



High quality compressed air from generation to application

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



ENGINEERING YOUR SUCCESS.

Contents

| | |
|--|----|
| Introduction..... | 1 |
| Compressed air contamination..... | 3 |
| Sources and types of contamination..... | 5 |
| A dedicated solution for every application | 7 |
| Compressed air purification | 9 |
| Are all compressed air filters and dryers the same? | 12 |
| The Parker domnick hunter design philosophy | 12 |
| After sales service | 15 |



Filtration, purification and separation is our business

Parker domnick hunter is a world leader in the filtration, purification and separation of compressed air and gases.

Parker domnick hunter specializes in purification and separation technologies where compressed air and gas purity, product quality, technological excellence and global support are paramount. It designs and manufactures compressed air treatment products, gas generators and ancillary equipment for many key industries where ease of integration, low cost of ownership and energy savings can make a real difference.

Compressed Air - The 4th Utility

Compressed air is a safe and reliable power source that is widely used throughout industry.

Approximately 90% of all companies use compressed air in some aspect of their operations, but unlike gas, water and electricity, compressed air is generated on-site, giving the user responsibility for air quality and operational costs.

However, untreated compressed air will cause major performance and reliability problems with any system. Almost all of these can be directly attributed to contamination.

After generation, compressed air typically contains up to 10 different contaminants as it enters the distribution system.

Modern production facilities are increasingly becoming more complex and as compressed air applications become more critical, compressed air purification is essential.



Compressed air contamination is a real problem for industry

In today's modern production facilities, the use of compressed air is often pivotal to manufacturing processes. Irrespective of whether the compressed air comes into direct contact with the product or is used to automate a process, provide motive power, packaging, or even to generate other gases on-site, a clean, dry, reliable compressed air supply is essential to maintain efficient and cost effective production.

Failure to remove or reduce contamination will cause many problems with the compressed air system, for example:

- **Corrosion within compressed air storage vessels and the air distribution system**
- **Blocked or damaged valves, cylinders, air motors and air tools**
- **Damaged production equipment**
- **Premature and unplanned desiccant changes for adsorption dryers**
- **Product contamination**

In addition to problems associated with the compressed air system itself, allowing contaminants such as particulate, oil and micro-organisms to exhaust from valves, cylinders and air tools, can lead to an unhealthy and unsafe working environment.

Compressed air contamination will ultimately lead to:

- **Inefficient production processes**
- **Spoiled, damaged or reworked products**
- **Reduced production efficiency**
- **Increased manufacturing costs**



Sources and types of contamination in a compressed air system

Understanding the sources of compressed air contamination and the types of contaminants which must be reduced or eliminated is a key factor in planning an efficient compressed air system.

The four sources of compressed air contamination

- The atmospheric air**
 Air compressors draw in vast volumes of air from the surrounding atmosphere which contain large concentrations of airborne contaminants.
- The type and operation of the air compressor**
 The air compressor can also add contamination, from wear particles to coolants and degraded lubricants.
- Air receivers and system piping**
 The air receiver and system piping stores and distributes the compressed air but will also retain the large amounts of contamination drawn into the system. Additionally, they cool the moist compressed air to cause condensation on a large scale. This will promote corrosion, poor performance and ultimately costly damage.

Particulate

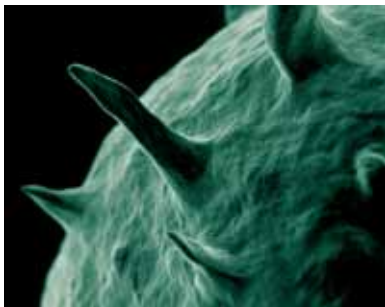
Particulate contamination in a compressed air system is a combination of atmospheric dirt, micro-organisms, rust and pipescale.



Atmospheric dirt

Atmospheric air in industrial and urban environments will typically contain 140 million dirt particles for every cubic meter of air. As 80% of these particles are less than

2 microns in size, they are therefore too small to be captured by the compressor air intake filter and pass directly into the compressed air system.



Micro-organisms

Bacteria and viruses will also be drawn into the compressed air system through the compressor intake and warm, moist air provides an ideal environment for the growth of micro-organisms. Ambient air can typically contain around 3800 micro-organisms per cubic meter. If

only a few micro-organisms were to enter a clean, sterile environment, or production process, enormous damage could be caused that not only diminishes product quality, but may even render a product entirely unfit for use and subject to costly recall.



Rust and pipescale

Water contamination will cause rust and pipescale to form in air receivers and the system piping.

This eventually breaks away to cause blockage or damage to the production process or application.

Water

In a compressed air system, water exists as water vapor, condensed liquid water and water aerosols. Of the ten main contaminants found in a compressed air system, water is either directly or indirectly responsible for the majority of problems experienced by the compressed air user.



Water vapor

Large volumes of atmospheric air enter the compressed air system through the compressor intake. As the air is compressed, the temperature increases significantly, causing it to become fully saturated with water vapor. The ability of air to retain water vapor is dependent

upon its temperature and pressure. The higher the temperature, the more water vapor that can be retained. The higher the pressure, the greater the amount of condensed water that will be released.



Condensed liquid water and water aerosols

After the compression stage, the now saturated air is cooled to a usable temperature by an aftercooler, causing the retained water vapor to be condensed into liquid water which is then removed by a condensate drain. The air leaving the after-cooler is now 100% saturated with water vapor and any further cooling of the air will result in more water vapor condensing into liquid water.

