



## Never stop moving

Hydraulic filtration and mobile equipment

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



ENGINEERING YOUR SUCCESS.

# Parker Hydraulic Filtration



**For more than 50 years, Parker Filtration has been designing and manufacturing hydraulic filtration solutions to a wide variety of mobile market sectors including agriculture, forestry, construction equipment, materials handling, mining & drilling, road building equipment, transportation, utility and waste management vehicles.**

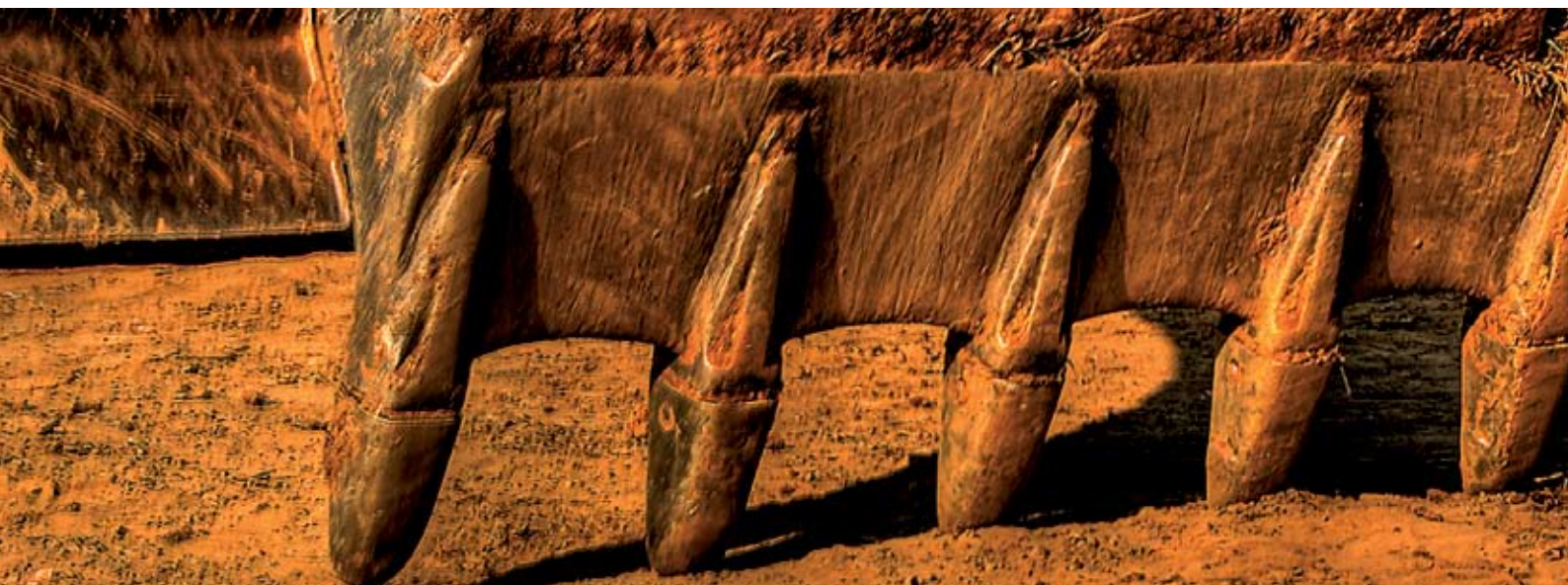
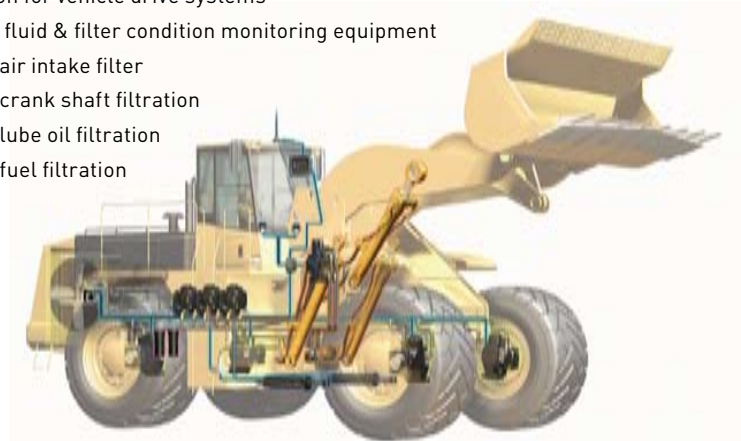
Parker's Hydraulic Filter Division looks beyond the customary solutions to a flexible approach in preventing breakdowns and extending the lifetime of components in hydraulics, lubrication and fuel systems.

