



Bulletin LF AGS





Parker is the world's leading diversified manufacturer of motion and control technologies and systems serving many markets.

Markets Parker serves:

- Commercial transport
- Military aircraft and missiles
- Regional transports
- General aviation
- Business aircraft
- Helicopters
- Engines
- Power plants/power generation
- Construction machinery
- Automotive
- Agriculture
- Transportation
- Mobile machinery
- Natural resources
- Machine tools
- Aerial lift
- Plastic machinery
- Mining equipment
- Hoists & cranes
- Lawn & garden
- Industrial machinery
- Conveyors
- Pulp & paper
- Metalworking
- Process control
- Printing
- Semiconductor manufacturing
- Packaging
- Mobile air conditioning
- Mobile & industrial gerotors
- Industrial refrigeration
- Supermarket refrigeration
- Commercial refrigeration
- Residential air conditioning
- Fuel dispensing
- Chemical processing
- Telecommunications
- Information technology
- Marine
- Environmental
- Oil & gas exploration
- Process analytical applications
- Medical & bio/pharmaceutical



Marine



Hydraulic, fluid connector, seal, pneumatic, air conditioning and filtration components and systems.

Food & Beverage



Pneumatic, electromechanical and connector components plus filtration for automation systems.

Machine Tool



Rigid and flexible connectors and associated products for pneumatic and fluid systems. Hydraulic & pneumatic components and systems. Aerospace



Control systems and components for aerospace and related high-technology markets. Aviation fuel filtration products.

Mobile Machinery



Hydraulic and fluid connector components and complete systems for mobile machinery.

Refrigeration & Air Conditioning



System-control and fluid-handling components and systems for refrigeration, air-conditioning and industrial equipment.

Electronics



Industrial and commercial sealing devices plus connector and related products.

Instrumentation



High-quality critical flow components for process instrumentation, ultra-high-purity, medical and analytical applications.

Seal

Zero Air Generators

Parker Balston® Zero Air

Generators are complete systems with state-of-the-art, highly reliable components engineered for easy installation, operation, and long term performance. Parker Balston[®] Zero Air Generators are much easier to install than dangerous, high pressure gas cylinders, and only need to be installed once! All that is required is a standard compressed air line and an electrical outlet.

Parker Balston[®] Zero Air Generators are easy to operate, there is no complicated operating procedure to learn or any labor intensive monitoring required.

Parker Balston[®] Zero Air Generators eliminate all the inconveniences and costs of cylinder gas supplies and

Baseline Comparison



There is no need to use valuable laboratory floor space to buy and store excessive reserves to protect yourself from late deliveries, transportation interruptions, or periods of tight supplies. With a Parker Balston[®] Zero Air Generator, you control your supply.



The Chromatograms (above) compare baselines produced by a Parker Balston[®] Zero Air Generator (left) and Bottled fuel air (right). The baseline produced by the Parker Balston[®] Generator is very flat, with no fluctuations or peaks, in comparison with the chromatogram of the bottled air fuel supply, which has many peaks ranging from .25 ppm to -.25 ppm.

Zero Air Generator Selection Chart						
Model Number and Flow Capacity						
75-83NA	HPZA-3500	HPZA-7000	HPZA-18000	HPZA-30000	76-98N100	76-98N200
1.0 lpm	3.5 lpm	7 lpm	18 lpm	30 lpm	140 lpm	280 lpm



Features & Benefits

- Produce UHP Zero Air from lab house compressed air supply
- Eliminates inconvenient and dangerous cylinders of air, breathing air, or zero air from the laboratory
- Increases the accuracy of analysis and reduces cleaning requirements of the detector
- Recommended and used by major GC and column manufacturers
- Payback period of typically less than 1 year
- Gas purity below 0.05 ppm Total Hydrocarbon Content (as Methane)
- Silent operation and minimal operator attention required

