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# Parker Industrial Hose

Gold Label® Aircraft Fueling Hose



ENGINEERING YOUR SUCCESS.

## **WARNING**

**FAILURE OR IMPROPER SELECTION OR IMPROPER USE OF THE PRODUCTS AND/OR SYSTEMS DESCRIBED HEREIN OR RELATED ITEMS CAN CAUSE DEATH, PERSONAL INJURY AND PROPERTY DAMAGE.**

This document and other information from Parker Hannifin Corporation, its subsidiaries and authorized distributors provide product and/or system options for further investigation by users having technical expertise. It is important that you analyze all aspects of your application, including consequences of any failure, and review the information concerning the product or system in the current product catalog. Due to the variety of operating conditions and applications for these products or systems, the user, through its own analysis and testing, is solely responsible for making the final selection of the products and systems and assuring that all performance, safety and warning requirements of the application are met.

The products described herein, including without limitation, product features, specifications, designs, availability and pricing, are subject to change by Parker Hannifin Corporation and its subsidiaries at any time without notice.

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The items described in this document are hereby offered for sale by Parker Hannifin Corporation, its subsidiaries and its authorized distributors. This offer and its acceptance are governed by the provisions stated in the full "Offer of Sale."

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# Maximum Performance, Maximum Safety: Gold Label® Aircraft Fueling Hose from Parker



Whether twin-seater or commercial jet, cargo plane or helicopter, all conventional aircraft have one thing in common: they need fuel to operate. And that requires a method of delivery that is efficient, effective and utilizes hose assemblies that can deliver the fuel safely and reliably.

Parker, the world's leading supplier of fluid conveyance systems and components, now offers Gold Label Aircraft Fueling Hose and hose assemblies to fit the most demanding aircraft industry fuel delivery applications.

Designed to provide long service life to keep downtime to a minimum, the Gold Label product offering is flexible and lightweight, yet robust. Gold Label Aircraft Fueling Hose is suitable for a variety of applications and fuel types, and is available in continuous lengths up to two hundred feet.

Parker aircraft fueling hose meets the needs of a range of markets, from private to commercial to military applications. Manufactured in the U.S.A., Gold Label Aircraft Fueling Hose meets current published industry standards and hose assemblies are factory-tested and certified.

Each branch of the military has stringent aircraft fueling hose specifications and requirements. Contact Parker for quotation of military specification aircraft fueling hose.

## Fuel Delivery Applications

Gold Label Aircraft Fueling Hose handles the following fueling applications:

- **Over-the-wing fueling** – used by small- and medium-sized aircraft, with aviation gasoline supplied through a hose attached to a dispenser.
- **Under-the-wing fueling** – used by large commercial cargo and passenger aircraft, with jet fuel supplied by a mobile dispenser cart connected to a fuel tanker or an in-ground hydrant system. For larger aircraft, jet fuel is supplied through an adjustable elevated service platform, called a jac-riser, connected to a mobile dispenser cart that is supplied by an in-ground hydrant system.
- **Side or aft helicopter fueling** – aviation gasoline or jet fuel is supplied through a hose attached to a dispenser.

## Industry Standards for Aircraft Fueling Hose

Industry Standard	Hose Series			
	7775	7776	7776CT	7777
EI 1529 Type C, Grade 1	YES			
EI 1529 Type C, Grade 2		YES		
EI 1529 Type C-CT, Grade 2			YES	
EI 1529 Type E, Grade 2				YES
EN 1361		YES		YES
NFPA 407	YES	YES	YES	YES

API (American Petroleum Institute); BS (British Standard); EI (Energy Institute); EN (European de Normalisation); NFPA (National Fire Protection Association)

Contact Parker for quotation of military specification aircraft fueling hose.

NOTE: API and BS have agreed to the transfer of responsibility to EI and EN respectively, of a portfolio of aviation fuel handling equipment standards and recommended operational/safety practices. A number of these documents had already been produced and published jointly by the two organizations. Aircraft fueling hose offered by Parker meets required specifications and performance criteria and may reference multiple organization designations during the transition period.

## Aircraft Fueling Applications

	Hose Series			
	7775	7776	7776CT	7777
Bottom Loading	YES	YES	YES	YES
Defueling	*	*	*	YES
Ground Fueling	YES	YES	YES	YES
Hydrant	YES	YES	YES	YES
Jac-Riser	YES	YES	YES	YES
Over Wing	YES	YES	YES	NO
Service Trucks	YES	YES	YES	YES
Tank Transfer	YES	YES	YES	YES
Under Wing	YES	YES	YES	YES

\* Limited. See product specifications.



## Fuel Types

Parker Gold Label Aircraft Fueling Hose is designed and manufactured for use with most common aviation fuels such as Jet A, Jet A1, JP5, JP8 and 100LL Avgas (see chart), incorporating a premium grade nitrile tube specifically formulated to handle the high aromatic content of aviation fuel, with minimal permeation.

