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# Treatment and distribution of industrial fluids





## Compressed air: the 4th utility

Compressed air is a safe and reliable power source that is widely used throughout industry. Known as the 4<sup>th</sup> utility, approximately 90% of all companies use compressed air in some aspect of their operations.

Unlike gas, water and electricity which is supplied to site by a utility company to strict tolerances and quality specifications, compressed air is generated on-site by the end user.

The quality of the compressed air and the cost of producing this powerful utility is therefore the responsibility of the user.

The quality and reliability of compressed air distribution systems have always posed problems. Almost all concerns arise from contaminants carried in the air.

Typically there are at least 10 different contaminants in a traditional compressed air network.

These may be present in the atmospheric air drawn into the compressor or can be created within the compressor itself. They are also often found in air receivers or out-dated pipe systems which may be subject to corrosion.

Contaminants, however, can be fully removed or reduced to acceptable levels when the compressed air treatment and the air distribution system are managed safely and efficiently

Water supplied to industrial concerns is continually monitored by Local Authorities in order to check there are no contaminants present which could endanger the production cycle.



Utility providers must ensure that the gas and water supplied to industrial users meet stringent quality standards.





Compressed air is generated by users themselves who alone are responsible for its purity.



## One solution for each contaminant

There are several different techniques for efficiently removing the contaminants found in compressed air and gases. Parker develops the best solutions and equipment for optimum results, with associated energy savings and respect for the environment.

Purification techniques	Contaminants								
	Water vapour	Condensates	Water aerosols	Dust and atmospheric particles	Micro- organisms	Oil vapour	Liquid oil and oil aerosols	CO-CO <sup>2</sup> - NOX-SO <sup>2</sup>	Rust and pipescale
Transair aluminium pipe systems									•
Condensate water separators		•							
Coalescing filters			•	•	•		•		•
Adsorption filters						•			
Refrigeration dryers	•		•						
Adsorption dryers	•								
Membrane dryers	•								
Activated carbon adsorption column						•			
Dust filters				•	•				•
Sterile filters					•				
Nitrogen generators					•				
Breathable air units			•	•		•		•	

## New Parker components for compressed air systems



Parker Global FRLs are available in three sizes and with BSPP or NPT connectors to suit all requirements. Our filters, regulators, filter/regulators and lubricators are available in a wide range of standard options. Personalised modules can be very easily assembled in different configurations using patented connection components.



The LF 3000 instant connection system for compressed air offers complete reliability at all times. Proven performance characteristics include optimum flow rate, vacuum capability, instant connection and disconnection, compactness, ease of use and lightweight materials.

The wide range includes 8 diameters from 3 mm to 16 mm and a choice of three BSP thread types - parallel, taper and metric.



Parker compressed air tube (CAH) is specifically designed for compressed air applications. The reinforced structure of the tube, internal duct and external covering can withstand aggressive working environments and guarantee a long trouble-free service life.

## **Products**















## Coalescing and activated carbon filters for air and compressed gas

Flow rate from 10 to 30,000 m³/h. Operating pressure up to 350 bar. Designed for air and other compressed gases (natural gas, hydrogen, oxygen, nitrogen, argon, helium, etc.). Deliverables in accordance with the main international bodies (PED, ASME VIII div. 1 and 2, Ghost, China Stamp, LRofS, DNV, GL, ABS, etc.) including directives ISO12500 and ISO8573.1.

#### Refrigeration dryers

Flow up to 26,400 m³/h. Operating pressure up to 40 bar. Pressure dew point +3 °C. Energy-saving system SMART SAVE.

#### Transair pipe systems for air and inert gases

Transair: a unique, truly flexible and upgradeable aluminium pipe system. Creating primary and secondary networks of the main industrial gases has never been quicker.

Compatible fluids: air, nitrogen, vacuum and argon, etc. Diameters available: 17, 25, 40, 63, 76, 100 and 168 mm. Tube colours: blue, grey and green. Fittings: BSP and NPT.

#### Adsorption dryers for compressed gases and air

Flow rate from 10 to 15,000  $\rm m^3/h$ . Operating pressure up to 350 bar. Pressure dew point to -70°C. Designed for air and other compressed gases. Patented vacuum regeneration system.

Compliant with the requirements of main international standards and bodies (PED, ASME VIII div. 1 and 2, Ghost, China Stamp, LRofS, DNV, GL, ABS, etc.).

