

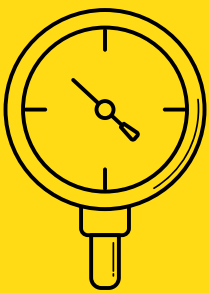


ARVI HITECH PRIVATE LIMITED

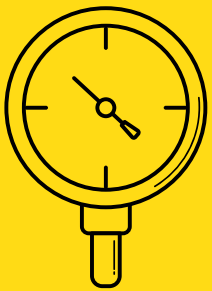
PRODUCT PRESENTATION - INDUSTRIAL HYDRAULICS



Authorised Distributor Of Parker Hannifin



Arvi Hitech Private Limited

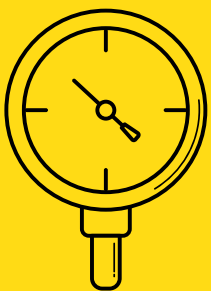


ABOUT PARKER

Parker is the world's leading diversified manufacturer of motion and control technologies and systems, providing precision-engineered solutions for a wide variety of commercial, mobile, industrial and aerospace markets.

- 263 manufacturing sites around the world
- 8,200 distributors
- 400,000 customers
- 3,200 product lines
- Listed as PH on the NYSE

Arvi Hitech Private Limited



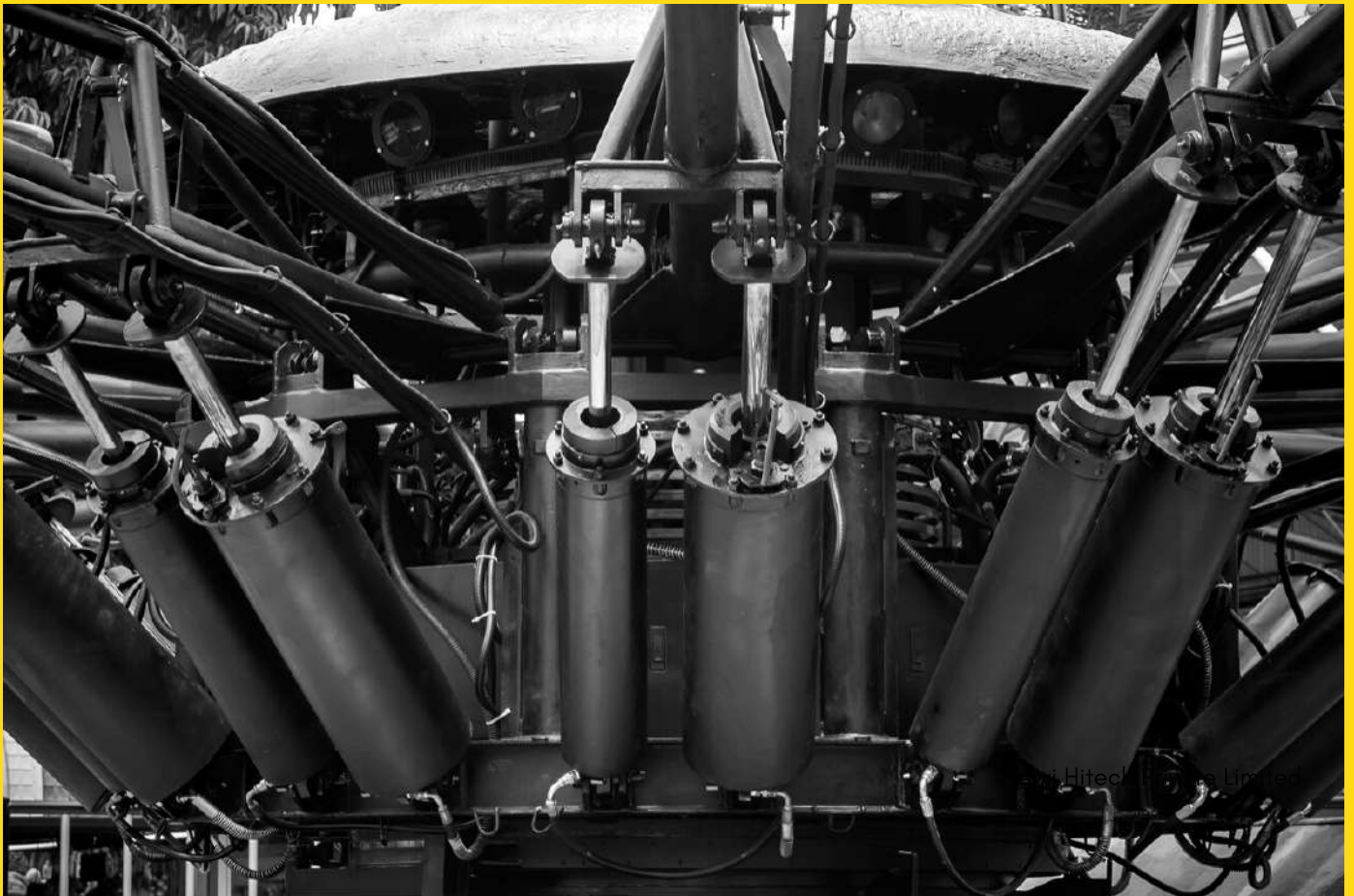
PARKER MOTION SYSTEMS GROUP

Parker's Motion Systems Group provides three technologies that create and control motion to customers across major mobile and industrial markets.

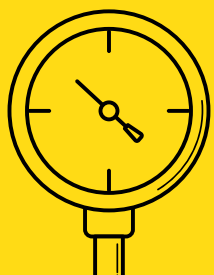
Hydraulics: the use of pressurized fluid

Pneumatics: the use of pressurized air

Electromechanical: the use of electricity



Parker Hydraulics is in the 'solutions business', offering our customers the widest array of solutions and services available. Customers can be assured that no one knows industrial hydraulics like Parker's staff of highly qualified application and design engineers, innovation teams, and our systems-solutions specialists. Our customers can reduce their number of vendors without compromising product integrity. And buying from a single source saves both time and money while allowing easier ordering and faster deliveries.



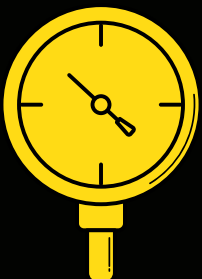
KEY INDUSTRIES

PARKER HYDRAULICS

- Amusement Rides & Simulators
- Bailers & Compactors
- Hydraulic Presses
- Industrial Machinery
