



TOOLS & SYSTEMS

# FASTEST<sup>®</sup>



## SAFE • FAST RELIABLE

SEALING CONNECTION TOOLS

2020 PRODUCT GUIDE





# FASTEST<sup>®</sup>

## SAFE, RELIABLE, FAST SEALING CONNECTIONS

Enhance Test Safety | Drive Continuous Improvement | Ensure Product Quality

### Standard and Custom Sealing Connection Tools for Leak Test and Fluid Transfer Applications.

FastTest is a dedicated manufacturer of advanced engineered Sealing Connection Tools for product testing, fluid transfer, and other processing applications. Our mission is to make your production safe, easy, and more efficient. **FasTest tools significantly increase operational throughput to reduce manufacturing costs.**

As your sealing and connection solution leader for over 35 years, FastTest is ready to assist you in specifying the optimal sealing connection tools for your application.

#### OUR CUSTOMERS

AUTOMOTIVE /  
VEHICLE SYSTEMS

HVAC/  
REFRIGERATION

COMPRESSED GAS

FLUID POWER

APPLIANCES

AEROSPACE

MEDICAL LIFE  
SCIENCES

...AND MORE



#### APPLICATION EXPERTS

We work with you to provide the best solution for your application.



#### QUALITY

ISO 9001 Certified;  
Robust tools improve the quality of your product.



#### BREADTH OF OFFERING

Extensive standard  
and Custom Engineered  
Solutions.



#### INTELLIGENT TOOLS

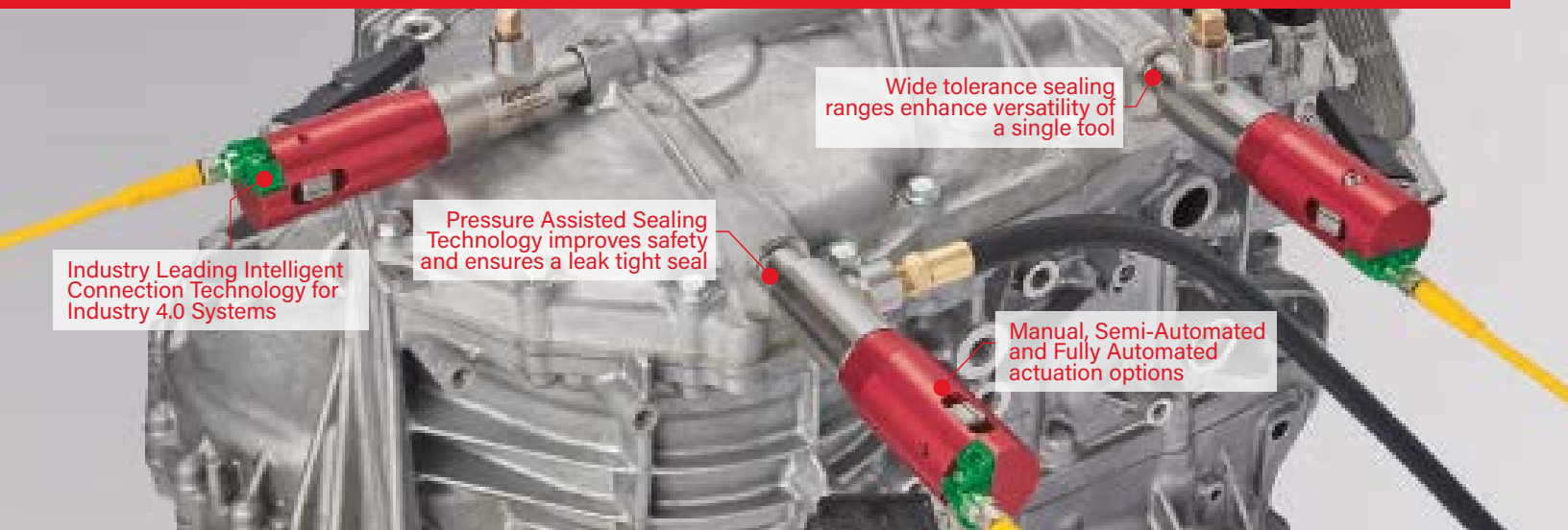
Industry 4.0 sensing &  
data generating tools



#### GLOBAL SUPPORT

Global distribution  
coverage for local and  
responsive distribution  
support.





## FASTEST EXPERTISE

**We are the Intelligence at the Point of Connection.** We've seen it, we've done it, we live it.

**FasTest® Sealing Connection Tool:** A high performance device that provides a repeatable, ergonomic, and fast way to attach and seal applications for leak testing and fluid transfer processes.

### Leak Testing

Sealing Connection integrity is imperative to get good leak testing results.

### Fluid Transfer Testing

High flow, high pressure, and safe connections

### HVAC/R Processing

Extreme leakage requirements for pressure and vacuum.

### Compressed Gas Filling

Robust, secure, and leak free connections

### CoreMax® Access Valve

CoreMax® access valve provides a leak free valve designed for refrigerant

## Complete Sealing Connection Tool Provider

Single source provider of all Sealing Connection Tools for an entire application. FasTest® Sealing Connection Tools provide consistent connection and sealing for testing variation reduction.

## Customer Intimacy

We work with you to improve your product and manufacturing process.

## Largest Selection of Sealing Connection Tools

Hundreds of standard designs available along with Custom Engineering Solutions.

## Faster and Better Real Time Decisions

FasTest® sealing connection integrity eliminates wasted time diagnosing leaks, allowing for focus on key process improvements.

## Quick ROI

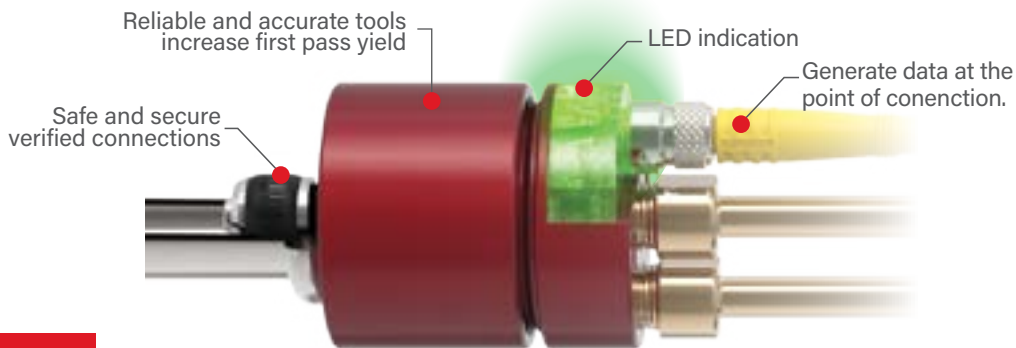
Improved safety, better ergonomics, and increased throughput.



# ICON™

## INTELLIGENT CONNECTION TECHNOLOGY

Fastest's ICON™ adds sensing capabilities to our mechanical Sealing Connection Tools. ICON™ Tools include instant LED visual feedback and data output to improve sealing connection accuracy, maximize production efficiency, and optimize maintenance.



### ICON™ features:



#### SURE SEAL™

Instant LED feedback verifies a good connection prior to starting a test.



#### SEAL LIFE™

Alert when the main seal is at end of life and must be replaced.

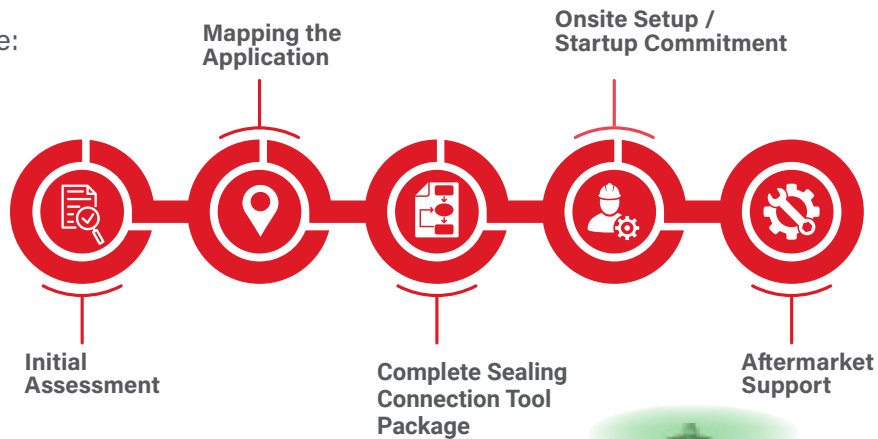
- » **Improve safety during functional tests.**  
SURE SEAL™ provides an instant LED indication of a safe and secure connection. Identify short-connects before media is introduced.
- » **Eliminate leak test false failures to improve first pass yield.**  
ICON™ verifies the connection. Know a leak is in the product, not the connection.
- » **Increase throughput and reduce downtime.**  
Safe, reliable, and consistent connections every cycle - test more, quicker. Reduce rework and the need to retest.
- » **Collect tool data.**  
Make better real time decisions through data. Utilize data on historical use and cycle count to eliminate waste and improve product quality.
- » **Optimize seal maintenance.**  
SEAL LIFE™ indicates when the main seal needs to be replaced.

# COMPLETE SYSTEM PROVIDER

## ALL THE SEALING CONNECTION TOOLS FOR YOUR APPLICATION - ACHIEVE CONSISTENT SEALING AND REDUCE TESTING VARIATION

- » Work with our experienced engineers to solve your problems.  
Let your engineers work on your products and leave sealing tools to us.

What we provide:

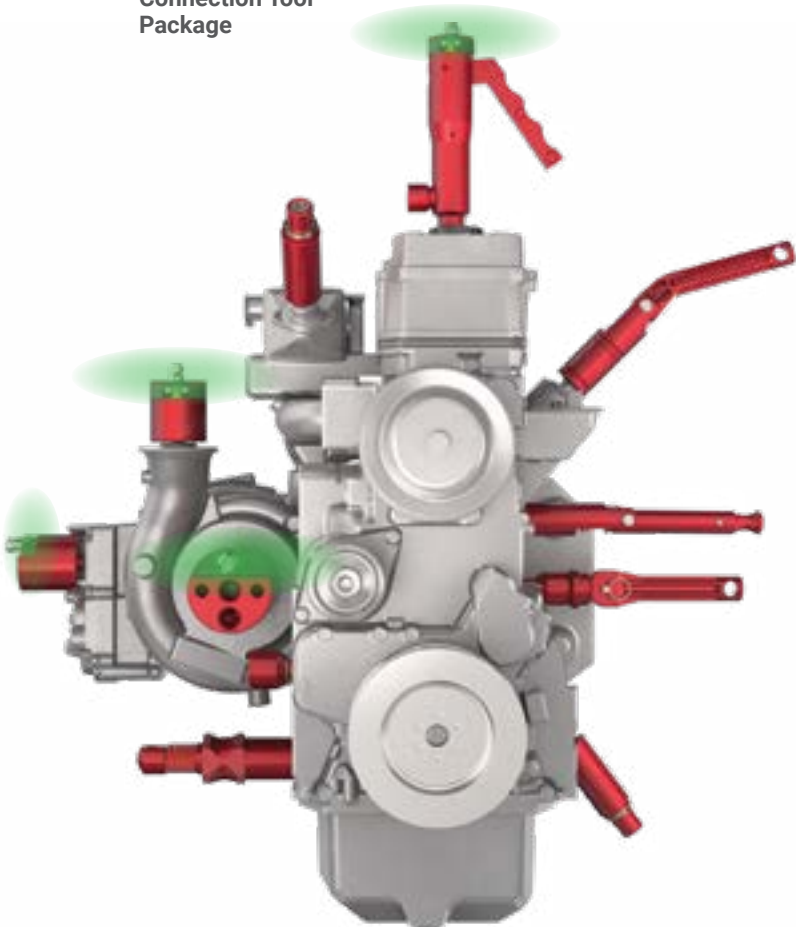


- » **Reduce testing variation** with a complete package of FasTest Sealing Connection Tools

- » **Ergonomic Sealing Connection Tools** with SURE SEAL™ eliminates false failures, improving takt time

- » **Multiple data points** provides insight for your testing process

- » **Leak-tight seals** prevents contamination of media and reduces scrap and test damage





## CUSTOM ENGINEERED SOLUTIONS

WE TRANSFORM STANDARDIZED TOOLS INTO TAILOR-MADE SOLUTIONS TO FIT YOUR EXACT REQUIREMENTS.

» We have a dedicated team of Custom Experts - we have done thousands of custom applications and have likely seen yours.

### Custom Sealing Connection Tools for:

#### Automotive / Vehicle Systems

- Unique port shapes/sizes
- Turbocharger
- Fuel systems

#### Fluid Power

- Hydraulic hose ends
- Hydrostatic drive components
- Cylinder testing

#### HVAC/R

- Distribution manifolds
- Compressor run testing
- Coil leak testing

#### Compressed Gas

- Pressure vessel proof testing
- Specialty gasses
- Fill plant ergonomics

#### Aerospace

- Specialty pressures/materials
- Hydraulic tubing
- Casting porosity

#### Appliance

- Washing machine mixing valves
- Coil/compressors
- Water dispensers and filtration

#### Medical / Life Science

- Drug delivery systems (insulin pumps/tube sets)
- Medical filtration (kidney dialysis)
- Medical devices (chest drains, angioplasty instruments)

#### Telecommunications

- Fiber optic cables
- Cloud server liquid cooling
- Casings



**NEED A SOLUTION FOR YOUR APPLICATION?** Submit a custom application form and drawing to [fastsales@fastestinc.com](mailto:fastsales@fastestinc.com) or to your local distributor.



» We know our customers - Our breadth of product, innovative technologies, and over 35 years of sealing experience makes us sealing connection tool experts for these industries... and more.

### AUTOMOTIVE / VEHICLE SYSTEMS

**Industry Needs:** safety, Industry 4.0, broad offering, repeatable, and durable.

**Common Applications:** Engine testing (leak & hot run test), cooling/braking/fuel systems leak testing, and fluid transfer.

Electric vehicle component testing, drive system, and battery cooling.

**Suggested Products:** FE/FI, JN/JX, FN/FX, ZF, ZN, ZGN, FR70, MET/MIT, 60/70, and customized solutions.



### FLUID POWER

**Industry Needs:** safety, Industry 4.0, high pressure, and high flow.

**Common Applications:** Pneumatic/hydraulic hose assembly, cylinders, pumps, motors, hydrostatics, pneumatic components, and valves.

**Suggested Products:** FN/FX, HPB, MET/MIT, ZGN, 60/70, and customized solutions.



### HVAC/R

**Industry Needs:** safety, Industry 4.0, extreme vacuum, current/next-gen refrigerants, safe, stringent leak test, system access valve.

**Common Applications:** Coil test, compressor test, burst test, manifold assembly test, evacuation/charging, furnace burner test, and system run test.

**Suggested Products:** ST, XT, GasMate, SnapMate, JNL/JXL, MBE/MRE, RQD, and customized solutions

**CoreMax® Access Valve System:** High flow OEM refrigerant valves for HVAC-R manufacturers and connectors for testing applications with refrigerant tubing, and process tips.



**DON'T SEE A SOLUTION FOR YOUR INDUSTRY?** Look on p. 6 to see our Custom Engineered Solutions capabilities.



## COMPRESSED GAS

**Industry Needs:** safety, Industry 4.0, high pressure, vacuum capable, robust, and specific for compressed gas / oxygen systems.

**Common Applications:** Cylinder evacuation and fill.



**Suggested Products:** G540, G580, G346, G590, MediMate, High Purity, and Cryovent.

## AEROSPACE

**Industry Needs:** safety, Industry 4.0, high pressure, non-marring, and stringent leak test

**Common Applications:** Tube assemblies, castings, fuel flow, calibration, and pitot tubes.



**Suggested Products:** HPB, FN/FX, MET/MIT, FE/FI, 60/70, and customized solutions.

## APPLIANCE

**Industry Needs:** safety, Industry 4.0, broad offering, vacuum capable, stringent leak test, high cycle, and easy to maintain.

**Common Applications:** Refrigerant leak test, manifold assembly test, evacuation/charging, furnace burner test, mixing valve tests, plumbing testing, and system run test.



**Suggested Products:** JN/JX, FN/FX, MET/MIT, GasMate, SnapMate, 60/70, ST, XT, and customized solutions.

## MEDICAL / LIFE SCIENCES

**Industry Needs:** safety, Industry 4.0, vacuum capable, certified cleanliness, FDA compliant seals, stringent leak test, high cycle, easy to maintain.

**Common Applications:** Angioplasty catheter, battery packs, needle, syringe, Luer testing, dialysis filters and specialty tools.