Together, with our customers, we break new ground to provide innovative design, reducing costs in various areas such as new build system maintenance, energy

consumption, disposal and weight. Our quality filter solutions and innovations are adopted by leading global equipment manufacturers and end users.

## Parker's Filtration solutions

- Filtration for hydraulic operation system
- Filtration for vehicle drive systems
- System fluid & filter condition monitoring equipment
- Engine air intake filter
- Engine crank shaft filtration
- Engine lube oil filtration
- Engine fuel filtration



# - breaking new ground



Engineering your success

Our principles and internal structures are based on dedicated market teams to provide demanding markets, customers and partners with maximum values, tailor-made solutions and innovations.

In Parker, we call it “**Engineering your success**”.

**Our solutions focus on value areas:**

## 1. System design & manufacturing

- System matched filtration
- Compact solutions through component integration
- System design & manufacturing support
- Cleanliness management control
- System & fluid conditioning monitoring

## 2. System performance

Improvement of systems;

- Productivity
- Controllability
- Reliability
- Safety

## 3. System sustainability

- Life cycle cost
- Predictable maintenance
- Extended service intervals
- Oil lifetime extension
- Component lifetime extension

## 4. Sustainable environment

Impact of equipment to environment

- Minimise waste of oil and filter elements
- Reduce number of leakage points
- Noise & vibration reduction

## 5. Energy control

- Reduction of energy consumption
- Energy recovery

## 6. Recycling

- Disposal cost and material management

## 7. Aftermarket

- Protected OEM spare element market
- Training and technical back-up
- Global spare parts back-up
- Extended warranty