- In-Plant Automotive
- Machine Tool
- Marine
- Medical Equipment
- Oil and Gas
- Paper
- Plastics & Rubber
- Power Generation
- Testing Machines



Arvi Hitech Private Limited

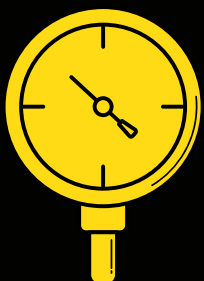


KEY PRODUCTS

PARKER HYDRAULICS



- Accumulators
- Air Oil Coolers
- Cylinders
- Filtration
- Hydraulic Controls and Valves
- Pumps
- Fluid Connectors
- Hydraulic Manifold Blocks
- Motors
- Power Units
- Rotary Actuators



HMI/HMD - CYLINDERS



- Tie rod cylinder for heavy duty applications
- Maximum working pressure 210 bar
- Standard bore sizes 25 mm to 200 mm
- Available in any practicable stroke length
- Mounting styles and dimensions to ISO 6020/2 and DIN 24 554
- Upto three rod sizes per bore
- Piston rod diameters 12 mm to 140 mm
- Up to three male and three female rod end threads per bore, plus custom designs
- Upto 12 standard mounting styles

2H - CYLINDERS



- Tie rod cylinder for heavy duty applications
- Maximum working pressure 210 bar
- Standard bore sizes 38.1mm to 304.8 mm
- Piston rod diameters 15.9 mm to 215.9 mm
- Rod ends: three standard choices, specials to order
- Available in any practicable stroke length
- 17 standard mounting styles
- Detachable gland for easy maintenance
- Parker profiled cushion for increased performance and productivity



3L - CYLINDERS

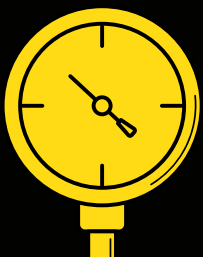


- Tie rod cylinder for medium duty applications
- Maximum working pressure 70 bar
- Standard bore sizes 25.4 mm to 203.2 mm
- Rod diameters 12.7 mm to 139.7 mm
- Available in any practicable stroke length
- Rod ends: three standard choices, specials to order
- 15 standard mounting styles
- Detachable gland for easy maintenance
- Parker profiled cushion for increased performance and productivity

