



CNG Vehicle and Fueling Products from Parker's Quick Coupling Division

Fueling Nozzles, Vehicle Receptacles, In-line Fill and Vent Line Breakaways, Check Valves
Catalog 3850-QCD | May 2018

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ENGINEERING YOUR SUCCESS.

A leader in the design and manufacture of products and systems that convey and utilize compressed natural gas (CNG), Parker is a natural for natural gas. Our proven products for CNG dispensing and vehicle fueling provide improved service, reduced risk and global interchangeability.

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ON VEHICLE

NGV1 Receptacles



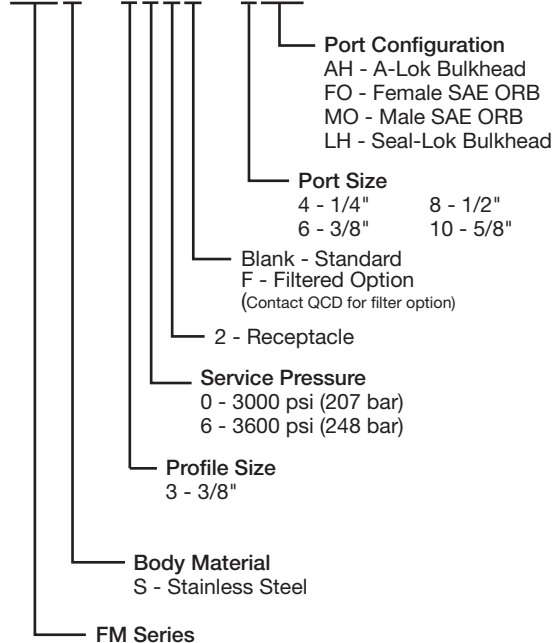
Parker FMS Series receptacles are designed for rigid mounting on a compressed natural gas vehicle. Receptacles can be employed in both fast-fill and time-fill dispensing applications. FMS Series receptacles are compatible with all CNG fueling nozzles conforming to the ANSI/NGV1 standards.

Features:

- FMS receptacles are certified to ANSI/CSA/NGV1 standards
- Internal check valve provides unidirectional flow - natural gas will only flow from dispenser to vehicle
- Seals are a special Nitrile compound formulated for compressed natural gas service
- Dust caps are available to provide protection from dirt and some environmental contamination. They are sold separately.

How To Order

FMS - 362F - 6FO



Materials of Construction

Body	Stainless Steel
Adapter	Stainless Steel
Valving	Stainless Steel
Seal	Special CNG Nitrile Compound

Specifications

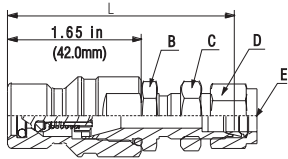
Part Number	FMS-302	FMS-362
Service Pressure	3000 psi (207 bar)	3600 psi (248 bar)
Temperature	-40°F to +250°F (-40°C to +121°C)	-40°F to +250°F (-40°C to +121°C)
Flow Rate	1750 scfm	1750 scfm

Dust Cap



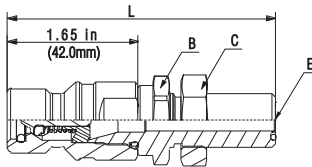
Part Number	Material	Fits Receptacle
FM-66M	Nitrile	FMS-302 & FMS-362 (3/8")

FMS Receptacles - A-Lok Bulkhead



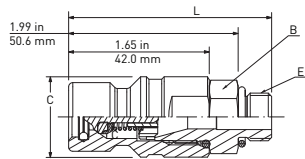
Part Number	L - Length	B - Hex	C - Hex	D - Hex	E - Port End
FMS-302-4AH FMS-362-4AH	2.71" (68.8 mm)	0.75" (19.0 mm)	0.75" (19.0 mm)	0.56" (14.3 mm)	1/4" A-Lok Bulkhead
FMS-302-6AH FMS-362-6AH	2.78" (70.6 mm)	0.75" (19.0 mm)	0.75" (19.0 mm)	0.69" (17.5 mm)	3/8" A-Lok Bulkhead
FMS-302-8AH FMS-362-8AH	3.09" (78.4 mm)	1.00" (25.4 mm)	1.06" (27.0 mm)	0.88" (22.2 mm)	1/2" A-Lok Bulkhead

FMS Receptacles - Seal-Lok Bulkhead



Part Number	L - Length	B - Hex	C - Hex	E - Port End
FMS-302-4LH FMS-362-4LH	3.03" (77.0 mm)	0.81" (20.6 mm)	0.81" (20.6 mm)	1/4" Seal-Lok Bulkhead
FMS-302-6LH FMS-362-6LH	3.38" (85.9 mm)	1.00" (25.4 mm)	1.00" (25.4 mm)	3/8" Seal-Lok Bulkhead

FMS Receptacles - Male SAE Straight Thread ORB



Part Number	L - Length	B - Hex	C - Largest Diameter	E - Port End
FMS-302-6MO FMS-362-6MO	2.38" (60.6 mm)	0.75" (19.0 mm)	0.98" (25 mm) 0.94" (24 mm)	9/16 - 18 UNF

Contact the Quick Coupling Division for other port configurations.

ON VEHICLE

Heavy Duty CNG Receptacle



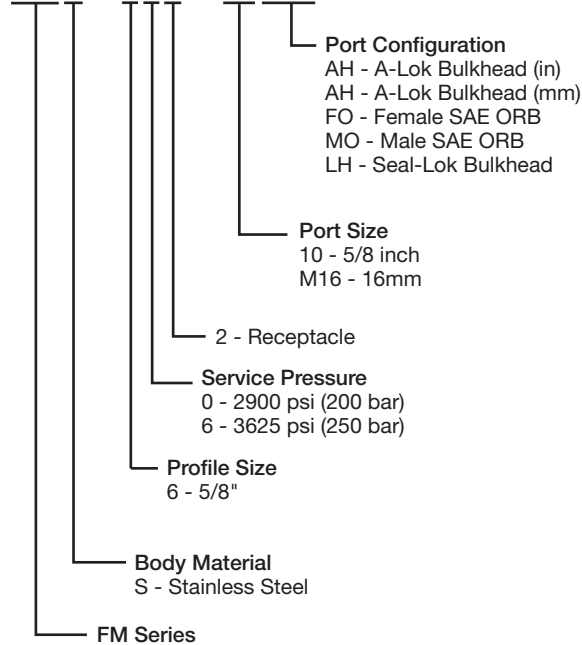
Parker's Heavy Duty Receptacles conform to ISO 14469 standard for Compressed Natural Gas (CNG) Refueling Connectors. These Receptacles are capable of flows as high as 5000 scfm. Higher flow decreases the amount of time necessary to fuel larger vehicles, buses, and trucks, getting them back into service more quickly. FMS-6*2 Heavy Duty Receptacles are compatible with all Heavy Duty CNG fueling nozzles conforming to ANSI/NGV1 and ISO 14469 standards.

