



aerospace  
climate control  
electromechanical  
filtration  
fluid & gas handling  
hydraulics  
pneumatics  
process control  
sealing & shielding



# Truck Hydraulics

Innovative Products and System Solutions



ENGINEERING YOUR SUCCESS.

# Contents

## Introduction

|                                  |   |
|----------------------------------|---|
| Parker Hannifin Corporation..... | 3 |
| Truck Hydraulics.....            | 4 |
| Parker's Value Proposition.....  | 5 |
| Value Added Programs.....        | 6 |

## Product Range

### Accumulators

|                                                  |   |
|--------------------------------------------------|---|
| Piston, Bladder and Diaphragm Accumulators ..... | 7 |
|--------------------------------------------------|---|

|                                              |   |
|----------------------------------------------|---|
| <b>Actuators / Cylinders / Coolers</b> ..... | 8 |
|----------------------------------------------|---|

|                                 |   |
|---------------------------------|---|
| <b>Compact Hydraulics</b> ..... | 9 |
|---------------------------------|---|

|                                            |    |
|--------------------------------------------|----|
| <b>Filtration and Fluid Analysis</b> ..... | 10 |
|--------------------------------------------|----|

|                                      |    |
|--------------------------------------|----|
| Fuel Filtration and Separation ..... | 11 |
|--------------------------------------|----|

### Fluid Connectors

|                           |    |
|---------------------------|----|
| Thermoplastic Hoses ..... | 12 |
| Hydraulic Fittings.....   | 13 |
| SensoControl.....         | 14 |
| Pneumatic Fittings.....   | 15 |
| Rubber Hoses .....        | 17 |

### Motors – Fixed Displacement

|                   |    |
|-------------------|----|
| Vane.....         | 20 |
| Gerotor .....     | 20 |
| Axial Piston..... | 21 |

|                        |    |
|------------------------|----|
| <b>Pneumatic</b> ..... | 22 |
|------------------------|----|

### Power Take Off

|                                                               |    |
|---------------------------------------------------------------|----|
| Mechanical 6 & 8 Bolt Power Take-Offs.....                    | 23 |
| Power Shift 10 Bolt Power Take-Off's .....                    | 25 |
| Split Shaft Power Take-Offs / Rear Mount Power Take-Offs..... | 27 |

### Pumps – Fixed Displacement

|                   |    |
|-------------------|----|
| Gear .....        | 29 |
| Vane.....         | 30 |
| Axial Piston..... | 32 |
| Boost Unit .....  | 33 |

### Pumps – Variable Displacement

|                                             |    |
|---------------------------------------------|----|
| Axial Piston.....                           | 34 |
| Axial Piston & Fixed Vane Combination ..... | 34 |

|                                         |    |
|-----------------------------------------|----|
| <b>Directional Control Valves</b> ..... | 35 |
|-----------------------------------------|----|

### Remote Control Systems

|                       |    |
|-----------------------|----|
| Pneumatic .....       | 36 |
| Hydraulic .....       | 36 |
| Electrohydraulic..... | 36 |
| Electronics.....      | 37 |

|                                                           |    |
|-----------------------------------------------------------|----|
| <b>Auxiliary Valves / Threaded Cartridge Valves</b> ..... | 38 |
|-----------------------------------------------------------|----|

|                                        |    |
|----------------------------------------|----|
| <b>Hydraulic Manifold blocks</b> ..... | 41 |
|----------------------------------------|----|

## Information

|                                              |    |
|----------------------------------------------|----|
| Parker's Motion & Control Technologies ..... | 42 |
| DVD Information / Contact Information .....  | 46 |
| DVD Catalogue / Warning .....                | 47 |



xx 00

Use the DVD search codes provided in this catalog to go directly to the section for that product.

© Copyright 2014, Parker Hannifin Corporation. All rights reserved.



# Parker Hannifin Corporation

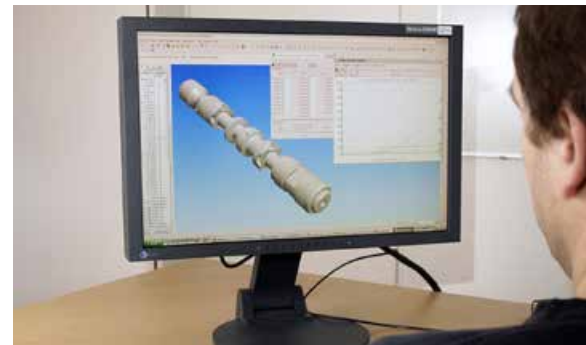


## The Parker Brand Promise

*Parker is the global leader in motion and control technologies, partnering with its customers to increase their productivity and profitability.*

A global Fortune 300 company with customers in 49 countries, Parker Hannifin is the world's leading supplier of hydraulic, pneumatic, and electro-mechanical systems and components. Customers rely on Parker for engineering excellence, world-class manufacturing and outstanding customer service to provide comprehensive application solutions that are second to none.

- More than USD 13 billion in sales
- 312 plants worldwide
- 13,000 distributors / MRO Outlets
- 465,000 customers
- Serving 1,100 distinct markets
- Listed as PH on the New York Stock Exchange



aerospace  
climate control  
electromechanical  
filtration  
fluid & gas handling  
hydraulics  
pneumatics  
process control  
sealing & shielding

## Dedication to the truck industry

The Parker Hannifin Corporation is the most dynamic hydraulics motion and control components and solutions provider in the truck industry. Parker hydraulics technology and components, including Chelsea product offerings, makes Parker the leading choice to fill your heavy-duty truck needs. With our qualified factory support and network of distribution, being your single source supplier for components, kits and solutions has never been easier. Our truck hydraulics, market-focused staff is ready to assist you with application expertise, innovative designs and state-of-the-art manufacturing and engineering technology. Total systems capability makes Parker Hannifin today's complete supplier. Our customers can reduce their number of vendors without compromising quality, and buying from a single source saves both time and money.



# Truck Hydraulics

## Fluid Power/Truck Focus

Although Parker serves many industries including Aerospace, Construction, Agriculture, Mining, Automotive, Refrigeration, etc., we are exclusively concentrated on controlling fluid motion and pressure. We have created a market-focused hydraulics truck team to focus solely on the needs of the customers in various vocational truck markets.

## Total Systems From the Ground Up

Parker will assist you to determine your component(s) and/or systems requirements and help design a solution. We have the ability to capture exact system details through our high levels of data acquisition. Parker's staff of highly qualified engineers – application engineers, research and development teams, and system solution specialists, assures you that nobody knows truck hydraulic applications and products better than Parker. Parker's extensive breadth of product line allows for unlimited solution possibilities. Our worldwide network manufacturing and distribution facilities ensures quick deliver of your engineered solution, from components to kits to entire system solutions.

## Manufacturing

Parker continues to invest in our world class ISO 9001 certified manufacturing facilities. Our factories are equipped with the most modern technology to meet the demands of both quality and delivery. Our manufacturing is backed by a highly qualified engineering staff, working with today's latest tools and technology. This investment ensures that we maintain control of the manufacturing process and components, as well as the ability to look forward to new design ideas and solutions. Our truck hydraulic components are core to our business and investments. We do not outsource our components and solutions – we manufacture them.



# Parker's Value Proposition



## Parker's Value Proposition

Parker is the leading hydraulics supplier worldwide. We have a powerful reputation, unparalleled breadth of products, and world-class customer service. However, Parker's greatest distinguishing benefits can be found in its Value Proposition. Parker believes that it takes more than our great products, competitive prices, and on-time delivery to satisfy customer demands. It takes a commitment to provide exceptional value.

- Truck Analysis and Troubleshooting
- Design-Engineering Support
- System Design
- Components Selection
- New Product Development
- Custom-Component Manufacturing
- Assemblies and Kits
- Sub-System Configuration
- Global Support and Service
- ISO Certification

At Parker, value is not a commodity. It is the result of personal relationships built around the customer's use of Parker's extensive resources. Our customer services include:



# Value Added Programs



## Premier Customer Service

Parker's Premier Customer Service leads the industry in response. In addition to assured product quality, Parker provides engineering assistance, consolidated shipments, on-time delivery, extensive product information, and customer training. Our employees are empowered to do whatever it takes to meet or exceed customer expectations.

## Field Sales Team

Parker's highly trained truck hydraulics field sales force provides knowledgeable assistance to your product and system requirements, working hand in hand with your local Parker distributor. These experts are strategically located throughout the world.

## Kitting

In those instances where you require multiple components and sub-assemblies for a specific application, Parker offers the added benefit of a Kitting Service. Within a kit, everything you need is delivered in one convenient package, ready for installation.

## Training

Parker is recognized as the industry leader in the development and presentation of technical training for hydraulic and pneumatic technology. We offer complete and comprehensive texts, along with hands-on classroom opportunities to our employees, distributors, and customers. This includes web based training, On site training, and classroom training at various Parker locations. Our focus is on a practical approach to training, stressing active participation to increase students' confidence and understanding of motion control technology.



# Accumulators - Piston, Bladder and Diaphragm

## A Series



Parker's comprehensive range of CE approved piston accumulators maintains high pressure for safe braking and manoeuvring. Ride control and load/boom damping systems enhance productivity and improve the operator's environment, while greater system efficiency and reduced pump sizes give longer life with lower whole-life costs.

- Standard capacities from 0.1 to 76 litres
- 250 bar and 350 bar maximum operating pressures
- Bore diameters from 50 mm to 200 mm
- Seal compounds to suit all standard fluids and operating temperatures



za 01

## ACP Series



- Standard capacities from 0.08 to 8 litres
- Up to 275 bar operating pressures
- 40, 50, 80 and 100 mm bore diameters
- Rechargeable or sealed-for-life designs
- High strength crimped construction



za 02

## Bladder Accumulators EHV from 330 to 690 bar



- Standard capacities from 0.2 to 57 Litres
- From 330 to 690 bar
- Operating temperature : - 20 °C + 80 °C
- Shell material options include alloyed steel, stainless steel, aluminium, titanium and composites
- Various bladder materials available which are compatible with a range of fluids and temperatures
- CE approved (Meet conformity assessment according to the PED)



za 03

## Diaphragm Accumulators ELM from 140 to 350 bar



- 11 standard capacities from 0.075 to 3.5 Litres
- From 140 to 350 bar
- -20 °C / +80 °C for standard nitrile elastomers for models 0.075 ≥ 1.4 Litres
- -10 °C / +80 °C for standard nitrile elastomers for models ≥ 2 Litres
- -35 °C / +80 °C for hydrin elastomers
- Materials : carbon steel or stainless steel, nitrile or hydrin diaphragm (for other constructions: contact Parker)
- Meet conformity assessment according to the PED (For information about SELO and SELO + CE availability: contact Parker)



za 07

## Accumulator Charging Kit and Mounting Accessories



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



za 01



# Actuators / Cylinders / Coolers

Multi-stage, Double-acting Telescopic with  
Mechanical Plunger and Load Holding Valve



Parker offers single- or double-acting single stage and telescopic mobile cylinders. Custom cylinders can be built in batch sizes from one piece to hundreds. We work with our customers to develop specifications in a wide range of sizes, pressures and mounting styles. New Intellinder absolute position sensing is ideally suited for double rod steering cylinders, and is available with two or more sensors for multiple redundancy in safety-critical applications.

Multi-stage, Single-acting Telescopic



## Telescopic Cylinders

- Bore sizes up to 500 mm diameter
- Any practicable stroke length
- Operating pressures up to 500 bar
- Seal compounds to suit all standard fluids
- A wide range of materials and coatings
  - stainless steel
  - electroless nickel
  - nitriding
  - chrome and double-chrome plating
- Options include
  - loadholding valves
  - electro-hydraulic transducers
  - position switches
  - end of stroke hydraulic damping
  - protective rod boots
  - flow controls
  - flow fuses

Single Stage Cylinder



## Single Stage Cylinders

- Cyl. Bore: Ø 25-200 mm
- Pressure: 160 bar
- Max Stroke: 2800 mm



zc 01, zc 03

Intellinder



## Intellinder

- Integrated, fully protected electro-optical position sensor
- Rugged construction – uses the piston rod as the measuring scale
- Maintenance-free design
- Resolution – 0.03 mm
- Repeatability – 0.04 mm
- Data input/output – J1939 CAN
- Ingression – connector, IP67 equivalent; sensor and lead IP68



zcy09

## Coolers

LDC – DC motor



- 12V or 24V DC motor
- Maximal cooling capacity 30 kW
- Can be fitted with Smart DC Drive
- Compact and light weight
- Quiet fan and motor
- Low pressure drop
- High cooling capacity
- Service-friendly, easy to retrofit
- For Truck cranes
- Body builders
- Mining Applications



zco 05

# Compact Hydraulics

## Hand Pump Series 700

With Built-in 4-way Valve



- Pressures up to 175 bar
- 8.2 cm<sup>3</sup>/stroke
- Operating Range: -40 to +70 °C (Depending on Fluid Used)
- Very Compact Size
- Excellent Backup Power Supply
- Up to 61 cm Handle Available

## Series 108



- AC or DC motor
- 4 pump sizes – up to 3 l/min
- Single or bidirectional rotation
- Fixed relief valve
- Locking check valves available on all models
- Variety of hydraulic circuits
- Reservoirs from 0.45 to 5.5 litres
- 241 bar rating



zu 01

## Series 165



- 0.75 kW, 12 VDC electric motor
- 3 pump sizes (0.52, 0.82 and 1.06 cm<sup>3</sup>/rev)
- Variety of circuits
- Many reservoir choices
- Up to 240 bar operating pressure
- Soft seat load hold check valves
- Vertical or horizontal mounting



zu 06

## Series 550



- Numerous motors to 1.5 kW
- 6 pump sizes – flows from 1 to 11.4 l/min
- Externally adjustable relief valve
- Variety of reservoirs
- Operating pressure to 210 bar
- NG6 pad or standard P and T ports



zs 02

## Compact EHA



- Compact, free-standing actuator for high power density applications
- Provides a complete actuation system for space critical industrial, mobile and remote use
- Eliminates need for separate pump, tank, hoses, valves and actuator
- Max. force, extension - 21.3kN
- Max. force, retraction - 16.0kN
- Max. speed - 84mm/s (no load)
- Standard stroke lengths - 102 mm, 152 mm, 203 mm
- Mounting pin diameters - 6.4 mm, 9.5 mm, 12.7 mm
- Motor Options - 12V DC, 245W or 560W; 24V DC, 245W or 560W



zo 04



# Filtration and Condition Monitoring Solutions

## Total Product Offering



For Parker Filtration, our commitment to re-think, re-engineer and realign ourselves to fulfil the needs of our customers and their customers, is best demonstrated by our Total 'Global' Product Offering. In addition to the products highlighted here, a comprehensive catalogue is available.