# Quality products reduce dow



SR suction & return filters



CN medium pressure filters



70 P high pressure filters



EAB and ABL breathers

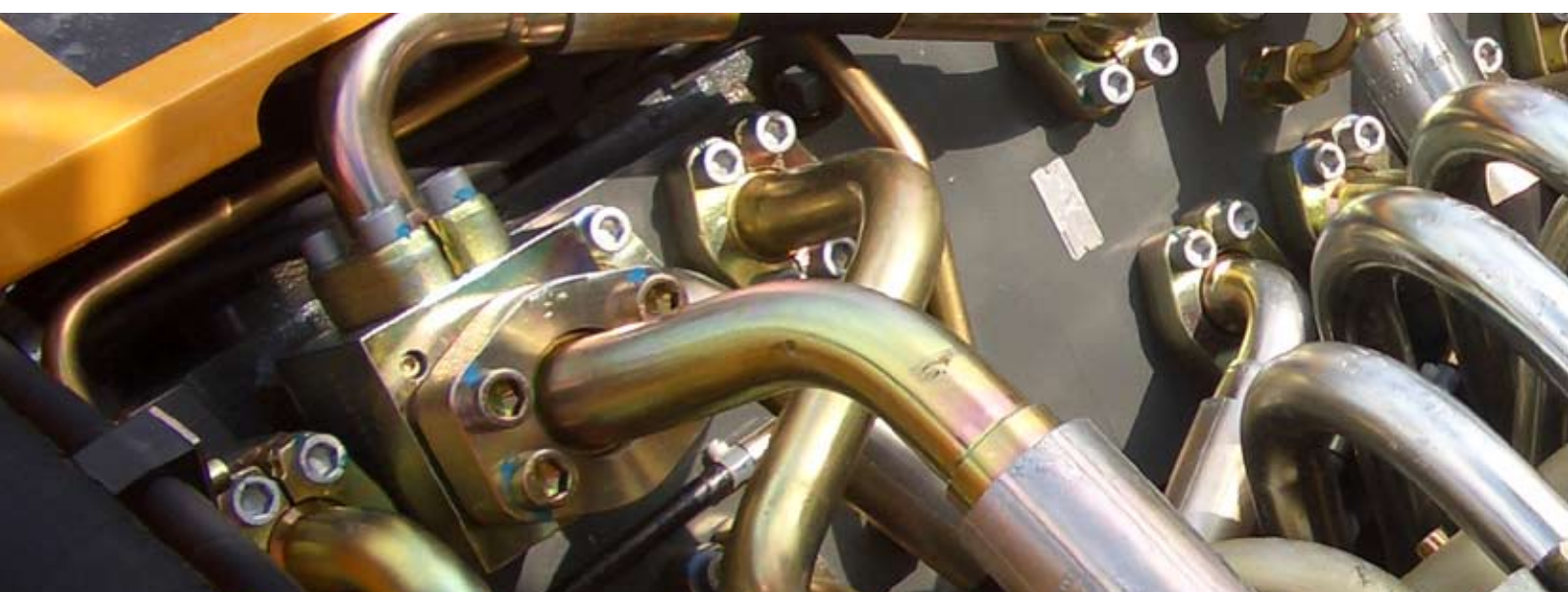
**Our philosophy is to improve the productivity, controllability and reliability of mobile equipment, without sacrificing safety.**

The market calls for lower cost of ownership. At the same time, complete work cycles & tasks or projects are shortened and OEM's are challenged to provide equipment which enables the owner to achieve profitable returns on investment.

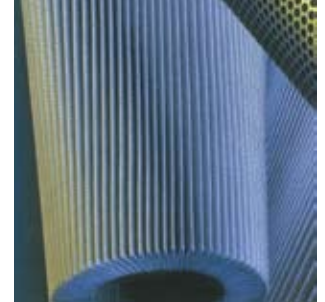
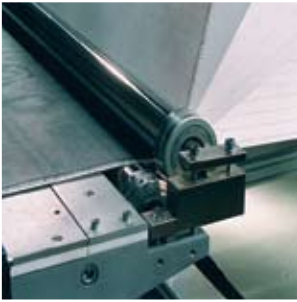
It is not only the higher level of productivity that counts. As equipment often operates in public or hazardous areas, mobile equipment needs higher levels of control to improve safety. This is directly influenced by system contamination proven to be responsible typically for over 80% of downtime or malfunction of systems. In this respect, filtration and condition monitoring fulfil a vital role.

Parker Filtration continues to develop high quality filtration solutions. A core competence is to develop dedicated technology to condition the fluid. For mobile equipment, Parker's Microglass filter media sets the benchmark for the industry.

Design →	Sourcing →	Manufacturing →	Assembly →	Testing →	Value Added Services →	Aftermarket
Common system development with OEM's	Global Logistic OEM support	Quantity and cost reduction of system components	Reduction of assembly cost and manufacturing time		Protected after market for filter elements	
Technology development	Reduction of parts	Reduction of system components.	Cleanliness control of new equipment		Reduction of warranty claims	
Analysis of system function	Supply system synchronised with OEM need	Breadman service	Training & consultancy		Transparency of spare element consumption	
	Reduction of points of purchase	Supply of pre-assembled units	Commissioning & testing support		Cost reduction of service	
		Outsourcing of non-core activities			System analysis support	
					Renewable parts programme	
					Real time system condition	
					Training programme for dealers	



