



# INNOTECH ENGINEERING

A SUBSIDIARY OF TECHINOVA ENGINEERING ANALYSIS SERVICES LLP



## TO SERVE THE ENGINEERING SECTOR



**MFG. UNIT :**

Gut No 353, Bhiwandi Wada Road, Musarne,  
Wada, Palghar 421312



[www.technova.net.in](http://www.technova.net.in)



Salil Padhy  
8334081626



[innotech@technova.net.in](mailto:innotech@technova.net.in)



## SINGLE STAGE END SUCTION PUMPS

### CENTRIFUGAL PUMPS

Capacities to 4200 gpm (954 m<sup>3</sup>/hr)

Heads to 520 feet (158 meters) Temperatures to 300°F (149°C)

### Setting New Standards of Efficiency

This is delivering over a century of innovation for constant peace of mind. Our years of experience in the design, sales and manufacturing of centrifugal pumps has Liquid handling requirements have evolved over the years and have increased along with temperatures and pressures. Today's installations demand sturdy but quiet, smooth running pumps with longer life cycles. These modern pumps with a clean, straightforward and updated design were developed with upgraded materials of construction and a simplified offering without limiting ranges and keeping maximum interchangeability in mind.

These pumps not only exceed U.S. Department of Energy (U.S. DOE) pump efficiency standards, but also feature shared hydraulics and premium materials as standard offering. The new series offer industry-leading durability and reliability to support your liquid handling needs.

### STANDARD FEATURES

- ❖ Offered in two configurations:
  - ✦ 3801 Close coupled
  - ✦ 3804 Flexible coupled-frame mounted
- ❖ Ductile Iron ASTM A536 Casings provide higher strength and durability
- ❖ Flange dimensions match the largest installed base for maximum interchangeability
- ❖ 316 Stainless Steel impellers and shaft sleeves provide less corrosion, additional chemical resistance and durability
- ❖ Vertical In-line Pumps to streamline parts inventories
- ❖ Heavy duty power frames with bearing life of 100,000 hours
- ❖ Double volute on some 4" and all 5" and larger discharge to reduce bearing loads and increase durability. Note: Not available on 4x5x11 and 4x5x13.5. Note: Single volute also available.
- ❖ Gauge taps on suction and discharge on flanged models
- ❖ 4 Power frame sizes
- ❖ Standard back pullout design reduces downtime
- ❖ Internal self-flushing mechanical seal for continuous lubrication and extended durability, eliminates the need for exterior lubricating and tubing
- ❖ Regreaseable bearings
- ❖ Coupling guard
- ❖ Working pressures up to 175 PSI
- ❖ Rigid base plate design
- ❖ NSF 372 listing standard



## CLOSE COUPLED

### OPTIONAL FEATURES

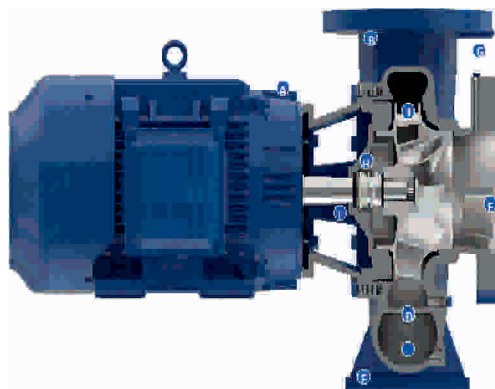
- ❖ 316 Stainless Steel shaft
- ❖ Unique drip rim base that is easier to grout than fabricated bases
- ❖ Drip pan
- ❖ Braided hose of Stainless Steel construction
- ❖ Epoxy coating for NSF50
- ❖ Several mechanical seal options for maximum temperatures up to 275°F
- ❖ Oil lube bearings
- ❖ 416 Stainless Steel case wear ring
- ❖ Certified performance testing

### APPLICATIONS

- ❖ HVAC Systems
- ❖ Boosting
- ❖ Chilled and Hot Water
- ❖ Commercial Pools
- ❖ Industrial Uses
- ❖ Municipal

### Pump Sizes

1.5x2x11	2x2.5x9.5
2x3x11	2.5x3x9.5
3x4x11	3x4x9.5
4x5x11A	4x5x9.5
5x6x11	5x6x9.5A
6x8x11A	6x8x9.5*
1.25x1.5x7	2x3x13.5
1.5x2x7	2.5x3x13.5
2x2.5x7A	3x4x13.5
2.5x3x7	4x5x13.5
3x4x7A*	5x6x13.5
4x5x7A*	6x8x13.5
5x6x7*	8x10x13.5
1.25x1.5x9.5	1.5x2x12
1.5x2x9.5	



#### A. Standard JM and JP motors

Provide low noise level pump operation.

#### B. Ductile Iron casing

Long life with higher working pressures.

#### C. Factory Hydro test

Guarantees casing and seal integrity.

#### D. Double volute discharge

On some 4" and all 5" and larger discharge to reduce bearing loads (exceptions: 4x5x11 and 4x5x13.5).

