

7/16 PUSH-ON

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APPENDIX

7/16 Push-On Connectors & Adapters



PUSH-ON 7/16-TYPE CONNECTORS eliminate time consuming tightening, torquing and loosening of 7/16-male connectors during testing or in applications where limited space requirements make tightening and torquing of a coupling nut difficult, if not impossible.

The 7/16 push-on slides directly onto any standard 7/16-female, allowing prompt connection and loosening. Three types of push-on 7/16 connectors are available: full-locking, locking with non-locking rear nut, and non-locking.

Full Locking push-on 7/16-Type connectors are recommended when longer testing is required and the connectors must be firmly locked so that they cannot be disconnected, even by mistake. **Locking with non-locking rear nut** 7/16-Type connectors are recommended where safe locking is necessary, but long term testing is not required. **Non-locking** push-on connectors are recommended for short period testing, testing that usually takes only seconds.

Push-On 7/16-Type connectors are available for termination with cables RG-142B/U, RG-400/U and RG-214/U. State-of-the-art high performance cables using push-on connectors are available as well, however, these high performance cable assemblies can only be purchased completely terminated; they can be found in the section "Cable Assemblies" starting on page 211 of this catalog.

PUSH-ON 7/16-TYPE CONNECTOR SAVERS AND ADAPTERS, were developed for attachment to cable assemblies which are terminated with regular connectors. The adapter has a standard connector on one side, and a push-on connector on the other end. The standard connector end of the adapter engages with the standard connector of the opposite sex at the cable assembly. These connector savers and adapters modify cable assemblies in seconds, changing them from a standard product to a state-of-the-art push-on assembly.

