

since 1906  
**albany**  
pump company ltd.

# ACP SERIES

END SUCTION PROCESS PUMP



**MANUFACTURING HEADQUARTER:**

420 Harry Walker pkwy. Newmarket, Ontario Canada, L3Y 8P5

**Sales Office:**

Burnaby, B.C. (Canada) | Buffalo, New York, (USA)

Phone: (905) 853-9005 | Toll Free: 1 (888) 334-3348

Fax: (888) 335-3391

E-mail: [sales@albanyump.com](mailto:sales@albanyump.com)

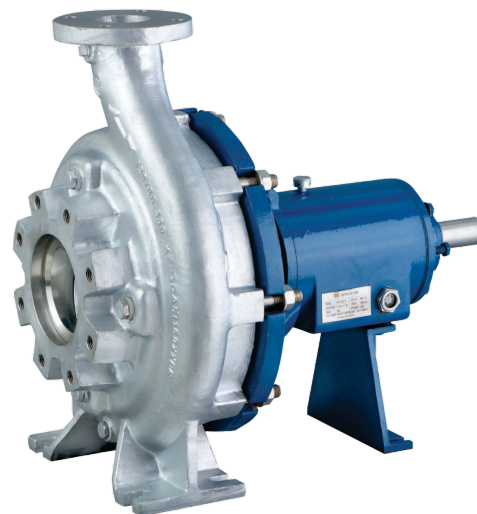
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## PROCESS PUMPS – ECP SERIES

### PERFORMANCE BEYOND TECHNOLOGY

The ACP series centrifugal pumps specially designed for handling paper stock and pulp up to 8% consistency and it is also used as process pumps in many different areas of pulp and paper mills. The semi open impeller is most suitable for heavily contaminated and high viscous liquids. These pumps are also designed for the pumping of stocks, liquors, filtrates, water, rejects, chemicals, additives, slurries, sludge and other liquids, which are typically pumped in the paper making process. Apart from the above, we can use these pumps for other industries like dairy, pulp and other food industries for pumping of pulp and viscous liquids.

The ACP series are tailor made pump to ensure process reliability, high efficiency and low operating costs. Dynamically balanced semi open impeller ensures vibration and noise free operation for long life and replaceable wear plate used to maintain optimum clearance between impeller and wear plate. To maintain impeller clearance external adjustment provision is provided to maintain required efficiency. At the same time, the spare parts inventory and costs are kept to a minimum by means of standardization and inter-changeability of spares among the ranges. These pumps are offered with back pull out design considering easy maintenance and repair. The pump flanges can be offered with ANSI 16.5 class 150 and DIN standards. The standard scope of semi open impeller with 2 or 3 vanes and 4 vanes also can be offered on request. In case of higher consistency applications the pump can be accommodated with use of optional inducers fitted to the impellers.