- Various mounting configurations
- High capacity/high efficiency quantumfiber™ media and environmentally friendly media options
- Visual and electrical indicators with several connector styles
- Tank mounted and in-tank models
- Condition Monitoring solutions for total health management



zf 01

### Low Pressure



| Model          | Max Flow Rate (l/min) | Max Pressure (bar) | Mounting Style                 |
|----------------|-----------------------|--------------------|--------------------------------|
| Suction Return | 250                   | 10                 | Tank Top                       |
| TTF Series     | 500                   | 10                 | Tank Top                       |
| PT Series      | 400                   | 6                  | Tank Top                       |
| Tank Topper    | 650                   | 10                 | Tank Top + Integrated Breather |
| IN-AGB         | 2400                  | 10                 | inside Tank                    |

### Medium Pressure



- Various port options
- High capacity/high efficiency quantumfiber™ and iprotect, environmentally friendly media options
- Cartridge style by-pass valve
- Visual and electrical indicators with several connector styles



zf 02

| Model        | Max. Flow Rate (l/min) | Max Pressure (bar) | Mounting Style |
|--------------|------------------------|--------------------|----------------|
| GMF iprotect | 600                    | 70                 | Inline         |
| 45 Series    | 260                    | 40                 | Inline         |

### High Pressure



- Various mounting configurations
- High capacity/high efficiency quantumfiber™, iprotect, environmentally friendly media options
- Visual and electrical indicators with several connector styles
- Flows up to 520 l/min at 414 bar



zf 03

| Model               | Max Flow Rate (l/min) | Max Pressure (bar) | Mounting Style |
|---------------------|-----------------------|--------------------|----------------|
| EPF iprotect Series | 700                   | 450                | Inline         |

## Condition Monitoring

Parker's range of condition monitoring monitors, detectors and analysers are designed and manufactured to the highest standard to ensure reliability and accuracy. From laser operated icountOS oil samplers, icountPD particle detectors to Parker Kittiwake's range of proven products such as the MHC Bearing Checker ideal for maintenance analysis of bearing condition and lubrication state; Parker offers on-line and on-site solutions for condition monitoring of critical plant and machinery.



zfa 03



# Fuel Filtration and Separation

## Racor Spin On Series



- Water separation to SAE J1488/J1839 and ISO 4020 6.5, and particle filtration to ISO TR13353
- Compact spin-on filter/water separator with electric heater and transparent bowl
- Filter elements with Aquabloc element and multiple ports
- The optional integral hand pump and water level sensor allow the filter to be adapted for the particular application in trucks and buses



zf 10

## Racor Turbine Series



- High performance prefilter/water separator for applications where there are large amounts of water in the fuel
- Element with original Aquabloc filter medium
- Newly designed bowls made of transparent plastic or injection moulded aluminium
- Optional electric heating and water level sensor



zf 10

## Crankcase Ventilation Filter (CCV)



- This compact, patented system removes the crankcase blow-by from the oil before it is returned to the intake manifold, thereby protecting the turbocharger and intercooler from oil deposits.
- Engines equipped in this way meet the requirements of Euro Tier 4 and 5



zf 10

## Engine Air Filter Systems



- Pamic series – two or three stage air filter with pre-separator or moisture separator for use in extreme conditions
- Eco series – air filters that are lightweight and easy to install
- Dynacell series – space-saving multi-stage air filter for use in challenging conditions



zf 10

## Transmission, Rear Axle and Cabin Air Filters



- High filter performance and service life from multilayer filter material
- A good filtration ratio with a specially designed
- “blocking layer” suitable for high burst pressures
- Fresh air filter for truck cabs to remove fine contaminants such as dust, pollen and asphaltene from the air



zf 10

## Truck TyreSaver 1 - Filling Tyres with Nitrogen



- Nitrogen truck tyre inflation system with a capacity of 10, 20, 30 and 40 nm<sup>3</sup>/h, 95% purity and 10 bar pressure
- Switches off automatically when no nitrogen is needed
- Compact design with high performance membrane
- Lower fuel consumption and longer tyre service life



zf 10



# Thermoplastic Hoses and Tubes

## Polyflex/Parflex

Thermoplastic Hoses for Use in Hydraulic and Industrial Applications



For pressures up to 2500 bar. Single and multiple hoses.

Applications: low pressure to high pressure hydraulics, pneumatics and surface polishing. PTFE hoses. Industrial gases, aggressive media and chemicals.

Construction: thermoplastic hoses with synthetic fibre/steel wire reinforcement.

Size range: from 5/64" to 1 1/4".

Temperature range: -57 °C to +250 °C.



zfc 03

Catalogue 4460

## Preforming



Thanks to preforming technology, Parker can custom shape hoses and thermoplastic tubes for a variety of applications such as air brakes, fuel lines and hydraulic lines with low and high pressure supply.

Benefits:

- Preformed thermoplastic products cost less than the tube or hose/ tube combination being replaced. The main difference is the smaller number of clamps needed for an identical layout.
- Products preformed by Parker may well include more expensive parts than the comparable product, but the extra cost is more than offset by the time saved during handling and installation.
- The smaller number of fittings reduces the risk of leaks
- Ideal where space is tight
- Easy installation in confined spaces
- Weight reduction



zfc 01

Bulletin 5200-Preformed

## Polyflex products for the transportation market



- Clutch hose with very low volumetric expansion
- Customised Power Steering hose
- Small bore cabin tilt hoses (DN2.9 up to DN6)
- SCR solutions (electrically heated or coolant lines)
- Hoses for Alternative Fuels (CNG/LPG) BUL4460-CNG/ BUL 4460-LPG-UK
- PTFE hoses for hot environment applications



zfc 02

Catalogue 5210

## CNG Hose

Hose for Mobile Applications in Vehicles



Parflex CNG Hose is specially developed for the conveyance of compressed natural gas. It is constructed of an electrically conductive nylon core designed to dissipate static build up and a fiber reinforcement for maximum pressure and flexibility. In addition, the polyurethane jacket provides abrasion resistance and protection from outdoor elements including ultraviolet light.

- **Approved according to CSA ECE R110**
- High flexibility, compact construction
- Strong polyurethane cover for high wear and tear resistance
- Working pressure 34.5 MPa
- Also available as twinline or multiline hose
- Customized preforming available (see Bulletin 5200-Preformed)
- Electrically conductive



zfc 02

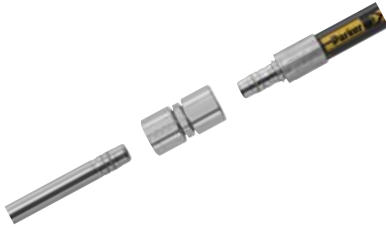
BUL4460-CNG



# Fittings

## UPTC push-to-connect system

Parker Universal Push to Connect



- For tubes and hoses
- Based on DIN 24° system and SAE O-Lok®
- 100% assured assembly
- 100% leak free
- Can be disassembled with standard tools
- Applications: steering hydraulics, hydraulic cab tilt systems, transmission oil cooling, etc.



zfc 30

Bulletin 4017\_UPTC

## EO-PSR, EO-2, EO2-FORM and EO-3

EO-PSR



- Metallic sealed connection
- ISO 8434 cutting ring system

EO-2



- Soft seals
- ISO 8434 cutting ring connection

EO2-FORM



- ISO 8434 soft seal
- Pipe forming
- Pipe AD 6 - 42 mm
- Steel, stainless steel, brass
- NBR, FKM
- PN to 800 bar



zfc 05

Catalogue 4100-9  
Catalogue 4131-1

EO-3



- With visual assembly status recognition
- For tube and hose applications

## SensoControl®

Test Terminals



A wide range of EMA test points and adapters for quick, clean and easy adaptation of sensors and measuring instruments to hydraulic systems



zfc 08

Catalogue 4100-9

# SensoControl®

## SensoControl® - test equipment for maintenance and construction

### ServiceJunior



Simple digital gauge for pressure measurements. Scanning rate 10 ms

- Back-lit display
- Numerical display of pressure spikes (MIN/MAX)
- Ideal for service engineers



zsc 01  
Catalogue 4054-2

### Serviceman Plus



Simple, robust and flexible

- "Plug & play" using automatic sensor recognition, simply plug in and measure
- Innovative memory concept with nano USB stick
- USB interface to PC for convenient analysis and documentation of the measurement via the SensoWin software
- Robust design with oil-resistant rubber protection for use in extreme conditions
- Large back-lit display for quick and secure reading
- Simple and clear user prompts



zsc 01  
Catalogue 4077  
Bulletin 4057

### The Parker ServiceMaster PLUS



High-performance high-end device:

- Interfaces: analogue, CAN, LAN and USB
- Display of measured values: numerical, bar graph, pointer and curve graph
- Measurement and display of more than 50 channels
- Remote maintenance via LAN, regardless of location
- Up to 4 million measured values per measurement
- Ideal for construction



zsc 01  
Bulletin 4067-2

### Pressure Sensors, Pressure and Temperature Sensors, Pressure Switches



Combined pressure/temperature sensors for use in maintenance and diagnostics, and pressure sensors and pressure switches in a sturdy steel housing for long-term mobile use.



zsc 01  
Catalogue 4054-1

# Pneumatic Fittings

## Prestomatic 2 Push-In Fittings

Connector for air brakes



Material: brass.

Size range: tube outer diameter from 6 mm to 16 mm

Threads : from M10x1.0 to M22x1.5, NPT, BSPT.

Working pressure : up to 17 bar

Working temperature : -40 °C to +100 °C



zfc 10

CAT/3530-2

## Prestomatic 3 Push-In Fittings

Connector for air brakes



Material: technical polymer

Size range: tube outer diameter from 8 mm to 16 mm

Threads : from M10x1 to M22x1.5

Working pressure : up to 17 bar

Working temperature : -40°C to +100°C



zfc 10

CAT/3530-2

## Air Brake, Adapters and Accessories

Range of prestomatic accessories with metric threads



Material: brass

Range: bulkhead unions, elbows, tees, run tees, test points, tilt drain valves

Threads : metric

Working pressure : up to 17 bar

Working temperature : -40°C to +100°C



zfc 10

CAT/3530-2

## LF 3000 Push-In Fittings

Complete range for pneumatic in cab applications



Material: technical polymer

Size range: from 3 mm to 16 mm

Threads : metric BSPP, BSPT, NPT

Working pressure : up to 20 bar

Working temperature : -20°C to +80°C



zfc 09

CAT/0540

## LF 3400 Cartridges

Low pressure cartridges



Material: technical polymer

Size range: 6mm and 8mm

Working temperature : -40°C to +100°C

Vacuum : 755 mm Hg (99% vacuum)

# Pneumatic Fittings

## Manifolds

Customised products for connection of pneumatic lines between the truck cab and chassis



Customised products  
Polymer body with integrated fittings  
Polymer manifolds



zfc 09  
CAT/0540

## Blowgun Kits



Material: Body: technical polymer  
- Nozzle : aluminium or nickel plated brass  
- Tubes : Polyamide  
Working pressure : up to 10 bar  
Working temperature : air : -15°C to +50°C / dry air : -20°C to +80°C



zfc 09  
CAT/0540

# Rubber Hoses

## SAE 100R5 Air Brake/Refrigerant and 2TE Hydraulic Hoses



Parker's airbrake and refrigerant hoses are the optimum solution for air brake systems, diesel engine cooling systems as well as air conditioning applications. Parker is offering for this hose types a special range of fittings (Series 26) as a No-Skive system. Some of the available hose types include high performance of fire resistance construction.

The hose constructions are dependent on working pressure and contain different layers of textile or steel wires and synthetic rubber material for tube and cover.

Working pressure: up to 207 bar.

Temperature range: -50 °C to +150 °C

Dimensions: size -4 to -32



zfc 17  
Catalogue 4400-UK

## 441 Compact *No-Skive* High Pressure SAE 100 R16 Hose – ideal for Power Steering



Parker's upgraded 441 hose provides 2-wire braided performance with only 1 high quality wire braid and is now approved for a working temperature of up to +125 °C.

The Hi-Pac construction of the hose braid allows the technical characteristics of an SAE 100 R16 hose to be met, but offers higher flexibility and therefore improved ease of installation in machines or equipment.

The 441 hose is ideal for many industrial and mobile applications, with typical usage seen on agricultural machines or in power steering circuits.

Synthetic rubber tube; one braid of high tensile steel wire reinforcement; oil, weather and abrasion resistant black synthetic rubber cover.

Temperature range: -40 to +125 °C

Exceptions: air max. +70 °C, water max. +85 °C

## CARBOBLUE N/L 10 – 20



CARBOBLUE N/L 10 - 20 is an automotive hose for trucks, specially designed for additive that reduces the amount of polluted substances released into the environment. These objectives are included in the European parameters EURO IV and EURO V.

Tube: Black, smooth, antistatic  $R < 1 \text{M } \Omega/\text{m}$  and sulphur free EPDM rubber compound nitrosamine-free with peroxide curing. Composed of 32 % urea aqueous (AUS 32/AIR1-AdBlue).

Reinforcement: Synthetic textile fabrics.

Cover: Black, smooth, antistatic  $R < 1 \text{M } \Omega/\text{m}$ , EPDM rubber compound nitrosamine free, ageing, heat and weather resistant.



# Rubber Hoses

## ARCTIC EDGE



Recommended for air, oil, gasoline, diesel, biodiesel and ethanol to be used in refrigerated applications and cold weather conditions. Arctic Edge keeps high flexibility and kink resistance also at extreme low temperatures (-57°C). Embedded copper wires assure conductive propriety to the hose for safe use in agriculture, construction and general industry. The longitudinal blue stripe on the cover allows an easy hose identification. Do not use for fuel dispensing.

