

## EBARA SLURRY PUMP Model SAL



The Products described herein fall under "the goods listed in row 16 of the appended table 1 of the Export Trade Control Order of Japan", so in cases of export of such Products, you need to confirm "use" and "purchaser and/or end-user" and, as case may be, obtain the approval of the Minister of Economy, Trade and Industry. (Please confirm these conditions on your own.) Furthermore, some of the Products fall under row 1-15 of the appended table 1(listed items). In case of export of these listed items, you are required to obtain the export license from the Minister of Economy, Trade and Industry. For more information, please contact our sales office located near you.

### CAUTION

- Do not attempt to operate, inspect or service this pump before you have read and understood manual of pump.
- Wiring and grounding work must NOT be performed by unqualified persons. It is extremely dangerous for unqualified persons to perform such work. The user should install electrical leakage breakers and overload safety devices to prevent electric shock and fire.

※1 "Model SAL " in this catalog is our model code

※2 All specifications subject to change without notice.



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Contact to

# EBARA SLURRY PUMP MODEL SAL PRODUCT FEATURES

## 1 FEATURES

- The limit load characteristics of the specially-designed pumps control horsepower regardless of the pump flow.
- The direct coupled type pumps that ensure stable operation are available as standard specifications.
- Special cast iron is used for the casing and impeller to offer high wear resistance.
- The effect of the rear vane of impeller reduces leakage from the gland packing.

## 2 APPLICATIONS

- For recycling of cutting fluids, grinding fluids, and cleaning solutions
- For various types of wastewater treatment and pumping effluent wastewater
- For fishery (e.g. pumping of seawater for aquaculture and processing of fish and shellfish)
- For paper industry (e.g. transfer of pulp, white water, and clay)

## PUMP SPECIFICATION

### SAL 50Hz / 60Hz Slurry Pumps

LIQUID	Slurry liquid including particle 0-80°C
TOTAL SUCTION HEAD	-5m : 125×100SAL and below -3m : 150×125SAL and above
ALLOWABLE POSITIVE SUCTION PRESSURE	0.1MPa (1kgf/cm <sup>2</sup> )
CONSTRUCTION	
IMPELLER	Semi open with rear vane
SHAFT SEAL	Gland packing
FLUSHING *1	External flushing Model SALE, F, G: 2-3L/min×0.1MPa(1kgf/cm <sup>2</sup> ) Model SAL, H, J: 3-5L/min×0.2MPa(2kgf/cm <sup>2</sup> )
BEARING	Sealed ball bearing : SALE, F, G Oil bath ball bearing : SALH, J
FLANGE	Equivalent to JIS 10K normal type (notch bolt hole type)
MATERIALS	
CASING	Chromium cast iron
IMPELLER	High-chromium cast iron
SHAFT	SUS403 : Model SALE, F, G
SHAFT SLEEVE	S35C : Model SALH, J SUS403
MOTOR	Three phase, 4 pole or 6 pole 50Hz:3phase/380-415V, 60Hz:3phase/380-415V
Drive metho	Total enclosed Motor direct drive flexible coupling

\*1 External flushing is necessary to protect gland packing and shaft sleeve. Please provide Fresh water.

Cannot be used for food-related liquid transport

In the case of facilities for living creatures (such as fish farms, cages or aquariums), a spare machine must be prepared since there is a risk of lack of oxygen due to pump failure. In the case of important equipment (such as computer cooling equipment or freezer cooling equipment), a spare machine must be prepared in case of pump failure. Depending on the equipment used, flush out the pump sufficiently and check it before use since cutting fluid, rubber mold material or foreign material etc. from pump manufacturing may be mixed in with the liquid used.