**Suggested Products:** ME, ML, LuerMate, 60/70, and customized solutions.

Connect and seal on the inside of the cavity, tube, or thread
















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	PRODUCT SERIES		EZ Connect™ ZN	FI	EZ Connect™ ZGN
3	Pressure rating		Vacuum to 50 psi (3.5 bar)	Vacuum to 120 psi (8.3 bar)	Vacuum to 120-300 psi (8.3-20.7 bar)
	Application type		Manual	Semi-automated or Fully automated	Manual/Semi-automated/Fully automated
4	Actuation method		Lever	Pneumatic	Lever / Pneumatic
	Grip method		Seal friction	Fixturing/Seal friction	Grip collets
5	ICON™ Technology			SURE SEAL™ and SEAL LIFE™	
CAVITIES	HOLES / BORES		2 0.375" to 1.339" 9.53 mm to 34.01 mm	0.310" to 3.005" 7.87 mm to 76.33 mm	N/A
	TUBES				
	STRAIGHT		0.375" to 1.339" 9.53 mm to 34.01 mm	0.310" to 3.005" 7.87 mm to 76.33 mm	N/A
	SWAGED				
	EXPANDED				
	FLARED				
	BEADED		0.375" to 1.339" 9.53 mm to 34.01 mm	0.310" to 3.005" 7.87 mm to 76.33 mm	N/A
	BARBED				
	FORMED				
THREADS	NPT		N/A	⅛ to 2½	⅛ to ½
	BSPT/BSPP (G)		N/A	⅛ to 2½	⅛ to ½
	O-RING BOSS / FLARE PORTS		N/A	⅞-20 to 2½-12 M10 to M60	¾-24 to ¾-16 M10 to M20
	JIC 37° FLARE SWIVEL NUT		N/A	N/A	N/A
	ORFS SWIVEL NUT		N/A	N/A	N/A

4

Choose preferred actuation method -  
Lever / Sleeve for Manual or Pneumatic for Automation

5

Identify desired ICON™ features



JNL	FasMate® FN	TwistMate® MIT
Vacuum 10 mtorr (micron) to 1000 psi (68.9 bar)	Vacuum to 5,000 psi (344.7 bar)	Vacuum to 10,000 psi (689.5 bar)
Manual	Manual	Manual
Lever	Lever/Pneumatic/ Thumb valve	Manual twist
Grip collets	Thread collets	Continuous thread
	SURE SEAL™	
0.375" to 1.625" 9.53 mm to 41.275 mm	N/A	N/A
0.375" to 1.625" 9.53 mm to 41.275 mm	N/A	N/A
N/A	N/A	N/A
N/A	1/8 to 3/4	1/8 to 4
N/A	1/8 to 3/4	1/8 to 1
N/A	7/16-20 to 1 1/16-16 M10 to M22	1/8-24 to 1 1/8-12 M10 to M22
N/A	N/A	7/16-20 to 3-12 (-4 to -40)
N/A	N/A	9/16-18 to 2 1/2-12 (-4 to -32)



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form and drawing to [fastsales@fastestinc.com](mailto:fastsales@fastestinc.com) or to your local distributor.



Connect and seal on the outside of the tube, or thread



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3

## PRODUCT SERIES

EZ Connect™ ZF

FE

60

70

Pressure rating

Vacuum to 300 psi (20.7 bar)

Vacuum to 500 psi (34.5 bar)

Vacuum to 750 psi (51.7 bar)

Vacuum to 750 psi (51.7 bar)

Application type

Manual

Semi-automated or Fully automated

Manual

Manual

4

Actuation method

Sleeve

Pneumatic

Sleeve

Sleeve

Grip method

Grip collets

Fixturing/Seal friction

Grip collets

Thread collets

5

ICON™ Technology

SURE SEAL™ and SEAL LIFE™

TUBES

STRAIGHT



SWAGED



EXPANDED



FLARED



BEADED



BARBED



FORMED



N/A

2

0.030" to 5.040"  
0.76 mm to 128.02 mm

N/A

0.236" to 2.040"  
6 mm to 51.8 mm

1

THREADS

NPTF



N/A

1/8 to 2 1/2

1/8 to 1

N/A

JIC 37° FLARE



N/A

7/16-20 to 1 7/8-12

7/16-20 to 1 5/16-12  
(-4 to -16)

N/A

METRIC



N/A

M10 to M60

M10 to M33

N/A

45° FLARE



N/A

7/16-20 to 1 1/16-14

7/16-20 to 1 3/8-12  
(-4 to -16)

N/A

BSPT/BSPP (G)



N/A

1/8 to 2 1/2

Consult factory

N/A

4

Choose preferred actuation method -  
Lever / Sleeve for Manual or Pneumatic for Automation

5

Identify desired ICON™ features



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JXL	FasMate® FX	HPB	TwistMate® MET
Vacuum 10 mtorr (micron) to 1000 psi (68.9 bar)	Vacuum to 5,000 psi (344.7 bar)	Vacuum to 6,000 psi (413.7 bar)	Vacuum 10,000 psi (689.5 bar)
Manual	Manual	Manual	Manual
Lever	Lever/Pneumatic/ Thumb valve	Sleeve	Twist
Grip collets	Threaded / Grip collets	Threaded / Grip collets	Continuous thread
0.25" to 0.875" 6.3 mm to 22.2 mm	N/A	N/A	N/A
N/A	0.38" to 0.75" 9.7 mm to 19.2 mm	N/A	N/A
N/A	1/8 to 1/2	1/4 to 3/4	1/8 to 3
N/A	3/8-24 to 3/4-16	7/16 to 3/4-16	7/16-20 to 2 1/2-12 (-4 to -32)
N/A	M10 to M20	N/A	
N/A	3/8-24 to 3/4-16	N/A	7/16-20 to 1 1/16-14 (-4 to -12)
N/A	1/8 to 1/2	1/4 to 1/2	1/8 to 1



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form and drawing to [fastsales@fastestinc.com](mailto:fastsales@fastestinc.com) or to your local distributor.

## Connect and seal specific tubes or threads



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DESIGNED FOR	FUEL RAILS	GAS BURNER TESTING	
PRODUCT SERIES	70 FR	GZNV	G60V
Pressure rating	Vacuum to 750 psi (51.7 bar)	Vacuum to 5 psi (0.4 bar)	Vacuum to 30 psi (2.1 bar)
Connects to	SAE J2044 fuel lines	Natural gas and propane regulators	Natural gas and propane regulator extension pipes
Sealing range	1/4", 5/16", 3/8", 1/2"	3/8, 1/2, 3/4 Female NPT/BSPP (G)	3/8, 1/2, 3/4 Male NPT/BSPP (G)
Application type	Manual	Manual	Manual
Actuation method	Sleeve	Lever	Sleeve
Grip method	Jaws	Seal friction	Thread collets



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DESIGNED FOR	MEDICAL-LIFE SCIENCES				
PRODUCT SERIES	ME	ML	60M	MLL	MLH
Pressure rating	Vacuum 10 mtorr (micron) to 500 psi (34.5 bar)	Vacuum 10 mtorr (micron) to 750 psi (51.7 bar)	Vacuum 10 mtorr (micron) to 750 psi (51.7 bar)	Vacuum 10 mtorr (micron) to 100 psi (6.9 bar)	Vacuum 10 mtorr (micron) to 500 psi (34.5 bar)
Connects to	Tubing and Luers (Full or partial thread)	Luers (Full thread)	Luers (Full or partial thread)	Luers (Full or partial thread)	Luers (Full thread)
Sealing range	0.015" to 0.510" (0.38 mm to 13 mm)	Luer	Luer	Luer	Luer
Application type	Semi-automated or Fully automated	Semi-automated or Fully automated	Manual	Semi-automated or Fully automated	Semi-automated or Fully automated
Actuation method	Pneumatic	Pneumatic	Manual sleeve	Pneumatic	Pneumatic
Grip method	Fixturing / Seal friction	Fixturing / Collar	Collets	Fixturing / Seal friction	Fixturing / Collar
ICON™ Technology	SURE SEAL™ and SEAL LIFE™				





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HVAC/R				
XT	ST	RQD	SNAPMATE	MBE / MRE
Vacuum 10 mtorr (micron) to 625 psi (43.1 bar)	Vacuum 10 mtorr (micron) to 1,000 psi (68.9 bar)	Vacuum 10 mtorr (micron) to 750 psi (51.7 bar)	Vacuum 10 mtorr (micron) to 625 psi (43.1 bar)	Vacuum 10 mtorr (micron) to 625 psi (43.1 bar)
Expanded tubes	Straight tubes	Hansen® and PCU® male fittings	CoreMax® / Schrader® access ports	Expanded tubes
5/16", 3/8", 1/2", 5/8", 3/4", 7/8"	1/4", 5/16", 3/8"	1/4", 3/8"	7/16-20 flare	1/4" to 1 3/8"
Manual	Manual	Manual	Manual	Manual
Sleeve	Sleeve	Sleeve / Lever	Sleeve	Sleeve
Ball latch	Thread collets	Ball latch	Thread collets	Ball / Ring latch

## » INDUSTRY LEADING RESPONSIVENESS

MAJORITY OF PRODUCTS SHIP WITHIN 2 DAYS.

CUSTOM ENGINEERED SOLUTIONS INCLUDING DESIGN,  
SHIP IN WEEKS VS. MONTHS.

AT FASTEST WE TAKE PRIDE IN BEING RESPONSIVE TO ALL OUR  
CUSTOMER'S NEEDS, INCLUDING PRODUCT AVAILABILITY.





# INTERNAL CONNECTIONS





 FASTEST

 FASTEST



# ZN™ / INTERNAL SEALING CONNECTION TOOL

Manual sealing connection tool for tubes and bores with broad tolerance and low pressures (<50 psi (3.4 bar)).

CONNECTS TO:

Straight Expanded Flared Beaded Barbed Formed Swaged



SPECIFICATIONS

Pressure Rating	Operating Temperatures	Materials of Construction
Vacuum to 50 psi (3.5 bar)	0°F to +200°F (-17°C to +93°C)	Anodized Aluminum, Stainless Steel, Acetal (POM)
Termination Port		Seal Material*
1/8 NPT to 3/8 NPT		Main seal: Neoprene® Internal seal: Buna-N

\* Additional seal material types available, consult factory.

ACTUATION METHOD

**Lever Handle:** Two way actuation handle is simple and ergonomic for production applications

ICON™ TECHNOLOGY

Consult Factory

ACCESSORIES



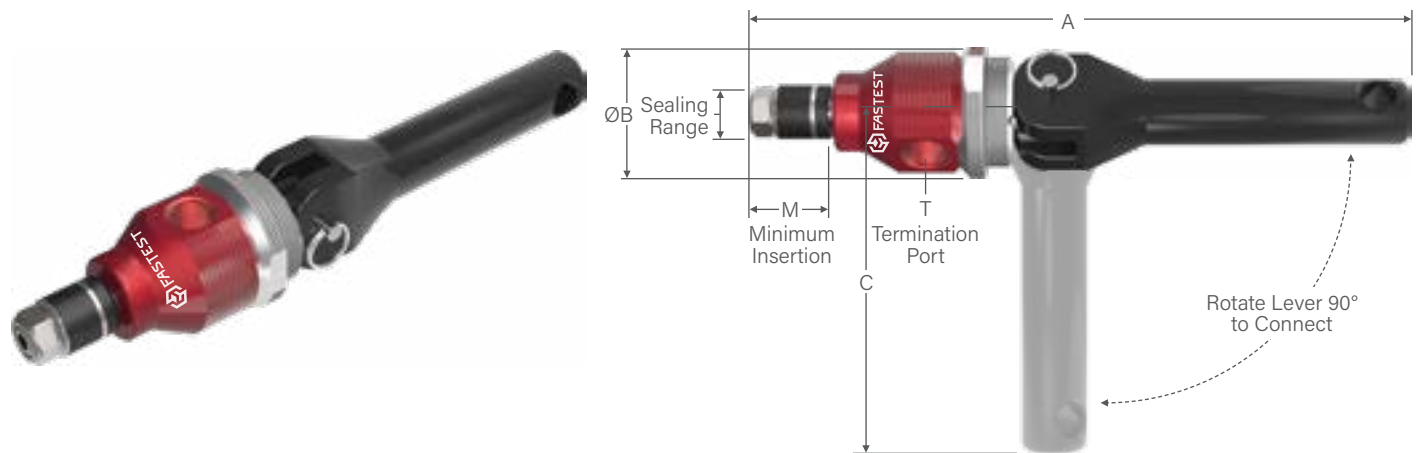
Safety Cable

- Additional safety feature in case of accidental blowoff.



- 1 Lockable collar to keep sealing pressure constant, handle hole for safety cable as needed
- 2 Adjustment ring to accommodate the widest sealing range in the industry; set preload and maximize seal life
- 3 High flow design can be quickly adapted for plug style applications
- 4 Quick change seal sets to accommodate multiple sizes of tubing and easy field maintenance

# ZN / INTERNAL SEALING CONNECTION TOOL



Ordering Information			Dimensions				
Sealing Range	Part Number	Replacement Seals Bulk Pack (5)	A	B	C	M	T
0.38 to 0.39 (9.5 to 10.0)	ZN101	ZNB10360	7.30 (185.4)	1.20 (30.5)	4.09 (103.9)	0.57 (14.5)	1/8 NPT
0.39 to 0.47 (10.0 to 12.0)	ZN111	ZNB111					
0.47 to 0.55 (12.0 to 14.0)	ZN112	ZNB112					
0.55 to 0.63 (14.0 to 16.0)	ZN113	ZNB113					
0.63 to 0.71 (16.0 to 18.0)	ZN221	ZNB221	7.50 (190.5)	1.50 (38.1)	4.09 (103.9)	0.78 (19.8)	1/4 NPT
0.71 to 0.79 (18.0 to 20.0)	ZN222	ZNB222					
0.79 to 0.87 (20.0 to 22.0)	ZN223	ZNB223					
0.87 to 0.95 (22.0 to 24.0)	ZN331	ZNB331	8.13 (206.6)	1.50 (38.1)	4.09 (103.9)	1.20 (30.5)	1/4 NPT
0.95 to 1.02 (24.0 to 26.0)	ZN332	ZNB332					
1.02 to 1.10 (26.0 to 28.0)	ZN333	ZNB333					
1.10 to 1.18 (28.0 to 30.0)	ZN441	ZNB441	8.18 (207.8)	1.63 (41.4)	4.09 (103.9)	1.25 (31.8)	3/8 NPT
1.18 to 1.26 (30.0 to 32.0)	ZN442	ZNB442					
1.26 to 1.34 (32.0 to 34.0)	ZN443	ZNB443					

Dimensions: inch (mm)



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# FI / INTERNAL SEALING CONNECTION TOOL

Pneumatic sealing connection tool for internal sealing in automated and semi-automated processes.

## CONNECTS TO:

Straight Expanded Flared Beaded Barbed Form End Swaged



- 1 Automated processes and high-volume production testing including pick and place and delicate robotic handling applications
- 2 Capable of sealing conventional and unique sealing surfaces including smooth, porous, out of round, and threaded
- 3 Quick change seal sets to accommodate multiple sizes of tubing and easy field maintenance
- 4 Available with Shaft Extensions for accessibility to seal remote ports or multiple ports with close center to center distances - consult factory for further information



## SPECIFICATIONS

Pressure Rating	Pilot Pressure	Operating Temperatures
Vacuum to 120 psi (8.3 bar)	60 to 120 psi (4.1 to 8.3 bar)	0°F to +200°F (-17°C to +93°C)
Termination Port	Materials of Construction	Seal Material*
Female 10-32 UNF, M5 x 0.8, NPT/BSPP (G): 1/8 to 3/4	Anodized Aluminum, Stainless Steel, Potted PCA	Standard: Neoprene®, Urethane Optional: FKM, Buna-N, EPDM, FDA White Neoprene®

\* Additional seal material types available, consult factory.

\*\* Operating Temp: 32°F-100°F (0°C-38°C) for ICON™.

- i Sealing connection tool and test part should be rigidly fixtured to prevent separation when under pressure (fixture not required for vacuum applications).

## ACTUATION METHOD

**Pneumatic:** Pilot pressure applied to seals with no metal contact and uniform seal movement seals inside tubes and pipes with no marring.

## ICON™ TECHNOLOGY

✓ SURE SEAL™

🔄 SEAL LIFE™

**ACCESSORIES** FOR DETAILS, VISIT [FASTESTINC.COM](http://FASTESTINC.COM)



**Shaft Extension**  
Consult factory.



**Seal Retainer Nut**  
Consult factory.



# ICON™

## INTELLIGENT CONNECTION TECHNOLOGY

FasTest's ICON™ adds sensing capabilities to our mechanical Sealing Connection Tools. ICON™ Tools include instant LED visual feedback and data output to improve sealing connection accuracy, maximize production efficiency, and optimize maintenance.

### ICON™ features:



#### SURE SEAL™

Instant LED feedback verifies a good connection prior to starting a test.



#### SEAL LIFE™

Alert when the main seal is at end of life and must be replaced.

### How To Add ICON™ to FI

Signal Output	Part Number Suffix	Example
FI without ICON™	None	FI01
FI with ICON™; Analog Output Signal	CV04ANA	FI01CV04ANA
FI with ICON™; Solid State Relay	CV04SSR	FI01CV04SSR

### System Overview:

CONNECTED

Green indication of a good connection.

RECONNECT

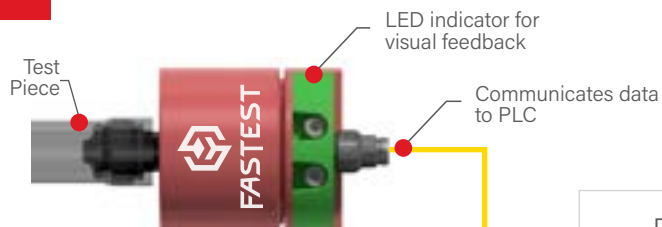
Recognize a connection issue before causing a false failure.

WORN SEAL

Alert when main seals should be replaced.

PICK TOOL

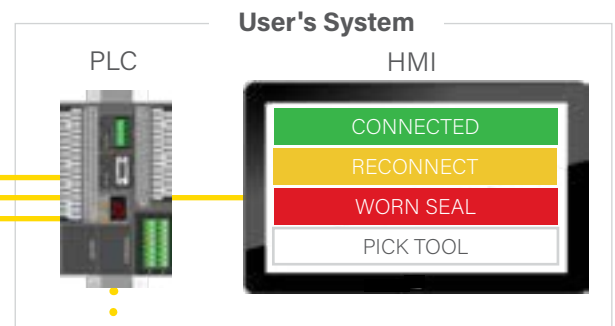
Controllable LED signals operator to use specific tool.