Tube: Black NBR rubber compound.

Reinforcement: Multiple textile plies with static wire

Cover: Black, smooth CR rubber compound resistant to oil and weathering

## EZ-Form MP



A multipurpose hose suitable for diesel, biodiesel, ethanol and gasoline in oil suction/return lines, on board fuel connector lines, drain lines on buses, cranes, mobile off-road equipment. Extremely handy and lightweight it reduces installation times, eliminates special design, tooling and fabrication cost. With a superior kink resistance and an outstanding flexibility could be routed with minimal force though confined spaces where pre-shaped and formed hose are normally required. Do not use for fuel dispensing or drag across sharp edges or very abrasive surfaces.

Tube: Black CR, antistatic rubber compound.

Reinforcement: Multiple textile plies with wire helix

Cover: Black, Greek corrugated CR rubber compound resistant to oil and weathering

## EZ-Form GS



Designed to handle air, coolant and water in on-road and off-road applications. Extremely flexible and lightweight provides full suction capability and a path to conduct static electrical charge to the ground. The unique Greek cover corrugations provides minimum force-to-bend, superior kink resistance, and maximum flexibility for ease of handling, used where formed hose might normally be required saving time and costs thanks to easy and quick assembly.

E-Z Form GS assure equal performances to SAE J20R2-D1.

Tube: Black EPDM, antistatic rubber compound.

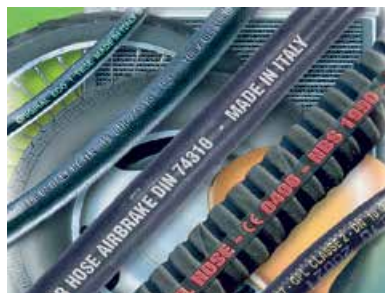
Reinforcement: Multiple textile plies with wire helix

Cover: Black EPDM rubber compound resistant to weathering, abrasion, heat and ozone. Greek corrugated finish

# Rubber Hoses

## AIRBRAKE DIN 74310

Air Brake System Hose



Based on the special EPDM rubber compound, used for both tube and cover, the product features are low permeability to air and an excellent flexibility even in case of low temperatures. The premium rubber compounds gives resistance to high temperatures, weathering, abrasion and oil traces. Based on this product features, AIRBRAKE DIN 74310 is widely used in automotive and air brake systems.

Tube: Black, smooth EPDM nitrosamine-free rubber compound.

Reinforcement: Stress-resistant, synthetic textile yarns.

Cover: Black, abrasion, ageing and weather-resistant, smooth EPDM nitrosamine free rubber compound.

## RADIOR DIN 6

Cooling System Hose



RADIOR DIN 6 is designed for a constant working pressure of 6 bar. Also the increased temperature range from -40 °C up to +125 °C makes this hose to the preferred product for cooling systems of automotive engines, stationary engines and for refrigerant systems.

Tube: Black, smooth, heat resistant EPDM rubber compound.

Reinforcement: Synthetic textile fabrics yarns. Up to ID 25 mm. in aramid plies as requested by DIN 74311. Cover: Black, smooth, wrapped finish, heat, ageing and weather-resistant EPDM rubber compound.

# Motors - Fixed Displacement

## Vane

Fan – M5



- Heavy duty bearing
- High performance motor
- Integrated valves possible (anti cavitation check, proportional pressure relief valve, ...)
- Low noise motor
- Bi-rotational technology
- Low torque ripple
- Long lifetime
- Interchangeable rotating groups



zvp 01

| Frame size M5AF                        | 006  | 010  | 012  | 016  | 018  | 023  | 025  | M5BF | 012  | 018  | 023   | 028   | 036   | 045  |
|----------------------------------------|------|------|------|------|------|------|------|------|------|------|-------|-------|-------|------|
| Displacement (cm <sup>3</sup> /rev)    | 6.3  | 10.0 | 12.5 | 16.0 | 18.0 | 23.0 | 25.0 |      | 12.0 | 18.0 | 23.0  | 28.0  | 36.0  | 45.0 |
| Max cont pressure (bar)                | 300  | 300  | 300  | 300  | 300  | 280  | 280  |      | 290  | 290  | 290   | 290   | 290   | 260  |
| Max operating speed <sup>1</sup> (rpm) | 5000 | 5000 | 3800 | 3800 | 3300 | 3000 | 3000 |      | 4000 | 4000 | 3000  | 3000  | 3000  | 2500 |
| Max output torque <sup>2</sup> (Nm)    | 26.1 | 43.7 | 55.7 | 79.4 | 81.2 | -    | -    |      | 50.6 | 81.2 | 117.1 | 132.1 | 172.8 | -    |
| Output power <sup>2</sup> (kW)         | 5.5  | 9.2  | 11.7 | 15.2 | 17.0 | -    | -    |      | 10.6 | 17.0 | 24.5  | 27.7  | 36.2  | -    |
| Weight (kg)                            | 15.0 | 15.0 | 15.0 | 15.0 | 15.0 | 15.0 | 15.0 |      | 18.5 | 18.5 | 18.5  | 18.5  | 18.5  | 18.5 |

| Frame size M5ASF                       | 006  | 010  | 012  | 016  | 018  | 023  | 025   |  |  |  |  |  |  |  |
|----------------------------------------|------|------|------|------|------|------|-------|--|--|--|--|--|--|--|
| Displacement (cm <sup>3</sup> /rev)    | 6.3  | 10.0 | 12.5 | 16.0 | 18.0 | 23.0 | 25.0  |  |  |  |  |  |  |  |
| Max cont pressure (bar)                | 280  | 280  | 280  | 280  | 280  | 280  | 280   |  |  |  |  |  |  |  |
| Max operating speed <sup>1</sup> (rpm) | 5000 | 5000 | 3800 | 3800 | 3300 | 3000 | 3000  |  |  |  |  |  |  |  |
| Max output torque <sup>2</sup> (Nm)    | 26.1 | 43.7 | 55.7 | 72.4 | 81.2 | 98.4 | 107.4 |  |  |  |  |  |  |  |
| Output power <sup>2</sup> (kW)         | 5.5  | 9.2  | 11.7 | 15.2 | 17.0 | 20.4 | 22.5  |  |  |  |  |  |  |  |
| Weight (kg)                            | 12.2 | 12.2 | 12.2 | 12.2 | 12.2 | 12.2 | 12.2  |  |  |  |  |  |  |  |

1) Max shaft speed at max pressure

2) Output at 2000 rpm, 24 cSt &amp; M5B\* at 320 bar, 045 at 280 bar, M5AF at 300 bar

## Gerotor

TE



- High volumetric efficiency
- Long life
- Full flow spline cooling
- High pressure shaft seal
- High flow shaft seal cooling
- High starting torque
- High side load capacity
- Balanced performance in both directions of rotation



zm 03

| Frame size TE                       | 0036 | 0045 | 0050 | 0065 | 0080 | 0100 | 0130 | 0165 | 0195 | 0230 | 0260 | 0295 |  |
|-------------------------------------|------|------|------|------|------|------|------|------|------|------|------|------|--|
| Displacement (cm <sup>3</sup> /rev) | 36   | 41   | 49   | 65   | 82   | 98   | 130  | 163  | 195  | 228  | 260  | 293  |  |
| Max cont pressure (bar)             | 140  | 140  | 140  | 140  | 140  | 140  | 140  | 140  | 140  | 120  | 110  | 100  |  |
| Max operating speed (rpm)           | 1141 | 1024 | 1020 | 877  | 695  | 582  | 438  | 348  | 292  | 328  | 287  | 256  |  |
| Max cont output torque (Nm)         | 55   | 71   | 90   | 125  | 160  | 190  | 255  | 310  | 390  | 380  | 400  | 428  |  |
| Weight, code L and H (kg)           | 6.7  | 6.8  | 6.9  | 7.0  | 7.1  | 7.2  | 7.6  | 7.8  | 8.1  | 8.3  | 8.6  | 8.8  |  |

| Frame size TE                       | 0330 | 0365 | 0390 |  |
|-------------------------------------|------|------|------|--|
| Displacement (cm <sup>3</sup> /rev) | 328  | 370  | 392  |  |
| Max cont pressure (bar)             | 100  | 95   | 85   |  |
| Max operating speed (rpm)           | 228  | 203  | 191  |  |
| Max cont output torque (Nm)         | 443  | 467  | 445  |  |
| Weight, code L and H (kg)           | 9.1  | 9.4  | 9.6  |  |

TG



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



zm 06

| Frame size TG                       | 0140 | 0170 | 0195 | 0240 | 0280 | 0310 | 0335 | 0405 | 0475 | 0530 | 0625 | 0785 | 0960 |
|-------------------------------------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| Displacement (cm <sup>3</sup> /rev) | 141  | 169  | 195  | 238  | 280  | 310  | 337  | 405  | 477  | 528  | 623  | 786  | 959  |
| Max cont pressure (bar)             | 207  | 207  | 207  | 207  | 207  | 207  | 207  | 172  | 138  | 138  | 121  | 103  | 69   |
| Max operating speed (rpm)           | 660  | 554  | 477  | 393  | 334  | 303  | 277  | 232  | 237  | 213  | 182  | 143  | 118  |
| Max cont output torque (Nm)         | 390  | 475  | 555  | 675  | 795  | 924  | 965  | 940  | 885  | 980  | 985  | 1045 | 775  |
| Weight code H and V (kg)            | 14.6 | 14.8 | 15.1 | 15.5 | 15.9 | 16.1 | 16.3 | 16.9 | 17.5 | 18.3 | 19.0 | 20.5 | 22.2 |

# Motors - Fixed Displacement

## Gerotor

TK



- High volumetric efficiency
- Flow through internal spline and shaft seal cooling
- High pressure shaft seal / no drainline
- High starting torque
- High side load capacity
- Long life



zm 08

| Frame size TK                       | 0250 | 0315 | 0400 | 0500 | 0630 | 0800 | 1000 |
|-------------------------------------|------|------|------|------|------|------|------|
| Displacement (cm <sup>3</sup> /rev) | 250  | 315  | 400  | 500  | 630  | 800  | 1000 |
| Max cont pressure (bar)             | 241  | 241  | 207  | 207  | 207  | 190  | 172  |
| Max operating speed (rpm)           | 523  | 413  | 373  | 298  | 237  | 276  | 218  |
| Max cont output torque (Nm)         | 814  | 1029 | 1153 | 1439 | 1617 | 1916 | 2413 |
| Weight (kg)                         | 30.8 | 31.4 | 32.3 | 33.2 | 34.5 | 36.0 | 37.9 |

## Axial Piston

F1



- Pressures up to 350 bar
- Positive synchronization with timing gear
- Shaft end and mounting flange meet the ISO standard for all sizes
- Very low weight
- High overall efficiency withstand high acceleration



zp 16

| Frame size F1                       | 25-M | 41-M | 51-M | 61-M | 81-M | 101-M | 121-M |
|-------------------------------------|------|------|------|------|------|-------|-------|
| Displacement (cm <sup>3</sup> /rev) | 25.6 | 40.9 | 51.1 | 59.5 | 81.6 | 102.9 | 118.5 |
| Max cont pressure (bar)             | 250  | 250  | 250  | 250  | 250  | 250   | 250   |
| Max operating speed (rpm)           | 3000 | 2700 | 2400 | 2200 | 2000 | 1800  | 1700  |
| Output torque at 200 bar (Nm)       | 81   | 130  | 162  | 189  | 259  | 327   | 376   |
| Output power (kW)                   | 20   | 27   | 31   | 34   | 41   | 48    | 51    |
| Weight (kg)                         | 8.5  | 8.5  | 8.5  | 8.5  | 12.5 | 12.5  | 12.5  |

F11



- Very high operating speeds and fast accelerations
- Anti cavitation valve available
- Pressures up to 420 bar
- High overall efficiency (low losses)
- Accept high external shaft loads
- Good resistance to vibrations and temperature shocks
- Proven reliability
- Easy to service
- CETOP, ISO and SAE versions available



zp 21

| Frame size F11                      | 05    | 06    | 10    | 12   | 14   | 19   |
|-------------------------------------|-------|-------|-------|------|------|------|
| Displacement (cm <sup>3</sup> /rev) | 4.9   | 6.0   | 9.8   | 12.5 | 14.3 | 19.0 |
| Max cont pressure (bar)             | 350   | 350   | 350   | 350  | 350  | 350  |
| Max operating speed (rpm)           | 12800 | 10200 | 10200 | 9400 | 9000 | 8100 |
| Output torque at 100 bar (Nm)       | 7.8   | 9.5   | 15.6  | 19.8 | 22.7 | 30.2 |
| Weight (kg)                         | 5     | 7.5   | 7.5   | 8.2  | 8.3  | 11   |

F12



- Very high operating speeds and fast accelerations
- Pressures up to 480 bar
- High starting torque
- Very high power capability
- High overall efficiency
- Small envelope size
- Accessory valves available
- ISO, SAE and cartridge versions available
- Proven reliability
- Easy to service
- Super-shockless swing relief valve



zp 21

| Frame size F12                      | 30   | 40   | 60   | 80   | 90   | 110   | 125  | 150   | 250   |
|-------------------------------------|------|------|------|------|------|-------|------|-------|-------|
| Displacement (cm <sup>3</sup> /rev) | 30.0 | 40.0 | 59.8 | 80.4 | 93.0 | 110.1 | 125  | 150.0 | 242.0 |
| Max cont pressure (bar)             | 420  | 420  | 420  | 420  | 350  | 420   | 420  | 350   | 350   |
| Max operating speed (rpm)           | 6700 | 6100 | 5300 | 4800 | 4600 | 4400  | 4200 | 3200  | 2700  |
| Output torque at 100 bar (Nm)       | 47.6 | 63.5 | 94.9 | 128  | 148  | 175   | 198  | 238   | 384   |
| Weight (kg)                         | 12   | 16.5 | 21   | 26   | 26   | 36    | 36   | 70    | 77    |

# Pneumatic

## Truck Valves

### Cab



Highly versatile range of poppet to inline air-control panels for on and/or off-road vehicles assisting air suspension stability.