- **Aviation gasoline (avgas)** – a high octane/low flash point fuel specially formulated to maintain its liquid phase (rather than vaporizing) at high altitude. The low flash point provides lower ignition properties, and the liquid phase of the fuel prevents vapor lock in the onboard fuel delivery system. It is typically used to power small private or commercial aircraft that incorporate piston engines. Avgas is available in two primary grades: Standard avgas (leaded gasoline) and LL avgas (low-lead gasoline); these fuels are often dyed to identify them for proper use.
- **Jet Propellant (JP)** – primarily a kerosene-based jet fuel specially formulated for larger commercial, private or military aircraft incorporating gas-turbine engines. The high flash point provides safer storage and transportation properties. Jet fuel is available in a variety of formulations, and is typically clear or straw-colored.

### Aircraft Fuel Compatibility

	Hose Series			
	7775	7776	7776CT	7777
<b>Aviation Gasoline (Avgas)</b>				
• 100	YES	YES	YES	YES
• 100LL	YES	YES	YES	YES
<b>Jet Propellant</b>				
• Jet A	YES	YES	YES	YES
• Jet A-1	YES	YES	YES	YES
• Jet B	YES	YES	YES	YES
• JPTS (high altitude)	YES	YES	YES	NO
• JP4	YES	YES	YES	YES
• JP5	YES	YES	YES	YES
• JP6 (discontinued)	n/a	n/a	n/a	n/a
• JP7	YES	YES	YES	YES
• JP8	YES	YES	YES	YES



## Safety Features

### Static Protection

Avgas and jet fuel molecules create friction and a subsequent static charge when flowing through hose. Unless properly drained/grounded, this charge could build and create a spark that ignites fuel or fuel fumes.

*All Parker Gold Label Aircraft Fueling Hose is manufactured with static conductive rubber compounds and/or a dual wire helix suitable for conducting an electrical charge to ground. Factory-fabricated hose assemblies are also tested for hydrostatic pressure and electrical conductivity.*

### Spillage Control

Aviation fuel is extremely flammable. Fuel spillage creates the risk of environmental harm and fire or explosion, leading to property damage, personal injury or death. A dispensing system equipped with a deadman control incorporates a hand-held electric, hydraulic or pneumatic handle/switch that is connected to a cable or hose reel assembly and then to a fuel flow control valve. The deadman control prevents fuel from flowing until the handle/switch is engaged; when the handle/switch is released, the fuel flow stops.

*To minimize accidental spillage, Parker offers Deadman and Twin Sensing hoses in industry-standard sizes, lengths and color combinations for reliable service in this application. For specific information about these products, see pages 8 and 9 of this bulletin.*

# Gold Label® Aircraft Fueling Hose

## Series 7775



Series 7775 is an economical, flexible, light weight, low pressure aircraft fueling hose. The hose provides easy handling for reel service. The premium nitrile tube minimizes permeation and will not contaminate product going through the hose.

<b>Tube:</b>	Black nitrile
<b>Reinforcement:</b>	Multiple textile plies
<b>Cover:</b>	Black static conductive nitrile, wrapped finish
<b>Temp Range:</b>	-40°F to +180°F (-40°C to +82°C)
<b>Brand Method:</b>	Embossed, and black letters on gold stripe
<b>Brand Example: (embossed)</b>	PARKER 7775-1500-0001 EI 1529/2005 TYPE C GRADE 1 NFPA 407 YYQX WP 1034 KPa (150 PSI)
<b>Design Factor:</b>	4:1
<b>Industry Standards:</b>	EI 1529:2005, Type C, Grade 1; NFPA 407:2007
<b>Applications:</b>	Aircraft fueling with avgas and jet fuel
<b>Compare To:</b>	Veyance Advantage

Part Number	ID (in)	ID (mm)	Reinf Plies	OD (in)	OD (mm)	Approx Wt (lbs/ft)	Drum/ Reel OD (in)	Max Rec WP (psi)	Max Lg (ft)	Stock Status *
7775-0750	3/4	19.1	2	1.378	35.0	0.57	7.5	150	200	N
7775-1000	1	25.4	2	1.630	41.4	0.69	10.0	150	200	Y
7775-1250	1-1/4	31.8	4	1.910	48.5	0.88	13.0	150	200	N
7775-1500	1-1/2	38.1	4	2.190	55.6	1.07	15.0	150	200	Y

<b>Packaging:</b>	Coils (bulk hose available only to Parker Select Aircraft Fueling Hose Assembly Fabricators)
<b>Coupling Recommendation:</b>	Permanently attached; non-sparking internally expanded brass stems, brass or stainless steel ferrules
<b>Factory Assemblies:</b>	Per customer requirement; assemblies are hydrostatically pressure tested to 300 psi, tested for electrical conductivity, and certified

\* **Stock:** "Y" indicates stocked item; "N" indicates non-stocked item.  
Stock status subject to change. Contact Parker Customer Service.

# Gold Label® Jac-Riser Aircraft Fueling Hose

Series 7777



Series 7777 acts as a flexible connection for jet fuel supplied through an adjustable elevated service platform, called a jac-riser, connected to a mobile dispenser cart that is supplied by an in-ground hydrant system. The dual wire helix provides flexibility, kink resistance and full suction capability for both fueling and defueling/unloading service. The premium nitrile tube minimizes permeation and will not contaminate product going through the hose.