# Uptime in mobile markets



## Important aspects of our filtration solutions are:

### Improve system productivity & controllability

- Stable removal efficiency of the filter media during flow & pressure fluctuations
- Low pressure drop across the filter media & housing for improved system response

### Ecology & Economy

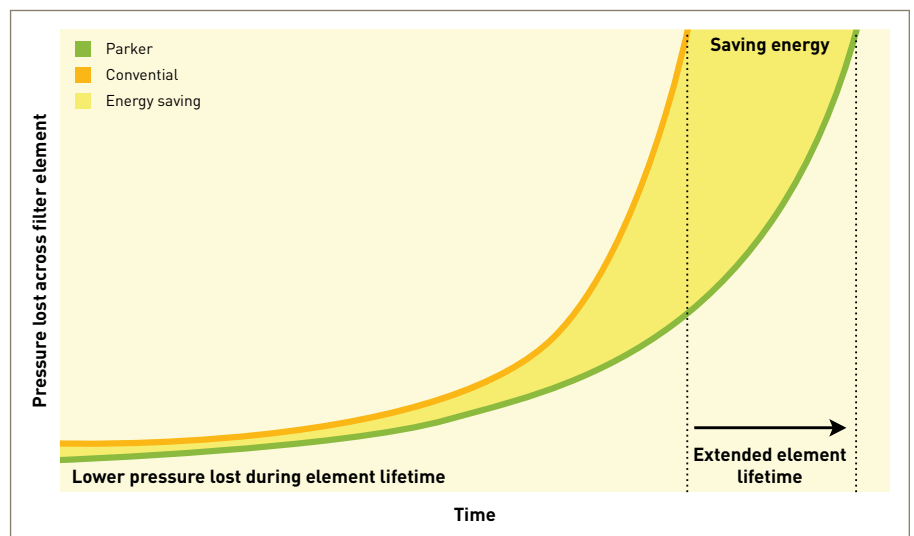
- Reduction of pressure lost across the filter saves energy & fuel
- Parker green elements reduce waste by over 50% compared to conventional solutions
- System-matched filter element lifetime

### Reliability & Safety

- Guaranteed quality of filtration
- System-matched filter element lifetime

Contaminated fluid reduces overall system efficiency. Parker's engineered solutions focus on system requirements, reliability and safety.

### Energy efficiency and savings



# Monitoring critical systems



IcountPD particle detector



IcountBS bottle Sampler



MS150 moisture sensor



LaserCM particle analyser

**Requirements with regard to hydraulic and oil lubrication systems emphasise reliability, safety, long lifetime and reduced energy. Depending on the circumstances, over 80% of system failures are due to contamination levels. System monitoring is essential to prevent reduced performance, equipment failure, downtime costs and negative quality perception by end users.**

## **Catastrophic failures**

Occurring suddenly and without warning; catastrophic failures are typically of a permanent nature. They are often caused by larger particles obstructing the relative movement between

surfaces, resulting in seizure of the component. Real-time condition monitoring is advisable for applications where catastrophic failures can affect the safety of operation. Trend analysis allows Parker to provide a dedicated package of pre-warnings to ensure that predictive corrective actions can be taken.

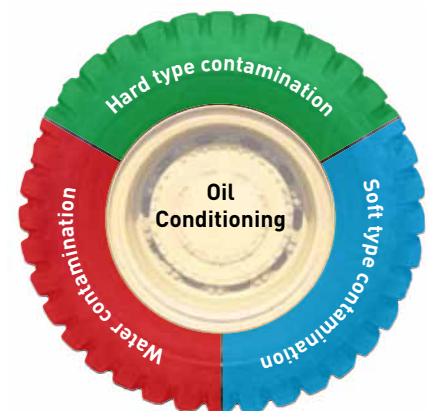
## **Transient failures**

This type of failure is short-lived and goes unnoticed, although the consequences rarely do. It is caused by particles that momentarily lodge in a critical clearance between matching parts, only to be washed away during the next operation cycle. As a

result components become less predictable and potentially unsafe.