### APPLICATIONS

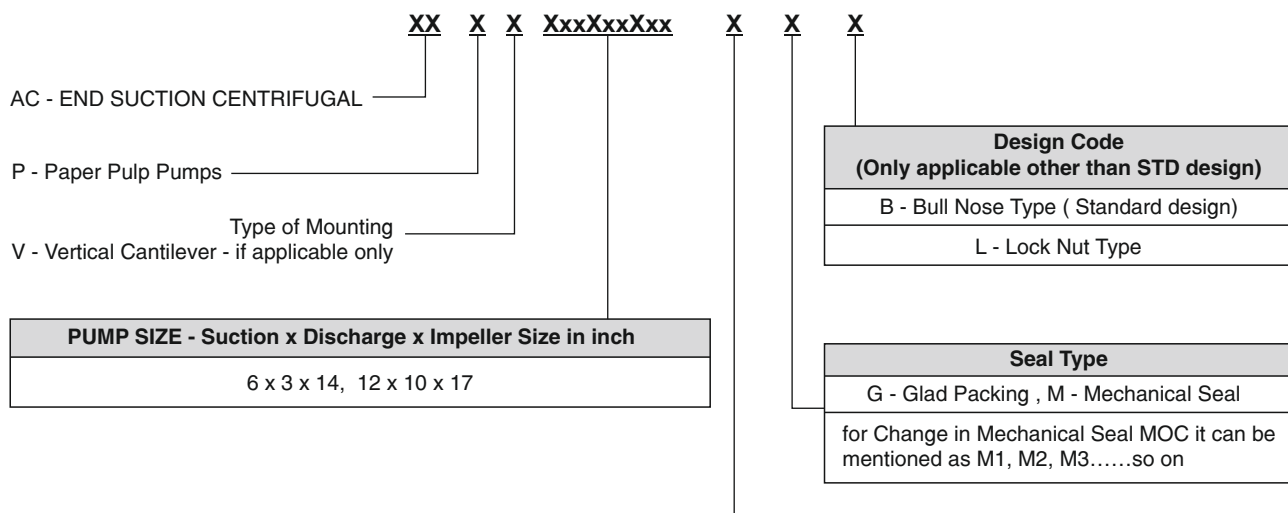
- Paper stock and pulp, sugar and other food industries to handle highly viscous liquids with consistencies upto 8%
- Liquor distilling and transfer
- Liquors with suspended solids upto 95mm
- Pumping of erosive, corrosive and non-corrosive effluents
- Chemical process, dewatering and De-inking
- Non API 610 chemical, process & fibrous effluents
- Dewatering in mines with low density slurries and sludge
- Edible oil refineries

### DESIGN FEATURES

- Consistencies upto 8%
- Non clog semi open impeller with back pull out design
- Inter-changeability of spares among the ranges to reduce the inventory cost
- Optional inducers for impeller to handle high consistency liquids
- Pump can be offered with different kind of material of construction
- Both gland and mechanical seal option for stuffing box
- Shims on DE side bearing housing to adjust the axial clearance between impeller and wear plate to maintain hydraulic efficiency