Condensation occurs at various stages throughout the system as the air is cooled further by the air receiver, piping and the expansion of air in valves and cylinders. The condensed water and water aerosols cause corrosion to the storage and distribution system, reduce performance efficiency and increase maintenance costs of the application. Water in any form must be removed to enable the system to function correctly and perform efficiently.

Oil

Oil is introduced into the compressed air system either through the compressor intake as a vapor (oil in a gaseous phase), by the compressor as a liquid or as an aerosol (fine mist).



Oil vapor

Atmospheric air contains oil in the form of unburned hydrocarbons which are drawn into the compressor intake. Typical concentrations can vary between 0.05 and 0.5 mg per cubic meter. Additionally, lubricants

used in the compression stage of a compressor can also be vaporized and carried into the compressed air system. Once inside the compressed air system, oil vapor will cool and condense into a liquid.



Liquid oil and oil aerosols

The majority of air compressors use oil in their compression stage(s) for sealing, lubrication and cooling. The oil is in direct contact with the air as it is compressed, however due to the efficiency of modern air / oil separators built into the compressor, only a small proportion of this lubricating oil is carried over into the compressed air system. This is either as a liquid or an aerosol (typically

no more than 5 mg/m³ for a well maintained screw compressor).

The main problems with oil in the compressed air system are due to the oil mixing with the water already present. At this point, the oil has lost its lubricating properties, often becoming very acidic which causes damage to the compressed air storage and distribution system, production equipment and final product.

A dedicated solution for every application

The quality of air required throughout a typical compressed air system will vary depending upon the application for which it is used.

Treatment of the compressed air at only one point alone, for example the compressor room; is not enough. Compressed air should be treated prior to entry into the distribution system (to a quality level suitable for protecting air receivers and distribution piping) and then at the point of use, with specific attention being placed on the application and the level of air quality required. This approach to system design ensures that air is not “over treated” and provides the most cost effective solution to high quality compressed air.

The use of the ISO8573-1:2010 Air Quality Standard provides the system engineer with a simple method of specifying the air purity required at each point in the compressed air system. Using this standard allows Parker domnick hunter to quickly and easily select products from its comprehensive range of purification products to exactly match your system requirements and to ensure that both capital and operational costs are kept to a minimum.

Critical Applications

Pharmaceutical products
Silicon wafer manufacturing
TFT / LCD Screen manufacturing
Memory device manufacturing
Optical storage devices (CD, CD/RW, DVD, DVD/RW)
Optical disk manufacturing (CD's/DVD's)
Hard disk manufacturing
Foodstuffs
Dairies
Breweries
CDA systems for electronics manufacturing

High Quality Oil-Free Air

Blow Molding of Plastics e.g. P.E.T. Bottles
Film processing
Critical instrumentation
Advanced pneumatics
Air blast circuit breakers
Decompression chambers
Cosmetic production
Medical air
Dental air
Lasers and optics
Robotics
Spray Painting
Air bearings
Pipeline purging
Measuring equipment
Blanketing
Modified Atmosphere Packaging
Pre-treatment for on-site gas generation

General Purpose Oil-Free Air

General ring main protection
Pre-filtration to point of use adsorption air dryers
Plant automation
Air Logistics
Pneumatic tools
General instrumentation
Metal stamping
Forging
General industrial assembly (no external pipework)
Air conveying
Air motors
Workshop (Tools)
Garage (Tire filling)
Temperature control systems
Blow guns
Gauging equipment
Raw material mixing
Sand / bead blasting



Compressed air purification

A solution for every contaminant.

| Contamination Removal | | | | | | | | |
|-------------------------------------|----------------------|-------------|----------------|--------------------------------------|-----------------|-----------|---------------------------|------------------|
| Purification Equipment Technologies | Bulk Condensed Water | Water Vapor | Water Aerosols | Atmospheric Dirt & Solid Particulate | Micro-organisms | Oil Vapor | Liquid Oil & Oil Aerosols | Rust & Pipescale |
| Water Separators | • | | | | | | | |
| Coalescing Filters | | | • | • | • | | • | • |
| Adsorption Filters | | | | | | • | | |
| Adsorption Dryers | | • | | | | | | |
| Refrigeration Dryers | | • | | | | | | |
| Dust Removal Filters | | | | • | • | | | • |
| Microbiological Filters | | | | • | • | | | |

Water separators

Water separators are used to protect coalescing filters against bulk liquid contamination, where excessive cooling takes place in air receivers and distribution piping.

Using mechanical separation techniques, Parker domnick hunter water separators will remove in excess of 92% bulk liquid contamination at all flow conditions.

Coalescing filters

Coalescing filters are probably the single most important items of purification equipment in a compressed air system. They are designed to not only remove aerosols (droplets) of oil and water using mechanical filtration techniques, but also to remove solid particulate to very low levels (as small as 0.01 micron in size). Installed in pairs, the first filter is a 'general purpose filter' which protects the second 'high efficiency filter' from bulk contamination. The dual filter installation from Parker domnick hunter ensures a continuous supply of high quality compressed air with the additional benefits of low operational costs and minimal maintenance.

Adsorption (Activated Carbon) filters

Oil vapor is oil in a gaseous form and will pass through a coalescing filter just as easily as the compressed air. Therefore, oil vapor removal filters must be employed as these provide a large bed of activated carbon adsorbent for the effective removal of oil vapor, providing the ultimate protection against oil contamination.

