Parker Truck Hydraulics
Work Truck Market
WARNING — User Responsibility

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Products for the Aerial Truck Market

Pumps & Motors

Gear Pump/Motors

P16 Series
- Aluminum flange / rear cover
- Cast iron gear section
- CW / CCW rotation
- Flow range to 38 GPM per section
- Journal bearings
- Fluorocarbon seal option
- Tandem / piggyback configurations
- Integral priority valve option w/relief

CP16 Series
- V-Belt, Direct Couple, or Serpentine Belt clutch options
- In-cab control option
- Side / rear porting option
- Same displacements / ratings as P16 units
- Clutch option

PGP020 Series
- Rugged cast iron body
- Variety of drive shafts and mounting styles
- Flows: up to 29 GPM / 2400 rpm / 3000 PSI; up to 39 GPM / 2400 rpm / 2500 PSI
- Can be assembled in tandem
- Can be configured as a pump or motor

Piston Pumps

PAVC Series
- High strength cast iron housing
- Built in supercharger
- High sideload capacity
- Sealed shaft bearing option
- Two piece housing
- Cartridge controls
- Airbleed valve
- Thru-shaft option (PAVC100)
- Optional port location
- Full pressure rating on water glycol fluids
- Control drain may be filtered and/or cooled

Gear Pump/Motors

PGP315 Series
- Three-piece cast iron construction
- Low friction bushing design
- Single / multiple / piggyback / thru-drive assemblies
- Heavy duty application
- Long life in severe operating environments
- Integrated / bolt-on valve options
- Direct clutch mount option
- Can be configured as pump or motor

PGP500 Series,
PGP505/511/517 Series
- High performance / efficiency
- Low noise at high operating pressures
- International mounts and connections
- Integrated valve capabilities
- Common inlet multiple pump configurations
- Can be configured as a pump or motor

Piston Pumps

P1/P2 Series
- Variable displacement, axial piston pump for open-circuit applications
- Medium pressure, continuous operation at pressures up to 320 bar
- Quiet and efficient control capability, low ripple
- Compact package size
- Elastomer seals that eliminate gaskets and external leakage
- High operating efficiency results in lower power consumption and reduced heat generation
- Simple “no-leak” hydraulic controls

Vane Pumps

T Series-Single
- Fixed displacement vane
- Silent technology
- Wide range of displacements
- Wide number of shafts option
- Double shaft seal option possible
- Drive train options (SAE-A/B/C)

T Series-Double
- Fixed displacement vane
- Low noise
- SAE or ISO standards
- One piece shaft (no internal torque limitations)
- One inlet
- Wide displacement possibility
- High power to weight ratio
- Wide range of options - shafts, threads and pilots
- Double - 32 porting orientations option
- Triple - 128 porting orientations option
Valves

Pneumatic Valves
- Extreme operating conditions, -40°F to 158°F temperature rating & 232 max pressure rating
- Solenoid, manual & remote pilot options available
- 1/8" thru 1/2" ports sizes standard in both inch and metric

Mobile Accessory Valves
- Flow controls, flow dividers, pilot operated check valves, relief valves, selector valves and bankable/stackable directional control valves
- Flows to 225 LPM (60 GPM)
- Pressures to 207 bar (3000 PSI)
- Cast iron bodies

Threaded Cartridge Valves
- Standard cavities sizes from 4–20
- Pressures to 345 bar (5000 PSI)
- Flows up to 378 LPM (100 GPM)
- Steel and aluminum bodies
- New RESILON™ D-Ring Seal eliminates need for back-up rings; improves wear, extrusion and spiral failure resistance
- Spherical Poppet design assures accurate alignment and reduces leakage rating on many valves
- New crimp design eliminates adhesive between adapter and cage

Hydraulic Valves
BV06 Series
- Open-center design, stackable configuration
- Flow 6-10 GPM, Pressure to 3000 PSI
- Solenoid (on/off) operation
- Proportional inlet unloader for proportional control
- Modular port accessories can be bolted onto the work port
  - RV’s, p/o checks, cross over r/v’s, press. comp. flow controls

BV18 Series
- Open-center design, stackable configuration
- Flow 8-18 GPM, 3000 PSI
- Available operators include solenoid (on/off), pilot (oil or air)
- Proportional inlet unloader for proportional control
- Modular port accessories can be bolted onto the work port
  - RV’s, p/o checks, cross over r/v’s, press. comp. flow controls

VPL Series
- Pressure-compensated load-sense (pre-compensated)
- Stackable configuration
- Work-section flows 1-30 GPM, 5000 PSI
- Digital solenoids provide very low hysteresis
- Many application specific features developed for this market

BV06 Series
- Open-center design, stackable configuration
- Flow 6-10 GPM, Pressure to 3000 PSI
- Manual operation
- Compact package

MV3/5 Series
- Open-center design, stackable configuration
- Flows 6-10 GPM, 3000 PSI
- Manual operation
- Compact package

Hydraulic Valves

Threaded Cartridge Valves
- Standard cavities sizes from 4–20
- Pressures to 345 bar (5000 PSI)
- Flows up to 378 LPM (100 GPM)
- Steel and aluminum bodies
- New RESILON™ D-Ring Seal eliminates need for back-up rings; improves wear, extrusion and spiral failure resistance
- Spherical Poppet design assures accurate alignment and reduces leakage rating on many valves
- New crimp design eliminates adhesive between adapter and cage

Hydraulic Valves

Hydraulic Valves

Hydraulic Valves

Hydraulic Valves

Hydraulic Valves

Hydraulic Valves
## Products for the Aerial Truck Market

### Cylinders

#### Pneumatic Cylinders
- High performance repairable & non-repairable pneumatic cylinders
- Numerous bore sizes ranging from 20 up to 100 mm
- Optional Scraper available for harsh conditions

#### Mobile Cylinders
- Single or double-acting telescopic, double-acting “rod type”, and Standard build mobile cylinders
- Bleederless design telescopic
- Bore sizes from 3”–14”
- Stroke up to 1270 cm (500”)
- Operating pressures up to 689 bar (10,000 PSI)
- Various materials and coatings including chrome, nitriding, stainless steel and double chrome
- Typical options
  - Load holding valves
  - Flow controls and fuses
  - End of stroke cushions
- Standard build program offers the benefit of standard tube and rod sizes with custom design options configurable to provide quick delivery. Various mounting options are available

### Power Take-Offs

#### Power Take-Off 6-Bolt

**270/271 Series**
- Powershift
- Designed for automatic transmissions
- 271 offers low profile housing for avoiding clearance problems
- Pressure lubrication available for both units
- Patent pending internal self adjusting shaft brake option
- Electric / hydraulic shift unit

**248 Series**
- Powershift
- Operates in all gears
- Specially matched PTO and pumps for superior work load capabilities
- One PTO for 4 x 2 and 4 x 4 applications
- Speed ratio of 124% of engine speed

**252 Series**
- Powershift
- Latest PTO technology for automatic transmission applications
- Patented integral solenoid design
- Fixed compression gasket eliminates setting of backlash
- Weather tight electrical connectors for secure under-the-vehicle connections
- Electric / hydraulic shift unit

#### Power Take-Off 8-Bolt

**880 Series**
- Two gear
- Coverage for tough applications
- Speed ratios for high / low speed applications
- Removable shift cover for adjusting backlash
- Dual-pump output for mounting a pump on each end of PTO

**277/278 Series**
- Approved for use with Allison World Transmissions
- (277 Series) Five speed ratios and eighteen output options
- (278 Series) Six speed ratios and eighteen output options
- (278 Series) Enhanced housing design for maximum transmission clearance when direct mounting a pump
- SuperTorque™ gears available for 20% higher intermittent torque ratings
- Electronic overspeed control available to protect driven equipment from over-speeding
- Electric / hydraulic shift
- Internal bearing lube

### Fluid Connectors

- Brass products
- Quick couplings
- Rubber hose products
- Thermoplastic products
- Tube fittings
Filters

Reservoir Accessories
- Non-metallic breathers and filler breathers
- Metallic breathers and filler breathers
- Triceptor™ desiccant type breathers
- Spin-on breathers
- Diffusers
- Fluid level / temperature gauges
- Suction strainers

Medium Pressure Filters
- NPT, SAE or flange ports
- High capacity / high efficiency
- Ecoglass III media
- Visual and electrical indicators with several connector styles
- Cartridge style bypass valve

Racor
- Engine filtration products
  - Fuel
  - Coolant
  - Oil
  - Additives
  - Air
  - Crankcase Ventilation

Low Pressure Filters
- Variety of mounting configurations
- High capacity / high efficiency
- Microglass media
- Visual and electrical indicators with several connector styles
- Flange options for low profile, easy mounting
- Bowl-less design available

Pneumatic filters & Regulators
- Accurate pressure control over a wide variety of operating conditions
- Low temperature operation to -40° F
- 1/8” thru 3/8” port sizes both inch and metric

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 two filter carts:
  - 18 LPM (5 GPM) flow 1/2 HP motor
  - 37 LPM (10 GPM) flow 3/4 HP motor

Accessories

Pneumatic Accessories
- Accurate pressure control over a wide variety of operating conditions
- Low temperature operation to -20° F
- 1/8” thru 1-1/12” port sizes both inch and metric

Pneumatic Exhaust Protectors
- Intended for mobile applications, quick venting applications and alternative exhaust port breathers that require protection against clogging
- 1/8” & 1/4” NPT male sizes available
- Resistant to rust, wash down and other contamination both Inch and Metric

Remote Control Systems

PCL4/PCL4-N Series, Hydraulic
- Hydraulic pilot proportional remote control of directional valves, pumps, motors, etc.

VPO4 Series, Pneumatic
- Pneumatic pilot proportional remote control of directional valves, positioning cylinders, etc.

TireSaver

TireSaver Nitrogen Tire Inflation
- Maintains proper tire pressure longer for improved fuel efficiency and increased tire life
- Eliminates chemical aging of tires which increases retreadability
- Prevents auto-ignition for safer ride
- Promotes “Green” as it reduces greenhouse gas emissions
  - Decrease in fuel usage
  - Increase in tire life
  - Improve retreadability
  - Easy installation. Simply pipe in compressed air and pipe out nitrogen

Diagnostic Equipment

- Increases vehicle productivity
- Increases vehicle profitability
- Reduces work truck downtime
- Reduces shop labor repair time
Products for the Agriculture Truck Market

Pumps & Motors

**Gear Pump/Motors**

**PGP305/051, PGP075/076, PGP505/511 Series**
- Three-piece cast iron construction
- Heavy duty application
- Long life in severe environments
- Single, multiple or piggyback assemblies
- Variety of valve options
- Can be configured as a pump or motor

**PGP030/031 Series**
- Flows to 41 GPM
- Pressures to 3000 PSI
- Speeds to 2400 rpm
- Priority valves
- Two-speed valves
- Piggybacks
- Winch motors
- Flow dividers

**PGP300 Series**
- Three-piece cast iron construction
- Low friction bushing design
- Heavy-duty application
- Single, multiple, piggyback and thru-drive assemblies

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**Low Speed High Torque Motors**

**Small Frame TB, TC and TE**

**Large Frame TF, TG, TH, TK**
- Smooth very low speed operation
- High efficiency
- Robust construction
- Long life
- High pressure shaft seal – no drain lines
- High starting torque
- High side load capacity

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**Piston Pumps**

**P1/P2 Series**
- Variable displacement, axial piston pump for open-circuit applications
- Medium pressure, continuous operation at pressures up to 320 bar
- Quiet and efficient control capability, low ripple
- Compact package size
- Elastomer seals that eliminate gaskets and external leakage
- High operating efficiency results in lower power consumption and reduced heat generation
- Simple “no-leak” hydraulic controls

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**Vane Pumps**

**T Series-Single**
- Fixed displacement vane
- Silent technology
- Wide range of displacements
- Wide number of shafts option
- Double shaft seal option possible
- Drive train options (SAE-A/B/C)

