	22	30
6	735	18.5	25
7	700	15	20
8	625	11	15
9	550	7.5	10

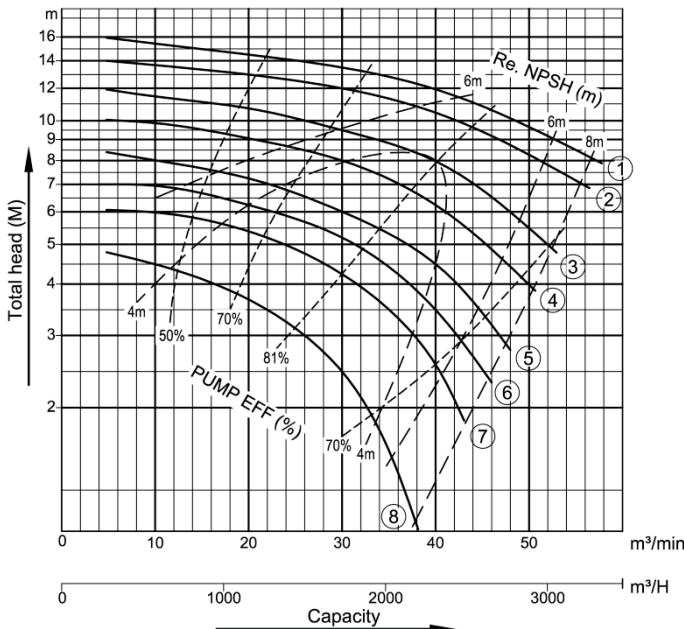
**5. Model 400 SZ**



Pump Rotation, and Power Requirement

Curve No	Pump Rotation (Rpm)	Motor Output (kW)	Engine Output (HP)
1	930	75	100
2	880	60	80
3	825	55	75
4	775	45	60
5	730	37	50
6	685	30	40
7	610	22	30
8	590	18.5	25
9	530	15	20
10	490	11	15

**6. Model 500 SZ**



Pump Rotation, and Power Requirement

Curve No	Pump Rotation (Rpm)	Motor Output (kW)	Engine Output (HP)
1	735	110	150
2	705	95	130
3	640	75	100
4	590	55	75
5	535	45	60
6	500	37	45
7	470	30	40
8	420	22	30