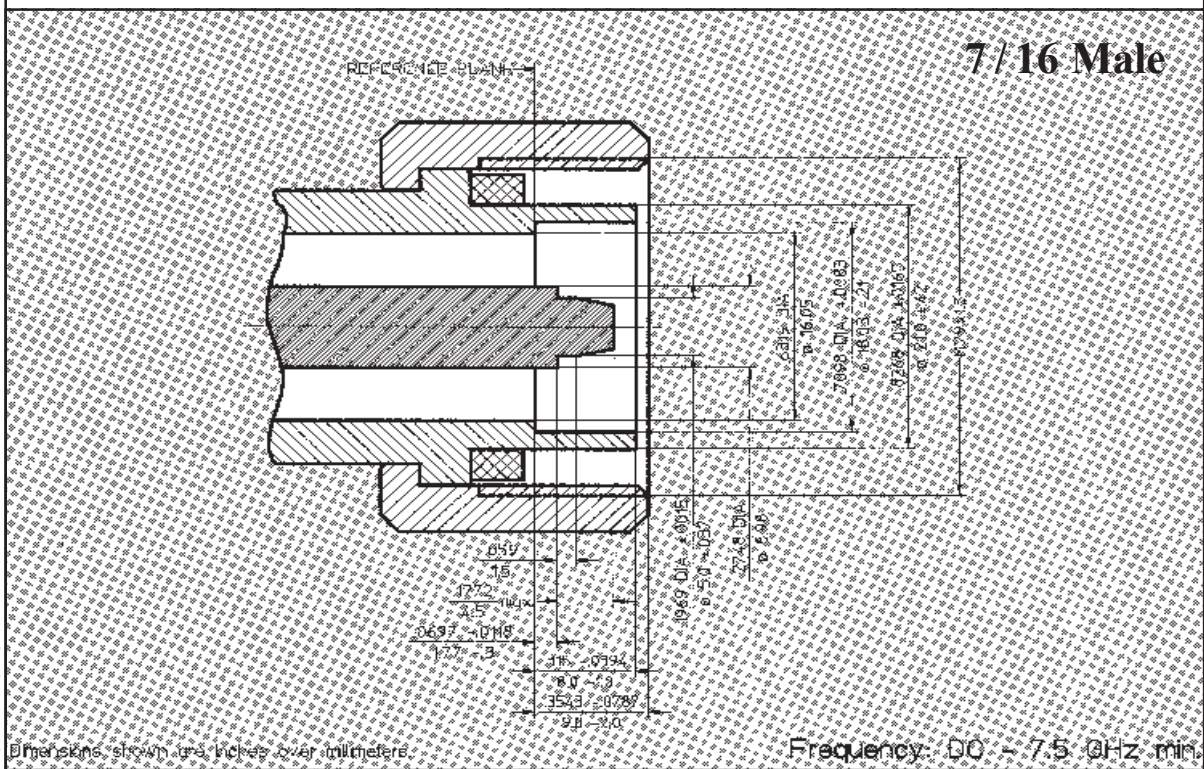
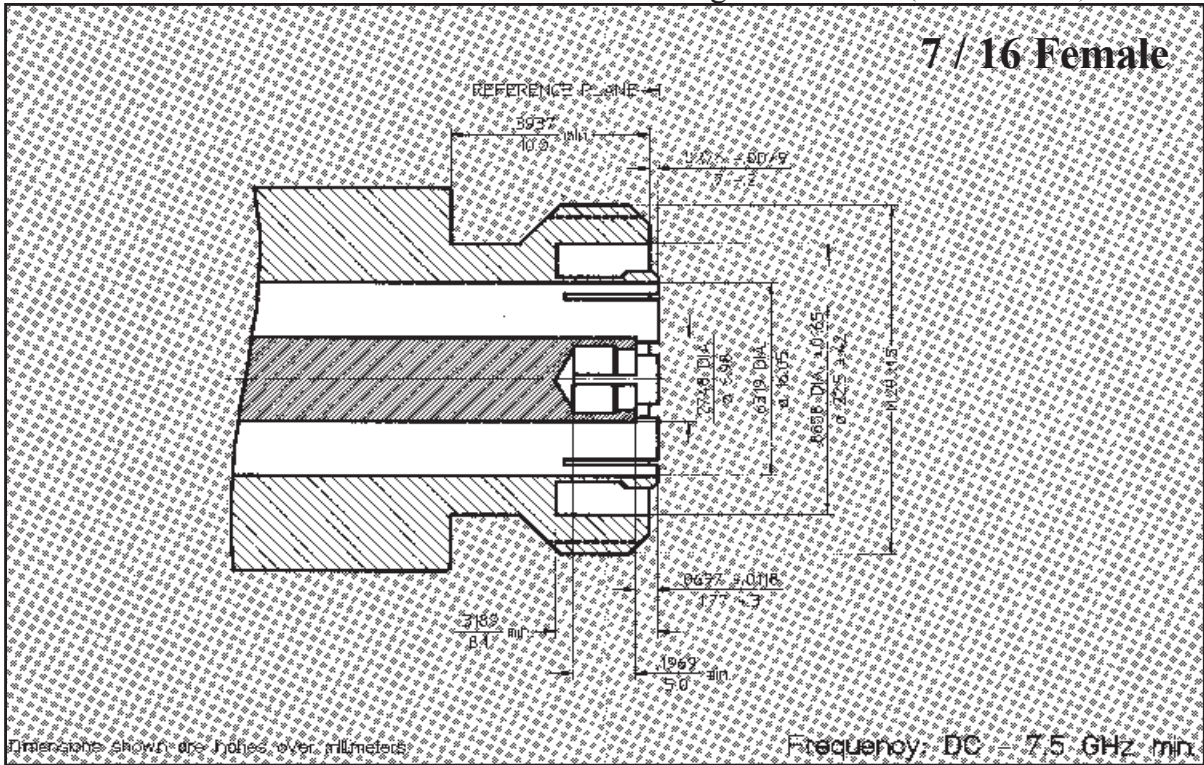
Push-on adapters are available for a variety of connectors and both male and female sexes within the connector series. 7/16-type push-on connectors savers are supplied in **full locking**, **locking with non-locking rear nut** and **non-locking** configuration.

FEATURES:

REPEATABLE PERFORMANCE
SAFE LOCKING MECHANISM*
REDUCED TEST TIME

* on Full Locking and Locking Units

LOW INSERTION LOSS
HIGH RETURN LOSS
DC-7.5 GHz
LONG LIFE



7/16 PUSH-ON Specifications



The specifications below are general specifications for all 7/16 PUSH-ON connectors. Specifications in the following table are recommended for any procurement documents or drawings. In the event of any conflict, these specifications shall govern. The PUSH-ON Connectors were developed to eliminate the time consuming lightening, torquing and loosening of connectors during test. The connector slides directly onto any Female of the same connector style, allowing quick connecting and disconnecting. Its mechanism locks safely onto the standard thread of the Female connector.