Test Piece

LED indicator for visual feedback

Communicates data to PLC



PLC

HMI

Standalone install or tie into PLC

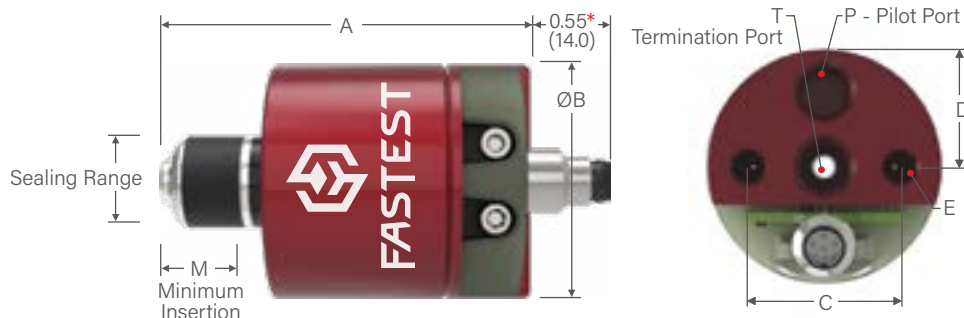
PROGRAMMING TOOL

- Quickly setup ICON™ Tools
- Eliminate the need for PLC programming
- Can be powered from wall adapter (included) or from a PLC (24VDC)

**NOTE:** Solid State Relay and Analog output options available.



# FI / INTERNAL SEALING CONNECTION TOOL / STRAIGHT TUBES & BORES



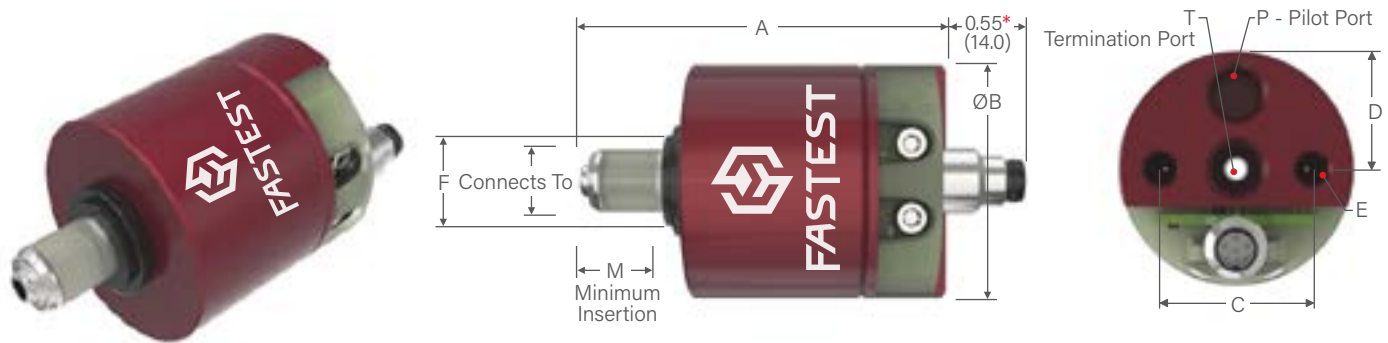
\*Dimension only applies to FI with ICON™ Technology  
(Base Part Numbers that include "CV04ANA" or "CV04SSR").

Ordering Information (Complete Connector = Main Seal Set + Base Part Number)					Dimensions							
Sealing Range	Main Seal Set*	Base Part Number	Replacement Seals Pack (5)	Rebuild Kit	A	B	C	D	E	M	P	T
0.310 to 0.330	FIS010300	FI01	FIB010300	FIR01	1.98	1.25	0.80	0.40	10-32	0.48	10-32 UNF	
0.330 to 0.394	FIS0101	FI01CV04ANA FI01CV04SSR	FIB0101	FIR01CV04ANA FIR01CV04SSR	(50.3)	(31.7)	(20.3)	(10.2)	UNF	(12.2)		
0.394 to 0.472	FIS111	FI1	FIB111	FIR1	2.44	1.57	1.02	0.51	1/4-28	0.57	1/8 NPT	
0.472 to 0.551	FIS112	FI1CV04ANA FI1CV04SSR	FIB112	FIR1CV04ANA FIR1CV04SSR	(62.0)	(39.9)	(25.9)	(12.9)	UNF	(14.5)		
0.551 to 0.630	FIS113		FIB113									
0.630 to 0.709	FIS221	FI2	FIB221	FIR1	2.44	1.57	1.02	0.51	1/4-28	0.57	1/8 NPT	
0.709 to 0.787	FIS222	FI2CV04ANA FI2CV04SSR	FIB222	FIR1CV04ANA FIR1CV04SSR	(62.0)	(39.9)	(25.9)	(12.9)	UNF	(14.5)		
0.787 to 0.866	FIS223		FIB223									
0.866 to 0.945	FIS331	FI3	FIB331	FIR3	2.61	2.36	1.60	0.80	1/4-28	0.71	1/8 NPT	
0.945 to 1.024	FIS332	FI3CV04ANA FI3CV04SSR	FIB332	FIR3CV04ANA FIR3CV04SSR	(66.3)	(59.9)	(40.6)	(20.3)	UNF	(18.0)		
1.024 to 1.102	FIS333		FIB333									
1.102 to 1.181	FIS441	FI4	FIB441	FIR3	2.61	2.36	1.60	0.80	1/4-28	0.71	1/8 NPT	
1.181 to 1.260	FIS442	FI4CV04ANA FI4CV04SSR	FIB442	FIR3CV04ANA FIR3CV04SSR	(66.3)	(59.9)	(40.6)	(20.3)	UNF	(18.0)		
1.260 to 1.339	FIS443		FIB443									
1.339 to 1.457	FIS551	FI5	FIB551	FIR6	3.68	3.49	2.31	1.16	1/4-28	1.24	1/8 NPT	1/2 NPT
1.457 to 1.575	FIS552	FI5CV04ANA FI5CV04SSR	FIB552	FIR6CV04ANA FIR6CV04SSR	(93.5)	(88.6)	(58.7)	(29.5)	UNF	(31.5)		
1.575 to 1.693	FIS553		FIB553									
1.693 to 1.850	FIS661	FI6	FIB661	FIR6	3.68	3.49	2.31	1.16	1/4-28	1.24	1/8 NPT	1/2 NPT
1.850 to 2.008	FIS662	FI6CV04ANA FI6CV04SSR	FIB662	FIR6CV04ANA FIR6CV04SSR	(93.5)	(88.6)	(58.7)	(29.5)	UNF	(31.5)		
2.008 to 2.165	FIS663		FIB663									
2.165 to 2.305	FIS771	FI7	FIB771	FIR7	3.36	4.20	3.00	1.50	1/4-28	1.33	1/8 NPT	3/4 NPT
2.305 to 2.445	FIS772	FI7CV04ANA FI7CV04SSR	FIB772	FIR7CV04ANA FIR7CV04SSR	(85.3)	(106.7)	(76.2)	(38.1)	UNF	(33.8)		
2.445 to 2.585	FIS773		FIB773									
2.585 to 2.725	FIS881	FI8	FIB881	FIR7	3.36	4.20	3.00	1.50	1/4-28	1.33	1/8 NPT	3/4 NPT
2.725 to 2.865	FIS882	FI8CV04ANA FI8CV04SSR	FIB882	FIR7CV04ANA FIR7CV04SSR	(85.3)	(106.7)	(76.2)	(38.1)	UNF	(33.8)		
2.865 to 3.005	FIS883		FIB883									

Dimensions: inch (mm).

\*Includes seals(s) and metal parts for one complete seal set. Neoprene® seals are standard.  
For Urethane seals, add "UR" suffix to Main Seal Set Part Number. Example: FIS010300UR

# FI / INTERNAL SEALING CONNECTION TOOL / NPT, BSPP (G), & BSPT THREADS



\*Dimension only applies to FI with ICON™ Technology  
(Base Part Numbers that include "CV04ANA" or "CV04SSR").

Ordering Information (Complete Connector = Main Seal Set + Base Part Number)					Dimensions								
Connects To	Main Seal Set*	Base Part Number	Replacement Seals Pack (5)	Rebuild Kit	A	B	C	D	E	F	M	P	T

FI | Connectors for NPT, BSPP (G), and BSPT Threads

1/8	FIS011/8NPT	FI01 FI01CV04ANA FI01CV04SSR	FIB011/8NPT	FIR01 FIR01CV04ANA FIR01CV04SSR	1.98 (50.3)	1.25 (31.7)	0.80 (20.3)	0.40 (10.2)	10-32 UNF	0.62 (15.7)	0.48 (12.2)	10-32 UNF	
1/4	FIS11/4NPT	FI1 FI1CV04ANA FI1CV04SSR	FIB11/4NPT	FIR1 FIR1CV04ANA FIR1CV04SSR	2.44 (62.0)	1.57 (39.9)	1.02 (25.9)	0.51 (12.9)	1/4-28 UNF	0.76 (19.3)	0.57 (14.5)	1/8 NPT	
3/8	FIS23/8NPT	FI2 FI2CV04ANA FI2CV04SSR	FIB23/8NPT	FIR1 FIR1CV04ANA FIR1CV04SSR	2.44 (62.0)	1.57 (39.9)	1.02 (25.9)	0.51 (12.9)	1/4-28 UNF	0.88 (22.3)	0.57 (14.5)	1/8 NPT	
1/2	FIS21/2NPT		FIB21/2NPT							1.07 (27.2)			
3/4	FIS33/4NPT	FI3 FI3CV04ANA FI3CV04SSR	FIB33/4NPT	FIR3 FIR3CV04ANA FIR3CV04SSR	2.61 (66.3)	2.36 (59.9)	1.60 (40.6)	0.80 (20.3)	1/4-28 UNF	1.26 (32.0)	0.71 (18.0)	1/8 NPT	
1	FIS41NPT	FI4 FI4CV04ANA FI4CV04SSR	FIB41NPT	FIR3 FIR3CV04ANA FIR3CV04SSR	2.61 (66.3)	2.36 (59.9)	1.60 (40.6)	0.80 (20.3)	1/4-28 UNF	1.57 (39.9)	0.71 (18.0)	1/8 NPT	
1-1/4	FIS511/4NPT	FI5 FI5CV04ANA FI5CV04SSR	FIB511/4NPT	FIR6 FIR6CV04ANA FIR6CV04SSR	3.68 (93.5)	3.49 (88.6)	2.31 (58.7)	1.16 (29.5)	1/4-28 UNF	1.88 (47.8)	1.24 (31.5)	1/8 NPT	1/2 NPT
1-1/2	FIS611/2NPT	FI6 FI6CV04ANA FI6CV04SSR	FIB611/2NPT	FIR6 FIR6CV04ANA FIR6CV04SSR	3.68 (93.5)	3.49 (88.6)	2.31 (58.7)	1.16 (29.5)	1/4-28 UNF	2.13 (54.1)	1.24 (31.5)	1/8 NPT	1/2 NPT
2	FIS72NPT	FI7 FI7CV04ANA FI7CV04SSR	FIB72NPT	FIR7 FIR7CV04ANA FIR7CV04SSR	3.36 (85.3)	4.20 (106.7)	3.00 (76.2)	1.50 (38.1)	1/4-28 UNF	2.75 (69.9)	1.33 (33.8)	1/8 NPT	3/4 NPT
2-1/2	FIS721/2NPT		FIB721/2NPT										

Dimensions: inch (mm)

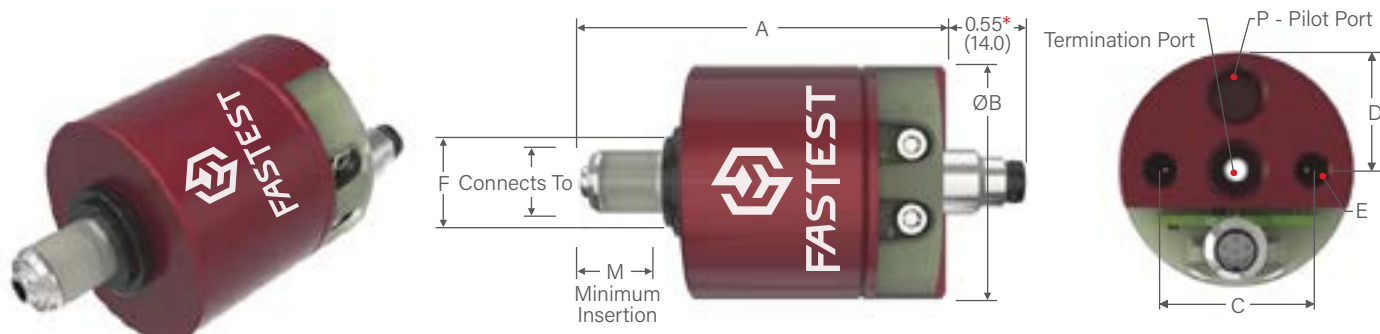
\*Includes seals(s) and metal parts for one complete seal set. Urethane seals are standard.

**Port Specifications:** NPT per SAE J476a; BSPP (G) per ISO 228; BSPT per ISO 7, JIS B8363 and B2351



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# FI / INTERNAL SEALING CONNECTION TOOL / SAE O-RING BOSS PORT THREADS



\*Dimension only applies to FI with ICON™ Technology  
(Base Part Numbers that include "CV04ANA" or "CV04SSR").

Ordering Information (Complete Connector = Main Seal Set + Base Part Number)					Dimensions								
Connects To	Main Seal Set*	Base Part Number	Replacement Seals Pack (5)	Repair Kit	A	B	C	D	E	F	M	P	T

FI | Connectors for SAE O-Ring Boss Port (ORB) Threads

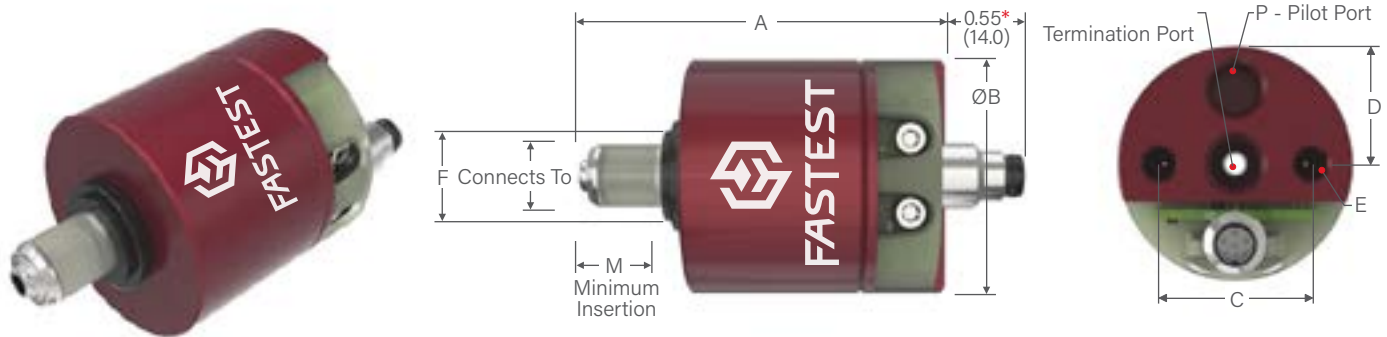
-4 [7/16-20]	FIS014SAE	FI01 FI01CV04ANA FI01CV04SSR	FIB014SAE	FIR01 FIR01CV04ANA FIR01CV04SSR	1.98 (50.3)	1.25 (31.7)	0.80 (20.3)	0.40 (10.2)	10-32 UNF	0.62 (15.7)	0.48 (12.2)	10-32 UNF	
-5 [1/2-20]	FIS15SAE	FI1 FI1CV04ANA FI1CV04SSR	FIB15SAE	FIR1 FIR1CV04ANA FIR1CV04SSR	2.44 (62.0)	1.57 (39.9)	1.02 (25.9)	0.51 (12.9)	1/4-28 UNF	0.76 (19.3)	0.57 (14.5)	1/8 NPT	
-6 [9/16-18]	FIS16SAE		FIB16SAE										
-8 [3/4-16]	FIS28SAE	FI2 FI2CV04ANA FI2CV04SSR	FIB27SAE	FIR1 FIR1CV04ANA FIR1CV04SSR	2.44 (62.0)	1.57 (39.9)	1.02 (25.9)	0.51 (12.9)	1/4-28 UNF	0.88 (22.3)	0.57 (14.5)	1/8 NPT	
-10 [7/8-14]	FIS310SAE	FI3 FI3CV04ANA FI3CV04SSR	FIB38SAE	FIR3 FIR3CV04ANA FIR3CV04SSR	2.61 (66.3)	2.36 (59.9)	1.60 (40.6)	0.80 (20.3)	1/4-28 UNF	1.26 (32.0)	0.71 (18.0)	1/8 NPT	
-12 [1 1/16-12]	FIS212SAE		FIB39SAE										
-14 [1 3/16-12]	FIS416SAE	FI4 FI4CV04ANA FI4CV04SSR	FIB410SAE	FIR3 FIR3CV04ANA FIR3CV04SSR	2.61 (66.3)	2.36 (59.9)	1.60 (40.6)	0.80 (20.3)	1/4-28 UNF	1.57 (39.9)	0.71 (18.0)	1/8 NPT	
-16 [1 5/16-12]	FIS416SAE		FIB411SAE										
-20 [1 5/8-12]	FIS520SAE	FI5 FI5CV04ANA FI5CV04SSR	FIB512SAE	FIR6 FIR6CV04ANA FIR6CV04SSR	3.68 (93.5)	3.49 (88.6)	2.31 (58.7)	1.16 (29.5)	1/4-28 UNF	1.88 (47.8)	1.24 (31.5)	1/8 NPT	1/2 NPT
-24 [1 7/8-12]	FIS624SAE	FI6 FI6CV04ANA FI6CV04SSR	FIS613SAE	FIR6 FIR6CV04ANA FIR6CV04SSR	3.68 (93.5)	3.49 (88.6)	2.31 (58.7)	1.16 (29.5)	1/4-28 UNF	2.13 (54.1)	1.24 (31.5)	1/8 NPT	1/2 NPT
-32 [2 1/2-12]	FIS732SAE	FI7 FI7CV04ANA FI7CV04SSR	FIB714SAE	FIR7 FIR7CV04ANA FIR7CV04SSR	3.36 (85.3)	4.20 (106.7)	3.00 (76.2)	1.50 (38.1)	1/4-28 UNF	2.75 (69.9)	1.33 (33.8)	1/8 NPT	3/4 NPT

Dimensions: inch (mm)

\*Includes seals(s) and metal parts for one complete seal set. Urethane seals are standard.