Applications

- Oxidant/support gas for GC with FID, FPD and NPD detectors
- Support gas for Total Hydrocarbon Analyzers
- Nebulizer and exhaust pump gas for LC/MS Instruments

Hydrogen Generators



Gas Generator Selection Chart

Hydrogen Gas Generator			
Flow Capacity	Model Number		
H2-90NA*	90 cc/min		
H2-150	150 cc/min		
A915000NA*	160 cc/min		
B920000NA*	250 cc/min		
H2-300	300 cc/min		
B940000NA*	500 cc/min		
H2-500NA	500 cc/min		
H2-800NA	800 cc/min		
H2-1200NA	1200 cc/min		

*99.9995% Fuel Grade Purity, no Palladium

Features & Benefits

- Eliminate dangerous and expensive hydrogen gas cylinders from the laboratory
- Produce a continuous or on-demand supply 99.9995% to 99.99999+% pure hydrogen gas
- Compact and reliable only one square foot of bench space required
- Designed to operate continuously 24 hours a day, 7 days a week
- Certified for laboratory use by CSA, UL, IEC 1010, and CE mark
- Safe produces only as much gas as you need

Applications

- Fuel and carrier gas for GC's
- Reaction gas for ELCD's
- Reagent Gas for AED's

Parker Balston[®] Hydrogen

Generators eliminate the need for expensive, dangerous, high pressure cylinders of hydrogen in the laboratory. It is no longer necessary to interrupt important analyses to change cylinders. Generator flow capacities of up to 1200 cc/min. of ultra-high purity hydrogen are available. Parker Balston® Hydrogen Generators are compact benchtop instruments designed for use in the laboratory or in the field. Hydrogen gas is produced by electrolytic dissociation of water. The resultant hydrogen stream then passes through a palladium membrane.

Only hydrogen and its isotopes can penetrate the palladium membrane; therefore, the purity of the output gas is guaranteed to be 99.99999+% consistently. This technology produces hydrogen at a purity two orders of magnitude greater than competitive technologies using silica gel, desiccants, and drying tubes. Parker Balston® Hydrogen Generators offer many special features to ensure safe and convenient operation. These features include low-water audible alarms to indicate when the water reservoir needs filling and automatic shutdown to protect expensive laboratory equipment.

High Purity Nitrogen Generators

Parker Balston[®] Models HP N2-1100, HPN2-2000, UHPN2-1100, 76-97NA, and 76-98NA Nitrogen

Generators can produce up to 12.0 lpm of ultra high purity nitrogen gas. These systems are completely engineered to transform standard compressed air into 99.99% or 99.9999% nitrogen, exceeding the specification of UHP cylinder gas. Nitrogen is produced by utilizing a combination of state-of-the art purification technologies and high efficiency filtration.

Pressure swing adsorption is utilized for the removal of O_2 , CO_2 , and water vapor. A catalyst module is incorporated in models UHPN2-1100 and 76-98NA to oxidize hydrocarbons from the inlet air supply. The generators also have high efficiency coalescing prefilters and a 0.01 micron (absolute) membrane filter incorporated into each design.

Parker Balston[®] UHP Nitrogen Generators are engineered and packaged in a small cabinet to fit on or beneath any benchtop. The systems eliminate the need for costly, inconvenient high pressure nitrogen cylinders. The HPN2-1100 and UHPN2-1100 are ideal for carrier gas applications.

The 76-97NA and 76-98NA are ideal for purging ICP's.