## GENERAL INFORMATION

### MODEL IDENTIFICATION

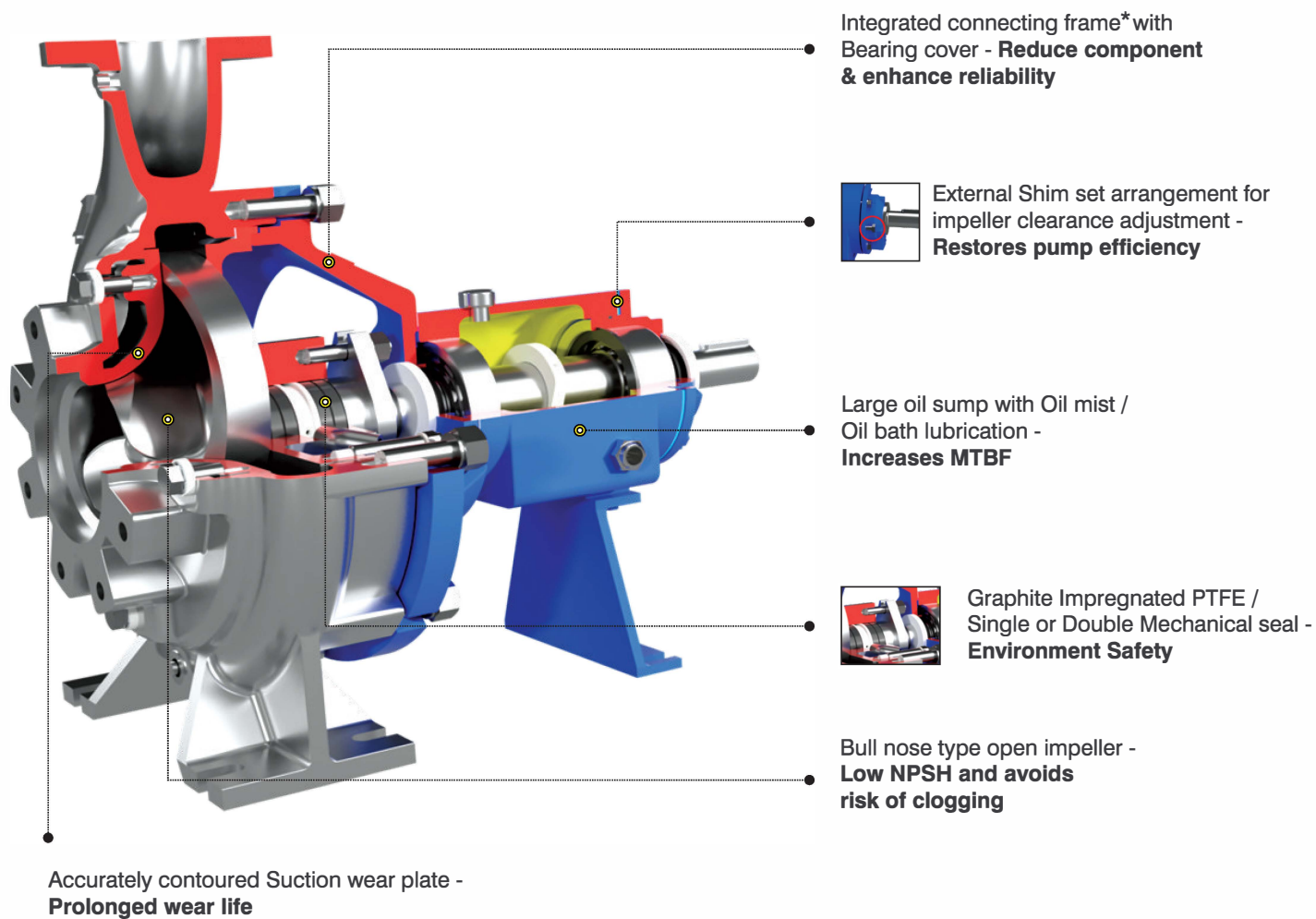


Description	Material of Construction					
Pump Casing	SS 316	SS 316	SS 304	CI	CI	SS 304
Impeller	SS 316	SS 316	SS 304	SS 316	SS 304	SS 304
Side Plate	SS 316	SS 316	SS 304	CI	CI	SS 304
Stuffing Box & Gland	SS 316	SS 316	SS 304	CI	CI	SS 304
Shaft	SS 316	EN 19	EN 19	EN 8	EN 8	SS 304
Shaft Sleeve	SS 316	SS 410	SS 410	SS 316	SS 316	SS 304
Bearing Housing with cover & Connecting Frame	Cast Iron	Cast Iron	Cast Iron	Cast Iron	Cast Iron	Cast Iron
Type of material of construction	<b>N</b>	<b>M</b>	<b>T</b>	<b>W</b>	<b>C</b>	<b>S</b>

### TECHNICAL SPECIFICATIONS

Power	: upto 420 HP
Flow	: upto 15850 gpm
Head	: upto 311 ft
Speed	: 1150/ 1700 RPM
Consistency	: upto 8%
Maximum Solid Size	: upto 3 ¾"
Maximum Working Pressure	: 16 bar
Maximum Liquid Temperature	: -10°C to 180°C