**Port Specifications:** SAE J1926 or ISO 11926

# FI / INTERNAL SEALING CONNECTION TOOL / METRIC ISO O-RING PORT THREADS



\*Dimension only applies to FI with ICON™ Technology  
(Base Part Numbers that include "CV04ANA" or "CV04SSR").

Ordering Information (Complete Connector = Main Seal Set + Base Part Number)					Dimensions								
Connects To	Main Seal Set*	Base Part Number	Replacement Seals Pack (5)	Repair Kit	A	B	C	D	E	F	M	P	T

## FI | Connectors for Metric ISO O-Ring Port Threads

M10 x 1.0	FIS01M10	FI01 FI01CV04ANA FI01CV04SSR	FIB01M10	FIR01 FIR01CV04ANA FIR01CV04SSR	1.98 (50.3)	1.25 (31.7)	0.80 (20.3)	0.40 (10.2)	10-32 UNF	0.62 (15.7)	0.48 (12.2)	10-32 UNF	
M12 x 1.5	FIS1M12	FI1 FI1CV04ANA FI1CV04SSR	FIB1M12	FIR1 FIR1CV04ANA FIR1CV04SSR	2.44 (62.0)	1.57 (39.9)	1.02 (25.9)	0.51 (12.9)	1/4-28 UNF	0.76 (19.3)	0.57 (14.5)	1/8 NPT	
M14 x 1.5	FIS1M14		FIS1M14										
M16 x 1.5	FIS2M16	FI2 FI2CV04ANA FI2CV04SSR	FIB1M16	FIR1 FIR1CV04ANA FIR1CV04SSR	2.44 (62.0)	1.57 (39.9)	1.02 (25.9)	0.51 (12.9)	1/4-28 UNF	0.88 (22.3)	0.57 (14.5)	1/8 NPT	
M18 x 1.5	FIS2M18		FIB2M18										
M20 x 1.5	FIS2M20		FIB2M20										
M22 x 1.5	FIS2M22		FIB2M22										
M24 x 1.5	FIS3M24	FI3 FI3CV04ANA FI3CV04SSR	FIB3M24	FIR3 FIR3CV04ANA FIR3CV04SSR	2.61 (66.3)	2.36 (59.9)	1.60 (40.6)	0.80 (20.3)	1/4-28 UNF	1.26 (32.0)	0.71 (18.0)	1/8 NPT	
M26 x 1.5	FIS3M26		FIB3M26										
M27 x 2	FIS3M27		FIB3M27										
M28 x 1.5	FIS3M28		FIB3M28										
M30 x 1.5	FIS4M30	FI4 FI4CV04ANA FI4CV04SSR	FIB4M30	FIR3 FIR3CV04ANA FIR3CV04SSR	2.61 (66.3)	2.36 (59.9)	1.60 (40.6)	0.80 (20.3)	1/4-28 UNF	1.57 (39.9)	0.71 (18.0)	1/8 NPT	
M33 x 2	FIS4M33		FIB4M33										
M36 x 2	FIS4M36		FIB4M36										
M42 x 2	FIS5M42	FI5 FI5CV04ANA FI5CV04SSR	FIB5M42	FIR6 FIR6CV04ANA FIR6CV04SSR	3.68 (93.5)	3.49 (88.6)	2.31 (58.7)	1.16 (29.5)	1/4-28 UNF	1.88 (47.8)	1.24 (31.5)	1/8 NPT	1/2 NPT
M48 x 2	FIS6M48	FI6 FI6CV04ANA FI6CV04SSR	FIB6M48	FIR6 FIR6CV04ANA FIR6CV04SSR	3.68 (93.5)	3.49 (88.6)	2.31 (58.7)	1.16 (29.5)	1/4-28 UNF	2.13 (54.1)	1.24 (31.5)	1/8 NPT	1/2 NPT
M60 x 2	FIS7M60	FI7 FI7CV04ANA FI7CV04SSR	FIB7M60	FIR7 FIR7CV04ANA FIR7CV04SSR	3.36 (85.3)	4.20 (106.7)	3.00 (76.2)	1.50 (38.1)	1/4-28 UNF	2.75 (69.9)	1.33 (33.8)	1/8 NPT	3/4 NPT

Dimensions: inch (mm)

\*Includes seals(s) and metal parts for one complete seal set. Urethane seals are standard.

**Port Specifications:** ISO 6149, DIN 3852 Part 1 (ISO 9974)



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# ZGN / INTERNAL SEALING CONNECTION TOOL

Wide tolerance grip and seal connection tool for multiple sizes / types - fits any internal thread.

**CONNECTS TO:**



ZGNL

ZGNP



**SPECIFICATIONS**

Pressure Rating	Pilot Pressure	Operating Temperatures
<b>ZGNL:</b> Vacuum to 120 psi (8.3 bar)	N/A	-40°F to +250°F (-40°C to +121°C)
<b>ZGNP:</b> Vacuum to 300 psi (20.7 bar)	60 psi (4.1 bar) minimum	
Termination Port	Materials of Construction	Seal Material*
1/8 NPT, 1/4 NPT	Anodized Aluminum, Stainless Steel, Handles PVC Dipped	Standard: Buna-N

\*Additional seal material types available, consult factory.

- 1** Pressure assisted sealing and gripping of threaded port to safely grip under pressure
- 2** Patented design allows for each tool to connect to multiple thread sizes / styles
- 3** Self aligning sleeve for repeatable / reliable connections, even with miss-alignment
- 4** Compact size fits into tight spaces and tightly spaced bores
- 5** Pneumatic operation can be used for automated testing or end of arm grip and hold - lever operation for manual applications

**ACTUATION METHOD**

**ZGNL Lever Handles:** Lever operation for manual applications.

**ZGNP Pneumatic:** Pneumatic operation can be used for automated testing or end of arm grip and hold.

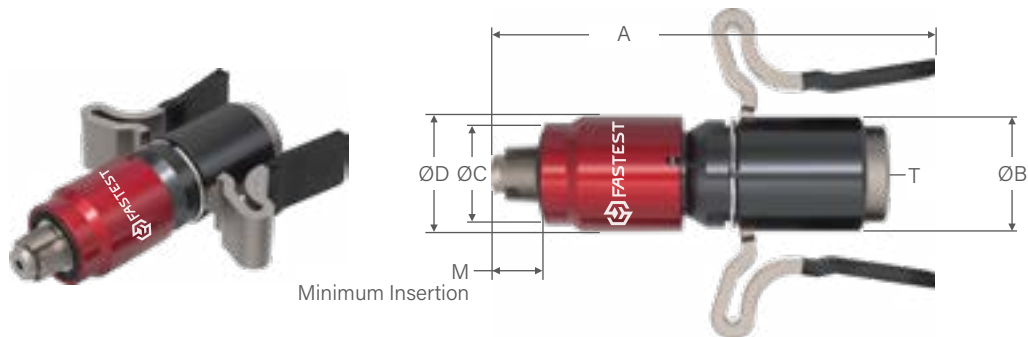
**ICON™ TECHNOLOGY**

Consult Factory

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# ZGNL / MANUAL INTERNAL SEALING CONNECTION TOOL



Ordering Information				Dimensions						
Connects To	Part Number	Main Seal Set	Rebuild Kit	A	B	C	D	Thread Minor Ø Range	M	T

**ZGNL** | Wide Tolerance Manual Sealing Connection Tool for Internal Threads

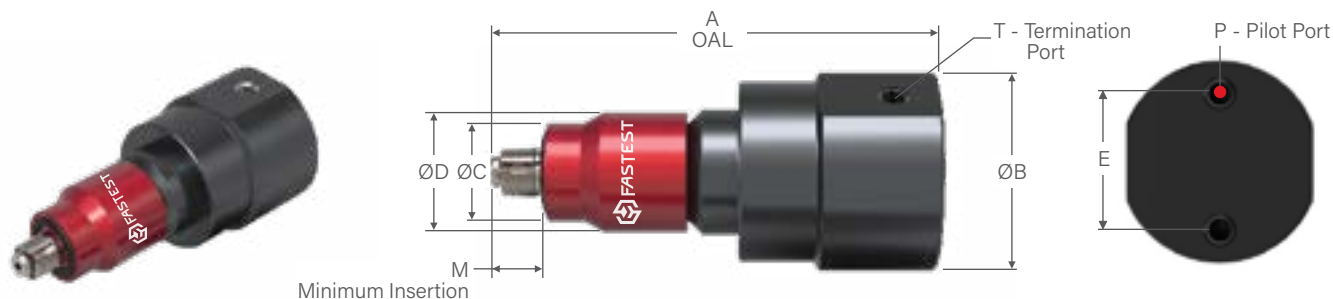
1/8 NPT 3/8-24 SAE 1/8 BSPP (G) 1/8 BSPT M10x1.0 M10x1.25 M10x1.5	ZGNL1	S1110B60	RZGNL1	3.25 (82.6)	0.88 (22.4)	0.64 (16.3)	0.78 (19.8)	0.34 to 0.36 (8.5 to 9.1)	0.32 (8.1)	1/8 NPT
7/16-20 UNF	ZGNL1A	S21030391B70	RZGNL1			0.67 (17.0)		0.38 to 0.40 (9.7 to 10.2)		
1/4 NPT 1/4 BSPP (G) 1/4 BSPT M14x1.5 1/2-20 SAE 9/16-18 SAE	ZGNL2	S1112B60	RZGNL2	3.34 (82.8)	0.87 (22.1)	0.77 (19.6)	0.87 (22.1)	0.45 to 0.50 (11.4 to 12.7)	0.40 (10.2)	1/8 NPT
M12x1.0 M12x1.5	ZGNL2A	S21030456B70	RZGNL2			0.74 (18.8)		0.42 to 0.44 (10.7 to 11.2)		
3/8 NPT 3/8 BSPP (G) 3/8 BSPT	ZGNL3	S1114B60	RZGNL3	3.61 (91.7)	1.12 (22.4)	0.90 (22.9)	0.99 (25.1)	0.59 to 0.61 (15.0 to 15.5)	0.45 (11.4)	1/4 NPT
M16x1.5 5/8-24 SAE	ZGNL3A	S1114B60	RZGNL3					0.56 to .58 (14.2 to 14.7)		
1/2 NPT 1/2 BSPP (G) 1/2 BSPT M20x1.5	ZGNL4	S1116B60	RZGNL4	3.62 (91.9)	1.32 (33.5)	1.06 (26.9)	1.22 (31.0)	0.71 to 0.74 (18.0 to 18.8)	0.50 (12.7)	1/4 NPT
M18x1.5	ZGNL4A	S1115B60	RZGNL4			1.03 (26.2)		0.65 to 0.67 (16.5 to 17.0)		
3/4-16 SAE	ZGNL4B	S1116B60	RZGNL4			1.06 (26.9)		0.68 to 0.71 (17.3 to 18.0)		

Dimensions: inch (mm)



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# ZGNP / PNEUMATIC INTERNAL SEALING CONNECTION TOOL



Ordering Information				Dimensions								
Connects To	Part Number	Main Seal Set	Rebuild Kit	A	B	C	D	E	Thread Minor Ø Range	M	P	T

**ZGNP** | Wide Tolerance Pneumatic Sealing Connection Tool for Automated Testing of Internal Threads

1/8 NPT 3/8-24 SAE 1/8 BSPP (G) 1/8 BSPT M10x1.0 M10x1.25 M10x1.5	ZGNP1	S1110B60	RZGNP1	2.92 (74.2)	1.30 (33.0)	0.64 (16.3)	0.78 (19.8)	0.88 (22.4)	0.34 to 0.36 (8.5 to 9.1)	0.32 (8.1)	10-32 UNF	1/8 NPT
7/16-20 SAE	ZGNP1A	S21030391B70	RZGNP1			0.67 (17.0)			0.38 to 0.40 (9.7 to 10.2)			
1/4 NPT 1/4 BSPP (G) 1/4 BSPT M14x1.5 1/2-20 SAE 9/16-18 SAE	ZGNP2	S1112B60	RZGNP2	3.08 (78.2)	1.30 (33.0)	0.77 (19.6)	0.87 (22.1)	0.88 (22.4)	0.45 to 0.50 (11.4 to 12.7)	0.40 (10.2)	10-32 UNF	1/8 NPT
M12x1.0 M12x1.5	ZGNP2A	S21030456B70	RZGNP2			0.74 (18.8)			0.42 to 0.44 (10.7 to 11.2)			
3/8 NPT 3/8 BSPP (G) 3/8 BSPT	ZGNP3	S1114B60	RZGNP3	3.52 (89.4)	1.75 (44.5)	0.90 (22.9)	0.99 (25.1)	1.13 (28.7)	0.59 to 0.61 (15.0 to 15.5)	0.45 (11.4)	1/8 NPT	1/4 NPT
M16x1.5 5/8-24 SAE	ZGNP3A	S1114B60	RZGNP3			0.90 (22.9)			0.56 to .58 (14.2 to 14.7)			
1/2 NPT 1/2 BSPP (G) 1/2 BSPT M20x1.5	ZGNP4	S1116B60	RZGNP4	3.60 (91.4)	1.75 (44.5)	1.06 (26.9)	1.22 (31.0)	1.13 (28.7)	0.71 to 0.74 (18.0 to 18.8)	0.50 (12.7)	1/8 NPT	1/4 NPT
M18x1.5	ZGNP4A	S1115B60	RZGNP4			1.03 (26.2)			Contact Factory			
3/4-16 SAE	ZGNP4B	S1116B60	RZGNP4			1.06 (26.9)			Contact Factory			

Dimensions: inch (mm)

Product Comparison Guide



Product Comparison Guide	TwistMate® (MIT)	ZGN™ (ZGNL / ZGNP)	FasMate® (FNL / FNP / FNV)
Low Pressure < 300 psi (20.7 bar)		✓	
Low Volume Production < 100 units/day	✓		
Difficult Interference		✓	
High Pressure and High Volume > 500 units/day			✓
Prevent False Failures or High First Pass Yield			✓



# JNL / INTERNAL SEALING CONNECTION TOOL

Manual lever actuated internal grip and seal connection tool for straight tubes / bores.

### CONNECTS TO:

Straight



### SPECIFICATIONS

Pressure Rating*	Operating Temperatures	Materials of Construction
JNL0 / JNL1: 10 mtorr (micron) to 1000 psi (68.9 bar)	-40°F to +250°F (-40°C to +121°C)	Aluminum Stainless Steel Acetal (POM) Urethane Collet Retainer
JNL2: 10 mtorr (micron) to 750 psi (51.7 bar)		
Termination Port		Seal Material**
1/8 NPT		Neoprene®

**i** \* Pressure rating based on the test piece having a surface finish greater than 16 rms and a hardness of no more than 95 Rb to grip and seal at the rated pressure. A surface finish of 8 rms may be acceptable if the test piece has a hardness no greater than 40 Rb.

\*\*Additional seal material types available, consult factory.

