

WE HAVE  
YOUR SOLUTION

# **PUMPS** Vane / Piston / Gear

Our years of knowledge has resulted in some of the most robust, long life pumps available today.



*HPVR front  
and back*



# PUMPS

## Vane and Piston Pumps

Continental has been manufacturing variable volume, pressure compensated pumps since 1955! Our years of knowledge has resulted in some of the most robust, long life pumps available today.

Vane Pumps with inherent wear compensation and use of Hydrodynamic Bearing are known for their ability to out perform many other design pumps.

Piston Pumps with enhanced Trunnion bearing design are ideal for high cyclic applications.

Product knowledge and application know-how is our strength, that our customer have come to rely and depend on!



### Applications:

Lumber and Forestry - Edger, Saw Head Position, Presses  
 Food and Beverage - Conveyors, Packaging, Dump Systems  
 Power Generation - Crushers, Positioning/Tracking, Gates  
 Heavy Equipment - Presses, Lifts, Forming Press, Stacker's  
 Metal Forming - Presses, Welders, Clamp, Conveyors

### Key Features:

- Continuous duty medium pressures pumps, up to 4000 PSI (275 Bar)
- Fast response and recovery times
- High volumetric and overall efficiency
- Very low noise level
- Tandem mounting capable
- Pressure compensated, load sense, remote pressure, dual pressure, torque limiting options
- Interchangeable with many pump manufactures



Pumps	Vane - PVX Series	Vane - PVR Series	Piston - HPVR Series	Piston - LPV Series
Displacement from	1 to 10 cu.in. (16.8 to 164 cc)	0.7 to 9.9 cu.in. (11.5 to 162 cc)	.88 to 3.97 cu.in. (14.4 to 65 cc)	.48 to 2.8 cu.in. (8 to 46 cc)
Continuous duty pressures to	3000 PSI (210 Bar)	2000 PSI (138 Bar)	4000 PSI (276 Bar)	3000 PSI (210 Bar)

### Vane - PVX

Hydraulic control via bias pistons acting on the cam ring making them very application flexible by allowing for a variety of control options. The large pumping chambers using superior port plate design allows for smooth output flow and pressure while providing the ability to work with poor fluid conditions.



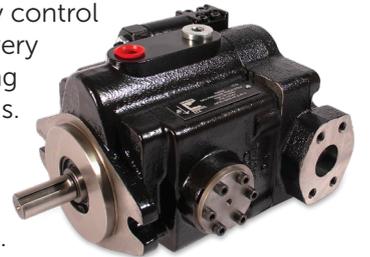
### Vane - PVR

Directly control via a spring acting on the cam ring making them extremely reliable and durable pump choices available. With the fewest moving parts, the direct spring forces volume change based on system demand with fast reaction time and walking ring technology. Field proven pumps for a low cost.



### Piston - HPVR

Hydraulic control via a variety control compensator, making them very application flexible by allowing for a variety of control options. The trunnion bearing style swash plate design allows for reduced hysteresis and long life in high cyclic applications.



### Piston - LPV

Variable displacement axial piston pumps with variable swash block, suitable for applications with open loop circuits and intermediate pressures requiring low noise levels and small frame sizes.



# VANE PUMPS

## PVX SERIES Hydraulically Compensated

PVX - Variable Displacement Vane Pump - Hydraulic Compensated	
Pressure	Adjustable range 200-3000 PSI (14-210 bar)
Mounting	SAE A to SAE D flange mounting
Displacements	1 to 10.0 inch <sup>3</sup> /rev (16 to 164 cm <sup>3</sup> /rev)
Controls	Pressure comp / load sense / remote / HP limiting / solenoid operated

The PVX vane pump is hydraulic control via bias pistons acting on the cam ring making them very application flexible by allowing for a variety of control options. The large pumping chambers using superior port plate design allows for smooth output flow and pressure while providing the ability to work with poor fluid conditions.