#### Membrane dryers

Designed for point of use applications where compact size is a determining factor.

Flow rate of air up to  $1,000 \text{ m}^3/\text{h}$ .

Operating pressure up to 10 bar.

Pressure dew point to -40°C.

Operates without electrical supply.

## **Breathing air systems**

Flow rate up to 850 m<sup>3</sup>/h.

Operating pressure up to 16 bar.

Compliant with ISO 12021 and European Pharmacopoeia standards.

## Heat exchangers with air and liquid cooling systems

Flow rate up to 12,000 m<sup>3</sup>/h.

Designed for applications from 0 to 40 bar.

Available in stainless steel and other materials resistant to chemical agents. Special ranges for biogas and natural gas.

Bespoke installations according to requirements.

## **Products**















#### Chillers for industrial cooling

Refrigerating power up to 800 kW.

Special external and internal surface treatments for aggressive gases and environments.

Dedicated equipment for laser applications and special gases (biogas). Bespoke installations according to requirements.

#### Condensate drains

For compressed air lines up to 66,000 m<sup>3</sup>/h.

Operating pressure up to 50 bar. Designed for corrosive gases and air. Float, time delay and electronic level control versions.

#### Transair pipe system for process water

Transair: a flexible and upgradeable stainless steel pipe system for creating primary and secondary industrial water networks.

Compatible fluids: industrial water, oils, etc.

Main application: cooling (moulds, tools, welding, etc.) Diameters available: 22, 28, 42, 60, 76 and 100 mm.

Fittings: BSP and NPT.

#### Water-oil condensate separators

Available in 7 models for the treatment of condensates generated by compressed air for flow rates up to 3,600 m<sup>3</sup>/h.

#### Nitrogen generators for industrial and laboratory applications.

To generate ultra-pure nitrogen from compressed air.

Flow rate of nitrogen produced up to 150 m<sup>3</sup>/h.

Modular assembly for larger nitrogen flow rates.

Degree of purity: from 95% to 99.999%.

Maximum pressure of incoming air: 15.0 bar.

Maximum pressure of outgoing nitrogen: 13.5 bar.

Compliant with EIGA standard relating to the food and drink industry.

#### Nitrogen membrane generators

To generate ultra-pure nitrogen from compressed air.

Flow rate of nitrogen produced up to 300 m<sup>3</sup>/h.

Modular assembly for larger nitrogen flow rates.

Degree of purity: from 95% to 99.5%.

Maximum pressure of outgoing nitrogen: 13 bar.

Reduced compressed air consumption per m<sup>3</sup> of nitrogen produced. Designed for point-of-use applications.

#### Added value services

Contaminant analysis.

Particle counting

Humidity testing.

Breathing air analysis.

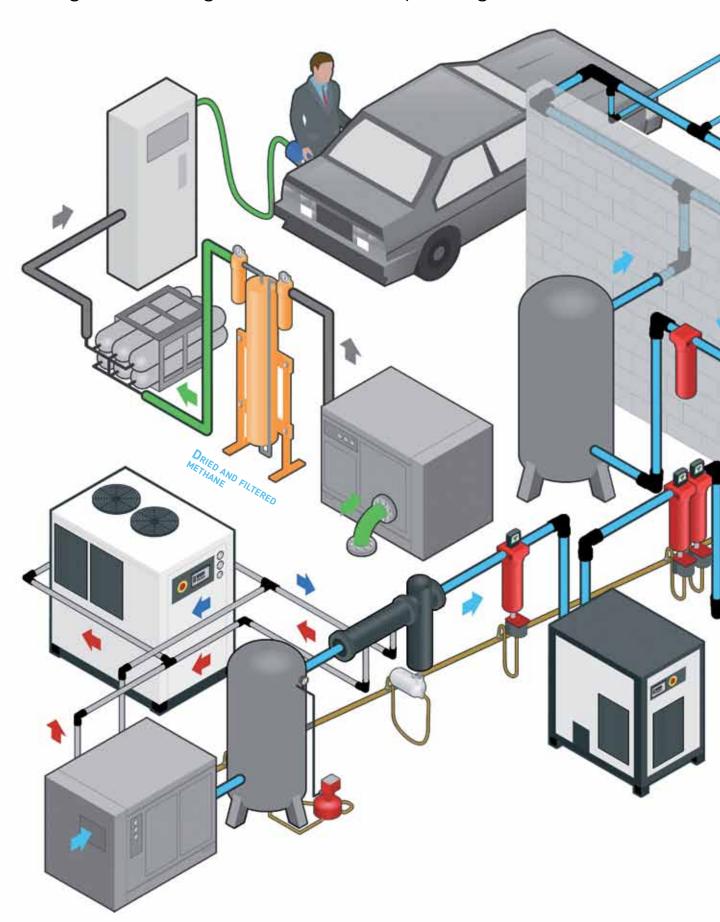
Leak testing.