- Reduced frictionless seal technology
- Low pressure drop loss in actuation
- Robust die cast, plastic and anodized material
- Push button or toggle technology
- Normally open/normally closed operation
- Mono or bi-stable position operation

### Chassis



Load distribution legislations in various countries utilize solenoid or vacuum, including hand-lever valves, to manually or automatically operate rugged, light and heavy freight operation.

- Wide operating temperature -40 °C to +70 °C
- Environmental conditions IP67
- Electric conditions between 12-24 VDC
- Stable seal performance technology
- Wide range of body sizes 1/8-3/4 (3 mm-19 mm)
- Easily accessible adjustments

## Truck Air Prep

### Cab



Provides moisture-free and dry compressed air to the equipment and applications which require continuous and uninterrupted regulated operation.

- One-piece filter cartridge for fast maintenance
- Robust metal shell for extra safety
- Key lock metal bonnet
- Ideal for low and high flow applications
- Space saving package for optimal performance
- Precise regulation with balanced poppet
- Multi-porting options

### Chassis



Low operating noise, with the ability to withstand vibration while operating in extreme conditions.

- Flexible design suitable for retrofitting systems
- Compact and light weight housing material
- Electric or pneumatic drains
- Solid control piston for extended life
- Removable, non-rising knob for panel mounting
- Dual or three-unit combinations



zpn 01

# Power Take-Off

## Mechanical 6 & 8 Bolt Power Take-Offs

442



- Engineered to work with virtually all existing transmission applications
- Economical workhorse features a cast iron housing
- Tapered cone bearings for high torque rating and long service life
- Slip fit idler pin for easy interchange from one transmission to another
- Easy to set backlash
- Wide range of shift and output options

| Series 442                                                           | A      | B      | C      | F      | H      | L      | Q      | R      | S      | U      | W      | X      |
|----------------------------------------------------------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| Standard Output Shaft Size                                           | 1 1/4" | 1 1/4" | 1 1/4" | 1 1/4" | 1 1/4" | 1 1/4" | 1 1/4" | 1 1/4" | 1 1/4" | 1 1/4" | 1 1/4" | 1 1/4" |
| Intermittent Torque Rating (Nm)                                      | 339    | 339    | 339    | 339    | 339    | 339    | 305    | 305    | 271    | 264    | 237    | 190    |
| Power Rating for Intermittent Service:<br>at 500 rpm of Output Shaft | 18     | 18     | 18     | 18     | 18     | 18     | 16     | 16     | 14     | 14     | 12     | 10     |
| at 1000 rpm of Output Shaft (kW)                                     | 36     | 36     | 36     | 36     | 36     | 36     | 32     | 32     | 28     | 28     | 25     | 20     |

489



- 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 shifters options and pump flanges



| Series 489                                                           | A      | C      | F      | H      | L      | Q      | R      | S      | U      | W      | X      |
|----------------------------------------------------------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| Standard Output Shaft Size                                           | 1 1/4" | 1 1/4" | 1 1/4" | 1 1/4" | 1 1/4" | 1 1/4" | 1 1/4" | 1 1/4" | 1 1/4" | 1 1/4" | 1 1/4" |
| Intermittent Torque Rating (Nm)                                      | 339    | 339    | 339    | 339    | 339    | 305    | 305    | 271    | 264    | 237    | 190    |
| Power Rating for Intermittent Service:<br>at 500 rpm of Output Shaft | 18     | 18     | 18     | 18     | 18     | 16     | 16     | 14     | 14     | 12     | 10     |
| at 1000 rpm of Output Shaft (kW)                                     | 36     | 36     | 36     | 36     | 36     | 32     | 32     | 28     | 28     | 25     | 20     |

823



- Robust design for high torque applications
- Lever shift standard
- Inspection cover for adjusting backlash
- Popular pump mounts available

| Series 823                                                           | B                                  | D   | G   | J   | M   | R   | T   |
|----------------------------------------------------------------------|------------------------------------|-----|-----|-----|-----|-----|-----|
| Standard Output Shaft Size                                           | 1 1/2" 10T spline with 1410 flange |     |     |     |     |     |     |
| Intermittent Torque Rating (Nm)                                      | 678                                | 678 | 678 | 678 | 678 | 542 | 475 |
| Power Rating for Intermittent Service:<br>at 500 rpm of Output Shaft | 36                                 | 36  | 36  | 36  | 36  | 28  | 25  |
| at 1000 rpm of Output Shaft (kW)                                     | 71                                 | 71  | 71  | 71  | 71  | 57  | 50  |

880



- Wide coverage for tough applications
- Speed ratios for high and low speed applications
- Removable shift cover for adjusting backlash
- Dual-pump output for mounting a pump on each end of the PTO

| Series 880                                                           | B                                  | D   | G   | J   | M   | Q   | R   | T   |
|----------------------------------------------------------------------|------------------------------------|-----|-----|-----|-----|-----|-----|-----|
| Standard Output Shaft Size                                           | 1 1/2" 10T spline with 1410 flange |     |     |     |     |     |     |     |
| Intermittent Torque Rating (Nm)                                      | 678                                | 678 | 678 | 678 | 678 | 610 | 542 | 475 |
| Power Rating for Intermittent Service:<br>at 500 rpm of Output Shaft | 36                                 | 36  | 36  | 36  | 36  | 32  | 28  | 25  |
| at 1000 rpm of Output Shaft (kW)                                     | 71                                 | 71  | 71  | 71  | 71  | 64  | 57  | 50  |

# Power Take-Off

## Power Shift 6 & 8 Bolt Power Take-Off's

236



- Optional Internal Self-Adjusting Shaft Brake
- Wide selection of input gears for virtually all currently produced transmissions
- Helical gears and optional pressure lubrication to extend PTO service life
- Inspection cover for adjusting backlash

| Series 236                                                           | D, K & Q | U   |
|----------------------------------------------------------------------|----------|-----|
| Standard Output Shaft Size                                           | 1¼"      | 1¼" |
| Intermittent Torque Rating (Nm)                                      | 339      | 305 |
| Power Rating for Intermittent Service:<br>at 500 rpm of Output Shaft | 18       | 16  |
| at 1000 rpm of Output Shaft (kW)                                     | 36       | 32  |

270/271



- Designed for automatic transmissions
- Electric-over-hydraulic shifting
- 271 offers low profile housing for avoiding clearance problems
- Pressure lubrication available for both units

| Series 270/271                                                       | 270 <sup>1)</sup> A, B, D & K | 270 <sup>2)</sup> A, B, D & K | 271 <sup>3)</sup> A, B, D & K |
|----------------------------------------------------------------------|-------------------------------|-------------------------------|-------------------------------|
| Standard Output Shaft Size                                           | 1¼"                           | 1¼"                           | 1¼"                           |
| Intermittent Torque Rating (Nm)                                      | 407                           | 339                           | 339                           |
| Power Rating for Intermittent Service:<br>at 500 rpm of Output Shaft | 21                            | 18                            | 18                            |
| at 1000 rpm of Output Shaft (kW)                                     | 43                            | 36                            | 36                            |

<sup>1)</sup> With Pressure Lube <sup>2)</sup> With Standard Lube <sup>3)</sup> All Lube Types

852



- Designed for Heavy Duty applications
- Three speed ratios to choose from
- Pump flanges to fit most popular hydraulic pumps
- Pressure Lubrication standard

| Series 852                                                           | B                               | G   | J   |
|----------------------------------------------------------------------|---------------------------------|-----|-----|
| Standard Output Shaft Size                                           | 1½" 10T spline with 1410 flange |     |     |
| Intermittent Torque Rating (Nm)                                      | 678                             | 678 | 678 |
| Power Rating for Intermittent Service:<br>at 500 rpm of Output Shaft | 36                              | 36  | 36  |
| at 1000 rpm of Output Shaft (kW)                                     | 71                              | 71  | 71  |

885



- Designed for Heavy Duty applications such as pneumatic blowers
- Rugged cast iron housing
- Four speed ratios to choose from
- Pressure Lubrication available

| Series 885                                                           | B                               | G   | J   | M   |
|----------------------------------------------------------------------|---------------------------------|-----|-----|-----|
| Standard Output Shaft Size                                           | 1½" 10T spline with 1410 flange |     |     |     |
| Intermittent Torque Rating (Nm)                                      | 678                             | 678 | 678 | 678 |
| Power Rating for Intermittent Service:<br>at 500 rpm of Output Shaft | 36                              | 36  | 36  | 36  |
| at 1000 rpm of Output Shaft (kW)                                     | 71                              | 71  | 71  | 71  |

# Power Take-Off

## Power Shift 10 Bolt Power Take-Off's

280



- It will feature a single continuous duty torque rating. No more intermittent rating
- Torque capacity ratings have been increased
- Pump clearance issues have been improved with rotatable cast iron flanges
- New positive stop for Driveline outputs – Eliminates ability for shaft couplings to damage Oil Seals
- Wet Spline Pump Flange option provides 7 to 10 times greater shaft life
- Broader coverage of speed ranges expanding from 5 ratios to 9 ratios
- Lower and higher speed now available
- The pressure / lube hose will be included with the new 280 Series. No need to order separately
- Three option positions for the integrated solenoid valve. Plus a remote mounted option provides maximum clearance

| Series 280                                                           | B                  | C   | D   | G   | K   | M   | P   | S   | T   |
|----------------------------------------------------------------------|--------------------|-----|-----|-----|-----|-----|-----|-----|-----|
| Standard Output Shaft Size                                           | 1-1/4" Round w/key |     |     |     |     |     |     |     |     |
| Intermittent Torque Rating (Nm)                                      | 407                | 529 | 529 | 488 | 461 | 431 | 393 | 359 | 325 |
| Power Rating for Intermittent Service:<br>at 500 rpm of Output Shaft | 29                 | 37  | 37  | 34  | 32  | 30  | 28  | 25  | 23  |
| at 1000 rpm of Output Shaft (kW)                                     | 43                 | 58  | 56  | 51  | 48  | 45  | 41  | 38  | 34  |

\* SuperTorque™

870



- Integral actuation valve simplifies plumbing and reduces installation time
- Compact housing height reduces clearance issues
- Remote mount valve solves installation interference problems
- Electronic Overspeed Control (E.O.C.) protects driven equipment
- Wet Spline pump flange extends P.T.O. and pump shaft life

| Series 870                                                         | A                           | B   | C   | D   | E   | F   | G   | H   | J   |
|--------------------------------------------------------------------|-----------------------------|-----|-----|-----|-----|-----|-----|-----|-----|
| Standard Output Shaft Size                                         | 1½" Spline with 1410 flange |     |     |     |     |     |     |     |     |
| Continuous Torque Rating (Nm)                                      | 908                         | 854 | 800 | 746 | 658 | 583 | 515 | 481 | 454 |
| Power Rating for Continuous Service:<br>at 500 rpm of Output Shaft | 48                          | 45  | 42  | 39  | 35  | 31  | 27  | 25  | 24  |
| at 1000 rpm of Output Shaft (kW)                                   | 95                          | 90  | 84  | 78  | 69  | 61  | 54  | 51  | 48  |

890/892



- Moves the P.T.O. mounting flange to the rear of the transmission allowing larger pumps and in some cases it will eliminate the need for a drive shaft
- Wet Spline outputs extends shaft life and eliminates the need to disassemble to frequently grease the splines
- Require less space than current P.T.O.s. Will help clear frame rails etc.
- Torque ratings up to 670 Lbs. ft. allows the use of higher flow and pressure pumps

| Series 890/892                                                     | A              | B   | C   | D   | E   | F   |
|--------------------------------------------------------------------|----------------|-----|-----|-----|-----|-----|
| Standard Output Shaft Size                                         | 1¼" 14T spline |     |     |     |     |     |
| Continuous Torque Rating (Nm)                                      | 908            | 854 | 800 | 746 | 658 | 583 |
| Power Rating for Continuous Service:<br>at 500 rpm of Output Shaft | 48             | 45  | 42  | 39  | 35  | 31  |
| at 1000 rpm of Output Shaft (kW)                                   | 95             | 90  | 84  | 78  | 69  | 61  |

# Power Take-Off

## Constant Mesh 10 Bolt Power Take-Off's

267



- Constant Mesh (non-shiftable) PTO ideal for applications requiring continuous power
- Wet Spline Output options available
- Three speed ratios and ten output options
- SuperTorque™ gears available for 20% higher intermittent torque ratings
- No backlash to adjust

| Series 267                                                           | B   | G   | S   | SB* | SG* | SS* |
|----------------------------------------------------------------------|-----|-----|-----|-----|-----|-----|
| Standard Output Shaft Size                                           | 1¼" | 1¼" | 1¼" | 1¼" | 1¼" | 1¼" |
| Intermittent Torque Rating (Nm)                                      | 454 | 407 | 339 | 545 | 488 | 359 |
| Power Rating for Intermittent Service:<br>at 500 rpm of Output Shaft | 24  | 21  | 18  | 29  | 26  | 19  |
| at 1000 rpm of Output Shaft (kW)                                     | 48  | 43  | 36  | 57  | 51  | 38  |

\* SuperTorque™

560V



- Wet Spline for Extended P.T.O. and Pump Shaft Life
- Single Continuous Duty Torque Rating
- Torque Rating of 335 Lbs. ft. (454 N.m.)
- Flow rates 3.4 to 31.7 GPM (12.9 119.9 LPM) at 1200 R.P.M.
- Pressure Ratings up to 3500 PSI (240 Bars)
- 12 or 24 Volt Electric Over Hydraulic Actuation
- Pressure and Suction Ports Rotatable for Best Clearance
- Weight 71 Lbs. No Pump Bracket Required
- Quiet Operation
- Patent Pending

| Series 560V                  | 03   | 05   | 06   | 09   | 10   | 12   | 14   | 17   | 20   | 22   | 25   | 28   | 31    |
|------------------------------|------|------|------|------|------|------|------|------|------|------|------|------|-------|
| Displacement ml/rec          | 10.8 | 17.2 | 21.3 | 26.4 | 34.1 | 37.1 | 46.0 | 58.3 | 63.8 | 70.3 | 79.3 | 88.8 | 100.0 |
| Intermittent pressure (Bars) | 275  | 275  | 275  | 275  | 275  | 275  | 275  | 275  | 275  | 275  | 275  | 210  | 210   |
| Continuous Pressure ( Bars)  | 240  | 240  | 240  | 240  | 240  | 240  | 240  | 240  | 240  | 240  | 240  | 160  | 160   |
| Maximum RPM                  | 2800 | 2800 | 2800 | 2800 | 2800 | 2800 | 2800 | 2800 | 2800 | 2800 | 2500 | 2500 | 2500  |

