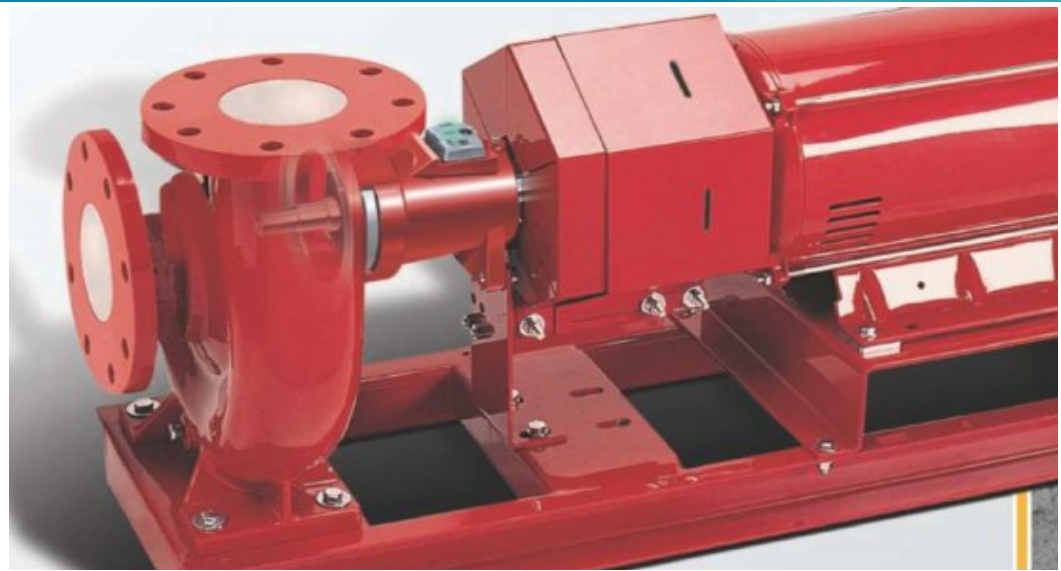


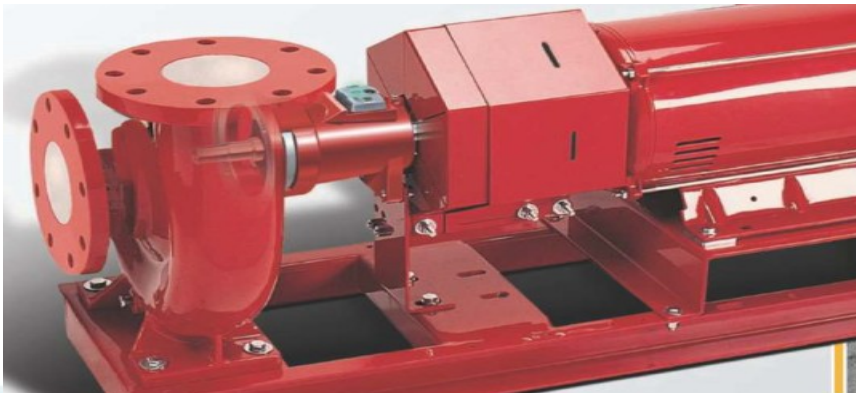
# 1510 The Next Generation Pump

Bell & Gossett ... Leaders in HVAC pumping



# Specifically Designed Features for...

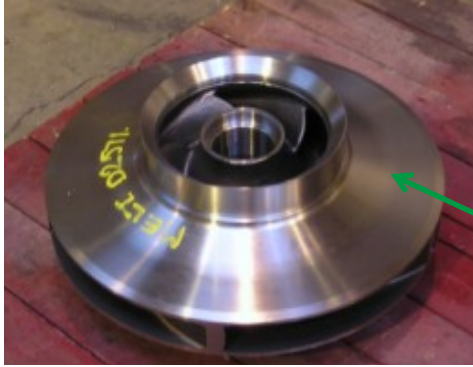
- Optimal Hydraulic Performance at varying loads of HVAC system
- Extended Pump Life and best overall Life Cycle Cost
- Designed for Operators – Safety Guards & iAlert system
- High Reliability – Reduce wear & tear in pumps
- Reduce Maintenance Time & Cost
- **Preventive Maintenance** instead of Breakdown Maintenance