### ACTUATION METHOD

**Lever Actuated:** Simply flip the ergonomic handle for ease of use

### ICON™ TECHNOLOGY

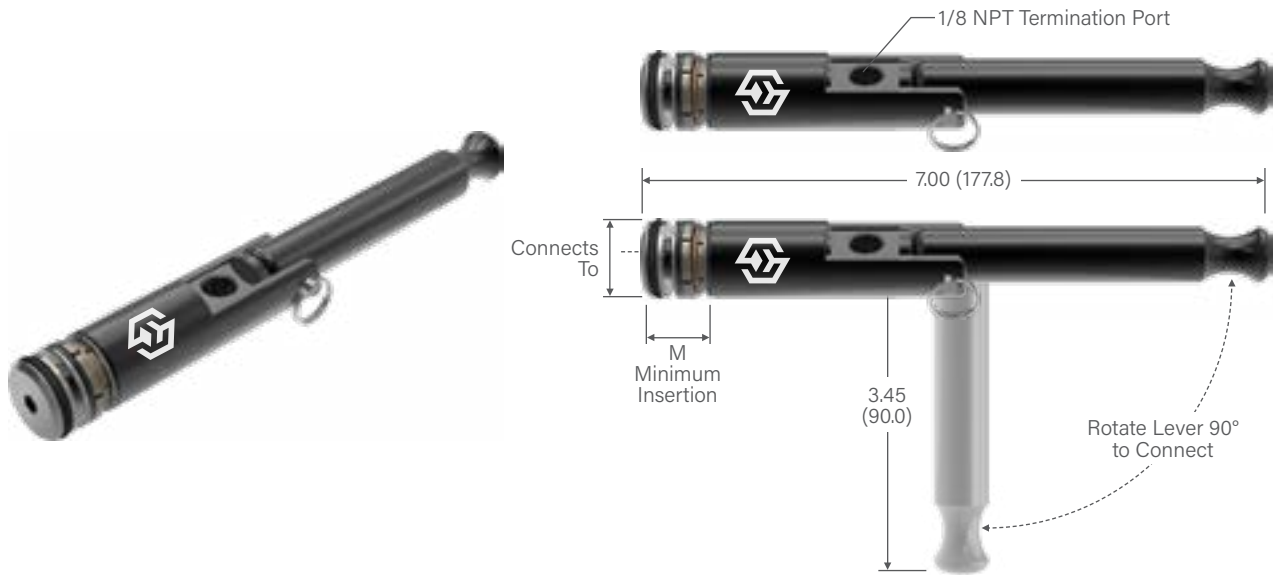
Consult Factory

### ACCESSORIES

Visit [fastestinc.com](http://fastestinc.com)

- 1 Pressure assisted sealing and gripping with internal safety lock feature prevents accidental disconnection under pressure if handle is released
- 2 Instant connection for copper, steel, and aluminum tubes commonly used in refrigeration and other industrial applications
- 3 Stainless steel collets provide maximum grip with minimum distortion of the test piece
- 4 Quick and easy seal replacement to minimize down time, maintenance and tool inventory
- 5 Self aligning connector requires no operator adjustment

# JNL / INTERNAL SEALING CONNECTION TOOL




Ordering Information			Dimensions
Connects To +0.010/-0.010 (+0.25/-0.25)	Part Number	Replacement Seals Bulk Pack (5)	M

JNL0 and JNL1 | Lever Actuated Connectors for Internal Tubes / Bores

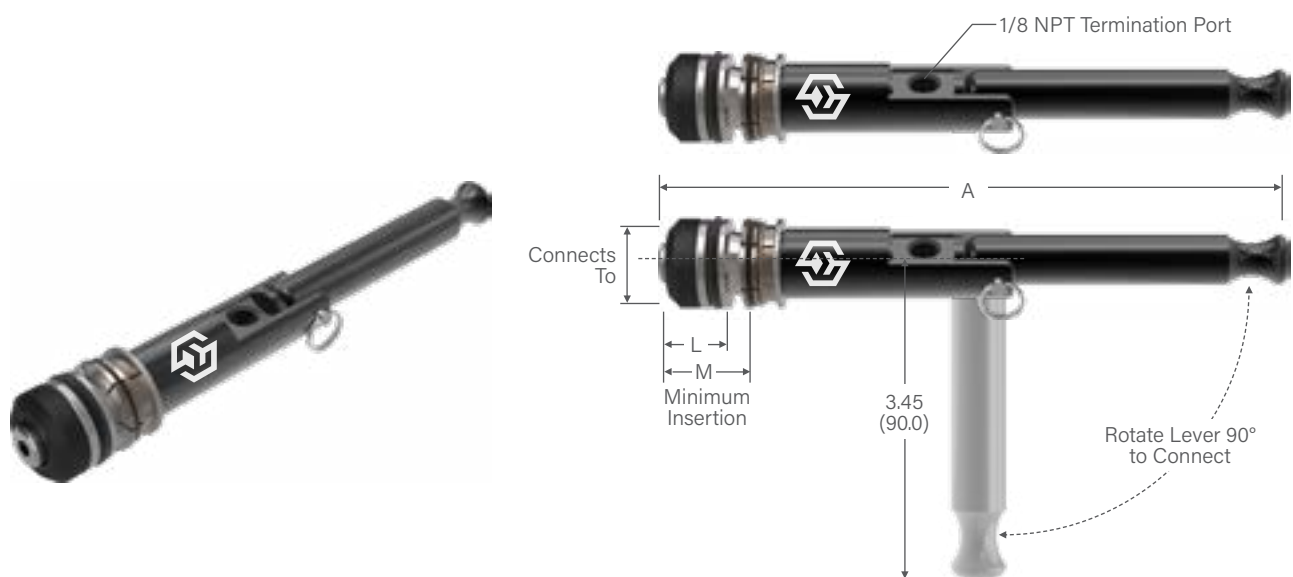
0.375 (9.5)	JNL00375H	SN00375H	0.53 (13.5)
0.500 (12.7)	JNL00500H	SN00500H	
0.590 (15.0)	JNL10590	SN10590	0.63 (16.0)
0.625 (15.9)	JNL10625	SN10625	
0.750 (19.1)	JNL10750	SN10750	
0.785 (19.9)	JNL10785	SN10785	
0.875 (22.2)	JNL10875	SN10875	

Dimensions: inch (mm)

 **NOTE:** JNL sizes available in .005" (.13 mm) increments per customer request. Consult factory.



# JNL / INTERNAL SEALING CONNECTION TOOL




Ordering Information			Dimensions		
Connects To +0.030/-0.010 (+0.76/-0.25)	Part Number	Replacement Seals Bulk Pack (5)	A	L	M
JNL2   Lever Actuated Connectors for Internal Tubes / Bores					
1.000 (25.4)	JNL21000	SN21000	718 (182.4)	1.31 (33.3)	1.39 (35.4)
1.125 (28.6)	JNL21125	SN21125			
1.250 (31.8)	JNL21250	SN21250	730 (185.5)	1.44 (36.6)	1.51 (38.4)
1.375 (34.9)	JNL21375	SN21375	784 (199.2)	1.56 (39.7)	2.05 (52.1)
1.500 (38.1)	JNL21500	SN21500	791 (201.0)	1.69 (43.0)	2.12 (53.9)
1.625 (41.3)	JNL21625	SN21625	8.09 (205.5)	1.81 (46.0)	2.30 (58.5)

Dimensions: inch (mm)

**NOTE:** Additional JNL2 sizes available per customer request. Consult factory.

# CUSTOM ENGINEERED SOLUTIONS



**WE TRANSFORM  
STANDARDIZED  
TOOLS INTO  
TAILOR-  
MADE SOLUTIONS  
TO FIT YOUR EXACT  
REQUIREMENTS.**



# FN / INTERNAL SEALING CONNECTION TOOL

Internal thread grip and seal tool that uses threaded collets to grip threaded bores for high pressures.

CONNECTS TO:



- 1 Pressure assisted grip and proprietary design locks the connector securely in the port, even when used in dynamic hydraulic applications
- 2 Instant threaded sealing connection up to 5,000 psig without tape, sealant, or wrenches - significantly reduces process time
- 3 Split collet design locks securely and will not damage threaded ports
- 4 Self aligning connector requires no operator adjustment
- 5 Quick and easy seal replacement to minimize down time, maintenance and tool inventory



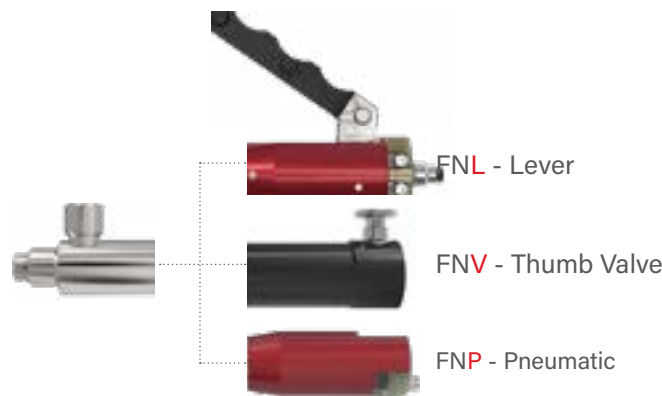
SPECIFICATIONS

Pressure Rating	Operating Temperatures	Materials of Construction
Vacuum to 5000 psi (345 bar)	-40°F to +250°F (-40°C to +121°C)	Anodized Aluminum, Stainless Steel, Potted PCA
Termination Port		Seal Material*
BSPP (G) or FNPT		Buna-N

\*Additional seal material types available, consult factory.  
\*\* Operating Temp: 32°F-100°F (0°C-38°C) for ICON™.

i Side load rating varies depending on size and insertion.

ACTUATION OPTIONS



ICON™ TECHNOLOGY



ACCESSORIES

Visit website: [fastestinc.com](http://fastestinc.com)



# ICON™

## INTELLIGENT CONNECTION TECHNOLOGY

FasTest's ICON™ adds sensing capabilities to our mechanical Sealing Connection Tools. ICON™ Tools include instant LED visual feedback and data output to improve sealing connection accuracy, maximize production efficiency, and optimize maintenance.

### ICON™ features:



#### SURE SEAL™

Instant LED feedback verifies a good connection prior to starting a test.

### System Overview:

#### CONNECTED

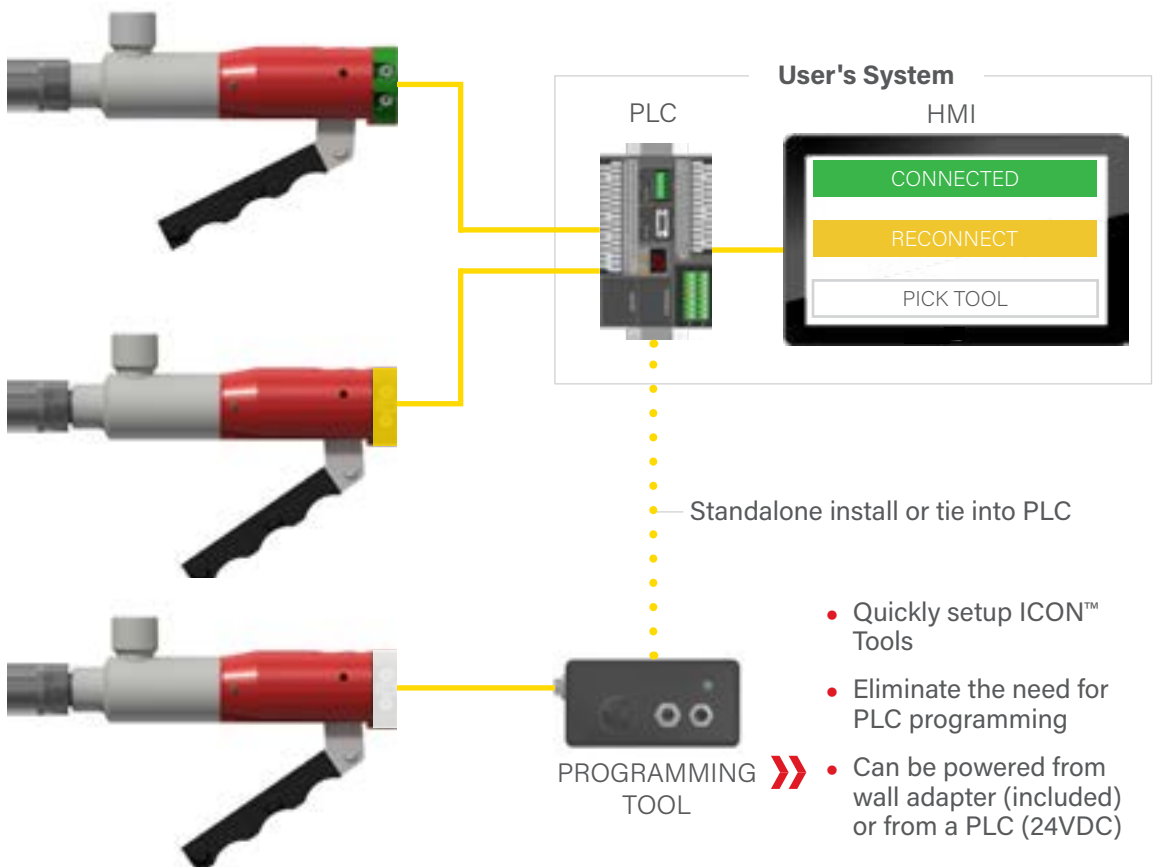
Verify connections are good prior to starting a leak test and provide operators instant positive feedback to simplify training.

#### RECONNECT

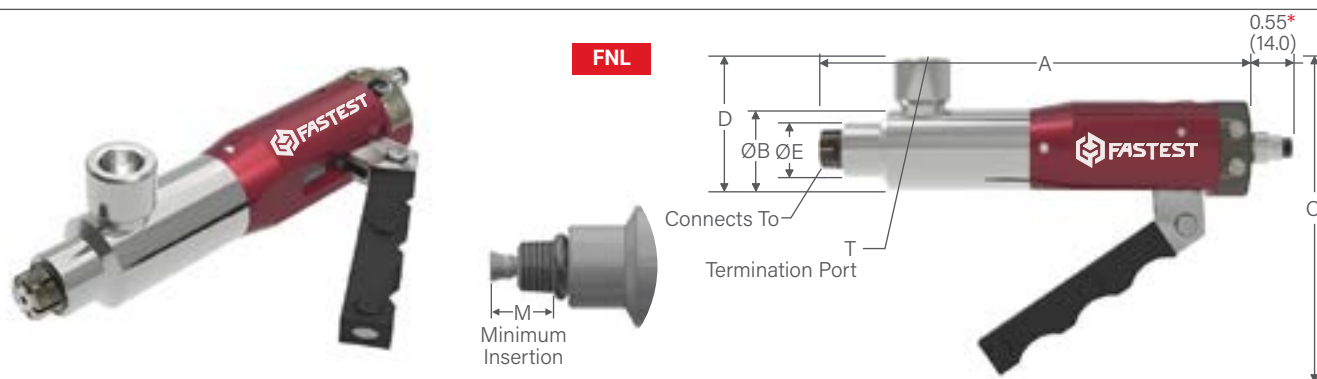
Recognize short connects before hazardous spills occur in functional testing, or prevent wasteful False Positive results in leak testing.

#### PICK TOOL

Controllable LED signals operator to use specific tool.



# FN / INTERNAL CONNECTIONS / NPT



## Ordering Information

Connects To	Pressure Rating	FNL Part Number (with Lever)	FNV Part Number (with Thumb Valve)	FNP Part Number (with Pneumatic Pilot)	Replacement Seals Pack (5)	Rebuild Kit	ICON™ Repair Kit (FNL / FNP)
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### FasMate® FN | NPT

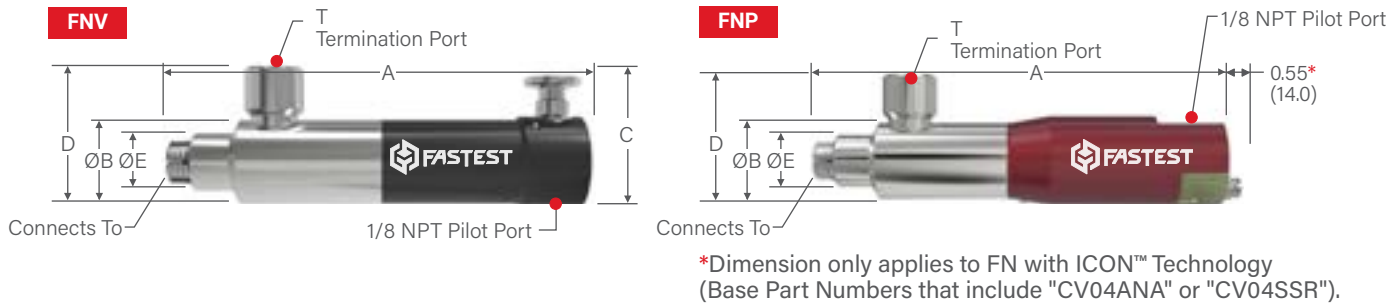
1/8 NPT	5000 (345)	FNL022021[*]	FNV022021	FNP022021[*]	S1108B70	RFN022021	RFNLBG1CV04ANA RFNLBG1CV04SSR
	2500 (172)	FNL022021[*]	FNV022021	FNP022021[*]			
	5000 (345)	FNL022025[*]	FNV022025	FNP022025[*]			
1/4 NPT	5000 (345)	FNL042041[*]	FNV042041	FNP042041[*]	S21250327B60	RFN042041	RFNLBG1CV04ANA RFNLBG1CV04SSR
	2500 (172)	FNL042041[*]	FNV042041	FNP042041[*]			
	5000 (345)	FNL042045[*]	FNV042045	FNP042045[*]			
3/8 NPT	5000 (345)	FNL062061[*]	FNV062061	FNP062061[*]	S1112B70	RFN062061	RFNLBG4CV04ANA RFNLBG4CV04SSR
	2500 (172)	FNL062061[*]	FNV062061	FNP062061[*]			
	5000 (345)	FNL062065[*]	FNV062065	FNP062065[*]			
1/2 NPT	5000 (345)	FNL082081[*]	FNV082081	FNP082081[*]	S1208B70	RFN082081	RFNLBG4CV04ANA RFNLBG4CV04SSR
		FNL082085[*]	FNV082085	FNP082085[*]			
3/4 NPT	3500 (241)	FNL122121[*]	FNV122121	FNP122121[*]	S1315B50	RFNBG5	RFNLBG5CV04ANA RFNLBG5CV04SSR
		FNL122125[*]	FNV122125	FNP122125[*]			

Reduced Thread Connectors [FNxRxxxxxx]; The "R" in the part number indicates a shorter collet length for shallow ports.