Adsorption dryers

Water vapor is removed from compressed air using an adsorption dryer. Adsorption dryers remove moisture by passing air over a regenerative desiccant material which strips the moisture from the air. This type of dryer is extremely efficient. A typical pressure dewpoint specified for an adsorption dryer is -40°F (-40°C) as it not only prevents corrosion, but it also inhibits the growth of micro-organisms. A pressure dewpoint of -100°F (-70°C) is often specified for critical applications.

Refrigeration dryers

Refrigeration dryers work by cooling the air, so are limited to positive pressure dewpoint ratings to prevent freezing of the condensed liquid. Typically used for general purpose applications, they provide pressure dewpoints of +37.4°F (+3°C), +44.6°F (+7°C) or +50°F (+10°C). Refrigeration dryers are not suitable for installations where piping is installed in ambient temperatures below the dryer dewpoint i.e. systems with external piping, or critical applications such as food, beverage or pharmaceuticals as they do not inhibit microbiological growth.

As adsorption or refrigeration dryers are designed to remove only water vapor and not water in a liquid form, they require the use of coalescing filters to work efficiently.

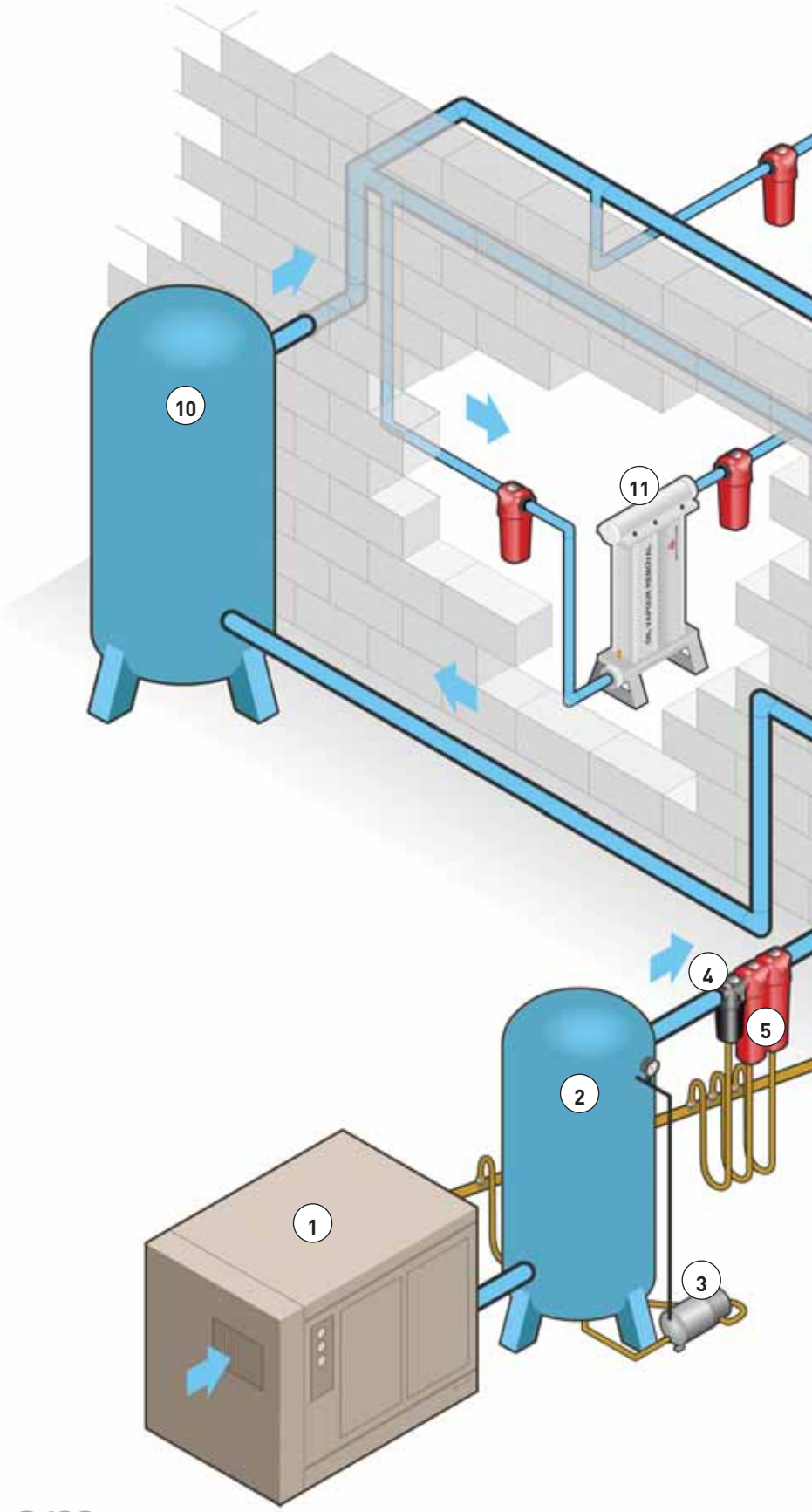
Dust removal filters

Dust removal filters are used for the removal of dry particulates. They provide identical particulate removal performance to the equivalent coalescing filter and use the same mechanical filtration techniques to provide up to 99.9999% particle removal efficiency.

