Patterson®

A Gorman-Rupp Company



HVAC PUMPS & ACCESSORIES

The Pump People®

ABOUT US

Patterson has built a trusted reputation for reliable pump installations worldwide - whether satisfying urban water or waste demands, harnessing and controlling ravaging floods, reclaiming arid deserts, taming rampaging and devastating fires, or protecting the planet's ecological balance, our pumps are trusted.

Around the globe, wherever liquid moves, in large volume or high pressure, you will find Patterson heavy-duty pumps and packaged systems. The world looks to Patterson to enhance safety and comfort in HVAC and fire suppression technology, exceeding pumping demands in water supply, irrigation, flood prevention, and wastewater treatment, make industrial solutions into liquid transfers, and fulfill heating or cooling needs to each of our clients.

ISO 14001 and ISO 9001 Certified

CHECK US OUT!

Website

Facebook

Linkedin

SEND US YOUR INSTALLATION PICTURES!

We want to see how it went! Use the QR code to upload your installation pictures. Send us an email afterward to learn how to receive a free gift at ppc-marketing@pattersonpumps.com

If you upload to the Dropbox, we reserve the right to use the photos







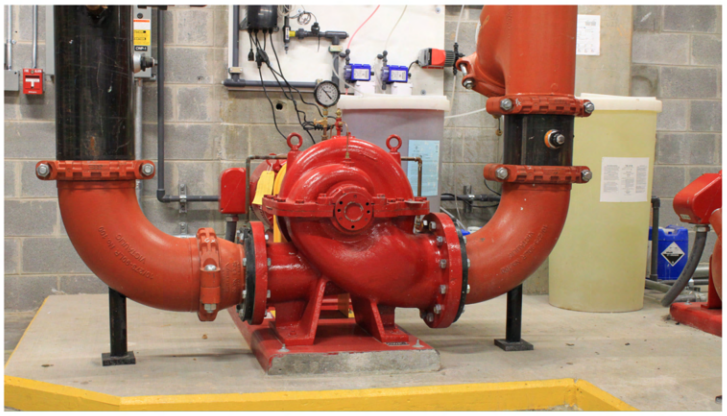




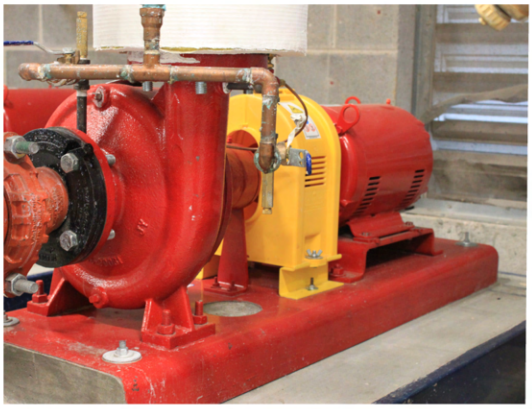





MSD

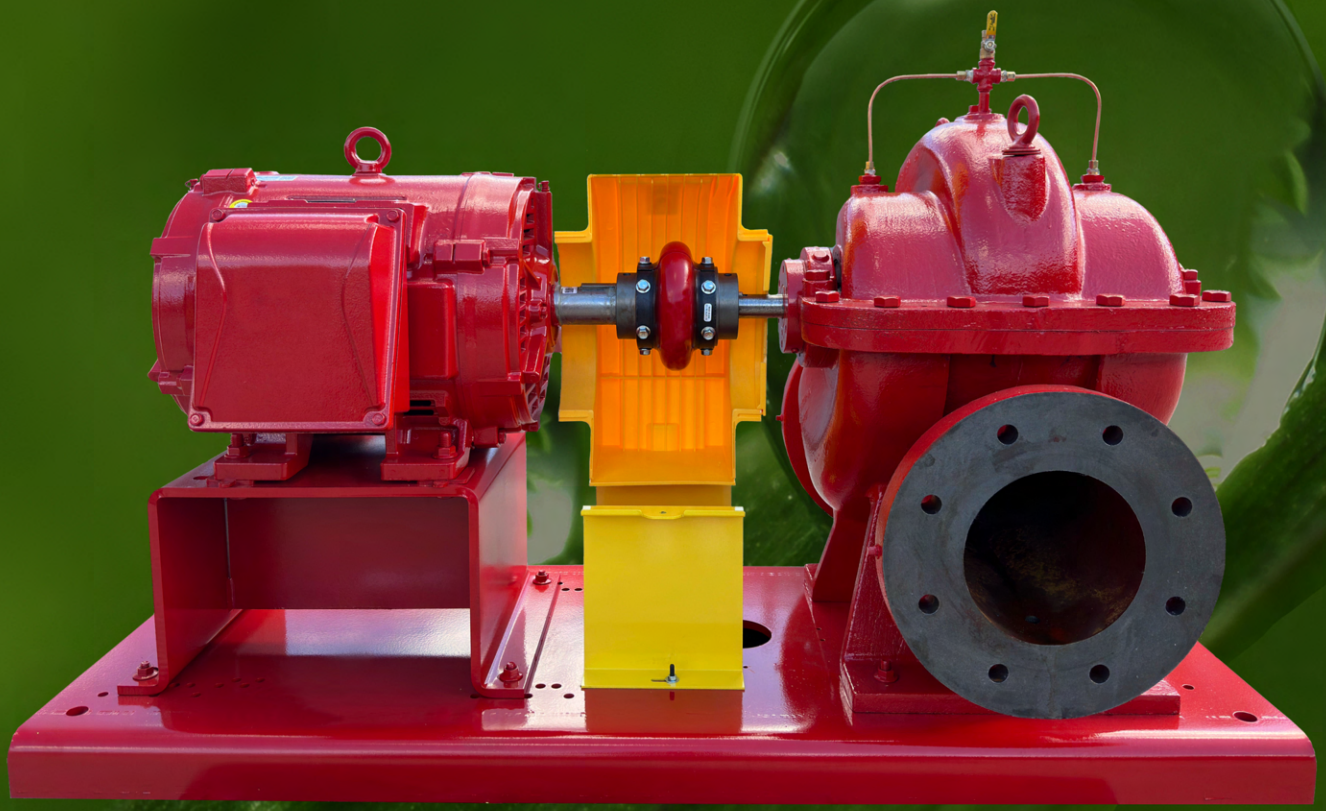








HORIZONTAL SPLIT CASE



Frame-Mounted Configuration

Patterson horizontal split case pumps offer a high-efficiency design that minimizes energy consumption and provides easy access and simplifies maintenance.

Flows to 6,500 GPM, heads to 205’ at 1800 RPM

Flows to 4,000 GPM, heads to 90’ at 1200 RPM

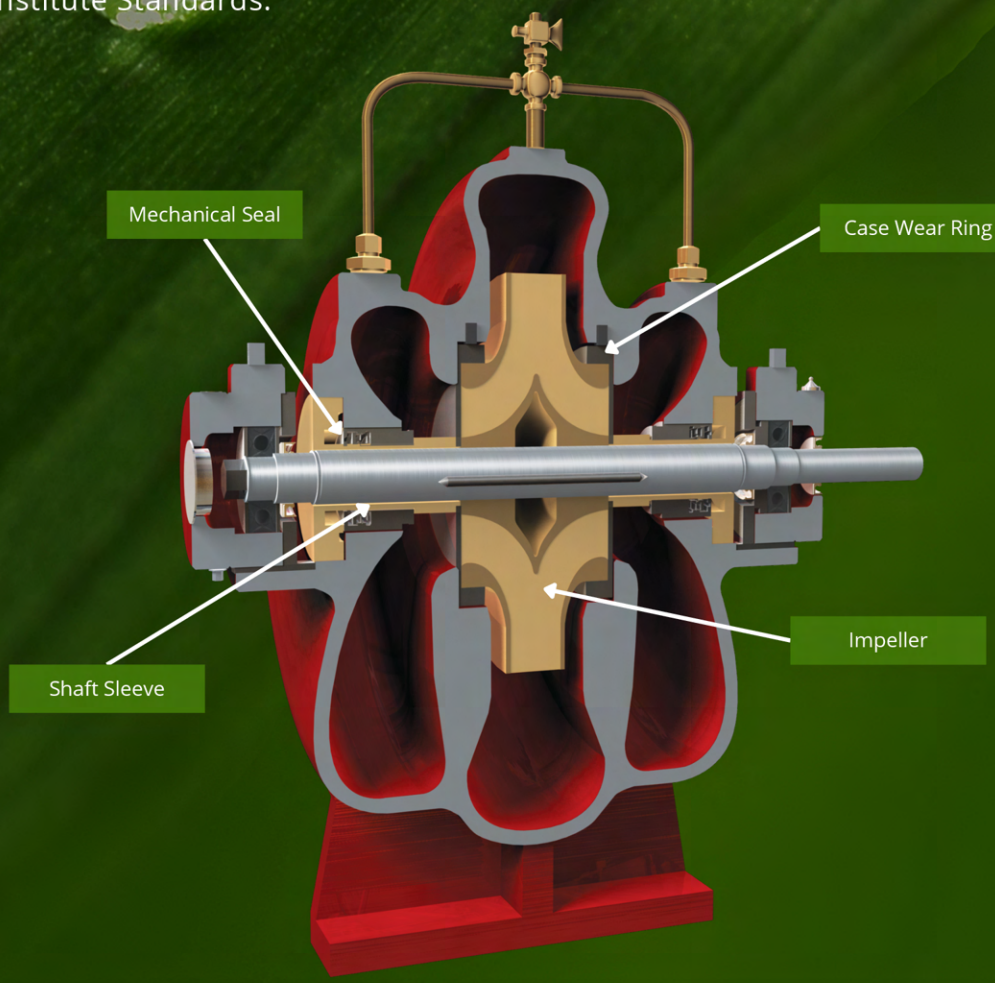
BENEFITS/FEATURES

- Gauge taps at the suction and discharge connections for complete monitoring flexibility
- Precision-cast, dynamically balanced impeller minimizes vibration and maximizes bearing life
- Precision bearings and shaft design limit deflection at the seal face
- Durable flex coupling, with optional variable speed, absorbs vibration
- Rigid steel base aids in pump alignment
- Standard case wear ring and grease-lubricated bearings
- Mechanical seals are standard in carbon vs. silicon carbide (optional: tungsten carbide) with external seal flush lines
- Every pump hydrostatically pressure-tested
- Optional 250-lb pump flanges on all models
- Standard construction with bronze shaft sleeve and steel shaft; optional stainless steel sleeve and shaft available