**Port specifications:** NPT per SAE J476 or ANSI B1.20

### \*How To Add ICON™ to FN

Signal Output	Part Number Suffix	Example
FNL Connector without ICON™	None	FNL022021
FNL with ICON™; Analog Output Signal	CV04ANA	FNL022021 <b>CV04ANA</b>
FNL with ICON™; Solid State Relay	CV04SSR	FNL022021 <b>CV04SSR</b>



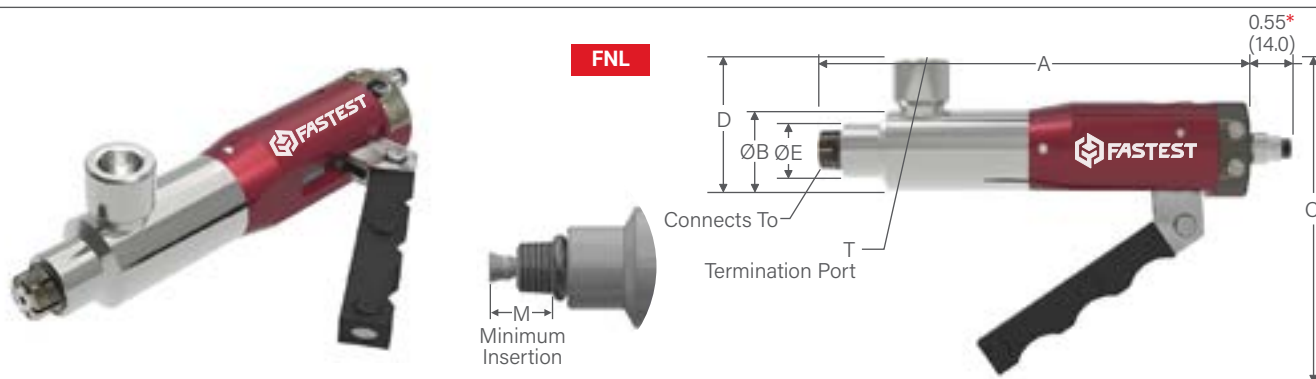
Dimensions									
A (FNL)	A (FNV)	A (FNP)	B	C (FNL)	C (FNV)	D	E	M	T
4.80 (121.9)	5.13 (130.3)	4.90 (124.5)	1.06 (26.9)	3.70 (94.0)	1.58 (40.1)	1.50 (38.1)	0.65 (16.5)	0.55 (14.0)	1/8 NPT
								0.30 (7.6)	
								0.55 (14.0)	1/8 BSPP (G)
5.00 (127.0)	5.21 (132.3)	5.00 (127.0)	1.06 (26.9)	4.00 (101.6)	1.58 (40.1)	1.70 (43.2)	0.72 (18.3)	0.67 (17.0)	1/4 NPT
								0.39 (9.9)	
								0.67 (17.0)	1/4 BSPP (G)
5.00 (127.0)	5.05 (128.3)	4.80 (121.9)	1.25 (31.8)	3.90 (99.1)	1.58 (40.1)	1.86 (47.2)	0.86 (21.8)	0.67 (17.0)	3/8 NPT
								0.47 (11.9)	
								0.67 (17.0)	3/8 BSPP (G)
5.27 (133.9)	5.27 (133.9)	5.34 (135.6)	1.43 (36.3)	4.40 (111.8)	1.85 (47.0)	2.33 (59.2)	1.09 (27.7)	0.76 (19.3)	1/2 NPT
									1/2 BSPP (G)
8.17 (207.5)	8.75 (222.2)	8.75 (222.2)	1.78 (45.2)	5.10 (129.5)	2.11 (53.6)	2.93 (74.4)	1.49 (37.8)	0.63 (16.0)	3/4 NPT
									3/4 BSPP (G)

Dimensions: inch (mm)  
Pressure Rating: psi (bar)



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# FN / INTERNAL CONNECTIONS / BSPP (G)/T



## Ordering Information

Connects To	Pressure Rating	FNL Part Number (with Lever)	FNV Part Number (with Thumb Valve)	FNP Part Number (with Pneumatic Pilot)	Replacement Seals Pack (5)	Rebuild Kit	ICON™ Repair Kit (FNL / FNP)
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### FasMate® FN | BSPP (G)

1/8 BSPP (G)	5000 (345)	FNL026021[*]	FNV026021	FNP026021[*]	S1108B70	RFN026021	RFNLBG1CV04ANA RFNLBG1CV04SSR
	2500 (172)	FNLR026021[*]	FNVR026021	FNPR026021[*]			
	5000 (345)	FNL026025[*]	FNV026025	FNP026025[*]			
	2500 (172)	FNLR026025[*]	FNVR026025	FNPR026025[*]			
1/8 BSPT	5000 (345)	FNL026T025[*]	FNV026T025	FNP026T025[*]			
1/4 BSPP (G)	5000 (345)	FNL046041[*]	FNV046041	FNP046041[*]	S21250327B60	RFN046041	
	2500 (172)	FNLR046041[*]	FNVR046041	FNPR046041[*]			
	5000 (345)	FNL046045[*]	FNV046045	FNP046045[*]			
	2500 (172)	FNLR046045[*]	FNVR046045	FNPR046045[*]			
1/4 BSPT	5000 (345)	FNL046T045[*]	FNV046T045	FNP046T045[*]			
3/8 BSPP (G)	5000 (345)	FNL066061[*]	FNV066061	FNP066061[*]	S1112B70	RFN066061	
		FNL066065[*]	FNV066065	FNP066065[*]			
3/8 BSPT		FNL066T065[*]	FNVR066T065	FNP066T065[*]			
1/2 BSPP (G)	5000 (345)	FNL086081[*]	FNV086081	FNP086081[*]	S1208B70	RFN086081	RFNLBG4CV04ANA RFNLBG4CV04SSR
		FNL086085[*]	FNV086085	FNP086085[*]			
1/2 BSPT		FNL086T085[*]	FNV086T085	FNP086T085[*]			
3/4 BSPP (G)	3500 (241)	FNL126121[*]	FNV126121	FNP126121[*]	S1315B50	RFNBG5	RFNLBG5CV04ANA RFNLBG5CV04SSR
		FNL126125[*]	FNV126125	FNP126125[*]			
3/4 BSPT		FNL126T125[*]	FNV126T125	FNP126T125[*]			

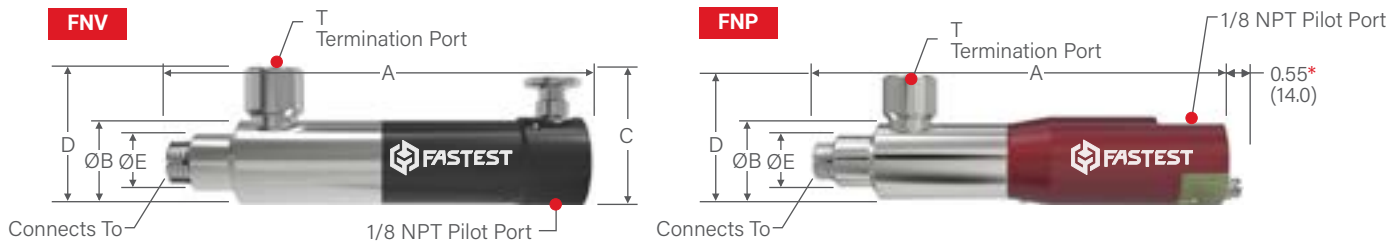
Reduced Thread Connectors [FNxRxxxxxx]; The "R" in the part number indicates a shorter collet length for shallow ports.

**Port Specifications:** BSPP (G) per ISO 228, BS 2779, DIN 3852 Part 2 Type A and B; BSPT per ISO 7 or BS 21

### \*How To Add ICON™ to FN

Signal Output	Part Number Suffix	Example
FNL Connector without ICON™	None	FNL022021
FNL with ICON™: Analog Output Signal	CV04ANA	FNL022021 <b>CV04ANA</b>
FNL with ICON™: Solid State Relay	CV04SSR	FNL022021 <b>CV04SSR</b>





\*Dimension only applies to FN with ICON™ Technology  
(Base Part Numbers that include "CV04ANA" or "CV04SSR").

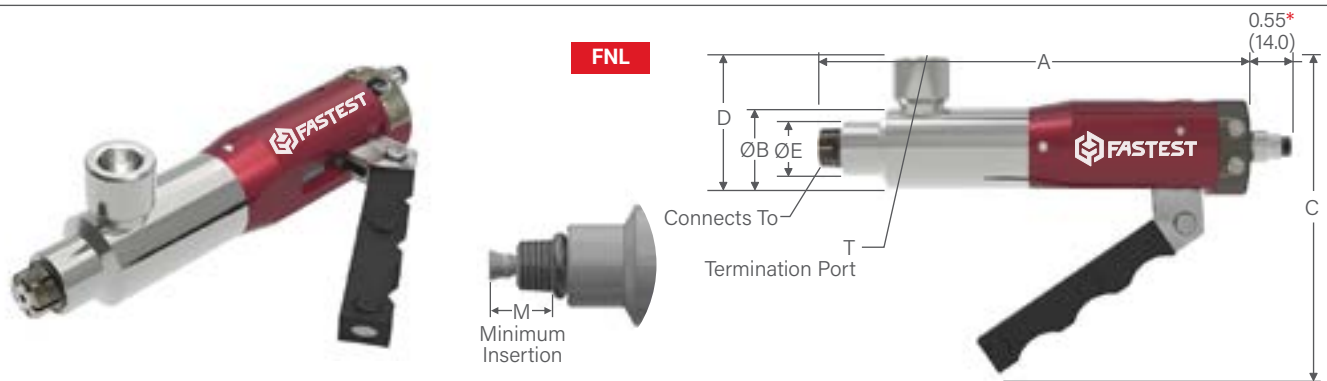
Dimensions									
A (FNL)	A (FNV)	A (FNP)	B	C (FNL)	C (FNV)	D	E	M	T
4.80 (121.9)	5.13 (130.3)	4.90 (124.5)	1.06 (26.9)	3.70 (94)	1.58 (40.1)	1.50 (38.1)	0.65 (16.5)	0.55 (14.0)	1/8 NPT
								0.27 (6.9)	1/8 NPT
								0.55 (14.0)	1/8 BSPP (G)
								0.27 (6.9)	1/8 BSPP (G)
								0.55 (14.0)	1/8 BSPP (G)
5.00 (127)	5.21 (132.3)	5.00 (127.0)	1.06 (26.9)	4.00 (101.6)	1.58 (40.1)	1.70 (43.2)	0.72 (18.3)	0.67 (17.0)	1/4 NPT
								0.39 (9.9)	1/4 NPT
								0.67 (17.0)	1/4 BSPP (G)
								0.39 (9.9)	1/4 BSPP (G)
								0.67 (17.0)	1/4 BSPP (G)
5.00 (127)	5.05 (128.3)	4.80 (121.9)	1.25 (31.8)	3.90 (99.1)	1.58 (40.1)	1.86 (47.2)	0.86 (21.8)	0.67 (17.0)	3/8 NPT
									3/8 BSPP (G)
									3/8 BSPP (G)
5.27 (133.9)	5.27 (133.9)	5.34 (135.6)	1.43 (36.3)	4.40 (111.8)	1.85 (47.0)	2.33 (59.2)	1.09 (27.7)	0.76 (19.3)	1/2 NPT
									1/2 BSPP (G)
									1/2 BSPP (G)
8.17 (207.5)	8.75 (222.2)	8.75 (222.2)	1.78 (45.2)	5.10 (129.5)	2.11 (53.6)	2.93 (74.4)	1.49 (37.8)	0.63 (16.0)	3/4 NPT
									3/4 BSPP (G)
									3/4 BSPP (G)

Dimensions: inch (mm)  
Pressure Rating: psi (bar)



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# FN / INTERNAL CONNECTIONS / SAE O-RING



## Ordering Information

Connects To	Pressure Rating	FNL Part Number (with Lever)	FNV Part Number (with Thumb Valve)	FNP Part Number (with Pneumatic Pilot)	Replacement Seals Pack (5)	Rebuild Kit	ICON™ Repair Kit (FNL / FNP)
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### FasMate® FN | SAE O-Ring

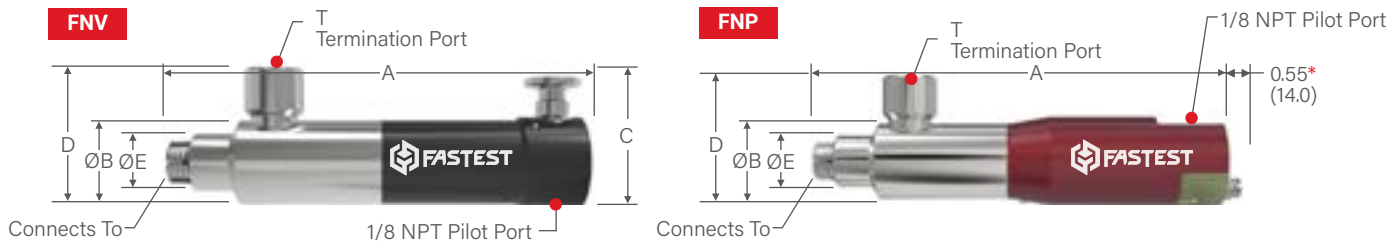
-3 [3/8-24]	2500 (172)	FNL034021[*]	FNV034021	FNP034021[*]	S1108B70	RFN022021	
		FNL034025[*]	FNV034025	FNP034025[*]			
-4 [7/16-20]	5000 (345)	FNL044021[*]	FNV044021	FNP044021[*]	S1109B70	RFN044021	RFNLBG1CV04ANA RFNLBG1CV04SSR
	2500 (172)	FNL044021[*]	FNV044021	FNP044021[*]			
	5000 (345)	FNL044025[*]	FNV044025	FNP044025[*]			
	2500 (172)	FNL044025[*]	FNV044025	FNP044025[*]			
-4 [7/16-24]	2500 (172)	FNL044K021[*]	FNV044K021	FNP044K021[*]	S1111B70	RFN064041	
		FNL044K025[*]	FNV044K025	FNP044K025[*]			
-5 [1/2-20]	5000 (345)	FNL054041[*]	FNV054041	FNP054041[*]	S21250327B60	RFN054041	RFNLBG4CV04ANA RFNLBG4CV04SSR
	2500 (172)	FNL054041[*]	FNV054041	FNP054041[*]			
	5000 (345)	FNL054045[*]	FNV054045	FNP054045[*]			
	2500 (172)	FNL054045[*]	FNV054045	FNP054045[*]			
-6 [9/16-18]	5000 (345)	FNL064041[*]	FNV064041	FNP064041[*]	S1111B70	RFN064041	
	2500 (172)	FNL064041[*]	FNV064041	FNP064041[*]			
	5000 (345)	FNL064045[*]	FNV064045	FNP064045[*]			
	2500 (172)	FNL064045[*]	FNV064045	FNP064045[*]			
-8 [3/4-16]	5000 (345)	FNL084061[*]	FNV084061	FNP084061[*]	S1207B70	RFN084061	RFNLBG4CV04ANA RFNLBG4CV04SSR
		FNL084065[*]	FNV084065	FNP084065[*]			
-10 [7/8-14]	5000 (345)	FNL104081[*]	FNV104081	FNP104081[*]	S2M0401600B70	RFN104081	
		FNL104085[*]	FNV104085	FNP104085[*]			
-12 [1 1/16-12]	3500 (241)	FNL124121[*]	FNV124121	FNP124121[*]	S1315B50	RFN054041	RFNLBG5CV04ANA RFNLBG5CV04SSR

Reduced Thread Connectors [FNxRxxxxxx]; The "R" in the part number indicates a shorter collet length for shallow ports.

### Port Specifications: SAE O-Ring per SAE J1926 or ISO 11926

#### \*How To Add ICON™ to FN

Signal Output	Part Number Suffix	Example
FNL Connector without ICON™	None	FNL022021
FNL with ICON™: Analog Output Signal	CV04ANA	FNL022021CV04ANA
FNL with ICON™: Solid State Relay	CV04SSR	FNL022021CV04SSR



\*Dimension only applies to FN with ICON™ Technology  
(Base Part Numbers that include "CV04ANA" or "CV04SSR").