Sterile filters

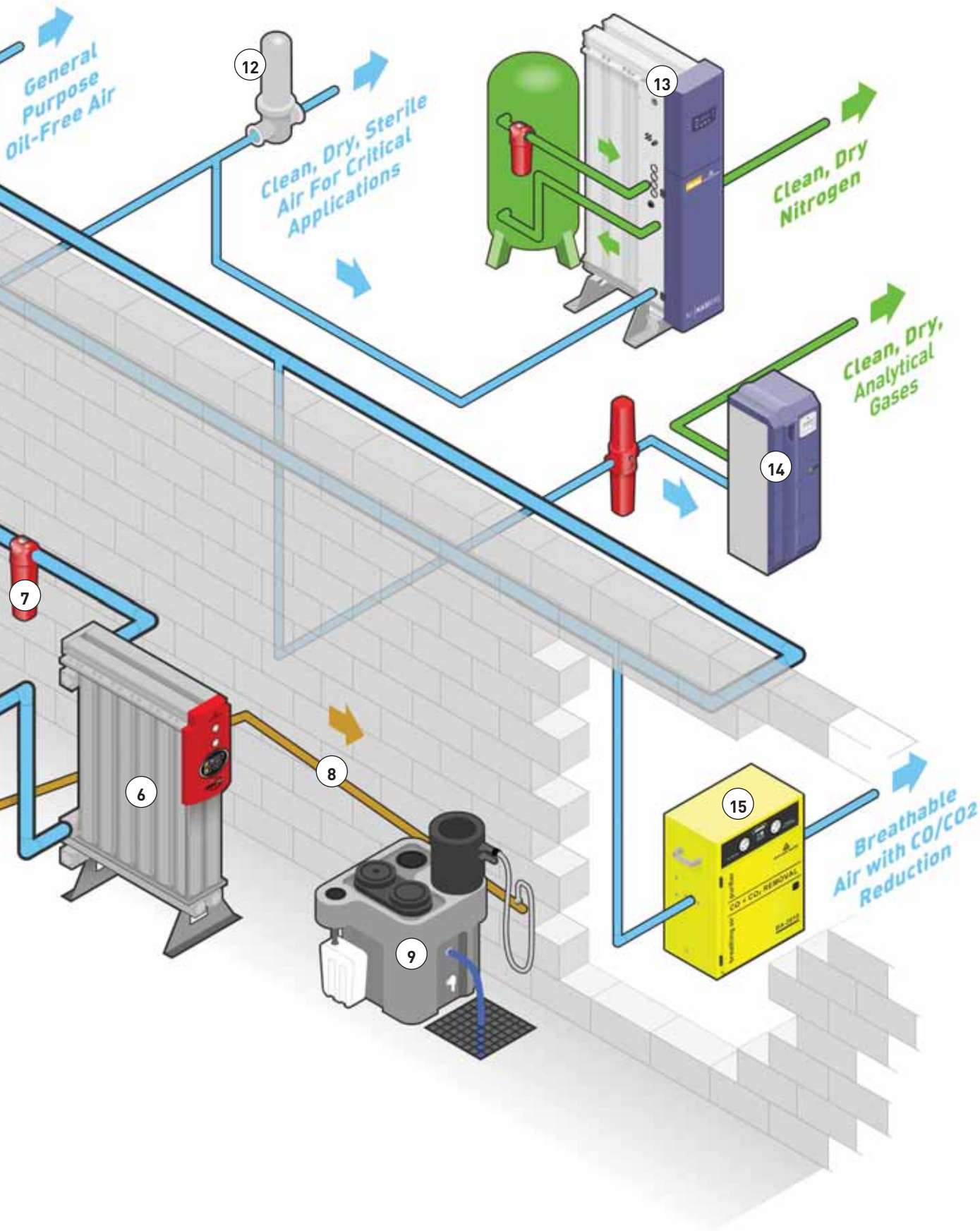
Absolute removal of solid particulates and micro-organisms is performed by a sieve retention or membrane filter. They are often referred to as sterile air filters as they also provide sterilized compressed air. Filter housings are manufactured from stainless steel to allow for in-situ steam sterilization of both the filter housing and element. It is important to note that the piping between the sterile filter and the application must also be cleaned and sterilized on a regular basis.

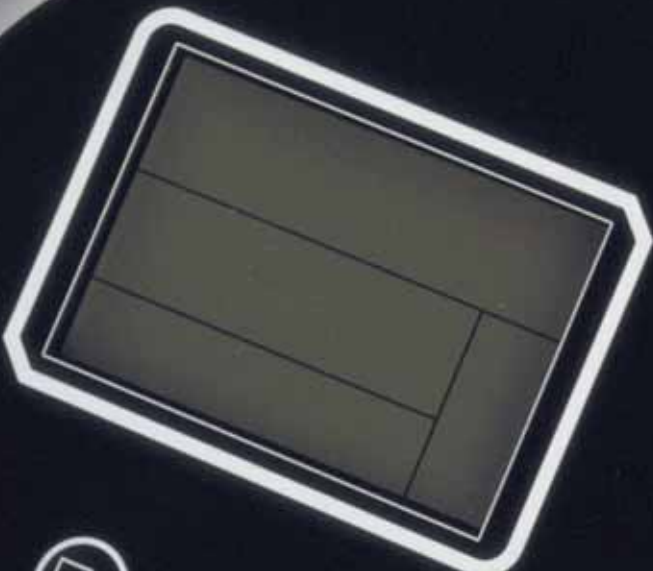
| KEY: | |
|------|--------------------------------|
| 1 | Air Compressor |
| 2 | Wet Air Receiver |
| 3 | Condensate Drain |
| 4 | Water Separator |
| 5 | Coalescing Filters |
| 6 | Modular Adsorption Dryer |
| 7 | Dust Filter |
| 8 | Condensate Drainage |
| 9 | Oil / Water Separator |
| 10 | Dry Air Receiver |
| 11 | Oil Vapor Removal |
| 12 | Sterile Air Filter |
| 13 | On-site Nitrogen Gas Generator |
| 14 | Analytical Gas Generator |
| 15 | Breathing Air Purifier |



