

HIGH PERFORMANCE SELF-PRIMING PUMP OPERATION MANUAL

BARE PUMP

《SU-V SERIES》

Thank you for your purchase of our
BARE PUMP

Upon receipt, please check the followings.

- Model is exactly what you ordered.
- There is no damage in transit.
- Accessories are all supplied.

In case of trouble, please contact dealer.

Be sure to read this manual
before operation

KOSHIN LTD.

<http://www.koshinpump.com>

TEL.: +81-75-953-2499 FAX.: +81-75-954-6119

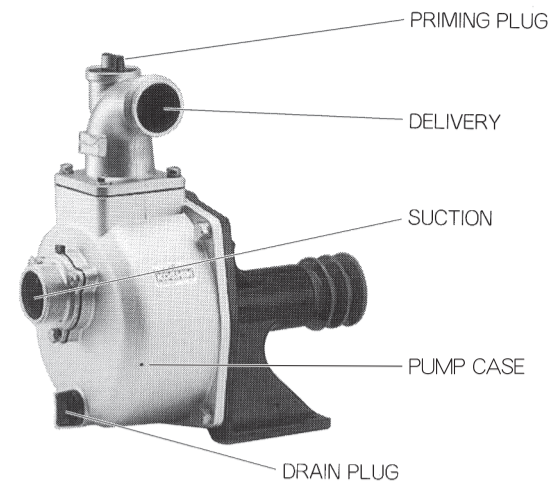
E-mail: info@koshin-ltd.co.jp

12 Kami-Hachinotsubo, Kotari, Nagaokakyo city, Kyoto, 617-8511, Japan

- 1 -

24-03 011593605

CAUTION



- Application**
As this pump is exclusively used for agriculture, do not apply muddy water.
 - Trouble if you don't observe.
Damage of mechanical seal
- Priming (photo 1)**
As this pump is of self-priming type, pour water fully from priming port before running.
 - Trouble if you don't observe.
Impossible pumping
Damage of mechanical seal
- Connection of suction hose**
If priming is not made by running after pouring water from priming port, it is almost because of imperfect connection of suction hose. In such a case, run after checking again connection of hose.
 - Trouble if you don't observe.
Impossible pumping
- Always rotate arrow direction, see photo 2 (counter-clock wise watching from pulley)**
- Don't turn over 4000rpm because it needs greater power.**
Please set correct pulley on motor shaft,

$$\text{pump rpm} = \frac{\phi \text{ Engine pulley} \times \text{Engine rpm}}{\phi \text{ pump pulley}}$$
- Don't run dry.**
- Drain of water after use**
Water inside casing freezes at below 0°C in winter and thereby pump may possibly be broken. After use, drain water from drain port at bottom to store.
 - Trouble if you don't observe.
Breakage of pump casing

- 2 -

SPECIFICATIONS

Model	SU-40V			SU-50V			SU-80V		
Connection Dia	40 mm(1 1/2in)			50 mm(2in)			80 mm(3in)		
Connection Thread	Outer Pipe Thread BSP								
Revolution	3000 rpm	3600 rpm	4000 rpm	3000 rpm	3600 rpm	4000 rpm	3400 rpm	3800 rpm	4000 rpm
Total Head	28 m	40 m	50 m	30 m	42 m	53 m	27 m	34 m	38 m
Delivery Volume	300 L/min	350 L/min	370 L/min	430 L/min	480 L/min	500 L/min	850 L/min	950 L/min	1000 L/min
Max. Suction Head	7 m(23 ft)	8 m(26 ft)	8 m(26 ft)	7 m(23 ft)	8 m(26 ft)	8 m(26 ft)	7 m(23 ft)	8 m(26 ft)	8 m(26 ft)
Required Power	1.5 kW (2 PS)	2.2 kW (3 PS)	3.7 kW (5 PS)	2.2 kW (3 PS)	3.7 kW (5 PS)	5.5 kW (7.5 PS)	5.5 kW (7.5 PS)	7.5 kW (10 PS)	8.6 kW (11.5 PS)
Standard Accessories	1 Strainer, 2 Couplings, 3 Hose Bands								
Net Weight	12.5 kg			15 kg			22 kg		