## STANDARD ACCESSORIES

Common base	1
Coupling	1 set
Coupling guard	1

## OPTIONAL ACCESSORIES

Priming funnel	
Companion flange	

## MODEL CODE

\*65 X 50 SALG 5 3.7 BL  
① ② ③ ④ ⑤ ⑥

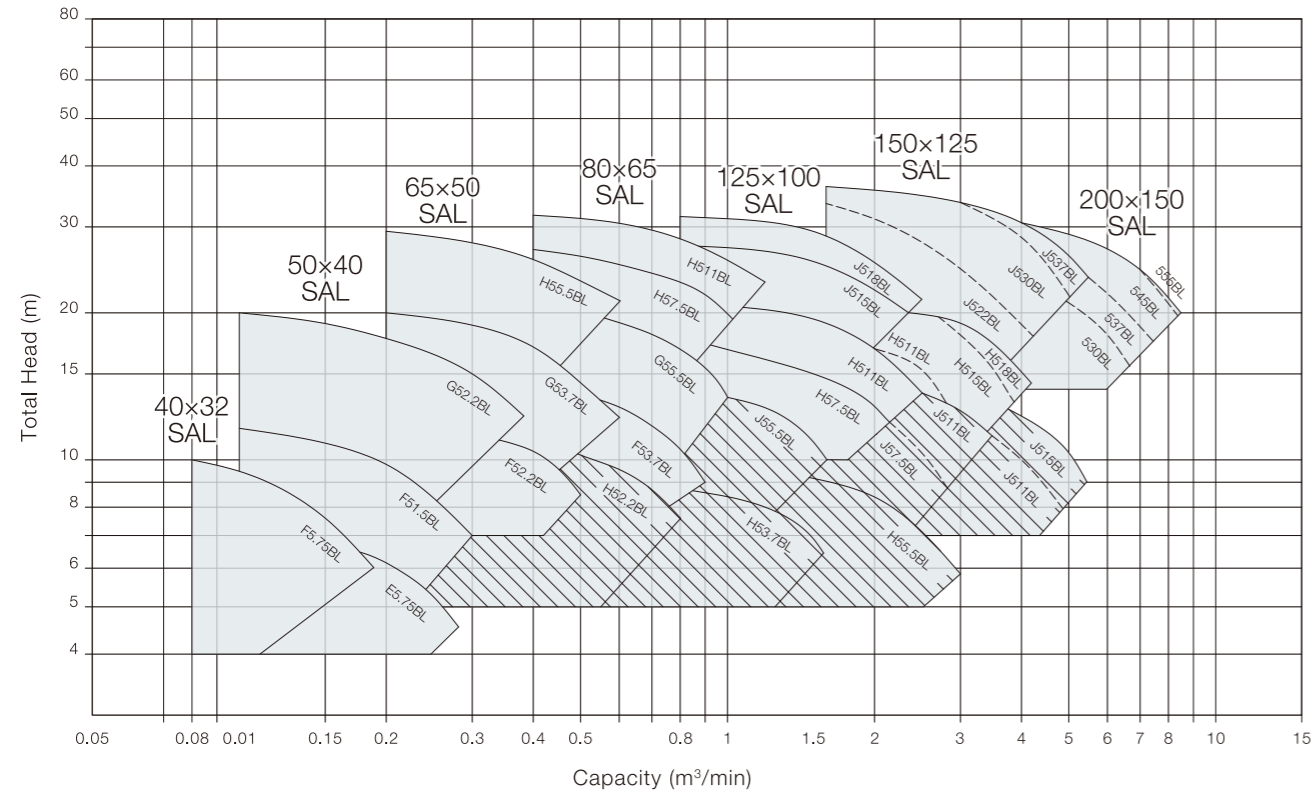
①Suction Size (mm) ②Discharge Size (mm)  
③Model ④Frequency (5 : 50Hz, 6 : 60Hz)  
⑤Motor Output (kW) ⑥Identification Code

Note:

1. Impeller measurements will vary for 150×125 and 200×150 according to capacities and heads used.
2. Output indicated in the chart is in relation to a 1.1 specific gravity. If specific gravity exceeds 1.1, out-put must be raised one level.