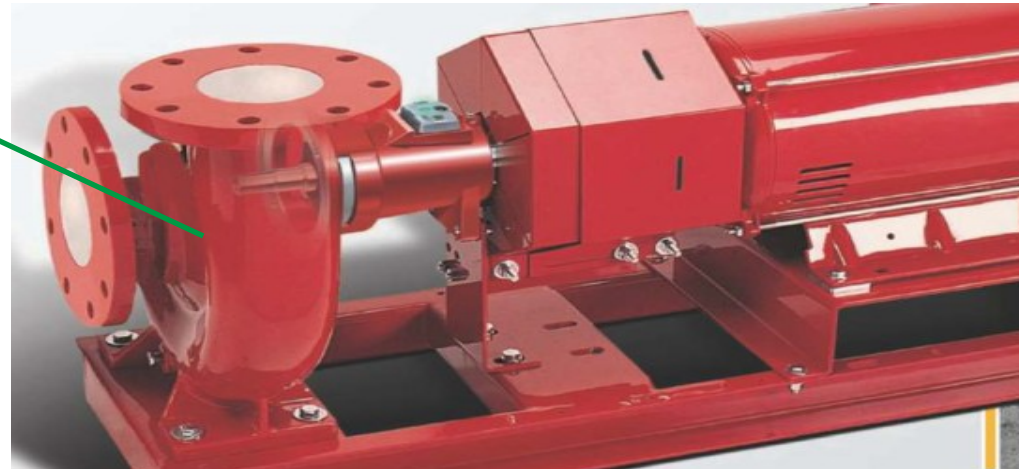
Not another water pump ... i510 are designed for HVAC

# Features that put us ahead to others.....

## ➤ **Standard Stainless Steel Impeller**

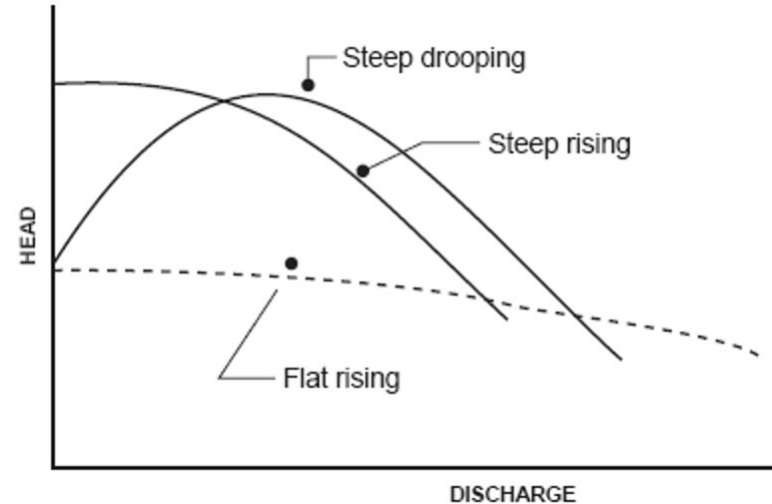
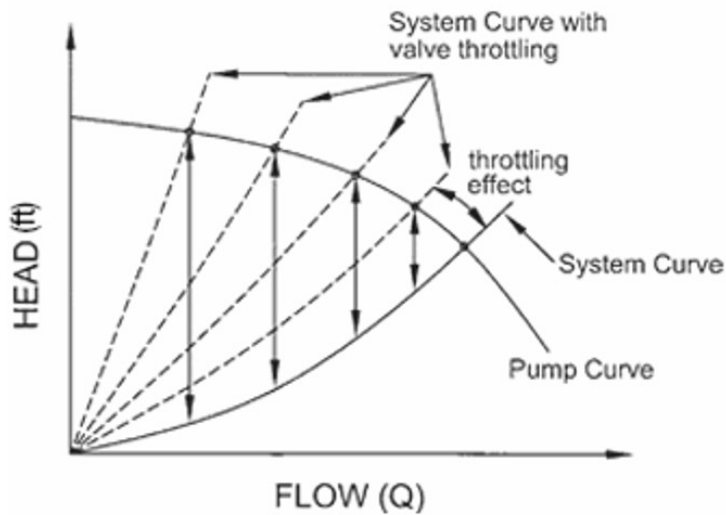


SS Impeller



- Lead free material unlike bronze
- Oxidation & Corrosion Resistant.
- Stronger & Stiffer than Bronze.
- Higher modulus of elasticity compared to Si-Br.
- Light in weight compared to Si-Br.
- Free from toxic content available in Si-Br C87600
- Weldability & Machinability

# Flat Curve Vs Steep Curve



HVAC System generally runs at rated capacity few weeks a year. Which means Unless you have flat curves, lower flow will mean higher head and more power wastage by valves.

In chilled water systems, pumping normally draws from around 6 to 12 % of the total annual plant energy consumption. A common cause of energy waste is that many chilled and condenser water circulation systems are significantly oversized and then “throttled” to produce the desired performance.

