TOMCO

IP Controls

Instrumentation Quick Couplings

quick connects

TOMCO
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Series QC Swagelok® – Parker® Interchange

TOMCO's sole purpose is to provide the instrumentation, automation, and chemical process valve and fitting industry with a high quality, rapid delivery source for quick connect couplers. The people at TOMCO have been manufacturing instrumentation products for over 30 years, and have supplied these products to some of the best known companies in the field. All of TOMCO's products are made in our own manufacturing facility using state of the art machining centers and are assembled, tested, and shipped from our plant in Spartanburg, South Carolina.

Typical Applications

- Chemical Processing
- Fluid Instrumentation

Technical Data

VACUUM RATING*	Maximum 50 millitor (0.05 mm of Hg) Absolute Pressure
SEALING	100% Production Leak Tested

** 0.05 mm of Hg absolute pressure = -27.9 inches Hg gauge pressure*

RATED WORKING PRESSURE (PSI)

BRASS PRODUCTS				STAINLESS STEEL PRODUCTS			
Body Size	1/4"	3/8"	1/2"	Body Size	1/4"	3/8"	1/2"
Connected Position	2000	1000	500	Connected Position	3000	1500	750
Disconnected Position	2000	1000	500	Disconnected Position	3000	1500	750
Connect Under Pressure	250	250	250	Connect Under Pressure	250	250	250

MATERIALS OF CONSTRUCTION

BRASS PRODUCTS	STAINLESS STEEL PRODUCTS
Machined Parts: CA360 Brass with Bright-Dip surface enhancement.	Machined Parts: Stainless Steel AISI type 316.
Springs, and Retaining Rings: Stainless Steel AISI type 316	Springs and Retaining Rings: Stainless Steel AISI type 316
Seals: "O" Rings–Nitrile is standard	Seals: "O" Rings–Viton® is standard

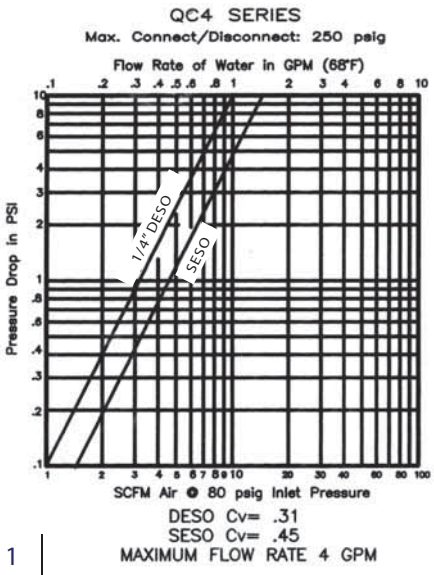
Features & Benefits

- Easy push-to-connect action.
- Redundant O-ring seals in couplers provide quick leak tight sealing in vacuum or pressurized systems. Nitrile standard in brass couplings, Viton® standard in 316SS couplings.
- Poppet Valve Equipped: Dependable poppet Valves with integral O-ring seals are standard in coupler and plug in double shutoff applications. In single end shut-off applications the poppet valve will be installed in the coupler half.
- Positive Valve Stops and Guides: Built-in positive valve stops prevent flow checking in the coupling. Valve guides align valves exactly to the coupler's valve seat greatly reducing the chance of leakage when in disconnected mode.
- Locking Mechanisms in Couplers: Smooth positive sleeve engagement and firm grip of the plug portion of the coupling assembly is assured with Tomco's Xylan® bonded stainless locking "dogs".
- 316 SS Springs: All coupler and valving springs are constructed from 316 stainless steel.
- Tomco tube fitting end: Permits leak-tight assembly with most industry standard swage type nut and ferrule combinations.
- IP Control couplers and plugs are available in body sizes 1/4", 3/8" and 1/2".
- Different connection ends, including male and female, tube fitting, bulkhead and other popular ends available.