Features & Benefits

- Nitrogen Generators for a variety of disciplines including Gas Chromatography, LC/MS, ICP, and Thermal Analysis
- Eliminate inconvenient and dangerous nitrogen cylinders or dewars from the laboratory
- Compact designs free up valuable laboratory floor space
- Offers long term cost stability, uncontrollable vendor price increases, contract negotiations, long term commitments and tank rentals are no longer a concern

Applications

- Carrier gas for all brands of GC's and detectors
- Makeup gas requirements
- Supply gas for GPC (Gel Permeation Chromatography)
- ICP optical or camera path purge

Nitrogen Generator Flow Chart

Inlet Air Pressure (psig)	Max Outlet Flow (cc/min.)	Max Outlet Pressure (psig)
Models HPN2-1100 and UHPN2-1100		
125	1100	85
110	1000	75
100	900	65
90	800	60
80	700	50
70	600	45
60	500	35
Model HPN2-2000		
75-120	2000	90
Model 76-97NA and 76-98NA		
60-120	12000	83



Parker Balston® Membrane Nitrogen Generators are designed to supply single or multiple LC/MS instruments with dry nitrogen at purities of 99% to 99.5%. The generator can also be used for solvent evaporation as well as supplying dry nitrogen to analytical instruments.

Installation requires a minimum of 60 psig of compressed air to a 1/4" or 1/2" inlet connection. The outlet nitrogen supply is then directed to your analytical instruments. No electrical connections are required and the only maintenance is to change prefilters periodically. The nitrogen generators are also available with purity monitors.

Nitrogen Generator Purity/Flow Chart

Model Number	Flow Ranges (LPM)	
N2-04	2-24	
N2-14, N2-14A	4-60	
N2-30NA(1)	30	
N2-22, N2-22A	7-88	
N2-35, N2-35A	11-131	
N2-45, N2-45A	16-62	
N2-80, N2-80A	28-70	
N2-135, N2-135A	56-512	

(1) With internal compressor.



Features & Benefits

- Minimal maintenance required
- No electricity required
- ROI in 6 months to 2 years
- LC/MS grade purity enhances Instrument Performance
- Phthalate-free
- Recommended, certified, tested and used by all major LC/MS instrument manufacturers

Applications

- LC/MS
- Solvent Evaporation
- Analytical Instruments requiring nitrogen

FT-IR Purge Gas Generators

Parker Balston® FT-IR Purge Gas Generators are specifically designed for use with FT-IR Spectrometers to provide a purified purge gas and air bearing gas from compressed air. The Generators supply carbon dioxide-free air at less than -100°F (-73°C) dew point with no suspended impurities larger than 0.01 µm. The units are designed to operate continuously 24 hours/day, 7 days/week. The Parker Balston FT-IR Purge Gas Generator completely eliminates the inconvenience and the high costs of nitrogen cylinders and dewars, and significantly reduces the costs of operating all FT-IR instrumentation. Each system offers cleaner background spectra in a shorter period of time and more accurate analysis by improving the signal-to-noise ratio. The typical payback period is less than one year. The Generators are also ideally suited for use with CO₂ Analyzers in addition to supplying other laboratory instruments. Each Generator is quiet, reliable, and easy to install - simply attach the inlet air and outlet purge lines, plug the power cord into a wall outlet, and enjoy trouble-free operation. The Model 74-5041NA Self Contained FT-IR Purge Gas Generator includes a state-of-the-art compressor.

Comparative Spectral Analysis in Purging an FT-IR Sample Chamber



This spectra comparison illustrates that a Parker Balston[®] FT-IR Purge Gas Generator allows an FT-IR to be purged at a much higher flow rate than is practical with nitrogen. The sample chamber purging of CO_2 and water by the Parker Balston[®] unit is faster than the sample compartment purged with nitrogen.

Here's what your colleagues say:

"A Parker Balston[®] FT-IR Purge Gas Generator and Self-Contained Lab Gas Generator were used in conjunction with the Society for Applied Spectroscopy Fourier Transform Infrared Spectrometry Workshop at the University of Georgia, June, 1999 (organized by Dr. James A. de Haseth and Dr. Peter R. Griffiths). The Self- Contained Lab Gas Generator provided excellent purge for six spectrometers. The organizers were so pleased with the performance of the Parker Balston[®] Systems, they have requested that Parker Hannifin Corporation participate in future workshops."