HMIX - CYLINDERS



- Cylinders with integral feedback devices designed for use with servo and proportional valves in closed-loop applications
- Maximum working pressures up to 210 bar
- Bolt-on and integral manifolds available
- Full range of transducer types
- Simplifies machine design and reduces number of hydraulic lines
- Eliminates need for limit switches, deceleration valves, shock absorbers and mechanical linkages in many applications



INTELLINDER - CYLINDERS

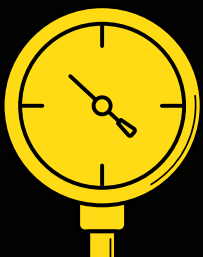


- Integrated, fully protected electro-optical position sensor
- Rugged construction – uses the piston rod as the measuring scale
- Absolute position sensing delivers instantaneous response from startup
- Plug and play – supplied fully assembled and tested
- Resolution – 0.03 mm , Repeatability – 0.04 mm , Long measured lengths – up to 2.4 metres as standard.
- Rod diameters – 25 mm to 127 mm
- Ingression – connector, IP67 equivalent; sensor and lead IP68

MMA/MMB - CYLINDERS



- Maximum working pressures 250 bar (MMA) and 160 bar (MMB)
- Heavy duty, flanged 'mill' cylinders with bore sizes up to 320 mm
- Fatigue-free at rated pressure
- Mounting styles and dimensions to ISO 6022 (MMA) and ISO 6020/1 (MMB)
- Two rod sizes per bore
- Strokes available in any practical length
- Piston rod diameters up to 220 mm
- Wide range of options including feedback and position sensing



CUSTOM CYLINDERS

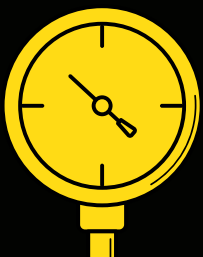


- Bore sizes up to 500 mm
- Any practicable stroke length
- Working pressures up to 600 bar
- Welded, threaded head and tie rod designs
- Telescopic and single stage cylinders
- Single and double acting designs

LIGHTRAULICS® COMPOSITE HYDRAULIC CYLINDERS



- Working pressures up to 700 bar
- Bore sizes up to 250 mm
- Stroke length up to 3000 mm
- Roundline fully composite barrel or tie rod design
- Customized design versions possible
- Weight saving compared to standard steel cylinders up to 65 %
- Corrosion resistant
- Superior fatigue performance



ROTARY ACTUATORS -HTR SERIES



- Rack and pinion rotary actuators for heavy-duty service
- Operating pressures up to 210 bar
- Standard rotations: 90°, 180°, 360°
- Custom rotations up to 5+ revolutions
- Output torque at 210 bar: up to 68,000 Nm
- Rugged cast iron housing with a range of mounting options
- Tapered roller bearings support high external and thrust loads
- Chrome alloy steel gears for strength
- Keyed and splined shaft options

ROTARY ACTUATORS -LTR SERIES



- The LTR Series is suitable for low-pressure applications.
- High strength alloy steel rack and pinion gearing is combined with lightweight aluminum housings to provide an effective, compact solution over a wide range of rotation and power needs.
- Three positions of rotation available with a full range of options

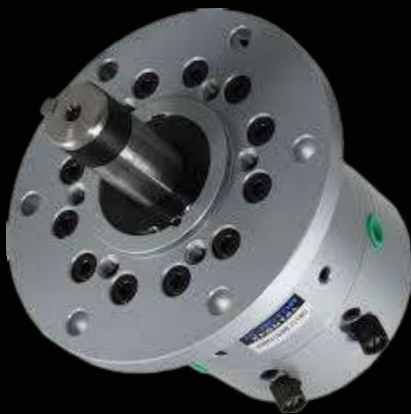


ROTARY ACTUATORS -M(MILL) SERIES



- The Mill (M) Series is the non tie rod version of the rack and pinion actuator that provides dependability features, improved durability and enhanced ease of maintenance.
- Encompassing a wide range of performance and special features, it offers custom configurations to fit special needs for materials, and performance provisions for power, speed and duty cycle.