REQUIREMENT GENERAL SPECIFICATIONS

GENERAL

Standard Materials	STEEL corrosion resistant 1.4305 per DIN 17440 (QQ-S-764, class 303 or ASTM-A-582-80). ALUMINUM AlMg4.5Mn per DIN 1725, AlMgSi0.5 per DIN 1725, AlMgSi1 per DIN 1725 (6061-T6 per QQ-A-225/8). BRASS CuZn39Pb3 per DIN 17660 (QQ-B-626, halfhard). COPPER BERYLLIUM 33-25 CuBe2Pb H per DIN 17666 (QQ-C-530). TFE Fluorocarbon per DIN 52900 (MIL-P-19468 and L-P403). SILICONE RUBBER per DIN 3771 (MIL-R-5847 and ZZ-R-765, Class II B.) Grade 50 - 75. BORRRIUM NITRITE Dielectric for high power applications per inhouse specification.
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Finish for	COPPER BERYLLIUM	Center Contacts shall be gold plated to a minimum thickness of .00005 inch (1.27 μm) in accordance with MIL-G-45204, Type II, Grade C. Outer conductors shall be gold plated to a thickness of .00003 inch (0.8 μm) per MIL-G-45204, Type II, Grade C, or silver plated to a thickness of .0001 inch (2.5 μm) per QQ-S-365.
	STAINLESS STEEL	Shall be passivated per QQ-P-35 or gold plated to a thickness of .00003 inch (0.8 μm) per MIL-G-45204, Type II, Grade C.
	ALUMINUM	Conductive Parts shall have an iridited finish per MIL-C-5541.
	BRASS	Other parts, such as Coupling Nuts and Back-Bodies shall be anodized per MIL-A-8625. Gold plated to a thickness of .00003 inch (0.8 μm) min. per MIL-45204, Type II, Grade C, or nicle plated to a thickness of .0002 inch (5μm) per QQ-N-290, grade E, or silver plated to a thickness of .0001 inch (2.5 μm) per QQ-S-365.
	VARIOUS	Imoloy .0001 inch (2.5 μm) min. plating, consisting of 55% Copper / 20% Zinc / 25% Tin (on special request).

Design	The design shall be such that the outline dimensions in this catalog are met. In addition, the assembled connector shall meet the interface dimensions.
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ELECTRICAL

Frequency Range	DC - 7.5 GHz min.
Insulation Resistance	The insulation resistance shall not be less than 1.000 megohms.
Voltage Standing Wave Ratio (VSWR)	1.10 : 1
Contact Resistance	The center contact resistance drop shall not exceed 1.0 milliohms max.
Dielectric Withstanding Voltage	The magnitude of the test voltage shall be 3.000 volts rms at 60 Hz.
RF High Potential Withstanding Voltage	The RF high potential withstanding voltage is 4,000 volts rms at 5 MHz.
RF Leakage	90 dB max. to 3.0 GHz, -80 dB max. to 7.5 GHz
Insertion Loss	0.15 dB max. at 7.5 GHz
Impedance	50 Ohms Nominal
Corona Level Voltage	2800 Volts at 0 ft.

MECHANICAL

Connector Durability	The connector is to be tested and its mating connector shall be subjected to 500 insertion min. Withdrawal cycles / minute are not applicable. The connector shall show no evidence of mechanical failure and the connector shall meet the mating characteristic requirements.
Temperature	-55°C to +155°C
Force to Engage and Disengage	The Force to Engage and Disengage is not applicable.
Longitudinal Force max.	Longitudinal force is not applicable.

ENVIRONMENTAL

Corrosion (Salt Spray)	Specification MIL-STD-202, Method 101, Test Condition B. The salt solution shall be 5%.
Vibration	Specification MIL-STD-202, Method 204, Test Condition D.
Shock	Specification MIL-STD-202, Method 213, Test Condition I.
Thermal Shock	Specification MIL-STD-202, Method 107, Test Condition B, except high temperature shall be + 200°C.
Moisture Resistance	Specification MIL-STD-202, Method 106. Step 7b (vibration) shall be omitted. Insulation resistance shall be 200 megohms min. within 5 minutes of removal from humidity.