**Tube:** Black nitrile  
**Reinforcement:** Multiple textile plies with dual wire helix  
**Cover:** Black static conductive nitrile; wrapped finish  
**Temp Range:** -40°F to +180°F (-40°C to +82°C)  
**Brand Method:** Embossed, and black letters on gold stripe  
**Brand Example: (embossed)** PARKER 7777-3000-0001 EI 1529/2005 TYPE E GRADE 2 NFPA 407 EN 1361/2004 YYQX WP 2068 KPa (300 PSI)  
**Design Factor:** 4:1  
**Industry Standards:** EI 1529:2005, Type E, Grade 2; NFPA 407:2007; EN 1361:2004  
**Applications:** Aircraft fueling and defueling/unloading with avgas and jet fuel  
**Compare To:** Contitech Elaflex TW; Eaton Carter 64405; Semperit 56132 TAPE

Part Number	ID (in)	ID (mm)	Reinf Plies	OD (in)	OD (mm)	Approx Wt (lbs/ft)	Min Bend Rad (in)	Max Rec WP (psi)	Max Lg (ft)	Stock Status *
7777-1500	1-1/2	38.1	4	2.236	56.8	1.33	6.0	300	200	N
7777-2000	2	50.8	4	2.720	69.1	1.61	8.0	300	200	N
7777-2500	2-1/2	63.5	4	3.290	83.6	2.29	10.0	300	200	N
7777-3000	3	76.2	4	3.930	99.8	3.15	12.0	300	200	Y
7777-4000	4	101.6	4	4.980	126.5	4.44	16.0	300	100	Y

**Packaging:** Coils (bulk hose available only to Parker Select Aircraft Fueling Hose Assembly Fabricators)  
**Coupling Recommendation:** Permanently attached; internally expanded carbon steel or stainless steel stems, carbon steel or stainless steel ferrules  
**Factory Assemblies:** Per customer requirement; assemblies are hydrostatically pressure tested to 600 psi, tested for electrical conductivity, and certified

\* **Stock:** "Y" indicates stocked item; "N" indicates non-stocked item.  
 Stock status subject to change. Contact Parker Customer Service.

# Gold Label® Aircraft Fueling Hose

## Series 7776



Series 7776 is excellent for high-pressure top deck reel and platform type fueling equipment. The premium nitrile tube minimizes permeation and will not contaminate product going through the hose. Also suitable for defueling service at low pressures (suction/vacuum rating to 8 in. Hg).

**Tube:** Black nitrile  
**Reinforcement:** Multiple textile plies  
**Cover:** Black static conductive nitrile; wrapped finish  
**Temp Range:** -40°F to +180°F (-40°C to +82°C)  
**Brand Method:** Embossed, and black letters on gold stripe  
**Brand Example: (embossed)** PARKER 7776-2000-0001 EI 1529/2005 TYPE C GRADE 2 NFPA 407 EN 1361/2004 YYQX WP 2068 KPa (300 PSI)  
**Design Factor:** 4:1  
**Industry Standards:** EI 1529:2005, Type C, Grade 2; NFPA 407:2007; EN 1361:2004  
**Applications:** Aircraft fueling with avgas and jet fuel  
**Compare To:** Contitech Elaflex HD-C, Veyance Jet Ranger & Wingcraft; Semperit 48137 TAPC

Part Number	ID (in)	ID (mm)	Reinf Plies	OD (in)	OD (mm)	Approx Wt (lbs/ft)	Drum/ Reel OD (in)	Max Rec WP (psi)	Max Lg (ft)	Stock Status *
7776-0750	3/4	19.1	2	1.378	35.0	0.57	7.5	300	200	N
7776-1000	1	25.4	2	1.630	41.4	0.69	10.0	300	200	Y
7776-1250	1-1/4	31.8	4	1.910	48.5	0.88	13.0	300	200	Y
7776-1500	1-1/2	38.1	4	2.190	55.6	1.07	15.0	300	200	Y
7776-2000	2	50.8	4	2.740	69.6	1.46	20.0	300	200	Y
7776-2500	2-1/2	63.5	4	3.260	82.8	1.81	25.0	300	200	Y
7776-3000	3	76.2	4	3.760	95.5	2.08	30.0	300	200	Y
7776-4000	4	101.6	4	4.950	125.7	3.61	40.0	300	200	Y

**Packaging:** Coils (bulk hose available only to Parker Select Aircraft Fueling Hose Assembly Fabricators)  
**Coupling Recommendation:** Permanently attached; non-sparking internally expanded brass stems, brass or stainless steel ferrules  
**Factory Assemblies:** Per customer requirement; assemblies are hydrostatically pressure tested to 600 psi, tested for electrical conductivity, and certified

\* **Stock:** "Y" indicates stocked item; "N" indicates non-stocked item. Stock status subject to change. Contact Parker Customer Service.

# Gold Label® Cold Temperature Aircraft Fueling Hose

## Series 7776CT



Series 7776CT is excellent for high-pressure top deck reel and platform type fueling equipment. The proprietary rubber compounds enable this hose to stay flexible in extreme low temperatures. The premium nitrile tube minimizes permeation and will not contaminate product going through the hose. Also suitable for defueling service at low pressures (suction/vacuum rating to 8 in. Hg).

