

**FIGHT BACK WITH** 

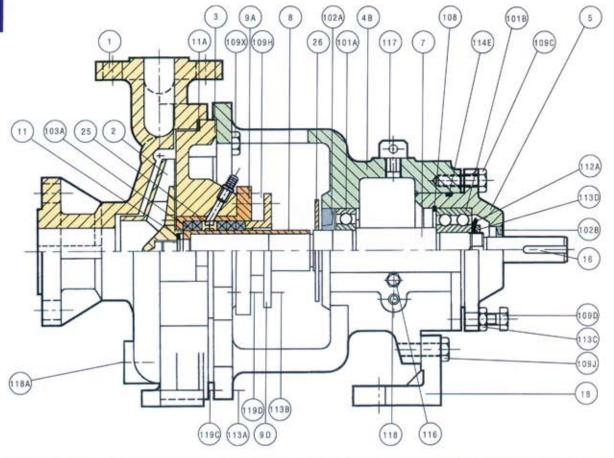


**ANSI PROCESS PUMPS** 

# **SERIES 'AER' METALLIC PUMPS**

Raje-Dia Pumps Pvt. Ltd. now presents metallic pumps to meet the demanding requirements of the Process Industries.

Series 'AER' ANSI Chemical Process Pumps are designed for operating reliability, easy maintenance and maximum interchangeability. These pumps offer superior hydraulics and wide coverage to meet exact requirements at best efficiency. Heavy duty bearing frame assembly ensures rugged and dependable service. Improved hydraulic coverage and higher efficiencies can be obtained from various models. Wide range of materials available to meet any service requirement. The pumps are manufactured in well-equipped manufacturing plant located at Pirojpura, north Gujarat state.



PART NO	DESCRIPTION	QTY			M	ATERIA	AL			PART NO	DESCRIPTION	QTY	MATERIAL			77.1			
1	CASING	1.	CI	CS	304	316	A20	HC	НВ		5-19525(055.0)		CI	CS	304	316	A20	HC	HE
2	IMPELLER	1	CI	CS	304	316	A20	HC	НВ	108	CIRCLIP	1	STEEL						
3	BACK PLATE	1	CI	CS	304	316	A20	HC	НВ	109C	HEX BOLT	3	STEEL			304			
4B	BEARING FRAME	1				CI		-		109D	HEX BOLT	3	STEEL 304						
5	BEARING CUP	1				CI				109J	HEX BOLT	1	STEEL 304						
7	SHAFT	1	EN	-8			316			109H	HEX BOLT	4	STEEL 304						
8	SLEEVE	1	41	0*	31	6	A20	HC	НВ	109X	HEX BOLT	2	STEEL						
9A	GLAND BUSH	1	C	S	31	6	A20	HC	НВ	112A	LOCKING WASHER	1	STEEL						
90	GLAND PUSHER	1	C	S	31	6	A20	HC	НВ	113A	NUT	8/12	STE	EL		316			
11	GASKET	1				PTFE				113C	LOCK NUT	3	STEEL 304						
11A	GASKET	1				PTFE				113D	BEARING LOCK NUT	1	STEEL						
16	KEY	t.	STE	EL			316			114E	'O' RING	1	NEOPRENE						
18	SUPPORT PLATE	1				CI				116	OIL VIEWER	1	ALUMINIUM						
25	LANTERN RING	1	CS	S	31	6	A20	HC	HB	117	BREATHER	1	STEEL						
26	DEFLECTOR	1.	304			118	DRAIN PLUG	1	STEEL										
101A	INBOARD BEARING	13			STEEL				118A	DRAIN PLUG (CASING)	1	STE	EL	304	316	A20	HC	НВ	
101B	OUTBOARD BEARING	1:	STEEL				119C	STUD	8/12	STEEL 316									
102A	INBOARD OIL SEAL	1	NEOPRENE			119D	STUD	2	STEEL 316										
102B	OUTBOARD OIL SEAL	114			NE	OPRE	NE			113B	NUT	2	STEEL 316						
103A	GLAND PACKING	5				TIWA#													

NOTE:-

- 1. \* 316 IN CASE OF MECHANICAL SEAL
- 2. # BRAIDED PTFEIGRAFOIL PACKING ALSO OFFERED DEPENDING ON REQUIREMENT

#### CASING

Top centreline discharge self-venting casing design fully confined casing gasket - casing foot support for handling misalignment, distortion from pipe loads and suitable for back pull-out construction.