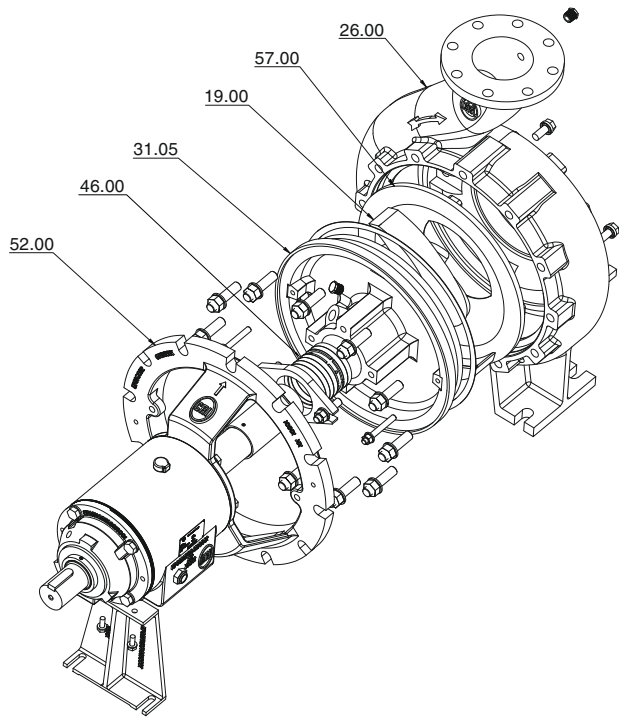
## FEATURES & BENEFITS



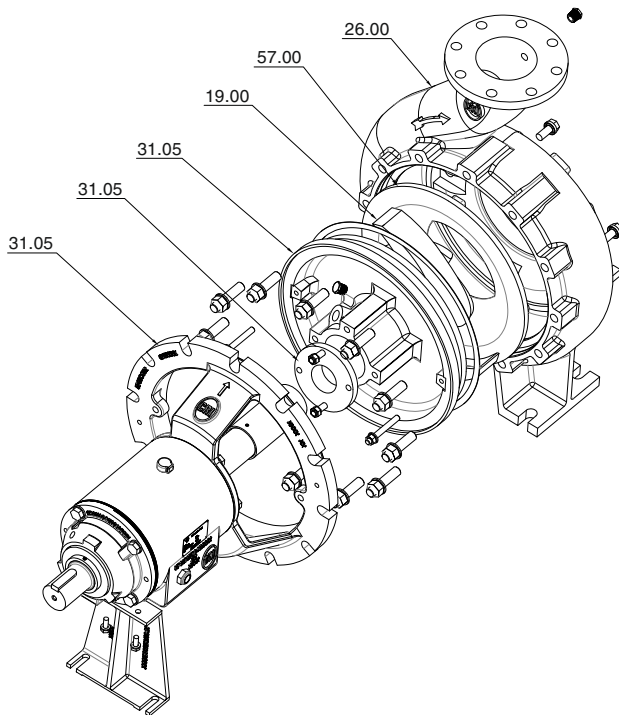
- 12 pump sizes with 3 bearing frame assembly ensures spare parts interchangeability, reducing inventory cost
- Additional corrosion allowance for extended wear life
- Vertical sump configuration also available