## ➤ Better efficiencies- Tangential Flow Design

Due to improved design 1510 offers better efficiencies to other end –suction pumps in industry



Tangential/Radial  
Flow Design



Centre line Flow Design

# ➤ Tangential Flow Design

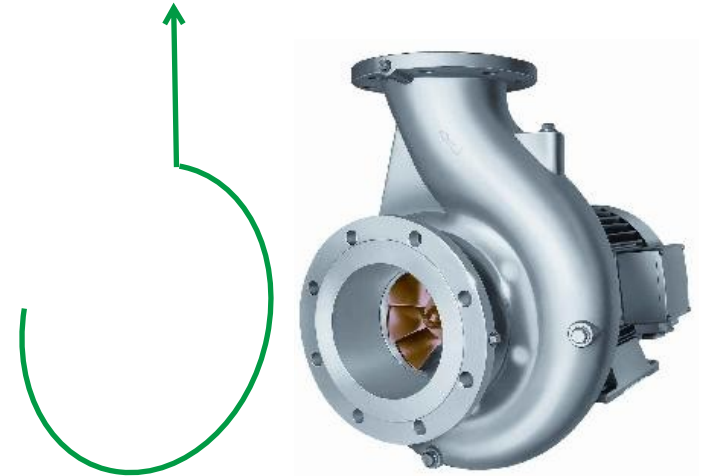
## Tangential/Radial Flow Design



Lesser resistance to flows  
= Lesser Friction losses  
= Better efficiencies

Better efficiency & smoother flow due to less resistance to flow

## Centre line Flow Design



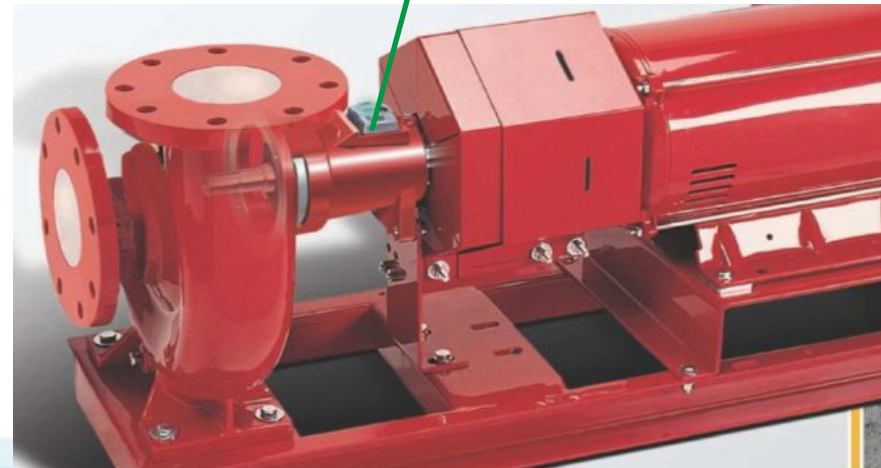
Additional resistance to flows  
= More Friction losses  
= Lower efficiencies

Lose efficiency by diverting the flow

## ➤ Patented i-Alert condition monitor

- Continuously measures vibrations & temperature & automatically indicates when pre/set levels exceed to make pre-failure changes.
- Visual indication of pump health makes inspection accurate.
- Change your maintenance strategy from
  - Breakdown Maintenance
  - Preventive Maintenance

Take visuals from iAlert catalog of ITT & put it here.