# PERFORMANCE CHART

**Model SAL 50Hz** [Synchronous speed :1500min<sup>-1</sup>]  
 [Shaded portion Synchronous speed :1000min<sup>-1</sup>]



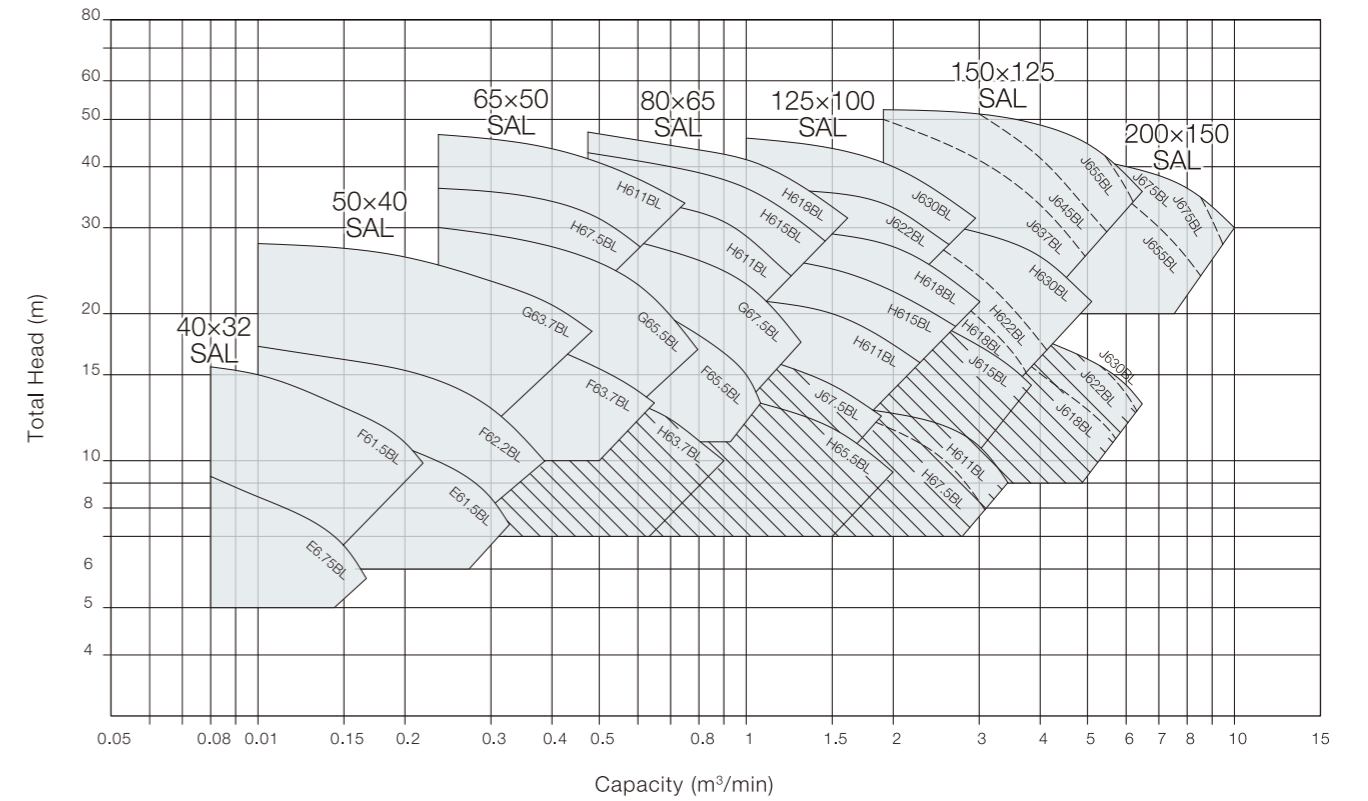
Performance Table 50Hz

Size φ s × φ d	Model	Motor Output kW	Pole	Capacity m³/min	Total Head m	Capacity m³/min	Total Head m	Capacity m³/min	Total Head m
40 X 32	40X32SALF5.75BL	0.75	4	0.08	10.2	0.14	8.2	0.18	6.1
	50X40SALE5.75BL	0.75	4	0.18	6.6	-	-	0.28	4.6
50 X 40	50X40SALF5.15BL	1.5		0.10	11.9	0.2	10	0.30	7.4
	50X40SALG52.2BL	2.2	0.10	19.9	0.24	16.7	0.38	12.5	
65 X 50	65X50SALF52.2BL	2.2	4	0.36	11.0	-	-	0.50	8.6
	65X50SALG53.7BL	3.7		0.20	20.0	0.4	17	0.60	12.5
	65X50SALH55.5BL	5.5		0.20	29.0	0.4	25.5	0.60	21.0
80 X 65	80X65SALF53.7BL	3.7	4	0.58	13.0	-	-	0.90	9.0
	80X65SALG55.5BL	5.5		0.58	19.3	0.8	16.5	1.05	13.0
	80X65SALH57.5BL	7.5		0.40	27.0	0.7	24	1.05	19.5
	80X65SALH511BL	11		0.40	32.0	0.8	29	1.25	23.0
125 X 100	80X65SALH52.2BL	2.2	6	0.52	10.0	-	-	0.80	7.5
	125X100SALH57.5BL	7.5	4	0.86	17.2	1.5	15	2.10	12.0
	125X100SALH511BL	11		1.06	20.5	1.8	18	2.50	14.0
	125X100SALH53.7BL	3.7	6	0.85	8.8	-	-	1.60	6.5
	125X100SALJ515BL	15	4	0.90	28.0	1.7	24.5	2.30	20.0
125X100SALJ518BL	18.5	0.90		33.0	1.6	29.5	2.55	22.0	
	125X100SALJ55.5BL	5.5	6	1.00	13.0	-	-	1.65	9.8

Pumps with 150x125 and 200x150 diameters must be matched to capacities and heads used. Indicate what principal items will be used.