Note: Single Volute also available  
nge matching largest installed base.

#### D. Double volute discharge

On some 4" and all 5" and larger discharge to reduce bearing loads (exceptions: 4x5x11 and 4x5x13.5).

Note: Single Volute also available

#### E. Suction splitter

On some 4" and all 5" and larger suction to eliminate pre-rotation.

#### F. Casing feet for easy back pull out

Allows servicing of pump without disturbing suction and discharge pipelines.

#### G. Gauge taps on suction and discharge flanges

#### H. Mechanical seal

has carbon against ceramic face for optimum hot water performance. Long life is assured with 303 SST metal parts and Buna-N flexible elastomers.

#### I. Shaft sleeve

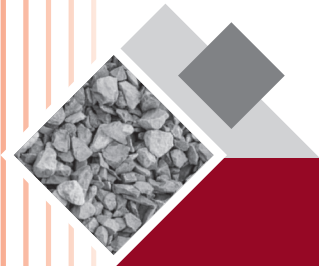
o protect the motor shaft.

#### J. Stainless Steel

Keyed to shaft extension and secured by a cap screw and washer. Gaskets are used to prevent leakage to shaft end.

#### K. Optional casing wear rings

flange to flange matching largest installed base.



## FLEXIBLE COUPLED

Standard T and TS base type motors

Provide low noise level pump operation.

**A. Ductile Iron casing**

Long life with higher working pressures.

**B. Factory Hydro test**

Guarantees casing and seal integrity.

**C. Double volute discharge**

On some 4" and all 5" and larger discharge to reduce bearing loads.

Note: Single Volute also available

**D. Suction splitter**

On some 4" and all 5" and larger suction to eliminate pre-rotation.

**E. Casing feet for easy back pull out**

Allows servicing of pump without disturbing suction and discharge pipelines.

**F. Gauge taps on suction and discharge flanges**

**G. Mechanical seal**

has carbon against ceramic face for optimum hot water performance. Long life is assured with 303 SST metal parts and Buna-N flexible elastomers.

**H. Shaft sleeve**

to protect the pump shaft.

**I. Stainless Steel impeller**

keyed to shaft extension and secured by a caps crew and washer. Gaskets are used to prevent leakage to shaft end.

**J. Optional casing wear rings**

**K. Re-grease able bearings**

**L. Stainless Steel shaft**

Designed for minimum deflection.

**M. Heavy duty power frame**

With re-greaseable bearing for 100,000 hours.

**N. Optional seal materials**

Flange to flange matching largest installed base.