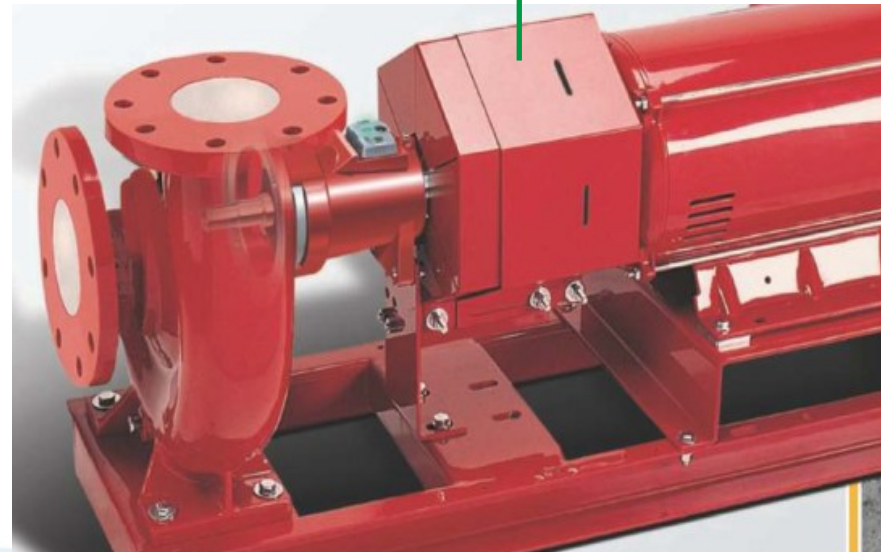
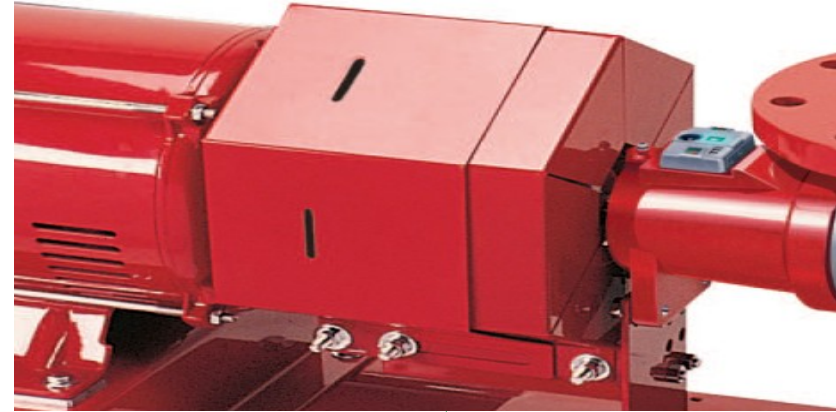


## ➤ ANSI/OSHA compliant coupling guard

- Complies with ANSI B15.1 & OSHA 1910.219.
- Fully encloses access openings.
- Include slotted viewing windows for easy inspection.
- Offers increased protection against potential injuries as compared to standard coupling guards.



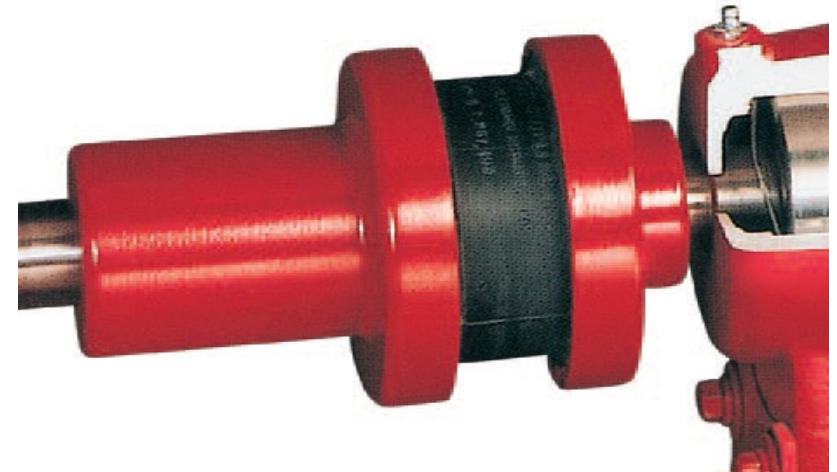
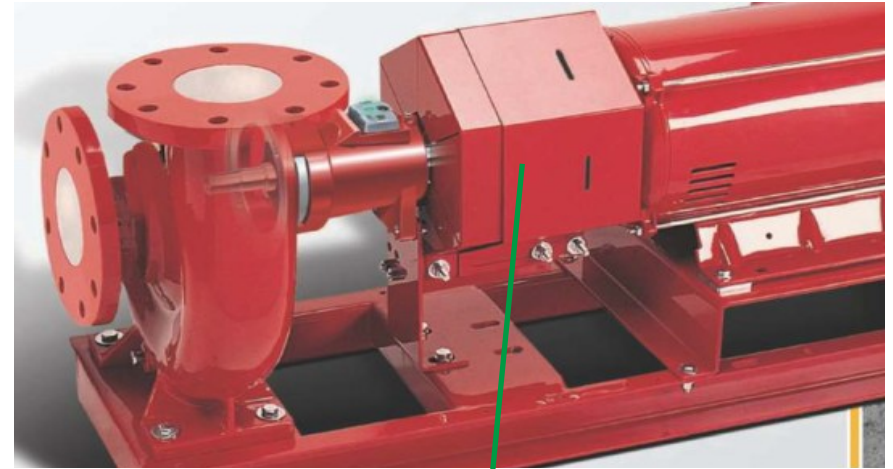
Conventional U shape coupling guard