Flow and pressure drop

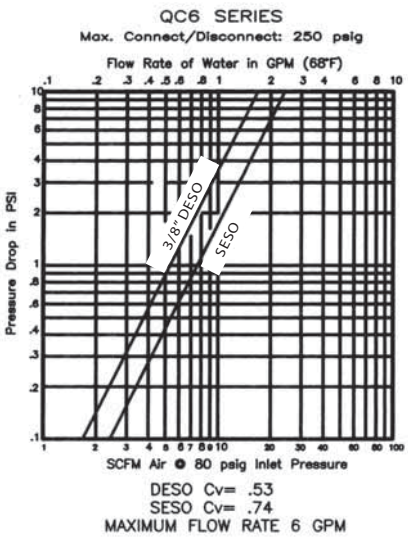
QC4 SERIES

Max. Connect/Disconnect: 250 psig



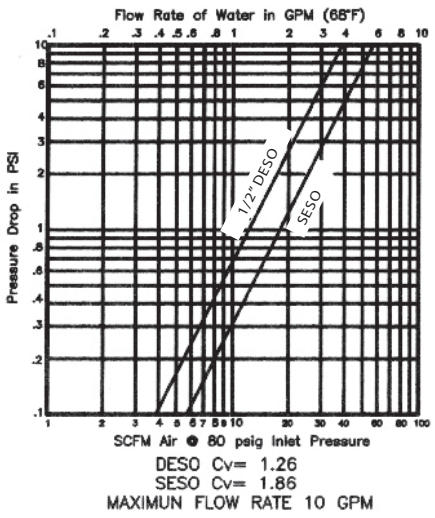
QC6 SERIES

Max. Connect/Disconnect: 250 psig



QC8 SERIES

Max. Connect/Disconnect: 250 psig

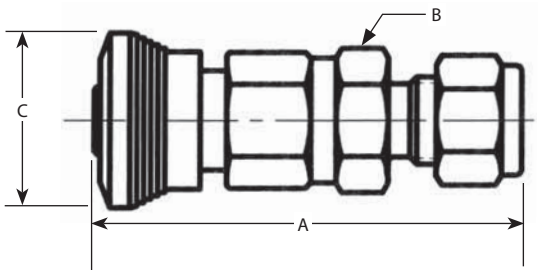


Series QC Swagelok® – Parker® Interchange

Body Assemblies with Valves

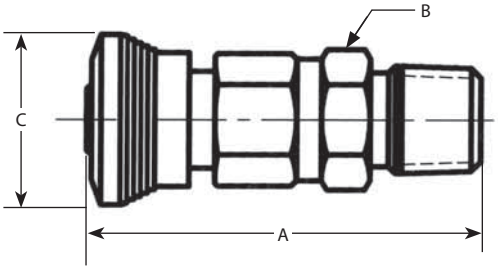
SERIES	BODY SIZE	TUBE SIZE	PART NO.	A	B HEX	C
QC4	¼	⅛	QC4-B-2-316	2.18	0.63	0.88
QC4	¼	¼	QC4-B-4	2.22	0.63	0.88
QC4	¼	¼	QC4-B-4-316	2.22	0.63	0.88
QC6	⅜	⅜	QC6-B-6	2.70	0.75	1.00
QC6	⅜	⅜	QC6-B-6-316	2.70	0.75	1.00
QC8	½	½	QC8-B-8	3.24	0.94	1.13
QC8	½	½	QC8-B-8-316	3.24	0.94	1.13

TUBE



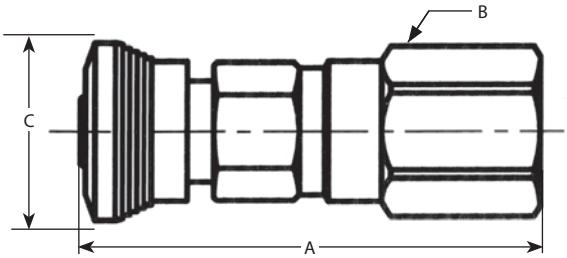
SERIES	BODY SIZE	TUBE SIZE	PART NO.	A	B HEX	C
QC4	¼	⅛	QC4-B-2M	1.83	0.63	0.88
QC4	¼	⅛	QC4-B-2M-316	1.83	0.63	0.88
QC4	¼	¼	QC4-B-4M	2.01	0.63	0.88
QC4	¼	¼	QC4-B-4M-316	2.01	0.63	0.88
QC6	⅜	¼	QC6-B-4M	2.43	0.75	1.00
QC6	⅜	¼	QC6-B-4M-316	2.43	0.75	1.00
QC6	⅜	⅜	QC6-B-6M	2.43	0.75	1.00
QC6	⅜	⅜	QC6-B-6M-316	2.43	0.75	1.00
QC8	½	½	QC8-B-8M	2.83	0.94	1.13
QC8	½	½	QC8-B-8M-316	2.83	0.94	1.13