Compressor room

Typical applications





△
ECO
OK



△
○
○

NEU

Are all compressed air filters and dryers the same?

Compressed air purification equipment is essential to all modern production facilities. It must deliver uncompromising performance and reliability whilst providing the right balance of air quality with the lowest cost of operation. Many manufacturers offer products for the filtration and purification of contaminated compressed air, which are often selected only upon their

initial purchase cost, with little or no regard for the air quality they provide, the cost of operation throughout their life or their environmental impact. When selecting purification equipment, the required air quality, the overall cost of ownership and the equipment's environmental impact must always be considered.

The Parker domnick hunter design philosophy



Parker domnick hunter has been supplying industry with high efficiency filtration and purification products since 1963. Our philosophy 'Designed for Air Quality & Energy Efficiency' ensures products that not only provide the user with

clean, high quality compressed air, but also with low lifetime costs and reduced carbon dioxide (CO₂) emissions.



Air Quality

Parker domnick hunter has been instrumental in the development of both ISO8573 and ISO12500, the international standards for compressed air quality and

compressed air filter testing respectively. All Parker domnick hunter products are designed to provide air quality in accordance with all editions of ISO8573-1, air quality standard.



Energy Efficiency

In these times of increasing energy costs, an efficient and cost effective manufacturing process is a major factor in maintaining the profitability and growth of your business. All Parker domnick hunter products are

designed to not only minimize the use of compressed air and electricity in their operation, but also to significantly reduce the operational costs of the compressor by minimizing pressure loss.



Low Lifetime Costs

Equipment with a low purchase cost may turn out to be a poor investment in the long term. By guaranteeing air quality and ensuring energy consumption is kept to a minimum,

Parker domnick hunter purification products can reduce the total cost of ownership and help improve profitability through improved manufacturing efficiencies.



Reduced CO₂ Emissions

Many countries worldwide are looking closely at their manufacturing industries in an effort to reduce the amount of harmful greenhouse gases released into the atmosphere. The use of electricity

has a direct impact on the generation and release of CO₂. By significantly reducing the energy consumption of its products, Parker domnick hunter can help you to reduce your carbon footprint and protect the environment.



After sales service

Compressed air equipment users demand much more than the supply of high quality products in order to maintain a competitive edge.

Modern production technology is increasingly demanding the provision of a higher purity and more reliable compressed air supply. Products and solutions that are manufactured by Parker domnick hunter are designed to provide air quality that meets with and often exceeds international standards.

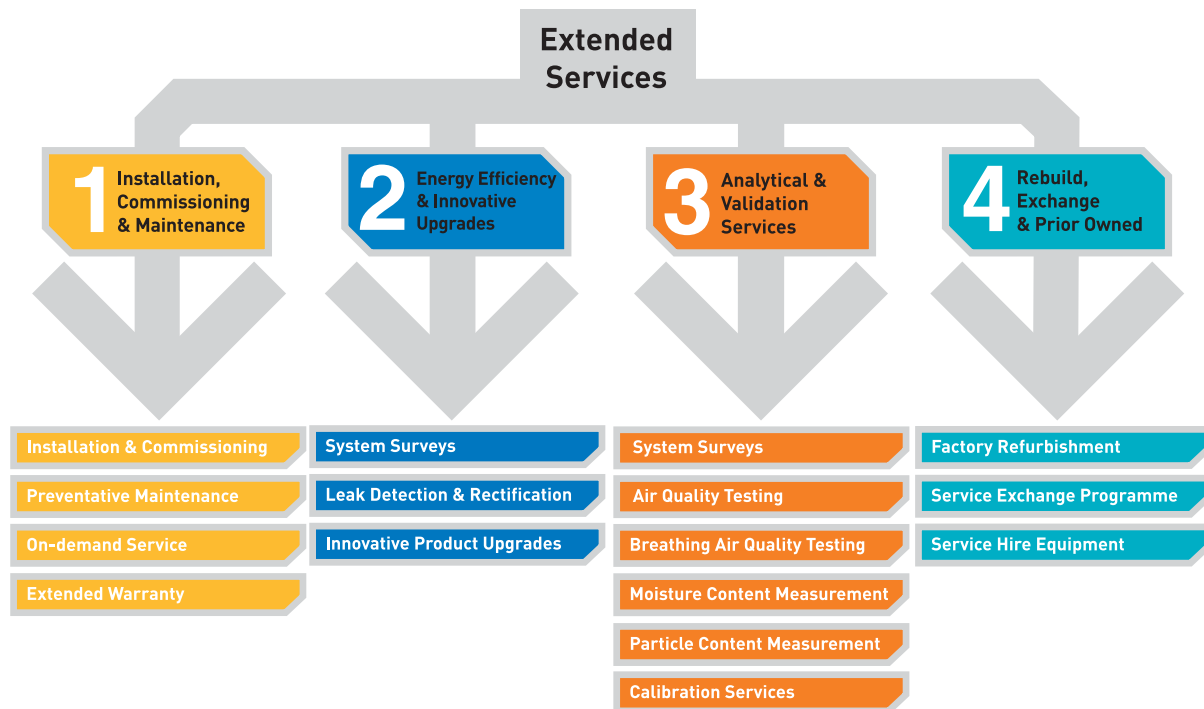
As well as the requirement for air purity and reliability, there are additional factors to consider when choosing the right service provider for your compressed air and gas purification system.