### KEY FEATURES:

- Fast response and recovery times, with as low as 20ms off stroke and 50ms on stroke
- Reliability - less moving parts than other pumps
- High volumetric and overall efficiency (94% volumetric), remains high throughout pump's life with vanes self-adjusting wear compensation technology
- Very low noise level – down to 67dBA at 3000 PSI
- Very low pressure and flow ripple
- Hydrodynamic journal bearing means virtually no wear out by contact => No limited B10 bearing life as in piston or gear pumps
- Tandem mounting capable
- Pressure compensated, load sense, remote pressure, dual pressure and torque limiting option
- Uniquely field-repairable without special tools

## PVR SERIES Direct-Spring Compensated

PVR - Variable Displacement Vane Pump - Direct Spring Compensated	
Pressure	PVR adjustable range 100-2000 PSI (7-138 bar)
Mounting	SAE flange mounting and manifold mounting
Displacements	PVR 0.7 to 9.9 inch <sup>3</sup> /rev (11.5 to 162 cm <sup>3</sup> /rev)
Controls	Direct spring / dual pressure - dual volume

The PVR vane pump is directly control via a spring acting on the cam ring making them extremely reliable and durable pump choices available. With the fewest moving parts, the direct spring forces volume change based on system demand with fast reaction time and walking ring technology, these pumps are the field proven for a low cost of ownership.



### KEY FEATURES:

- Walking ring technology reduces wear on the cam ring and vane tips
- High reliability with less moving parts than any other pump types
- High volumetric and overall efficiency), remains high throughout pump's life with vanes self-adjusting wear compensation technology
- Very low pressure and flow ripple
- Hydrodynamic journal bearing means virtually no wear out by contact => No limited B10 bearing
- Performance is high through ample range of displacements
- Tandem mounting capable
- Because of the direct spring compensation, there is no change in case drain flow rates allowing for efficient use of case drain coolers
- Uniquely field-repairable without special tools

# PISTON PUMPS

## HPVR SERIES Trunnion Design

HPVR - Variable Displacement Axial Piston Pump - Trunnion Design	
Pressure	Adjustable range 200-4000 PSI (14-275 bar)
Mounting	SAE A to SAE C flange mounting
Displacements	0.88 to 3.78 inch <sup>3</sup> /rev (14.4 to 61.9 cm <sup>3</sup> /rev)
Controls	Pressure comp / load sense / remote / HP limiting

The HPVR piston pump is hydraulic control via a variety control compensator, making them very application flexible by allowing for a variety of control options. The trunnion bearing style swash plate design allows for reduced hysteresis and long life in high cyclic applications.



### KEY FEATURES:

- Improved trunnion bearing design allows for long life and low hysteresis
- Tandem mounting capable
- Pressure compensated, load sense, remote pressure
- Expanded porting options; rear and side ports with SAE threads, metric threads, split flange ports
- Interchangeable with many pump manufactures
- Maximum volume adjustment standard

## LPV SERIES Saddle Block

LPV - Variable Displacement Axial Piston Pump - Saddle Block	
Pressure	Adjustable range 200-3000 PSI (14-210 bar)
Mounting	SAE A to SAE B flange mounting
Displacements	0.488 to 2.8 inch <sup>3</sup> /rev (8 to 46 cm <sup>3</sup> /rev)
Controls	Pressure comp / load sense / remote / D03 valve pad

The LPV are variable displacement axial piston pumps with variable swash block, suitable for applications with open loop circuits and intermediate pressures requiring low noise levels and small frame sizes.



### KEY FEATURES:

- External shaft seal and bearing access for ease of servicing.
- Control compensator options: pressure compensator, remote pressure, load sense and a D03 valve mount allowing for pressure control circuits from dual pressure to proportional pressure
- Swash block and saddle design permit consistent control and provide long life over trunnion designs. Saddle bearing can also be easily serviced.
- Specially designed spherical port plate makes these extremely quiet operating pumps with optimized filling performance.
- Maximum volume adjustment standard



# GEAR PUMPS

Performance, long life reliability, robustness and ease of use even in the harshest of environments

The Hydreco Hydraulics pump range includes helical gear and spur gear pumps together with cast iron and aluminium bodies. High durability, long life, and high efficiency are features of these pumps, which, when combined with the low noise characteristics of the helical gear pumps, make them highly suitable for modern machinery.