897/899



- Moves the P.T.O. mounting flange to the rear of the transmission allowing larger pumps and in some cases it will eliminate the need for a drive shaft
- Require less space than current P.T.O.s. Will help clear frame rails etc.
- Torque ratings up to 908 N.m. allows the use of higher flow and pressure pumps
- Wet Spline outputs extends shaft life and eliminates the need to disassemble to frequently grease the splines

| Series 897/899                                                     | A              | B   | C   | D   | E   | F   |
|--------------------------------------------------------------------|----------------|-----|-----|-----|-----|-----|
| Standard Output Shaft Size                                         | 1½" 14T spline |     |     |     |     |     |
| Continuous Torque Rating (Nm)                                      | 908            | 854 | 800 | 746 | 658 | 583 |
| Power Rating for Continuous Service:<br>at 500 rpm of Output Shaft | 48             | 45  | 42  | 39  | 35  | 31  |
| at 1000 rpm of Output Shaft (kW)                                   | 95             | 90  | 84  | 78  | 69  | 61  |

877



- Torque capacity up to 908 N.m.
- Compact housing height reduces clearance issues
- Wet Spline pump flange extends P.T.O. and pump shaft life

| Series 877                                                         | A                           | B   | C   | D   | E   | F   | G   | H   | J   |
|--------------------------------------------------------------------|-----------------------------|-----|-----|-----|-----|-----|-----|-----|-----|
| Standard Output Shaft Size                                         | 1½" Spline with 1410 flange |     |     |     |     |     |     |     |     |
| Continuous Torque Rating (Nm)                                      | 908                         | 854 | 800 | 746 | 658 | 583 | 515 | 481 | 454 |
| Power Rating for Continuous Service:<br>at 500 rpm of Output Shaft | 48                          | 45  | 42  | 39  | 35  | 31  | 27  | 25  | 24  |
| at 1000 rpm of Output Shaft (kW)                                   | 95                          | 90  | 84  | 78  | 69  | 61  | 54  | 51  | 48  |

# Power Take-Off

## Split Shaft Power Take-Offs

912



- Three 8-Bolt openings that allow you to operate a variety of auxiliary equipment
- Wide variety of 6-Bolt, 8-Bolt, PowerShift and Reversible PTO's fit the 912 Series
- Air and Lever shift available

| Series 912                                                       |                 |           |
|------------------------------------------------------------------|-----------------|-----------|
| Standard Output Shaft Size                                       | 2 ¾" 10T Spline |           |
| Max Thru Torque Capacity w/Diesel Engine: Automatic Transmission | 13 000 lbs ft   | 17 625 Nm |
| Manual Transmission                                              | 12 000 lbs ft   | 16 270 Nm |
| Max Thru Torque Capacity w/Gas Engine: Automatic Transmission    | 16 000 lbs ft   | 21 693 Nm |
| Manual Transmission                                              | 15 000 lbs ft   | 20 337 Nm |

941



- Smaller version of the 912 Series with three 6-bolt openings
- Designed for Class 3, 4, 5 and 6 trucks with automatic transmissions and no P.T.O. opening or trucks requiring additional P.T.O. openings
- Special Park Brake Applications available
- Several 6-Bolt and Reversible P.T.O.s will fit on the 941 Series

| Series 941                                                       |                 |         |
|------------------------------------------------------------------|-----------------|---------|
| Standard Output Shaft Size                                       | 1 ½" 12T Spline |         |
| Max Thru Torque Capacity w/Diesel Engine: Automatic Transmission | 3100 lbs ft     | 4203 Nm |
| Manual Transmission                                              | 2900 lbs ft     | 3932 Nm |
| Max Thru Torque Capacity w/Gas Engine: Automatic Transmission    | 4200 lbs ft     | 5694 Nm |
| Manual Transmission                                              | 3900 lbs ft     | 5288 Nm |

## Rear Mount Power Take-Offs

511



- Rear mount design - requires less mounting space and simplifies installation
- Wet Spline outputs - Extend PTO and Pump Shaft Life. Eliminates the need to disassemble to grease the mating Pump and P.T.O. shafts
- Four direct mount pump options
- Four Shift Options
- No gear back lash to set - simplifying installation



zpto 01

| Series 511                                                              | R               |  |
|-------------------------------------------------------------------------|-----------------|--|
| Standard Output Shaft Size                                              | 4-Bolt DIN 5462 |  |
| Continuous Torque Rating (Nm)                                           | 800             |  |
| Power rating for Continuous Service At 500 rpm of the Output Shaft (kW) | 42              |  |
| At 1000 rpm of the Output Shaft (kW)                                    | 84              |  |

523



- Rear mount design - requires less mounting space and simplifies installation
- Wet Spline outputs - Extend PTO and Pump Shaft Life. Eliminates the need to disassemble to grease the mating Pump and P.T.O. shafts
- Four direct mount pump options
- Four Shift Options
- No gear back lash to set - simplifying installation

| Series 523                                                              | T               | V   |  |
|-------------------------------------------------------------------------|-----------------|-----|--|
| Standard Output Shaft Size                                              | 4-Bolt DIN 5462 |     |  |
| Continuous Torque Rating (Nm)                                           | 350             | 350 |  |
| Power rating for Continuous Service At 500 rpm of the Output Shaft (kW) | 18              | 18  |  |
| At 1000 rpm of the Output Shaft (kW)                                    | 37              | 37  |  |

# Power Take-Off



VOLVO



ZF



MERCEDES-BENZ



RENAULT



SCANIA



IVECO

## Parker PTO's

Parker's power take-off units are designed to meet the requirement of the majority of today's truck applications. The PTO range covers a great many trucks and is being continually updated to fit new gearboxes. The PTO's are used in a variety of applications such as Tippers, Hook Loaders, Skip Loaders and Cranes, and are specifically designed to close-couple pumps with the current ISO-Standard mounting flange. Alternatively, the units can be fitted with our cardan shaft adaptor to enable them to be used for a wide range of propshaft driven applications.

- Tailor made for the Parker Truck Hydraulics pumps
- Possibility to close-couple any ISO-standard pump
- Shaft-driven adaptor for other applications
- Competitively priced
- Easy to install
- Electrical indicator available on latest PTO's

Parker can, with its range of PTO units, the F1, F2, T1 and VP1 truck pumps and a great number of accessories, offer the total truck hydraulic package. Parker have become synonymous with extraordinary quality. Many body builders and chassis manufacturers now include our products as a standard part of their programme.



zpto 01

# Pumps - Fixed Displacement

## Gear

GPA



- Low noise
- High efficiency
- Bi-rotational
- Compact design
- Low weight / Aluminium body
- Pressure and suction connection in the rear and on the side



zp 45

| Frame Size GPA                      | 008  | 012  | 016  | 019  |
|-------------------------------------|------|------|------|------|
| Displacement (cm <sup>3</sup> /rev) | 8    | 12   | 16   | 19   |
| Max cont pressure (bar)             | 250  | 250  | 250  | 230  |
| Max operating speed (rpm)           | 2000 | 2000 | 2000 | 2000 |
| Weight (kg)                         | 4.6  | 4.8  | 5.1  | 5.3  |

GP1



- Low noise
- High efficiency
- Bi-rotational
- Exceptional durability
- Compact design
- Low weight
- Pressure and suction connection in the rear or on the side



zp 47

| Frame Size GP1                      | 016  | 019  | 023  | 029  | 036  | 041  | 046  | 050  | 060  | 070  | 080  | 100  |
|-------------------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Displacement (cm <sup>3</sup> /rev) | 16   | 19   | 23   | 29   | 36   | 41   | 46   | 50   | 60   | 70   | 80   | 100  |
| Max. cont. pressure (bar)           | 270  | 260  | 250  | 240  | 230  | 210  | 200  | 300  | 280  | 240  | 200  | 170  |
| Max. operating speed (rpm)          | 2000 | 2000 | 2000 | 2000 | 2000 | 2000 | 2000 | 2000 | 1800 | 1700 | 1600 | 1400 |
| Weight (kg)                         | 6.0  | 6.3  | 6.7  | 7.1  | 7.5  | 7.8  | 8.1  | 12.5 | 13.0 | 13.5 | 14.0 | 15.0 |

# Pumps - Fixed Displacement

## Vane – SAE

**DENISON®**

Single



- 275 bar max pressure for T6CM. 240 bar for T6DM & T6EM
- Silent technology even under high pressure
- Wide range of displacements
- User friendly = easy conversions & evolutions
- Wide number of shafts available (SAE, ISO & specials)
- Double shaft seal option possible (T6CP, T6DP & T6EP)
- Rear drive train options available (SAE A, SAE B or SAE C)



zvp 01

| Frame size TB                          | 003  | 004  | 005  | 006  | 008  | 009  | 011  | 012  |  |
|----------------------------------------|------|------|------|------|------|------|------|------|--|
| Displacement (cm <sup>3</sup> /rev)    | 8.8  | 12.8 | 16.0 | 20.7 | 26.1 | 31.5 | 35.6 | 39.7 |  |
| Max cont pressure (bar)                | 175  | 175  | 175  | 175  | 175  | 175  | 175  | 175  |  |
| Max int pressure (bar)                 | 175  | 190  | 190  | 190  | 190  | 190  | 190  | 190  |  |
| Max operating speed <sup>1</sup> (rpm) | 3500 | 3500 | 3400 | 3400 | 3300 | 3300 | 3200 | 3200 |  |
| Input power <sup>2</sup> (kW)          | 3.3  | 5.8  | 7.2  | 9.2  | 11.5 | 13.9 | 15.7 | 17.5 |  |
| Weight (kg)                            | 7.0  | 7.0  | 7.0  | 7.0  | 7.0  | 7.0  | 7.0  | 7.0  |  |

| Frame size T6CM                        | B03               | B05  | B06  | B08  | B10  | B12  | B14  | B17  | B20  | B22  | B25  | B28                | B31                |
|----------------------------------------|-------------------|------|------|------|------|------|------|------|------|------|------|--------------------|--------------------|
| Displacement (cm <sup>3</sup> /rev)    | 10.8              | 17.2 | 21.3 | 26.4 | 34.1 | 37.1 | 46.0 | 58.3 | 63.8 | 70.3 | 79.3 | 88.8               | 100.0              |
| Max cont pressure (bar)                | 240               | 240  | 240  | 240  | 240  | 240  | 240  | 240  | 240  | 240  | 240  | 160                | 160                |
| Max int pressure (bar)                 | 275               | 275  | 275  | 275  | 275  | 275  | 275  | 275  | 275  | 275  | 275  | 210                | 210                |
| Max operating speed <sup>1</sup> (rpm) | 2800              | 2800 | 2800 | 2800 | 2800 | 2800 | 2800 | 2800 | 2800 | 2800 | 2500 | 2500               | 2500               |
| Input power <sup>2</sup> (kW)          | 5.3 <sup>3)</sup> | 12.2 | 14.7 | 17.7 | 22.3 | 24.1 | 29.5 | 36.9 | 40.2 | 44.1 | 49.5 | 48.5 <sup>4)</sup> | 54.4 <sup>4)</sup> |
| Weight (kg)                            | 15.7              | 15.7 | 15.7 | 15.7 | 15.7 | 15.7 | 15.7 | 15.7 | 15.7 | 15.7 | 15.7 | 15.7               | 15.7               |

| Frame size T6DM                        | B14  | B17  | B20  | B24  | B28  | B31  | B35   | B38   | B42   | B45   | B50                |  |
|----------------------------------------|------|------|------|------|------|------|-------|-------|-------|-------|--------------------|--|
| Displacement (cm <sup>3</sup> /rev)    | 47.6 | 58.2 | 66.0 | 79.5 | 89.7 | 98.3 | 111.0 | 120.3 | 136.0 | 145.7 | 158.0              |  |
| Max cont pressure (bar)                | 210  | 210  | 210  | 210  | 210  | 210  | 210   | 210   | 210   | 210   | 160                |  |
| Max int pressure (bar)                 | 240  | 240  | 240  | 240  | 240  | 240  | 240   | 240   | 240   | 240   | 210                |  |
| Max operating speed <sup>1</sup> (rpm) | 2500 | 2500 | 2500 | 2500 | 2500 | 2500 | 2500  | 2500  | 2200  | 2200  | 2200               |  |
| Input power <sup>2</sup> (kW)          | 30.6 | 37.0 | 41.7 | 49.8 | 55.9 | 61.0 | 68.7  | 74.3  | 83.7  | 89.5  | 85.0 <sup>4)</sup> |  |
| Weight (kg)                            | 24.0 | 24.0 | 24.0 | 24.0 | 24.0 | 24.0 | 24.0  | 24.0  | 24.0  | 24.0  | 24.0               |  |

| Frame size T6EM                        | 042   | 045   | 050   | 052   | 054   | 057   | 062   | 066   | 072   |  |
|----------------------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|--|
| Displacement (cm <sup>3</sup> /rev)    | 132.3 | 142.4 | 158.5 | 164.8 | 171.0 | 183.3 | 196.7 | 213.3 | 227.1 |  |
| Max cont pressure (bar)                | 210   | 210   | 210   | 210   | 210   | 210   | 210   | 210   | 210   |  |
| Max int pressure (bar)                 | 240   | 240   | 240   | 240   | 240   | 240   | 240   | 240   | 240   |  |
| Max operating speed <sup>1</sup> (rpm) | 2200  | 2200  | 2200  | 2200  | 2200  | 2200  | 2200  | 2200  | 2200  |  |
| Input power <sup>2</sup> (kW)          | 82.6  | 88.7  | 98.3  | 102.1 | 105.8 | 113.2 | 121.3 | 131.2 | 139.5 |  |
| Weight (kg)                            | 43.3  | 43.3  | 43.3  | 43.3  | 43.3  | 43.3  | 43.3  | 43.3  | 43.3  |  |