MALE PIPE



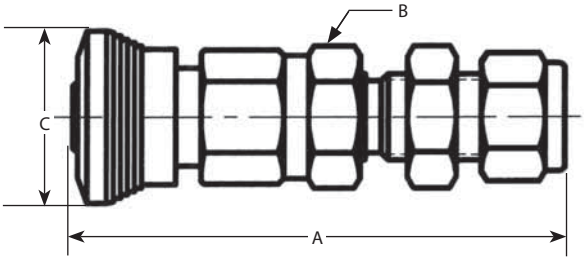
SERIES	BODY SIZE	TUBE SIZE	PART NO.	A	B HEX	C
QC4	1/4	1/8	QC4-B-2F	2.10	0.63	0.88
QC4	1/4	1/8	QC4-B-2F-316	2.10	0.63	0.88
QC4	1/4	1/4	QC4-B-4F	2.26	0.75	0.88
QC4	1/4	1/4	QC4-B-4F-316	2.26	0.75	0.88
QC6	3/8	1/4	QC6-B-4F	2.60	0.75	1.00
QC6	3/8	1/4	QC6-B-4F-316	2.60	0.75	1.00
QC6	3/8	3/8	QC6-B-6F	2.63	0.88	1.00
QC6	3/8	3/8	QC6-B-6F-316	2.63	0.88	1.00
QC8	1/2	1/2	QC8-B-8F	3.25	1.06	1.13
QC8	1/2	1/2	QC8-B-8F-316	3.25	1.06	1.13

FEMALE PIPE



SERIES	BODY SIZE	TUBE SIZE	PART NO.	A	B HEX	C
QC4	1/4	1/4	QC4-B1-4	2.59	0.63	0.88
QC4	1/4	1/4	OC4-B1-4-316	2.59	0.63	0.88
QC6	3/8	3/8	QC6-B1-6	3.02	0.75	1.00
QC6	3/8	3/8	QC6-B1-6-316	3.02	0.75	1.00

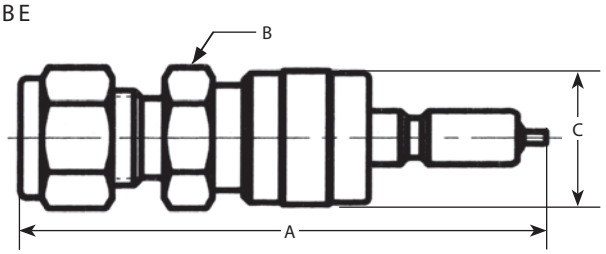
BULKHEAD TUBE



Series QC Swagelok® – Parker® Interchange

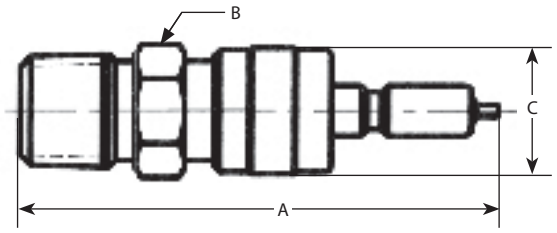
Instrumentation Plugs, Non Valved Single End Shut Off

TUBE



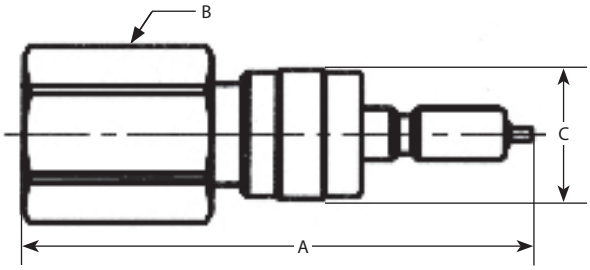
SERIES	BODY SIZE	TUBE SIZE	PART NO.	A	B HEX	C
OC4	¼	⅛	QC4-S-2-316	2.95	0.56	0.62
QC4	¼	¼	QC4-S-4	2.42	0.56	0.62
QC4	¼	¼	QC4-S-4-316	2.42	0.56	0.62
QC6	⅜	⅜	QC6-S-6	2.60	0.69	0.74
QC6	⅜	⅜	OC6-S-6-316	2.60	0.69	0.74
QC8	½	½	QC8-S-8	3.15	0.88	0.88
QC8	½	½	QC8-S-8-316	3.15	0.88	0.88