**T Series-Double**
- Fixed displacement vane
- Low noise
- SAE or ISO standards
- One piece shaft (no internal torque limitations)
- One inlet
- Wide displacement possibility
- High power to weight ratio
- Wide range of options - shafts, threads and pilots
- Double - 32 porting orientations option
- Triple - 128 porting orientations option

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**Gear Pump/Motors**

**PGP610/620/640 Series**
- 610, 620 and 640 frame sizes
- Single, multiple and piggyback options
- Pumps and motors
- Integral valve options
- 0.37 – 4.88 in³/rev (7.0 – 80.0 cc/rev)
- Pressures to 4000 PSI
- Stealth technology available for low noise (620 Series)

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### Valves

**Monoblock 300 / 400 Valves**
- Monoblock body design
- Open / closed center configurations
- Shim-adjustable relief valve
- Load (reverse flow) check (series 300 only)
- Handle mounted in “up” or “down” position
- Numerous spool positioner options available
- Replaceable, hardened relief valve seats

**Monoblock SP / SPK Valves**
- Monoblock body design
- Available in parallel (SP & SPK) configurations
- Available in 1-, 2-, or 3-spool versions
- Adjustable / non-adjustable ball/spring type relief valve
- Built-in, reverse flow check
- Control handles mounted in ‘up’ or ‘down’ position
- Numerous spool positioner options available
- (Optional) power-beyond conversion, port outlet

**Threaded Cartridge Valves**
- Standard cavities sizes from 4–20
- Pressures to 345 bar (5000 PSI)
- Flows up to 378 LPM (100 GPM)
- Steel and aluminum bodies
- New RESILON™ D-Ring Seal eliminates need for back-up rings; improves wear, extrusion and spiral failure resistance
- Spherical Poppet design assures accurate alignment and reduces leakage rating on many valves
- New crimp design eliminates adhesive between adapter and cage

### Fluid Connectors

- Brass products
- Quick couplings
- Rubber hose products
- Thermoplastic products
- Tube fittings

### Power Take-Offs

**Power Take-Off 8-Bolt 880 Series**
- Two gear
- Coverage for tough applications
- Speed ratios for high / low speed applications
- Removable shift cover for adjusting backlash
- Dual-pump output for mounting a pump on each end of PTO

**Power Take-Off 8-Bolt 489 Series**
- Two gear
- 442 Series family, but with an 8-Bolt mounting flange
- No adapter plate needed
- Less installation time, less expense, and less chance of leakage
- Wide range of shifter options / pump flanges

**Power Take-Off 6-Bolt 270/271 Series**
- Powershift
- Designed for automatic transmissions
- 271 offers low profile housing for avoiding clearance problems
- Pressure lubrication available for both units
- Patent pending internal self adjusting shaft brake option
- Electric / hydraulic shift unit

**Power Take-Off 10-Bolt 859 Series**
- Highest torque capacities of any PTO offered for the Allison World transmissions
- PTO torque ratings from 285 to 575 Lbs. ft.
- Electronic overspeed control available to protect driven equipment from over-speeding
- Advanced gear design for increased tooth-contact ratio for quieter operation
- Electric / hydraulic shift

**Power Take-Off 8-Bolt 277/278 Series**
- Approved for use with Allison World Transmissions
- (277 Series) Five speed ratios and eighteen output options
- (278 Series) Six speed ratios and eighteen output options
- (278 Series) Enhanced housing design for maximum transmission clearance when direct mounting a pump
- SuperTorque™ gears available for 20% higher intermittent torque ratings
- Electronic overspeed control available to protect driven equipment from over-speeding
- Electric / hydraulic shift
- Internal bearing lube

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- 442 Series family, but with an 8-Bolt mounting flange
- No adapter plate needed
- Less installation time, less expense, and less chance of leakage
- Wide range of shifter options / pump flanges
Products for the Agriculture Truck Market

**Power Take-Offs**

**Power Take-Off 10-Bolt 867 Series**
- Approved for use with Allison World Transmissions
- Constant mesh (non-shiftable) PTO that is ideal for applications requiring continuous power
- Four speed ratios and five output options
- Torque ratings from 350 to 575 Lbs. ft.

**Power Take-Off 10-Bolt 890 Series**
- Works with Allison 3000/4000 Automatic Transmissions
- Requires less space than current PTO’s to mount which helps clear frame rails, etc.
- Is a single unit which places PTO Output and pumps beyond rear of transmission
- Has a single shaft that eliminates the splines at the housing end of the unit
- Has wet spline outputs
- Can be installed in 2 pieces for ease of assembly into a hydraulic or wet line system

**Power Take-Off Rear Mount 541 Series**
- Thrushaft® design for Eaton® Fuller® transmissions
- Three speed ratios available
- Two shift options available
- Direct mount pump flanges or driveshaft output options

**Filters**

**Reservoir Accessories**
- Non-metallic breathers and filler breathers
- Metallic breathers and filler breathers
- Triceptor™ desiccant type breathers
- Spin-on breathers
- Diffusers
- Fluid level / temperature gauges
- Suction strainers

**Low Pressure Filters**
- Variety of mounting configurations
- High capacity / high efficiency Microglass media
- Visual and electrical indicators with several connector styles
- Flange options for low profile, easy mounting
- Bowl-less design available

**Medium Pressure Filters**
- NPT, SAE or flange ports
- High capacity / high efficiency EccoGlass III media
- Visual and electrical indicators with several connector styles
- Cartridge style bypass valve

**Racor**
- Engine filtration products
  - Fuel
  - Coolant
  - Oil
  - Additives
  - Air
  - Crankcase Ventilation

**Pneumatic Filters & Regulators**
- Accurate pressure control over a wide variety of operating conditions
- Low temperature operation to -40° F
- 1/8" thru 3/8" port sizes both inch and metric

**Remote Control Systems**

**PCL4/PCL4-N Series, Hydraulic**
- Hydraulic pilot proportional remote control of directional valves, pumps, motors, etc.

**VPO4 Series, Pneumatic**
- Pneumatic pilot proportional remote control of directional valves, positioning cylinders, etc.
TireSaver Nitrogen Tire Inflation
- Maintains proper tire pressure longer for improved fuel efficiency and increased tire life
- Eliminates chemical aging of tires which increases retreadability
- Prevents auto-ignition for safer ride
- Promotes “Green” as it reduces greenhouse gas emissions
  - Decrease in fuel usage
  - Increase in tire life
- Improve retreadability
- Easy installation. Simply pipe in compressed air and pipe out nitrogen

Diagnostic Equipment
- Increases vehicle productivity
- Increases vehicle profitability
- Reduces work truck downtime
- Reduces shop labor repair time
Products for the Bulk Transport Truck Market

Pumps & Motors

**Gear Pump/Motors**
- **PGP020 Series**
  - Rugged cast iron body
  - Variety of drive shafts and mounting styles
  - Flows: up to 29 GPM / 2400 rpm / 3000 PSI; up to 39 GPM / 2400 rpm / 2500 PSI
  - Can be assembled in tandem
  - Can be configured as a pump or motor

**PGP500 Series**
- High performance / efficiency
- Low noise at high operating pressures
- International mounts and connections
- Integrated valve capabilities
- Common inlet multiple pump configurations
- Can be configured as a pump or motor

**Piston Pumps**
- **P1/P2 Series**
  - Variable displacement, axial piston pump for open-circuit applications
  - Medium pressure, continuous operation at pressures up to 320 bar
  - Quiet and efficient control capability, low ripple
  - Compact package size
  - Elastomer seals that eliminate gaskets and external leakage
  - High operating efficiency results in lower power consumption and reduced heat generation
  - Simple “no-leak” hydraulic controls

**Low Speed High Torque Motors**
- **Small Frame TB, TC and TE**
  - Smooth very low speed operation
  - High efficiency
  - Robust construction
  - Long life
  - High pressure shaft seal – no drain lines
  - High starting torque
  - High side load capacity
- **Large Frame TF, TG, TH, TK**
  - Smooth very low speed operation
  - High efficiency
  - Robust construction
  - Long life
  - High pressure shaft seal – no drain lines
  - High starting torque
  - High side load capacity

**Mobile Accessory Valves**
- Flow controls, flow dividers, pilot operated check valves, relief valves, selector valves and bankable / stackable directional control valves
- Flows to 225 LPM (60 GPM)
- Pressures to 207 bar (3000 PSI)
- Cast iron bodies

**Pneumatic Valves**
- Extreme operating conditions, -40° F to 158° F temperature rating & 232 max pressure rating
- Solenoid, manual & remote pilot options available
- 1/8” thru 1/2” ports sizes standard in both inch and metric

**Vane Pumps**
- **T Series-Single**
  - Fixed displacement vane
  - Silent technology
  - Wide range of displacements
  - Wide number of shafts option
  - Double shaft seal option possible
  - Drive train options (SAE-A/B/C)
- **T Series-Double**
  - Fixed displacement vane
  - Low noise
  - SAE or ISO standards
  - One piece shaft (no internal torque limitations)
  - One inlet
  - Wide displacement possibility
  - High power to weight ratio
  - Wide range of options - shafts, threads and pilots
  - Double - 32 porting orientations option
  - Triple - 128 porting orientations option

**Piston Pumps**
- **VA35 Series**
  - Exceptional size to pressure drop ratio
  - .47” spool stroke, providing outstanding feathering control
  - Cost effective, electrohydraulic operation option
  - Differential main relief’s – quick response and low pressure rise
  - Low cost VA iron option for medium duty applications
Fluid Connectors

- Brass products
- Quick couplings
- Rubber hose products
- Thermoplastic products
- Tube fittings

Power Take-Offs

Power Take-Off Rear Mount 541 Series
- Thrushaft® design for Eaton® Fuller® transmissions
- Three speed ratios available
- Two shift options available
- Direct mount pump flanges or driveshaft output options

Power Take-Off 6-Bolt 442 Series
- Two gear
- Engineered to work with most existing transmission applications
- Economical workhorse features cast iron housing
- Tapered cone bearings for high torque rating / long service life
- Slip fit idler pin for easy interchange from one transmission to another
- Easy to set backlash
- Wide range of shift / output options

Power Take-Off 6-Bolt 270/271 Series
- Powershift designed for automatic transmissions
- 271 offers low profile housing for avoiding clearance problems
- Pressure lubrication available for both units
- Patent pending internal self adjusting shaft brake option
- Electric / hydraulic shift unit

Power Take-Off 6-Bolt 230/231 Series
- Powershift
- Designed for both manual / automatic transmissions
- 231 offers low profile housing for avoiding clearance problems
- Pressure lubrication option available for both units
- Patent pending internal self adjusting shaft brake option
- Air or electric / air shift unit

Power Take-Off 6-Bolt 236/238 Series
- Powershift
- Self adjusting shaft brake option
- Wide selection of input gears
- Helical gears / optional pressure lubrication extends PTO service life
- Inspection cove for adjusting backlash
- Air or electric / air shift unit
Products for the Bulk Transport Truck Market

Power Take-Offs

**Power Take-Off 8-Bolt**
- 489 Series
  - Two gear
  - 442 Series family, but with an 8-Bolt mounting flange
  - No adapter plate needed
  - Less installation time, less expense, and less chance of leakage
  - Wide range of shifter options / pump flanges

**Power Take-Off 8-Bolt**
- 880 Series
  - Two gear
  - Coverage for tough applications
  - Speed ratios for high / low speed applications
  - Removable shift cover for adjusting backlash
  - Dual-pump output for mounting a pump on each end of PTO