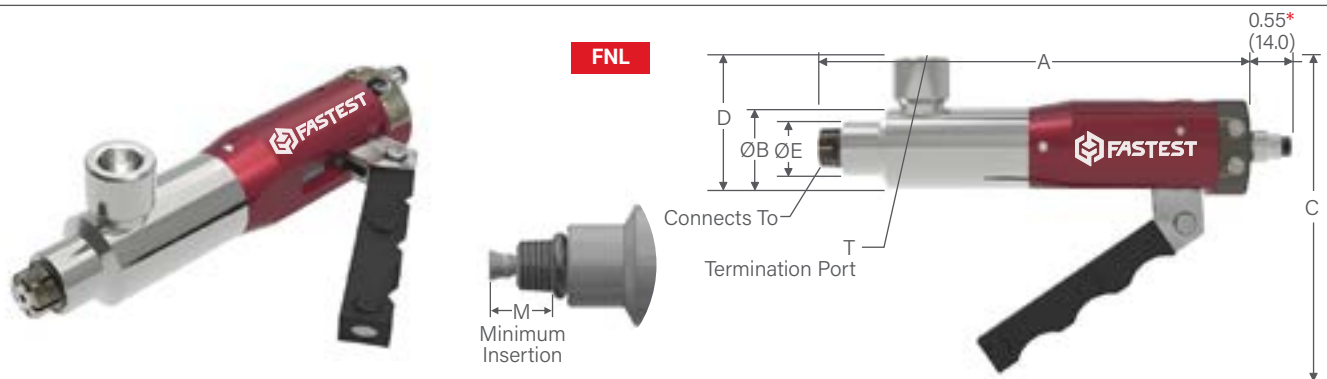
Dimensions									
A (FNL)	A (FNV)	A (FNP)	B	C (FNL)	C (FNV)	D	E	M	T
4.80 (121.9)	5.13 (130.3)	4.90 (124.5)	1.06 (26.9)	3.70 (94.0)	1.58 (40.1)	1.50 (38.1)	0.65 (16.5)	0.30 (7.6)	1/8 NPT
								1/8 BSPP (G)	
4.80 (121.9)	5.13 (130.3)	4.90 (124.5)	1.06 (26.9)	3.70 (94.0)	1.58 (40.1)	1.50 (38.1)	0.65 (16.5)	0.55 (14.0)	1/8 NPT
								0.34 (8.6)	1/8 NPT
								0.55 (14.0)	1/8 BSPP (G)
								0.34 (8.6)	1/8 BSPP (G)
								0.37 (9.4)	1/8 NPT
									1/8 BSPP (G)
5.00 (127.0)	5.21 (132.3)	5.00 (127.0)	1.06 (26.9)	4.00 (101.6)	1.58 (40.1)	1.70 (43.2)	0.72 (18.3)	0.67 (17.0)	1/4 NPT
								0.39 (9.9)	
								0.67 (17.0)	1/4 BSPP (G)
								0.39 (9.9)	
5.00 (127.0)	5.21 (132.3)	5.00 (127.0)	1.06 (26.9)	3.90 (99.1)	1.58 (40.1)	1.86 (47.2)	0.79 (20.1)	0.67 (17.0)	1/4 NPT
								0.41 (10.4)	
								0.67 (17.0)	1/4 BSPP (G)
								0.41 (10.4)	
5.27 (133.9)	5.27 (133.9)	5.34 (135.6)	1.43 (36.3)	4.40 (111.8)	1.85 (47.0)	2.33 (59.2)	1.09 (27.7)	0.76 (19.3)	3/8 NPT
									3/8 BSPP (G)
5.27 (133.9)	5.27 (133.9)	5.34 (135.6)	1.43 (36.3)	4.40 (111.8)	1.85 (47.0)	2.33 (59.2)	1.25 (31.8)	0.76 (19.3)	1/2 NPT
									1/2 BSPP (G)
8.17 (207.5)	8.75 (222.2)	8.75 (222.2)	1.78 (45.2)	5.10 (129.5)	2.11 (53.6)	2.93 (74.4)	1.49 (37.8)	0.63 (16.0)	3/4 NPT

Dimensions: inch (mm)  
Pressure Rating: psi (bar)



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# FN / INTERNAL CONNECTIONS / METRIC



## Ordering Information

Connects To	Pressure Rating	FNL Part Number (with Lever)	FNV Part Number (with Thumb Valve)	FNP Part Number (with Pneumatic Pilot)	Replacement Seals Pack (5)	Rebuild Kit	ICON™ Repair Kit (FNL / FNP)
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### FasMate® FN | ISO O-Ring Metric

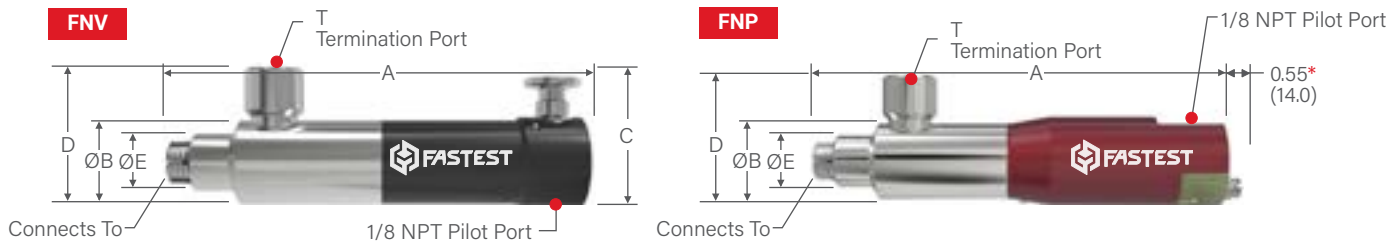
M10 × 1.0	5000 (345)	FNL108021[*]	FNV108021	FNP108021[*]	S1108B70	RFN022021	RFNLBG1CV04ANA RFNLBG1CV04SSR
	2500 (172)	FNLR108021[*]	FNVR108021	FNPR108021[*]			
	5000 (345)	FNL108025[*]	FNV108025	FNP108025[*]			
	2500 (172)	FNLR108025[*]	FNVR108025	FNPR108025[*]			
M10 × 1.25	2500 (172)	FNLR108D021[*]	FNVR108D021	FNPR108D021[*]			
		FNLR108D025[*]	FNVR108D025	FNPR108D025[*]			
M10 × 1.5	2500 (172)	FNLR108E021[*]	FNVR108E021	FNPR108E021[*]			
		FNLR108E025[*]	FNVR108E025	FNPR108E025[*]			
M12 × 1.0	5000 (345)	FNL128021[*]	FNV128021	FNP128021[*]	S21250327B60	RFN042041	
	2500 (172)	FNLR128021[*]	FNVR128021	FNPR128021[*]			
	5000 (345)	FNL128025[*]	FNV128025	FNP128025[*]			
	2500 (172)	FNLR128025[*]	FNVR128025	FNPR128025[*]			
M12 × 1.25	2500 (172)	FNLR128D021[*]	FNVR128D021	FNPR128D021[*]	S1203B60		
		FNLR128D025[*]	FNVR128D025	FNPR128D025[*]			
M12 × 1.5	2500 (172)	FNLR128E021[*]	FNVR128E021	FNPR128E021[*]			
		FNLR128E025[*]	FNVR128E025	FNPR128E025[*]			
M14 × 1.5	5000 (345)	FNL148045[*]	FNV148045	FNP148045[*]	S21250327B60	RFN042041	
	2500 (172)	FNLR148041[*]	FNVR148041	FNPR148041[*]	S1203B60		
	2500 (172)	FNLR148045[*]	FNVR148045	FNPR148045[*]			
M16 × 1.5	5000 (345)	FNL168065[*]	FNV168065	FNP168065[*]	S21200445B70	RFN062061	
	2500 (172)	FNLR168061[*]	FNVR168061	FNPR168061[*]			
	2500 (172)	FNLR168065[*]	FNVR168065	FNPR168065[*]			
M18 × 1.5	5000 (345)	FNL188065[*]	FNV188065	FNP188065[*]	S1206B70	RFN188061	RFNLBG4CV04ANA RFNLBG4CV04SSR
M20 × 1.5	5000 (345)	FNL208065[*]	FNV208065	FNP208065[*]	S21390576B70	RFN208061	
M22 × 1.5	5000 (345)	FNL228085[*]	FNV228085	FNP228085[*]	S1208B70	RHN228081	

Reduced Thread Connectors [FNxRxxxxxx]; The "R" in the part number indicates a shorter collet length for shallow ports.

**Port Specifications:** BSPP (G) per ISO 228, BS 2779, DIN 3852 Part 2 Type A and B; BSPT per ISO 7 or BS 21

### \*How To Add ICON™ to FN

Signal Output	Part Number Suffix	Example
FNL Connector without ICON™	None	FNL022021
FNL with ICON™: Analog Output Signal	CV04ANA	FNL022021CV04ANA
FNL with ICON™: Solid State Relay	CV04SSR	FNL022021CV04SSR



\*Dimension only applies to FN with ICON™ Technology  
(Base Part Numbers that include "CV04ANA" or "CV04SSR").

Dimensions									
A (FNL)	A (FNV)	A (FNP)	B	C (FNL)	C (FNV)	D	E	M	T
4.80 (121.9)	5.13 (130.3)	4.90 (124.5)	1.06 (26.9)	3.70 (94.0)	1.58 (40.1)	1.50 (38.1)	0.65 (16.5)	0.55 (14.0)	1/8 NPT
								0.30 (7.6)	
								0.55 (14.0)	1/8 BSPP (G)
								0.30 (7.6)	
								0.32 (8.1)	1/8 NPT
								0.32 (8.1)	1/8 BSPP (G)
5.00 (127.0)	5.21 (132.3)	5.00 (127.0)	1.06 (26.9)	4.00 (101.6)	1.58 (40.1)	1.70 (43.2)	0.72 (18.3)	0.34 (8.6)	1/8 NPT
								0.34 (8.6)	1/8 BSPP (G)
								0.67 (17.0)	1/8 NPT
								0.38 (9.7)	
								0.67 (17.0)	1/8 BSPP (G)
								0.38 (9.7)	
5.00 (127.0)	5.21 (132.3)	5.00 (127.0)	1.06 (26.9)	4.00 (101.6)	1.58 (40.1)	1.70 (43.2)	0.72 (18.3)	0.38 (9.7)	1/8 NPT
								0.38 (9.7)	1/8 BSPP (G)
								0.40 (10.2)	1/8 BSPP (G)
5.00 (127.0)	5.05 (128.3)	4.80 (121.9)	1.25 (31.8)	3.90 (99.1)	1.58 (40.1)	1.86 (47.2)	0.86 (21.8)	0.67 (17.0)	1/4 BSPP (G)
								0.43 (10.9)	1/4 NPT
								0.43 (10.9)	1/4 BSPP (G)
5.00 (127.0)	5.05 (128.3)	4.80 (121.9)	1.25 (31.8)	3.90 (99.1)	1.58 (40.1)	1.86 (47.2)	0.86 (21.8)	0.67 (17.0)	3/8 BSPP (G)
								0.43 (10.9)	3/8 NPT
								0.43 (10.9)	3/8 BSPP (G)
5.27 (133.9)	5.27 (133.9)	5.34 (135.6)	1.43 (36.3)	4.40 (111.8)	1.85 (47.0)	2.33 (59.2)	1.00 (25.4)	0.76 (19.3)	3/8 BSPP (G)
5.27 (133.9)	5.27 (133.9)	5.34 (135.6)	1.43 (36.3)	4.40 (111.8)	1.85 (47.0)	2.33 (59.2)	1.09 (27.7)	0.76 (19.3)	3/8 BSPP (G)
5.27 (133.9)	5.27 (133.9)	5.34 (135.6)	1.43 (36.3)	4.40 (111.8)	1.85 (47.0)	2.33 (59.2)	1.09 (27.7)	0.76 (19.3)	1/2 BSPP (G)

Dimensions: inch (mm)  
Pressure Rating: psi (bar)



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# MIT / INTERNAL CONNECTIONS

Manual twist sealing connection tool for internal threaded ports.

**CONNECTS TO:**



**SPECIFICATIONS**

Pressure Rating	Operating Temperatures	Materials of Construction
Vacuum to 10,000 psi (689 bar)	-40°F to +200°F (-40°C to +93°C)	Stainless Steel
Termination Port		Seal Material*
NPT, SAE 37° Flare		Urethane, Neoprene, or Buna-N

\*Additional seal material types available, consult factory.

**ACTUATION METHOD**

**Manual Twist:** Finger-tight connection eliminates tape and sealants

**ICON™ TECHNOLOGY**

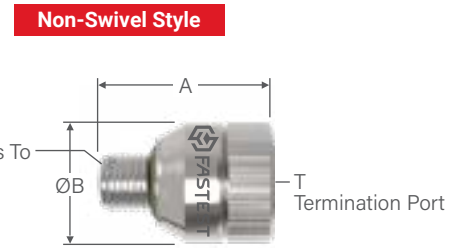
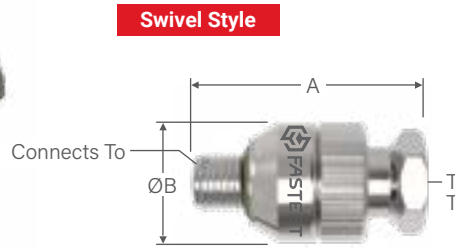
Consult Factory

**ACCESSORIES**

Visit [fastestinc.com](http://fastestinc.com)

- 1 Pressure assisted sealing eliminates leaks and resists movement under pressure
- 2 Leak-tight seal prevents contamination of media and reduces scrap and test damage
- 3 Available in flow or plug versions
- 4 Quick and easy seal replacement to minimize down time, maintenance, and tool inventory

## MIT / INTERNAL CONNECTIONS / NPT

Swivel Style  
Non-Swivel Style

Ordering Information					Dimensions		
Connects To	Part Number*	Replacement Seals Bulk Pack (5)	Rebuild Kit	Pressure Rating	A	B	T

**NPT** | Swivel Style

1/8 NPT	MIT022021	S1109U70	MITR020	5000 (345)	1.68 (42.7)	0.82 (20.8)	1/8 NPT
1/4 NPT	MIT042041	S1111U70	MITR040		1.88 (42.8)	1.00 (25.4)	1/4 NPT
3/8 NPT	MIT062061	S1113U70	MITR060	4000 (276)	2.09 (53.1)	1.18 (30.0)	3/8 NPT
1/2 NPT	MIT082081	S1209U70	MITR080		2.57 (65.3)	1.36 (34.5)	1/2 NPT
3/4 NPT	MIT122121	S1213U70	MITR120		2.73 (69.3)	1.68 (42.7)	3/4 NPT
1 NPT	MIT162161	S1216U70	MITR160		3.27 (83.1)	2.00 (50.8)	1 NPT
1 1/4 NPT	MIT202201	S1222U70	MITR200	3000 (207)	3.29 (83.6)	2.38 (60.5)	1 1/4 NPT
1 1/2 NPT	MIT242241	S1327U70	MITR240		3.73 (94.7)	3.73 (94.7)	1 1/2 NPT

**NPT** | Non-Swivel Style

1/8 NPT	MIT022021X	S1109U70	MITR02	5000 (345)	1.24 (31.5)	0.82 (20.8)	1/8 NPT
1/4 NPT	MIT042041X	S1111U70	MITR04		1.41 (35.8)	1.00 (25.4)	1/4 NPT
3/8 NPT	MIT062061X	S1113U70	MITR06	4000 (276)	1.48 (37.6)	1.18 (30.0)	3/8 NPT
1/2 NPT	MIT082081X	S1209U70	MITR08		1.85 (47.0)	1.36 (34.5)	1/2 NPT
3/4 NPT	MIT122121X	S1213U70	MITR12	4000 (276)	1.94 (49.3)	1.68 (42.7)	3/4 NPT
1 NPT	MIT162161X	S1216U70	MITR16		2.07 (52.6)	2.00 (50.8)	1 NPT
1-1/4 NPT	MIT202201X	S1222U70	MITR20	4000 (276)	2.13 (54.1)	2.38 (60.5)	1 1/4 NPT
1-1/2 NPT	MIT242241X	S1327U70	MITR24	3000 (207)	2.40 (61.0)	2.74 (69.6)	1 1/2 NPT
2 NPT	MIT322161X	S1331U70	MITR32	2500 (172)	2.68 (68.1)	3.47 (88.1)	1 NPT
2-1/2 NPT	MIT402161X	S1335U70	MITR40	1500 (103)	3.42 (88.9)	3.97 (100.8)	1 NPT
3 NPT	MIT482161X	S1340U70	MITR48	1500 (103)	3.68 (93.5)	4.73 (120.1)	1 NPT
4 NPT	MIT642161X	S1348U70	MITR64	1000 (69)	3.68 (93.5)	5.73 (145.5)	1 NPT

Dimensions: inch (mm)  
Pressure Rating: psi (bar)

\*Optional seal materials include V = FKM, E = EPDM, and B = Buna-N - Example: MIT022021X**V** = FKM

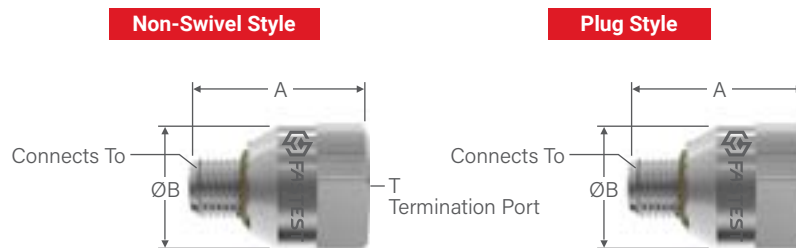
**Port Specifications:** NPT per SAE J476 or ANSI B1.20



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# MIT / INTERNAL CONNECTIONS / NPT

Non-Swivel Style for High Pressure  
Plug Style



Ordering Information					Dimensions		
Connects To	Part Number*	Replacement Seals Bulk Pack (5)	Rebuild Kit	Pressure Rating	A	B	T

## NPT | Non-Swivel Style for High Pressure

1/8 NPT	MITH022021X	S1109U70	MITR02	10000 (689)	1.24 (31.5)	0.82 (20.8)	1/8 NPT
1/4 NPT	MITH042041X	S1111U70	MITR04		1.41 (35.8)	1.00 (25.4)	1/4 NPT
3/8 NPT	MITH062061X	S1113U70	MITR06	10000 (689)	1.48 (37.6)	1.18 (30.0)	3/8 NPT
1/2 NPT	MITH082081X	S1209U70	MITR08	8000 (552)	1.85 (47.0)	1.36 (34.5)	1/2 NPT
3/4 NPT	MITH122121X	S1213U70	MITR12	7500 (517)	1.94 (49.3)	1.68 (42.7)	3/4 NPT
1 NPT	MITH162161X	S1216U70	MITR16	6500 (448)	2.07 (52.6)	2.00 (50.8)	1 NPT

## NPT | Plug Style

1/8 NPT	MIT022P	S1109U70	MITR02	5000 (345)	1.24 (31.5)	0.82 (21.8)	N/A  (Plug Style No Termination Port)
1/4 NPT	MIT042P	S1111U70	MITR04		1.41 (35.8)	1.00 (25.4)	
3/8 NPT	MIT062P	S1113U70	MITR06	4000 (276)	1.48 (37.6)	1.18 (30.0)	
1/2 NPT	MIT082P	S1209U70	MITR08		1.85 (47.0)	1.36 (34.5)	
3/4 NPT	MIT122P	S1213U70	MITR12		1.94 (49.3)	1.68 (42.7)	
1 NPT	MIT162P	S1216U70	MITR16		2.07 (52.6)	2.00 (50.8)	
1 ¼ NPT	MIT202P	S1222U70	MITR20	3000 (207)	2.13 (54.1)	2.38 (60.5)	
1 ½ NPT	MIT242P	S1327U70	MITR24		2.40 (61.0)	2.74 (69.6)	
2 NPT	MIT322P	S1331U70	MITR32	2500 (172)	2.68 (68.1)	3.47 (88.1)	
2 ½" NPT	MIT402P	S1335U70	MITR40	1500 (103)	3.42 (88.9)	3.97 (100.8)	
3 NPT	MIT482P	S1340U70	MITR48		3.68 (93.5)	4.73 (120.1)	
4 NPT	MIT642P	S1348U70	MITR64	1000 (69)	3.68 (93.5)	5.73 (145.5)	