1) Shaft speed for petroleum based fluids. For higher speeds, please contact Parker

2) 1500 rpm at 240 bar (except TB at 175 bar)

3) 140 bar

4) 210 bar max

Double



- Very low noise
- SAE or ISO standards
- One piece shaft (no internal torque limitations)
- Single common inlet
- 32 porting orientations available, 16 different double pump frames
- 819 displacement possibility (from 10.8 to 227.1 cm<sup>3</sup>/rev) with a max displacement of 454.2 cm<sup>3</sup>/rev
- Displacement combinations with above T6CM – T6DM & T6EM
- High power to weight ratio
- Wide range of options available = different shafts, threads, pilots
- Double shaft seal option available (T6CCP, T6DCP, T6ECP & T6EDP)
- Special shafts for tractors (J718c) T6CCMW, T6DCMW, T6ECM & T6EDM)

Triple



- Very low noise
- Single common inlet
- 128 porting orientations available
- 6766 displacement combinations (from 10.8 to 227.1 cm<sup>3</sup>/rev) with a max displacement of 552 cm<sup>3</sup>/rev
- One piece shaft (no internal torque limitation)
- High power to weight ratio
- 15 different triple pump frames available



# Pumps - Fixed Displacement

## Vane

Single & Double



- Special PTO shaft DIN 5462
- Silent technology
- Designed for radial load capability
- Flexibility in the porting
- Two pilot options = 4 bolts Ø 80.0 or 3 bolts Ø 52.0
- Maximum working pressure 275 bar
- Double pump available (T6GCC)



zvp 01

| Frame size T6GC - T6ZC                 | B03                                      | B05  | B06  | B08  | B10  | B12  | B14  | B17  | B20  | B22  | B25  | B28  | B31   |
|----------------------------------------|------------------------------------------|------|------|------|------|------|------|------|------|------|------|------|-------|
| Displacement (cm <sup>3</sup> /rev)    | 10.8                                     | 17.2 | 21.3 | 26.4 | 34.1 | 37.1 | 46.0 | 58.3 | 63.8 | 70.3 | 79.3 | 88.8 | 100.0 |
| Max cont pressure (bar)                | 240                                      | 240  | 240  | 240  | 240  | 240  | 240  | 240  | 240  | 240  | 240  | 160  | 160   |
| Max int pressure (bar)                 | 257                                      | 275  | 275  | 275  | 275  | 275  | 275  | 275  | 275  | 275  | 275  | 210  | 210   |
| Max operating speed <sup>1</sup> (rpm) | 2800                                     | 2800 | 2800 | 2800 | 2800 | 2800 | 2800 | 2800 | 2800 | 2800 | 2500 | 2500 | 2500  |
| Max input power <sup>2</sup> (kW)      | -                                        | 12.2 | 14.7 | 17.7 | 22.3 | 24.1 | 29.5 | 36.9 | 40.2 | 44.1 | 49.5 | 48.5 | 54.4  |
| Weight (kg)                            | T6GC = 18.0   T6ZC = 14.0   T6GCC = 27.2 |      |      |      |      |      |      |      |      |      |      |      |       |

1) Shaft speed for petroleum based fluids. For higher speeds, please contact Parker Denison

2) 1500 rpm at 240 bar

## Vane – Cardan Shaft

Double – T6CCZ



- High radial & axial loads capabilities
- 3 different keyed shafts available
- One inlet
- Displacements = on P1 from 10 to 100 cm<sup>3</sup>/rev & P2 from 10 to 100 cm<sup>3</sup>/rev
- Pressure: up to 275 bar on P1 & P2

# Pumps - Fixed Displacement

## Axial Piston

F1



- Intermittent pressures up to 400 bar
- High power capability
- High shaft speed
- Low weight
- Bi-directional
- Volumetric efficiency 98 %
- Also SAE-B available sizes 25 up to 61



zp 16

| Frame size F1                       | 25   | 41   | 51   | 61   | 81   | 101   |
|-------------------------------------|------|------|------|------|------|-------|
| Displacement (cm <sup>3</sup> /rev) | 25.6 | 40.9 | 51.1 | 59.5 | 81.6 | 102.9 |
| Max cont pressure (bar)             | 350  | 350  | 350  | 350  | 350  | 350   |
| Max operating speed* (rpm)          | 2700 | 2700 | 2700 | 2700 | 2300 | 2300  |
| Max operating speed** (rpm)         | 2600 | 2400 | 2200 | 2200 | 2000 | 1800  |
| Input torque at 350 bar (Nm)        | 142  | 227  | 284  | 331  | 453  | 572   |
| Max cont input power (kW)           | 31   | 46   | 52   | 61   | 76   | 86    |
| Weight (kg)                         | 8.5  | 8.5  | 8.5  | 8.5  | 12.5 | 12.5  |

\* Unloaded pump (BPV)

\*\* In service 350 bar

F2



- Twin Flow / Dual displacement
- High power capability
- High shaft speed
- Easy to install
- Smart System Solutions
- Proven reliability



zp 16

| Frame size F2                       | 42/42 | 55/28 | 53/53 | 70/35 | 70/70 |
|-------------------------------------|-------|-------|-------|-------|-------|
| Displacement (cm <sup>3</sup> /rev) | 43/41 | 54/52 | 55/28 | 69/36 | 68/68 |
| Max cont pressure (bar)             | 350   | 350   | 350   | 350   | 300   |
| Max operating speed* (rpm)          | 2550  | 2550  | 2550  | 2550  | 2550  |
| Max operating speed** (rpm)         | 1800  | 1800  | 1800  | 1800  | 1650  |
| Input torque at 350 bar (Nm)        | 467   | 461   | 589   | 583   | 648   |
| Max cont input power (kW)           | 88    | 88    | 110   | 110   | 112   |
| Weight (kg)                         | 19    | 19    | 19    | 19    | 19    |

\* Unloaded pump (BPV)

\*\* In service 350 bar

T1



- Pressures up to 350 bar
- Shaft speed to 2300 rpm
- High overall efficiency
- Bi-directional
- Proven reliability



zp 16

| Frame size T1                       | 51   | 81   | 121   |
|-------------------------------------|------|------|-------|
| Displacement (cm <sup>3</sup> /rev) | 50.0 | 81.5 | 118.5 |
| Max cont pressure (bar)             | 200  | 200  | 200   |
| Max operating speed* (rpm)          | 2300 | 2300 | 2300  |
| Max operating speed** (rpm)         | 2100 | 2000 | 1600  |
| Input torque at 200 bar (Nm)        | 158  | 258  | 375   |
| Max cont input power (kW)           | 27   | 54   | 71    |
| Weight (kg)                         | 7.2  | 8.5  | 12.5  |

\* Unloaded pump (BPV)

\*\* In service 350 bar

# Pumps - Fixed Displacement

## Axial Piston

F11



- Pressures up to 420 bar
- High overall efficiency (low losses)
- Accept high external shaft loads
- Good resistance to vibrations and temperature shocks
- Proven reliability
- Easy to service
- CETOP, ISO and SAE versions available



zp 21

| Frame size F11                      | 05   | 10   | 12   | 14   | 19   |
|-------------------------------------|------|------|------|------|------|
| Displacement (cm <sup>3</sup> /rev) | 4.9  | 9.8  | 12.5 | 14.3 | 19.0 |
| Max cont pressure (bar)             | 350  | 350  | 350  | 350  | 350  |
| Max operating speed (rpm)           | 4600 | 4200 | 4000 | 3900 | 3500 |
| Weight (kg)                         | 5    | 7.5  | 8.2  | 8.3  | 11   |

F12



- Pressures up to 480 bar
- Very high power capability
- High overall efficiency
- Small envelope size
- ISO, SAE and cartridge versions available
- Proven reliability
- Easy to service



zp 21

| Frame size F12                      | 30   | 40   | 60   | 80   | 90   | 110   | 125  | 150   | 250   |
|-------------------------------------|------|------|------|------|------|-------|------|-------|-------|
| Displacement (cm <sup>3</sup> /rev) | 30.0 | 40.0 | 59.8 | 80.4 | 93.0 | 110.1 | 125  | 150.0 | 242.0 |
| Max cont pressure (bar)             | 420  | 420  | 420  | 420  | 350  | 420   | 420  | 350   | 350   |
| Max operating speed (rpm)           | 3150 | 2870 | 2500 | 2300 | 2300 | 2200  | 2100 | 1700  | 1500  |
| Weight (kg)                         | 12   | 16.5 | 21   | 26   | 26   | 36    | 36   | 70    | 77    |

## Boost Unit

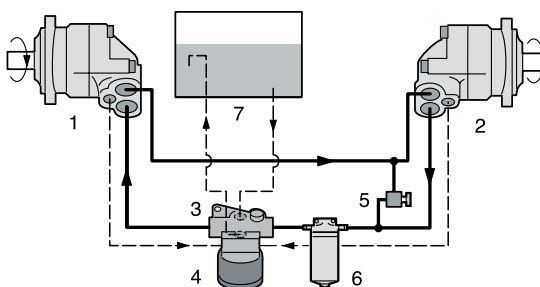
BLA



The boost unit provides filtration and make-up fluid to replace pump and motor volumetric losses, while maintaining sufficient pump inlet pressure to avoid cavitation. The semi-closed system could be built with a smaller and lighter reservoir at the same time as, the pump speed is possible to increase. The Boost Units BLA are available in two different sizes:

BLA 4 for flow 25–160 litres per minute,

BLA 6 for flow 150–400 litres per minute.



1. Pump  
4. Filter cartridge  
7. Reservoir

2. Motor  
5. Pressure relief valve

3. Boost unit (with injector and nozzle)  
6. Full-flow filter (when required)

# Pumps - Variable Displacement

## Axial Piston

VP1



- Intermittent pressure up to 400 bar
- Suitable for all load-sensing systems
- Splined shaft DIN 5462
- Light and compact
- Mounting flange and shaft meet the ISO Standard
- Strong and reliable
- Less energy – less fuel – less heat



zp 16

| Frame size* VP1                     | 45    | 75    | 95     | 120   |
|-------------------------------------|-------|-------|--------|-------|
| Displacement (cm <sup>3</sup> /rev) | 45    | 75    | 95     | 120   |
| Max cont pressure (bar)             | 350   | 350   | 400    | 360   |
| Max operating speed (rpm)           | 2400* | 2200* | 2200** | 1900* |
| Input power (kW)                    | 63    | 96    | 139    | 137   |
| Weight (kg)                         | 27    | 27    | 27     | 27    |

\* 2 1/2" suction line    \*\* 3" suction line

**DENISON®**

## Axial Piston & Fixed Vane Combination

Double &amp; Triple



- Variable piston & vane pump combination
- Wide range of displacements:
  - Variable piston unit of 42 cm<sup>3</sup>/rev (SAE B) or 62 cm<sup>3</sup>/rev (SAE C)
  - Vane unit from 6 cm<sup>3</sup>/rev to 158 cm<sup>3</sup>/rev
- One inlet, one shaft (no internal torque limitations)
- Pressure controls (standard, ventable & ventable by electronic valve, load sensing)
- Very compact unit
- Splined & keyed shafts available
- 10 frame size available

# Directional Control Valves

## Load Sensing Valves

P70LS



L90LS



VP120



## Constant Flow Valves

P70CF



F130CF



Parker Directional Control Valves have built in functionality that support Truck market applications. See details in spreadsheet below.



zv 01

| Product type                  | Load Sensing   |                 |                  |
|-------------------------------|----------------|-----------------|------------------|
| Compensator Y/N               | No Compensator | Pre Compensated | Post Compensated |
| Product name                  | P70LS          | L90LS           | VP120            |
| No of sections                | 10             | 12              | 10               |
| <b>Covers</b>                 |                |                 |                  |
| Pump flow (l/min)             | 90             | 200             | 160              |
| Section flow (l/min)          | 90             | 125             | 120              |
| Pump port (bar)               | 320            | 320             | 280              |
| Work port (bar)               | 350            | 350             | 320              |
| Tank port (bar)               | 20             | 20              | 15               |
| Threaded ports                | x              | x               | x                |
| By-pass                       |                | x               |                  |
| Copy spool in inlet           |                | x               |                  |
| Counter pressure              |                | x               |                  |
| Pilot reducer                 | x              | x               | x                |
| Pump protection               | x              | x               | x                |
| Pump unloading                | x              |                 |                  |
| Pump blocking                 |                | x               |                  |
| <b>Sections</b>               |                |                 |                  |
| Port reliefs                  | x              | x               | x                |
| Main spool                    | x              | x               | x                |
| Boost / Margin control        |                |                 | x                |
| Force feedback                |                | x               |                  |
| Pressure control              |                | x               |                  |
| Signal lines                  |                | x               |                  |
| Priority function             |                | x               |                  |
| LS pick up system             | x              | x               | x                |
| LS compensator spool          |                | x               |                  |
| AS compensator spool          |                | x               |                  |
| Flowsharing compensator spool |                |                 | x                |
| Feed reducer, individuell     |                | x               |                  |
| Feed reducer, common          |                |                 | x                |
| <b>Controls</b>               |                |                 |                  |
| Manual                        |                | x               | x                |
| Pneumatic                     |                | x               |                  |
| Hydraulic                     | x              | x               | x                |
| Electro-hydraulic             | x              | x               | x                |
| On-board electronics          |                | x               |                  |

| Product type             | Constant Flow |        |
|--------------------------|---------------|--------|
| Product name             | P70CF         | F130CF |
| No of sections           | 10            | 11     |
| <b>Covers</b>            |               |        |
| <b>[Inlet or Outlet]</b> |               |        |
| Pump port (bar)          | 320           | 320    |
| Work port (bar)          | 350           | 350    |
| Tank port (bar)          | 20            | 20     |
| Power beyond             | x             | x      |
| Counter pressure         | x             | x      |
| Pilot reducer            | x             | x      |
| Pump protection          | x             | x      |
| Pump unloading           | x             |        |
| Pump blocking            | x             |        |
| <b>Mid Inlet</b>         |               |        |
| Common flow              | x             | x      |
| Split flow               | x             | x      |
| <b>Sections</b>          |               |        |
| Port reliefs             | x             | x      |
| Main spool               | x             | x      |
| Priority function        | x             | x      |
| <b>Controls</b>          |               |        |
| Manual                   | x             | x      |
| Pneumatic                | x             | x      |
| Hydraulic                | x             | x      |
| Electro-hydraulic        | x             | x      |