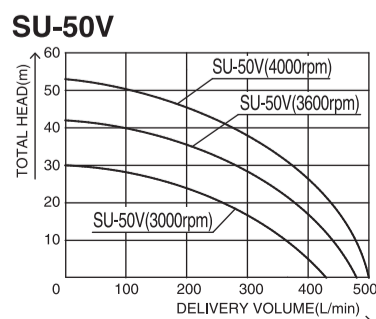
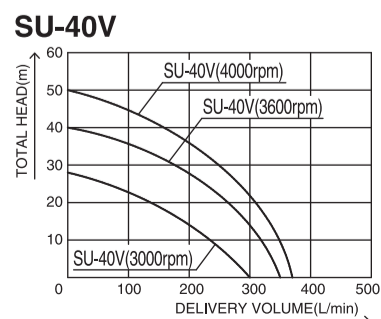
Chart Showing co-relation between motor rotation and pulley diameter

SU-40V								SU-50V														
Hz	Motor Poles (Revolution)	Revolution		3000rpm		3600rpm		4000rpm		Hz	Motor Poles (Revolution)	Revolution		3000rpm		3600rpm		4000rpm				
		Pulley	inch	mm	inch	mm	inch	mm	Pulley			inch	mm	inch	mm	inch	mm	inch	mm			
50	2P(2880rpm)	3	76.2	3-1/2	88.9	4	101.6	2P(3440rpm)	2-1/2	63.5	3	76.2	3-1/2	88.9	60	4P(1720rpm)	5	127	6	152.4	7	177.8
		4P(1430rpm)	6	152.4	7-1/2	190.5	8	203.2	4P(1720rpm)	5	127	6	152.4	7			177.8					
		6P(960rpm)	9	228.6	11	279.4	12	304.8	6P(1150rpm)	7-1/2	190.5	9	228.6	10			254					

SU-50V								SU-80V														
Hz	Motor Poles (Revolution)	Revolution		3000rpm		3600rpm		4000rpm		Hz	Motor Poles (Revolution)	Revolution		3400rpm		3800rpm		4000rpm				
		Pulley	inch	mm	inch	mm	inch	mm	Pulley			inch	mm	inch	mm	inch	mm	inch	mm			
50	2P(2880rpm)	3	76.2	3-1/2	88.9	4	101.6	2P(3440rpm)	2-1/2	63.5	3	76.2	3-1/2	88.9	60	4P(1720rpm)	5	127	6	152.4	7	177.8
		4P(1430rpm)	6	152.4	7-1/2	190.5	8-1/2	215.9	4P(1720rpm)	5	127	6	152.4	7			177.8					
		6P(960rpm)	9	228.6	11	279.4	12-1/2	317.5	6P(1150rpm)	7-1/2	190.5	9	228.6	10-1/2			266.7					

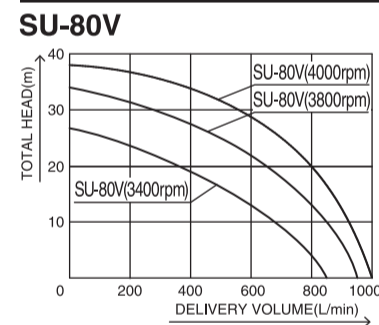
SU-80V								SU-80V														
Hz	Motor Poles (Revolution)	Revolution		3400rpm		3800rpm		4000rpm		Hz	Motor Poles (Revolution)	Revolution		3400rpm		3800rpm		4000rpm				
		Pulley	inch	mm	inch	mm	inch	mm	Pulley			inch	mm	inch	mm	inch	mm	inch	mm			
50	2P(2880rpm)	3-1/2	88.9	-	-	4	101.6	2P(3440rpm)	3	76.2	-	-	3-1/2	88.9	60	4P(1720rpm)	6	152.4	6-1/2	165.1	7	177.8
		4P(1430rpm)	7	177.8	8	203.2	8-1/2	215.9	4P(1720rpm)	6	152.4	6-1/2	165.1	7			177.8					
		6P(960rpm)	10-1/2	266.7	12	304.8	12-1/2	317.5	6P(1150rpm)	9	228.6	10	254	10-1/2			266.7					