Features:

- FMS receptacles are certified to the ISO 14469 standard and ECE R110
- Internal check valve provides unidirectional flow - natural gas will only flow from dispenser to vehicle
- Robust proprietary valve seal prevents leakage
- Hardened stainless steel body resists damage
- Designed to accommodate a variety of port end configurations
- Dust cap is included with each receptacle to provide protection from dirt and some environmental contamination.

How To Order

FMS - 662 - 10MO

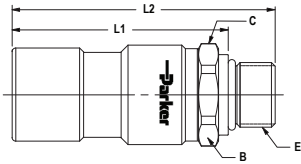


Materials of Construction	
Body	Stainless Steel
Adapter	Stainless Steel
Valving	Stainless Steel
Seal	Special CNG Nitrile Compound

Specifications		
Part Number	FMS-602-***	FMS-662-***
Service Pressure	2900 psi (200 bar)	3625 psi (250 bar)
Temperature	-40°F to +250°F (-40°C to +121°C)	-40°F to +250°F (-40°C to +121°C)
Flow Rate	Up to 5000 scfm	Up to 5000 scfm

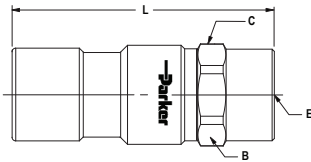
Replacement Dust Cap		
Part Number	Material	Fits Receptacle
H6-66M	Nitrile	FMS-602 & FMS-662

FMS Heavy Duty Receptacles - Male SAE Straight Thread ORB - SAE J1926-2



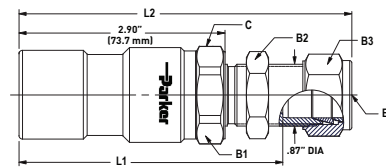
Part Number	L1 - Length	L2 - Length	B - Hex	C - Diameter Across Corners	E - Port End
FMS-602-10MO	2.90" [73.7 mm]	3.53" [89.7 mm]	1.25" [31.8 mm]	1.38" [35 mm]	7/8 - 14 UNF
FMS-662-10MO	2.90" [73.7 mm]	3.53" [89.7 mm]	1.25" [31.8 mm]	1.38" [35 mm]	7/8 - 14 UNF

FMS Heavy Duty Receptacles - Female SAE Straight Thread ORB - SAE J1926-1



Part Number	L - Length	B - Hex	C - Diameter Across Corners	E - Port End
FMS-602-10FO	3.53" [89.7 mm]	1.25" [31.8 mm]	1.38" [35 mm]	7/8 - 14 UNF
FMS-662-10FO	3.53" [89.7 mm]	1.25" [31.8 mm]	1.38" [35 mm]	7/8 - 14 UNF

FMS Heavy Duty Receptacles - A-Lok bulkhead



Part Number	L1 - Length	L2 - Length	B1 - Hex	B2 - Hex	B3 - Hex	C - Dia Across Corners	E - Port End
FMS-602-10AH	3.71" [94.2 mm]	4.68" [118.9 mm]	1.25" [31.8 mm]	1.06" [27 mm]	1.00" [25.4 mm]	1.38" [35 mm]	5/8" A-Lok Bulkhead
FMS-662-10AH	3.71" [94.2 mm]	4.68" [118.9 mm]	1.25" [31.8 mm]	1.06" [27 mm]	1.00" [25.4 mm]	1.38" [35 mm]	5/8" A-Lok Bulkhead
FMS-602-M16AH	3.71" [94.2 mm]	4.68" [118.9 mm]	1.25" [31.8 mm]	1.06" [27 mm]	1.00" [25.4 mm]	1.38" [35 mm]	16mm A-Lok Bulkhead
FMS-662-M16AH	3.71" [94.2 mm]	4.68" [118.9 mm]	1.25" [31.8 mm]	1.06" [27 mm]	1.00" [25.4 mm]	1.38" [35 mm]	16mm A-Lok Bulkhead

Contact the Quick Coupling Division for other port configurations.

ON VEHICLE

Check Valves



CVS Series check valves provide an important feature for CNG powered vehicles. When installed immediately after the fueling receptacle it functions as a redundant sealing device in the fill line, only allowing flow in one direction, from the dispenser to the vehicle.

Features:

- Three piece valve resists seal washout
- Soft seat with low crack pressure improves system efficiency
- Inline check valve provides unidirectional flow - natural gas will only flow from dispenser to vehicle
- Special Nitrile seals for CNG

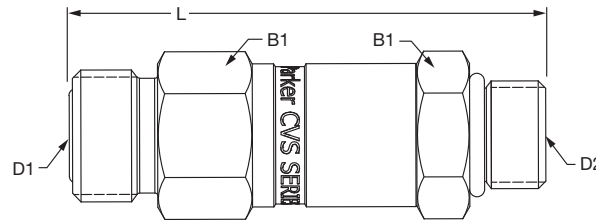
Materials of Construction

Material	Stainless with Nitrile Seals
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Specifications

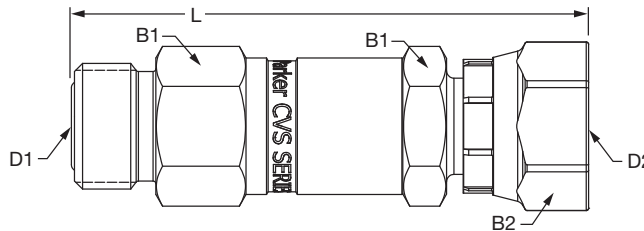
Service Pressure	3600 psi
Temperature	-40°F to +250°F (-40°C to +121°C)

CVS Check Valve with Male Face Seal and Male O-ring Boss



Part Number	L - Length	B1 - Hex	D1 - Port End (inlet)	D2 - Port End (outlet)	Crack Pressure
CVS-363-6MSMO-10	2.45" (62.2 mm)	0.75" (19.0 mm)	11/16-16 UN Male Face Seal	9/16-18 UNF Male ORB	10 psid

CVS Check Valve with Male Face Seal and Female Face Seal



Part Number	L - Length	B1 - Hex	B2 - Hex	D1 - Port End (inlet)	D2 - Port End (outlet)	Crack Pressure
CVS-363-6MSFS-10	2.79" (70.8 mm)	0.75" (19.0 mm)	0.813" (20.6 mm)	11/16-16 UN Male Face Seal	11/16-16 UN Female Face Seal	10 psid

Contact the Quick Coupling Division for other port configurations.