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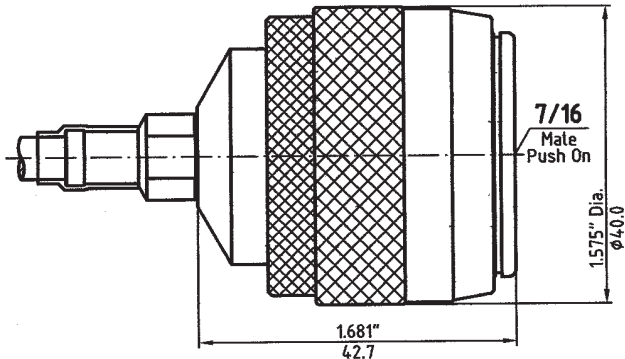
7/16 PUSH-ON Connectors

Full Locking

DC - 7.5 GHz

Connector Part No.	Flexible Cable Type	Cable Code	Connector Code
7515-7S01-02	RG-142B/U	42	7S
7515-7S02-02	RG-400/U	40	
7517-7S01-02	RG-214/U	21	

Connector outer conductor is passivated stainless steel. Center conductor is gold or/and silver plated.

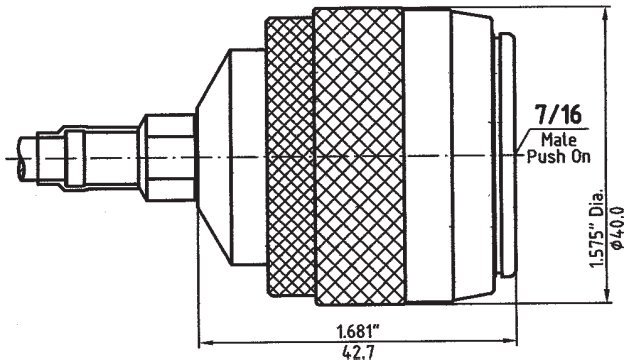


Full Locking

DC - 7.5 GHz

Connector Part No.	Flexible Cable Type	Cable Code	Connector Code
7515-7SB1-13	RG-142B/U	42	7SB
7515-7SB2-13	RG-400/U	40	
7517-7SB1-13	RG-214/U	21	

Connector outer conductor is brass silver plated for lower intermodulation products. Center conductor is gold or/and silver plated. Remaining parts are stainless steel for ruggedness.

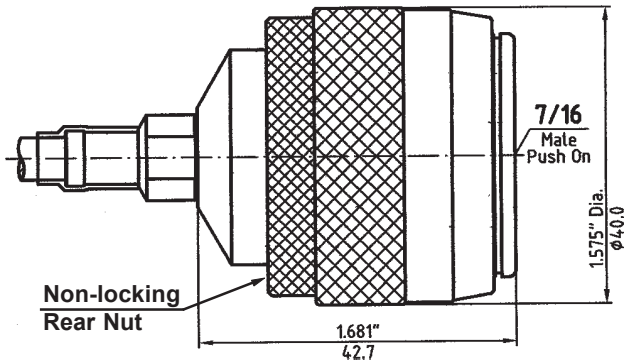


Locking with Non-locking Rear Nut

DC - 7.5 GHz

Connector Part No.	Flexible Cable Type	Cable Code	Connector Code
7515-7R01-02	RG-142B/U	42	7R
7515-7R02-02	RG-400/U	40	
7517-7R01-02	RG-214/U	21	

Connector outer conductor is passivated stainless steel. Center conductor is gold or/and silver plated.