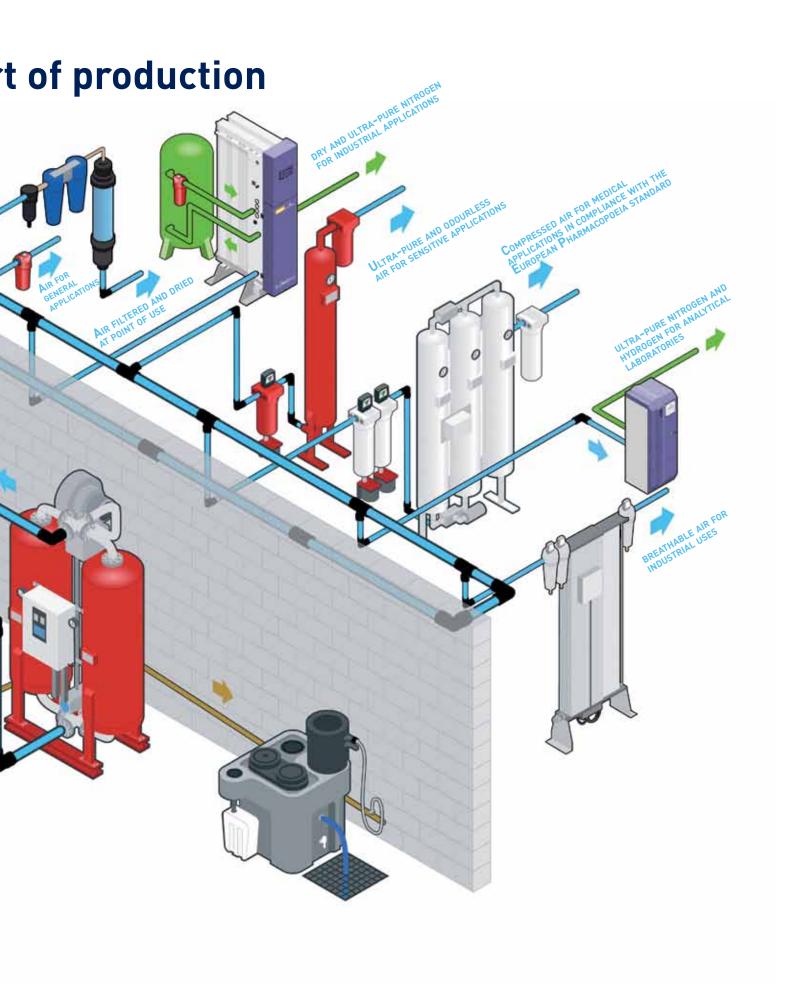
Service packages.

Factory trained technicians.

# From the compressor room to the hear

The Parker solution couples excellent purity of conveyed air and gases with high flow and lower operating costs





#### 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 2233 458 parker.azerbaijan@parker.com

**BE/LU – Belgium,** Nivelles Tel: +32 (0)67 280 900 parker.belgium@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,** Budapest Tel: +36 1 220 4155 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 7272 505 800 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 Tel: +1 216 896 3000

#### **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

IN - India, Gurgaon Tel: +91 124 459 0600 legris.india@parker.com

**JP - Japan,** Tokyo Tel: +81 (0)3 6408 3901

**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: +662 186 7000-99

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

#### **South America**

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

**BR - Brazil,** Sao Jose dos Campos Tel: +55 800 727 5374

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

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

European 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)

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## Fluid System Connectors Division Europe Transair Business Unit

CS 46911 - 74 rue de Paris 35069 Rennes - France phone : +33 (0) 2 99 25 55 00 fax : +33 (0) 2 99 25 56 47 transair@parker.com www. parkertransair.com