## EXPLODED VIEW

### GLAND PACKING CONSTRUCTION



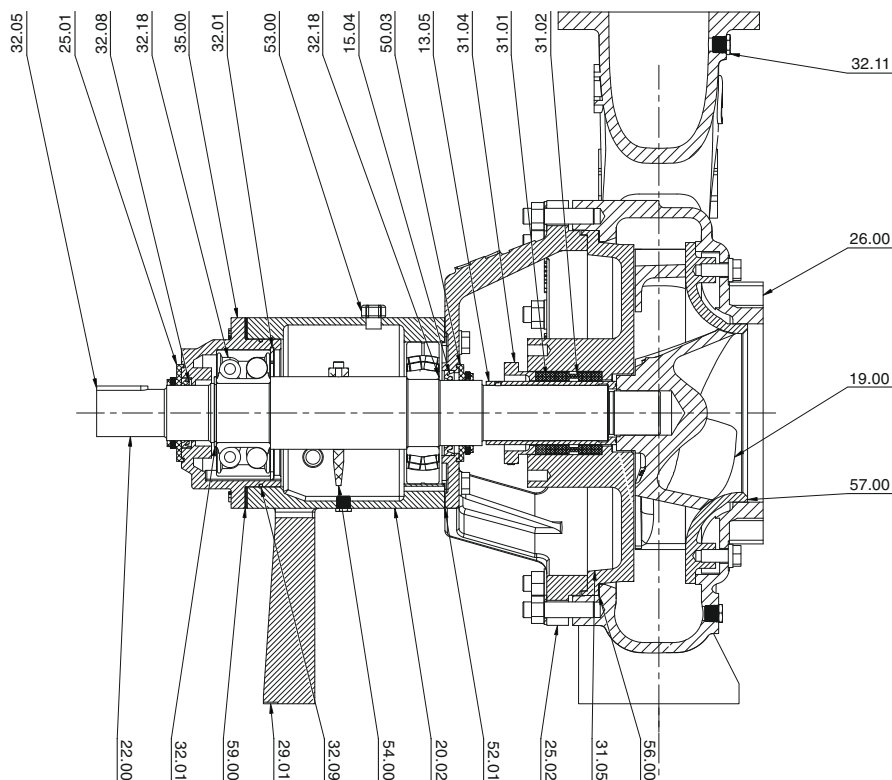
### MECHANICAL SEAL CONSTRUCTION



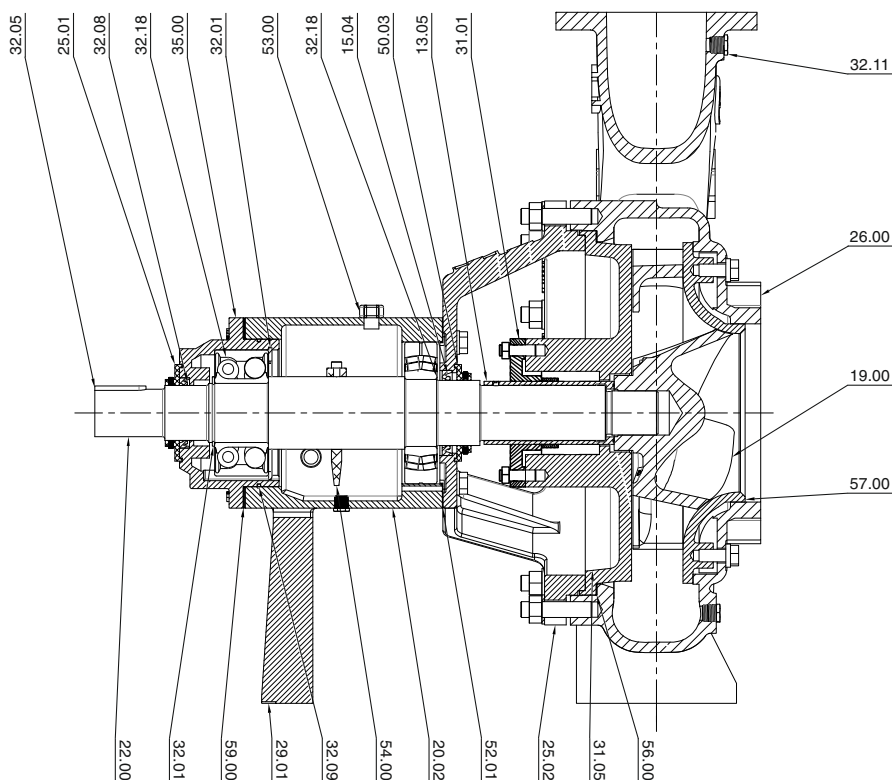
P. No.	Part Name
52.00	Connecting Frame
60.00	Mechanical Seal
31.05	Stuffing Box
19.00	Impeller
57.00	Side Plate
26.00	Casing
46.00	Gland Packing