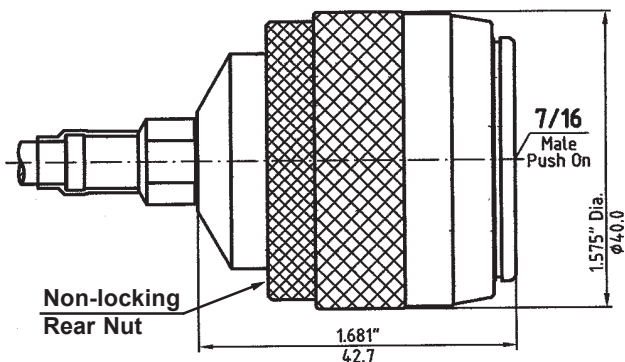


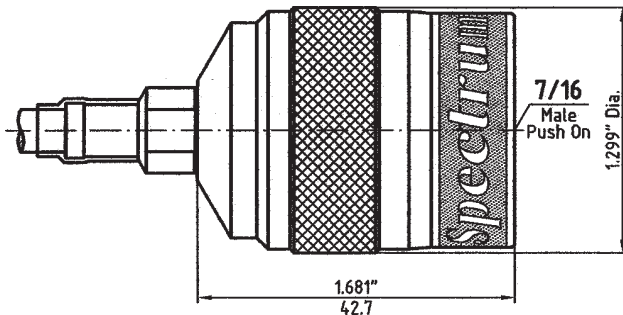
Locking with Non-locking Rear Nut

DC - 7.5 GHz

Connector Part No.	Flexible Cable Type	Cable Code	Connector Code
7515-7RB1-13	RG-142B/U	42	7RB
7515-7RB2-13	RG-400/U	40	
7517-7RB1-13	RG-214/U	21	

Connector outer conductor is brass silver plated for lower intermodulation products. Center conductor is gold or/and silver plated. Remaining parts are stainless steel for ruggedness.



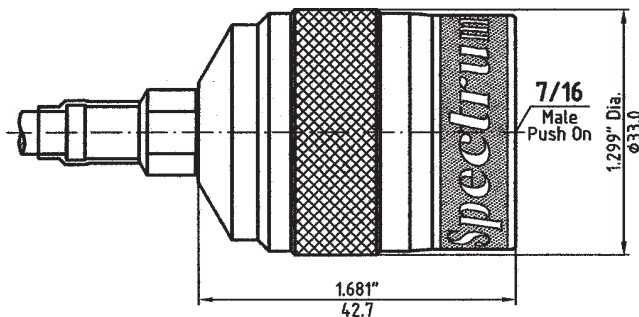


DC - 7.5 GHz

NON Locking

Connector Part No.	Flexible Cable Type	Cable Code	Connector Code
7515-7N01-02	RG-142B/U	42	7N
7515-7N02-02	RG-400/U	40	
7517-7N01-02	RG-214/U	21	

Connector outer conductor is passivated stainless steel. Center conductor is gold or/and silver plated.



DC - 7.5 GHz

NON Locking

Connector Part No.	Flexible Cable Type	Cable Code	Connector Code
7515-7NB1-13	RG-142B/U	42	7NB
7515-7NB2-13	RG-400/U	40	
7517-7NB2-13	RG-214/U	21	

Connector outer conductor is brass silver plated for lower intermodulation products. Center conductor is gold or/and silver plated. Remaining parts are stainless steel for ruggedness.

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Dimensions shown are inches over millimeters. Standard units have stainless steel finish (last two digits of the P/N are -02). Interfaces are per DIN 47223. For details please refer to the beginning of this section.

Cable Assemblies with PUSH-ON Connectors



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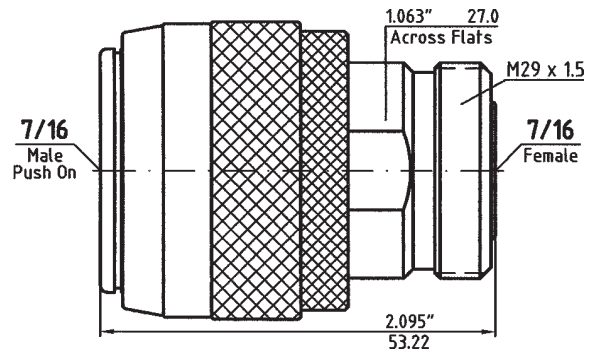
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7/16 Push-On Adapters

Full Locking

Adapter Part No.	8001-7S76-02
Connector Config.	7/16 Push-On to 7/16-f
Frequency Range	DC to 7.5 GHz
VSWR	1.10 : 1 max.

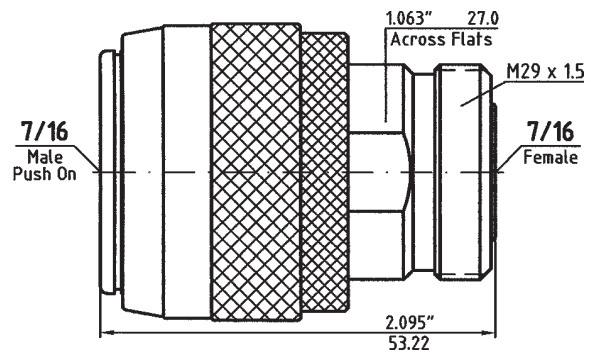
Connector outer conductor is passivated stainless steel. Center conductor is gold or/and silver plated.