## ➤ Centre Drop-out Spacer Coupling

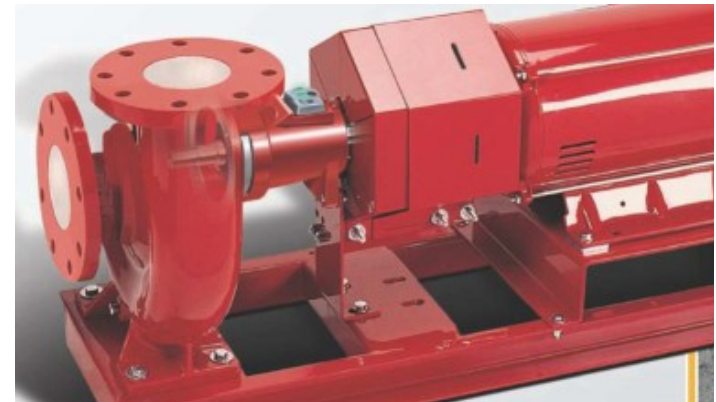
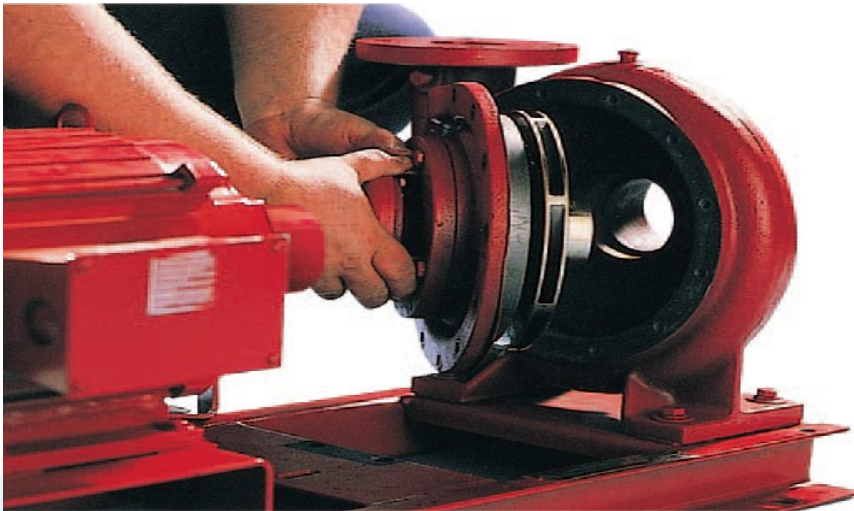
- Reduce complexity of installation of couplings with a “drop Out Design”
- The elastomer coupling can absorb vibrations and further help improve pump life.
- Allows removal of bearing frame & rotating element without disturbing the pump end pipe alignment or motor connections.



Centre drop out Spacer coupling

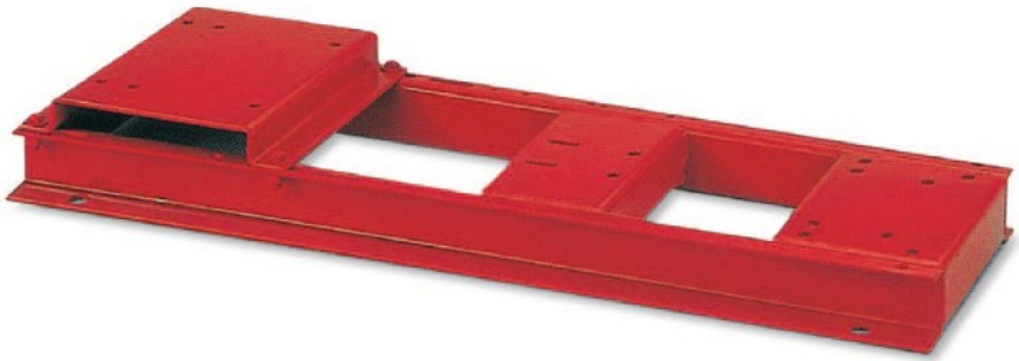
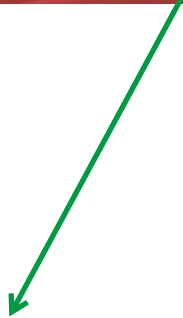
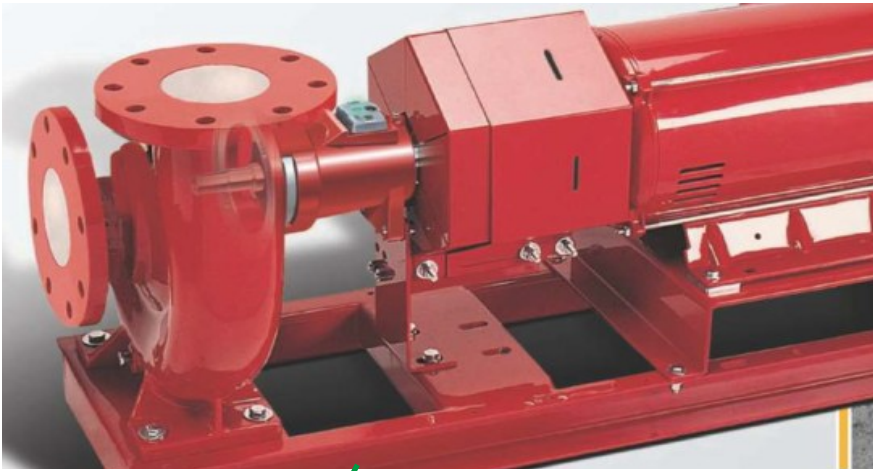
## ➤ True back pull-out design for easy repairs