For example, knowledge of the many regulations regarding the management of industrial waste, energy efficiency improvement programs and consideration of any environmental impact. It is anticipated that future legislations will demand further in-depth technical and knowledge based support from service providers.

Our commitment to industry does not stop with the supply of high quality products. We are also committed to ensuring that our equipment provides high performance by providing a trouble-free service from a bespoke maintenance and verification package - all tailored to your own specific requirements.

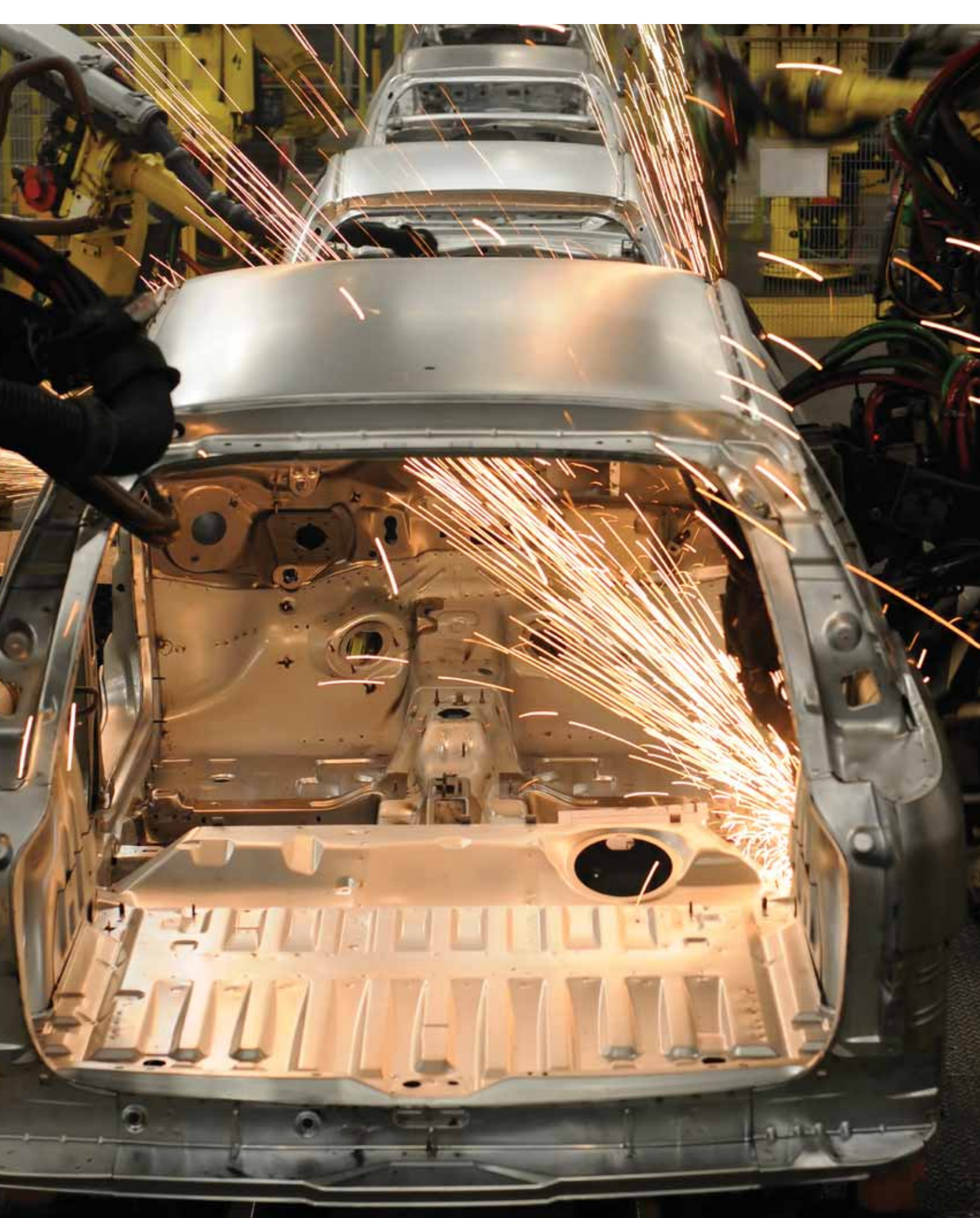
We offer a wide range of valuable services that will impact positively on your drive towards improved production efficiency and product quality with reduced production rejections and operational costs.

From initial selection to installation, commissioning, preventative maintenance and extended services, Parker domnick hunter is redefining customer service.