PERFORMANCE CURVE



- 3 -

PERFORMANCE CURVE

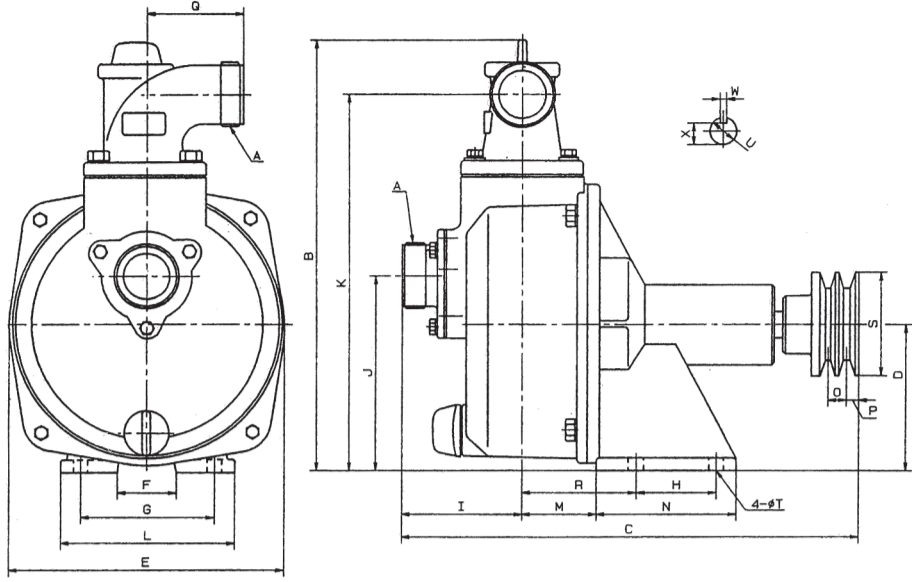


TROUBLE & REMEDY

- Pump dose not revolve.**
 - Breakage of bearing (Replace bearing)
 - Sticking of impeller (Disassemble & clean)
- Pumping volume is small.**
 - Entrance of air at suction side (Check piping at suction side)
 - Breakage of mechanical seal (Replace mechanical seal)
 - High suction lift (Lower)
 - Thin or long or kink of hose (Thicken or shorten or straighten)
 - Leak of water from water passage (Stop leak)
 - Clogging of foreign substance in impeller (Disassemble & clean)
 - Imperfect revolution
 - Wear of impeller (Replace impeller)
- Pump does not self-prime.**
 - Suction of air at suction side (Check piping at suction side)
 - Insufficient priming water inside pump casing (Prime water fully)
 - Imperfect tightening of drain cock (Tighten the plugs completely)
 - Imperfect revolution
 - Entrance of air from mechanical seal (Replace mechanical seal)

- 4 -

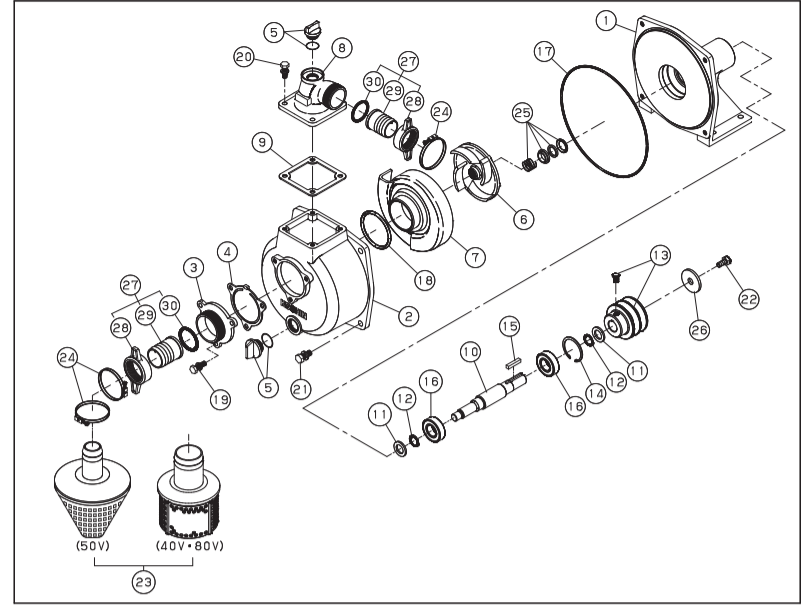
DIMENSION



MODEL	A	B	C	D	E	F	G	H	I	J	K	L
SU-40V	G1 1/2	319	341	110	209	110	150	60	91	147	280	190
SU-50V	G2	378	371	115	238	135	150	80	100	152	337	205
SU-80V	G3	428	404	130	270	155	205	85	122	175	371	235

M	N	O	P	Q	R	S	T	U	W	X	V-Pulley
52	108	15	9	75	85	76.2	11	19	5	16	3 in X A2
56	127	19	12.5	80	88	78	11	24	7	20	3 in X B2
72	130	19	12.5	112	102	78	14	24	7	20	3 in X B2