ROTARY ACTUATORS -HRN SERIES



- The HRN Series provides an additional range of vane actuator technology, allowing more options in optimum torque and pressure.
- Single and double vane options provide high torque in a compact package for the medium-to-high operating pressure range.
- The units are precision machined from high grade materials and the compact size offers maximum flexibility in mounting and packaging.
- Unique cushion options are available for applications where control of high inertia loads is critical.



DIRECTIONAL CONTROL VALVES

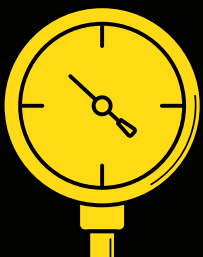


- NFPA manifold mounted
- Rugged spools with four control lands; upto 21 spool styles available depending on operator
- Solenoid, lever, cam, air or oil pilot operated
- Soft-shift available on D1 and D3 solenoid operated valves
- Low pressure drop
- Phosphate finish body
- Easy access mounting bolts.

PROPORTIONAL DIRECTIONAL CONTROL VALVES



- Standard DIN/ISO/CETOP/NFPA interfaces
- Progressive flow characteristics for improved low flow resolution
- Spring centered spool
- Wide selection of spool options and flow capacity
- Single piece rugged solenoid assembly



SANDWICH VALVES



- Mounted between directional control valves and their mounting surface
- Steel bodies and internal hardened steel components for strength and durability

LO-TORQ DIRECTIONAL CONTROL VALVES



- Shear-type positive seat
- Zero leakage
- High contamination tolerance
- Standard valves are interflow
- Low turning torque
- Side, bottom or subplate mounted
- Panel mounting standard
- Lubricated air, hydraulic oil and water
- Operating temperature -40° to $+250^{\circ}\text{F}$



PRESSURE CONTROL VALVES



- Manifold, inline, SAE flange or DIN cartridge
- 350 bar operating pressure
- Functions include relief, pressure reducing and sequence, and unloading

CHECK VALVES



- Hydraulic velocity fuse valves
- Low cost check valves
- Restrictor and poppet-style check valves
- Double cylinder locking valves
- Military equivalent versions available
- Versions for high shock and high velocity applications
- Valves mount in a variety of positions
- Pilot operated types



FLOW CONTROL VALVES

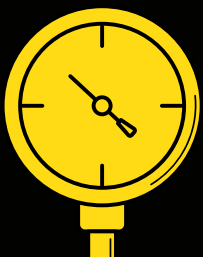


- Pressure and temperature compensated valves available
- Controlled flow in one or both directions
- Simple set screw locks valve settings
- Versions available with Colorflow scales
- Reverse flow checks optional on several valves
- Variety of metering needles
- Versions offered with tamperproof option

HYDRAULIC- REMOTE CONTROL SYSTEMS



- The PCL4 is a hydraulic pilot system for the proportional remote control of directional valves, pumps, motors, etc.
- It is available with coordinate lever-units, as well as linear units for hand or foot control.
- The PCL4 is intended primarily for the remote control of hydraulically operated spool actuators and pump regulators in all kinds of mobile and industrial applications.
- All connection ports can be obtained with G1 /4", M14x1.5 or 9 /16" UNF connection threads.



PISTON ACCUMULATORS

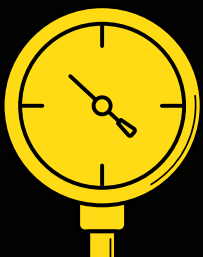


- Low temperature solutions to -50°F
- Over 50 standard capacities from 5 cu. in. (.075 liters) to 50 gallons (189 liters)
- 2", 3", 4", 6", 7", 8", 9" and 12" nominal bore sizes
- 207,276 and 350 bar (3000, 4000 and 5000 psi) operating pressures
- Industry proven five-bladed V-O-ring piston seals in five standard seal compounds
- Accumulator and gas bottle configurations
- CRN/CSA, AS1210, DNV, ABS, ASME, CE and other certifications available
- Specials up to 200 gallons and 20,000 psi

ACP SERIES NON-REPAIRABLE PISTON ACCUMULATORS



- Piston design
- 40, 50 80, 100 mm bore sizes
- Standard capacities from 5 cu. in (.075 liters) to 488 cu. in. (8 liters)
- 276 bar (4000 psi) operating pressure
- Low-cost, non-repairable design
- Multiple port options
- No gas valve option
- Fast delivery