# PERFORMANCE CHART

**Model SAL 60Hz** [Synchronous speed :1800min<sup>-1</sup>]  
 [Shaded portion Synchronous speed :1200min<sup>-1</sup>]



Performance Table 60Hz

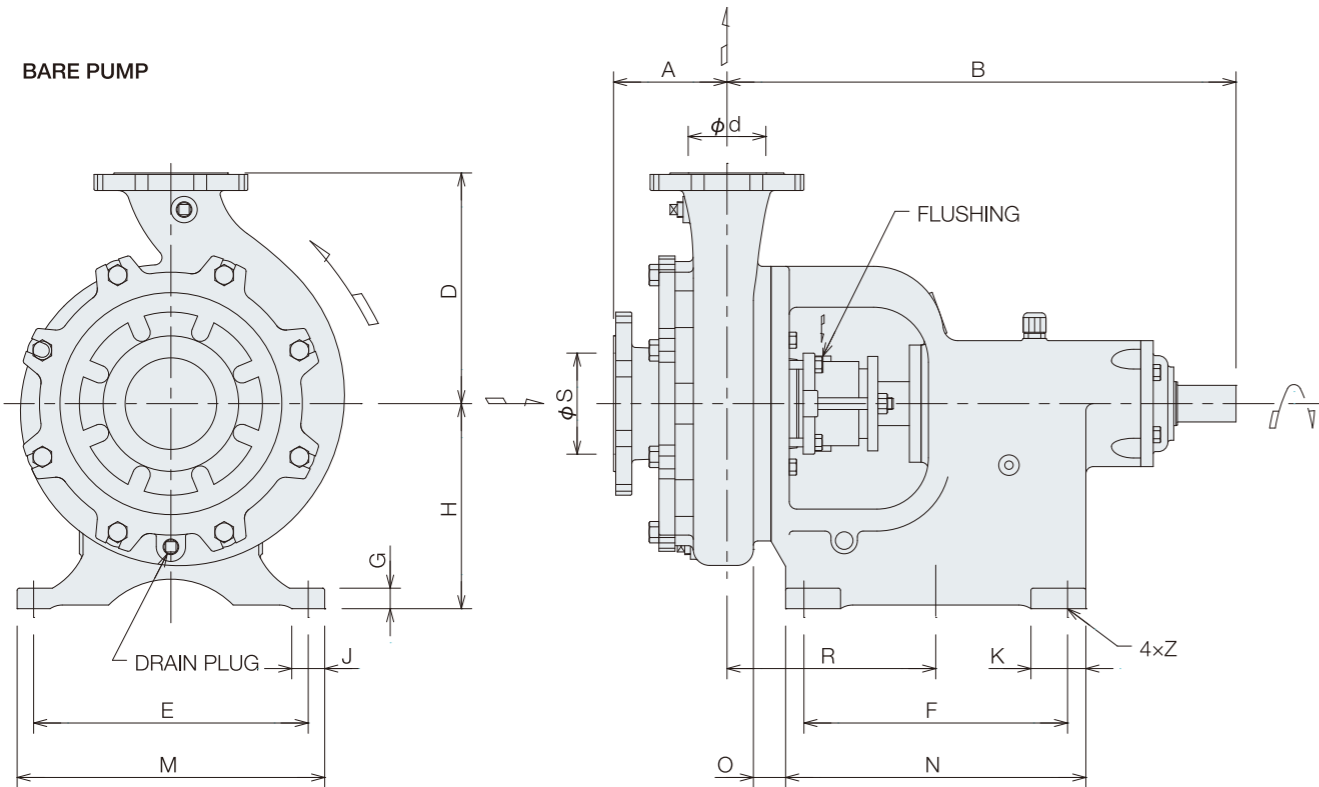
Size φ s × φ d	Model	Motor Output kW	Pole	Capacity m³/min	Total Head m	Capacity m³/min	Total Head m	Capacity m³/min	Total Head m
40 X 32	40X32SALE6.75BL	0.75	4	0.08	9.2	0.13	7.4	0.17	5.7
	40X32SALE61.5BL	1.5		0.08	15.5	0.15	13.2	0.22	9.8
50 X 40	50X40SALE61.5BL	1.5	4	0.21	10.5	-	-	0.33	7.5
	50X40SALF62.2BL	2.2		0.1	17.5	0.2	16	0.38	10.2
	50X40SALG63.7BL	3.7		0.1	28	0.25	25	0.48	18
65 X 50	65X50SALF63.7BL	3.7	4	0.45	16.7	-	-	0.65	13
	65X50SALG65.5BL	5.5		0.24	30.2	0.5	25	0.8	17
	65X50SALH67.5BL	7.5		0.28	35.5	0.5	32	0.6	27
	65X50SALH611BL	11		0.28	45.0	0.5	40	0.75	33.0