**Power Take-Off 10-Bolt**
- 277/278 Series
  - Approved for use with Allison World Transmissions
  - (277 Series) Five speed ratios and eighteen output options
  - (278 Series) Six speed ratios and eighteen output options
  - (278 Series) Enhanced housing design for maximum transmission clearance when direct mounting a pump
  - SuperTorque™ gears available for 20% higher intermittent torque ratings
  - Electronic overspeed control available to protect driven equipment from over-speeding
  - Electric / hydraulic shift
  - Internal bearing lube

Filters

**Reservoir Accessories**
- Non-metallic breathers and filler breathers
- Metallic breathers and filler breathers
- Triceptor™ desiccant type breathers
- Spin-on breathers
- Diffusers
- Fluid level / temperature gauges
- Suction strainers

**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 two filter carts:
  - 18 LPM (5 GPM) flow 1/2 HP motor
  - 37 LPM (10 GPM) flow 3/4 HP motor
Products for the Bulk Transport Truck Market

Tire$aver Nitrogen Tire Inflation
- Maintains proper tire pressure longer for improved fuel efficiency and increased tire life
- Eliminates chemical aging of tires which increases retreadability
- Prevents auto-ignition for safer ride
- Promotes "Green" as it reduces greenhouse gas emissions
  - Decrease in fuel usage
  - Increase in tire life
- Improve retreadability
- Easy installation. Simply pipe in compressed air and pipe out nitrogen

Accessories
- Pneumatic Accessories
  - Accurate pressure control over a wide variety of operating conditions
  - Low temperature operation to -20°F
  - 1/8" thru 1-1/12" port sizes both inch and metric

Pneumatic Filters & Regulators
- Accurate pressure control over a wide variety of operating conditions
- Low Temperature operation to -40°F
- 1/8" thru 3/8" port sizes both inch and metric

Pneumatic Exhaust Protectors
- Intended for mobile applications, quick venting applications and alternative exhaust port breathers that require protection against clogging
- 1/8" & 1/4" NPT male sizes available
- Resistant to rust, wash down and other contamination both Inch and Metric

Remote Control Systems
- PCL4/PCL4-N Series, Hydraulic
  - Hydraulic pilot proportional remote control of directional valves, pumps, motors, etc.
- VPO4 Series, Pneumatic
  - Pneumatic pilot proportional remote control of directional valves, positioning cylinders, etc.

Diagnostic Equipment
- Increases vehicle productivity
- Increases vehicle profitability
- Reduces work truck downtime
- Reduces shop labor repair time

Racor
- Engine filtration products
  - Fuel
  - Oil
  - Air
- Coolant
- Additives
- Crankcase Ventilation

Pneumatic Filters & Regulators
- Accurate pressure control over a wide variety of operating conditions
- Low Temperature operation to -20°F
- 1/8" thru 1-1/12" port sizes both inch and metric

Low Pressure Filters
- Variety of mounting configurations
- High capacity / high efficiency
  - Microglass media
- Visual and electrical indicators with several connector styles
- Flange options for low profile, easy mounting
- Bowl-less design available

Fan Drive Filter Reservoirs
- Lightweight, flexible space saving designs
- Reduced leak potential with SAE connections on multi-ports systems
- Environmentally friendly, top loading filter elements reduce maintenance cycle times
- Long life Microglass media keeps systems clean with improved service intervals

Pneumatic Accessories
- Accurate pressure control over a wide variety of operating conditions
- Low temperature operation to -20°F
- 1/8" thru 1-1/12" port sizes both inch and metric
Products for the Dump Truck / Trailer Market

**Pumps & Motors**

**Gear Pump/Motors**
- C101/102 and G101/102 Series
  - Pump / valve combinations
  - Remote / PTO Mount
  - Two / three-line installations
  - Air remote operators option
  - 138 bar (2000 PSI) relief valve Std.
  - Pressures to 172 bar (2500 PSI)

**Vane Pumps**
- T Series-Single
  - Fixed displacement vane
  - Silent technology
  - Wide range of displacements
  - Wide number of shafts option
  - Double shaft seal option possible
  - Drive train options option (SAE-A/B/C)
- T Series-Double
  - Fixed displacement vane
  - Low noise
  - SAE or ISO standards
  - One piece shaft (no internal torque limitations)
  - One inlet
  - Wide displacement possibility
  - High power to weight ratio
  - Wide range of options - shafts, threads and pilots
  - Double - 32 porting orientations option
  - Triple - 128 porting orientations option

**Pneumatic Cylinders**
- High performance repairable & non-repairable pneumatic cylinders
- Numerous bore sizes ranging from 20 up to 100 mm
- Optional Scraper available for harsh conditions

**Mobile Cylinders**
- Single or double-acting telescopic, double-acting “rod type”, and Standard Build mobile cylinders
- Bleederless design telescopic
- Bore sizes from 3”–14”
- Stroke up to 1270 cm (500”)
- Operating pressures up to 689 bar (10,000 PSI)
- Various materials and coatings including chrome, nitriding, stainless steel and double chrome
- Typical options
  - Load holding valves
  - Flow controls and fuses
  - End of stroke cushions
- Standard build program offers the benefit of standard tube and rod sizes with custom design options configurable to provide quick delivery. Various mounting options are available

**Valves**

**Mobile Accessory Valves**
- Flow controls, flow dividers, pilot operated check valves, relief valves, selector valves and bankable / stackable directional control valves
- Flows to 225 LPM (60 GPM)
- Pressures to 207 bar (3000 PSI)
- Cast iron bodies

**Fluid Connectors**
- Brass products
- Quick couplings
- Rubber hose products
- Thermoplastic products
- Tube fittings

**Pneumatic Valves**
- Extreme Operating Conditions, -40° F to 158° F temperature rating & 232 max pressure rating
- Solenoid, manual & remote pilot options available
- 1/8” thru 1/2” ports sizes standard in both inch and metric

**Piston Pumps**
- P1/P2 Series
  - Variable displacement, axial piston pump for open-circuit applications
  - Medium pressure, continuous operation at pressures up to 320 bar
  - Quiet and efficient control capability, low ripple
  - Compact package size
  - Elastomer seals that eliminate gaskets and external leakage
  - High operating efficiency results in lower power consumption and reduced heat generation
  - Simple “no-leak” hydraulic controls

**Brass products**
- Quick couplings
- Rubber hose products
- Thermoplastic products
- Tube fittings
### Power Take-Offs

#### Power Take-Off 6-Bolt
**270/271 Series**
- Powershift
- Designed for automatic transmissions
- 271 offers low profile housing for avoiding clearance problems
- Pressure lubrication available for both units
- Patent pending internal self-adjusting shaft brake option
- Electric / hydraulic shift unit

#### Power Take-Off 6-Bolt
**442 Series**
- Two gear
- Engineered to work with most existing transmission applications
- Economical workhorse features cast iron housing
- Tapered cone bearings for high torque rating / long service life
- Slip fit idler pin for easy interchange from one transmission to another
- Easy to set backlash
- Wide range of shift / output options

#### Power Take-Off 8-Bolt
**489 Series**
- Two gear
- 442 Series family, but with an 8-Bolt mounting flange
- No adapter plate needed
- Less installation time, less expense, and less chance of leakage
- Wide range of shifter options / pump flanges

#### Power Take-Off 8-Bolt
**890 Series**
- Works with Allison 3000/4000 Automatic Transmissions
- Requires less space than current PTO's to mount which helps clear frame rails, etc.
- Is a single unit which places PTO output and pumps beyond rear of transmission
- Has a single shaft that eliminates the splines at the housing end of the unit
- Has wet spline outputs
- Can be installed in 2 pieces for ease of assembly into a hydraulic or wet line system

#### Power Take-Off 10-Bolt
**277/278 Series**
- Approved for use with Allison World Transmissions
- (277 Series) Five speed ratios and eighteen output options
- (278 Series) Six speed ratios and eighteen output options
- (278 Series) Enhanced housing design for maximum transmission clearance when direct mounting a pump
- SuperTorque™ gears available for 20% higher intermittent torque ratings
- Electronic overspeed control available to protect driven equipment from over-speeding
- Electric / hydraulic shift
- Internal bearing lube

### Wet Line Kits

#### Wet Line Kits, Reservoirs and Accessories
- Simple to use software builds complete Wet Line System – saves time
- Uses Parker, Commercial and Chelsea quality components
- Single part numbered kits for immediate installation
- Software provides a Bill of Material used to order repair / replacement parts
- Takes the guesswork out of system design
Products for the Dump Truck / Trailer Market

**Filters**

- **Reservoir Accessories**
  - Non-metallic breathers and filler breathers
  - Metallic breathers and filler breathers
  - Triceptor™ desiccant type breathers
  - Spin-on breathers
  - Diffusers
  - Fluid level / temperature gauges
  - Suction strainers

- **Racor**
  - Engine filtration products
    - Fuel
    - Oil
    - Air
  - Coolant
  - Additives
  - Crankcase Ventilation

- **Low Pressure Filters**
  - Variety of mounting configurations
  - High capacity / high efficiency
  - Microglass media
  - Visual and electrical indicators with several connector styles
  - Flange options for low profile, easy mounting
  - Bowl-less design available

- **Pneumatic Filters & Regulators**
  - Accurate pressure control over a wide variety of operating conditions
  - Low Temperature operation to -40° F
  - 1/8” thru 3/8” port sizes both inch and metric

- **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 two filter carts:
    - 18 LPM (5 GPM) flow 1/2 HP motor
    - 37 LPM (10 GPM) flow 3/4 HP motor
Pneumatic Accessories
- Accurate pressure control over a wide variety of operating conditions
- Low temperature operation to -20° F
- 1/8" thru 1-1/12" port sizes both inch and metric

Pneumatic Exhaust Protectors
- Intended for mobile applications, quick venting applications and alternative exhaust port breathers that require protection against clogging
- 1/8" & 1/4" NPT male sizes available
- Resistant to rust, wash down and other contamination both Inch and Metric

Pneumatic Lift Axle Systems
- Air control panels for both on & off road vehicles
- Manual switch and push / pull options available

Pneumatic Pressure Switches
- In-line mountable
- -40° F to 220° F Temperature range
- Field adjustable 15 to 150 PSI

TireSaver Nitrogen Tire Inflation
- Maintains proper tire pressure longer for improved fuel efficiency and increased tire life
- Eliminates chemical aging of tires which increases retreadability
- Prevents auto-ignition for safer ride
- Promotes “Green” as it reduces greenhouse gas emissions
  - Decrease in fuel usage
  - Increase in tire life
- Improve retreadability
- Easy installation. Simply pipe in compressed air and pipe out nitrogen

Remote Control Systems
- PCL4/PCL4-N Series, Hydraulic
  - Hydraulic pilot proportional remote control of directional valves, pumps, motors, etc.
- VPO4 Series, Pneumatic
  - Pneumatic pilot proportional remote control of directional valves, positioning cylinders, etc.