BLADDER ACCUMULATORS

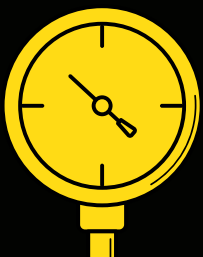


- Standard capacities from 10 cu. in. (.16 liters) to 15 gallons (56 liters)
- Maximum operating pressures upto 455 bar (6600 psi)
- Bladders manufactured in-house
- Six bladder compound to suit a variety of fluids and temperatures
- Bottom and top repairable; medium and high-flow, transfer barriers and gas bottles
- Water/chemical service available
- CRN/CSA, AS1210, DNV, ABS, ASME, CE and other certifications available

DIAPHRAGM ACCUMULATORS



- Standard capacities from 5 cu. in. (.075 liters) to 170 cu. in. (2.8 liters)
- Maximum operating pressures upto 250 bar (3600 psi)
- Compact and lightweight
- Low-cost, non-repairable design
- Quick responding diaphragms of nitrile or hydrin



INLINE PULSE-TONE™ SHOCK SUPPRESSORS



- Reduces pulsations and shock
Compact size, inline mounting 207 and 345 bar (3000 and 5000 psi) models
- NPT, BSPP, SAE and split flange connections
- Stainless steel model for water/ chemical service

ACCUMULATOR CHARGING KIT AND MOUNTING ACCESSORIES



- Charging and gauging equipment
- Gauge adapters and assemblies
- Unloading valves
- Mounting clamps and base brackets
- U-Bolt mounting hardware
- Accumulator repair tools



HYDRAULIC OIL AND ENGINE COOLERS

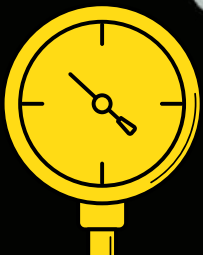


- Parker coolers offer compact design resulting in lighter weight units with higher cooling capacity and lower pressure drop
- Ruggedly designed for arduous, mobile applications; Low service and maintenance costs
- Optimized fan design and material for low noise operation
- Available with DC Motor (12V/24V) or Hydraulic Motor (displacement from 8.4 cc/rev to 25.2 cc/rev)
- Cooling capacity up to 40 HP (DC Motor) and 215 HP (Hyd Motor)

COMPACT HYDRAULICS 108 SERIES



- AC or DC motor
- 4 pump sizes: up to 2.8 LPM (.75 GPM)
- Single or bidirectional rotation
- Adjustable relief valve(s)
- Locking check valves available on all models
- Variety of hydraulic circuits
- Reservoirs from .45 to 5.6 L (28 cu. in. to 1.5 gallons)
- 241 bar (3500 psi) capability



COMPACT HYDRAULICS 165 SERIES



- 8 kW (1 HP), 12 or 24 VDC motor
- Up to 5.4 LPM (1.4 GPM)
- Variety of circuits including reversible locking
- Soft seat load hold check valves
- 241 bar (3500 psi) capability
- Many reservoir choices

COMPACT EHA (ELECTRO-HYDRAULIC ACTUATOR)



- Compact, power dense, low noise plug and play solution
- Robust, leak free one piece housing design
- Speed range up to 84 mm/sec (3.3 in/sec)
- Force range up to 21.35 kN (4800 lbs)
- Cylinder stroke length of 102, 152 and 203 mm (4", 6" and 8")
- Variety of pump displacements, cylinder rod and bore sizes
- 12 or 24 VDC motor, .18 kW to .56 kW (1/4 to 3/4 hp) for intermittent duty
- Comes pre-flushed, filled & sealed



F11- MOTOR



- Very high motor operating speeds
- Pressures to 420 bar (6000 psi)
- Efficient (low losses)
- Accepts high external shaft loads
- SAE, ISO and Cartridge mount available
- Compact, lightweight motor and pump
- Integral anti-cavitation valves available on certain displacements
- Good resistance to vibrations and temperature shocks
- Easy to service with very few moving parts
- Heavy duty roller bearings