80 X 65	80X65SALF65.5BL	5.5	4	0.75	19.0	-	-	1.1	13.0
	80X65SALG67.5BL	7.5		0.64	27.7	0.97	23.5	1.3	17.5
	80X65SALH611BL	11		0.75	32.0	1	29	1.25	24
	80X65SALH615BL	15		0.48	42.0	0.9	38	1.5	28.0
	80X65SALH618BL	18		0.48	47.0	1	42.0	1.65	31
125 X 100	80X65SALH63.7BL	3.7	6	0.55	14.2	-	-	0.9	10
	125X100SALH611BL	11	4	1.1	21	1.6	19	2.2	16.0
	125X100SALH615BL	15		1.35	26	2	23	2.65	19.0
	125X100SALH618BL	18	1.55	29.5	2.2	26.5	3	21	
	125X100SALJ65.5BL	5.5	6	1.10	12.5	-	-	2.00	9.4
	125X100SALJ622BL	22	4	1.40	36.0	-	-	2.5	27.5
	125X100SALJ630BL	30	6	0.96	46.5	1.90	41.0	2.95	31.5
125X100SALJ67.5BL	7.5	6	1.2	16	-	-	1.85	12.5	

Pumps with 150x125 and 200x150 diameters must be matched to capacities and heads used. Indicate what principal items will be used.