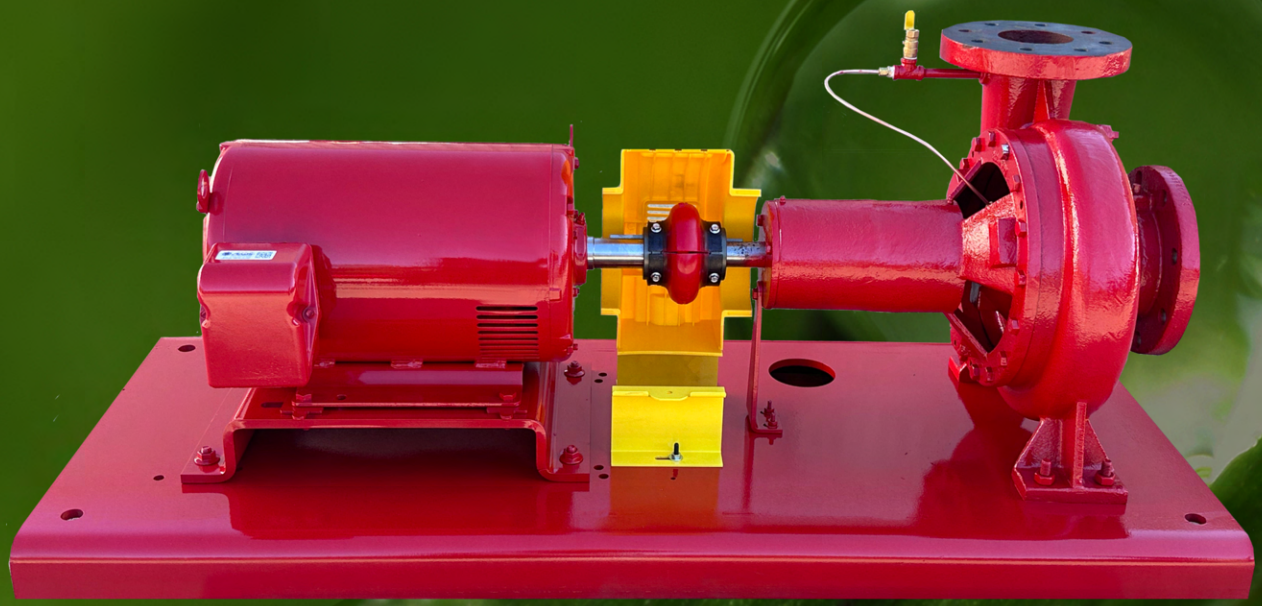
SPECIFICATIONS: FLEX-COUPLED

Pumps shall be high efficiency, horizontal split case design, base mounted with OSHA approved coupling guard. The pumps shall be single stage, class 30 cast iron and capable of being serviced without disturbing piping connections. Pump should be suitable for 175 psi working pressure (std.) or 325 psi (optional). Flanges shall be 125b. ANSI (std.) or 250 lb. ANSI (optional). The pumps shall have case wear rings and grease lubricated bearings. The impeller shall be of the enclosed double suction type and shall be hydraulically and dynamically balanced. The impeller shall be keyed to the shaft and secured by lock nuts. The pumps shall have a replaceable bronze or stainless steel shaft sleeve and shall cover the liquid area under the seal. The pump shall have a mechanical seal type carbon vs. silicon carbide with seal water flush line (optional: tungsten carbide). Seal shall be suitable for continuous operation at 250 degrees Fahrenheit. Pumps shall be designed for a maximum shaft deflection of 0.002" at the seal face.

Casing shall have tapped holes on the suction and discharge to accommodate gauges, fittings, and drain ports. Motors shall be EPAC/Nema rated and shall be of the size, voltage, and enclosure (ODP/TEFC) as outlined in the plans and specifications. The motor shall be non-overloading throughout the entirety of the pump performance curve (optional: premium efficiency motor). A flexible coupling shall be sized for non-overloading conditions and capable of absorbing torsional vibration and VFD approved ease of serviceability. The coupling guard shall be of safety yellow and meet all OSHA standards, secured to the base. Pump and motor shall be factory aligned. The contractor shall re-align upon installation of pump unit assembly prior to startup. Each pump shall be factory hydrostatically tested per+ Hydraulic Institute Standards.



END SUCTION



Frame-Mounted Configuration

Patterson frame-mounted end suction HVAC pumps offer a high-efficiency design that minimizes energy consumption, and their back pullout configuration provides easy access and simplifies maintenance.