F12- MOTOR



- Very high motor operating speeds
- Pressures to 480 bar (7000 psi)
- High starting torque
- Very high power capability
- High overall efficiency
- Compact, lightweight motor and pump
- Laminated piston ring provides low internal leakage and thermal shock resistance
- Accessory valves available
- ISO, SAE and cartridge versions available



T12 -MOTOR



- Designed specifically for track drives
- Very high operating speeds
- Pressures to 482 bar (7000 psi)
- Very high power capability
- High starting torque
- Low weight
- High overall efficiency
- Axial or side ports
- Two-position control
- Cartridge version available

V14 -MOTOR



- For open or closed circuits
- High starting torque and smooth operation
- Increased shaft speeds and improved support
- Improved sealing
- Faster control response
- Enlarged setting piston
- Tapered roller bearings
- Wide displacement range–5:1
- Small envelope size and high power-to-weight ratio
- Robust motor with long service life and proven reliability



V12 -MOTOR

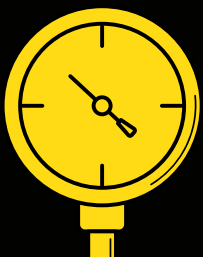


- Very high operating speeds
- Displacement ratio 5:1
- Pressures to 482 bar (7000 psi)
- Very high power capability
- High starting torque
- Low weight
- High overall efficiency
- Axial or side ports
- Controls available for most needs
- ISO, SAE and cartridge versions

TORQMOTOR™ AND BRAKE MOTORS



- High volumetric efficiency
- Full flow spline cooling
- High pressure shaft seal
- High flow shaft seal cooling
- High starting torque
- High side load capacity
- Long life



TORQMOTOR™ LARGE FRAME

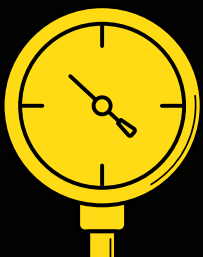


- High volumetric efficiency
- Full flow spline cooling
- High pressure shaft seal
- High flow shaft seal cooling
- High starting torque
- High side load capacity
- Long life

TORQMOTOR™ MEDIUM FRAME



- High volumetric efficiency
- Full flow spline cooling
- High pressure shaft seal
- High flow shaft seal cooling
- High starting torque
- High side load capacity
- Long life



TORQMOTOR™ SMALL FRAME

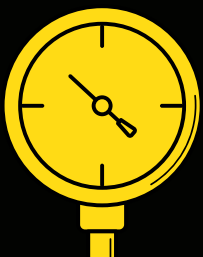


- High volumetric efficiency
- Long life
- Full flow spline cooling
- High pressure shaft seal
- High flow shaft seal cooling
- High starting torque

MOTORS -NICHOLS



- Single and two-speed styles
- Rugged, compact design
- Unique IGR power element
- Integral selector valve on two-speed styles
- Maximum supply pressure 276 bar (4000 psi)



M2 - MOTOR



- High starting torque typically 90% of running torque
- Smooth output torque throughout the entire speed range
- Bi-directional operation
- High pressure shaft seal
- Standard SAE mounting
- Long life and quiet operation
- Heavy duty bearings

M4 - MOTOR



- High starting torque typically 90% of running torque
- Smooth output torque throughout the entire speed range
- Bi-directional operation
- High pressure shaft seal
- Standard SAE mounting
- Long life and quiet operation
- Heavy duty bearings



MR-MRE SERIES-FIXED DISPLACEMENT



- 5 piston design
- Wide range of displacement
- Starting torque from 90-95% theoretical
- Total efficiency up to 96%
- Resistance to thermal shocks $\Delta T=176^{\circ}F$
- Speed feedback accessories optional

MRD-MRDE SERIES-DUAL DISPLACEMENT



- Hydraulically balanced 10 and 14 piston twin row design
- Wide range of displacements
- Starting torque from 91% theoretical
- Total efficiency up to 96%
- Speed feedback accessories optional



M3-M5 FIXED DISPLACEMENT

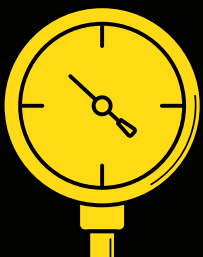


- Low ripple torque
- Low starting torque
- Low noise
- Bi-rotational technology
- Various pilot, threaded port and porting configurations
- External/internal drain option
- Many displacement combinations for double motor