<b>Tube:</b>	Black nitrile
<b>Reinforcement:</b>	Multiple textile plies
<b>Cover:</b>	Black static conductive nitrile; wrapped finish
<b>Temp Range:</b>	-55°F to +180°F (-48°C to +82°C)
<b>Brand Method:</b>	Embossed, and gold letters on green stripe
<b>Brand Example: (embossed)</b>	PARKER 7776CT-2000-0001 EI 1529/2005 TYPE C-CT GRADE 2 NFPA 407 YYQX WP 2068 KPa (300 PSI)
<b>Design Factor:</b>	4:1
<b>Industry Standards:</b>	EI 1529:2005, Type C-CT, Grade 2; NFPA 407:2007
<b>Applications:</b>	Aircraft fueling with avgas and jet fuel
<b>Compare To:</b>	Contitech Elaflex HDLT-C

Part Number	ID (in)	ID (mm)	Reinf Plies	OD (in)	OD (mm)	Approx Wt (lbs/ft)	Drum/ Reel OD (in)	Max Rec WP (psi)	Max Lg (ft)	Stock Status *
<b>7776CT-1000</b>	1	25.4	2	1.630	41.4	0.67	10.0	300	100	Y
<b>7776CT-1250</b>	1-1/4	31.8	4	1.910	48.5	0.81	13.0	300	100	Y
<b>7776CT-1500</b>	1-1/2	38.1	4	2.190	55.6	0.97	15.0	300	100	Y
<b>7776CT-2000</b>	2	50.8	4	2.740	69.6	1.23	20.0	300	100	Y
<b>7776CT-2500</b>	2-1/2	63.5	4	3.260	82.8	1.40	25.0	300	100	Y
<b>7776CT-3000</b>	3	76.2	4	3.760	95.5	1.70	30.0	300	100	Y
<b>7776CT-4000</b>	4	101.6	4	4.950	125.7	2.70	40.0	300	100	N

<b>Packaging:</b>	Coils (bulk hose available only to Parker Select Aircraft Fueling Hose Assembly Fabricators)
<b>Coupling Recommendation:</b>	Permanently attached; non-sparking internally expanded brass stems, brass or stainless steel ferrules
<b>Factory Assemblies:</b>	Per customer requirement; assemblies are hydrostatically pressure tested to 600 psi, tested for electrical conductivity, and certified

\* **Stock:** "Y" indicates stocked item; "N" indicates non-stocked item.  
Stock status subject to change. Contact Parker Customer Service.

# Deadman Twin Sensing Hose

Series 7139



Deadman Twin Sensing hose is a flexible air conduit incorporated in pneumatic closed-circuit control systems designed to prevent fuel spills during aircraft fueling operations. The hose is connected to air-actuated shut-off valves which are controlled by the aircraft refueling operator at all times during refueling operations. When the operator engages the handle/switch, fuel flows. When the operator releases the handle/switch – either accidentally or intentionally – fuel delivery automatically shuts off at the operator-end of the hydrant or truck refueling system.

Deadman Twin Sensing hose lines are bonded to prevent separation and maximize flexibility. The hose features a high grade oil resistant nitrile tube combined with an abrasion, oil and weather resistant Neoprene cover.

<b>Tube:</b>	Black nitrile
<b>Reinforcement:</b>	Multiple textile spirals
<b>Cover:</b>	Green and red Neoprene; smooth finish
<b>Temp Range:</b>	-30°F to +200°F (-34°C to +93°C)
<b>Brand Method:</b>	White ink
<b>Brand Example:</b>	(Red hose only): PARKER SERIES 7139 DEADMAN TWIN HOSE 1/4 ID (6.4 MM) 200 PSI MAX WP MADE IN USA (DATE CODE)
<b>Design Factor:</b>	4:1
<b>Industry Standards:</b>	None applicable
<b>Applications:</b>	Air hose incorporated in pneumatic closed-circuit control systems associated with aircraft refueling operations
<b>Compare To:</b>	Carter 64406; Veyance Deadman Aircraft Refueling

Part Number	ID (in)	ID (mm)	Reinf Plies	OD (in)	OD (mm)	Approx Wt (lbs/ft)	Min Bend Rad (in)	Max Rec WP (psi)	Std Pack Qty (ft)	Stock Status *
7139-251	1/4	6.4	2	.530	13.5	0.19	2.0	200	800	Y

<b>Packaging:</b>	Reels
<b>Coupling Recommendation:</b>	Refer to CrimpSource at <a href="http://www.safehose.com">www.safehose.com</a> for coupling recommendations and crimp specifications.

\* **Stock:** "Y" indicates stocked item; "N" indicates non-stocked item.  
Stock status subject to change. Contact Parker Customer Service.

**WARNING!** Couplings attached with bands or clamps may reduce the working pressure of the hose assembly to less than the maximum rated working pressure of the hose. Refer to the NAHAD Industrial Hose Assembly Guidelines.

# Twin Sensing Hose

Series 7140



Parker Twin Sensing hose is a flexible air conduit used in aircraft fueling systems that incorporate underground hydrants commonly found at large metropolitan airports. Twin sensing hose operates between the vehicle dispenser control system and the hydrant coupler/control valve, supplying data to monitor the flow and pressure of fuel being pumped into the aircraft.

Twin sensing hose lines are bonded to prevent separation and maximize flexibility. The hose features a high grade oil resistant nitrile tube combined with an abrasion, oil and weather resistant Neoprene cover.