Diagnostic Equipment
- Increases vehicle productivity
- Increases vehicle profitability
- Reduces work truck downtime
- Reduces shop labor repair time
Products for the Forestry Truck Market

Pumps & Motors

Gear Pump/Motors
PGP050/051 and PGP075/076
- Three-piece cast iron construction
- Heavy duty application
- Long life in severe environments
- Single, multiple or piggyback assemblies
- Variety of valve options
- Can be configured as a pump or motor

PGP300 Series
- Three-piece cast iron construction
- Low friction bushing design
- Single / multiple / piggyback / thru-drive assemblies
- Heavy duty application
- Long life in severe operating environments
- Integrated / bolt-on valve options
- Direct clutch mount option
- Can be configured as pump or motor

Low Speed High Torque Motors
Small Frame TB, TC and TE
- Smooth very low speed operation
- High efficiency
- Robust construction
- Long life
- High pressure shaft seal – no drain lines
- High starting torque
- High side load capacity

Large Frame TF, TG, TH, TK
- Variable displacement, axial piston pump for open-circuit applications
- Medium pressure, continuous operation at pressures up to 320 bar
- Quiet and efficient control capability, low ripple
- Compact package size
- Elastomer seals that eliminate gaskets and external leakage
- High operating efficiency results in lower power consumption and reduced heat generation
- Simple “no-leak” hydraulic controls

Piston Pumps
P1/P2 Series
- Variable displacement, axial piston pump for open-circuit applications
- Medium pressure, continuous operation at pressures up to 320 bar
- Quiet and efficient control capability, low ripple
- Compact package size
- Elastomer seals that eliminate gaskets and external leakage
- High operating efficiency results in lower power consumption and reduced heat generation
- Simple “no-leak” hydraulic controls

PGP610/620/640 Series
- 610, 620 and 640 frame sizes
- Single, multiple and piggyback options
- Pumps and motors
- Integral valve options
- 0.37 – 4.88 in³/rev (7.0 – 80.0 cc/rev)
- Pressures to 4000 PSI
- Stealth technology available for low noise (620 Series)

Vane Pumps
T Series-Single
- Fixed displacement vane
- Silent technology
- Wide range of displacements
- Wide number of shafts option
- Double shaft seal option possible
- Drive train options (SAE-A/B/C)

T Series-Double
- Fixed displacement vane
- Low noise
- SAE or ISO standards
- One piece shaft (no internal torque limitations)
- One inlet
- Wide displacement possibility
- High power to weight ratio
- Wide range of options - shafts, threads and pilots
- Double - 32 porting orientations option
- Triple - 128 porting orientations option

Piston Pumps
P1/P2 Series
- Variable displacement, axial piston pump for open-circuit applications
- Medium pressure, continuous operation at pressures up to 320 bar
- Quiet and efficient control capability, low ripple
- Compact package size
- Elastomer seals that eliminate gaskets and external leakage
- High operating efficiency results in lower power consumption and reduced heat generation
- Simple “no-leak” hydraulic controls

PGP315/330/350/365 Series
- 315, 330, 350 and 365 frame sizes
- Single, multiple, piggyback, Add-A-Pump
- Pumps, motors, flow dividers
- Relief valves, priority valves, load-sense unloading
- 0.47 – 9.00 in³/rev (7.6 – 147.5 cc/rev)
- Pressures to 3500 PSI
- Speeds to 3000 rpm
Valves

VA35, VG35 Series
- Exceptional size to pressure drop ratio
- .47” spool stroke, providing outstanding feathering control
- Cost effective, electrohydraulic operation option
- Differential main relief’s – quick response and low pressure rise
- Low cost VA iron option for medium duty applications

VA/VG20 Series
- Exceptional size to pressure drop ratio
- .41” spool stroke; providing outstanding feathering control
- Stackable circuit flexibility via parallel, series, or tandem combinations
- Differential main relief’s – quick response and low pressure rise
- Low cost VA iron option for medium duty applications

Hydraulic Valves

VPL Series
- Pressure-compensated load-sense (pre-compensated)
- Stackable configuration
- Work-section flows 1-30 GPM, 5000 PSI
- Digital solenoids provide very low hysteresis
- Many application specific features developed for this market

Pneumatic Valves

- Extreme operating Conditions, -40° F to 158° F temperature rating & 232 max pressure rating
- Solenoid, manual & remote pilot options available
- 1/8” thru 1/2” ports sizes standard in both inch and metric

Threaded Cartridge Valves
- Standard cavities sizes from 4–20
- Pressures to 345 bar (5000 PSI)
- Flows up to 378 LPM (100 GPM)
- Steel and aluminum bodies
- New RESILON™ D-Ring Seal eliminates need for back-up rings; improves wear, extrusion and spiral failure resistance
- Spherical Poppet design assures accurate alignment and reduces leakage rating on many valves
- New crimp design eliminates adhesive between adapter and cage

Fluid Connectors

- Brass products
- Quick couplings
- Rubber hose products
- Thermoplastic products
- Tube fittings
## Products for the Forestry Truck Market

### Power Take-Offs

<table>
<thead>
<tr>
<th>Product</th>
<th>Features</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Power Take-Off 6-Bolt</strong></td>
<td></td>
</tr>
<tr>
<td><strong>270/271 Series</strong></td>
<td>- Powershift&lt;br&gt;- Designed for automatic transmissions&lt;br&gt;- 271 offers low profile housing for avoiding clearance problems&lt;br&gt;- Pressure lubrication available for both units&lt;br&gt;- Patent pending internal self adjusting shaft brake option&lt;br&gt;- Electric / hydraulic shift unit</td>
</tr>
<tr>
<td><strong>340 Series</strong></td>
<td>- Single low-speed forward and reverse&lt;br&gt;- Removable cover plate for adjusting backlash&lt;br&gt;- Shift options include air and lever&lt;br&gt;- Variety of input gears to cover most applications&lt;br&gt;- 6-Bolt mounting pad</td>
</tr>
<tr>
<td><strong>Power Take-Off 8-Bolt</strong></td>
<td></td>
</tr>
<tr>
<td><strong>880 Series</strong></td>
<td>- Two gear&lt;br&gt;- Coverage for tough applications&lt;br&gt;- Speed ratios for high / low speed applications&lt;br&gt;- Removable shift cover for adjusting backlash&lt;br&gt;- Dual-pump output for mounting a pump on each end of PTO</td>
</tr>
<tr>
<td><strong>489 Series</strong></td>
<td>- Two gear&lt;br&gt;- 442 Series family, but with an 8-Bolt mounting flange&lt;br&gt;- No adapter plate needed&lt;br&gt;- Less installation time, less expense, and less chance of leakage&lt;br&gt;- Wide range of shifter options / pump flanges</td>
</tr>
<tr>
<td><strong>277/278 Series</strong></td>
<td>- Approved for use with Allison World Transmissions&lt;br&gt;- (277 Series) Five speed ratios and eighteen output options&lt;br&gt;- (278 Series) Six speed ratios and eighteen output options&lt;br&gt;- (278 Series) Enhanced housing design for maximum transmission clearance when direct mounting a pump&lt;br&gt;- SuperTorque™ gears available for 20% higher intermittent torque ratings&lt;br&gt;- Electronic overspeed control available to protect driven equipment from over-speeding&lt;br&gt;- Electric / hydraulic shift&lt;br&gt;- Internal bearing lube</td>
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### Filters

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<td>- Non-metallic breathers and filler breathers&lt;br&gt;- Metallic breathers and filler breathers&lt;br&gt;- Triceptor™ desiccant type breathers&lt;br&gt;- Spin-on breathers&lt;br&gt;- Diffusers&lt;br&gt;- Fluid level / temperature gauges&lt;br&gt;- Suction strainers</td>
</tr>
<tr>
<td><strong>Low Pressure Filters</strong></td>
<td>- Variety of mounting configurations&lt;br&gt;- High capacity / high efficiency&lt;br&gt;- Microglass media&lt;br&gt;- Visual and electrical indicators with several connector styles&lt;br&gt;- Flange options for low profile, easy mounting&lt;br&gt;- Bowl-less design available</td>
</tr>
<tr>
<td><strong>Medium Pressure Filters</strong></td>
<td>- NPT, SAE or flange ports&lt;br&gt;- High capacity / high efficiency&lt;br&gt;- Ecoglass III media&lt;br&gt;- Visual and electrical indicators with several connector styles&lt;br&gt;- Cartridge style bypass valve</td>
</tr>
<tr>
<td><strong>High Pressure Filters</strong></td>
<td>- 7,000 PSI operating pressure&lt;br&gt;- Non-metallic Ecoglass III coreless elements&lt;br&gt;- Patented reverse flow / bypass element design</td>
</tr>
<tr>
<td><strong>Low Pressure Filters</strong></td>
<td>- Variety of mounting configurations&lt;br&gt;- High capacity / high efficiency&lt;br&gt;- Microglass media&lt;br&gt;- Visual and electrical indicators with several connector styles&lt;br&gt;- Flange options for low profile, easy mounting&lt;br&gt;- Bowl-less design available</td>
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</tr>
</tbody>
</table>

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Parker

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Products for the Forestry Truck Market

**Tire$aver Nitrogen Tire Inflation**
- Maintains proper tire pressure longer for improved fuel efficiency and increased tire life
- Eliminates chemical aging of tires which increases retreadability
- Prevents auto-ignition for safer ride
- Promotes “Green” as it reduces greenhouse gas emissions
  - Decrease in fuel usage
  - Increase in tire life
- Improve retreadability
- Easy installation. Simply pipe in compressed air and pipe out nitrogen

**Remote Control Systems**
- **Diagnostic Equipment**
  - Increases vehicle productivity
  - Increases vehicle profitability
  - Reduces work truck downtime
  - Reduces shop labor repair time

**Racor**
- Engine filtration products
  - Fuel
  - Oil
  - Air
  - Coolant
  - Additives
  - Crankcase Ventilation

**Pneumatic Filters & Regulators**
- Accurate pressure control over a wide variety of operating conditions
- Low temperature operation to -40° F
- 1/8” thru 3/8” port sizes both inch and metric

**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 two filter carts:
  - 18 LPM (5 GPM) flow 1/2 HP motor
  - 37 LPM (10 GPM) flow 3/4 HP motor

**PCL4/PCL4-N Series, Hydraulic**
- Hydraulic pilot proportional remote control of directional valves, pumps, motors, etc.

**VPO4 Series, Pneumatic**
- Pneumatic pilot proportional remote control of directional valves, positioning cylinders, etc.
Products for the Oil/Gas/Water Drilling Market

**Pumps & Motors**

**Gear Pump/Motors**
PGP050/051, PGP075/076, PGP350, PGP365
- Three-piece cast iron construction
- Heavy duty application
- Long life in severe environments
- Single, multiple or piggyback assemblies
- Variety of valve options
- Can be configured as a pump or motor

**Low Speed High Torque Motors**
Small Frame TB, TC and TE
Large Frame TF, TG, TH, TK
- Smooth very low speed operation
- High efficiency
- Robust construction
- Long life
- High pressure shaft seal – no drain lines
- High starting torque
- High side load capacity

**Piston Pumps**

**P1/P2 Series**
- Variable displacement, axial piston pump for open-circuit applications
- Medium pressure, continuous operation at pressures up to 320 bar
- Quiet and efficient control capability, low ripple
- Compact package size
- Elastomer seals that eliminate gaskets and external leakage
- High operating efficiency results in lower power consumption and reduced heat generation
- Simple “no-leak” hydraulic controls

**Vane Pumps**

**T Series-Single**
- Fixed displacement vane
- Silent technology
- Wide range of displacements
- Wide number of shafts option
- Double shaft seal option possible
- Drive train options (SAE-A/B/C)

**T Series-Double**
- Fixed displacement vane
- Low noise
- SAE or ISO standards
- One piece shaft (no internal torque limitations)
- One inlet
- Wide displacement possibility
- High power to weight ratio
- Wide range of options - shafts, threads and pilots
- Double - 32 porting orientations option
- Triple - 128 porting orientations option

**Mobile Accessory Valves**

**Flow controls**, **flow dividers**, **pilot operated check valves**, **relief valves**, **selector valves** and **bankable / stackable directional control valves**
- Flows to 225 LPM (60 GPM)
- Pressures to 207 bar (3000 PSI)
- Cast iron bodies

**Hydraulic Valves**

**VPL Series**
- Pressure-compensated load-sense (pre-compensated)
- Stackable configuration
- Work-section flows 1-30 GPM, 5000 PSI
- ATEX approved solenoids
- Many application specific features developed for this market

**VA35, VG35 Series**
- Exceptional size to pressure drop ratio
- .47” spool stroke, providing outstanding feathering control
- Cost effective, electrohydraulic operation option
- Differential main relief’s – quick response and low pressure rise
- Low cost VA iron option for medium duty applications