Full Locking

Adapter Part No.	8001-7S76-13
Connector Config.	7/16 Push-On to 7/16-f
Frequency Range	DC to 7.5 GHz
VSWR	1.10 : 1 max.

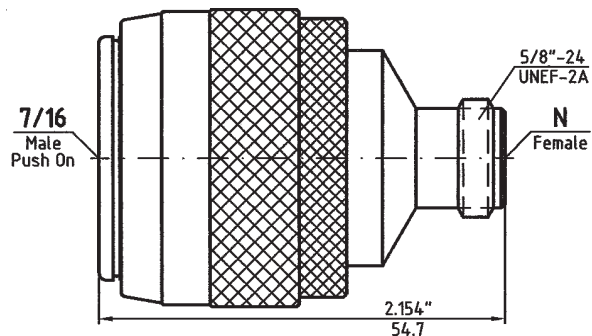
Connector outer conductor is brass silver plated for lower intermodulation products. Center conductor is gold or/and silver plated. Remaining parts are stainless steel for ruggedness.



Full Locking

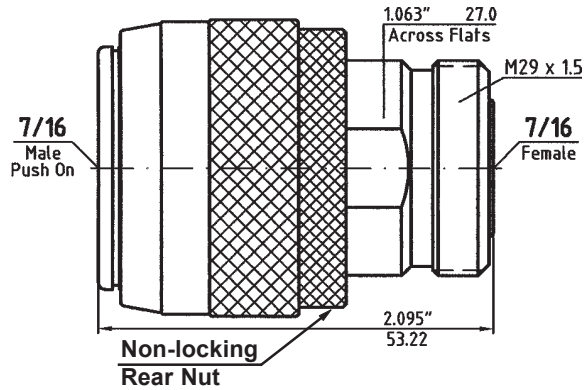
Adapter Part No.	8001-7S61-02
Connector Config.	7/16 Push-On to N-f
Frequency Range	DC to 7.5 GHz
VSWR	1.10 : 1 max.

Connector outer conductor is passivated stainless steel. Center conductor is gold or/and silver plated.



Dimensions shown are inches over millimeters. Standard units have stainless steel finish (last two digits of the P/N are -02). Interfaces are per MIL-C 39012, MIL-C-87104/2, MIL-C-3643, MIL-STD-348, IEC-169-7, IEC-457-2, DIN 47 223, DIN 47 226, DIN 47 298, where applicable. For details please refer to the beginning of this section.

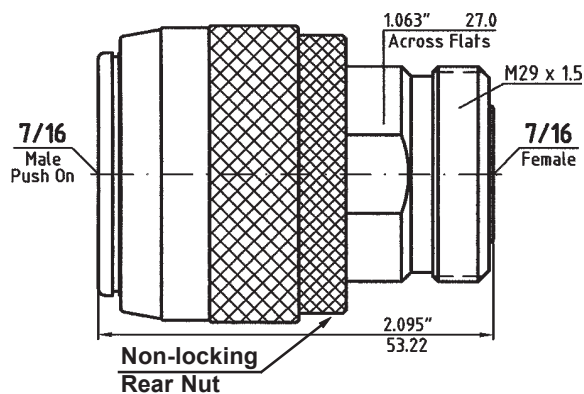
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Locking with Non-locking Rear Nut

Adapter Part No.	8001-7R76-02
Connector Config.	7/16 Push-On to 7/16-f
Frequency Range	DC to 7.5 GHz
VSWR	1.10 : 1 max.

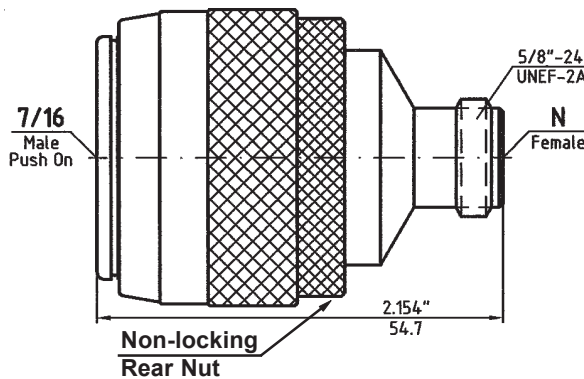
Connector outer conductor is passivated stainless steel. Center conductor is gold or/and silver plated.