- Dr. James A. de Haseth and Dr. Peter R. Griffiths



Features & Benefits

- Eliminate costly, inconvenient gas cylinders from the laboratory
- Improve instrument accuracy, sensitivity, and performance
- Safe operates at low pressure
- Cost effective payback typically less than one year
- Compact free up valuable laboratory floor space

Applications

- Provide clean, dry, CO₂ free air to all brands of FT-IR Spectrometers
- Provide clean, dry instrument air at -100°F dew point

Gas Generator Selection Chart

FI-IR Gas Generator	Flow Capacity
75-45NA	Up to 17 lpm
75-52NA	Up to 34 lpm
75-62NA	Up to 102 lpm
74-5041NA	Up to 28 lpm

TOC Gas Generator



Features & Benefits

- Replaces high pressure oxygen or nitrogen gas cylinders with hydrocarbon-free, CO₂-free compressed gas for TOC Analyzers
- Ensures consistent, reliable, TOC operation and significantly reduces instrument service and maintenance costs
- Compact design frees up valuable laboratory floor space
- Purity meets or exceeds all TOC manufacturer's gas purity requirements

Applications

- Combustion/carrier gas for TOC's
- Supply gas for Total Organic Halogen Analyzers

The Parker Balston® TOC-1250 Gas

Generator purifies an existing compressed air supply in carrier/combustion gas, for TOC instruments, eliminating the need to purchase expensive, inconvenient, high pressure cylinders of oxygen or nitrogen. The Parker Balston[®] TOC-1250 utilizes catalytic oxidation and pressure swing adsorption technologies to remove hydrocarbons to 0.1 ppm (measured as methane), CO₂ to

TOC Gas Generator Selection Chart

Model Number TOC-1250

Flow Capacity 1,250 scc/min 1 ppm, and water vapor to 1 ppm (-100°F/-73°C dewpoint). The Parker Balston® TOC-1250 Gas Generator eliminates all the inconveniences and costs of cylinder gas supplies and dependence on outside vendors. Uncontrollable vendor price increases, contract negotiations, long term commitments and tank rentals are no longer a concern. The Parker Balston® TOC-1250 Gas Generator offers long-term cost stability. The TOC-1250 is a complete system with carefully matched components engineered for easy installation, operation, and long term reliability. Installation consists of connecting a standard compressed air line to the inlet and connecting the outlet to the instrument gas supply line. Plug the generator into a standard electrical wall outlet and within minutes high purity carrier/combustion gas is supplied!



Respective baselines of THC (left) and CO₂ (right) analyzers over 5 hours, supplied by a Parker Balston TOC Gas Generator.

Parker Balston's FID -1000 and FID-2500 Gas Stations can provide both hydrogen gas and zero grade air for FID detectors on Gas Chromatographs. These systems are specifically designed to provide fuel gas and support air for up to 6 Flame Ionization Detectors, Flame Photometric Detectors, and Total Hydrocarbon Analyzers.

Hydrogen gas is produced from deionized water using a Proton Exchange Membrane Cell. The hydrogen generator compartment utilizes the principle of electrolytic dissociation of water and hydrogen proton conduction through the membrane. The hydrogen supply produces up to 250 cc/min of 99.9995% pure hydrogen with pressures up to 60 psig. Zero Air is produced by purifying on-site compressed air to a total hydrocarbon concentration of less than 0.05 ppm (measured as methane). The zero air supply is up to 2500 cc/min of Zero Grade Air.

Both the Parker Balston FID-1000 and FID-2500 eliminate all the inconveniences and cost of zero air and hydrogen cylinder gas supplies and dependence on outside vendors. With the FID Gas Generator, you control your gas supply. All Parker Balston gas generators meet NFPA 50A and OSHA 1910.103 regulations governing the storage of hydrogen.