Flows to 6,000 GPM, heads to 205’ at 1800 RPM

Flows to 3,000 GPM, heads to 90’ at 1200 RPM

Flows to 2,000 GPM, heads to 475’ at 3600 RPM

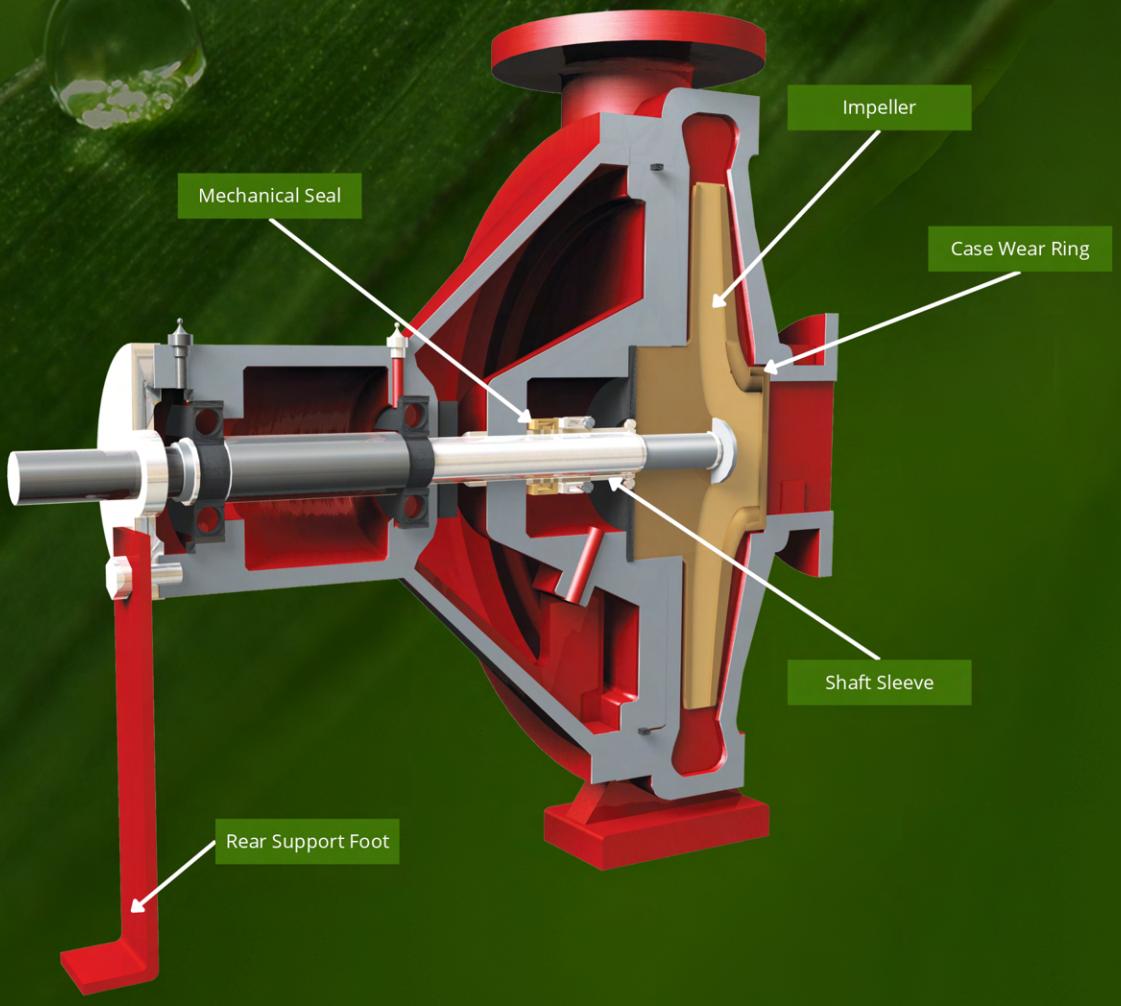
BENEFITS/FEATURES

- Gauge taps at the suction and discharge connections for complete monitoring flexibility
- Annular pressure reducing clearance with impeller balance holes to reduce axial thrust
- Precision-cast, dynamically balanced impeller minimizes vibration and maximizes bearing life
- Precision bearings and shaft design limit deflection at the seal face
- Bearing housing mounts directly to the pump volute to save space and provide proper alignment
- OSHA coupling guard accessible from both sides
- Durable flex coupling, with optional variable speed, absorbs vibration
- Rigid steel base aids in pump alignment
- Standard case wear ring and grease-lubricated bearings
- Mechanical seal is standard in carbon vs. silicon carbide (optional: tungsten carbide) with an external seal flush line
- Every pump hydrostatically pressure-tested
- Optional 250-lb discharge flanges on many models
- Standard construction with bronze shaft sleeve and steel shaft; optional stainless steel sleeve and shaft available

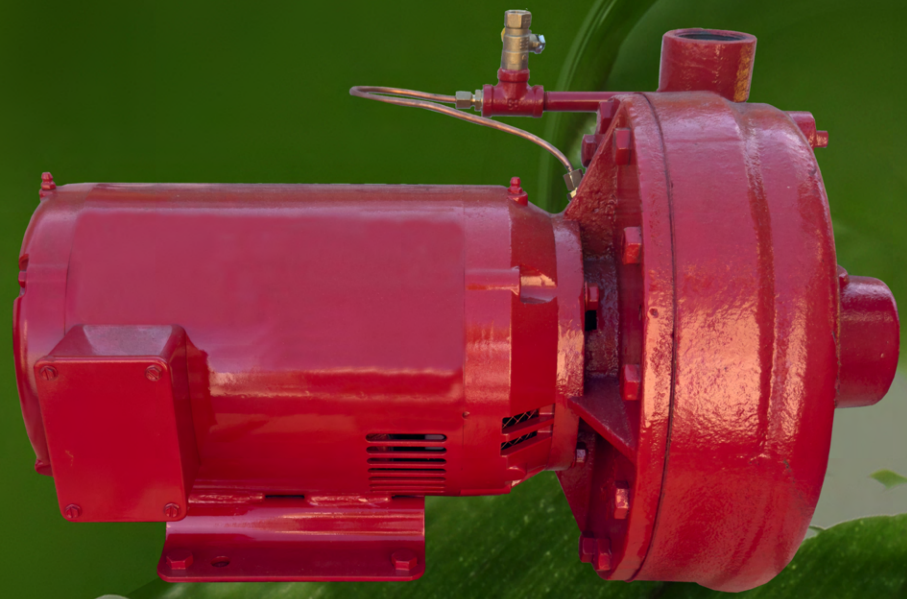
SPECIFICATIONS: FRAME-MOUNTED

These highly efficient pump models are base mounted with an OSHA approved coupling guard. These models are back pullout design, single stage, and capable of being serviced without disturbing piping connections. The flex coupling is rated for non-overloading conditions. The pump volute case is class 35 cast iron with standard case wear rings, grease lubricated bearings, and volute mount rear support foot. Pumps are designed for minimum shaft deflection. Enclosed impellers are precision-cast, dynamically balanced, and keyed to the shaft. The impellers have annular pressure reducing clearance with balancing holes to reduce axial thrust.