<b>Tube:</b>	Black nitrile
<b>Reinforcement:</b>	Multiple textile spirals
<b>Cover:</b>	Green and yellow Neoprene; smooth finish
<b>Temp Range:</b>	-30°F to +200°F (-34°C to +93°C)
<b>Brand Method:</b>	White ink
<b>Brand Example:</b>	(Green hose only): PARKER SERIES 7140 TWIN SENSING HOSE 3/8 ID (9.5 MM) 250 PSI MAX WP MADE IN USA (DATE CODE)
<b>Design Factor:</b>	4:1
<b>Industry Standards:</b>	None applicable
<b>Applications:</b>	Air hose incorporated in pneumatic closed-circuit control and data systems associated with aircraft refueling operations
<b>Compare To:</b>	Carter 64407; Veyance Refueling Sensing

Part Number	ID (in)	ID (mm)	Reinf Plies	OD (in)	OD (mm)	Approx Wt (lbs/ft)	Min Bend Rad (in)	Max Rec WP (psi)	Std Pack Qty (ft)	Stock Status *
7140-381	3/8	9.5	2	.660	16.7	0.29	3.0	250	700	Y

<b>Packaging:</b>	Reels
<b>Coupling Recommendation:</b>	Refer to CrimpSource at <a href="http://www.safehose.com">www.safehose.com</a> for coupling recommendations and crimp specifications.

\* **Stock:** "Y" indicates stocked item; "N" indicates non-stocked item.  
Stock status subject to change. Contact Parker Customer Service.

**WARNING!** Couplings attached with bands or clamps may reduce the working pressure of the hose assembly to less than the maximum rated working pressure of the hose. Refer to the NAHAD Industrial Hose Assembly Guidelines.

# Arctic Translite® Low Temperature Corrugated Tank Truck Hose

Series SWC325



Arctic Translite® is a flexible, light weight, low temperature suction and discharge hose suitable for refined fuels such as avgas, biodiesel, diesel, ethanol, gasoline and many common petroleum based oils. The corrugated hose construction incorporates a dual wire helix that provides full suction capability, flexibility and kink resistance—even in the harshest cold climate conditions to -67°F (-82°C)—and a path to conduct a static electrical charge to ground. The cover is resistant to abrasion, oil and weathering. Series SWC325 is compatible with avgas and biodiesel B100 in dedicated service.

**Note: NOT FOR AIRCRAFT FUELING SERVICE.** Arctic Translite was not designed for aircraft fueling applications, and does not meet EI 1529 or NFPA 407 requirements. Arctic Translite may be used to transfer avgas between storage tanks and delivery trucks when used in dedicated service.

<b>Tube:</b>	Black nitrile
<b>Reinforcement:</b>	Multiple textile plies with dual wire helix
<b>Cover:</b>	Black nitrile; corrugated wrapped finish
<b>Temp Range:</b>	-67°F to +180°F (-55°C to +82°C)
<b>Brand Method:</b>	White text on blue stripe
<b>Brand Example:</b>	PARKER SERIES SWC325 ARCTIC TRANSLITE® -67°F LOW-TEMP TANK TRUCK HOSE XXX PSI WP MADE IN USA
<b>Design Factor:</b>	4:1
<b>Industry Standards:</b>	None applicable
<b>Applications:</b>	Avgas, biodiesel, diesel, ethanol, gasoline, petroleum-based oils, refined fuels; low temperature in-plant and storage tank transfer; low temperature delivery, transport
<b>Vacuum:</b>	Full

Part Number	ID (in)	ID (mm)	Reinf Plies	OD (in)	OD (mm)	Approx Wt (lbs/ft)	Min Bend Rad (in)	Max Rec WP (psi)	Std Pack Qty (ft)	Stock Status *
SWC325-1500	1-1/2	38.1	2	2.060	52.3	0.83	1.5	150	100	Y
SWC325-2000	2	50.8	2	2.500	53.5	1.19	2.0	150	100	Y
SWC325-2500	2-1/2	63.5	2	3.000	76.2	1.56	2.5	150	100	N
SWC325-3000	3	76.2	2	3.560	90.4	2.12	3.0	150	100	Y
SWC325-4000	4	101.6	2	4.560	115.8	2.79	4.0	150	100	Y
SWC325-6000	6	152.4	2	6.690	169.9	4.87	6.0	125	100	Y

<b>Packaging:</b>	Coils
<b>Coupling Recommendation:</b>	Refer to CrimpSource at <a href="http://www.safehose.com">www.safehose.com</a> for coupling recommendations and crimp specifications.

\* **Stock:** "Y" indicates stocked item; "N" indicates non-stocked item. Stock status subject to change. Contact Parker Customer Service.

**WARNING!** Couplings attached with bands or clamps may reduce the working pressure of the hose assembly to less than the maximum rated working pressure of the hose. Refer to the NAHAD Industrial Hose Assembly Guidelines.

## Arctic Edge™ Low Temp Multi-Purpose Hose Series 7102

A low temperature multi-purpose hose for air, fuel and water. Provides extreme flexibility in severe low temperature environments. The static wire provides a path for electrical conductivity but does not provide suction/vacuum capability. Series 7102 is compatible with gasoline; use for avgas and biodiesel B20 only in dedicated service.