MALE PIPE



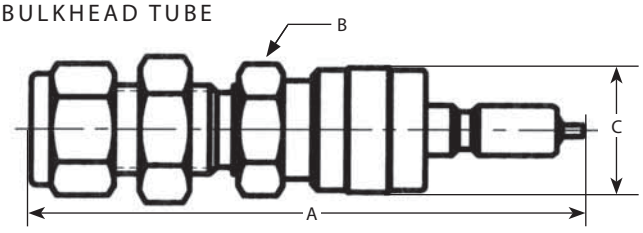
SERIES	BODY SIZE	TUBE SIZE	PART NO.	A	B HEX	C
QC4	¼	⅛	QC4-S-2M	2.06	0.56	0.62
QC4	¼	⅛	QC4-S-2M-316	2.06	0.56	0.62
QC4	¼	¼	QC4-S-4M	2.24	0.56	0.62
QC4	¼	¼	QC4-S-4M-316	2.24	0.56	0.62
QC6	⅜	¼	QC6-S-4M	2.34	0.75	0.74
QC6	⅜	¼	QC6-S-4M-316	2.34	0.75	0.74
QC6	⅜	⅜	QC6-S-6M	2.34	0.75	0.74
QC6	⅜	⅜	QC6-S-6M-316	2.34	0.75	0.74
QC8	½	½	QC8-S-8M	2.87	0.88	0.88
QC8	½	½	QC8-S-8M-316	2.87	0.88	0.88

FEMALE PIPE



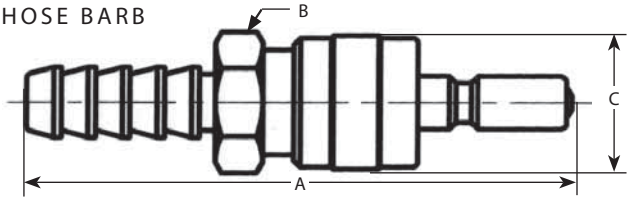
SERIES	BODY SIZE	TUBE SIZE	PART NO.	A	B HEX	C
QC4	¼	⅛	QC4-S-2F	2.21	0.56	0.62
QC4	¼	⅛	QC4-S-2F-316	2.21	0.56	0.62
QC4	¼	¼	QC4-S-4F	2.34	0.75	0.62
QC4	¼	¼	QC4-S-4F-316	2.51	0.75	0.62
QC6	⅜	¼	QC6-S-4F	2.51	0.75	0.74
QC6	⅜	¼	QC6-S-4F-316	2.51	0.75	0.74
QC6	⅜	⅜	QC6-S-6F	2.53	0.88	0.74
QC6	⅜	⅜	QC6-S-6F-316	2.53	0.88	0.74
QC8	½	½	QC8-S-8F	3.12	1.06	0.88
QC8	½	½	QC8-S-8F-316	3.12	1.06	0.88

BULKHEAD TUBE



SERIES	BODY SIZE	TUBE SIZE	PART NO.	A	B HEX	C
QC4	¼	¼	QC4-S1-4	2.80	0.56	0.62
QC4	¼	¼	QC4-S1-4-316	2.80	0.56	0.62
QC6	⅜	⅜	QC6-S1-6-316	3.24	0.69	0.74

HOSE BARB



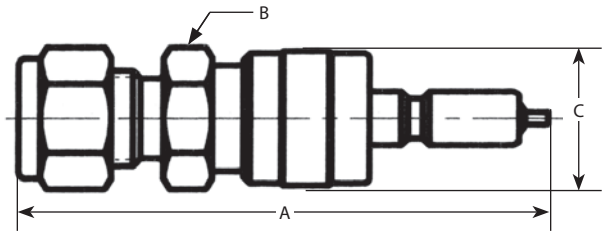
SERIES	BODY SIZE	TUBE SIZE	PART NO.	A	B HEX	C
QC6	⅜	⅜	QC6-S-6H-316	2.66	.69	.74