- Bearing frame & impeller removed without disturbing pump volute or motor assembly.
- Reduces pump downtime & decreases maintenance costs.



# ➤ Heavy Duty Baseframe

- Meets Hydraulic Institute Standards ANSI/HI 9.6.4-2009 for recommended acceptable unfiltered field vibration limits.
- Provides a heavy duty saddle assembly with full seam welds, closed ends & open top grouting ease.
- Reduces pump torsion (due to piping) and controls vibrations.



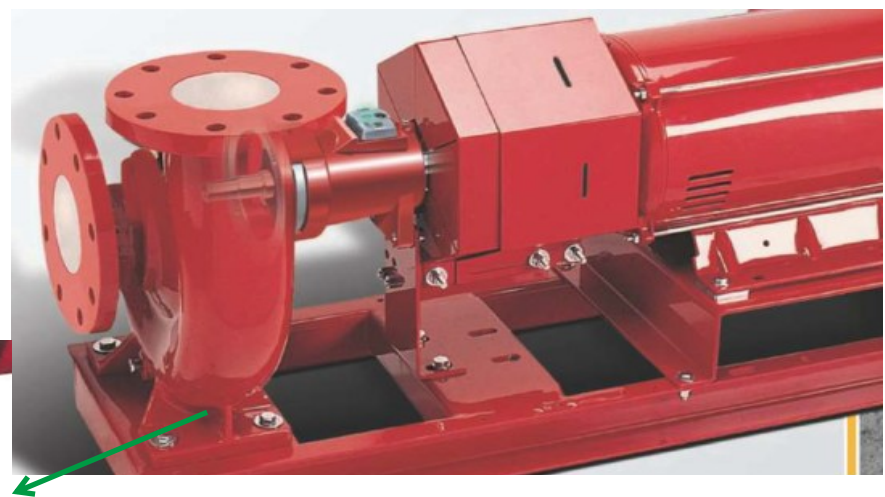
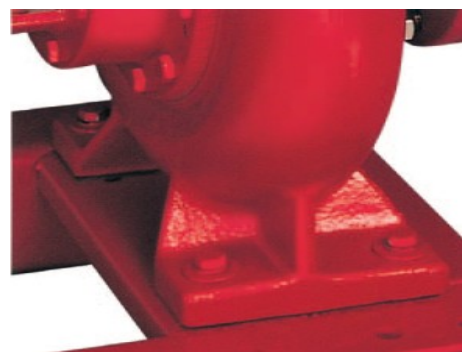
Heavy duty baseplate



Pump with Channel Baseframe

# ➤ Foot Mounted Volute

- Ensures that alignment between volute & motor is maintained.
- Helpful in preventing premature bearing, shaft & seal failures due to distortion caused by piping weight.



- Improved efficiencies.
- Low NPSHr.
- Eliminates Overhung impeller load.