#### BACK PLATE

The back plate is designed for gland packing and mechanical seal installation. The large bore provided in case of mechanical seal arrangement enhances the mechanical seal life. The flow path in series 'AER' pumps is between the rear of the impeller and face of the back plate. The abrasive and erosive wear takes place on the face of the back plate and not on the expensive casing. This feature reduces the replacement costs.

#### SHAFT

A single piece shaft is designed for minimum deflection. All critical surfaces are ground for precision fitment of bearings, coupling hubs, etc. Shaft threads are machined with close tolerances for effective impeller fitment. PTFE impeller gasket provides maximum protection to impeller and shaft threads.

#### UNIQUE IMPELLER DESIGN

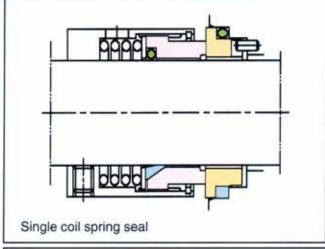
The unique impeller design offers special advantages not available on conventional impellers:

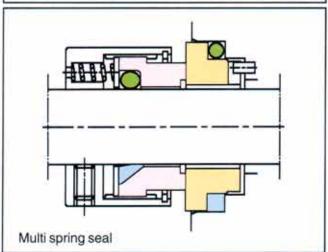
- Impeller clearance of rotor assembly can be adjusted on the maintenance shop bench itself.
  This reduces down time of the equipment.
- Efficient pump operation even in marginal NPSH conditions is possible which helps to reduce cavitation problems.
- Helps to maintain low seal chamber pressure, aids efficient shaft sealing and improved seal life.
- The impeller vanes located on the back plate side greatly reduce the thrust loads on the bearings and provide enhanced bearing life.

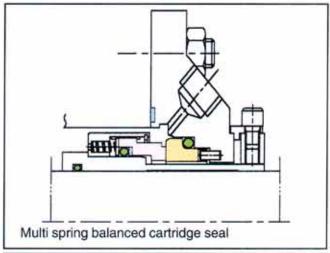
#### SELF-PRIMING PUMP

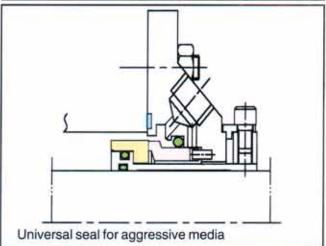
The casing of the self-priming pump has a built-in priming chamber. The rotor assembly of the standard series 'AER' pump can be used for this pump. There is no need of foot valve or frequent priming of the pump.

### VARIOUS MECHANICAL SEAL ARRANGEMENTS





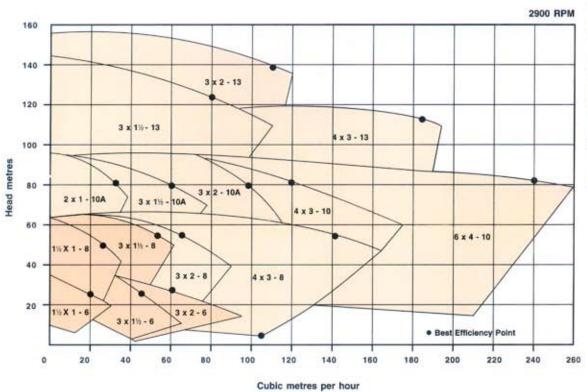


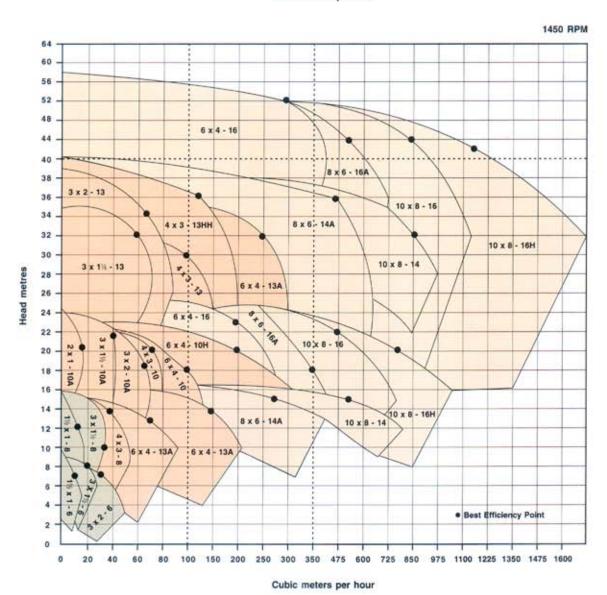


Mechanical Seal offered as optional. Back plate cover is designed to accommodate various types of seals and different environmental controls depending on the requirement.