Defueling Receptacles



Parker's defueling receptacles allow fuel tanks to be emptied within a closed system when depressurizing in preparation for service operations. The three piece valve design provides increased durability and reliability with greater resistance to seal wash out.

Features:

- 3-piece valve design resists seal wash out
- Special Nitrile seals for CNG
- ISO 7241, series B profile has global interchangeability

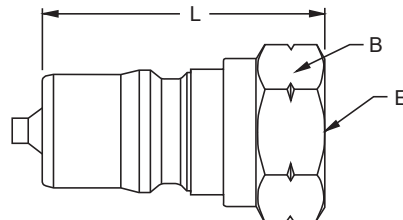
Materials of Construction

Material	Stainless with Nitrile Seals
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Specifications

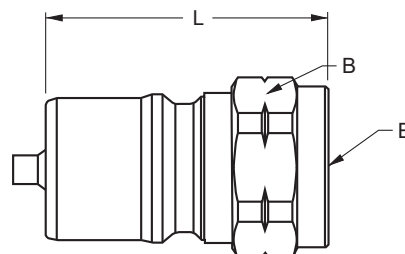
Service Pressure	3600 psi
Temperature	-40°F to +250°F [-40°C to +121°C]

1/4 inch Defueling Receptacle



Part Number	Body Size	L - Length	B - Hex	E - Port End
SH2-63-643	1/4 in	1.39" (35.3 mm)	0.75" (19 mm)	1/4 - 18NPTF

3/8 inch Defueling Receptacle



Part Number	Body Size	L - Length	B - Hex	E - Port End
SH3-63-643	3/8 in	1.50" (38.1 mm)	0.88" (22.2 mm)	3/8 - 18NPTF

Contact the Quick Coupling Division for other port configurations.

FUELING STATION

Nozzles

Push-to-Connect Fueling Nozzles



Located on CNG fueling dispensers, Parker's NGVC2 Nozzle easily connects with FMS Series receptacles and others certified to ANSI/CSA/NGV1 standards.

Features:

- Certified to ANSI/CSA/NGV1 standards
- This nozzle can be classified as type 2 or 3 and can be used for both fast-fill and time-fill service
- Left-hand thread configurations are available for use on home refueling dispensers
- Push-to-connect, manually retract sleeve to disconnect
- Non-marring polyurethane sleeve protects vehicle body from surface damage
- Durable ball locking design for longer life

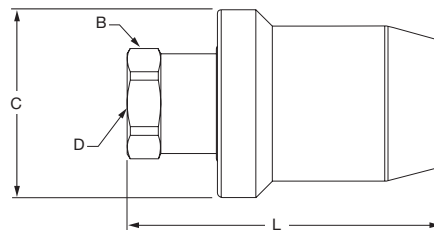
Materials of Construction

Body	Stainless Steel
Adapter	Stainless Steel
Valving	Stainless Steel
Seal	Nitrile and Urethane

Specification

Service Pressure	3000 or 3600 psi (207 or 248 bar)
Temperature	-40°F to +185°F (-40°C to +85°C)
Flow Rate	2100 scfm

NGVC2 Fueling Nozzle



Part Number	L - Length	B - Wrench Flats	C - Largest Diameter	D - Port End
NGVC2-P30	3.51" (89.1 mm)	1.12" (28.4 mm)	2.10" (53.3 mm)	9/16 - 18 UNF
NGVC2-P36	3.51" (89.1 mm)	1.12" (28.4 mm)	2.10" (53.3 mm)	9/16 - 18 UNF

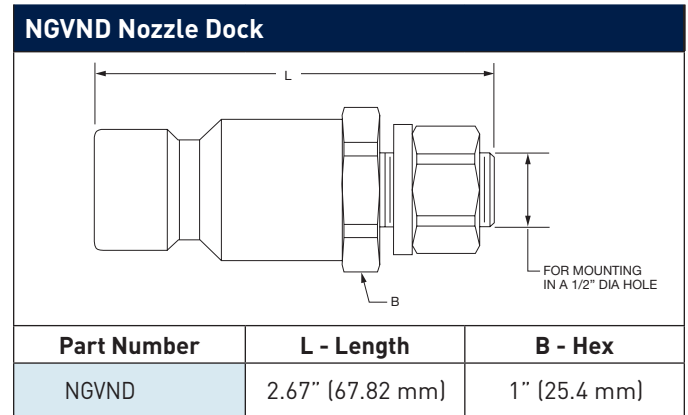
WARNING: This product can expose you to chemicals including Lead, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov

Nozzle Dock

Parker's NGVND Nozzle Dock provides a secure location on the fueling dispenser for the nozzle to reside when not in use. The Nozzle Dock keeps the nozzle clean, contained and readily accessible.

Features:

- Material is corrosion resistant aluminum
- Lock washer keeps the dock secure for repeated use
- Compatible with all ANSI/CSA/NGV1 fueling nozzles

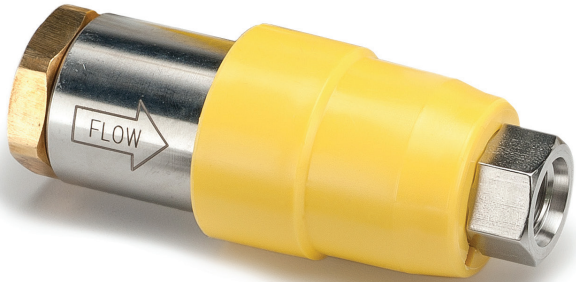


WARNING: This product can expose you to chemicals including Lead, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov



FUELING STATION

Breakaway - Fill Line



Parker's NGVBCN2-P50 fill line breakaway provides an important safety feature for CNG dispensing systems. It is certified to ANSI/NGV4.4/CSA12.54 standards for breakaway devices used on natural gas dispensing hoses and systems. It allows the hose to safely disconnect, preventing damage to the dispenser in the event of a "drive off" and sealing the CNG in the fill line to effectively prevent leakage or hose whip.