# Remote Control System

## Pneumatic

VP04



- Pneumatic pilot valve
- Proportional
- Linear or joystick hand control
- For controlling valves



zr 21

| System Type                                  | Pneumatic Pilot Pressure |  |
|----------------------------------------------|--------------------------|--|
| Control pressure range                       | 0–8 bar                  |  |
| Control flow                                 | max. 7 nl/s              |  |
| Control curves with straight characteristics | X                        |  |
| Friction brake for retention in any position | X                        |  |
| Mechanical end-position detent               | X                        |  |

## Hydraulic

PCL4



- Hydraulic pilot valve
- Proportional
- Linear hand / foot control
- Joystick hand control
- For controlling valves, pumps or motors

| System Type                                           | Hydraulic Pilot Pressure |  |
|-------------------------------------------------------|--------------------------|--|
| Control pressure range                                | 1–75 bar                 |  |
| Control flow                                          | max. 15 l/min            |  |
| Max supply pressure                                   | 100 bar                  |  |
| Individual control characteristics for each direction | X                        |  |
| Selectable start and final pressures                  | X                        |  |
| Selectable lever force                                | X                        |  |
| Curves with straight characteristics                  | X                        |  |
| Curves with two-step characteristics                  | X                        |  |
| Curves with forced opening (final step)               | X                        |  |
| Friction brake for retention in any position          | X                        |  |
| Mechanical or solenoid end position detent            | X                        |  |

## Electrohydraulic

PVC6



- Proportional pressure reducing valve assembly
- Up to 6 solenoid sections
- Converts electric current to hydraulic pressure
- For 12 or 24 Volt
- Used to control mobile directional control valves



zr 02

# Remote Control Systems

## Electronic units

IQAN



The state-of-the-art IQAN system is a unique, totally electronic approach that replaces mechanical and electromechanical systems for controlling and monitoring hydraulics in mobile machines. With Parker's IQAN, you have complete freedom to design customized software without the need for advanced programming skills.

The flexible functions available within the IQAN system allow sophisticated applications to be programmed and optimized very quickly, enabling huge savings on development time – and cost. The IQAN software tools cover all phases of a machine's life cycle, from development through production to after sales.

### Functional safety

The robust hardware, built in error-detection and the high-level development tool IQANdesign, are important factors that reduce the risk of dangerous faults in the machine.

For applications with high demands on safety function, such as overload prevention or wheel steering, the IQAN-MC3 is the state-of-the-art choice. The IQAN-MC3 is a controller developed in accordance with IEC 61508, for safety functions requiring up to SIL2.

Components



### Remote diagnostics

When a modem is fitted to the machine, it allows for remote diagnostics with the same powerful diagnostic features as when connected locally.



zr 01

| System Types     | IQANdesign platform                                        |  |
|------------------|------------------------------------------------------------|--|
| CANbus Master    | IQAN-MD4, IQAN-MD3, IQAN-MC2, IQAN-MC3                     |  |
| CANbus Modules   | IQAN-XA2, IQAN-XS2, IQAN-XS3, IQAN-XT2, IQAN-XC10, IQAN-G2 |  |
| CANbus Joysticks | IQAN-LC5-C01, IQAN-LM                                      |  |
| Analog Joysticks | IQAN-LC6, IQAN-LSL, IQAN-LST, IQAN-LF1, IQAN-LC5-X05       |  |
| Sensors          | IQAN-SP035, IQAN-SP500, IQAN SENSORS                       |  |

IQAN Software tools



The IQAN software studios cover all phases of a machine's life cycle, from development through production to after sales. The main philosophy behind the IQAN Software Studios is that the OEM, with their extensive knowledge of their machine's life cycle, should be able to create software that makes their product perform at top level, easy to produce and giving the end user maximum up-time. All this can be achieved without any previous programming experience – anyone who knows what functions are needed can learn to build them in a remarkably short time.

**IQANdesign** - Development tool for application software

**IQANsimulate** - For simulation during development, but also for training of service technicians and operators

**IQANrun** - Service tool, used both in production line and as a powerful diagnostic tool for field service

**IQANscript** - Scripting of IQANrun operations for production and field service

**IQANcustomize** - Enhance the look and feel of the service tool IQANrun, to make it OEM specific.



# Auxiliary Valves - Threaded Cartridge Valves



## Directional Control Valves



zv 40  
HY15-3502/USA/EU

| Valve Type                                   | Max Working Pressure (bar) | Flow Capacity (l/min) |  |
|----------------------------------------------|----------------------------|-----------------------|--|
| Manual valves                                | 240                        | 50                    |  |
| Manual three-way valves                      | 240                        | 25                    |  |
| Manual four-way valves                       | 240                        | 8                     |  |
| Pilot operated valves                        | 240                        | 40                    |  |
| Solenoid, poppet-type, two-way valves        | 345                        | 265                   |  |
| Solenoid, poppet-type, bi-directional valves | 345                        | 20                    |  |
| Solenoid, spool-type, two-way valves         | 345                        | 75                    |  |
| Solenoid, spool-type, three-way valves       | 345                        | 65                    |  |
| Solenoid, spool-type, four-way valves        | 345                        | 30                    |  |
| Double solenoid, spool-type, four-way valves | 345                        | 25                    |  |

## Proportional Control Valves



zv 41

| Valve Type                                                           | Max Working Pressure (bar) | Flow Capacity (l/min) |  |
|----------------------------------------------------------------------|----------------------------|-----------------------|--|
| Solenoid operated, two-way NC or NO proportional flow control valves | 207                        | 225                   |  |
| Solenoid operated, two-way NO, proportional pressure control valves  | 207                        | 150                   |  |
| Solenoid operated, two-way NC throttle valves                        | 207                        | 20                    |  |
| Solenoid operated, proportional pressure reducing valves             | 207                        | 40                    |  |
| Solenoid operated, three-way, proportional pressure control valves   | 207                        | 11                    |  |

# Auxiliary Valves - Threaded Cartridge Valves

## Load Holding Valves



zv 42

| Valve Type                         | Max Working Pressure (bar) | Flow Capacity (l/min) |  |
|------------------------------------|----------------------------|-----------------------|--|
| Counterbalance valves              | 345                        | 0-750                 |  |
| Check valves                       | 345                        | 0-375                 |  |
| Soft seat check valves             | 207                        | 0-60                  |  |
| Vent-to-open check valves          | 240                        | 0-225                 |  |
| Pilot-to-close check valves        | 240                        | 0-150                 |  |
| Single pilot operated check valves | 207                        | 0-190                 |  |
| Double pilot operated check valves | 207                        | 0-190                 |  |
| Shuttle valves                     | 240                        | 0-25                  |  |

## Pressure Control Valves



zv 43

| Valve Type                              | Max Working Pressure (bar) | Max Setting Pressure (bar) | Flow Capacity (l/min) |  |
|-----------------------------------------|----------------------------|----------------------------|-----------------------|--|
| Direct acting relief valves             | 345                        | 345                        | 0-150                 |  |
| Cross-over relief valves                | 240                        | 240                        | 0-75                  |  |
| Dual relief with anti-cavitation checks | 345                        | 345                        | 0-60                  |  |
| Pilot operated relief valves            | 345                        | 345                        | 0-375                 |  |
| Pressure sensing valves                 | 345                        |                            | 0-190                 |  |
| Reducing/relieving valves               | 345                        | 345                        | 0-150                 |  |
| Direct acting pressure reducing valves  | 345                        | 345                        | 0-60                  |  |
| Pressure reducing valves                | 345                        | 345                        | 0-60                  |  |
| Pressure reducing spools                | 345                        |                            | 0-19                  |  |
| Sequence valves                         | 345                        | 345                        | 0-150                 |  |
| Unloading relief valves                 | 240                        | 207                        | 0-6                   |  |
| Logic elements                          | 250                        | 250                        | 0-19                  |  |
| Thermal relief                          | 250                        | 250                        | 0-30                  |  |

## Flow Control Valves



zv 44

| Valve Type                                                     | Max Working Pressure (bar) | Max Flow Setting (l/min) | Flow Capacity (l/min) |  |
|----------------------------------------------------------------|----------------------------|--------------------------|-----------------------|--|
| Needle valves                                                  | 240                        |                          | 0-190                 |  |
| Rotary adjust needle valves                                    | 240                        |                          | 0-60                  |  |
| Flow divider/combiner valves                                   | 207                        |                          | 0-45                  |  |
| Pilot control flow control valves                              | 207                        |                          | 0-60                  |  |
| Flow control valves                                            | 240                        |                          | 0-45                  |  |
| Restrictive-type, pressure compensated valves                  | 240                        |                          | 0-150                 |  |
| Priority-type, pressure compensated valves                     | 240                        | 0-40                     | 0-60                  |  |
| Restrictive-type, pressure compensated flow regulator valves   | 240                        |                          | 0-60                  |  |
| Priority-type, pressure compensated flow regulator valves      | 240                        | 0-35                     | 0-60                  |  |
| Priority-type, pressure compensated flow regulator with relief | 240                        | 0-35                     | 0-60                  |  |
| Velocity fuses                                                 | 207                        |                          | 0-30                  |  |

# Auxiliary Valves

## Threaded Cartridge Valves



Directly controlled pressure-relief valves with anti-cavitation function. The valves have good pressure characteristics together with very short reaction times. They are compact, tight, reliable and not sensitive to contamination.



| Valve Type             | Max Working Pressure bar | Max Setting Pressure bar | Flow Capacity l/min |
|------------------------|--------------------------|--------------------------|---------------------|
| Pressure relief valves | 600                      | 25-550                   | 0-350               |

## Auxiliary Valves



Parker's stackable selector valve is operated by a wet pin solenoid. The valve is capable of switching from one circuit to another at a variety of flows and pressures. If more than two circuits are to be controlled then additional units can be stacked together. Alternatively, the valve can be connected to a pump and used to direct the flow to either one of two different circuits.

- Stackable
- Reduce pipe work
- Reduce number of fittings
- Reduce number of directional control valves spool sections

The pressure reducing valve is of three-way design.

- Compact
- Easy to adjust
- Factory set and sealed

The sequence valve is designed to open or close a hydraulic pilot signal when it reaches a predetermined pressure level.

- Compact
- Several pressure ranges available
- Can be factory set and sealed

The shuttle valve enables two signal flows in a hydraulic system to be directed alternately into a common service line. The flow with the highest pressure takes priority.

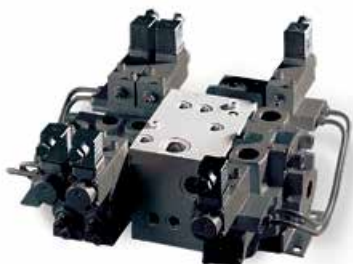
- Small dimensions
- Rapid switching
- Negative overlapping
- Reacts on very small flows
- Minimal leakage



| Valve Type                                                                       | Max Working Pressure bar | Flow Capacity l/min |
|----------------------------------------------------------------------------------|--------------------------|---------------------|
| Stackable, 2-position, 4-way, solenoid operated, circuit selector control valves | 210                      | 40                  |
| Pressure reducer valve                                                           | 250                      | 25                  |
| Sequence valve                                                                   | 250                      | 25                  |
| Shuttle valve                                                                    | 250                      | 20                  |

# Hydraulic Manifold Blocks

## Hydraulic Cartridge Systems



Hydraulic Manifold Blocks are designed to meet the many demands on mobile hydraulic equipment. Manifold blocks offer you the following benefits:

- Minimum number of tubing, hoses and couplings
- Fewer components
- Fewer leakage points
- Less space required
- Simplified assembly and service instructions
- Complete system solution with optimized functions



Manifold blocks can be flanged to one or more directional valves as well as to pumps, cylinders, motors and filters.

Some cartridge valve products offered by Parker include:

- Directional Control Valves
- Logic Elements and Flow Controls
- Pressure Controls
- Proportional Valves
- Powershift Transmission Controls
- Load Holding Valves



Parker offers value-added services such as manifold design using 3D CAD and CAM software, application engineering assistance and assembly and testing capabilities.

When you need finished integrated hydraulic circuits with extremely short lead times, the Parker 'Speed Shop' is the place to go. Parker's expert application engineers along with the latest computer-aided design technology can bring advanced new custom products to market faster.