Consult Raje-Dia for appropriate selection of Mechanical Seals for trouble free operation.

# **COMPOSITE PERFORMANCE CHARACTERISTICS**

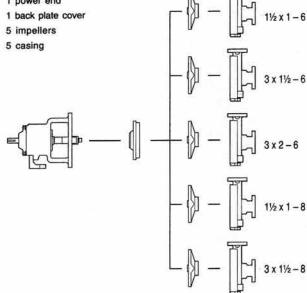




# **SERIES AER STANDARD INTERCHANGEABILITY**

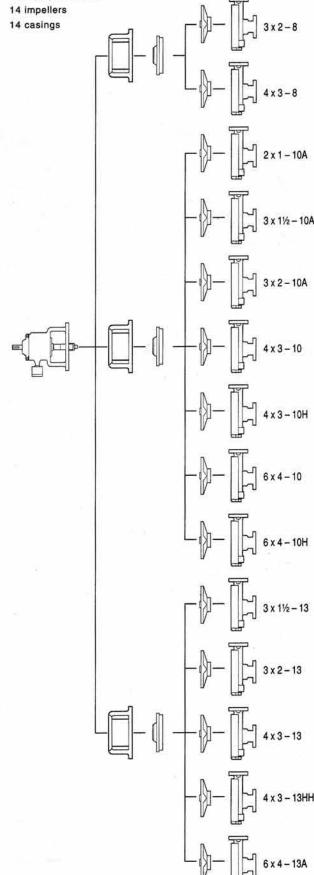
### POWER END I

- 5 Standard Models
- 1 power end



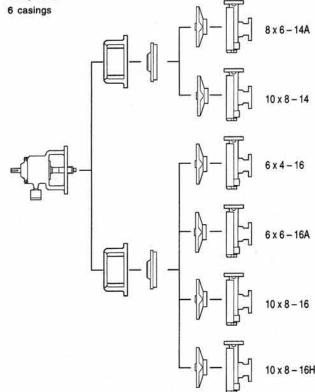
#### POWER END II

- 14 standard models
- 1 power end
- 3 adapters
- 3 back plate covers



#### POWER END III

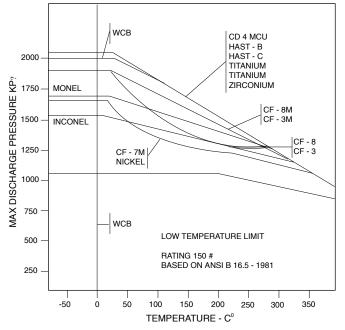
- 6 standard models
- 1 power end
- 2 adapters
- 2 back plate covers
- 6 impellers

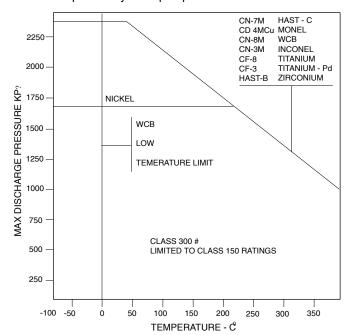


## PRESSURE TEMPERATURE RATING

## SERIES AER PUMPS FOR LOW AND HIGH TEMPERATURE SERVICES

Series AER pumps can be used successfully to handle liquids with wide temperature range from -212 to 30 $^{\circ}$  C. This combined with superior hydraulics, easy maintenance and readily available components, give specific design options and extremely reliable pump performance for demanding service requirements.... at a cost less than previously used pumps.







### **APPLICATIONS AND INDUSTRIES SERVED**

Chemical Processing • Effluent Treatment • Fumes scrubbing • Acid pickling • Recirculation process

- Photographic processing Drugs and Pharmaceuticals Food processing Agro chemicals Perfumeries
- Detergents and Caustics Breweries Petrochemicals Dyes and Pigments Tanneries Paper and Pulp industries



### THE HI-TECH SOLUTION FOR CORROSION

# Raje-Dia Pumps Pvt. Ltd.

1 - G, Laxmi Industrial Estate, New Link Road, Andheri (West), Mumbai 400 053, INDIA.

Fax: 91-22- 2632 0866

Phone: 91-22-2635 2846, 2639 0337/38, 2636 1737.

Website: www.rajediapumps.com E-mail: rppl@rajediapumps.com



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