Features:

- Exclusive design
- Pressure balanced
- Reliable consistent performance
- Compact size
- Reusable following breakaway (with minimal inspection)

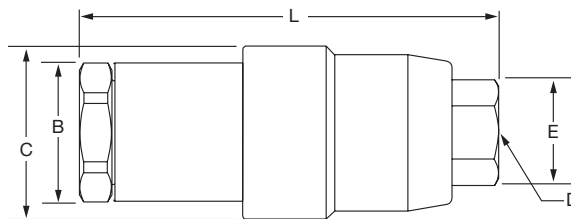
Materials of Construction

Material	Brass and Stainless with Nitrile and Urethane Seals
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Specifications

Service Pressure	3600 psi
Forces to Actuate	60/140 lbs. to disconnect at any pressure up to operating
Temperature	-40°F to +150°F (-40°C to +65°C)

NGVBCN2-P50 Breakaway-Fill Line



Part Number	B - Hex	C - Largest Diameter	D - Port End (2 places)	E - Hex	L - Connected Length
NGVBCN2-P50	1.12" (28.4 mm)	1.53" (38.9 mm)	9/16 - 18 UNF	0.81" (20.6 mm)	3.73" (94.7 mm)

WARNING: This product can expose you to chemicals including Lead, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov

Breakaway - Vent Line



Parker's vent line breakaway provides an important safety feature for CNG dispensing systems. It allows the vent line hose to safely disconnect, preventing damage to the dispenser in the event of a "drive off" and allows any CNG remaining in the vent line to bleed off safely.

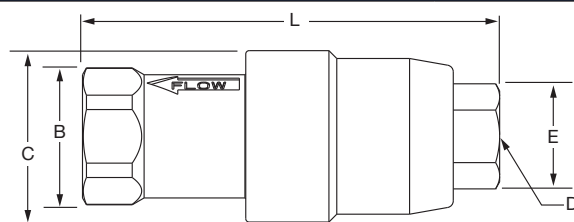
Features:

- Reliable consistent performance
- Compact size
- Reusable following breakaway (with minimal inspection)

Specifications

Material	Brass and Stainless Steel with Urethane Seals
Forces to Actuate	60/140 lbs. to disconnect

NGVBCN2-VL Breakaway-Vent Line



Part Number	B - Hex	C - Largest Diameter	D - Port End (2 places)	L - Connected Length
NGVBCN2-VL	1.12" (28.4 mm)	1.53" (38.9 mm)	9/16 - 18 UNF 3/8" port per SAE J1926-1	3.72" (94.5 mm)

WARNING: This product can expose you to chemicals including Lead, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov

SAFETY GUIDE



WARNING

SAFETY GUIDE FOR SELECTING AND USING QUICK COUPLING DIVISION PRODUCTS AND RELATED ACCESSORIES



WARNING

DANGER: Failure or improper selection or improper use of Quick Coupling Division (QCD) products and related accessories can cause death, personal injury, and property damage. Possible consequences of failure or improper selection or improper use of QCD products or related accessories include but are not limited to:

- Couplings or parts thrown off at high speed.
- High velocity fluid discharge.
- Explosion or burning of the conveyed fluid.
- Contact with suddenly moving or falling objects that are to be held in position or moved by the conveyed fluid.
- Dangerously whipping hose.
- Contact with conveyed fluids that may be hot, cold, toxic, or otherwise injurious.
- Sparking or explosion while paint or flammable liquid spraying.

Before selecting or using any Parker quick action couplings or related accessories, it is important that you read and follow the following instructions.

No product from the Quick Coupling Division is approved for in-flight aerospace applications. For products used in in-flight aerospace applications, please contact Parker Aerospace Group.

1.1 Scope: This safety guide provides instructions for selecting and using (including installing, connecting, disconnecting, and maintaining) QCD products and related accessories. This safety guide is a supplement to and is to be used with, the specific Parker publications for the specific QCD products and related accessories being considered for use.

1.2 Fail-Safe: QCD products or the hose they are attached to can fail without warning for many reasons. Design all systems and equipment in a fail-safe mode, so failure of the QCD product or hose will not endanger persons or property.

1.3 Distribution: Provide a copy of this safety guide to each person responsible for selecting or using QCD products. Do not select or use QCD products without thoroughly reading and understanding this safety guide as well as the specific Parker publications for the products considered or selected.

1.4 User Responsibility: Due to the wide variety of operating conditions and uses for QCD products, Parker and its distributors do not represent or warrant any particular QCD product suitable for any specific end use system. This safety guide does not analyze all technical parameters that must be considered in selecting a product. The user, through its own analysis and testing, is solely responsible for:

- Making the final selection of QCD products.
- Assuring the user's requirements are met and the use presents no health or safety hazards.
- Providing all appropriate health and safety warnings on the equipment on which the QCD products are used.

1.5 Additional Questions: Call the appropriate Parker customer service department if you have any questions or require any additional information. For the telephone numbers of the appropriate customer service department, see the Parker publication for the product being considered or used.

2.0 QCD PRODUCT SELECTION INSTRUCTIONS

2.1 Pressure: QCD product selection must be made so the published rated pressure is equal to or greater than the maximum system pressure. Surge pressures in the system higher than the rated pressure will shorten the QCD products' life. Do not confuse burst pressure or other pressure values with rated pressure and do not use burst pressure or other pressure values for this purpose.

2.2 Fluid Compatibility: QCD product selection must assure compatibility of the products' materials of construction with the fluid media being used.

2.3 Temperature: Be certain fluid and ambient temperatures, both steady and transient, do not exceed the limitations of the QCD product. Use caution and proper PPE when handling QCD products heated or cooled by the media they are conducting or by their environment.

2.4 Size: Transmission of power by means of pressurized liquid varies with pressure and flow. The size of the QCD product and other components of the system must be adequate pressure losses to a minimum and avoid damage due to heat generation or excessive fluid velocity.

2.5 Pressurized Connect or Disconnect: If connecting or disconnecting under pressure is a requirement, use only quick couplings designed for that purpose. The rated operating pressure of a quick action coupling may not be the pressure at which it may be safely connected or disconnected.

2.6 Environment: Care must be taken to ensure QCD products are either compatible with or protected from the environment (that is, surrounding conditions) to which they are exposed. Environmental conditions including but not limited to ultraviolet radiation, ozone, moisture, water, salt water, chemicals, and air pollutants can cause degradation and premature failure.