These models have a replaceable shaft sleeve covering the liquid area under the mechanical seal with a seal water flush line pulling from the pump discharge. The pumps are rated for a 175 psi working pressure. Higher working pressures available for some models. Casing includes tapped holes on the suction and discharge to accommodate gauges, fittings, and drain ports. Motors are NEMA rated to meet the power, voltage, and enclosure (ODP/TEFC) needs. The motor shall be non-overloading. Each pump shall be factory hydrostatically tested per ANSI/HI 14.6 requirements.



END SUCTION



Close-Coupled Configuration

Patterson close-coupled end suction HVAC pumps offer a high-efficiency design that minimizes energy consumption, and their back pullout configuration provides easy access and simplifies maintenance.

Flows to 2,800 GPM, heads to 205’ at 1800 RPM

Flows to 1,700 GPM, heads to 90’ at 1200 RPM

Flows to 2,000 GPM, heads to 455’ at 3600 RPM

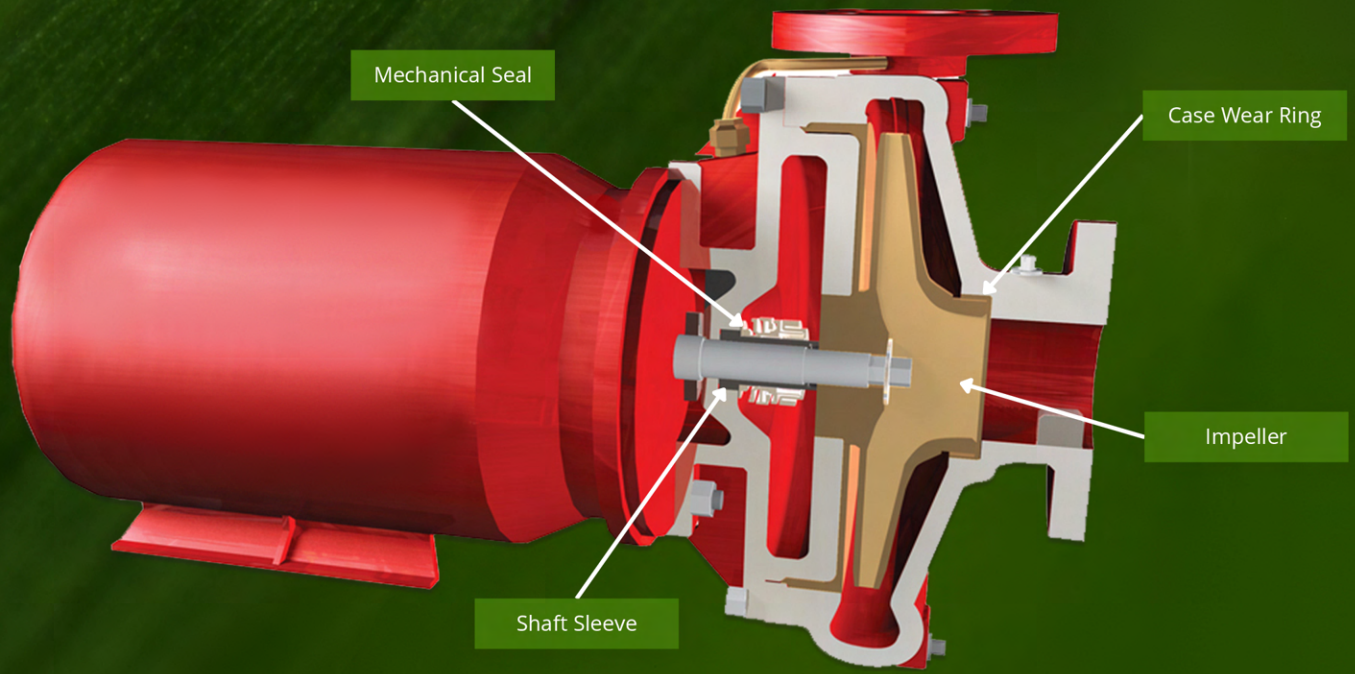
BENEFITS/FEATURES

- Gauge taps at the suction and discharge connections for complete monitoring flexibility
- Annular pressure reducing clearance with impeller balance holes to reduce axial thrust
- Precision-cast, dynamically balanced impeller minimizes vibration and maximizes bearing life
- Precision bearings and shaft design limit deflection at the seal face
- Standard case wear ring
- Mechanical seal is standard in carbon vs. silicon carbide (optional: tungsten carbide) with an external seal flush line
- Every pump hydrostatically pressure-tested
- Optional 250-lb discharge flanges on many models
- Standard construction with bronze shaft sleeve and steel shaft; optional stainless steel sleeve and shaft available
- Optional rigid mounting base

SPECIFICATIONS: CLOSE-COUPLED

These highly efficient pump models are close-coupled with back pullout design, single stage, and capable of being serviced without disturbing piping connections. The pump volute case is class 35 cast iron with standard case wear rings. Pumps are designed for minimum shaft deflection. Enclosed impellers are precision-cast, dynamically balanced, and keyed to the shaft. The impellers have annular pressure reducing clearance with balancing holes to reduce axial thrust.