PARTS LIST



SU-40V

No.	PARTS CODE	PARTS NAME	QTY	MATERIAL	No.	PARTS CODE	PARTS NAME	QTY	MATERIAL
1	0115733	Pedestal Stand	1	FC	16	912506014	Bearing	2	6204-2NSE
2	0122082	Pump Casing	1	ADC	17	0115014	O-ring	1	1517-42.5 NBR
3	0113327	Suction Flange	1	ADC	18	889855048	O-ring	1	P48 NBR
4	0113328	Check Valve	1	NBR	19	743119045	Bolt	3	M8x20 SWRM
5	0118078	Plug Set	2		20	743119047	Bolt	4	M8x25 SWRM
6	0115734	Impeller	1	FC-200	21	743119046	Bolt	4	M8x22 SWRM
7	0110218	Volute Casing	1	FC-20	22	743119043	Bolt	1	M8x16 SWRM
8	0110577	Delivery Flange	1	ADC	23	0118013	Strainer	1	FC
9	0110593	Flange Packing	1	CR	24	940019048	Hose Band	3	φ48
10	0115736	Shaft	1	S45C	25	0114825	Mechanical Seal	1	TYPE6 3/4in
11	0115737	Rubber Seal	2	NBR	26	0116013	Pulley Washer	1	φ8.5x26
12	889855018	O-ring	2	P18 NBR	27	0117212	Coupling Set	2	PC+ABS
13	0118314	V-Pulley Set	1	3inch A2+M8x12	28	0114986	Coupling	2	PC
14	888427047	Stop Ring	1		29	0110358	Nipple	2	ABS
15	884009044	Parallel Key	1	5x5x28	30	0114987	Coupling Packing	2	NBR

SU-50V

No.	PARTS CODE	PARTS NAME	QTY	MATERIAL	No.	PARTS CODE	PARTS NAME	QTY	MATERIAL
1	0115719	Pedestal Stand	1	FC20	16	912506016	Bearing	2	6205-2NSE
2	0122083	Pump Casing	1	ADC	17	0115015	O-ring	1	1517-46.5 NBR
3	0112662	Suction Flange	1	ADC	18	0112792	O-ring	1	P54 NBR
4	0112665	Check Valve	1	NBR	19	743119045	Bolt	3	M8x20 SWRM
5	0118078	Plug Set	2		20	743119047	Bolt	4	M8x25 SWRM
6	0115720	Impeller	1	FC-200	21	743119061	Bolt	4	M10x25 SWRM
7	0115721	Volute Casing	1	FC-20	22	743119043	Bolt	1	M8x16 SWRM
8	0110556	Delivery Flange	1		23	0118159	Strainer	1	PP
9	0110541	Flange Packing	1	CR	24	940019060	Hose Band	3	φ60
10	0115722	Shaft	1	S45C	25	0114825	Mechanical Seal	1	TYPE6 3/4in
11	0115723	Rubber Seal	2	NBR	26	0116014	Pulley Washer	1	φ8.5x31
12	889955025	O-ring	2	G25 NBR	27	0117026	Coupling Set	2	ABS
13	0118090	V-Pulley Set	1	3inch B2+M8x12	28	0113390	Coupling	2	ABS
14	888427052	Stop Ring	1	52SK	29	0110356	Nipple	2	NBR
15	884009071	Parallel Key	1	S45C 7x7x28	30	0113391	Coupling Packing	2	ABS

SU-80V

No.	PARTS CODE	PARTS NAME	QTY	MATERIAL	No.	PARTS CODE	ARTS NAME	QTY	MATERIAL
1	0115913	Pedestal Stand	1	FC	16	912506018	Bearing	2	6206-2NSE
2	0122084	Pump Casing	1	ADC	17	0115016	O-ring	1	1517-51.5 NBR
3	0112797	Suction Flange	1	ADC	18	0113989	O-ring	1	P74 NBR
4	0112799	Check Valve	1	NBR	19	743119061	Bolt	3	M10x25 SWRM
5	0118079	25A Plug Set	2		20	743119063	Bolt	4	M10x30 SWRM
6	0115914	Impeller	1	FC	21	743119078	Bolt	4	M12x30 SWRM
7	0115915	Volute Casing	1	FC	22	743119043	Bolt	1	M8x16 SWRM
8	0110570	Delivery Flange	1	ADC	23	0118195	Strainer	1	PP
9	0110584	Flange Packing	1	CR	24	940019090	Hose Band	3	φ90
10	0115916	Shaft	1	S45C	25	0115918	Mechanical Seal	1	TYPE6 1in CERAMIC CARBON
11	0115917	Panel	2	NBR	26	0116014	Pulley Washer	1	φ8.5x31
12	889955025	O-ring	2	G25 NBR	27	0117028	Coupling Set	2	
13	0117593	V-Pulley Set	1	3inch B2+M8x8	28	0114375	Coupling	2	ABS
14	888427062	Stop Ring	1	62SK	29	0110301	Nipple	2	ABS
15	884009071	Parallel Key	1	S45C 7x7x28	30	0114378	Coupling Packing	2	NBR