Series QC Swagelok® – Parker® Interchange

Instrumentation Plugs, Non Valved Double End Shut Off

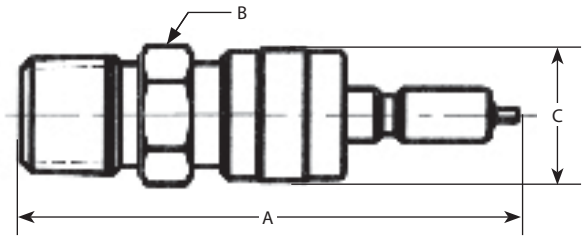
SERIES	BODY SIZE	TUBE SIZE	PART NO.	A	B HEX	C
OC4	¼	⅛	OC4-D-2-316	2.95	0.56	0.62
QC4	¼	¼	OC4-D-4	2.42	0.56	0.62
QC4	¼	¼	QC4-D-4-316	2.42	0.56	0.62
QC6	⅜	⅜	QC6-D-6	2.60	0.69	0.74
QC6	⅜	⅜	QC6-D-6-316	2.60	0.69	0.74
QC8	½	½	QC8-D-8	3.15	0.88	0.88
QC8	½	½	QC8-D-8-316	3.15	0.88	0.88

TUBE



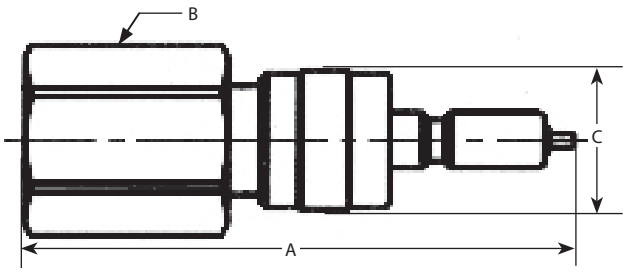
SERIES	BODY SIZE	TUBE SIZE	PART NO.	A	B HEX	C
QC4	¼	⅛	QC4-D-2M	2.06	0.56	0.62
QC4	¼	⅛	QC4-D-2M-316	2.06	0.56	0.62
QC4	¼	¼	QC4-D-4M	2.24	0.56	0.62
QC4	¼	¼	QC4-D-4M-316	2.24	0.56	0.62
QC6	⅜	¼	OC6-D-4M	2.34	0.75	0.74
QC6	⅜	¼	OC6-D-4M-316	2.34	0.75	0.74
QC6	⅜	⅜	QC6-D-6M	2.34	0.75	0.74
QC6	⅜	⅜	QC6-D-6M-316	2.34	0.75	0 74
QC8	½	½	QC8-D-8M	2.87	0.88	0.88
QC8	½	½	QC8-D-8M-316	2.87	0.88	0.88

MALE PIPE



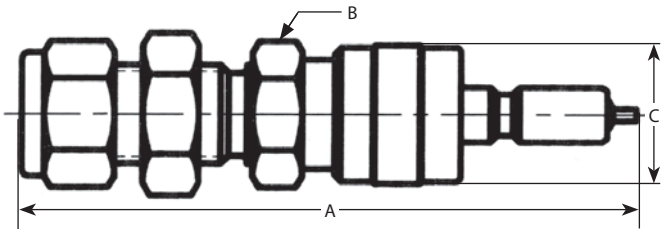
SERIES	BODY SIZE	TUBE SIZE	PART NO.	A	B HEX	C
QC4	¼	⅛	QC4-D-2F	2.21	0.56	0.62
QC4	¼	⅛	QC4-D-2F-316	2.21	0.56	0.62
QC4	¼	¼	QC4-D-4F	2.34	0.75	0.62
QC4	¼	¼	QC4-D-4F-316	2.34	0.75	0.62
QC6	⅜	¼	QC6-D-4F	2.51	0.75	0.74
QC6	⅜	¼	QC6-D-4F-316	2.51	0.75	0.74
QC6	⅜	⅜	QC6-D-6F	2.53	0.88	0.74
QC6	⅜	⅜	QC6-D-6F-316	2.53	0.88	0.74
QC8	½	½	QC6-D-8F	3.12	1.06	0.88
QC8	½	½	QC8-D-8F-316	3.12	1.06	0.88

FEMALE PIPE



SERIES	BODY SIZE	TUBE SIZE	PART NO.	A	B HEX	C
QC4	¼	¼	QC4-D1-4	2.80	0.56	0.62
QC4	¼	¼	QC4-D1-4-316	2.80	0.56	0.62
QC6	⅜	⅜	QC6-D1-6-316	3.24	0.69	0.74

BULKHEAD TUBE



Series QC Swagelok® – Parker® Interchange

How to Order

Standard seal lubrication is silicone

QC4 - B1 - 4 F - C - 316 - 203

BODY SIZE
- QC4 ¼
- QC6 ⅜
- QC8 ½

COMPONENT
- B Body
- B1 Bulkhead Body
- D Plug Valved
- D1 Plug Valved B.H.
- S Plug Non-valved
- S1 Plug Non-valved B.H.