These models have a replaceable shaft sleeve covering the liquid area under the mechanical seal with a seal water flush line pulling from the pump discharge. The pumps are rated for a 175 psi working pressure. Higher working pressures available for some models. Casing includes tapped holes on the suction and discharge to accommodate gauges, fittings, and drain ports. Motors are NEMA rated to meet the power, voltage, and enclosure (ODP/TEFC) needs. The motor shall be non-overloading. Each pump shall be factory hydrostatically tested per ANSI/HI 14.6 requirements.



VERTICAL IN-LINE



Close-Coupled Configuration

Patterson close-coupled vertical in-line HVAC pumps offer a high-efficiency design that minimizes energy consumption, and their back pullout configuration provides easy access and simplifies maintenance.

Flows to 2,000 GPM, heads to 205’ at 1800 RPM

Flows to 1,800 GPM, heads to 85’ at 1200 RPM

Flows to 1,400 GPM, heads to 375’ at 3600 RPM

BENEFITS/FEATURES

- Gauge taps at the suction and discharge connections for complete monitoring flexibility
- Annular pressure reducing clearance with impeller balance holes to reduce axial thrust
- Precision-cast, dynamically balanced impeller minimizes vibration and maximizes bearing life
- Precision bearings and shaft design limit deflection at the seal face
- Standard case wear ring
- Mechanical seal is standard in carbon vs. silicon carbide (optional: tungsten carbide) with an external seal flush line
- Every pump hydrostatically pressure-tested
- Optional 250-lb pump flanges on many models
- Standard construction with bronze shaft sleeve and steel shaft; optional stainless steel sleeve and shaft available

SPECIFICATIONS: CLOSE-COUPLED

These highly efficient pump models are close-coupled with back pullout design, single stage, and capable of being serviced without disturbing piping connections. The pump volute case is class 35 cast iron with standard case wear rings. Pumps are designed for minimum shaft deflection. Enclosed impellers are precision-cast, dynamically balanced, and keyed to the shaft. The impellers have annular pressure reducing clearance with balancing holes to reduce axial thrust.

These models have a replaceable shaft sleeve covering the liquid area under the mechanical seal with a seal water flush line pulling from the pump discharge. The pumps are rated for a 175 psi working pressure. Higher working pressures available for some models. Casing includes tapped holes on the suction and discharge to accommodate gauges, fittings, and drain ports. Motors are NEMA rated to meet the power, voltage, and enclosure (ODP/TEFC) needs. The motor shall be non-overloading. Each pump shall be factory hydrostatically tested per ANSI/HI 14.6 requirements.



VERTICAL IN-LINE



Split-Coupled Configuration

Patterson split, rigid coupled vertical in-line HVAC pumps offer a high-efficiency design that minimizes energy consumption, and their back pullout configuration provides easy access and simplifies maintenance.

BENEFITS/FEATURES

- Gauge taps at the suction and discharge connections for complete monitoring flexibility
- Annular pressure reducing clearance with impeller balance holes to reduce axial thrust
- Precision-cast, dynamically balanced impeller minimizes vibration and maximizes bearing life
- Precision bearings and shaft design limit deflection at the seal face
- Mechanical seal replaceable without removing motors
- Rigid coupling to eliminate the requirement for field shaft alignment
- Standard case wear ring
- Mechanical seal is standard in carbon vs. silicon carbide (optional: tungsten carbide) with an external seal flush line
- Every pump hydrostatically pressure-tested
- Optional 250-lb pump flanges on many models
- Standard construction with stainless steel shaft