## CROSS SECTIONAL DRAWING

### GLAND PACKING CONSTRUCTION


























































### MECHANICAL SEAL CONSTRUCTION



P. No.	Part Name
26.00	Casing
22.00	Shaft
19.00	Impeller
13.05	Sleeve Shaft
31.05	Stuffing Box
32.05	Parallel Key
32.18	Double Row Angular Contact Ball Bearing
32.01	Circlip External
35.00	Housing Bearing
32.01	Circlip Internal
32.09	'O' Ring
20.02	Bearing Frame
32.18	Spherical Roller Bearing
52.01	Gasket Connecting Frame
25.02	Connecting Frame
53.00	Breather Nut
25.01	Deflector
32.08	Oil Seal
54.00	Thrower
31.01	Packing / Mechanical Seal
31.02	Ring Lantern
31.04	Gland
56.00	Gasket Casing
57.00	Side Plate
29.01	Frame Support
59.00	Shim
32.11	Hex. Plug



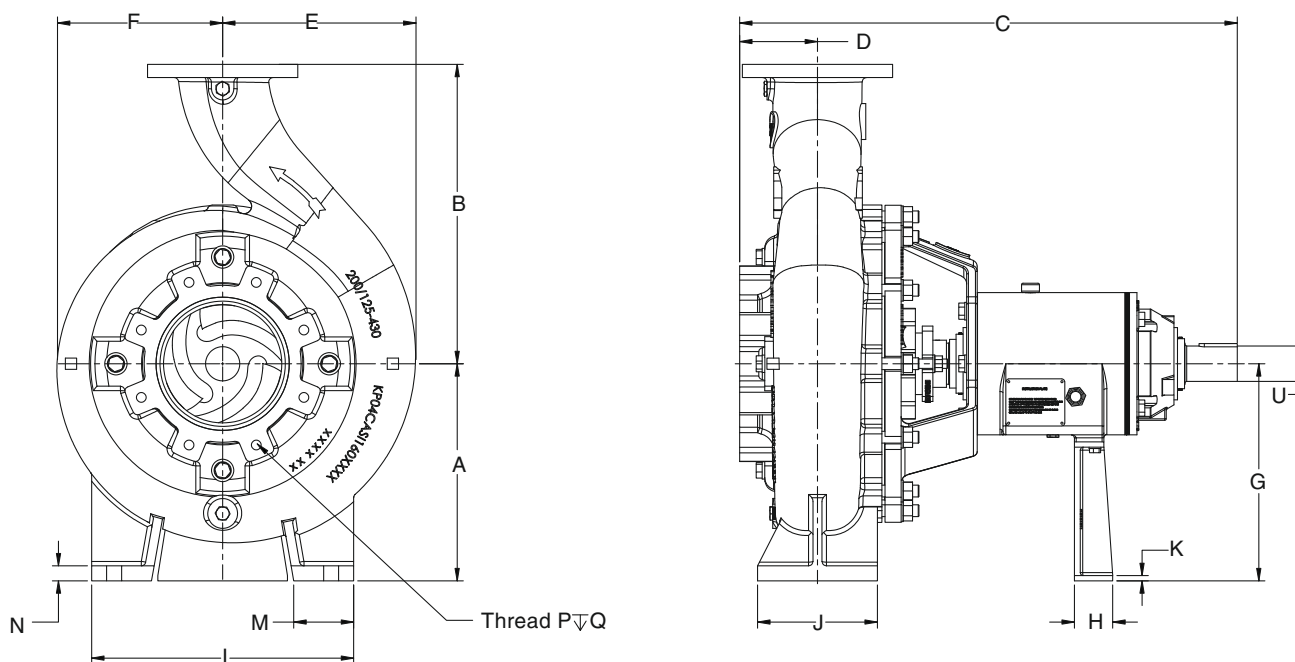
## INTERCHANGEABILITY CHART

Part Name	6 x 3 x 14 (150 x 80 x 350)	6 x 4 x 14 (150 x 100 x 350)	8 x 4 x 17 (200 x 100 x 430)	8 x 5 x 17 (200 x 125 x 430)	8 x 6 x 21 (200 x 150 x 430)	10 x 8 x 21 (250 x 200 x 430)	12 x 10 x 17 (300 x 250 x 430)	8 x 6 x 21 (200 x 150 x 530)	10 x 8 x 21 (250 x 200 x 530)	14 x 12 x 21 (355 x 300 x 530)	16 x 14 x 21 (400 x 355 x 530)
Casing											
Casing Side Flate											
Impeller											
Stuffing Box											
Frame Assembly											