Produced and supported by an ISO 9001 registered organization, Parker Balston's hydrogen generators are the first built to meet the toughest laboratory standards in the world: CSA, UL, CE, and IEC 1010.







Features & Benefits

D Gas Stations

- Ideal for up to 6 FIDs
- Produces UHP Zero Air from house compressed air (< 0.05 ppm THC) and 99.9995% pure hydrogen in one enclosure
- Eliminates inconvenient and dangerous zero air and hydrogen cylinders from the laboratory
- Increases the accuracy of analysis and reduces the cleaning requirement of the detector
- Recommended and used by many GC and column manufacturers
- Payback period of typically less than one year
- Automatic water fill as standard
- Silent operation and minimal operator attention required

FID Gas Station Selection Chart		
Model Number	# of FIDs	
FID-1000	Up to 2 FIDs	
FID-2500	Up to 6 FIDs	

Air Dryers for Analytical Instruments



Features & Benefits

Compressed Air Dryers

- Produce ultra-dry, purified compressed air for analytical instruments
- Model 64-20 reduces the dewpoint of compressed air to -100°F
- Compact design frees up floor space
- eliminates costly, inconvenient gas cylinders
- Low dewpoint instrument air protects analytical instruments

Membrane Air Dryers

- Dry air for hazardous areas
- No electricity required low operating costs
- No refrigerants or freons environmentally sound
- Explosion proof
- No moving parts or motors silent operation

Applications

Compressed Air Dryers

- NMR Spectrometers
- AA Spectrophotometers
- Electron Microscopes
- Thermal Analyzers
- Mask Aligners
- Solvent Evaporators
- Any analytical instrument requiring moisture-free and particle-free air



Water vapor quickly permeates the membrane, and is released harmlessly to atmosphere. Air flows along the membrane fiber as a separate product stream. Parker Balston[®] Model 64-20 Compressed Air Dryer provides

ultra-dry, purified compressed air for analytical instruments. The dryer reduces the dewpoint to -100°F without operator attention. It comes complete with a high efficiency prefiltration system, automatic drains, a 0.01 µm final filter, a moisture indicator, and pretested controls. **The Parker Balston® 64-01, 64-02, and 64-10 Membrane Air Dryers** will supply oil and particulate-free dry compressed air to dewpoints as low as -40°F, and at flow rates of up to 25 SCFM. The membrane air dryers are engineered for easy installation,

Air Dryer Selection Chart			
Model Number	Flow Capacity		
Compressed Air Dryers			
64-20 (1)	283 lpm		
Membrane Air Dryers			
64-01	71 lpm		
64-02	142 lpm		
64-10	708 lpm		

operation, and long term reliability. They incorporate the highest efficiency membrane available, offering low cost operation and minimal maintenance. The dryers are lightweight, compact, can be easily installed on an existing air line and require no electrical connections, making them ideal for remote and point-of-use installations or those in hazardous areas.

If oxygen is not a concern, our air dryer is ideal for all laboratory applications requiring ultra-dry, purified compressed gas. Eliminate costly, inconvenient cylinders of nitrogen and other inert gases from your laboratory with a Parker Balston[®] Air Dryer.

Lab Gas Generators

Features & Benefits

Lab Gas Generator

- Ideal for applications requiring clean, dry gas
- includes state-of-the-art, oil-less compressor
- Compact, portable design is ideal for mobile labs
- Special sound insulation design ensures quiet operation

Gas Generator for NMR Instruments

- Supplies ultra-dry, purified compressed air to NMR Spectrometers
- Completely eliminates costly, inconvenient nitrogen dewars - never pay for or change out another Dewar again
- Compact design frees up valuable laboratory floor space
- Completely automatic



The Parker Balston® Model 74-5041 Lab Gas Generator provides instruments with a continuous supply of purified compressed air with a dew point of less than -100°F (73°C) and no suspended impurities larger than 0.01 µm. non-methane hydrocarbons are reduced to approximately 2 ppm. The Parker Balston® Lab Gas Generator is quiet, reliable, and easy to install. Simply attach the outlet air to your instruments, connect the electrical service, and the unit is ready for trouble-free operation.