**Piston Pumps**

**P1/P2 Series**
- Variable displacement, axial piston pump for open-circuit applications
- Medium pressure, continuous operation at pressures up to 320 bar
- Quiet and efficient control capability, low ripple
- Compact package size
- Elastomer seals that eliminate gaskets and external leakage
- High operating efficiency results in lower power consumption and reduced heat generation
- Simple “no-leak” hydraulic controls
Pneumatic Valves
- Extreme operating Conditions, -40° F to 158° F temperature rating & 232 max pressure rating
- Solenoid, manual & remote pilot options available
- 1/8” thru 1/2” ports sizes standard in both inch and metric

Threaded Cartridge Valves
- Standard cavities sizes from 4–20
- Pressures to 345 bar (5000 PSI)
- Flows up to 378 LPM (100 GPM)
- Steel and aluminum bodies
- New RESILON™ D-Ring Seal eliminates need for back-up rings; improves wear, extrusion and spiral failure resistance
- Spherical Poppet design assures accurate alignment and reduces leakage rating on many valves
- New crimp design eliminates adhesive between adapter and cage

Mobile Cylinders
- Single or double-acting telescopic, double-acting "rod type", and standard build mobile cylinders
- Bleederless design telescopic
- Bore sizes from 3”–14”
- Stroke up to 1270 cm (500”)
- Operating pressures up to 689 bar (10,000 PSI)
- Various materials and coatings including chrome, nitriding, stainless steel and double chrome
- Typical options
  - Load holding valves
  - Flow controls and fuses
  - End of stroke cushions
- Standard build program offers the benefit of standard tube and rod sizes with custom design options configurable to provide quick delivery. Various mounting options are available

Fluid Connectors
- Brass products
- Quick couplings
- Rubber hose products
- Thermoplastic products
- Tube fittings
# Products for the Oil/Gas/Water Drilling Market

## Power Take-Offs

<table>
<thead>
<tr>
<th>Series</th>
<th>Features</th>
</tr>
</thead>
</table>
| **Power Take-Off 8-Bolt 852 Series** | - Designed for H. D. applications  
- Three speed ratios to choose from  
- Pump flanges to fit most popular hydraulic pumps  
- Pressure lubrication standard  
- Electric / hydraulic shift unit |

| **Power Take-Off 8-Bolt 823 Series** | - Two gear  
- Robust design for high torque applications  
- Lever shift standard  
- Inspection cover for adjusting backlash  
- Popular pump mounts available |

| **Power Take-Off 8-Bolt 880 Series** | - Two gear  
- Coverage for tough applications  
- Speed ratios for high / low speed applications  
- Removable shift cover for adjusting backlash  
- Dual-pump output for mounting a pump on each end of PTO |

## Filters

<table>
<thead>
<tr>
<th>Filters</th>
<th>Features</th>
</tr>
</thead>
</table>
| **Low Pressure Filters** | - Variety of mounting configurations  
- High capacity / high efficiency  
- Microglass media  
- Visual and electrical indicators with several connector styles  
- Flange options for low profile, easy mounting  
- Bowl-less design available |

| **Medium Pressure Filters** | - NPT, SAE or flange ports  
- High capacity / high efficiency  
- Ecoglass III media  
- Visual and electrical indicators with several connector styles  
- Cartridge style bypass valve |

| **High Pressure Filters** | - 7,000 PSI operating pressure  
- Non-metallic Ecoglass III coreless elements  
- Patented reverse flow / bypass element design |

## Racor

<table>
<thead>
<tr>
<th>Features</th>
</tr>
</thead>
<tbody>
<tr>
<td>Engine filtration products</td>
</tr>
<tr>
<td>- Fuel</td>
</tr>
<tr>
<td>- Coolant</td>
</tr>
<tr>
<td>- Oil</td>
</tr>
<tr>
<td>- Additives</td>
</tr>
<tr>
<td>- Air</td>
</tr>
<tr>
<td>- Crankcase Ventilation</td>
</tr>
</tbody>
</table>

## Pneumatic Filters & Regulators

<table>
<thead>
<tr>
<th>Features</th>
</tr>
</thead>
</table>
| Accurate pressure control over a wide variety of operating conditions  
- Low temperature operation to -40° F  
- 1/8" thru 3/8" port sizes both inch and metric |
**TireSaver**

- Maintains proper tire pressure longer for improved fuel efficiency and increased tire life
- Eliminates chemical aging of tires which increases retreadability
- Prevents auto-ignition for safer ride
- Promotes “Green” as it reduces greenhouse gas emissions
  - Decrease in fuel usage
  - Increase in tire life
- Improve retreadability
- Easy installation. Simply pipe in compressed air and pipe out nitrogen

**Pneumatic Accessories**

- Accurate pressure control over a wide variety of operating conditions
- Low Temperature operation to -20° F
- 1/8” thru 1-1/12” port sizes both inch and metric

**PCL4/PCL4-N Series, Hydraulic**

- Hydraulic pilot proportional remote control of directional valves, pumps, motors, etc.

**VPO4 Series, Pneumatic**

- Pneumatic pilot proportional remote control of directional valves, positioning cylinders, etc.

**Remote Control Systems**

**Diagnostic Equipment**

- Increases vehicle productivity
- Increases vehicle profitability
- Reduces work truck downtime
- Reduces shop labor repair time
Products for the Pumper Cleaner Truck Market

**Pumps & Motors**

**Piston Pumps**
- PAVC Series
  - High strength cast iron housing
  - Built in supercharger
  - High sideload capacity
  - Sealed shaft bearing option
  - Two piece housing
  - Cartridge controls
  - Airbleed valve
  - Thru-shaft option (PAVC100)
  - Optional port location
  - Full pressure rating on water glycol fluids
  - Control drain may be filtered and/or cooled

**Piston Pumps**
- P1/P2 Series
  - Variable displacement, axial piston pump for open-circuit applications
  - Medium pressure, continuous operation at pressures up to 320 bar
  - Quiet and efficient control capability, low ripple
  - Compact package size
  - Elastomer seals that eliminate gaskets and external leakage
  - High operating efficiency results in lower power consumption and reduced heat generation
  - Simple “no-leak” hydraulic controls

**Vane Pumps**
- T Series-Single
  - Fixed displacement vane
  - Silent technology
  - Wide range of displacements
  - Wide number of shafts option
  - Double shaft seal option possible
  - Drive train options (SAE-A/B/C)

- T Series-Double
  - Fixed displacement vane
  - Low noise
  - SAE or ISO standards
  - One piece shaft (no internal torque limitations)
  - One inlet
  - Wide displacement possibility
  - High power to weight ratio
  - Wide range of options - shafts, threads and pilots
  - Double - 32 porting orientations option
  - Triple - 128 porting orientations option

**Pneumatic Valves**
- Extreme operating conditions, -40° F to 158° F temperature rating & 232 max pressure rating
- Solenoid, manual & remote pilot options available
- 1/8” thru 1/2” ports sizes standard in both inch and metric

**Mobile Accessory Valves**
- Flow controls, flow dividers, pilot operated check valves, relief valves, selector valves and bankable / stackable directional control valves
- Flows to 225 LPM (60 GPM)
- Pressures to 207 bar (3000 PSI)
- Cast iron bodies

**Hydraulic Valves**
- VA35/VG35 Series
  - Exceptional size to pressure drop ratio
  - .47” spool stroke, providing outstanding feathering control
  - Cost effective, electrohydraulic operation option
  - Differential main relief’s – quick response and low pressure rise
  - Low cost VA iron option for medium duty applications
**Power Take-Offs**

**Threaded Cartridge Valves**
- Standard cavities sizes from 4–20
- Pressures to 345 bar (5000 PSI)
- Flows up to 378 LPM (100 GPM)
- Steel and aluminum bodies
- New RESILON™ D-Ring Seal eliminates need for back-up rings; improves wear, extrusion and spiral failure resistance
- Spherical Poppet design assures accurate alignment and reduces leakage rating on many valves
- New crimp design eliminates adhesive between adapter and cage

**Cylinders**

**Pneumatic Cylinders**
- High performance repairable & non-repairable pneumatic cylinders
- Numerous bore sizes ranging from 20 up to 100 mm
- Optional scraper available for harsh conditions

**Power Take-Off Split Shaft**

**912 Series**
- Three 8-Bolt openings that allow you to operate a variety of auxiliary equipment
- Wide variety of 6-Bolt, 8-Bolt, Powershift, and reversible PTOs fit the 912 Series
- Air and lever shift available

**Power Take-Off 6-Bolt**

**270/271 Series**
- Powershift
- Designed for automatic transmissions
- 271 offers low profile housing for avoiding clearance problems
- Pressure lubrication available for both units
- Patent pending internal self adjusting shaft brake option
- Electric / hydraulic shift unit

**Power Take-Off 10-Bolt**

**859 Series**
- Highest torque capacities of any PTO offered for the Allison World transmissions
- PTO torque ratings from 285 to 575 Lbs. ft.
- Electronic overspeed control available to protect driven equipment from over-speeding
- Advanced gear design for increased tooth-contact ratio for quieter operation
- Electric / hydraulic shift

**Fluid Connectors**

- Brass products
- Quick couplings
- Rubber hose products
- Thermoplastic products
- Tube fittings

**Power Take-Off 10-Bolt**

**890 Series**
- Works with Allison 3000/4000 Automatic Transmissions
- Requires less space than current PTO’s to mount which helps clear frame rails, etc.
- Is a single unit which places PTO Output and pumps beyond rear of transmission
- Has a single shaft that eliminates the splines at the housing end of the unit
- Has wet spline outputs
- Can be installed in 2 pieces for ease of assembly into a hydraulic or wet line system

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**Parker**
Filters for the Pumper Cleaner Truck Market

**Reservoir Accessories**
- Non-metallic breathers and filler breathers
- Metallic breathers and filler breathers
- Triceptor™ desiccant type breathers
- Spin-on breathers
- Diffusers
- Fluid level / temperature gauges
- Suction strainers

**Medium Pressure Filters**
- NPT, SAE or flange ports
- High capacity / high efficiency
- Ecoglass III media
- Visual and electrical indicators with several connector styles
- Cartridge style bypass valve

**Low Pressure Filters**
- Variety of mounting configurations
- High capacity / high efficiency
- Microglass media
- Visual and electrical indicators with several connector styles
- Flange options for low profile, easy mounting
- Bowl-less design available

**Racor**
- Engine filtration products
  - Fuel
  - Coolant
  - Oil
  - Additives
  - Air
  - Crankcase Ventilation

**Pneumatic Filters & Regulators**
- Accurate pressure control over a wide variety of operating conditions
- Low temperature operation to -40° F
- 1/8" thru 3/8" port sizes both inch and metric

**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 two filter carts:
  - 18 LPM (5 GPM) flow 1/2 HP motor
  - 37 LPM (10 GPM) flow 3/4 HP motor
Remote Control Systems

PCL4/PCL4-N Series, Hydraulic
- Hydraulic pilot proportional remote control of directional valves, pumps, motors, etc.

VPO4 Series, Pneumatic
- Pneumatic pilot proportional remote control of directional valves, positioning cylinders, etc.