M5BF FAN DRIVE VANE MOTORS



- Low noise
- Designed for severe duty applications
- High efficiency
- High starting torque
- Low torque ripple
- Long life
- Interchangeable rotating groups
- Cross port check valve on M5BF/1



PGP 300 SERIES GEAR PUMPS



- Three-piece cast iron construction
- Low friction bushing design
- Single, multiple, piggyback and thru-drive assemblies
- Heavy duty application
- Long life in severe operating environments
- Integrated or bolt-on valve options available
- Direct clutch mount available
- Can be configured as pump or motor

PGP 500 SERIES GEAR PUMPS



- Superior performance
- High efficiency
- Low noise operation at high operating Pressures
- International mounts and connections
- Integrated valve capabilities
- Common inlet multiple pump configurations
- Can be configured as a pump or motor



PGP 600 SERIES



- Patented, interlocking body design
- 12 tooth gears, bronze thrust plates
- Tandem, triple and cross-frame pumps available
- Common inlets available for tandem and triple pumps
- Continuous operating pressures upto 275bar
- Production run-in available to suit OEM application conditions and to provide optimized volumetric efficiencies
- High power through-drive capability
- Wide range of integral valves for power steering, power brakes, fan drives and implement hydraulics

CAST IRON ROLLER BEARING PUMPS AND MOTORS



- Flows to 128 GPM
- Pressures to 3000 psi
- Speeds to 2400 rpm
- Two-speed valves
- Piggybacks
- Winch motors
- Priority Valves
- Unloader Valve



PVP - PUMPS

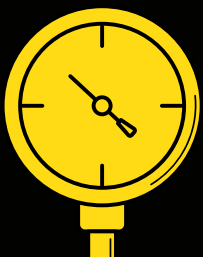


- High strength cast-iron housing
- Optional inlet/outlet locations
- Replaceable bronze port plate
- Replaceable piston slipper plate
- Low noise levels
- Fast response times
- Metric pilot, shaft and ports available

PAVC - PUMPS



- High strength cast-iron housing
- Built-in supercharger
- High speed capability – 3000 RPM (2600 RPM PAVC100)
- Sealed shaft bearing
- Cartridge bronze clad port plate
- Airbleed standard for quick priming
- Hydrodynamic cylinder barrel bearing
- Thru-shaft (PAVC100 only)
- Full pressure rating on water glycol fluids
- Pump case and shaft seal – see inlet pressure only
- Filter and/or cool drain line (100 psi Max)



P1 - PUMPS

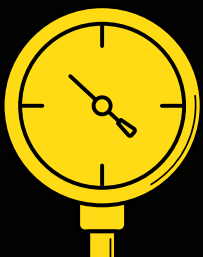


- Variable displacement, axial piston pump for open-circuit applications
- Medium pressure, continuous operation at pressures up to 280 bar
- Low ripple to further reduce noise
- Compact overall package size
- Elastomer seals that eliminate gaskets and external leakage
- High operating efficiency results in lower power consumption and reduced heat generation

P2 - PUMPS



- Sealed shaft bearing
- High self-priming speed
- Flexible, reliable, service friendly



VP1 - PUMPS

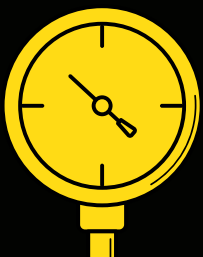


- Variable, load-sense control
- Low noise level
- High power-to-weight ratio
- Compact and lightweight
- Withstands low temperatures
- Sturdy design
- Highly efficient

F1/F2 - PUMPS



- Pressures up to 350 bar (5000 psi)
- High power capability
- Twin flow version available
- High self-priming speed
- Easy to install
- Easy to service



CARTRIDGE PUMPS



- Three-piston design
- Fixed displacement determined by internal cam angle
- Uni-directional
- Designed to fit specially machined manifolds

GEROTOR PUMP AND MOTOR



- Gerotor design (HSLT- High Speed/Low Torque)
- Aluminum construction for optimum power to weight ratio
- Bi-directional – designed for fan drive and cut off applications
- High-pressure mechanical seals available for series application to 1000 psi back pressure
- Roller bearings for long life and high OHL capacity
- Buna-N Seals are standard for petroleum and glycol based fluids