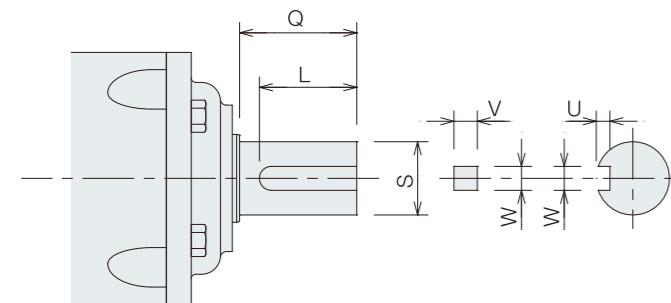


# DIMENSIONS (BARE SHAFT)

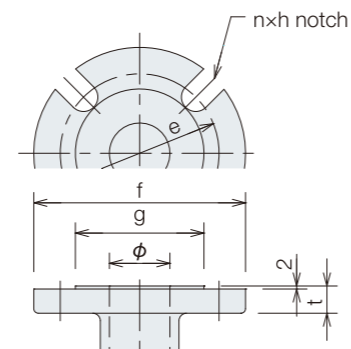
BARE PUMP



SHAFT



FLANGE



# DIMENSIONS (BARE SHAFT)

Flange (JIS10K.eq)

Unit:mm

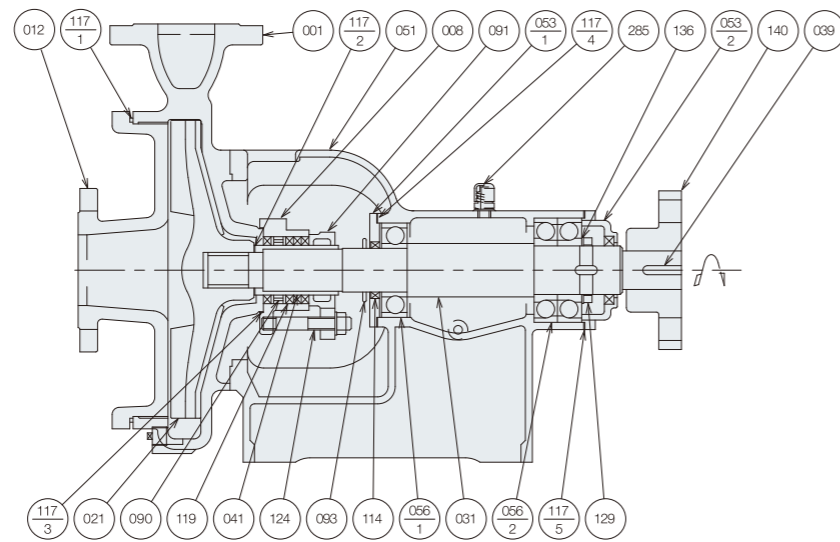
Size $\phi$	g	e	f	t	n	h
32	80	100	135	18	4	19
40	85	105	140	18	4	19
50	100	120	155	20	4	19
65	120	140	175	22	4	19
80	130	150	185	22	8	19
100	155	175	210	24	8	19
125	185	210	250	24	8	24
150	215	240	280	26	8	24
200	265	290	330	26	12	24