Diagnostic Equipment

- Increases vehicle productivity
- Increases vehicle profitability
- Reduces work truck downtime
- Reduces shop labor repair time

TireSaver

TireSaver Nitrogen Tire Inflation
- Maintains proper tire pressure longer for improved fuel efficiency and increased tire life
- Eliminates chemical aging of tires which increases retreadability
- Prevents auto-ignition for safer ride
- Promotes “Green” as it reduces greenhouse gas emissions
  - Decrease in fuel usage
  - Increase in tire life
- Improve retreadability
- Easy installation. Simply pipe in compressed air and pipe out nitrogen
Products for the Refuse Truck Market

Pumps & Motors

Gear Pump/Motors
PGP050/051, PGP075/076, PGP350, PGP365
- Three-piece cast iron construction
- Heavy duty application
- Long life in severe environments
- Single, multiple or piggyback assemblies
- Variety of valve options
- Can be configured as a pump or motor

PGP300 Series
- Three-piece cast iron construction
- Low friction bushing design
- Single / multiple / piggyback / thru-drive assemblies
- Heavy duty application
- Long life in severe operating environments
- Integrated / bolt-on valve options
- Direct clutch mount option
- Can be configured as pump or motor

Packer Pumps
- Reduces fuel consumption
- Provides maximum flow to pump
- Eliminates following components from front mounted engine pumps:
  - Dry valve
  - Flow control block
  - Bleeder valves
  - Air components to shift dry valve
  - Extra hoses to connect system components

Low Speed High Torque Motors
Small Frame TB, TC and TE
Large Frame TF, TG, TH, TK
- Smooth very low speed operation
- High efficiency
- Robust construction
- Long life
- High pressure shaft seal – no drain lines
- High starting torque
- High side load capacity

Vane Pumps
T Series-Single
- Fixed displacement vane
- Silent technology
- Wide range of displacements
- Double shaft seal option possible
- Drive train options (SAE-A/B/C)

T Series-Double
- Fixed displacement vane
- Low noise
- SAE or ISO standards
- One piece shaft (no internal torque limitations)
- One inlet
- Wide displacement possibility
- High power to weight ratio
- Wide range of options - shafts, threads and pilots
- Double - 32 porting orientations option
- Triple - 128 porting orientations option

Variable Piston / Fixed Vane Hybrid Pumps
T6H Series
- Very compact
- High pressure ratings
- Low noise
- Independent outlets for fixed / variable flow allow simultaneous cycles
- Internal or external drain
- Choice of controls
- Wide range of acceptable fluids

Valves

Hydraulic Valves
V20 Series
- Available in open-center and load-sense technologies
- Flows 10-25 GPM, 3500 PSI
- Work ports available in SAE 8, 10 and 12
- Many special metering spools available
- Unique “anti-tip” control and winch boost accomplished with integrated work-port “dump” cartridges and solenoids
- Cost effective electro-hydraulic and pressure generation / regulation

VA/VG20 Series
- Exceptional size to pressure drop ratio
- .41” spool stroke; providing outstanding feathering control
- Stackable circuit flexibility via parallel, series, or tandem combinations
- Differential main relief’s – quick response and low pressure rise
- Low cost VA iron option for medium duty applications

VA35, VG35 Series
- Exceptional size to pressure drop ratio
- .47” spool stroke, providing outstanding feathering control
- Cost effective, electrohydraulic operation option
- Differential main relief’s – quick response and low pressure rise
- Low cost VA iron option for medium duty applications
Pneumatic Valves
- Extreme operating conditions, -40° F to 158° F temperature rating & 232 max pressure rating
- Solenoid, manual & remote pilot options available
- 1/8" thru 1/2" ports sizes standard in both inch and metric

Pneumatic Cylinders
- High performance repairable & non-repairable pneumatic cylinders
- Numerous bore sizes ranging from 20 up to 100 mm
- Optional scraper available for harsh conditions

Mobile Accessory Valves
- Flow controls, flow dividers, pilot operated check valves, relief valves, selector valves and bankable / stackable directional control valves
- Flows to 225 LPM (60 GPM)
- Pressures to 207 bar (3000 PSI)
- Cast iron bodies

Mobile Cylinders
- Single or double-acting telescopic, double-acting "rod type", and standard build mobile cylinders
- Bleederless design telescopic
- Bore sizes from 3"–14"
- Stroke up to 1270 cm (500")
- Operating pressures up to 689 bar (10,000 PSI)
- Various materials and coatings including chrome, nitriding, stainless steel and double chrome
- Typical options
  - Load holding valves
  - Flow controls and fuses
  - End of stroke cushions
- Standard build program offers the benefit of standard tube and rod sizes with custom design options configurable to provide quick delivery. Various mounting options are available

Threaded Cartridge Valves
- Standard cavities sizes from 4–20
- Pressures to 345 bar (5000 PSI)
- Flows up to 378 LPM (100 GPM)
- Steel and aluminum bodies
- New RESILON™ D-Ring Seal eliminates need for back-up rings; improves wear, extrusion and spiral failure resistance
- Spherical Poppet design assures accurate alignment and reduces leakage rating on many valves
- New crimp design eliminates adhesive between adapter and cage

Fluid Connectors
- Brass products
- Quick couplings
- Rubber hose products
- Thermoplastic products
- Tube fittings

Power Take-Offs

Power Take-Off 6-Bolt 270/271 Series
- Powershift
- Designed for automatic transmissions
- 271 offers low profile housing for avoiding clearance problems
- Pressure lubrication available for both units
- Patent pending internal self adjusting shaft brake option
- Electric / hydraulic shift unit

Power Take-Off 8-Bolt 489 Series
- Two gear
- 442 Series family, but with an 8-Bolt mounting flange
- No adapter plate needed
- Less installation time, less expense, and less chance of leakage
- Wide range of shifter options / pump flanges

Power Take-Off 10-Bolt 890 Series
- Works with Allison 3000/4000 Automatic Transmissions
- Requires less space than current PTOs to mount which helps clear frame rails, etc
- Is a single unit which places PTO output and pumps beyond rear of transmission
- Has a single shaft that eliminates the splines at the housing end of the unit
- Has wet spline outputs
- Can be installed in 2 pieces for ease of assembly into a hydraulic or wet line system

Brass products
Quick couplings
Rubber hose products
Thermoplastic products
Tube fittings
### Products for the Refuse Truck Market

#### Power Take-Offs

**Power Take-Off 10-Bolt 269 Series**
- Approved for use with Allison World Transmissions
- Constant Mesh (non-shiftable) PTO - ideal for applications requiring continuous power
- Wet Spline design virtually eliminates spline fretting
- Increase shaft life by a factor of 10
- Specially designed to Direct Mount a Parker VP1 Series pump or similar style pump on Allison MD and HD transmissions

**Power Take-Off 10-Bolt 267 Series**
- Approved for use with Allison World Transmissions
- Constant Mesh (non-shiftable) PTO - ideal for applications requiring continuous power
- Three speed ratios and ten output options
- SuperTorque™ gears available for 20% higher intermittent torque ratings
- No backlash to adjust
- Wet spline output options available

**Power Take-Off 10-Bolt 269 Series**
- Approved for use with Allison World Transmissions
- Constant Mesh (non-shiftable) PTO
- Six speed ratios and eighteen output options
- Enhanced housing design for maximum transmission clearance when direct mounting a pump
- SuperTorque™ gears available for 20% higher intermittent torque ratings
- Electronic overspeed control available to protect driven equipment from over-speeding
- Advanced gear design for increased tooth-contact ratio for quieter operation
- Electric / hydraulic shift

**Power Take-Off 10-Bolt 859 Series**
- Highest torque capacities of any PTO offered for the Allison World transmissions
- PTO torque ratings from 285 to 575 Lbs. ft.
- Electronic overspeed control available to protect driven equipment from over-speeding
- Advanced gear design for increased tooth-contact ratio for quieter operation
- Electric / hydraulic shift

**Power Take-Off 10-Bolt 867 Series**
- Approved for use with Allison World Transmissions
- Constant Mesh (non-shiftable) PTO that is ideal for applications requiring continuous power
- Four speed ratios and five output options
- Torque ratings from 350 to 575 Lbs. ft.

#### Filters

**Reservoir Accessories**
- Non-metallic breathers and filler breathers
- Metallic breathers and filler breathers
- Triceptor™ desiccant type breathers
- Spin-on breathers
- Diffusers
- Fluid level / temperature gauges
- Suction strainers

**Low Pressure Filters**
- Variety of mounting configurations
- High capacity / high efficiency Microglass media
- Visual and electrical indicators with several connector styles
- Flange options for low profile, easy mounting
- Bowl-less design available

**Medium Pressure Filters**
- NPT, SAE or flange ports
- High capacity / high efficiency Ecoglass III media
- Visual and electrical indicators with several connector styles
- Cartridge style bypass valve
**Products for the Refuse Truck Market**

**TireSaver Nitrogen Tire Inflation**
- Maintains proper tire pressure longer for improved fuel efficiency and increased tire life
- Eliminates chemical aging of tires which increases retreadability
- Prevents auto-ignition for safer ride
- Promotes “Green” as it reduces greenhouse gas emissions
  - Decrease in fuel usage
  - Increase in tire life
- Improve retreadability
- Easy installation. Simply pipe in compressed air and pipe out nitrogen

**Accessories**

**Pneumatic Accessories**
- Accurate pressure control over a wide variety of operating conditions
- Low temperature operation to -20° F
- 1/8" thru 1-1/12" port sizes both inch and metric

**Pneumatic Exhaust Protectors**
- Intended for mobile applications, quick venting applications and alternative exhaust port breathers that require protection against clogging
- 1/8" & 1/4" NPT male sizes available
- Resistant to rust, wash down and other contamination both inch and metric

**Remote Control Systems**

**PCL4/PCL4-N Series, Hydraulic**
- Hydraulic pilot proportional remote control of directional valves, pumps, motors, etc.

**VPO4 Series, Pneumatic**
- Pneumatic pilot proportional remote control of directional valves, positioning cylinders, etc.

**Racor**
- Engine filtration products
  - Fuel
  - Oil
  - Air
- Coolant
- Additives
- Crankcase Ventilation

**Pneumatic Filters & Regulators**
- Accurate pressure control over a wide variety of operating conditions
- Low temperature operation to -40° F
- 1/8" thru 3/8" port sizes both inch and metric

**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 two filter carts:
  - 18 LPM (5 GPM) flow 1/2 HP motor
  - 37 LPM (10 GPM) flow 3/4 HP motor

**Diagnostic Equipment**
- Increases vehicle productivity
- Increase vehicle profitability
- Reduces work truck downtime
- Reduces shop labor repair time

---

**TireSaver**

"TireSaver Nitrogen Tire Inflation" advertisement.
**Products for the Snow & Ice Truck Market**

### Pumps & Motors

#### Piston Pumps
**P1/P2 Series**
- Variable displacement, axial piston pump for open-circuit applications
- Medium pressure, continuous operation at pressures up to 320 bar
- Quiet and efficient control capability, low ripple
- Compact package size
- Elastomer seals that eliminate gaskets and external leakage
- High operating efficiency results in lower power consumption and reduced heat generation
- Simple “no-leak” hydraulic controls

#### PAVC Series
- High strength cast iron housing
- Built in supercharger
- High sideload capacity
- Sealed shaft bearing option
- Two piece housing
- Cartridge controls
- Airbleed valve
- Thru-shaft option (PAVC100)
- Optional port location
- Full pressure rating on water glycol fluids
- Control drain may be filtered and/or cooled

#### VP1 Series
- Variable displacement load sense
- Pressures up to 345 bar (5000 PSI)
- Suitable for all load-sensing systems
- Splined shaft DIN 5462
- Mounting flange ISO 7653-1985
- Lightweight slim cross-section designed for truck applications
- Strong and reliable
- Less energy – less fuel – less heat
- Self-priming

### Low Speed High Torque Motors

#### Small Frame TB, TC and TE
- Smooth very low speed operation
- High efficiency
- Robust construction
- Long life
- High pressure shaft seal – no drain lines
- High starting torque
- High side load capacity

#### Large Frame TF, TG, TH, TK
- Pressure-compensate load-sense, with flow-sharing technology
- Stackable configuration
- Work-section flows 8-45 GPM
- Pressures to 5000 PSI
- Available spool operators are manual (cable), pneumatic and electro-hydraulic

### Valves

#### Hydraulic Valves
**VP170 Series**
- Flow controls, flow dividers, pilot operated check valves, relief valves, selector valves and bankable / stackable directional control valves
- Flows to 225 LPM (60 GPM)
- Pressures to 207 bar (3000 PSI)
- Cast iron bodies