Depending on model, features include: spur gears, helical gears, displacements from 1.4 to 240cc/rev, uni-directional or reversible motors, single or multiple assemblies, cast iron or aluminium bodies, high pressure ratings.

### Key Features:

- High volumetric efficiency
- Very low noise levels
- Long life plain bearings
- Multiple pumps on one shaft
- Popular drives/ports
- Range of custom interfaces
- Compatible with environmentally aware fluids
- Flexible build configuration

Gear Pumps	HY Series	World Series	Roller Bearing Series	QX5 Series	QR Series
Applications	1.4 to 98 cc/rev (0.73 to 14.6 cu in/rev)	12 to 240 cc/rev (0.73 to 14.6 cu in/rev)	12 to 237 cc/rev (0.738 to 14.43 cu in/rev)	23 to 68 cc/rev (1.40 to 4.15 cu in/rev)	16 to 220 cc/rev (0.98 to 13.42 cu in/rev)
Rated Pressure	250 bar (3625 psi)	350 bar (5075 psi)	207 bar (3000 psi)	250 bar (3625 psi)	250 bar (3625 psi)
Input Speed	450 to 5000 RPM	450 to 3500 RPM	400 to 3000 RPM	400 to 3000 RPM	450 to 3000 RPM
Bodies	Aluminum (5 frame sizes)	Cast Iron	Cast Iron	Cast Iron	Cast Iron



HY2 SAE A  
Aluminium Tandem



### Applications:

- Mining Equipment
- Excavating / Backhoe
- Wheel Loader
- Marine
- Crank



WSP40 Pump

### HY Series

Available in 3 mount frame sizes with an aluminum alloy housing, two gear wheels supported by sleeve bearings and cast-iron flange and cover. The pumps / motors can be supplied as single or multiple units with a huge variety of options on flanges, shafts and ports, providing the right setup on each application.



### World Series

Single and multiple pump options covering all applications. Low noise spur gear technology minimizes pressure ripple and noise.



### Roller Bearing Series

The pump contains pressure-balanced wear plates, utilize a very rigid two-piece construction and specially designed, long life continuously pressure lubricated roller bearings. The series maintains its bi-rotational pump or motor capabilities.



### QX5 Series

QX5 pumps incorporate unique patented helical gear technology to give the highest performance with lowest noise levels. Pumps can be supplied as single, double, triple or quadruple units.



### QR Series

QR spur gear pumps are designed for minimum pressure ripple. Pumps can be supplied as single, double, triple or quadruple units.



# Making the difference at Continental & Hydreco

We have built our reputation on these four pillars that make our company's different: People who care, who deliver engineering excellence and application know-how, all while being easy to do business with.

From industrial and mobile hydraulics with motion solutions, from the Mid-West to the World, from analogue control logics to computerized electronics and AI, we are riding the wave of technology in our fast-changing markets.

Continental has been at the forefront of power transmission innovation for over 60 years and is – a leading force in transforming the industrial world we live in.

## 4 Pillars of Difference



### Global Support

As a member of the Duplomatic Group our distribution and service network is quick, reliable, and responsive to our customer's needs. Rest assured that no matter where you're located, we will be there with unrivalled products and technical expertise.



### Technical Support

Quality products are only part of Continentals and Hydrecos commitment to our customers. We also provide advisory, planning, and design services specifically geared to your application and backed by on-time delivery, full repair and test facility capabilities.



### Exceptional People

Continental and Hydreco engages and inspires their workforce to deliver on our four pillars of difference, providing the very best in what we do. Our culture, like everything, is made possible by each employee's contribution as a unified team.



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