## **Degradation failures**

This failure is caused by the effect of wear induced by contamination. Additional generated contamination can lead to catastrophic failure and necessity to repair and replacement



# is essential



of the component as additional generated contamination can lead to catastrophic failure.

The extended package of Parker's Fluid Condition Monitoring equipment is based on a modular architecture, enabling designers to select the sensors needed for

real-time analysis of important system and fluid parameters.

Parker's integrated solutions include diagnostics and smart decision making processes, communication status reports or warnings to the machine operator or service organisation.

## IQAN-MD3 Electronic Remote control

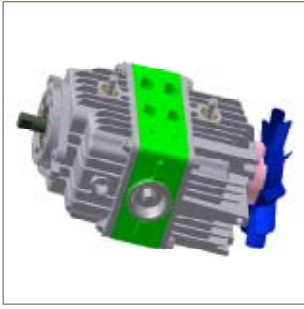


### Monitoring critical systems

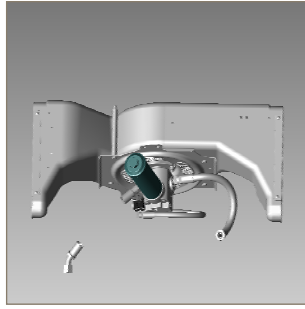
Predictable maintenance		Fluid conditioning		Fluid condition monitoring	
Condition Monitoring	Element pressure drop measurement	Productivity Controllability	Guaranteed oil cleanliness	Reliability & safety	Quality index of system oil and system condition
	Temperature measurement		Oil lifetime extension		Intelligent interface with vehicle operator
	Fluid cleanliness level measurement		Component lifetime extension		
	Fluid viscosity measurement				
	Other fluid system parameters				



# Reducing costs by innovative



Hydrostatic charge pump with integrated, protected filter



Hydraulic fan drive motor with protected filter (Supplied as one unit)



Manifold with integrated duplex filter & instrumentation

**Solutions for the future require a different approach.**

**Parker's philosophy underlines our ability to support our customers with the design and realisation of new generation equipment.**

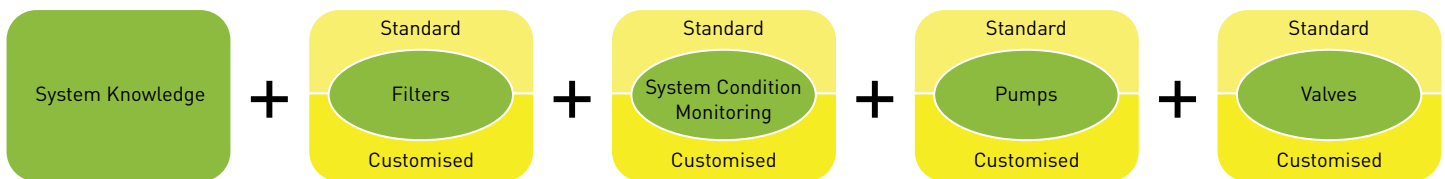
Parker offers the unique possibility to integrate various system functions into single components. This can result in cost reduction of the application in manufacturing and maintenance; can realise more compact solutions and lower impact for the environment by means of

reduced leakage points. In addition to the integrated, protected filters, this guarantees the quality of filtration for maximum protection of the system components.

As a complete supplier of motion & control solutions, Parker is able to support extended warranty; a valuable proposal to OEM's providing long term reliability and safety towards their customers in the market.

Parker's experience in mobile markets for more than five decades is focused for our customers through the dedicated Mobile System Team and divisional engineering staff.

Application and system specialists for hydraulic operation, drive system and filtration are available "at your service".