Lab Gas Generator Selection ChartModel NumberFlow Capacity74-5041 (1)28 lpm

(1) Includes air compressor.

Gas Generator Services



Parker Balston Extended Support Services extend the warranty term of gas generators to 24-months. There are four choices available within the Depot and Express levels of service. All parts and labor are included with "next business morning" delivery of a temporary replacement available.



Parker Balston "Balston Bucks" Loyalty Programs are offered to every customer who purchases gas generators. Services include special discounts and incentives on gas generator spare parts and consumables as well as special deals on buying your next gas generator. Customers can easily "opt-in" and opt-out" of our special e-mail alerts system which features newsletters, new product announcements and product reminders.

Gas Generator Services



Parker Balston Leasing and Rental Services can provide simple cost effective ways to acquire your next gas generator. Our competitive rates typically provide a monthly payment less than current monthly cylinder gas expenditures. Leasing and rental programs avoid the use of capital budget money.



Parker Balston Preventative Maintenance Contracts provide convenient direct in-lab maintenance service for your gas generator. A factory trained technician will service your gas generator, in your lab, with original Parker parts. Preventative maintenance saves time, money and will reduce the total cost of ownership of your gas generator.

Application Notes



Parker Hannifin Corporation Filtration and Separation Division 242 Neck Road, P.O. Box 8223 Haverhill, MA 01835-0723 Phone: 800-343-4048 or 978-858-0505 Fax: 978-858-0625 http://www.parker.com/balston

About Parker Hannifin Corporation

Parker Hannifin is a leading global motion-control company dedicated to delivering premier customer service. A Fortune 500 corporation listed on the New York Stock Exchange (PH), our components and systems comprise over 1,400 product lines that control motion in some 1,000 industrial and aerospace markets. Parker is the only manufacturer to offer its customers a choice of hydraulic, pneumatic, and electromechanical motion-control solutions. Our Company has the largest distribution network in its field, with over 7,500 distributors serving nearly 400,000 customers worldwide.

Parker's Charter

To be a leading worldwide manufacturer of components and systems for the builders and users of durable goods. More specifically, we will design, market and manufacture products controlling motion, flow and pressure. We will achieve profitable growth through premier customer service.

Product Information

North American customers seeking product information for Balston products, the location of local sales offices or repair services will receive prompt attention by calling the Filtration and Separation Division at our toll-free number: 1-800-343-4048. For all other product information call 1-800-C-PARKER (1-800-272-7537).

The Aerospace Group is a leader in the development, design, manufacture and servicing of control systems and components for aerospace and related high-technology markets, while achieving growth through premier customer service.





The Climate & Industrial Controls Group designs, manufactures and markets system-control and fluid-handling components and systems to refrigeration, air-conditioning and industrial customers worldwide.

The Fluid Connectors Group designs, manufactures and markets rigid and flexible connectors, and associated products used in pneumatic and fluid systems.

Wind Co



The Seal Group designs, manufactures and distributes industrial and commercial sealing devices and related products by providing superior quality and total customer satisfaction.

The Hydraulics Group designs, produces and markets a full spectrum of hydraulic components and systems to builders and users of industrial and mobile machinery and equipment.

The Automation Group is a leading supplier of pneumati and electromechanical components and systems to automatior customers worldwide.





The Filtration Group designs, manufactures and markets quality filtration and clarification products, providing customers with the best value, quality, technical support, and global availability.



The Instrumentation Group is a global leader in the design, manufacture and distribution of high-quality critical flow components for worldwide process instrumentation, ultra-high-purity, medical and analytical applications.