Flows to 6,000 GPM, heads to 245’ at 1800 RPM

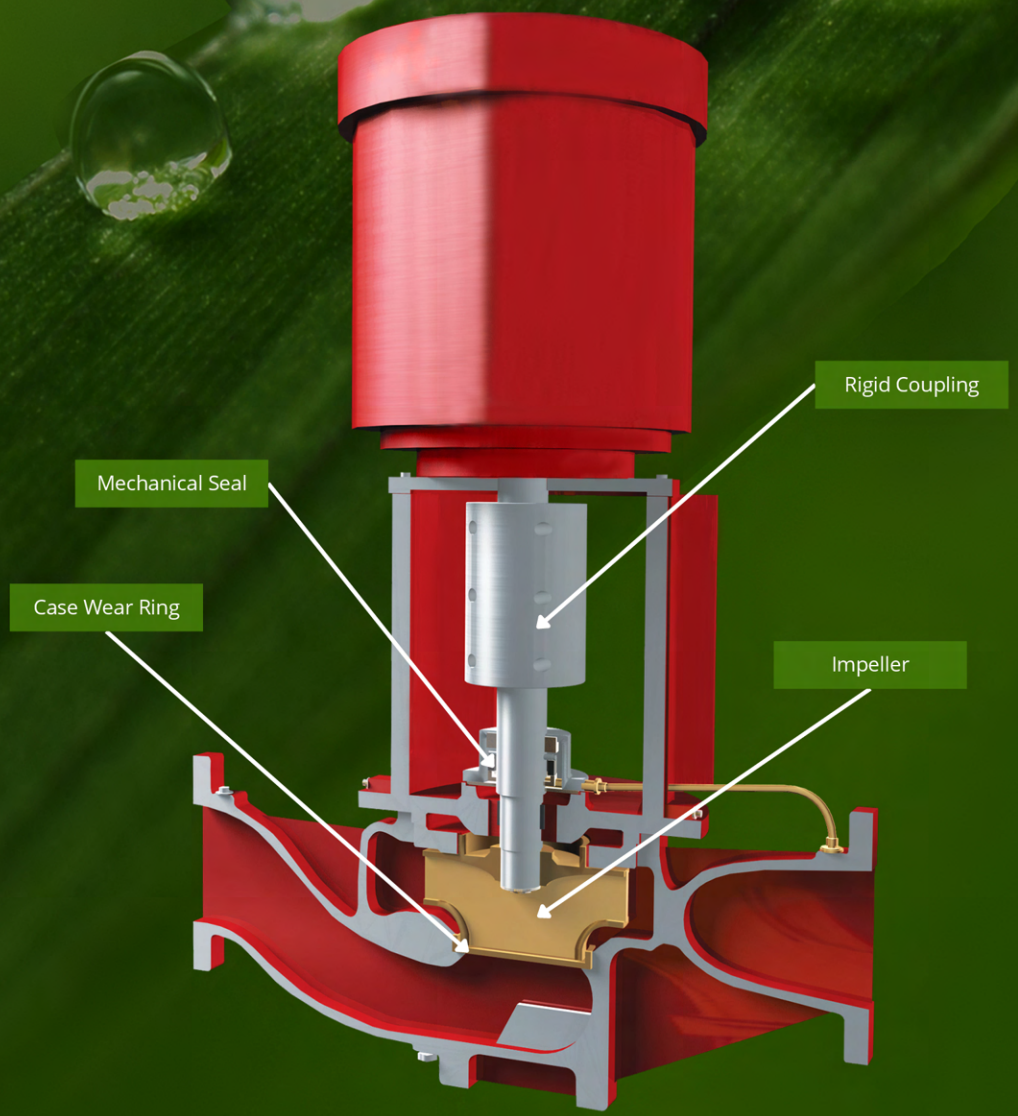
Flows to 4,000 GPM, heads to 105’ at 1200 RPM

Flows to 1,900 GPM, heads to 500’ at 3600 RPM

SPECIFICATIONS: SPLIT-COUPLED

These highly efficient pump models are rigid split-coupled with back pullout design, single stage, and capable of being serviced without disturbing piping connections. The pump volute case is class 35 cast iron with standard case wear rings and OSHA approved coupling guards. Pumps are designed for minimum shaft deflection. Enclosed impellers are precision-cast, dynamically balanced, and keyed to the shaft. The impellers have annular pressure reducing clearance with balancing holes to reduce axial thrust. Mechanical seal can be changed with motor still in place.

The pump has a stainless steel shaft to minimize wear. The mechanical seal has a seal water flush line pulling from the pump discharge. The pumps are rated for a 175 psi working pressure. Higher working pressures available for some models. Casing includes tapped holes on the suction and discharge to accommodate gauges, fittings, and drain ports. Motors are NEMA rated to meet the power, voltage, and enclosure (ODP/TEFC) needs. The motor shall be non-overloading. Each pump shall be factory hydrostatically tested per ANSI/HI 14.6 requirements.



VERTICAL IN-LINE

Double Suction



Split-Coupled Configuration

Patterson split, rigid coupled double suction vertical in-line HVAC pumps offer a high-efficiency design that minimizes energy consumption, and their back pullout configuration provides easy access and simplifies maintenance.

BENEFITS/FEATURES

- Gauge taps at the suction and discharge connections for complete monitoring flexibility
- Annular pressure reducing clearance with impeller balance holes to reduce axial thrust
- Precision-cast, dynamically balanced double suction impeller minimizes vibration and maximizes bearing life
- Precision bearings and shaft design limit deflection at the seal face
- Additional lower radial bearing support with a water flush line pulling from the pump discharge
- Mechanical seal replaceable without removing motors
- Rigid coupling to eliminate the requirement for field shaft alignment
- Standard case wear ring
- Mechanical seal is standard in carbon vs. silicon carbide (optional: tungsten carbide) with an external seal flush line
- Every pump hydrostatically pressure-tested
- Optional ductile iron case with 250-lb pump flanges
- Standard construction with stainless steel shaft

Flows to 11,500 GPM, heads to 295’ at 1800 RPM

Flows to 8,000 GPM, heads to 145’ at 1200 RPM

ACCESSORIES

Suction Diffusers



Benefits

- Establish correct flow regimen for efficient pump suction conditions
- Simplify system design by combining the functions of the suction entrance pipe, long radius elbow, Y-strainer and start-up strainer
- Low pressure drop—thanks to inlet flange designed to allow a butterfly valve to fully open into the body of the suction diffuser
- Body is designed to use bolts—no threaded studs required
- Corrugated stainless steel permanent strainer provides maximum surface area

Features

- Available in full and reducing sizes, 2 in. – 12 in.
- Standard with magnetic plug
- Fine mesh brass start-up strainer
- Designed to accommodate a support foot
- Rated to 175 psi, 250° F

Multipurpose Valve

Globe

- Combination valve replaces the features of a check valve, balancing valve and shutoff valve
- Available in 2 in. – 12 in. sizes
- Cast iron body with ANSI flanged connections
- Working pressure is 240 psi
- Metering ports



Additional Accessories Available

- Air Separators and Purgers
- Air/Dirt Separators
- Flex Connectors
- Glycol Make-up systems
- Heat Exchangers: Shell & Tube, Plate & Frame, Brazed
- Tanks: Expansion, Buffer, Hydro-pneumatic
- Tri-Duty valves
- Automatic Vent Valves

Other Specialty Products

Also available are vertical multi-stage pumps, tank drains, tank air control fittings and related specialties.