# system integration



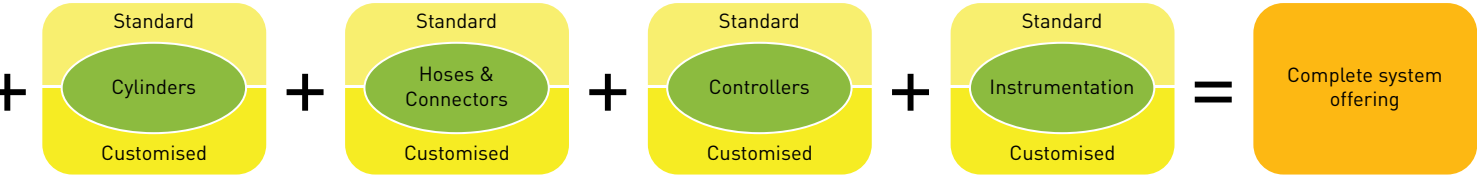
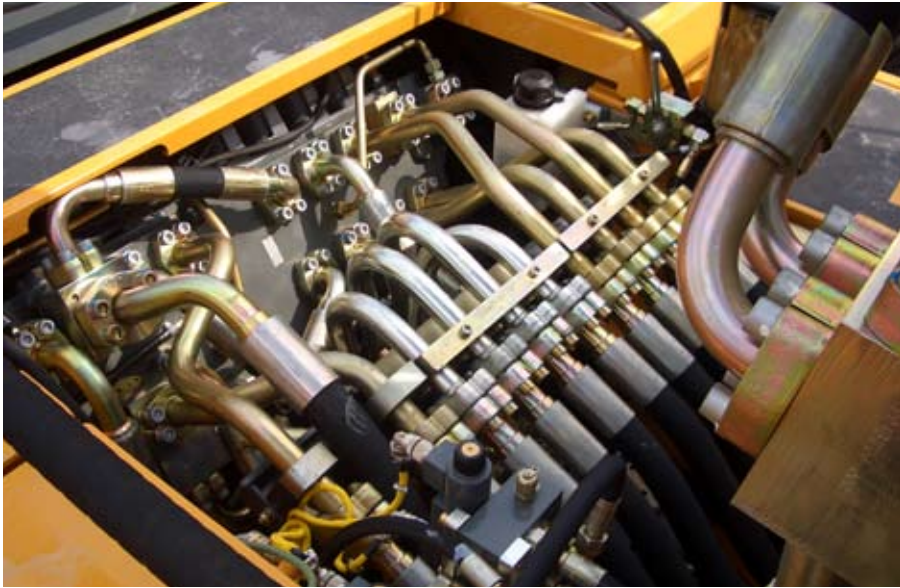
Sub-system supplied ready for direct plug and operation



Customised co-polymer hydraulic reservoir with integrated filter and breather



Hydraulic pump with integrated pressure filter



# A partnership in ecology and



**Our aim is always to develop long term relationships with our customers. As partners we can work together to provide the most effective solutions for hydraulic filtration. But our aim is not only to provide low cost, extended reliability and performance.**

**Today's markets call for environmentally friendly solutions. We call that Ecology & Economy and we often step beyond traditional conventions to take responsibility for society and take the environment into account.**

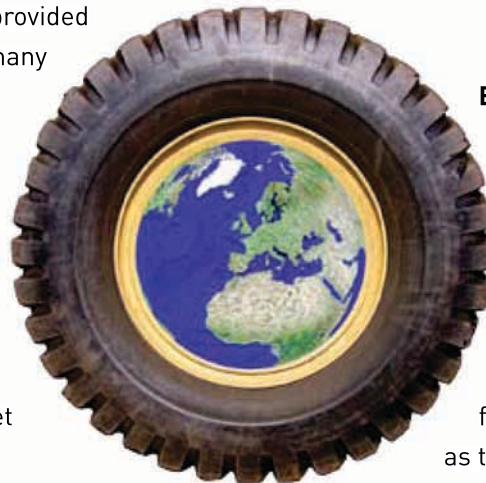
Dedicated support is implicit in a good partnership: for example, making quality spare parts

available to our partners and end users. Direct or through dedicated distribution networks.