PORT SIZE
- 2 ⅛
- 4 ¼
- 6 ⅜
- 8 ½

PORT CONFIGURATION
- F Female
- M Male
- H Hose Barb
- Blank Tube

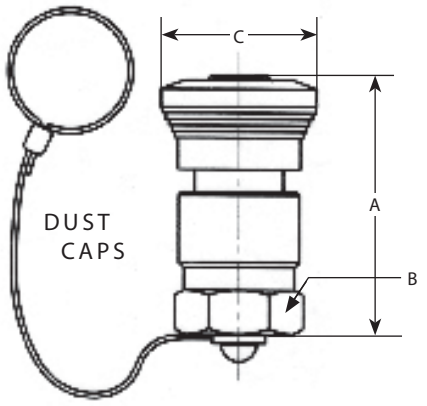
SEAL OPTIONS
- 201 Viton®
- 203 Kalrez®
- 204 EP
- 205 Nitrile
- 206 Neoprene

MATERIALS
- Blank Brass
- 316 Stainless

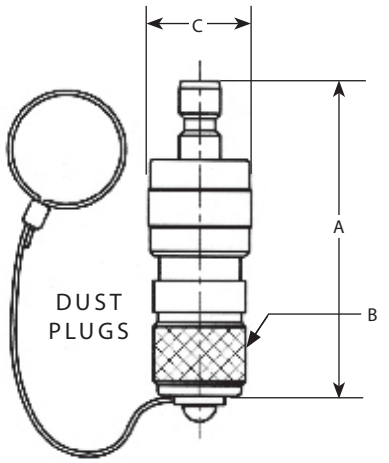
OPTIONS
- C Oxygen Clean
- L Less Nuts & Ferrules
- K1-K8 Keyed sleeves (see page 6)
- 1S Low Profile Sleeve
- LV Less Valve

Accessories Swagelok® – Parker® Interchange

DUST CAPS					
SERIES	BODY SIZE	PART NO.	A	B HEX	C
QC4	¼	QC4-C	1.45	0.63	0.88
QC4	¼	OC4-C-316	1.45	0.63	0.88
QC6	⅜	OC6-C	1.45	0.75	1.00
QC6	⅜	QC6-C-316	1.45	0.75	1.00
QC8	½	QC8-C	1.65	0.94	1.13
QC8	½	QC8-C-316	1.65	0.94	1.13



DUST PLUGS					
SERIES	BODY SIZE	PART NO.	A	B HEX	C
QC4	¼	QC4-P	1.88	0.57	0.62
QC4	¼	OC4-P-316	1.88	0.57	0.62
QC6	⅜	OC6-P	1.98	0.63	0.74
QC6	⅜	QC6-P-316	1.98	0.63	0.74
QC8	½	QC8-P	2.25	0.75	0.88
QC8	½	QC8-P-316	2.25	0.75	0.88



Series QC Swagelok® – Parker® Interchange

"Keyed" QC Series

TOMCO "KEYED" Quick Couplers will only couple with it's respective mating component. This coded system assures positive protection from accidental mixing of fluid or pressure lines. Keyed coupler and plug assemblies will only connect with its matching color and numeric coded counterpart for positive identification. TOMCO "KEYED" Quick Coupler Series are interchangeable and intermixable with Swagelok and Parker components of the same QC style.