#### Mobile Accessory Valves
- Extreme operating conditions, -40° F to 158° F temperature rating & 232 max pressure rating
- Solenoid, manual & remote pilot options available
- 1/8" thru 1/2" ports sizes standard in both inch and metric

#### Pneumatic Valves
- Flow controls, flow dividers, pilot operated check valves, relief valves, selector valves and bankable / stackable directional control valves
- Flows to 225 LPM (60 GPM)
- Pressures to 207 bar (3000 PSI)
- Cast iron bodies

#### Vane Pumps
**T Series-Single**
- Fixed displacement vane
- Silent technology
- Wide range of displacements
- Wide number of shafts option
- Double shaft seal option possible
- Drive train options (SAE-A/B/C)

**T Series-Double**
- Fixed displacement vane
- Low noise
- SAE or ISO standards
- One piece shaft (no internal torque limitations)
- One inlet
- Wide displacement possibility
- High power to weight ratio
- Wide range of options - shafts, threads and pilots
- Double - 32 porting orientations option
- Triple - 128 porting orientations option
Cylinders

- **Pneumatic Cylinders**
  - High performance repairable & non-repairable pneumatic cylinders
  - Numerous bore sizes ranging from 20 up to 100 mm
  - Optional Scraper available for harsh conditions

Hydraulic Cartridge Systems

- **PSM1000, PSM1500**
  - Spreader control system provides remote electronics for a safer quieter cab environment
  - Non-ground speed system and operates in open loop only
  - Feed rate proportional cartridge 16 GPM
  - Spinner proportional cartridge 7 GPM
  - Manual over-rides
  - Proportional unloader for fixed displacement pumps
  - System safety relief
  - Standard SAE ports
  - 3000 PSI operation
  - Main power button
  - Feed rate potentiometer – 10 detents
  - Spinner potentiometer – 10 detents
  - Main power button
  - Feed rate potentiometer – 10 detents
  - Spin button – preset for 5 second duration
  - EMI/RFI compliant
  - Solid state circuit protection
  - Wire harness included for plug and play

Mobile Cylinders

- Single or double-acting telescopic, double-acting “rod type”, and standard build mobile cylinders
- Bleederless design telescopic
- Bore sizes from 3"–14"
- Stroke up to 1270 cm (500")
- Various materials and coatings including chrome, nitriding, stainless steel and double chrome
  - Typical options
    - Load holding valves
    - Flow controls and fuses
    - End of stroke cushions
  - Standard build program offers the benefit of standard tube and rod sizes with custom design options configurable to provide quick delivery. Various mounting options are available

Threaded Cartridge Valves

- Standard cavities sizes from 4–20
- Pressures to 345 bar (5000 PSI)
- Flows up to 378 LPM (100 GPM)
- Steel and aluminum bodies
- New RESILON™ D-Ring Seal eliminates need for back-up rings; improves wear, extrusion and spiral failure resistance
- Spherical poppet design assures accurate alignment and reduces leakage rating on many valves
- New crimp design eliminates adhesive between adapter and cage

Fluid Connectors

- Brass products
- Quick couplings
- Rubber hose products
- Thermoplastic products
- Tube fittings
**Power Take-Offs**

### Power Take-Off 6-Bolt

**252 Series**
- Powershift
- Latest PTO technology for automatic transmission applications
- Patented Integral solenoid design
- Fixed compression gasket eliminates setting of backlash
- Weather tight electrical connectors for secure under-the-vehicle connections
- Electric / hydraulic shift unit

### Power Take-Off 6-Bolt

**270/271 Series**
- Powershift
- Designed for automatic transmissions
- 271 offers low profile housing for avoiding clearance problems
- Pressure lubrication available for both units
- Patent pending internal self adjusting shaft brake option
- Electric / hydraulic shift unit

### Power Take-Off 10-Bolt

**267 Series**
- Approved for use with Allison World Transmissions
- Constant Mesh (non-shiftable) PTO - ideal for applications requiring continuous power
- Three speed ratios and ten output options
- SuperTorque™ gears available for 20% higher intermittent torque ratings
- No backlash to adjust
- Wet spline output options available

**269 Series**
- Approved for use with Allison World Transmissions
- Constant Mesh (non-shiftable) PTO - ideal for applications requiring continuous power
- Wet Spline design virtually eliminates spline fretting
- Increase shaft life by a factor of 10
- Specially designed to Direct Mount a Parker VP1 Series pump or similar style pump on Allison MD and HD transmissions

### Power Take-Off Crankshaft Driven

**2230U Series**
- Allows the driver to shift “on the go”
- Electric-over-air for reliable shifting
- 2230U Series runs at 88% of engine speed
- Electronic overspeed control (EOC) available to protect driven equipment

**2442 Series**
- The economical 2442 Series is a manual shift PTO
- Operator must stop the engine before shifting
- Available in 7 different speed ratios ranging from 39% to 123% of engine speed
- 10 shift options available

### Filters

- Engine filtration products
  - Fuel
  - Coolant
  - Oil
  - Additives
  - Air
  - Crankcase Ventilation

### Racor

- Guardian hand-held purification system with 15 LPM (4 GPM) flow rate
- Choice of two filter carts:
  - 18 LPM (5 GPM) flow 1/2 HP motor
  - 37 LPM (10 GPM) flow 3/4 HP motor

**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 two filter carts:
  - 18 LPM (5 GPM) flow 1/2 HP motor
  - 37 LPM (10 GPM) flow 3/4 HP motor
Diagnostic Equipment

- Increases vehicle productivity
- Increases vehicle profitability
- Reduces work truck downtime
- Reduces shop labor repair time

Reservoir Accessories
- Non-metallic breathers and filler breathers
- Metallic breathers and filler breathers
- Triceptor™ desiccant type breathers
- Spin-on breathers
- Diffusers
- Fluid level / temperature gauges
- Suction strainers

Low Pressure Filters
- Variety of mounting configurations
- High capacity / high efficiency Microglass media
- Visual and electrical indicators with several connector styles
- Flange options for low profile, easy mounting
- Bowl-less design available

Medium Pressure Filters
- NPT, SAE or flange ports
- High capacity / high efficiency Ecoglass III media
- Visual and electrical indicators with several connector styles
- Cartridge style bypass valve

Pneumatic Filters & Regulators
- Accurate pressure control over a wide variety of operating conditions
- Low temperature operation to -40° F
- 1/8" thru 3/8" port sizes both inch and metric

Pneumatic Accessories
- Accurate pressure control over a wide variety of operating conditions
- Low temperature operation to -20° F
- 1/8" thru 1-1/12" port sizes both inch and metric

IQAN

IQAN Mobile Electronics TOC8, TOC2, LSL and LST
- IQAN-TOC8 is a general purpose controller
- Communicates with a variety of input and output devices. It has proportional current outputs for valve control, digital / PWM outputs for auxiliary functions and analog / digital inputs for signals like pressure, RPM or temperature
- The unit has a CAN hub designed to interface with a SAE J1939 network

TOC2
- General purpose unit that can control two bi-directional valve sections or two cartridge solenoids simultaneously

LSL
- Single-axis joystick, 0.5 - 4.5 VDC, intended for the proportional control of one double-acting hydraulic function

LST
- Small single-axis joystick 0.5 - 4.5 VDC, intended for the proportional control of one double-acting hydraulic function. The combination of a mini-lever and armrest can provide substantial ergonomic benefits

Remote Control Systems

PCL4/PCL4-N Series, Hydraulic
- Hydraulic pilot proportional remote control of directional valves, pumps, motors, etc.

VPO4 Series, Pneumatic
- Pneumatic pilot proportional remote control of directional valves, positioning cylinders, etc.

Tire$aver

Tire$aver Nitrogen Tire Inflation
- Maintains proper tire pressure longer for improved fuel efficiency and increased tire life
- Eliminates chemical aging of tires which increases retreadability
- Prevents auto-ignition for safer ride
- Promotes “Green” as it reduces greenhouse gas emissions
  - Decrease in fuel usage
  - Increase in tire life
- Improve retreadability
- Easy installation. Simply pipe in compressed air and pipe out nitrogen

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Products for the Tow / Recovery Truck Market

Pumps & Motors

PGP 500 Series, PGP505/511 Series
- High performance / efficiency
- Low noise at high operating pressures
- International mounts and connections
- Integrated valve capabilities
- Common inlet multiple pump configurations
- Can be configured as a pump or motor

Gear Pump/Motors
PGP020 Series
- Rugged cast iron body
- Variety of drive shafts and mounting styles
- Flows: up to 29 GPM / 2400 rpm / 3000 PSI; up to 39 GPM / 2400 rpm / 2500 PSI
- Can be assembled in tandem
- Can be configured as a pump or motor

Small Frame TB, TC and TE
Large Frame TF, TG, TH, TK
- Smooth very low speed operation
- High efficiency
- Robust construction
- Long life
- High pressure shaft seal – no drain lines
- High starting torque
- High side load capacity

Valves

Pneumatic Valves
- Extreme operating conditions, -40°F to 158°F temperature rating & 232 max pressure rating
- Solenoid, manual & remote pilot options available
- 1/8” thru 1/2” ports sizes standard in both inch and metric

Hydraulic Valves
V20 Series
- Open-center design, stackable configuration
- Flows 10-25 GPM, 3500 PSI
- Work ports available in SAE 8, 10 and 12
- Very competitive open-center and loop pressure drops
- Electro-hydraulic package includes integrated “on-demand” pressure generation and regulation
- Work-section EH options include a single-ended cap design that permits manual both sides of the truck and/or radio remote

Mobile Accessory Valves
- Flow controls, flow dividers, pilot operated check valves, relief valves, selector valves and bankable / stackable directional control valves
- Flows to 225 LPM (60 GPM)
- Pressures to 207 bar (3000 PSI)
- Cast iron bodies

Threaded Cartridge Valves
- Standard cavities sizes from 4–20
- Pressures to 345 bar (5000 PSI)
- Flows up to 378 LPM (100 GPM)
- Steel and aluminum bodies
- New RESILON™ D-Ring Seal eliminates need for back-up rings; improves wear, extrusion and spiral failure resistance
- Spherical Poppet design assures accurate alignment and reduces leakage rating on many valves
- New crimp design eliminates adhesive between adapter and cage
Pneumatic Cylinders
• High performance repairable & non-repairable pneumatic cylinders
• Numerous bore sizes ranging from 20 up to 100 mm
• Optional Scraper available for harsh conditions

Power Take-Offs

Power Take-Off 6-Bolt
270/271 Series
• Powershift
• Designed for automatic transmissions
• 271 offers low profile housing for avoiding clearance problems
• Pressure lubrication available for both units
• Patent pending internal self adjusting shaft brake option
• Electric / hydraulic shift unit

277/278 Series
• Approved for use with Allison World Transmissions
• (277 Series) Five speed ratios and eighteen output options
• (278 Series) Six speed ratios and eighteen output options
• (278 Series) Enhanced housing design for maximum transmission clearance when direct mounting a pump
• SuperTorque™ gears available for 20% higher intermittent torque ratings
• Electronic overspeed control available to protect driven equipment from over-speeding
• Electric / hydraulic shift
• Internal bearing lube

Power Take-Off 6-Bolt
252 Series
• Powershift
• Latest PTO technology for automatic transmission applications
• Patented integral solenoid design
• Fixed compression gasket eliminates setting of backlash
• Weather tight electrical connectors for secure under-the-vehicle connections
• Electric / hydraulic shift unit

Mobile Cylinders
• Single or double-acting telescopic, double-acting “rod type”, and standard build mobile cylinders
• Bleederless design telescopic
• Bore sizes from 3”–14”
• Stroke up to 1270 cm (500”)
• Operating pressures up to 689 bar (10,000 PSI)
• Various materials and coatings including chrome, nitriding, stainless steel and double chrome
• Typical options
  – Load holding valves
  – Flow controls and fuses
  – End of stroke cushions
• Standard build program offers the benefit of standard tube and rod sizes with custom design options configurable to provide quick delivery. Various mounting options are available