INTERNATIONAL APPROVALS







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.



AEROSPACE

Key Markets

- Aircraft engines
- Business & general aviation
- Commercial transports
- Land-based weapons systems
- Military aircraft
- Missiles & launch vehicles
- Regional transports
- Unmanned aerial vehicles

Key Products

- Flight control systems & components
- Fluid conveyance systems
- Fluid metering delivery & atomization devices
- Fuel systems & components
- Hydraulic systems & components
- Inert nitrogen generating systems
- Pneumatic systems & components
- Wheels & brakes



CLIMATE CONTROL

Key Markets

- Agriculture
- Air conditioning
- Food, beverage & dairy
- Life sciences & medical
- Precision cooling
- Processing
- Transportation

Key Products

- CO2 controls
- Electronic controllers
- Filter driers
- Hand shut-off valves
- Hose & fittings
- Pressure regulating valves
- Refrigerant distributors
- Safety relief valves
- Solenoid valves
- Thermostatic expansion valves



ELECTROMECHANICAL

Key Markets

- Aerospace
- Factory automation
- Food & beverage
- 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
- Controllers
- Gantry robots
- Gearheads
- Human machine interfaces
- Industrial PCs
- Inverters
- Linear motors, slides and stages
- Precision stages
- Stepper motors
- Servo motors, drives & controls
- Structural extrusions



FILTRATION

Key Markets

- Food & beverage
- Industrial machinery
- Life sciences
- Marine
- Mobile equipment
- Oil & gas
- Power generation
- Process
- Transportation

Key Products

- Analytical gas generators
- Compressed air & gas filters
- Condition monitoring
- Engine air, fuel & oil filtration & systems
- Hydraulic, lubrication & coolant filters
- Process, chemical, water & microfiltration filters
- Nitrogen, hydrogen & zero air generators



FLUID & GAS HANDLING

Key Markets

- Aerospace
- Agriculture
- Bulk chemical handling
- Construction machinery
- Food & beverage
- Fuel & gas delivery
- Industrial machinery
- Mobile
- Oil & gas
- Transportation
- Welding

Key Products

- Brass fittings & valves
- Diagnostic equipment
- Fluid conveyance systems
- Industrial hose
- PTFE & PFA hose, tubing & plastic fittings
- Rubber & thermoplastic hose & couplings
- Tube fittings & adapters
- Quick disconnects



HYDRAULICS

Key Markets

- Aerospace
- Aerial lift
- Agriculture
- Construction machinery
- Forestry
- Industrial machinery
- Mining
- Oil & gas
- Power generation & energy
- Truck hydraulics

Key Products

- Diagnostic equipment
- Hydraulic cylinders & accumulators
- Hydraulic motors & pumps
- Hydraulic systems
- Hydraulic valves & controls
- Power take-offs
- Rubber & thermoplastic hose & couplings
- Tube fittings & adapters
- Quick disconnects



PNEUMATICS

Key Markets

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

Key Products

- Air preparation
- Compact cylinders
- Field bus valve systems
- Grippers
- Guided cylinders
- Manifolds
- Miniature fluids
- Pneumatic accessories
- Pneumatic actuators & grippers
- Pneumatic valves and controls
- Rodless cylinders
- Rotary actuators
- Tie rod cylinders
- Vacuum generators, cups & sensors



PROCESS CONTROL

Key Markets

- Chemical & refining
- Food, beverage & dairy
- Medical & dental
- Microelectronics
- Oil & gas
- Power generation

Key Products

- Analytical sample conditioning products & systems
- Fluoropolymer chemical delivery fittings, valves & pumps
- High purity gas delivery fittings, valves & regulators
- Instrumentation fittings, valves & regulators
- Medium pressure fittings & valves
- Process control manifolds



SEALING & SHIELDING

Key Markets

- Aerospace
- Chemical processing
- Consumer
- Energy, oil & gas
- Fluid power
- General industrial
- Information technology
- Life sciences
- Military
- Semiconductor
- Telecommunications
- Transportation

Key Products

- Dynamic seals
- Elastomeric o-rings
- EMI shielding
- Extruded & precision-cut, fabricated elastomeric seals
- Homogeneous & inserted elastomeric shapes
- High temperature metal seals
- Metal & plastic retained composite seals
- Thermal management



ENGINEERING YOUR SUCCESS.

Purification, Dehydration and Filtration Division

4087 Walden Avenue
Lancaster, NY 14086
T 716 686 6400, F 877 857 3800

Sales Offices

5900-B Northwoods Parkway
Charlotte, NC 28269
T 716 686 6400, F 877 857 3800

160 Chisholm Drive
Milton, Ontario L9T 3G9 Canada
T 905 693 3000, F 905 876 1958

www.parker.com/pdf

North America

Parker Hannifin Corporation Filtration Group

Global Headquarters
6035 Parkland Boulevard
Cleveland, OH 44124-4141
T 216 896 3000, F 216 896 4021
www.parker.com

Compressed Air Treatment Filtration & Separation/Balston

242 Neck Road
Haverhill, MA 01835-0723
T 978 858 0505, F 978 858 0625
www.parker.com/balston

Filtration & Separation/Finite

500 Glaspie Street, PO. Box 599
Oxford, MI 48371-5132
T 248 628 6400, F 248 6281850
www.parker.com/finitefilter

Engine Filtration & Water Purification

Racor

3400 Finch Road, PO Box 3208
Modesto, CA 95353
T 209 521 7860, F 209 529 3278
www.parker.com/racor

Racor

850 North West St., PO Box 6030 Holly
Springs, MS 38635
T 662 252 2656, F 662 274 2118
www.parker.com/racor

Racor

302 Parker Drive
Beaufort, SC 29906
T 843 846 3200, F 843 846 3230
www.parker.com/racor

Racor -- Village Marine Tec.