2.7 Locking Means: Ball locking quick couplings can unintentionally disconnect if they are dragged over obstructions on the end of a hose or if the sleeve is bumped or moved enough to cause disconnect. Sleeves designed with flanges to provide better gripping for oily or gloved hands are especially susceptible to accidental disconnect and should not be used where these conditions exist. Sleeve lock or union (threaded) sleeve designs should be considered where there is a potential for accidental disconnect.

2.8 Mechanical Loads: External forces can significantly reduce QCD product life or cause failure. Mechanical loads which must be considered include excessive tensile or side loads, and vibration. Unusual applications may require special testing prior to QCD product selection.

2.9 Specifications and Standards: When selecting QCD products, government, industry, and Parker specifications must be reviewed and followed where applicable.

2.10 Vacuum: Not all QCD products are suitable or recommended for vacuum service. QCD products used for vacuum applications must be selected to ensure the product will withstand the vacuum and pressure of the system.

2.11 Fire Resistant Fluids: Some fire-resistant fluids require seals other than the standard nitrile used in many QCD products.

2.12 Radiant Heat: QCD product can be heated to destruction or loss of sealing integrity without contact by nearby items such as hot manifolds or molten metal. The same heat source may then initiate a fire. This can occur despite the presence of cool air around the QCD product.

2.13 Welding and Brazing: Heating of plated parts, including QCD products and port adapters, above 450°F (232°C) such as during welding, brazing, or soldering may emit deadly gases and may cause permanent product damage.

3.0 QUICK ACTION COUPLING INSTALLATION INSTRUCTIONS

3.1 Pre-Installation Inspection: Before installing a QCD product, visually inspect it and check for correct style, body material, seal material, and catalog number. Before final installation, coupling halves should be connected and disconnected with a sample of the mating half with which they will be used.

3.2 Quick Coupling Halves from Other Manufacturers: If a quick coupling assembly is made up of one Parker half and one half from another manufacturer, the lowest pressure rating of the two halves should not be exceeded.

3.3 Fitting Installation: Use a thread sealant, lubricant, or a combination of both when assembling pipe thread joints on QCD products. Be sure the sealant is compatible with the system fluid or gas. To avoid system contamination, use a liquid or paste type sealant rather than a tape style. Use the flats provided to hold QCD product when installing fittings. Do not use pipe wrenches or a vice on other parts of the product

to hold it when installing or removing fittings as damage or loosening of threaded assembly joints in the product could result. Do not apply excessive torque to taper pipe threads because cracking or splitting of the female component can result.

3.4 Caps and Plugs: Use dust caps and plugs when quick couplings are not coupled to exclude dirt and contamination and to protect critical surfaces from damage.

3.5 Quick Coupling Location: Locate quick couplings where they can be reached for connect or disconnect without exposing the operator to slipping, falling, getting sprayed, or coming in contact with hot or moving parts.

3.6 Hose Whips: Use a hose whip (a short length of hose between the tool and the coupling half) instead of rigidly mounting a coupling half on hand tools or other devices. This reduces the potential for coupling damage if the tool is dropped and provides some isolation from mechanical vibration which could cause unintended disconnection.

4.0 QCD PRODUCT MAINTENANCE INSTRUCTIONS

4.1 Even with proper selection and installation, QCD product life may be significantly reduced without a maintenance program. Frequency should be determined by the severity of the application and risk potential. A maintenance program must be established and followed by the user and must include the following as a minimum:

4.2 Visual Inspection of QCD Product: Any of the following conditions require immediate shut down and replacement of the QCD product:

- Cracked, damaged, or corroded product.
- Leaks at the fitting, valve or mating seal.
- Broken mounting hardware, especially breakaway clamps.

4.3 Visual Inspection Other: The following items must be tightened, repaired or replaced as required:

- Leaking seals or port connections.
- Excess dirt buildup on the quick coupling locking mechanism or on the interface area of either coupling half
- Clamps, guards, and shields.
- System fluid level, fluid type and any air entrapment.

4.4 Functional Test: Operate the system at maximum operating pressure and check for possible malfunctions and leaks. Personnel must avoid potentially hazardous areas while testing and using the system.

4.5 Replacement Intervals: Specific replacement intervals must be considered based on previous service life, government, or industry recommendations, or when failures could result in unacceptable downtime, damage, or injury risk. See instruction 1.2 above.

Additional copies of the preceding safety information can be ordered by requesting "Safety Guide for Selecting and Using QCD Product and Related Accessories," Parker Publication DS6013.

OFFER OF SALE

1. Definitions. As used herein, the following terms have the meanings indicated. "Buyer" means any customer receiving a Quote for Products. "Buyer's Property" means any tools, patterns, plans, drawings, designs, specifications materials, equipment, or information furnished by Buyer, or which are or become Buyer's property. "Confidential Information" means any technical, commercial, or other proprietary information of Seller, including, without limitation, pricing, technical drawings or prints and/or part lists, which has been or will be disclosed, delivered, or made available, whether directly or indirectly, to Buyer. "Goods" means any tangible part, system or component to be supplied by Seller. "Intellectual Property Rights" means any patents, trademarks, copyrights, trade dress, trade secrets or similar rights. "Products" means the Goods, Services and/or Software as described in a Quote. "Quote" means the offer or proposal made by Seller to Buyer for the supply of Products. "Seller" means Parker-Hannifin Corporation, including all divisions, subsidiaries and businesses selling Products under these Terms. "Seller's IP" means patents, trademarks, copyrights, or other intellectual property rights relating to the Products, including without limitation, names, designs, images, drawings, models, software, templates, information, any improvements or creations or other intellectual property developed prior to or during the relationship contemplated herein. "Services" means any services to be provided by Seller. "Software" means any software related to the Goods, whether embedded or separately downloaded. "Special Tooling" means equipment acquired by Seller or otherwise owned by Seller necessary to manufacture Goods, including but not limited to tools, jigs, and fixtures. "Terms" means the terms and conditions of this Offer of Sale.