LOW PRESSURE FILTERS

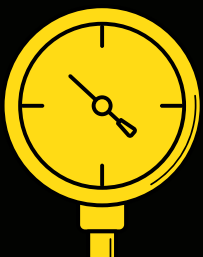


- Various mounting configurations
- High capacity/high efficiency Microglass media
- Visual and electrical indicators with several connector styles
- Flange options for low profile, easy mounting

MEDIUM PRESSURE FILTERS



- NPT, SAE or flange port
- High capacity/high efficiency Microglass media
- Cartridge style by-pass valve
- Visual and electrical indicators with several connector styles



HIGH PRESSURE FILTERS

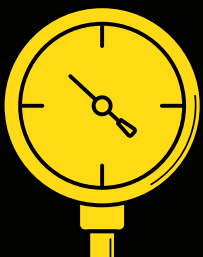


- SAE, flange or ISO ports
- High capacity/high efficiency Microglass media
- Visual and electrical indicators with several connector styles
- Manifold mount option (50P and 15P/30P and WPF Series)
- Reverse flow option (50PR Series) for HST circuits

FILTRATION - PORTABLE/OFFLINE SYSTEMS



- Provide flexibility for removing contaminants from hydraulic fluid
- Guardian hand-held purification system with 15 LPM (4 GPM) flow rate
- Choice of five portable purification systems including 18, 37, 75, 113 and 170 LPM (5, 10, 20, 30 and 45 GPM) flow rates
- Choice of two filter carts:
 - 19 LPM (5GPM) flow; $\frac{1}{2}$ hp electric motor
 - 39 LPM (10GPM) flow; $\frac{3}{4}$ hp electric motor



FILTRATION -PAR FIT ELEMENTS



- Extensive range of competitively priced quality replacement filter elements for any filter brand
- Over 6500 competitive interchange listings help consolidate vendor base by allowing users to acquire all replacement elements from one source
- Provides proven performance in competitive filter housings

FILTRATION -RESERVOIR ACCESSORIES



- Metallic and non-metallic breathers and filler breathers
- Triceptor™ desiccant breathers
- Spin-on breathers
- Diffusers
- Fluid level/temperature gauges
- Suction strainers



FILTRATION -LCM – (LASER PARTICLE COUNTER)



- Particle count test cycle in 2 minutes reported in ISO or NAS format
- On-line sampling up to 414 bar (6000 psi)
- RS232 serial port with data storage capacity up to 300 tests
- Integral printer with data graphing and Windows-based software

FILTRATION -PAR-TEST



- Particle count
- Photomicrograph
- Viscosity analysis
- Water analysis
- Neutralization analysis



FILTRATION -MS200 MOISTURE SENSOR

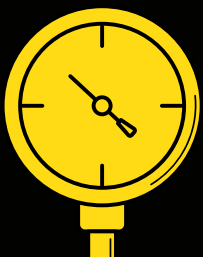


- Simple LEDs provide local Go/No-Go indication
- Panel meter for local or remote display reports 0 – 100% saturation
- Meter scale is color coded for positive/easy identification
- 0 – 10 VDC analog and 120 VAC logic output

IPD – ICOUNT PARTICLE DETECTOR



- Particle count
- Photomicrograph
- Viscosity analysis
- Water analysis
- Neutralization analysis



ANALEXFDMPPLUS

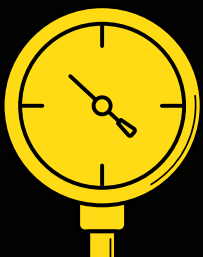


- Portable
- 15 second test time
- Data storage memory
- Touch screen data entry

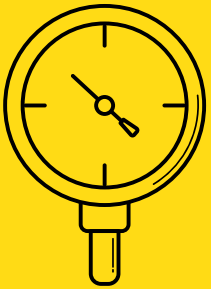
DIGI FIELD KIT



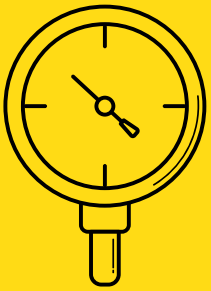
- Portable
- TAN and TBN test
- Water in Oil test
- Viscosity go/no-go
- Combustion related debris (soot) test



Arvi Hitech Private Limited



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