### MODULAR INTERCHANGABILITY

Shaft & Bearing data	Frame - I	Frame - II	Frame - III
<b>Shaft Diameter (mm)</b>			
At Coupling	Ø42	Ø60	Ø90
At 'NDE' Bearing	60	85	120
At 'DE' Bearing	50	75	110
Between bearings	63.5	92.1	122.2
Under Sleeve	45	69.82	114.27
<b>Stuffing box dimensions (mm)</b>			
Shaft sleeve Outer Diameter	55	80	135
Stuffing Box Bore diameter	80.5	105.5	173
Stuffing Box Bore diameter	88	93	134.5
<b>Shaft Lengths (mm)</b>			
Impeller end of shaft to 'NDE' Bearing	270.2	321.3	406.3
Between bearings	152.4	172.7	335.8
'DE' Bearing. To Coupling end	170.1	220.2	282.9
<b>Bearings</b>			
'NDE'	21312	21317	22224
'DE'	5310	5315	5222
<b>Keyway at Coupling (mm)</b>			
Width	12	18	25
Depth	5	7	9
Length	50	56	100
<b>Shaft Thread at Impeller</b>	M36x3 RH	M56x3 RH	M90x6 RH

## MOUNTING DIMENSION -PUMP



	Pump Size in inch (mm)										
	6 x 3 x 14 (150 x 80 x 350)	6 x 4 x 14 (150 x 100 x 350)	8 x 4 x 17 (200 x 100 x 430)	8 x 5 x 17 (200 x 125 x 430)	8 x 6 x 21 (200 x 150 x 430)	10 x 8 x 21 (250 x 200 x 430)	12 x 10 x 17 (300 x 250 x 430)	8 x 6 x 21 (200 x 150 x 530)	10 x 8 x 21 (250 x 200 x 530)	14 x 12 x 21 (355 x 300 x 530)	16 x 14 x 21 (400 x 355 x 530)
A	279.4	279.4	368.3	368.3	368.3	431.8	431.8	431.8	431.8	546.1	609.6
B	362	362	558.8	506.4	508	558.8	616.6	660.4	711.2	812.8	863.6
C	689.2	695.5	827.4	844.5	867.4	871.9	750.29	1169.5	1177.5	1222.9	1287.25
D	114.3	114.3	128.4	132.1	139.7	139.2	176.3	152.4	154.9	177.8	244.3
E	245.4	248.4	363.1	320	311.7	403.1	335.7	430.1	461	562.9	454.1
F	225	225	305	284.3	379.8	310.8	464.2	364.8	377.5	414.5	639.3
G	279.3	279.3	370.3	370.3	368.3	370.3	370.1	433.8	433.8	433.8	431.8
H	50	50	65	65	65	65	64	70	70	70	70
J	165.1	165.1	203.2	203.2	203.2	203.2	233.1	254	254	254	258.7
K	9.9	9.9	9.9	9.9	9.9	9.9	9.9	15	15	15	15
L	355.6	355.6	444.5	444.5	435.5	444.5	444.5	609.6	685.8	685.8	685.8
M	76.2	76.2	101.6	101.6	101.6	101.6	101.6	152.4	152.4	152.4	152.4
N	19.1	19.1	25.4	25.4	25.4	25.4	25.4	25.4	25.4	25.4	25.4
P	M20x2.5	M20x2.5	M20x2.5	M20x2.5	M20x2.5	M20x2.5	M20x2.5	M20x2.5	M20x2.5	M20x2.5	M20x2.5
Q	35	35	33	30	25	30	25	33	30	33	33
U	42	42	60	60	60	60	60	90	90	90	90