<b>Tube:</b>	Black nitrile
<b>Reinforcement:</b>	Multiple textile spirals with static wire
<b>Cover:</b>	Black Neoprene with solid blue stripe; smooth finish
<b>Temp Range:</b>	-70°F to +212°F (-57°C to +100°C)
<b>Brand Method:</b>	White ink
<b>Brand Example:</b>	PARKER SERIES 7102 ARCTIC EDGE (-70° F) LOW TEMP 3/4 ID 300 PSI MAX WP MADE IN USA (DATE CODE)
<b>Design Factor:</b>	4:1
<b>Industry Standards:</b>	None applicable ( <b>does not meet EI 1529, NFPA 407 or UL 330</b> )
<b>Compare To:</b>	Veyance Arctic Ortac

Part Number	ID (in)	ID (mm)	Reinf Plies	OD (in)	OD (mm)	Approx Wt (lbs/ft)	Min Bend Rad (in)	Max Rec WP (psi)	Std Pack Qty (ft)	Stock Status *
7102-38304	3/8	9.5	4	0.750	19.1	0.21	3.8	300	650	N
7102-50304	1/2	12.7	4	0.906	23.0	0.28	5.0	300	500	N
7102-75304	3/4	19.1	4	1.156	29.4	0.37	6.0	300	400	Y
7102-100304	1	25.4	4	1.458	37.0	0.54	8.0	300	300	Y
7102-125304	1-1/4	31.8	4	1.810	46.0	0.83	9.0	300	250	Y
7102-138304	1-3/8	34.9	4	1.925	48.9	0.89	9.5	300	200	N
7102-150304	1-1/2	38.1	4	2.031	51.6	0.92	10.0	300	200	Y

<b>Packaging:</b>	Reels
<b>Coupling Recommendation:</b>	Refer to CrimpSource at <a href="http://www.safehose.com">www.safehose.com</a> for coupling recommendations and crimp specifications.

\* **Stock:** "Y" indicates stocked item; "N" indicates non-stocked item. Stock status subject to change. Contact Parker Customer Service.

## Flex-Ever™ 2000 Gasoline Dispenser Hose Series 7280

A dual wire helix provides flexibility, kink resistance, full suction capability and a path for electrical conductivity. Series 7280 is compatible with gasoline; use for avgas and biodiesel B20 only in dedicated service.



<b>Tube:</b>	Black nitrile
<b>Reinforcement:</b>	Multiple textile braids with dual wire helix
<b>Cover:</b>	Black CPE; wrapped finish
<b>Temp Range:</b>	-40°F to +180°F (-40°C to +82°C)
<b>Brand Method:</b>	White ink
<b>Brand Example:</b>	PARKER SERIES 7280 FLEX-EVER 2000 GASOLINE HOSE UL LISTED 655N MH530 (ULC) MADE IN USA
<b>Design Factor:</b>	4:1
<b>Industry Standards:</b>	UL330 ( <b>does not meet EI 1529 or NFPA 407</b> )
<b>Compare To:</b>	Veyance BC Gasoline

Part Number	ID (in)	ID (mm)	Reinf Plies	OD (in)	OD (mm)	Approx Wt (lbs/ft)	Min Bend Rad (in)	Max Rec WP (psi)	Std Pack Qty (ft)	Stock Status *
7280-632A	5/8	15.9	2	1.031	23.0	0.39	3.0	150	500	Y
7280-752A	3/4	19.1	2	1.172	29.4	0.47	4.0	150	500	Y
7280-1002A	1	25.4	2	1.453	37.0	0.64	5.0	150	500	Y

<b>Packaging:</b>	Reels
<b>Coupling Recommendation:</b>	Refer to CrimpSource at <a href="http://www.safehose.com">www.safehose.com</a> for coupling recommendations and crimp specifications. Factory assemblies available. Contact Parker.

\* **Stock:** "Y" indicates stocked item; "N" indicates non-stocked item. Stock status subject to change. Contact Parker Customer Service.

**Note:** The hoses on this page are NOT FOR AIRCRAFT FUELING SERVICE. They are not designed for aircraft fueling applications, and do not meet EI 1529 or NFPA 407. They may be used to transfer avgas between storage tanks and transport trucks.

**WARNING!** Couplings attached with bands or clamps may reduce the working pressure of the hose assembly to less than the maximum rated working pressure of the hose. Refer to the NAHAD Industrial Hose Assembly Guidelines.

# Aircraft Fueling Hose Assemblies

Parker Gold Label Aircraft Fueling Hoses are available as factory assemblies to meet specific customer requirements. Bulk hose is available only to Parker Select Aircraft Fueling Hose Assembly Fabricators.

Couplings are permanently attached by an internal expansion process that provides secure retention and a full-flow of fuel through the hose. The coupling stems are brass, carbon steel or stainless steel, and are available in rigid male pipe or swivel female end styles.

Ferrules are available in brass, carbon steel or 304 stainless steel. These materials are fuel, oil and weather resistant.

All Parker aircraft fueling hose assemblies are fabricated only by Parker or Parker Select fabricators. All assemblies are tested for electrical conductivity and hydrostatically tested to twice the working pressure, per EI 1529 requirements. A certification document is shipped with each hose assembly.



# Offer of Sale

The items described in this document and other documents and descriptions provided by Parker Hannifin Corporation, its subsidiaries and its authorized distributors ("Seller") are hereby offered for sale at prices to be established by Seller. This offer and its acceptance by any customer ("Buyer") shall be governed by all of the following Terms and Conditions. Buyer's order for any item described in its document, when communicated to Seller verbally, or in writing, shall constitute acceptance of this offer. All goods, services or work described will be referred to as "Products."