Locking with Non-locking Rear Nut

Adapter Part No.	8001-7R76-13
Connector Config.	7/16 Push-On to 7/16-f
Frequency Range	DC to 7.5 GHz
VSWR	1.10 : 1 max.

Connector outer conductor is brass silver plated for lower intermodulation products. Center conductor is gold or/and silver plated. Remaining parts are stainless steel for ruggedness.



Locking with Non-locking Rear Nut

Adapter Part No.	8001-7R61-02
Connector Config.	7/16 Push-On to N-f
Frequency Range	DC to 7.5 GHz
VSWR	1.10 : 1 max.

Connector outer conductor is passivated stainless steel. Center conductor is gold or/and silver plated.

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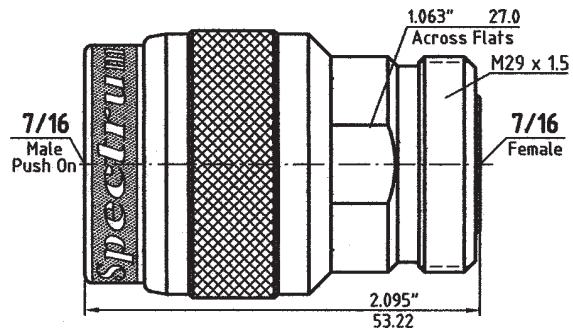
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7/16 Push-On Adapters

NON Locking

Adapter Part No.	8001-7N76-02
Connector Config.	7/16 Push-On to 7/16-f
Frequency Range	DC to 7.5 GHz
VSWR	1.10 : 1 max.

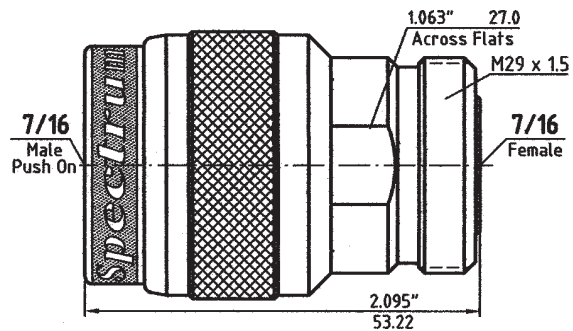
Connector outer conductor is passivated stainless steel. Center conductor is gold or/and silver plated.



NON Locking

Adapter Part No.	8001-7N76-13
Connector Config.	7/16 Push-On to 7/16-f
Frequency Range	DC to 7.5 GHz
VSWR	1.10 : 1 max.

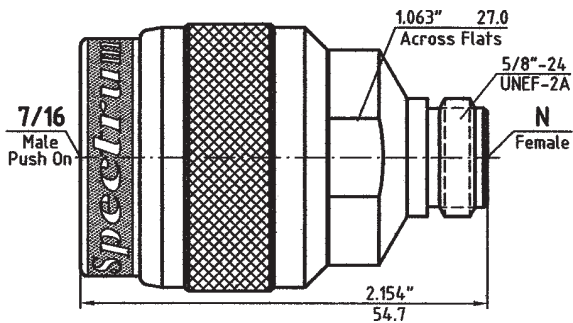
Connector outer conductor is brass silver plated for lower intermodulation products. Center conductor is gold or/and silverplated. Remaining parts are stainless steel for ruggedness.



NON Locking

Adapter Part No.	8001-7N61-02
Connector Config.	7/16 Push-On to N-f
Frequency Range	DC to 7.5 GHz
VSWR	1.10 : 1 max.

Connector outer conductor is passivated stainless steel. Center conductor is gold or/and silver plated.



Dimensions shown are inches over millimeters. Standard units have stainless steel finish (last two digits of the P/N are -02). Interfaces are per MIL-C 39012, MIL-C-87104/2, MIL-C-3643, MIL-STD-348, IEC-169-7, IEC-457-2, DIN 47 223, DIN 47 226, DIN 47 298, where applicable. For details please refer to the beginning of this section.