The solution to your problem is only minutes away when Parker's Quick Design proposals and quotes that are created using 3D CAD. Once the design is finalized, the 'Speed Shop' process is further streamlined by utilizing electronic communications and approvals. When design specifications meet customer requirements, Parker's CAD linked prototype machining produces fully functional hydraulic integrated circuits. All prototypes are fully tested and documented before being released to production. In today's highly competitive market, speed and quality are critical for success.



zv 22



# Parker's Motion & Control Technologies

At Parker, we're guided by a relentless drive to help our customers become more productive and achieve higher levels of profitability by engineering the best systems for their requirements. It means looking at customer applications from many angles to find new ways to create value. Whatever the motion and control technology need, Parker has the experience, breadth of product and global reach to consistently deliver. No company knows more about motion and control technology than Parker. For further info call 00800 27 27 5374



## Aerospace Key Markets

Aftermarket services  
Commercial transports  
Engines  
General & business aviation  
Helicopters  
Launch vehicles  
Military aircraft  
Missiles  
Power generation  
Regional transports  
Unmanned aerial vehicles

## Key Products

Control systems & actuation products  
Engine systems & components  
Fluid conveyance systems & components  
Fluid metering, delivery & atomization devices  
Fuel systems & components  
Fuel tank inerting systems  
Hydraulic systems & components  
Thermal management  
Wheels & brakes



## Climate Control Key Markets

Agriculture  
Air conditioning  
Construction Machinery  
Food & beverage  
Industrial machinery  
Life sciences  
Oil & gas  
Precision cooling  
Process  
Refrigeration  
Transportation

## Key Products

Accumulators  
Advanced actuators  
CO<sub>2</sub> controls  
Electronic controllers  
Filter driers  
Hand shut-off valves  
Heat exchangers  
Hose & fittings  
Pressure regulating valves  
Refrigerant distributors  
Safety relief valves  
Smart pumps  
Solenoid valves  
Thermostatic expansion valves



## Electromechanical Key Markets

Aerospace  
Factory automation  
Life science & medical  
Machine tools  
Packaging machinery  
Paper machinery  
Plastics machinery & converting  
Primary metals  
Semiconductor & electronics  
Textile  
Wire & cable

## Key Products

AC/DC drives & systems  
Electric actuators, gantry robots & slides  
Electrohydraulic actuation systems  
Electromechanical actuation systems  
Human machine interface  
Linear motors  
Stepper motors, servo motors, drives & controls  
Structural extrusions



## Filtration Key Markets

Aerospace  
Food & beverage  
Industrial plant & equipment  
Life sciences  
Marine  
Mobile equipment  
Oil & gas  
Power generation & renewable energy  
Process  
Transportation  
Water Purification

## Key Products

Analytical gas generators  
Compressed air filters & dryers  
Engine air, coolant, fuel & oil filtration systems  
Fluid condition monitoring systems  
Hydraulic & lubrication filters  
Hydrogen, nitrogen & zero air generators  
Instrumentation filters  
Membrane & fiber filters  
Microfiltration  
Sterile air filtration  
Water desalination & purification filters & systems



## Fluid & Gas Handling Key Markets

Aerial lift  
Agriculture  
Bulk chemical handling  
Construction machinery  
Food & beverage  
Fuel & gas delivery  
Industrial machinery  
Life sciences  
Marine  
Mining  
Mobile  
Oil & gas  
Renewable energy  
Transportation

## Key Products

Check valves  
Connectors for low pressure fluid conveyance  
Deep sea umbilicals  
Diagnostic equipment  
Hose couplings  
Industrial hose  
Mooring systems & power cables  
PTFE hose & tubing  
Quick couplings  
Rubber & thermoplastic hose  
Tube fittings & adapters  
Tubing & plastic fittings



## Hydraulics Key Markets

Aerial lift  
Agriculture  
Alternative energy  
Construction machinery  
Forestry  
Industrial machinery  
Machine tools  
Marine  
Material handling  
Mining  
Oil & gas  
Power generation  
Refuse vehicles  
Renewable energy  
Truck hydraulics  
Turf equipment

## Key Products

Accumulators  
Cartridge valves  
Electrohydraulic actuators  
Human machine interfaces  
Hybrid drives  
Hydraulic cylinders  
Hydraulic motors & pumps  
Hydraulic systems  
Hydraulic valves & controls  
Hydrostatic steering  
Integrated hydraulic circuits  
Power take-offs  
Power units  
Rotary actuators  
Sensors



## Pneumatics Key Markets

Aerospace  
Conveyor & material handling  
Factory automation  
Life science & medical  
Machine tools  
Packaging machinery  
Transportation & automotive

## Key Products

Air preparation  
Brass fittings & valves  
Manifolds  
Pneumatic accessories  
Pneumatic actuators & grippers  
Pneumatic valves & controls  
Quick disconnects  
Rotary actuators  
Rubber & thermoplastic hose & couplings  
Structural extrusions  
Thermoplastic tubing & fittings  
Vacuum generators, cups & sensors



## Process Control Key Markets

Alternative fuels  
Biopharmaceuticals  
Chemical & refining  
Food & beverage  
Marine & shipbuilding  
Medical & dental  
Microelectronics  
Nuclear Power  
Offshore oil exploration  
Oil & gas  
Pharmaceuticals  
Power generation  
Pulp & paper  
Steel  
Water/wastewater

## Key Products

Analytical Instruments  
Analytical sample conditioning products & systems  
Chemical injection fittings & valves  
Fluoropolymer chemical delivery fittings, valves & pumps  
High purity gas delivery fittings, valves, regulators & digital flow controllers  
Industrial mass flow meters/ controllers  
Permanent no-weld tube fittings  
Precision industrial regulators & flow controllers  
Process control double block & bleeds  
Process control fittings, valves, regulators & manifold valves



## Sealing & Shielding Key Markets

Aerospace  
Chemical processing  
Consumer  
Fluid power  
General Industrial  
Information technology  
Life sciences  
Microelectronics  
Military  
Oil & gas  
Power generation  
Renewable energy  
Telecommunications  
Transportation

## Key Products

Dynamic seals  
Elastomeric o-rings  
Electro-medical instrument design & assembly  
EMI shielding  
Extruded & precision-cut, fabricated elastomeric seals  
High temperature metal seals  
Homogeneous & inserted elastomeric shapes  
Medical device fabrication & assembly  
Metal & plastic retained composite seals  
Shielded optical windows  
Silicone tubing & extrusions  
Thermal management  
Vibration dampening

ENGINEERING YOUR SUCCESS.

## Notes

[illegible]

## Notes

[illegible]

## Notes

[illegible]

# DVD Information

## System Requirements

To view the DVD, the following are required:

- Pentium®-class processor
- Win® XP, SP3
- 128 MB of RAM (512 MB recommended)

## Acrobat Reader

Catalogue files are viewed using a customized document viewer based on Adobe Acrobat Reader. If you have an earlier version than Acrobat Reader 9.0 installed on your PC, you will be given the option to install Acrobat Reader 9.0 from the DVD.

## To View the DVD

The document viewer application will launch, and the opening page will appear on your monitor. If the application does not start when you have inserted the disc, right-click on the DVD icon in the Explorer view and select Explore. Double click on start.bat and the application will launch.

Adobe and Acrobat are registered trademarks of Adobe Systems Inc.  
Windows is a registered trademark of Microsoft Corp.



Using the DVD search codes provided in this catalogue will take you directly to the section for that product or to a page to select different languages of that product.

## Contact Us!

Phone:

00800 27 27 5374 (European Product Information Centre)\*

+44 1442 358 429 (English speaking service)\*\*

+44 1442 358 428 (German speaking service)\*\*

+44 1442 358 427 (French speaking service)\*\*

\* If you are calling from Austria, Belgium, Czech Republic, Eire, Finland, France, Germany, Italy, Portugal, Spain, Sweden, Switzerland, United Kingdom.

\*\* If you are calling from other countries.

Web: [www.parker.com](http://www.parker.com)

Email: [epic@parker.com](mailto:epic@parker.com)

There is a European Product Information Centre in the following Sales Companies, AT, BE, CH, DE, IE, ES, FR, IT, PT, SE, UK but the 00800 27 27 5374 number is live in all the following countries and will be answered by a member of staff with good product knowledge, EPIC agents will be put in place in those countries highlighted in red in the near future. AT, BE, CH, CZ, DE, **DK**, ES, FI, FR, IE, IT, **NL**, **NO**, PL, PT, **RU**, SE, UK, **ZA**.

# DVD Catalogue



## **WARNING – USER RESPONSIBILITY**

**FAILURE OR IMPROPER SELECTION OR IMPROPER USE OF THE PRODUCTS DESCRIBED HEREIN OR RELATED ITEMS CAN CAUSE DEATH, PERSONAL INJURY AND PROPERTY DAMAGE.**

- This document and other information from Parker-Hannifin Corporation, its subsidiaries and authorized distributors provide product or system options for further investigation by users having technical expertise.
- The user, through its own analysis and testing, is solely responsible for making the final selection of the system and components and assuring that all performance, endurance, maintenance, safety and warning requirements of the application are met. The user must analyze all aspects of the application, follow applicable industry standards, and follow the information concerning the product in the current product catalog and in any other materials provided from Parker or its subsidiaries or authorized distributors.
- To the extent that Parker or its subsidiaries or authorized distributors provide component or system options based upon data or specifications provided by the user, the user is responsible for determining that such data and specifications are suitable and sufficient for all applications and reasonably foreseeable uses of the components or systems.

## **Offer of Sale**

Please contact your Parker representation for a detailed 'Offer of Sale'.

# Parker Worldwide

## Europe, Middle East, Africa

**AE – United Arab Emirates,**  
Dubai

Tel: +971 4 8127100  
parker.me@parker.com

**AT – Austria,** Wiener Neustadt  
Tel: +43 (0)2622 23501-0  
parker.austria@parker.com

**AT – Eastern Europe,** Wiener  
Neustadt  
Tel: +43 (0)2622 23501 900  
parker.easteurope@parker.com

**AZ – Azerbaijan,** Baku  
Tel: +994 50 22 33 458  
parker.azerbaijan@parker.com

**BE/LU – Belgium,** Nivelles  
Tel: +32 (0)67 280 900  
parker.belgium@parker.com

**BG – Bulgaria,** Sofia  
Tel: +359 2 980 1344  
parker.bulgaria@parker.com

**BY – Belarus,** Minsk  
Tel: +375 17 209 9399  
parker.belarus@parker.com

**CH – Switzerland,** Etoy  
Tel: +41 (0)21 821 87 00  
parker.switzerland@parker.com

**CZ – Czech Republic,** Klecany  
Tel: +420 284 083 111  
parker.czechrepublic@parker.com

**DE – Germany,** Kaarst  
Tel: +49 (0)2131 4016 0  
parker.germany@parker.com

**DK – Denmark,** Ballerup  
Tel: +45 43 56 04 00  
parker.denmark@parker.com

**ES – Spain,** Madrid  
Tel: +34 902 330 001  
parker.spain@parker.com

**FI – Finland,** Vantaa  
Tel: +358 (0)20 753 2500  
parker.finland@parker.com

**FR – France,** Contamine s/Arve  
Tel: +33 (0)4 50 25 80 25  
parker.france@parker.com

**GR – Greece,** Athens  
Tel: +30 210 933 6450  
parker.greece@parker.com

**HU – Hungary,** Budaoers  
Tel: +36 23 885 470  
parker.hungary@parker.com

**IE – Ireland,** Dublin  
Tel: +353 (0)1 466 6370  
parker.ireland@parker.com

**IT – Italy,** Corsico (MI)  
Tel: +39 02 45 19 21  
parker.italy@parker.com

**KZ – Kazakhstan,** Almaty  
Tel: +7 7273 561 000  
parker.easteurope@parker.com

**NL – The Netherlands,** Oldenzaal  
Tel: +31 (0)541 585 000  
parker.nl@parker.com

**NO – Norway,** Asker  
Tel: +47 66 75 34 00  
parker.norway@parker.com

**PL – Poland,** Warsaw  
Tel: +48 (0)22 573 24 00  
parker.poland@parker.com

**PT – Portugal,** Leca da Palmeira  
Tel: +351 22 999 7360  
parker.portugal@parker.com

**RO – Romania,** Bucharest  
Tel: +40 21 252 1382  
parker.romania@parker.com

**RU – Russia,** Moscow  
Tel: +7 495 645-2156  
parker.russia@parker.com

**SE – Sweden,** Spånga  
Tel: +46 (0)8 59 79 50 00  
parker.sweden@parker.com

**SK – Slovakia,** Banská Bystrica  
Tel: +421 484 162 252  
parker.slovakia@parker.com

**SL – Slovenia,** Novo Mesto  
Tel: +386 7 337 6650  
parker.slovenia@parker.com

**TR – Turkey,** Istanbul  
Tel: +90 216 4997081  
parker.turkey@parker.com

**UA – Ukraine,** Kiev  
Tel: +380 44 494 2731  
parker.ukraine@parker.com

**UK – United Kingdom,** Warwick  
Tel: +44 (0)1926 317 878  
parker.uk@parker.com

**ZA – South Africa,** Kempton Park  
Tel: +27 (0)11 961 0700  
parker.southafrica@parker.com

## North America

**CA – Canada,** Milton, Ontario  
Tel: +1 905 693 3000

**US – USA,** Cleveland  
(industrial)  
Tel: +1 216 896 3000

**US – USA,** Elk Grove Village  
(mobile)  
Tel: +1 847 258 6200

## Asia Pacific

**AU – Australia,** Castle Hill  
Tel: +61 (0)2-9634 7777

**CN – China,** Shanghai  
Tel: +86 21 2899 5000

**HK – Hong Kong**  
Tel: +852 2428 8008

**ID – Indonesia,** Tangerang  
Tel: +62 21 7588 1906

**IN – India,** Mumbai  
Tel: +91 22 6513 7081-85

**JP – Japan,** Fujisawa  
Tel: +81 (0)4 6635 3050

**KR – South Korea,** Seoul  
Tel: +82 2 559 0400

**MY – Malaysia,** Shah Alam  
Tel: +60 3 7849 0800

**NZ – New Zealand,** Mt Wellington  
Tel: +64 9 574 1744

**SG – Singapore**  
Tel: +65 6887 6300

**TH – Thailand,** Bangkok  
Tel: +662 717 8140

**TW – Taiwan,** New Taipei City  
Tel: +886 2 2298 8987

**VN – Vietnam,** Ho Chi Minh City  
Tel: +84 8 3999 1600

## South America

**AR – Argentina,** Buenos Aires  
Tel: +54 3327 44 4129

**BR – Brazil,** Cachoeirinha RS  
Tel: +55 51 3470 9144

**CL – Chile,** Santiago  
Tel: +56 2 623 1216

**MX – Mexico,** Toluca  
Tel: +52 72 2275 4200

Ed. 2013-08-01

## EMEA Product Information Centre

**Free phone: 00 800 27 27 5374**

(from AT, BE, CH, CZ, DE, DK, EE, ES, FI, FR, IE, IL,  
IS, IT, LU, MT, NL, NO, PL, PT, RU, SE, SK, UK, ZA)

## US Product Information Centre

**Toll-free number: 1-800-27 27 537**

[www.parker.com](http://www.parker.com)

Your local authorized Parker distributor