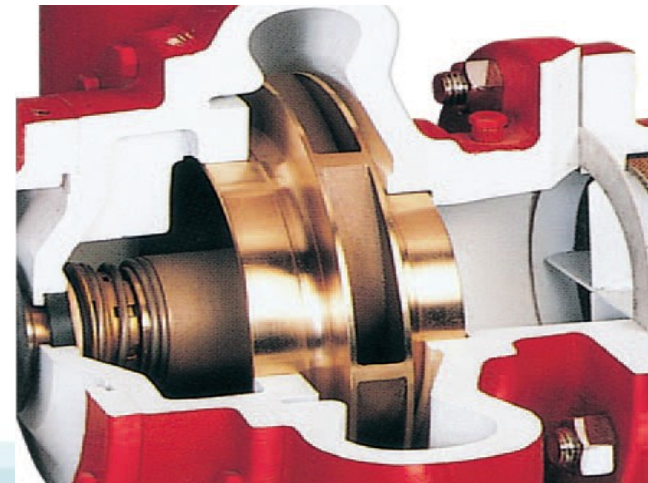
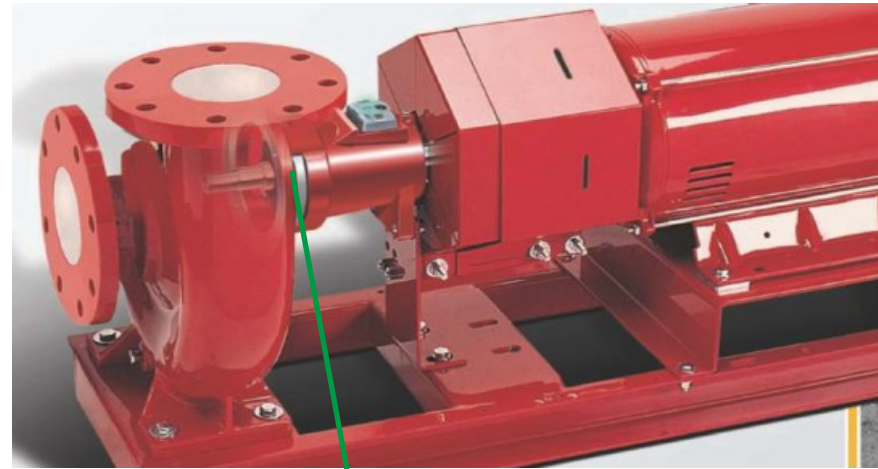
Pumps with overhung Volute

# ➤ Self flushing mechanical seal

- Introduced self-flushing mechanical seals to HVAC industry.
- Ensures maximum seal face lubrication, heat dissipation & debris removal.



Pump with external flushing arrangement for Mechanical seal



Self flushing mechanical seal

## ➤ Regreasable Bearings



- Outlast permanently lubricated bearings
- Allows re-lubrication
- Remove impurities

# Truly..... The Next Generation Pump



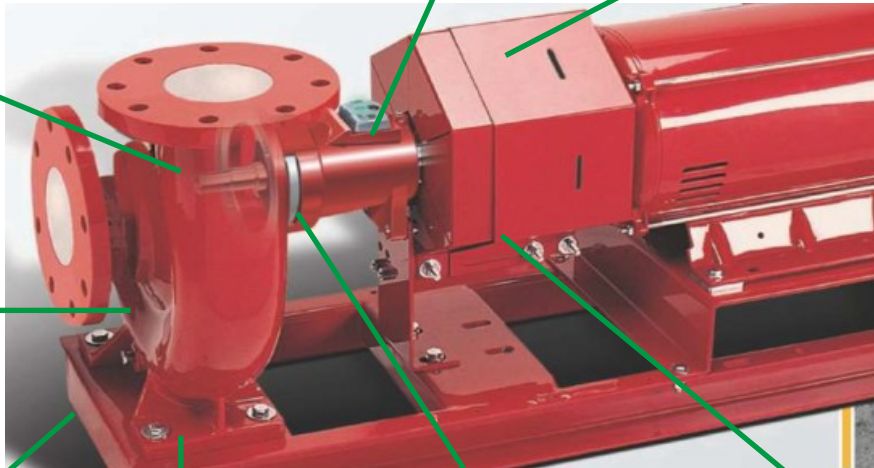
SS Impeller



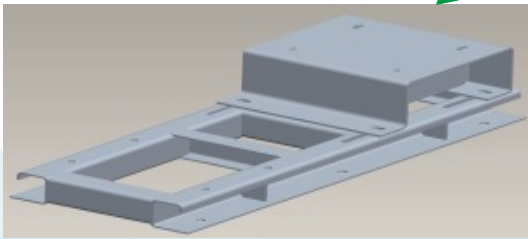
Patented i-Alert condition monitoring



ANSI/OSHA Coupling guard



True back pullout design



Heavy duty baseplate



Foot-mounted volute



Self flushing mechanical seal



Centre drop out Spacer coupling

# Summary

- Better efficiencies due to Tangential flow design.
- SS Impeller.
- Patented i-Alert condition monitoring for vibrations & noise measurement.
- ANSI/OSHA Coupling Guard.
- True Back pullout design.
- Centre Drop out Spacer Coupling.
- Heavy Duty Baseplate.
- Foot-mounted volute.
- Self Flushing Mechanical Seal.