2. Terms. All sales of Products by Seller will be governed by, and are expressly conditioned upon Buyer's assent to, these Terms. These Terms are incorporated into any Quote provided by Seller to Buyer. Buyer's order for any Products whether communicated to Seller verbally, in writing, by electronic data interface or other electronic commerce, shall constitute acceptance of these Terms. Seller objects to any contrary or additional terms or conditions of Buyer. Reference in Seller's order acknowledgement to Buyer's purchase order or purchase order number shall in no way constitute an acceptance of any of Buyer's terms or conditions of purchase. Any Quote made by Seller to Buyer shall be considered a firm and definite offer and shall not be deemed to be otherwise despite any language on the face of the Quote. Seller reserves all rights to accept or reject any purported acceptance by Buyer to Seller's Quote if such purported acceptance attempts to vary the terms of the Quote. If Seller ships Products after Buyer issues an acceptance to the Quote, any additional or different terms proposed by Buyer will not become part of the parties' business relationship unless agreed to in a writing that is signed by an authorized representative of Seller, excluding email correspondence. If the transaction proceeds without such agreement on the part of Seller, the business relationship will be governed solely by these Terms and the specific terms in Seller's Quote.

3. Price; Payment. The Products set forth in the Quote are offered for sale at the prices indicated in the Quote. Unless otherwise specifically stated in the Quote, prices are valid for thirty (30) days and do not include any sales, use, or other taxes or duties. Seller reserves the right to modify prices for any reason and at any time by giving ten (10) days prior written notice. Unless otherwise specified by Seller, all prices are F.C.A. Seller's facility (INCOTERMS 2020). All sales are contingent upon credit approval and full payment for all purchases is due thirty (30) days from the date of invoice (or such date as may be specified in the Quote). Under any circumstances, Buyer may not withhold or suspend payment of any amounts due and payable as a deduction, set-off or recoupment of any amount, claim or dispute with Seller. Unpaid invoices beyond the specified payment date incur interest at the rate of 1.5% per month or the maximum allowable rate under applicable law. Seller reserves the right to require advance payment or provision of securities for first and subsequent deliveries if there is any doubt, in Seller's sole determination, regarding the Buyer's creditworthiness or for other business reasons. If the requested advance payment or securities are not provided to Seller's satisfaction, Seller reserves the right to suspend performance or reject the purchase order, in whole or in part, without prejudice to Seller's other rights or remedies, including the right to full compensation. Seller may revoke or shorten any payment periods previously granted in Seller's sole determination. The rights and remedies herein reserved to Seller are cumulative and in addition to any other or further rights and remedies available at law or in equity. No waiver by Seller of any breach by Buyer of any provision of these terms will constitute a waiver by Seller of any other breach of such provision.

4. Shipment; Delivery; Title and Risk of Loss. All delivery dates are approximate, and Seller is not responsible for damages or additional costs resulting from any delay. All deliveries are subject to our ability to procure materials from our suppliers. Regardless of the manner of shipment, delivery occurs and title and risk of loss or damage pass to Buyer, upon placement of the Products with the carrier at Seller's facility. Unless otherwise agreed prior to shipment and for domestic delivery locations only, Seller will select and arrange, at Buyer's sole expense, the carrier and means of delivery. When Seller selects and arranges the carrier and means of delivery, freight and insurance costs for shipment to the designated delivery location will be prepaid by Seller and added as a separate line item to the invoice. Buyer shall be responsible

for any additional shipping charges incurred by Seller due to Buyer's acts or omissions. Buyer shall not return or repackage any Products without the prior written authorization from Seller, and any return shall be at the sole cost and expense of Buyer.

5. Warranty. The warranty for the Products is as follows: (i) Goods are warranted against defects in material or workmanship for a period of twelve (12) months from the date of delivery or 2,000 hours of use, whichever occurs first; (ii) Services shall be performed in accordance with generally accepted practices and using the degree of care and skill that is ordinarily exercised and customary in the field to which the Services pertain and are warranted for a period of six (6) months from the date of completion of the Services; and (iii) Software is only warranted to perform in accordance with applicable specifications provided by Seller to Buyer for ninety (90) days from the date of delivery or, when downloaded by a Buyer or end-user, from the date of the initial download. All prices are based upon the exclusive limited warranty stated above, and upon the following disclaimer: **EXEMPTION CLAUSE; DISCLAIMER OF WARRANTY, CONDITIONS, REPRESENTATIONS: THIS WARRANTY IS THE SOLE AND ENTIRE WARRANTY, CONDITION, AND REPRESENTATION, PERTAINING TO PRODUCTS. SELLER DISCLAIMS ALL OTHER WARRANTIES, CONDITIONS, AND REPRESENTATIONS, WHETHER STATUTORY, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THOSE RELATING TO DESIGN, NONINFRINGEMENT, MERCHANTABILITY, AND FITNESS FOR A PARTICULAR PURPOSE. SELLER DOES NOT WARRANT THAT THE SOFTWARE IS ERROR-FREE OR FAULT-TOLERANT, OR THAT BUYER'S USE THEREOF WILL BE SECURE OR UNINTERRUPTED, UNLESS OTHERWISE AUTHORIZED IN WRITING BY SELLER, THE SOFTWARE SHALL NOT BE USED IN CONNECTION WITH HAZARDOUS OR HIGH-RISK ACTIVITIES OR ENVIRONMENTS. EXCEPT AS EXPRESSLY STATED HEREIN, ALL PRODUCTS ARE PROVIDED "AS IS".**

6. Claims; Commencement of Actions. Buyer shall promptly inspect all Products upon receipt. No claims for shortages will be allowed unless reported to Seller within ten (10) days of delivery. Buyer shall notify Seller of any alleged breach of warranty within thirty (30) days after the date the non-conformance is or should have been discovered by Buyer. Any claim or action against Seller based upon breach of contract or any other theory, including tort, negligence, or otherwise must be commenced within twelve (12) months from the date of the alleged breach or other alleged event, without regard to the date of discovery.

7. LIMITATION OF LIABILITY. IN THE EVENT OF A BREACH OF WARRANTY, SELLER WILL, AT ITS OPTION, REPAIR OR REPLACE THE NON-CONFORMING PRODUCTS, RE-PERFORM THE SERVICES, OR REFUND THE PURCHASE PRICE PAID WITHIN A REASONABLE PERIOD OF TIME. IN NO EVENT IS SELLER LIABLE FOR ANY SPECIAL, INDIRECT, INCIDENTAL OR CONSEQUENTIAL DAMAGES INCLUDING ANY LOSS OF REVENUE OR PROFITS, WHETHER BASED IN CONTRACT, TORT OR OTHER LEGAL THEORY. IN NO EVENT SHALL SELLER'S LIABILITY UNDER ANY CLAIM MADE BY BUYER EXCEED THE PURCHASE PRICE PAID FOR THE PRODUCTS.