## PUMP FEATURE

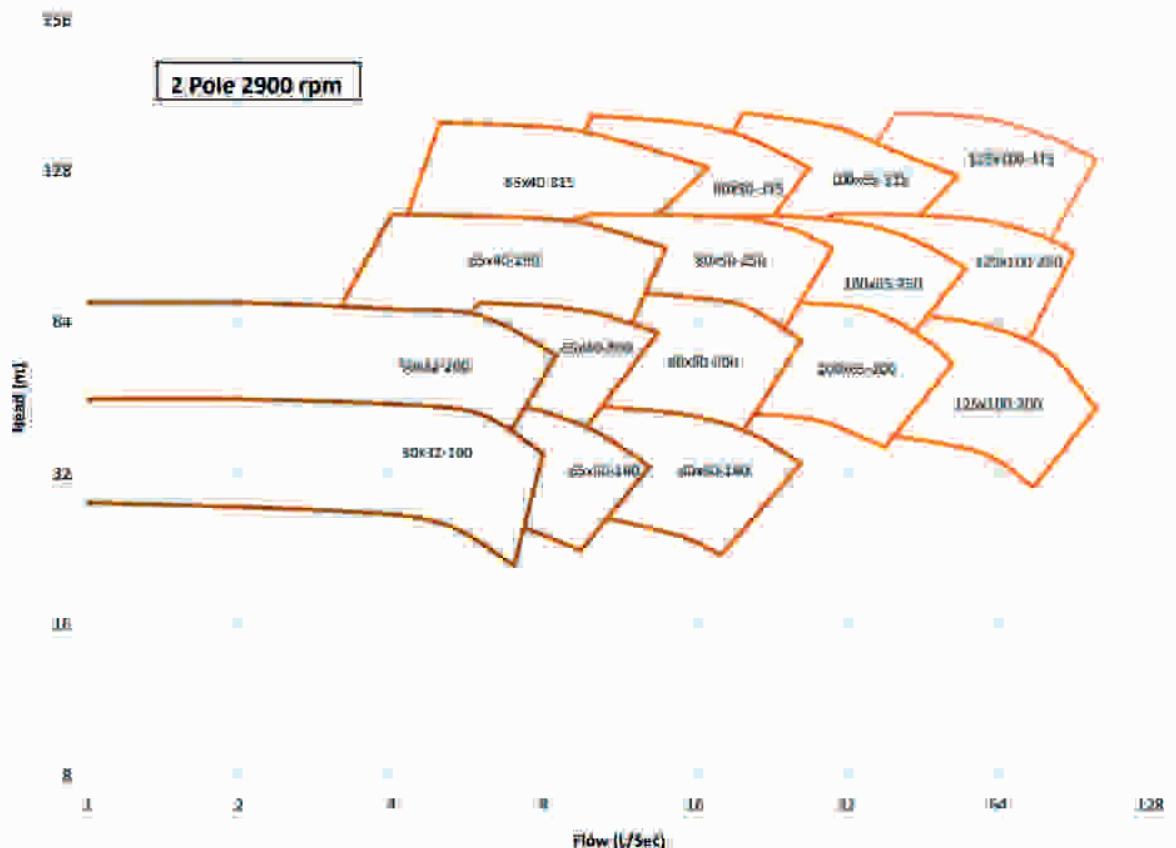
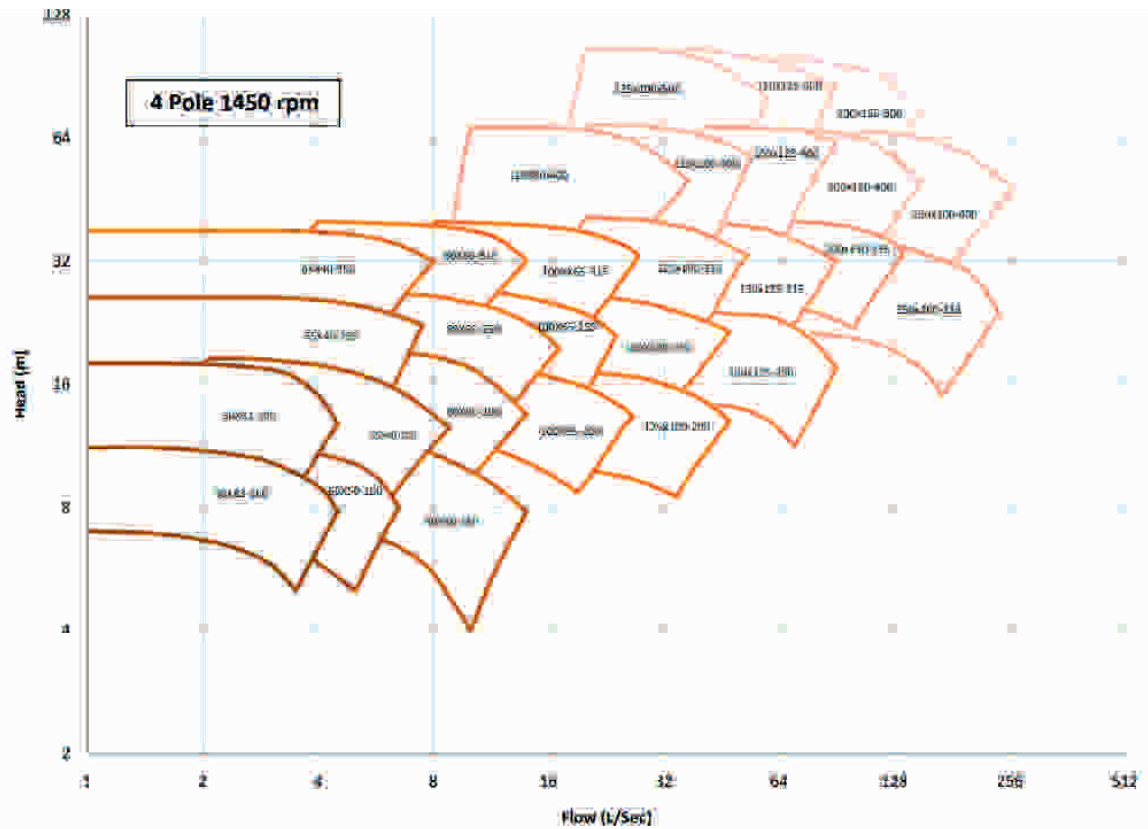
**Maximum Lamination Based  
On Standard Materials And  
Pumping Clear Water**

RPM	Flow Range	Head	Power
2900	15 to 400 m <sup>3</sup> /HR	150 m.	280 HP
1450	10 to 500 m <sup>3</sup> /HR	100 m.	390 HP

Pump Part	Stainless Steel Impeller Fitted
Casing	Ductile Iron ASTM A536
Impeller	Stainless Steel ASTM A743 Type 316
Seal plate/motor bracket	Cast Iron ASTM A48
Shaft	Stainless Steel AISI C1045
Sleeve	Stainless Steel ASTM A743 Type 316
Power frame (PF1, PF2, PF3 or PF21A)	Cast Iron ASTM A48
Mechanical seal	
Washer	Carbon
Seat	Ceramic
Elastomer	Buna-N
Metal Parts	303 SST
Spring	303 SST



## PUMP FEATURE





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**Salil Padhy 8334081626**