TOMCO Color Coded "Keyed" Quick Couplers

KEY NUMBER AND COLOR	QC4		QC6		QC8	
	BODY SLEEVE O.D.	PLUG SLEEVE O.D.	BODY SLEEVE O.D.	PLUG SLEEVE O.D.	BODY SLEEVE O.D.	PLUG SLEEVE O.D.
K1-BLACK	0.96	0.82	1.13	0.99	1.26	1.10
K2-ORANGE	0.99	0.85	1.16	1.02	1.29	1.14
K3-GREEN	1.02	0.88	1.19	1.05	1.32	1.17
K4-YELLOW	1.05	0.91	1.22	1.08	1.35	1.20
K5-BLUE	1.08	0.94	1.24	1.11	1.38	1.23
K6-WHITE	1.11	0.97	1.28	1.14	1.41	1.26
K7-PURPLE	1.14	1.00	1.31	1.17	1.44	1.29
K8-BROWN	1.17	1.03	1.34	1.20	1.47	1.32

Keys 1 through 5 are standard stock items. For keys 6 through 8 , consult factory.

Warnings

Failure, 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 TOMCO and its 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 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 TOMCO and its subsidiaries at any time without notice.

Safety Guide

1. Quick couplers can fail without warning for a variety of reasons. All systems and equipment should be of a fail-safe design to avoid endangering persons and property.
2. Any person responsible for selecting or using quick couplers should read and understand this safety guide as well as specific information about product selection.
3. TOMCO and its distributors do not represent or warrant that any quick coupler is suitable for any specific end use system. 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 are met.

FLUID AND TEMPERATURE	Body and seal materials of the coupler must be compatible with the fluid media and ambient temperature both steady and transient. Do not exceed the limits of the coupler.
SIZE	Transmission of power by means of pressurized fluid varies with pressure and flow rate. The size of the coupler must be adequate to keep pressure losses to a minimum and avoid damage due to heat generation or excessive fluid velocity.
ENVIRONMENT	Environmental conditions including, but not limited to, moisture, water, chemicals, ozone, ultraviolet radiation and air pollutants can cause degradation and premature failure.
LOCKING MECHANISM	Couplers can accidentally disconnect when dragged over obstructions on the end of a hose.
LOADS	Mechanical loads such as: excessive tensile, side loading, or vibration can reduce coupler life or cause failure.
VACUUM	When selecting a coupler for vacuum service, make sure it will withstand the vacuum and pressure of the system.
COUPLER INSTALLATION	Couplers should be located so as not to expose the operator to hot or moving parts, potential of falling, slipping, or other hazardous conditions.
HOSE WHIP	A short length of hose between the tool and the coupling half should be used instead of a rigid mount. This reduces the potential for coupler damage and provides some isolation from mechanical vibration, which could cause accidental uncoupling.
PRESSURE	When selecting your coupler make sure the published pressure rating is equal to, or greater than, the maximum system pressure. High surge pressure can shorten the life of the coupler.
DO NOT GO NEAR FLUID LEAKS	• High pressure leaks of fluids such as oil easily puncture skin and can cause serious injury, gangrene or death. • If injured, seek emergency medical help. Immediate surgery is required to remove oil. • Do not use your fingers or skin to check for leaks. • Lower load or relieve tool pressure before loosening fittings.

Notes

Notes

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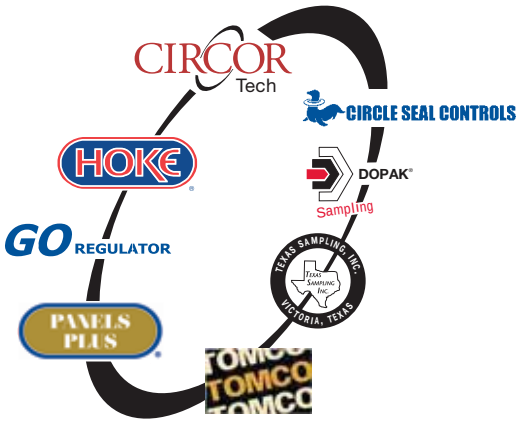

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CIRCOR Instrumentation Technologies

CIRCOR Instrumentation Technologies (CIT) is a product group of CIRCOR International (NYSE: CIR), specializing in fluid process control solutions with orifice sizes typically up to 1″. Our main product lines include ball, needle, packless, diaphragm, solenoid, and metering valves, pressure regulators, quick couplers, Gyrolok® compression tube fittings, and fully integrated sampling systems.

CIT markets primarily to the petrochemical, refining, power generation, food and beverage, semiconductor, and pharmaceutical industries, and to OEM's. CIT separates itself from the competition by offering highly engineered components manufactured to exacting standards and a variety of custom options.

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