- 1. Terms and Conditions.** Seller's willingness to offer Products, or accept an order for Products, to or from Buyer is subject to these Terms and Conditions or any newer version of the terms and conditions found on-line at [www.parker.com/saleterms/](http://www.parker.com/saleterms/). Seller objects to any contrary or additional terms or conditions of Buyer's order or any other document issued by Buyer.
- 2. Price Adjustments; Payments.** Prices stated on Seller's quote or other documentation offered by Seller are valid for 30 days, and do not include any sales, use, or other taxes unless specifically stated. Unless otherwise specified by Seller, all prices are F.C.A. Seller's facility (INCOTERMS 2010). Payment is subject to credit approval and is due 30 days from the date of invoice or such other term as required by Seller's Credit Department, after which Buyer shall pay interest on any unpaid invoices at the rate of 1.5% per month or the maximum allowable rate under applicable law.
- 3. Delivery Dates; Title and Risk; Shipment.** All delivery dates are approximate and Seller shall not be responsible for any damages resulting from any delay. Regardless of the manner of shipment, title to any products and risk of loss or damage shall pass to Buyer upon placement of the products with the shipment carrier at Seller's facility. Unless otherwise stated, Seller may exercise its judgment in choosing the carrier and means of delivery. No deferment of shipment at Buyers' request beyond the respective dates indicated will be made except on terms that will indemnify, defend and hold Seller harmless against all loss and additional expense. Buyer shall be responsible for any additional shipping charges incurred by Seller due to Buyer's acts or omissions.
- 4. Warranty.** Seller warrants that the Products sold hereunder shall be free from defects in material or workmanship for a period of twelve months from the date of delivery to Buyer or 2,000 hours of normal use, whichever occurs first. The prices charged for Seller's products are based upon the exclusive limited warranty stated above, and upon the following disclaimer: **DISCLAIMER OF WARRANTY: THIS WARRANTY COMPRISES THE SOLE AND ENTIRE WARRANTY PERTAINING TO PRODUCTS PROVIDED HEREUNDER. SELLER DISCLAIMS ALL OTHER WARRANTIES, EXPRESS AND IMPLIED, INCLUDING DESIGN, MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.**
- 5. Claims; Commencement of Actions.** Buyer shall promptly inspect all Products upon delivery. No claims for shortages will be allowed unless reported to the Seller within 10 days of delivery. No other claims against Seller will be allowed unless asserted in writing within 30 days after delivery. Buyer shall notify Seller of any alleged breach of warranty within 30 days after the date the defect is or should have been discovered by Buyer. Any action based upon breach of this agreement or upon any other claim arising out of this sale (other than an action by Seller for an amount due on any invoice) must be commenced within 12 months from the date of the breach without regard to the date breach is discovered.
- 6. LIMITATION OF LIABILITY.** UPON NOTIFICATION, SELLER WILL, AT ITS OPTION, REPAIR OR REPLACE A DEFECTIVE PRODUCT, OR REFUND THE PURCHASE PRICE. **IN NO EVENT SHALL SELLER BE LIABLE TO BUYER FOR ANY SPECIAL, INDIRECT, INCIDENTAL OR CONSEQUENTIAL DAMAGES ARISING OUT OF, OR AS THE RESULT OF, THE SALE, DELIVERY, NON-DELIVERY, SERVICING, USE OR LOSS OF USE OF THE PRODUCTS OR ANY PART THEREOF, OR FOR ANY CHARGES OR EXPENSES OF ANY NATURE INCURRED WITHOUT SELLER'S WRITTEN CONSENT, EVEN IF SELLER HAS BEEN NEGLIGENT, WHETHER IN CONTRACT, TORT OR OTHER LEGAL THEORY. IN NO EVENT SHALL SELLER'S LIABILITY UNDER ANY CLAIM MADE BY BUYER EXCEED THE PURCHASE PRICE OF THE PRODUCTS.**
- 7. User Responsibility.** The user, through its own analysis and testing, is solely responsible for making the final selection of the system and Product and assuring that all performance, endurance, maintenance, safety and warning requirements of the application are met. The user must analyze all aspects of the application and follow applicable industry standards and Product information. If Seller provides Product or system options, the user is responsible for determining that such data and specifications are suitable and sufficient for all applications and reasonably foreseeable uses of the Products or systems.
- 8. Loss to Buyer's Property.** Any designs, tools, patterns, materials, drawings, confidential information or equipment furnished by Buyer or any other items which become Buyer's property, will be considered obsolete and may be destroyed by Seller after two consecutive years have elapsed without Buyer ordering the items manufactured using such property. Seller shall not be responsible for any loss or damage to such property while it is in Seller's possession or control.
- 9. Special Tooling.** A tooling charge may be imposed for any special tooling, including without limitation, dies, fixtures, molds and patterns, acquired to manufacture Products. Such special tooling shall be and remain Seller's property notwithstanding payment of any charges by Buyer. In no event will Buyer acquire any interest in apparatus belonging to Seller which is utilized in the manufacture of the Products, even if such apparatus has been specially converted or adapted for such manufacture and notwithstanding any charges paid by Buyer. Unless otherwise agreed, Seller shall have the right to alter, discard or otherwise dispose of any special tooling or other property in its sole discretion at any time.
- 10. Buyer's Obligation; Rights of Seller.** To secure payment of all sums due or otherwise, Seller shall retain a security interest in the goods delivered and this agreement shall be deemed 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 its security interest.