Power Take-Off 10-Bolt
248 Series
• Powershift
• Operates in all gears
• Specially matched PTO and pumps for superior work load capabilities
• One PTO for 4 x 2 and 4 x 4 applications
• Speed ratio of 124% of engine speed

Fluid Connectors
• Brass products
• Quick couplings
• Rubber hose products
• Thermoplastic products
• Tube fittings

442 Series
• Two gear
• Engineered to work with most existing transmission applications
• Economical workhorse features cast iron housing
• Tapered cone bearings for high torque rating / long service life
• Slip fit idler pin for easy interchange from one transmission to another
• Easy to set backlash
• Wide range of shift / output options

Brass products
Quick couplings
Rubber hose products
Thermoplastic products
Tube fittings
Products for the Tow / Recovery Truck Market

Filters

Reservoir Accessories
- Non-metallic breathers and filler breathers
- Metallic breathers and filler breathers
- Triceptor™ desiccant type breathers
- Spin-on breathers
- Diffusers
- Fluid level / temperature gauges
- Suction strainers

Racor
- Engine filtration products
  - Fuel
  - Oil
  - Air
- Coolant
- Additives
- Crankcase Ventilation

Low Pressure Filters
- Variety of mounting configurations
- High capacity / high efficiency Microglass media
- Visual and electrical indicators with several connector styles
- Flange options for low profile, easy mounting
- Bowl-less design available

Pneumatic Filters & Regulators
- Accurate pressure control over a wide variety of operating conditions
- Low temperature operation to -40° F
- 1/8" thru 3/8" port sizes both inch and metric

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 two filter carts:
  - 18 LPM (5 GPM) flow 1/2 HP motor
  - 37 LPM (10 GPM) flow 3/4 HP motor
**TireSaver Nitrogen Tire Inflation**
- Maintains proper tire pressure longer for improved fuel efficiency and increased tire life
- Eliminates chemical aging of tires which increases re treadability
- Prevents auto-ignition for safer ride
- Promotes “Green” as it reduces greenhouse gas emissions
  - Decrease in fuel usage
  - Increase in tire life
- Improve re treadability
- Easy installation. Simply pipe in compressed air and pipe out nitrogen

**Remote Control Systems**
- **PCL4/PCL4-N Series, Hydraulic**
  - Hydraulic pilot proportional remote control of directional valves, pumps, motors, etc.
- **VPO4 Series, Pneumatic**
  - Pneumatic pilot proportional remote control of directional valves, positioning cylinders, etc.

**Diagnostic Equipment**
- Increases vehicle productivity
- Increases vehicle profitability
- Reduces work truck downtime
- Reduces shop labor repair time

**Pneumatic Accessories**
- Accurate pressure control over a wide variety of operating conditions
- Low temperature operation to -20° F
- 1/8” thru 1-1/12” port sizes both inch and metric

**Accessories**
- **TireSaver**
- **Pneumatic accessories**
- **Remote Control Systems**
- **Diagnostic Equipment**

**Other**
- **PCL4/PCL4-N Series, Hydraulic**
- **VPO4 Series, Pneumatic**

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*Image of a tow truck and a Parker logo.*
# Products for the Truck Mounted Crane Market

## Pumps & Motors

### Piston Pumps
- **F1/F2 Series**
  - Fixed displacement piston
  - Pressures up to 345 bar (5000 PSI)
  - High power capability
  - Twin Flow version option
  - High self-priming speed
  - Easy to install / service

### Piston Pumps
- **P1/P2 Series**
  - Variable displacement, axial piston pump for open-circuit applications
  - Medium pressure, continuous operation at pressures up to 320 bar
  - Quiet and efficient control capability, low ripple
  - Compact package size
  - Elastomer seals that eliminate gaskets and external leakage
  - High operating efficiency results in lower power consumption and reduced heat generation
  - Simple “no-leak” hydraulic controls

### Piston Pumps
- **VP1 Series**
  - Variable displacement load sense
  - Pressures up to 345 bar (5000 PSI)
  - Suitable for all load-sensing systems
  - Splined shaft DIN 5462
  - Mounting flange ISO 7653-1985
  - Lightweight slim cross-section designed for truck applications
  - Strong and reliable
  - Less energy – less fuel – less heat
  - Self-priming

### Low Speed High Torque Motors
- **Small Frame TB, TC and TE**
  - Smooth very low speed operation
  - High efficiency
  - Robust construction
  - Long life
  - High pressure shaft seal – no drain lines
  - High starting torque
  - High side load capacity

- **Large Frame TF, TG, TH, TK**
  - Variable displacement load sense
  - Pressures up to 345 bar (5000 PSI)
  - Suitable for all load-sensing systems
  - Splined shaft DIN 5462
  - Mounting flange ISO 7653-1985
  - Lightweight slim cross-section designed for truck applications
  - Strong and reliable
  - Less energy – less fuel – less heat
  - Self-priming

### Vane Pumps
- **T Series-Single**
  - Fixed displacement vane
  - Silent technology
  - Wide range of displacements
  - Wide number of shafts option
  - Double shaft seal option possible
  - Drive train options (SAE-A/B/C)

- **T Series-Double**
  - Fixed displacement vane
  - Low noise
  - SAE or ISO standards
  - One piece shaft (no internal torque limitations)
  - One inlet
  - Wide displacement possibility
  - High power to weight ratio
  - Wide range of options - shafts, threads and pilots
  - Double - 32 porting orientations option
  - Double - 128 porting orientations option

## Valves

### Mobile Accessory Valves
- Flow controls, flow dividers, pilot operated check valves, relief valves, selector valves and bankable / stackable directional control valves
- Flows to 225 LPM (60 GPM)
- Pressures to 207 bar (3000 PSI)
- Cast iron bodies

### VG35 Series
- Exceptional size to pressure drop ratio
- .47” spool stroke, providing outstanding feathering control
- Cost effective, electrohydraulic operation option
- Differential main relief’s – quick response and low pressure rise
- Low cost VA iron option for medium duty applications

### Hydraulic Valves
- **V20 Series**
  - Available in open-center and load-sensing technologies
  - Flows 10-25 GPM, 3500 PSI
  - Work ports available in SAE 8, 10 and 12
  - Many special metering spools available
  - Unique “anti-tip” control and winch boost accomplished with integrated work-port “dump” cartridges and solenoids
  - Cost effective electro-hydraulic package includes integrated on-demand pressure generation / regulation
Pneumatic Valves
- Extreme operating conditions, -40°F to 158°F temperature rating & 232 max pressure rating
- Solenoid, manual & remote pilot options available
- 1/8” thru 1/2” ports sizes standard in both inch and metric

Threaded Cartridge Valves
- Standard cavities sizes from 4–20
- Pressures to 345 bar (5000 PSI)
- Flows up to 378 LPM (100 GPM)
- Steel and aluminum bodies
- New RESILON™ D-Ring Seal eliminates need for back-up rings; improves wear, extrusion and spiral failure resistance
- Spherical Poppet design assures accurate alignment and reduces leakage rating on many valves
- New crimp design eliminates adhesive between adapter and cage

Pneumatic Cylinders
- High performance repairable & non-repairable pneumatic cylinders
- Numerous bore sizes ranging from 20 up to 100 mm
- Optional scraper available for harsh conditions

Mobile Cylinders
- Single or double-acting telescopic, double-acting “rod type”, and standard build mobile cylinders
- Bleederless design telescopic
- Bore sizes from 3”–14”
- Stroke up to 1270 cm (500”)
- Operating pressures up to 689 bar (10,000 PSI)
- Various materials and coatings including chrome, nitriding, stainless steel and double chrome
- Typical options
  – Load holding valves
  – Flow controls and fuses
  – End of stroke cushions
- Standard build program offers the benefit of standard tube and rod sizes with custom design options configurable to provide quick delivery. Various mounting options are available

Fluid Connectors
- Brass products
- Quick couplings
- Rubber hose products
- Thermoplastic products
- Tube fittings

Cylinders

Power Take-Offs

Power Take-Off 6-Bolt
270/271 Series
- Powershift
- Designed for automatic transmissions
- 271 offers low profile housing for avoiding clearance problems
- Pressure lubrication available for both units
- Patent pending internal self adjusting shaft brake option
- Electric / hydraulic shift unit

Power Take-Off 6-Bolt
442 Series
- Two gear
- Engineered to work with most existing transmission applications
- Economical workhorse features cast iron housing
- Tapered cone bearings for high torque rating / long service life
- Slip fit idler pin for easy interchange from one transmission to another
- Easy to set backlash
- Wide range of shift / output options

Power Take-Off 8-Bolt
489 Series
- Two gear
- 442 Series family, but with an 8-Bolt mounting flange
- No adapter plate needed
- Less installation time, less expense, and less chance of leakage
- Wide range of shifter options / pump flanges
Products for the Truck Mounted Crane Market

Power Take-Offs

Power Take-Off 10-Bolt 277/278 Series
- Approved for use with Allison World Transmissions
- (277 Series) Five speed ratios and eighteen output options
- (278 Series) Six speed ratios and eighteen output options
- (278 Series) Enhanced housing design for maximum transmission clearance when direct mounting a pump
- SuperTorque™ gears available for 20% higher intermittent torque ratings
- Electronic overspeed control available to protect driven equipment from over-speeding
- Electric / hydraulic shift
- Internal bearing lube

Power Take-Off 8-Bolt 880 Series
- Two gear
- Coverage for tough applications
- Speed ratios for high / low speed applications
- Removable shift cover for adjusting backlash
- Dual-pump output for mounting a pump on each end of PTO

Filters

Racor
- Engine filtration products
  - Fuel
  - Oil
  - Air
- Coolant
- Additives
- Crankcase Ventilation

Low Pressure Filters
- Variety of mounting configurations
- High capacity / high efficiency Microglass media
- Visual and electrical indicators with several connector styles
- Flange options for low profile, easy mounting
- Bowl-less design available

Medium Pressure Filters
- NPT, SAE or flange ports
- High capacity / high efficiency Ecoglass III media
- Visual and electrical indicators with several connector styles
- Cartridge style bypass valve

Reservoir Accessories
- Non-metallic breathers and filler breathers
- Metallic breathers and filler breathers
- Triceptor™ desiccant type breathers
- Spin-on breathers
- Diffusers
- Fluid level / temperature gauges
- Suction strainers
**High Pressure Filters**

**WPF Series**
- 7,000 PSI operating pressure
- Non-metallic Ecoglass III coreless elements
- Patented reverse flow / bypass element design

**Pneumatic Filters & Regulators**
- Accurate pressure control over a wide variety of operating conditions
- Low temperature operation to -40° F
- 1/8" thru 3/8" port sizes both inch and metric

**Pneumatic Accessories**
- Accurate pressure control over a wide variety of operating conditions
- Low temperature operation to -20° F
- 1/8" thru 1-1/12" port sizes both inch and metric

**Pneumatic Exhaust Protectors**
- Intended for mobile applications, quick venting applications and alternative exhaust port breathers that require protection against clogging
- 1/8" & 1/4" NPT male sizes available
- Resistant to rust, wash down and other contamination both Inch and Metric

**Remote Control Systems**

**PCL4/PCL4-N Series, Hydraulic**
- Hydraulic pilot proportional remote control of directional valves, pumps, motors, etc.

**VPO4 Series, Pneumatic**
- Pneumatic pilot proportional remote control of directional valves, positioning cylinders, etc.

**TireSaver**

**TireSaver Nitrogen Tire Inflation**
- Maintains proper tire pressure longer for improved fuel efficiency and increased tire life
- Eliminates chemical aging of tires which increases retrackability
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  - Decrease in fuel usage
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- Increases vehicle profitability
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