Parker Hannifin Corporation

Filtration Group Technical Sales & Service Locations

Filtration Group North America

Filtration and

Separation Division 242 Neck Road, P.O. Box 8223 Haverhill, MA 01835-0723 Phone: 800-343-4048 or 978-858-0505 Fax: (978) 858-0625

> Haverhill, MA Phone: (978) 858-0505 Baltimore, MD Phone: (410) 636-7200 Oxford, MI Phone: (248) 628-6400

Hydraulic Filter Division

16810 Fulton County Road #2 Metamora, OH 43540-9714 Phone: (419) 644-4311 Fax: (419) 644-6205

Process Filtration Division

6640 Intech Boulevard Indianapolis, IN 46278 Phone: (317) 275-8300 Fax: (317) 275-8413

Tell City, IN Phone: (812) 547-2371

Racor Division

3400 Finch Road P.O. Box 3208 Modesto, CA 95353 Phone: (800) 344-3286 Phone: (209) 521-7860 Fax: (209) 529-3278 Beaufort, SC

Phone: (843) 846-3200 Henryetta, OK Phone: (800) 451-7299 Holly Springs, MS Phone: (662) 252-2656

Filter Division Europe

Parker Hannifin UK Ltd. Shaw Cross Business Park Dewsbury, West Yorkshire England WF12 7RD UK Phone: +44 (0) 1924 487000 Fax: +44 (0) 1924 487001

> Arnhem The Netherlands Phone: +31 (0) 26 3760376

Etten-Leur The Netherlands Phone: +31 76 508 53 00

Maidstone England Phone: +44 (0) 1622 723300

Thetford, Norfolk England Phone: +44 (0) 1842 763299

Urjala As. Finland Phone: +358 (0)3 54100

Filtration Group Asia Pacific

Parker Hannifin Asia Pacific Company, LTD Filtration Group Dae Venture Plaza 169 Samsung-Dong Kangnam-Ku, Seoul Korea 135-882 Phone: +82 2 559 0400 Fax: +82 2 556 8187

Filtration Group Latin America

Parker Hannifin Ind. e Com. Ltda. Filter Division AV Getulio Vargas, 1331/1333 123-05-000 Jacarei, SP Brazil Phone: +55 (11) 3917 1222 Fax: +55 (11) 3917 1102

Call 1-800-343-4048 for any Parker Products In Europe, 00800-2727-5374 or visit our Web site www.parker.com/ags

Parker Worldwide Sales Offices

Contact Parker's worldwide service and distribution network by calling:

Argentina +54	4 (11) 4752 4129
Australia +6	1 (2) 9 634 7777
Austria4	3-2622-23501-0/
Belgium	+32 (67) 280900
Brazil 8	55-12-3955-1000
Canada	1-800-272-7537
Central & South	
America/Caribbean	1-305-470-8800
China +80	6 (21) 6445 9339
Czech Republic 42	-0-2-830-85-221
Denmark4	5-0-43-56-04-00
Finland	+358 (0)3 54100
France 3	33-0-254-741403
Germany 49	-0-2131-513-350

Singapore	+65 6261 5233
South Africa	+27 (11) 392 7280
Spain	+34 (91) 675 7300
Sweden	46-8-5979-5000
Switzerland	41-0-22-307-7111
Taiwan	+886 (2) 2298 8987
Thailand	
United Arab Emi	rates. 971-2-6788587
United Kingdom	+44 (0) 1924-487000
USA	1-800-272-7537
Venezuela	58-212-238-54-22

Note: The (+) sign in front of the country code indicates that you may need to dial an additional prefix.





Parker Hannifin Corporation

Filtration and Separation Division 242 Neck Road, P.O. Box 8223 Haverhill, MA 01835-0723 Phone: 800-343-4048 or 978-858-0505 Fax: 978-858-0625 http://www.parker.com/ags Bulletin LF AGS Printed October 2004 Copyright © Parker Hannifin Corporation 2004

Global Filtration Technology