- 11. Improper use and Indemnity.** Buyer shall indemnify, defend, and hold Seller harmless from any claim, liability, damages, lawsuits, and costs (including attorney fees), whether for personal injury, property damage, patent, trademark or copyright infringement or any other claim, brought by or incurred by Buyer, Buyer's employees, or any other person, arising out of: (a) improper selection, improper application or other misuse of Products purchased by Buyer from Seller; (b) any act or omission, negligent or otherwise, of Buyer; (c) Seller's use of patterns, plans, drawings, or specifications furnished by Buyer to manufacture Product; or (d) Buyer's failure to comply with these terms and conditions. Seller shall not indemnify Buyer under any circumstance except as otherwise provided.
- 12. Cancellations and Changes.** Orders shall not be subject to cancellation or change by Buyer 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. Seller may change product features, specifications, designs and availability with notice to Buyer.
- 13. Limitation on Assignment.** Buyer may not assign its rights or obligations under this agreement without the prior written consent of Seller.
- 14. Force Majeure.** Seller does not assume the risk and shall not be liable for delay or failure to perform any of Seller's obligations by reason of circumstances beyond the reasonable control of Seller (hereinafter "Events of Force Majeure"). Events of Force Majeure shall include without limitation: accidents, strikes or labor disputes, acts of any government or government agency, acts of nature, delays or failures in delivery from carriers or suppliers, shortages of materials, or any other cause beyond Seller's reasonable control.
- 15. Waiver and Severability.** Failure to enforce any provision of this agreement will not waive that provision nor will any such failure prejudice Seller's right to enforce that provision in the future. Invalidation of any provision of this agreement by legislation or other rule of law shall not invalidate any other provision herein. The remaining provisions of this agreement will remain in full force and effect.
- 16. Termination.** Seller may terminate this agreement for any reason and at any time by giving Buyer thirty (30) days written notice of termination. Seller may immediately terminate this agreement, in writing, if Buyer: (a) commits a breach of any provision of this agreement (b) appoints a trustee, receiver or custodian for all or any part of Buyer's property (c) files a petition for relief in bankruptcy on its own behalf, or by a third party (d) makes an assignment for the benefit of creditors, or (e) dissolves or liquidates all or a majority of its assets.
- 17. Governing Law.** This agreement and the sale and delivery of all Products hereunder shall be 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 this agreement.
- 18. Indemnity for Infringement of Intellectual Property Rights.** Seller shall have no liability for infringement of any patents, trademarks, copyrights, trade dress, trade secrets or similar rights except as provided in this Section. Seller will defend and indemnify Buyer against allegations of infringement of U.S. patents, U.S. trademarks, copyrights, trade dress and trade secrets ("Intellectual Property Rights"). 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 an allegation that a Product sold pursuant to this Agreement infringes the Intellectual Property Rights of a third party. Seller's obligation to defend and indemnify Buyer is contingent on Buyer notifying Seller within ten (10) days after Buyer becomes aware of such allegations of infringement, and Seller having sole control over the defense of any allegations or actions including all negotiations for settlement or compromise. If a Product is subject to a claim that it infringes the Intellectual Property Rights of a third party, Seller may, at its sole expense and option, procure for Buyer the right to continue using the Product, replace or modify the Product so as to make it noninfringing, or offer to accept return of the Product and return the purchase price less a reasonable allowance for depreciation. Notwithstanding the foregoing, Seller shall have no liability for claims of infringement based on information provided by Buyer, or directed to Products delivered hereunder for which the designs are specified in whole or part by Buyer, or infringements resulting from the modification, combination or use in a system of any Product sold hereunder. The foregoing provisions of this Section shall constitute Seller's sole and exclusive liability and Buyer's sole and exclusive remedy for infringement of Intellectual Property Rights.
- 19. Entire Agreement.** This agreement contains the entire agreement between the Buyer and Seller and constitutes the final, complete and exclusive expression of the terms of sale. All prior or contemporaneous written or oral agreements or negotiations with respect to the subject matter are herein merged.
- 20. Compliance with Law, U. K. Bribery Act and U.S. Foreign Corrupt Practices Act.** Buyer agrees to comply with all applicable laws and regulations, including both those of the United Kingdom and the United States of America, and of the country or countries of the Territory in which Buyer may operate, including without limitation the U. K. Bribery Act, the U.S. Foreign Corrupt Practices Act ("FCPA") and the U.S. Anti-Kickback Act (the "Anti-Kickback Act"), and agrees to indemnify and hold harmless Seller from the consequences of any violation of such provisions by Buyer, its employees or agents. Buyer acknowledges that they are familiar with the provisions of the U. K. Bribery Act, the FCPA and the Anti-Kickback Act, and certifies that Buyer will adhere to the requirements thereof. In particular, Buyer represents and agrees that Buyer shall not make any payment or give anything of value, directly or indirectly to any governmental official, any foreign political party or official thereof, any candidate for foreign political office, or any commercial entity or person, for the purpose of influencing such person to purchase products or otherwise benefit the business of Seller.

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