THE VFD WAY TO EFFICIENT PUMPING IN ANY SIZE HYDRONIC SYSTEM...

For larger systems with sensors:
Schneider Electric™ Altivar ATV212 and ATV600 series Variable Frequency Drives (VFDs), regulating power to Patterson's VIL series HVAC pumps, eliminate the need for pressure reducing or throttling valves or inlet guide vanes. These compact drives reduce installation costs and maximize building occupant comfort with accurate flow control.



The drives offer the latest in VFD technology to help keep total harmonic distortion (THD) levels within the limits of the IEEE 519-1992. These drives are specifically designed to comply with IEC/EN 61000-3-12, which limits THDI of system components to 35%. Additionally, these drives feature resonant frequency skipping, soft starting and stopping, under-load and over-load detection and time limits for operating at minimum speed.

For smaller systems - the sensorless option:
With no differential pressure transducers necessary, Schneider-Electric Altivar Process VFDs provide easy and space efficient installation in simple systems. In addition, they offer the highest possible performance with Patterson VIL pumps through changing load conditions:

- Operation closest to the pumps' best efficiency point (BEP)
- New insights into pumping performance through remote communications
- Energy drift detection in real time preventing abnormal conditions and premature equipment wear
- Low harmonic distortion—48% THDi
- Troubleshooting and maintenance reduced by 20%— dynamic QR code generation

Beyond peak performance, the drive communicates all the information you need:

- Embedded Ethernet with web server and customizable dashboards protected by Achilles Level 2 cyber security
- Embedded monitoring of pump efficiency load curves
- Embedded power measurement at accuracy rate below 5%
- Energy dashboards with meaningful information on consumed energy
- Customizable alarm management system
- Logging of all events to assist in managing predictive maintenance

INTUITION BY Patterson



Operational Intelligence

Applications need to run at optimum efficiency for your success. Making informed decisions, easily, at a moment's notice is foundational to this. Embedded process knowledge provided by Patterson Intuition gives you the information you need.

Embedded Guidance

Avoid getting lost with start-up, integration of your drives and maintenance needs. New and intuitive built-in functions simplify support and diagnostics, allowing issues to be solved quickly and comprehensively.

Reliable and Sustainable

Long operating life and reliability have been the hallmarks of Patterson Pump Company and Schneider Electric for over 30 years. The tradition continues. We are ready to help you solve your challenges.

Operational Intelligence

Custom Information

- Configurable Dashboard
- Graphical Keypad
- Pump Language

Energy Management

- Motor Power Measurement
- Energy Dashboards
- Export Energy Data

Embedded Ethernet and Web Server

- Local or Remote Access
- Achilles Level 2 Security
- Web server on any device using HTML5

Process Monitoring & Control

- Operating Data Feedback
- Compare to Expected Values
- Predictive Maintenance
- Stop & Go
- Real Time Clock
- Sensor-less Control (including multi-pump)
- Multi-Pump Control (up to 6 pumps)

Reliable and Sustainable

- Digital Inputs
- Analog Inputs
- Relays
- Analog Outputs
- Conformal Coating
- 50 Degree C Rating

Embedded Guide

Startup

- Pump Specific Functions
- Simply Start
- QR Code Access to Product Information and Technical Support

Integration

- PlantStruxure Optimized
- FDT/DTM Ready
- Industry Standard Communications

Maintenance Excellence

- Dynamic QR Code Assistance
- Troubleshooting Messages
- Fast Device Replacement

PARTS AND SERVICE FOR PATTERSON PUMPS

Patterson Pump Company – one of America's leading designers, engineers and manufacturers of axial and mixed flow, sewage, vertical in-line, vertical turbine, split case and end suction pumps along with plumbing package systems.

Service

We provide personal training to keep your equipment in top-notch condition. Our service group is dedicated to your specific needs – from a single part requirement to a complete rebuild.

O. E. M.

With lower maintenance costs, less down time, and parts that you can be sure of. Patterson offers the highest quality parts and workmanship available…at a competitive price.

Savings

Parts and service can give your equipment an extended life.

Return your Patterson equipment to its original specifications with genuine O.E.M. parts. You'll save in the long run. We guarantee it!

For prompt, no-obligation quotes, call, or email your nearest Patterson representative, or contact our service group.

Phone: 706-886-2101
Fax: 706-886-0023
Email: ppc-service@pattersonpumps.com

PATTERSON LOCAL REPRESENTATIVES AND SALES TEAM

Our local representatives and internal sales team are here to help. Try out these helpful tools:

Representative Locator

Contact Us

Pump Selection Tool

Phone: 706-886-2101
Fax: 706-886-0023
Email: ppc-sales@pattersonpumps.com

The Pump People®
Patterson®



FIRE



WASTE
WATER



PLUMBING

The Pump People®



CLEAN
WATER



HVAC



FLOOD
CONTROL

Sales: ppc-sales@pattersonpumps.com
Service: ppc-service@pattersonpumps.com
For more information, please visit our website:
www.pattersonpumps.com