Complete sub-systems or other after market parts like filter elements are provided by Parker, in many cases from Parker's own central distribution warehouses the EDCs.

Protection of the aftermarket is an essential element in any Parker partnership that is developed for and with an OEM customer.

Guaranteed filtration quality, improved connection with end users, extended warranty provision and transparency in the after market are basics in any Parker partnership.



## **Ecology & Economy and LEIF® and Ecoglass III**

Parker provides complete sub-systems or other after market parts like filter elements such as the eco-friendly

LEIF® and Ecoglass III, making spare parts available to our customers and end users direct or



# economy

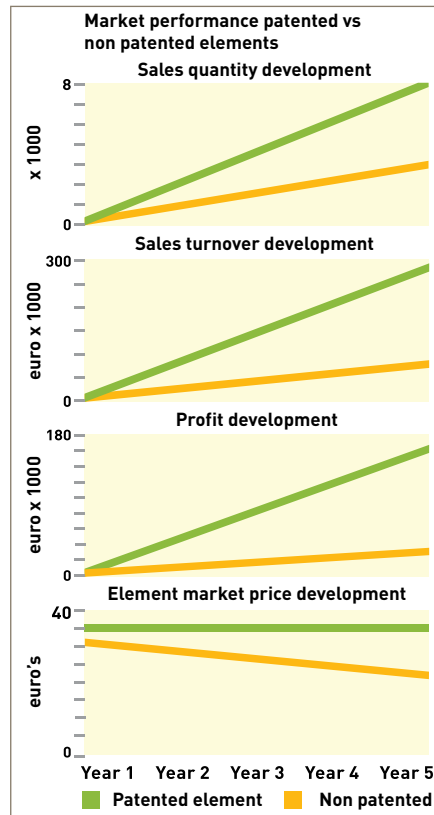


Parker quality green elements reduces the waste typically over 50%

through a dedicated distribution network via our Europe-wide Sales Companies operating on a country by country basis.

## Benefits of Parker's protected Elements:

- OEM protected after market excludes piracy
- Guaranteed quality of filtration
- System user fits genuine (Parker) OEM spare parts
- Typically, a reduction of warranty claims
- Extended warranty provision
- OEM contact with end users and service organisations is improved
- Improved after market share and revenue



# Parker Worldwide

**AE – UAE, Dubai**  
Tel: +971 4 8127100  
parker.me@parker.com

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

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

**AT – Eastern Europe, Wiener Neustadt**  
Tel: +43 (0)2622 23501 970  
parker.easteurope@parker.com

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

**AZ – Azerbaijan, Baku**  
Tel: +994 50 2233 458  
parker.azerbaijan@parker.com

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

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

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

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

**CH – Switzerland, Etoy**  
Tel: +41 (0) 21 821 02 30  
parker.switzerland@parker.com

**CN – China, Shanghai**  
Tel: +86 21 5031 2525

**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 33 00 01  
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

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

**HU – Hungary, Budapest**  
Tel: +36 1 220 4155  
parker.hungary@parker.com

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

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

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

**JP – Japan, Tokyo**  
Tel: +(81) 3 6408 3901

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

**KZ – Kazakhstan, Almaty**  
Tel: +7 7272 505 800  
parker.easteurope@parker.com

**LV – Latvia, Riga**  
Tel: +371 6 745 2601  
parker.latvia@parker.com

**MX – Mexico, Apodaca**  
Tel: +52 81 8156 6000

**MY – Malaysia, Subang Jaya**  
Tel: +60 3 5638 1476

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

**NO – Norway, Ski**  
Tel: +47 64 91 10 00  
parker.norway@parker.com

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

**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

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

**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

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

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

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

**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

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

**VE – Venezuela, Caracas**  
Tel: +58 212 238 5422

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