**Recommendation- Economical option for flows upto 1800 USGPM & 16 bar pressure**



# Bell & Gossett ... Series i-1510

## Competitive Summary

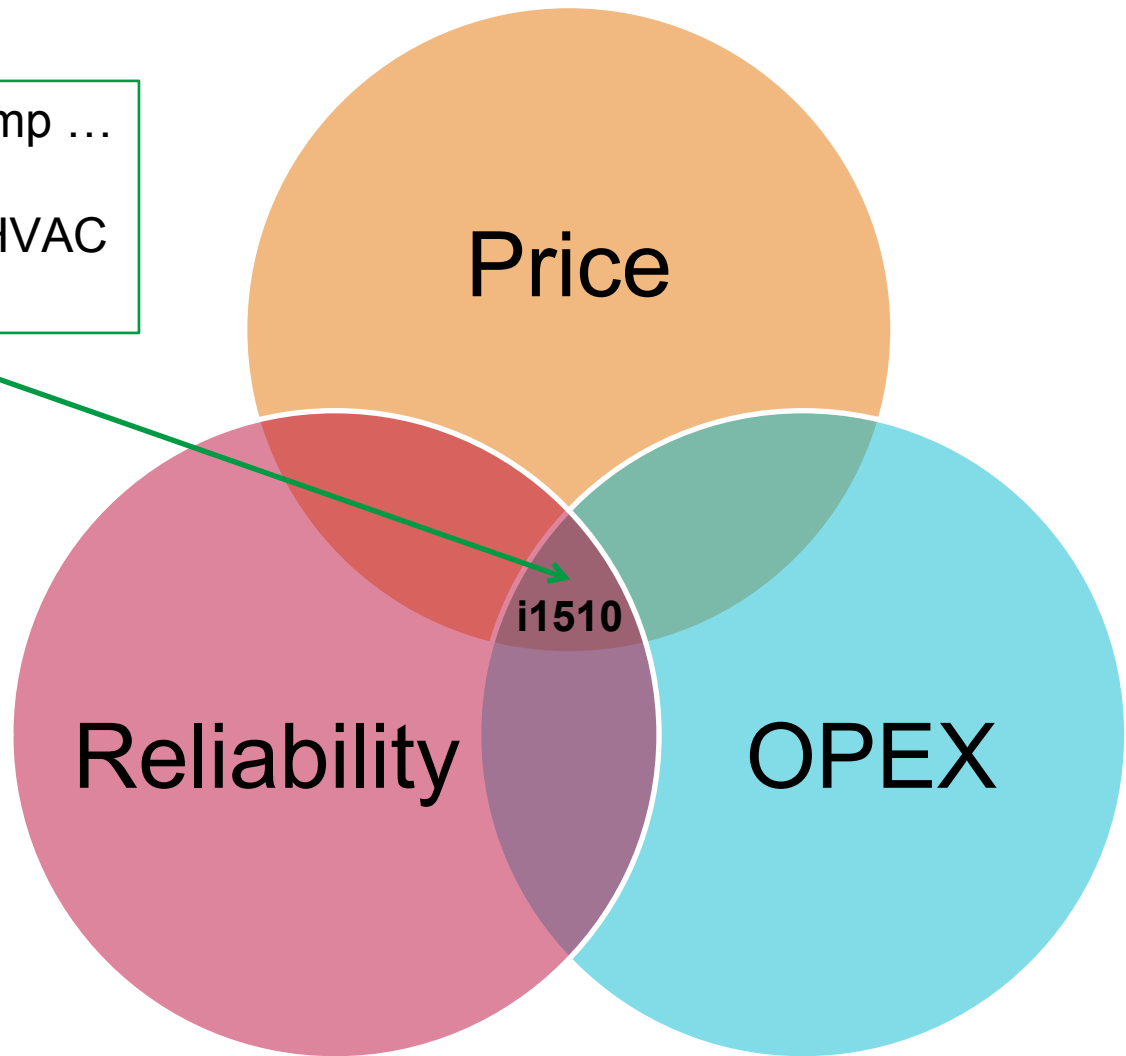
<b>Manufacturer</b>	<b>FLAT CURVE Low OPEX</b>	<b>Tangential Discharge</b>	<b>Conditional Monitoring</b>	<b>ANSI/HI 9.6.4 Baseplate Low Vibration</b>	<b>ANSI/OSHA Coupling Guard</b>	<b>Regreasable Bearingsae</b>	<b>Foot Mounted Volute</b>
B&G							
Armstrong							
KBL							
Wilo							
Grundfos-PACO							
Grundfos-NB							

# Bell & Gossett ... Series i-1510

## Competitive Summary

i1510 – Not a standard Water Pump ...

A pump designed for CRITICAL HVAC duty



Let's Solve Water