8. Confidential Information. Buyer acknowledges and agrees that Confidential Information has been and will be received in confidence and will remain the property of Seller. Buyer further agrees that it will not use Seller's Confidential Information for any purpose other than for the benefit of Seller and shall return all such Confidential Information to Seller within thirty (30) days upon request.

9. Loss to Buyer's Property. Buyer's Property will be considered obsolete and may be destroyed by Seller after two (2) consecutive years have elapsed without Buyer ordering the Products manufactured using Buyer's Property. Also, Seller shall not be responsible for any loss or damage to Buyer's Property while it is in Seller's possession or control.

10. Special Tooling. Seller may impose a tooling charge for any Special Tooling. Special Tooling shall be and remain Seller's property. In no event will Buyer acquire any interest in the Special Tooling, even if such Special Tooling has been specially converted or adapted for manufacture of Goods for Buyer and notwithstanding any charges paid by Buyer. Unless otherwise agreed, Seller has the right to alter, discard or otherwise dispose of any Special Tooling or other property owned by Seller in its sole determination at any time.

11. Security Interest. To secure payment of all sums due from Buyer, Seller retains a security interest in all Products delivered to Buyer and, Buyer's acceptance of these Terms is deemed to be a Security Agreement under the Uniform Commercial Code. Buyer authorizes Seller as its attorney to execute and file on Buyer's behalf all documents Seller deems necessary to perfect Seller's security interest.

12. User Responsibility. Buyer, through its own analysis and testing, is solely responsible for making the final selection of the Products and assuring that all performance, endurance, maintenance, safety and warning requirements of the application of the Products are met. Buyer must analyze all aspects of the application and follow applicable industry standards, specifications, and any technical information provided with the Quote or the Products, such as Seller's instructions, guides and specifications. If Seller provides options of or for Products based upon data or specifications provided by Buyer, Buyer is responsible for determining that such data and specifications are suitable and sufficient for all applications and reasonably foreseeable uses of the Products. In the event Buyer is not the end-user of the Products, Buyer will ensure such end-user complies with this paragraph.

13. Use of Products, Indemnity by Buyer. Buyer shall comply with all instructions, guides and specifications provided by Seller with the Quote or the Products. If Buyer uses or resells the Products in any way prohibited by Seller's instructions, guides or specifications, or Buyer otherwise fails to comply with Seller's instructions, guides and specifications, Buyer acknowledges that any such use, resale, or non-compliance is at Buyer's sole risk. Further, Buyer shall indemnify, defend, and hold Seller harmless from any losses, claims, liabilities, damages, lawsuits, judgments and costs (including attorney fees and defense costs), whether for personal injury, property damage, intellectual property infringement or any other claim, arising out of or in connection with: (a) improper selection, design, specification, application, or any misuse of Products; (b) any act or omission, negligent or otherwise, of Buyer; (c) Seller's use of Buyer's Property; (d) damage to the Products from an external cause, repair or attempted repair by anyone other than Seller, failure to follow instructions, guides and specifications provided by Seller, use with goods not provided by Seller, or opening, modifying, deconstructing, tampering with or repackaging the Products; or (e) Buyer's failure to comply with these Terms, including any legal or administrative proceedings, collection efforts, or other actions arising from or relating to such failure to comply. Seller shall not indemnify Buyer under any circumstance except as otherwise provided in these Terms.

14. Cancellations and Changes. Buyer may not cancel or modify, including but not limited to movement of delivery dates for the Products, any order for any reason except with Seller's written consent and upon terms that will indemnify, defend and hold Seller harmless against all direct, incidental and consequential loss or damage and any additional expense. Seller, at any time, may change features, specifications, designs and availability of Products.

15. Assignment. Buyer may not assign its rights or obligations without the prior written consent of Seller.

16. Force Majeure. Seller is not liable for delay or failure to perform any of its obligations by reason of any events or circumstances beyond its reasonable control. Such circumstances include without limitation: accidents, labor disputes or stoppages, government acts or orders, acts of nature, pandemics, epidemics, other widespread illness, or public health emergency, cyber related disruptions, cyber-attacks, ransomware sabotage, delays or failures in delivery from carriers or suppliers, shortages of materials, sudden increases in the price of raw material or components, shutdowns or slowdowns affecting the supply of raw materials or components, or the transportation thereof, oil shortages or oil price increases, energy crisis, energy or fuel interruption, war (whether declared or not) or the serious threat of same, riots, rebellions, acts of terrorism, embargoes, fire or any reason whether similar to the foregoing or otherwise. Seller will resume performance as soon as practicable after the event of force majeure has been removed. All delivery dates affected by an event of force majeure shall be tolled for the duration of such event of force majeure and rescheduled for mutually agreed dates as soon as practicable after the event of force majeure ceases to exist. The right to allocate capacity is in the Seller's sole discretion. An event of force majeure shall not include financial distress, insolvency, bankruptcy, or other similar conditions affecting one of the parties, affiliates and/or sub-contractors. An event of force majeure in the meaning of these Terms means any circumstances beyond Seller's control that permanently or temporarily hinders performance, even where that circumstance was already foreseen. Buyer shall not be entitled to cancel any orders following its claim of an event of force majeure.

17. Waiver and Severability. Failure to enforce any provision of these Terms will not invalidate that provision; nor will any such failure prejudice either party's right to enforce that provision in the future. Invalidation of any provision of these Terms shall not invalidate any other provision herein and, the remaining provisions will remain in full force and effect.

18. Duration. Unless otherwise stated in the Quote, any agreement governed by or arising from these Terms shall: (a) be for an initial duration of one (1) year; and (b) shall automatically renew for successive one-year terms unless terminated by Buyer with at least 180-days written notice to Seller or if Seller terminates the agreement pursuant to Section 19 of these Terms.

19. Termination. Seller may, without liability to Buyer, terminate any agreement governed by or arising from these Terms for any reason and at any time by giving Buyer thirty (30) days prior written notice. Seller may immediately terminate, in writing, if Buyer: (a) breaches any provision of these Terms, (b) becomes or is deemed insolvent, (c) appoints or has appointed a trustee, receiver or custodian for all or any part of Buyer's property, (d) files a petition for relief in bankruptcy on its own behalf, or one is filed against Buyer by a third party, (e) makes an assignment for the benefit of creditors; or (f) dissolves its business or liquidates all or a majority of its assets.