Size $\phi_s \times \phi_d$	Model	Pump														Shaft						Mass kg
		A	B	D	E	F	G	H	J	K	M	N	O	R	Z	S	Q	L	U	V	W	
40 X 32	40X32SALEBL	80	355	180	230	120	22	160	37	44	260	164	40	150	15	24	54	40	4	7	7	39
	40X32SALFBL	80	355	180	230	120	22	160	37	44	260	164	40	150	15	24	54	40	4	7	7	39
50 X 40	50X40SALEBL	100	355	180	230	120	22	160	37	44	260	164	40	150	15	24	54	40	4	7	7	39
	50X40SALFBL	100	355	180	230	120	22	160	37	44	260	164	40	150	15	24	59	40	4	7	7	39
	50X40SALGBL	100	375	225	260	130	22	180	37	44	290	174	39	155	15	32	66	50	4.5	8	10	61
65 X 50	65X50SALFBL	100	460	225	320	215	30	205	49	54	360	269	47	202.5	19	40	59	50	4.5	8	10	89
	65X50SALGBL	100	160	225	320	215	30	205	49	54	360	269	47	202.5	19	40	59	50	4.5	8	10	89
	65X50SALHBL	110	545	280	285	280	22	205	35	60	320	320	34	220	15	35	59	45	4.5	8	10	120
80 X 65	80X65SALFBL	100	460	250	320	215	30	205	47	54	360	269	60	202.5	19	40	59	50	4.5	8	10	92
	80X65SALGBL	100	460	250	320	215	30	205	47	54	360	269	60	202.5	19	40	59	50	4.5	8	10	93
	80X65SALHBL	120	550	280	285	20	22	205	35	60	320	320	36	225	15	35	59	45	4.5	8	10	130
125 X 100	125X100SALHBL	150	565	280	285	280	22	205	35	60	320	320	35	240	15	35	59	45	4.5	8	10	130
	125X100SALJBL	155	695	315	375	360	28	280	45	75	410	420	44	280	19	50	80	50	4.5	8	12	220
150 X 125	150X125SALHBL	180	710	355	375	360	28	280	45	75	410	420	44	300	19	50	80	50	4.5	8	12	280
	150X125SALJBL	180	710	355	375	360	28	280	45	75	410	420	44	300	19	50	80	50	4.5	8	12	290
200 X 150	200X150SALJBL	220	895	400	490	440	40	350	50	85	540	490	76	400	24	70	107	64	6	12	18	455

# SECTIONAL VIEW

## Applied Model

50x40 SALH  
65x50 SALH  
80x65 SALH  
125x100 SALH,J  
150x125 SALH,J  
200x150 SALJ



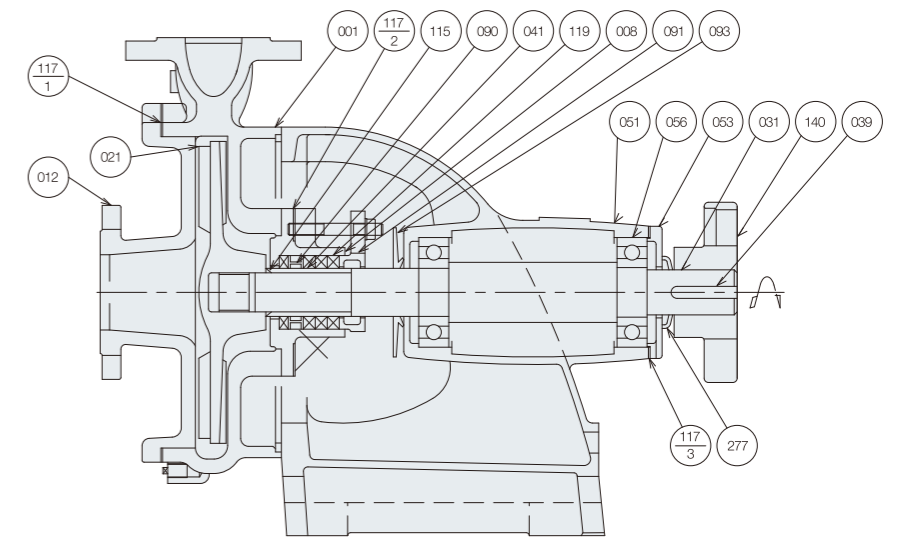
200x150 SALJ	# 6316	# 7318BDB	SB8010513	ISO VG-46 JIS K2213 # 140	3.0
150x125 SALJ	# 6312	# 7313ADB	SB608212		1.4
125x100 SALJ					
125x100 SALH	# 6309	# 7310BDB	SB456812		0.8
80x65 SALH					
65x50 SALH					
50x40 SALH					
MODEL	056-1	056-2	114	OIL	ℓ CAPACITY
	BALL BEARING	BALL BEARING	OIL SEAL		