2000 West 135th Street
Gardena, CA 90249
T 310 516 9911, F 310 538 3048
www.villagemarine.com

Hydraulic Filtration

Hydraulic Filter

16810 Fulton County Road #2
Metamora, OH 43540-9714
T 419 644 4311, F 419 644 6205
www.parker.com/hydraulicfilter

Process Filtration

Process Advanced Filtration

2340 Eastman Avenue
Oxnard, CA 93030
T 805 604 3400, F 805 604 3401
www.parker.com/processfiltration

Europe

Compressed Air Treatment

domnick hunter Industrial
Dukesway, Team Valley Trading Estate
Gateshead, Tyne & Wear
England NE11 OPZ
T +44 (0) 191 402 9000,
F +44 (0) 191 482 6296
www.domnickhunter.com

Hiross Zander

Padova Business Unit
Strada Zona Industriale 4
35020 S. Angelo di Piove Padova, Italy
T +39 049 9712 111, F +39 049 9701 911
www.dh-hiross.com

Hiross Zander

Essen Business Unit
Zander Aufbereitungstechnik GmbH
Im Teelbruch 118
D-45219 Essen, Germany
T +49 2054 9340, F +49 2054 934164
www.zander.de

Parker Gas Separations

Oude Kerkstraat 4
P O Box 258
4870 AG Etten- Leur, Netherlands
T +31 76 508 5300, F +31 76 508 5333

Engine Filtration & Water Purification

Racor

Shaw Cross Business Park Churwell Vale
Dewsbury,
WF12 7RD England
T +44 (0) 1924 487000,
F +44 (0) 1924 487038
www.parker.com/rfde

Racor Research & Development

Parker Hannifin GmbH & Co KG
Inselstrasse 3 – 5
70327 Stuttgart Germany
T +49 (0)711 7071 290-0,
F +49 (0)711 7071 290 -70
www.parker.com/racor

Hydraulic Filtration

Hydraulic Filter

Stieltjesweg 8, 6827 BV
P.O. Box 5008 6802 EA
Annem, Holland
T +31 26 3760376, F +31 26 3643620
www.parker.com/eurofilt

Urxjala Operation, Finn Filter

Salmentie 260
31700 Urxjala as Finland
T +358 20 753 2500, F +358 20 753 2501
www.parker.com/fin

Condition Monitoring Center

Brunel Way Thetford,
Norfolk IP 24 1HP England
T +44 1842 763299, F +44 1842 756300
www.parker.com/cmc

Process Filtration

domnick hunter Process

Durham Road, Birtley Co. Durham, DH3
2SF England
T +44 (0) 191 410 5121,
F +44 (0) 191 410 5312
www.domnickhunter.com

Asia Pacific

Australia

9 Carrington Road, Castle Hill
NSW 2154, Australia
T +61 2 9634 777, F +61 2 9899 6184
www.parker.com/australia

China

280 YunQiao Road
JinQiao Export Processing Zone
Shanghai 101206 China
T +86 21 5031 2525, F +86 21 5834 3714
www.parker.com/china

India

Plot EL 26, MIDC, TTC Industrial Area
Mahape, Navi Mumbai 400 709 India
T +91 22 5613 7081, 82, 83, 84, 85
F +91 22 2768 6618 6841
www.parker.com/india

Japan

626, Totsuka-cho, Totsuka-ku
Yokohama-shi, 244-0003 Japan
T +81 45 870 1522, F +81 45 864 5305
www.parker.com/japan

Korea

1-C Block, Industrial Complex of Jangan,
615-1, Geumui-Ri Jangan-Myeon,
Hwaseong-City Gyeonggi-Do, Korea
T +82 31 359 0771, F +82 31 359 0770
www.parker.com/korea

Singapore

No. 11 4th Chin Bee Road
Jurong Town, Singapore 619702
T +65 6887 6330, F +65 6261 4929
www.parker.com/singapore

Thailand

1023 3rd Floor, TPS Building
Pattanakam Road, Suanluang,
Bangkok 10250 Thailand
T +66 2717 8140, F +66 2717 8148
www.parker.com/thailand

Latin America

Parker Comercio Ltda.

Filtration Division

Estrada Municipal Joel de Paula
900 Eugenio de Melo,
Sao Jose dos Campos
CEP 12225390 SP Brazil
T +55 12 4009 3500, F +55 12 4009 3529
www.parker.com/br

Pan American Division - Miami

7400 NW 19th Street, Suite A
Miami, FL 33128
T 305 470 8800 F 305 470 8808
www.parker.com/panam

Africa

Parker Hannifin Africa Pty Ltd Parker

Place, 10 Berne Avenue,
Aeroporto Kempton Park,
1620 South Africa
T +27 11 9610700, F +27 11 3927213
www.parker.com/au

©2010 Parker Hannifin Corporation
Catalog: 174004401_03_EN 07/10
Rev 000 NA 05/2011