20. Ownership of Rights. Buyer agrees that (a) Seller (and/or its affiliates) owns or is the valid licensee of Seller's IP and (b) the furnishing of information, related documents or other materials by Seller to Buyer does not grant or transfer any ownership interest or license in or to Seller's IP to Buyer, unless expressly agreed in writing. Without limiting the foregoing, Seller retains ownership of all Software supplied to Buyer. In no event shall Buyer obtain any greater right in and to the Software than a right in a license limited to the use thereof and subject to compliance with any other terms provided with the Software. Buyer further agrees that it will not, directly or through intermediaries, reverse engineer, decompile, or disassemble any Software

(including firmware) comprising or contained within a Product, except and only to the extent that such activity may be expressly permitted, either by applicable law or, in the case of open source software, the applicable open source license.

21. Indemnity for Infringement of Intellectual Property Rights. Seller is not liable for infringement of any Intellectual Property Rights except as provided in this Section. Seller will defend at its expense and will pay the cost of any settlement or damages awarded in an action brought against Buyer based on a third-party claim that one or more of the Products infringes the Intellectual Property Rights of a third party in the country of delivery of the Products by Seller to Buyer. Seller's obligation to defend and indemnify Buyer is contingent on Buyer notifying Seller within ten (10) days after Buyer becomes aware of any such claim, and Seller having sole control over the defense of the claim including all negotiations for settlement or compromise. If one or more Products is subject to such a claim, Seller may, at its sole expense and option, procure for Buyer the right to continue using the Products, replace or modify the Products to render them non-infringing, or offer to accept return of the Products and refund the purchase price less a reasonable allowance for depreciation. Seller has no obligation or liability for any claim of infringement: (i) arising from information provided by Buyer (including Seller's use of Buyer's Property); or (ii) directed to any Products for which the designs are specified in whole or part by Buyer; or (iii) resulting from the modification, combination or use in a system of any Products. The foregoing provisions of this Section constitute Seller's sole and exclusive liability and Buyer's sole and exclusive remedy for claims of infringement of Intellectual Property Rights.

22. Governing Law. These Terms, the terms of any Quote, and the sale and delivery of all Products are deemed to have taken place in, and shall be governed and construed in accordance with, the laws of the State of Ohio, as applicable to contracts executed and wholly performed therein and without regard to conflicts of laws principles. Buyer irrevocably agrees and consents to the exclusive jurisdiction and venue of the courts of Cuyahoga County, Ohio with respect to any dispute, controversy or claim arising out of or relating to the sale and delivery of the Products.

23. Entire Agreement. These Terms, along with the terms set forth in the Quote, forms the entire agreement between the Buyer and Seller and constitutes the final, complete and exclusive expression of the terms of sale and purchase. In the event of a conflict between any term set forth in the Quote and these Terms, the terms set forth in the Quote shall prevail. All prior or contemporaneous written or oral agreements or negotiations with respect to the subject matter shall have no effect. No modification to these Terms will be binding on Seller unless agreed to in a writing that is signed by an authorized representative of Seller, excluding email correspondence, 'clickwrap' or other purported electronic assent to different or additional terms. Sections 2-25 of these Terms shall survive termination or cancellation of any agreement governed by or arising from these Terms.

24. No 'Wrap' Agreements/No Authority to Bind. Seller's clicking any buttons or any similar action, such as clicking "I Agree" or "Confirm," to utilize Buyer's software or webpage for the placement of orders, is NOT an agreement to Buyer's Terms and Conditions. NO EMPLOYEE, AGENT OR REPRESENTATIVE OF SELLER HAS THE AUTHORITY TO BIND SELLER BY THE ACT OF CLICKING ANY BUTTON OR SIMILAR ACTION ON BUYER'S WEBSITE OR PORTAL.

25. Compliance with Laws. Buyer agrees to comply with all applicable laws, regulations, and industry and professional standards, including those of the United States of America, and the country or countries in which Buyer may operate, including without limitation the U.S. Foreign Corrupt Practices Act ("FCPA"), the U.S. Anti-Kickback Act ("Anti-Kickback Act"), U.S. and E.U. export control and sanctions laws ("Export Laws"), the U.S. Food Drug and Cosmetic Act ("FDCA"), and the rules and regulations promulgated by the U.S. Food and Drug Administration ("FDA"), each as currently amended. Buyer agrees to indemnify, defend, and hold harmless Seller from the consequences of any violation of such laws, regulations and standards by Buyer, its employees or agents. Buyer represents that it is familiar with all applicable provisions of the FCPA, the Anti-Kickback Act, Export Laws, the FDCA and the FDA and certifies that Buyer will adhere to the requirements thereof and not take any action that would make Seller violate such requirements. Buyer represents and agrees that Buyer will not make any payment or give anything of value, directly or indirectly, to any governmental official, foreign political party or official thereof, candidate for foreign political office, or commercial entity or person, for any improper purpose, including the purpose of influencing such person to purchase Products or otherwise benefit the business of Seller. Buyer further represents and agrees that it will not receive, use, service, transfer or ship any Products from Seller in a manner or for a purpose that violates Export Laws or would cause Seller to be in violation of Export Laws. Buyer agrees to promptly and reliably provide Seller all requested information or documents, including end-user statements and other written assurances, concerning Buyer's ongoing compliance with Export Law.

Contact these Parker Divisions for CNG products

CNG RECEPTACLES, NOZZLES AND IN-LINE BREAKAWAYS

Parker Hannifin Corporation
Quick Coupling Division
8145 Lewis Road
Minneapolis, Minnesota 55427
phone 763 544 7781
fax 763 544 3418

CNG VALVES

Parker Hannifin Corporation
Fluid Control Division
95 Edgewood Avenue
New Britain, Connecticut 06051
phone 860 827 2300
fax 860 827 2384

CNG SUPPLY AND RETURN LINE HOSE

Parker Hannifin Corporation
Hose Products Division
30240 Lakeland Blvd.
Wickliffe, Ohio 44092
phone 440 943 5700
fax 440 943 3129

CNG HOSE

Parker Hannifin Corporation
Parflex Division
1300 N. Freedom Street
Ravenna, Ohio 44266
phone 330 296 2871
fax 330 296 8433

SEAL-LOK™ O-RING FACE SEAL FITTINGS

Parker Hannifin Corporation
Tube Fittings Division
3885 Gateway Blvd.
Columbus, Ohio 43228
phone 614 279 7070
fax 614 279 7685

FILTRATION

Parker Hannifin Corporation
Filtration Division
Finite Airtek
500 Glaspie Street
Oxford, Michigan 48371
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fax 248 628 1850



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