No.	Part name	Material		Qty
285	AIR BREATHER	POLY CARBONATE	POLY CARBONATE	1
140	COUPLING	FC200	CAST IRON	1
136	WASHER	SS400	CARBON STEEL	1
129	NUT	SS400	CARBON STEEL	1
124	GLAND BOLTS	SUS403	403 STAINLESS STEEL	2
119	GLAND PACKING	CARBONIZED FIBER	CARBONIZED FIBER	4
117-5	GASCKET	OIL SHEET	OIL SHEET	1
117-4	GASCKET	OIL SHEET	OIL SHEET	1
117-3	GASCKET	NON ASBESTOS SHEET	NON ASBESTOS SHEET	1
117-2	GASCKET	PTFE	PTFE	1
117-1	GASCKET	PTFE	NON ASBESTOS SHEET	1
114	OIL SEAL	RUBBER	RUBBER/NBR	2
093	DEFLECTER	SUS316	316 STAINLESS STEEL	1
091	GLAND	FC150	CAST IRON	1
090	LANTERN RING	FC150	CAST IRON	1
056-2	BALL BEARING	-	-	1
056-1	BALL BEARING	-	-	1
053-2	BEARING COVER	FC200	CAST IRON	1
053-1	BEARING COVER	FC200	CAST IRON	1
051	BEARING HOUSING	FC200	CAST IRON	1
041	SHAFT SLEEVE	SUS420J1	420 STAINLESS STEEL	1
039	KEY	S50C-N	CARBON STEEL	1
031	SHAFT	S35C	CARBON STEEL	1
021	IMPELLER	HCrFC	HIGH CHROMIUM CAST IRON	1
012	SUCTION COVER	CrFC	CHROMIUM CAST IRON	1
008	STUFFING BOX	FC200	CAST IRON	1
001	CASING	CrFC	CHROMIUM CAST IRON	1

# SECTIONAL VIEW

## Applied Model

40x32 SALE,F  
50x40 SALE,F,G  
65x50 SALF,G  
80x65 SALF,G



80x65 SALF,G	# 6309ZZ	36xØ 1.5
65x50 SALF,G	# 6307ZZ	24xØ 1.5
50x40 SALG		
50x40 SALE,F	# 6306ZZ	115
40x32 SALE,F		
MODEL	056	115
	BALL BEARING	O RING

No.	Part name	Material		Qty
277	V RING	RUBBER/NBR	RUBBER/NBR	1
140	COUPLING	FC200	CAST IRON	1
119	GLAND PACKING	CARBONIZED FIBER	CARBONIZED FIBER	4
117-3	GASCKET	PRESS BOARD	PRESS BOARD	1
117-2	GASCKET	NON ASBESTOS SHEET	NON ASBESTOS SHEET	1
117-1	GASCKET	NON ASBESTOS SHEET	NON ASBESTOS SHEET	1
115	O RING	RUBBER/CR	RUBBER/CR	1
093	DEFLECTER	RUBBER/NBR	RUBBER/NBR	1
091	GLAND	FC150	CAST IRON	1
090	LANTERN RING	SUS304	304 STAINLESS STEEL	1
056	SEALED BALL BEARING	-	-	2
053	BEARING COVER	FC150	CAST IRON	1
051	BEARING COVER	FC150	CAST IRON	1
041	SHAFT SLEEVE	SUS403	403 STAINLESS STEEL	1
039	KEY	S50C-N	CARBON STEEL	1
031	SHAFT	SUS403	403 STAINLESS STEEL	1
021	IMPELLER	HCrFC	HIGH CHROMIUM CAST IRON	1
012	SUCTION COVER	CrFC	CHROMIUM CAST IRON	1
008	STUFFING BOX	FC200	CAST IRON	1
001	CASING	CrFC	CHROMIUM CAST IRON	1