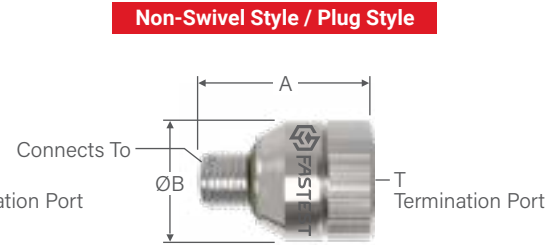
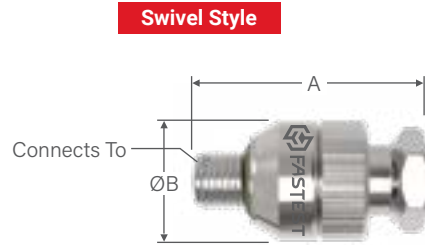
Dimensions: inch (mm)  
Pressure Rating: psi (bar)

\*Optional seal materials include V = FKM, E = EPDM, and B = Buna-N - Example: MITH022021X**V** = FKM

**Port Specifications:** NPT per SAE J476 or ANSI B1.20

# MIT / INTERNAL CONNECTIONS / BSPP (G)

Swivel Style  
Non-Swivel Style  
Plug Style



Ordering Information					Dimensions		
Connects To	Part Number*	Replacement Seals Bulk Pack (5)	Rebuild Kit	Pressure Rating	A	B	T
BSPP (G)   Swivel Style							
1/8 BSPP (G)	MIT026021	S1109U70	MITR020	5000 (345)	1.66 (42.2)	0.82 (20.8)	1/8 FNPT
1/4 BSPP (G)	MIT046041	S1111U70	MITR040		1.83 (46.5)	1.00 (25.4)	1/4 FNPT
3/8 BSPP (G)	MIT066061	S1113U70	MITR060	4000 (276)	2.10 (53.4)	1.18 (30.0)	3/8 FNPT
1/2 BSPP (G)	MIT086081	S1209U70	MITR080		2.55 (64.8)	1.36 (34.5)	1/2 FNPT
BSPP (G)   Non-Swivel Style							
1/8 BSPP (G)	MIT026021X	S1109U70	MITR02	5000 (345)	1.20 (30.5)	0.82 (20.8)	1/8 FNPT
1/4 BSPP (G)	MIT046041X	S1111U70	MITR04		1.36 (34.5)	1.00 (25.4)	1/4 FNPT
3/8 BSPP (G)	MIT066061X	S1113U70	MITR06	4000 (276)	1.50 (38.1)	1.18 (30.0)	3/8 FNPT
1/2 BSPP (G)	MIT086081X	S1209U70	MITR08		1.83 (46.5)	1.36 (34.5)	1/2 FNPT
3/4 BSPP (G)	MIT126121X	S1213U70	MITR12		1.94 (49.3)	1.68 (42.7)	3/4 FNPT
1 BSPP (G)	MIT166161X	S1216U70	MITR16		2.07 (52.6)	2.07 (52.6)	1 FNPT
BSPP (G)   Plug Style							
1/8 BSPP (G)	MIT026P	S1109U70	MITR02	5000 (345)	1.24 (31.5)	0.82 (20.8)	N/A  (Plug Style No Termination Port)
1/4 BSPP (G)	MIT046P	S1111U70	MITR04		1.41 (35.8)	1.00 (25.4)	
3/8 BSPP (G)	MIT066P	S1113U70	MITR06	4000 (276)	1.48 (37.6)	1.18 (30.0)	
1/2 BSPP (G)	MIT086P	S1209U70	MITR08		1.85 (47.0)	1.36 (34.5)	
3/4 BSPP (G)	MIT126P	S1213U70	MITR12		1.90 (48.3)	1.68 (42.7)	
1 BSPP (G)	MIT166P	S1216U70	MITR16		2.36 (59.9)	2.07 (52.6)	

Dimensions: inch (mm)  
Pressure Rating: psi (bar)

\*Optional seal materials include V = FKM, E = EPDM, and B = Buna-N - Example: MIT026021**V** = FKM

**Port Specifications:** BSPP (G) per ISO 228 or BS2779

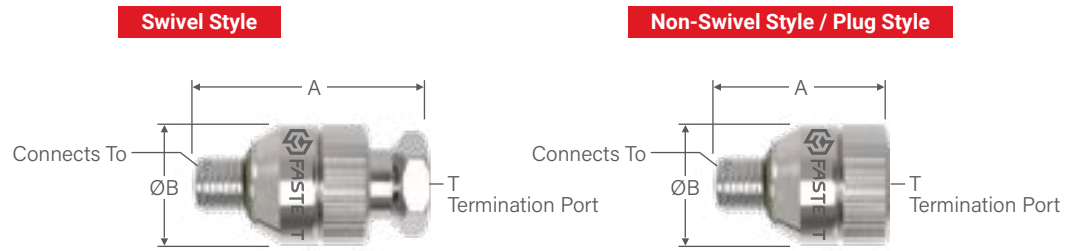


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# MIT / INTERNAL CONNECTIONS / BSPT

Swivel Style  
Non-Swivel Style  
Plug Style



Ordering Information					Dimensions		
Connects To	Part Number*	Replacement Seals Bulk Pack (5)	Rebuild Kit	Pressure Rating	A	B	T

## BSPT | Swivel Style

1/8 BSPT	MIT026T021	S1109U70	MITR020	5000 (345)	1.70 (43.2)	0.82 (20.8)	1/8 FNPT
1/4 BSPT	MIT046T041	S1111U70	MITR040		1.88 (47.8)	1.00 (25.4)	1/4 FNPT
3/8 BSPT	MIT066T061	S1113U70	MITR060	4000 (276)	2.10 (53.4)	1.18 (30.0)	3/8 FNPT
1/2 BSPT	MIT086T081	S1209U70	MITR080		2.88 (64.8)	1.36 (34.5)	1/2 FNPT

## BSPT | Non-Swivel Style

1/8 BSPT	MIT026T021X	S1109U70	MITR02	4000 (276)	1.20 (30.5)	0.82 (20.8)	1/8 FNPT
1/4 BSPT	MIT046T041X	S1111U70	MITR04		1.41 (35.8)	1.00 (25.4)	1/4 FNPT
3/8 BSPT	MIT066T061X	S1113U70	MITR06		1.55 (39.8)	1.18 (30.0)	3/8 FNPT
1/2 BSPT	MIT086T081X	S1209U70	MITR08		1.82 (46.2)	1.36 (34.5)	1/2 FNPT
3/4 BSPT	MIT126T121X	S1213U70	MITR12		2.00 (50.8)	1.68 (42.7)	3/4 FNPT
1 BSPT	MIT166T161X	S1216U70	MITR16		2.26 (57.4)	2.00 (50.8)	1 FNPT

## BSPT | Plug Style

1/8 BSPT	MIT026TP	S1109U70	MITR02	5000 (345)	1.20 (30.5)	0.82 (21.8)	N/A (Plug Style No Termination Port)
1/4 BSPT	MIT046TP	S1111U70	MITR04		1.41 (35.8)	1.00 (25.4)	
3/8 BSPT	MIT066TP	S1113U70	MITR06	4000 (276)	1.50 (38.1)	1.18 (30.0)	
1/2 BSPT	MIT086TP	S1209U70	MITR08		1.85 (47.0)	1.36 (34.5)	
3/4 BSPT	MIT126TP	S1213U70	MITR12		1.92 (48.8)	1.68 (42.7)	
1 BSPT	MIT166TP	S1216U70	MITR16		2.07 (52.6)	2.00 (50.8)	
1 1/2 BSPT	MIT246TP	S1327U70	MITR24	3000 (207)	2.54 (64.5)	2.74 (69.6)	
2 BSPT	MIT326TP	S1331U70	MITR32	2500 (172)	2.74 (69.6)	3.47 (88.1)	

Dimensions: inch (mm)

Pressure Rating: psi (bar)

\*Optional seal materials include V = FKM, E = EPDM, and B = Buna-N - Example: MIT026T021V = FKM

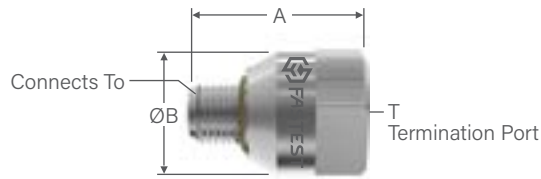
**Port Specifications:** BSPT per ISO 7 or BS 21

# MIT / INTERNAL CONNECTIONS / SAE ORB

Non-Swivel Style  
Non-Swivel Style for High Pressure



Non-Swivel Style



Ordering Information					Dimensions		
Connects To	Part Number*	Replacement Seals Bulk Pack (5)	Rebuild Kit	Pressure Rating	A	B	T

## SAE ORB | Non-Swivel Style

-3 [3/8-24]	MIT034021X	S1109U70	MITR02	5000 (345)	1.29 (32.8)	0.82 (21.8)	1/8 FNPT
-4 [7/16-20]	MIT044021X				1.29 (32.8)	0.82 (21.8)	1/8 FNPT
-5 [1/2-20]	MIT054041X	S1111U70	MITR04		1.41 (35.8)	1.00 (25.4)	1/4 FNPT
-6 [9/16-18]	MIT064041X				1.41 (35.8)	1.00 (25.4)	1/4 FNPT
-8 [3/4-16]	MIT084081X	S1209U70	MITR08	4000 (276)	1.85 (47.0)	1.36 (34.5)	1/2 FNPT
-10 [7/8-14]	MIT104081X				1.85 (47.0)	1.36 (34.5)	1/2 FNPT
-12 [1 1/16-12]	MIT124121X	S1213U70	MITR12		1.94 (49.3)	1.68 (42.7)	3/4 FNPT
-14 [1 3/16-12]	MIT144161X	S1216U70	MITR16		2.13 (54.1)	2.00 (50.8)	1 FNPT
-16 [1 5/16-12]	MIT164161X	S1217U70	MITR16		2.13 (54.1)	2.00 (50.8)	1 FNPT
-20 [1 5/8-12]	MIT204201X	S1222U70	MITR20		2.13 (54.1)	2.38 (60.5)	1 1/4 FNPT

## SAE ORB | Non-Swivel Style for High Pressure

-4 [7/16-20]	MITH044021X	S1109U70	MITR02	10000 (689)	1.29 (32.8)	0.82 (21.8)	1/8 FNPT
-6 [9/16-18]	MITH064041X	S1111U70	MITR04		1.41 (35.8)	1.00 (25.4)	1/4 FNPT
-8 [3/4-16]	MITH084081X	S1209U70	MITR08	8000 (552)	1.85 (47.0)	1.36 (34.5)	1/2 FNPT
-10 [7/8-14]	MITH104081X			7500 (517)	1.85 (47.0)	1.36 (34.5)	1/2 FNPT
-12 [1 1/16-12]	MITH124121X	S1213U70	MITR12		1.94 (49.3)	1.68 (42.7)	3/4 FNPT
-14 [1 3/16-12]	MITH144161X	S1216U70	MITR16	7000 (483)	2.13 (54.1)	2.00 (50.8)	1 FNPT
-16 [1 5/16-12]	MITH164161X	S1217U70	MITR16		2.13 (54.1)	2.00 (50.8)	1 FNPT

Dimensions: inch (mm)  
Pressure Rating: psi (bar)

\*Optional seal materials include V = FKM, E = EPDM, and B = Buna-N - Example: MIT034021X**V** = FKM

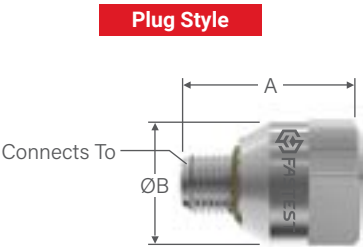
**Port Specifications:** SAE ORB per SAE J1926 or ISO 11926



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MIT / INTERNAL CONNECTIONS / SAE ORB

Plug Style



Ordering Information					Dimensions		
Connects To	Part Number*	Replacement Seals Bulk Pack (5)	Rebuild Kit	Pressure Rating	A	B	T
SAE ORB   Plug Style							
-4 [7/16-20]	MIT044P	S1109U70	MITR02	5000 (345)	1.29 (32.8)	0.82 (21.8)	N/A  (Plug Style No Termination Port)
-5 [1/2-20]	MIT054P	S1111U70	MITR04		1.41 (35.8)	1.00 (25.4)	
-6 [9/16-18]	MIT064P	S1111U70	MITR04	4000 (276)	1.41 (35.8)	1.00 (25.4)	
-8 [3/4-16]	MIT084P	S1209U70	MITR08		1.85 (47.0)	1.36 (34.5)	
-10 [7/8-14]	MIT104P	S1209U70	MITR08		1.94 (49.3)	1.68 (42.7)	
-12 [1 1/16-20]	MIT124P	S1213U70	MITR12		1.29 (32.8)	0.82 (21.8)	
-14 [1 3/16-12]	MIT144P	S1216U70	MITR16		2.13 (54.1)	2.00 (50.8)	
-16 [1 5/16-12]	MIT164P	S1217U70	MITR16		2.13 (54.1)	2.00 (50.8)	
-20 [1 5/8-12]	MIT204P	S1222U70	MITR20		2.13 (54.1)	2.38 (60.5)	

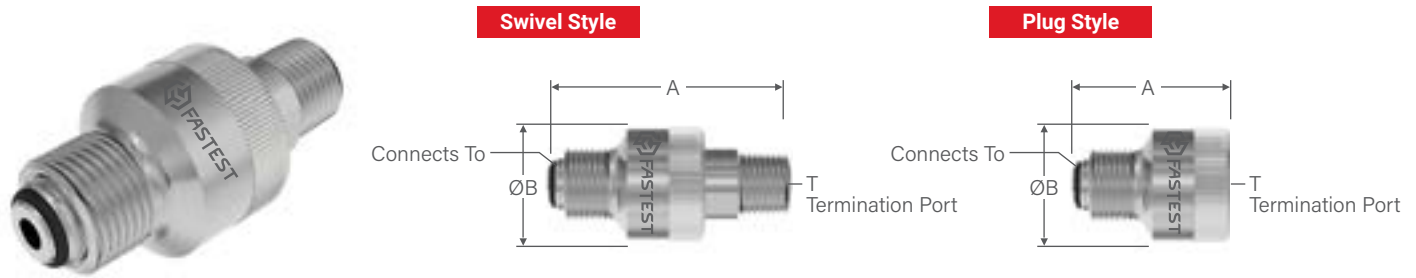
Dimensions: inch (mm)  
Pressure Rating: psi (bar)

\*Optional seal materials include V = FKM, E = EPDM, and B = Buna-N - Example: MIT044P**V** = FKM

Port Specifications: SAE ORB per SAE J1926 or ISO 11926

# MIT / INTERNAL CONNECTIONS / SAE 37° FLARE

Swivel Style  
Plug Style



Ordering Information					Dimensions		
Connects To	Part Number*	Replacement Seals Bulk Pack (5)	Rebuild Kit	Pressure Rating	A	B	T

## SAE 37° FLARE | Swivel Style

-4 [7/16-20]	MITH040022	S20540158B70	METR02	10000 (689)	2.11 (53.6)	0.80 (20.3)	1/8 NPTF
-6 [9/16-18]	MITH060042	S20640239B70	METR04		2.36 (59.9)	0.97 (24.6)	1/4 NPTF
-8 [3/4-16]	MITH080062	S1012B70	METR06	8000 (552)	2.54 (64.5)	1.18 (30.0)	3/8 NPTF
-10 [7/8-14]	MITH100082	S1013B70	METR08	7500 (517)	2.94 (76.7)	1.38 (35.1)	1/2 NPTF
-12 [1 1/16-12]	MITH120122	S20700583B70	METR12	7500 (517)	3.30 (83.8)	1.72 (43.7)	3/4 NPTF
-16 [1 5/16-12]	MITH160162	S20800796B70	METR16	7000 (483)	3.77 (95.8)	2.13 (54.1)	1 NPTF

## SAE 37° FLARE | Plug Style

-4 [7/16-20]	MITH040P	S20540158B70	METR02	10000 (689)	1.42 (36.1)	0.80 (20.3)	N/A (Plug Style No Termination Port)
-6 [9/16-18]	MITH060P	S20640239B70	METR04		1.51 (38.4)	0.97 (24.6)	
-8 [3/4-16]	MITH080P	S1012B70	METR06	8000 (552)	1.65 (41.9)	1.18 (30.0)	
-10 [7/8-14]	MITH100P	S1013B70	METR08	7500 (517)	1.86 (47.2)	1.38 (35.1)	
-12 [1 1/16-12]	MITH120P	S20700583B70	METR12	7500 (517)	2.03 (51.6)	1.72 (43.7)	
-16 [1 5/16-12]	MITH160P	S20800796B70	METR16	7000 (483)	2.29 (58.2)	2.13 (54.1)	

Dimensions: inch (mm)  
Pressure Rating: psi (bar)

\*Optional seal materials include V = FKM, E = EPDM, and B = Buna-N - Example: MITH040022V = FKM

**Port Specifications:** SAE 37° FLARE per SAE J514

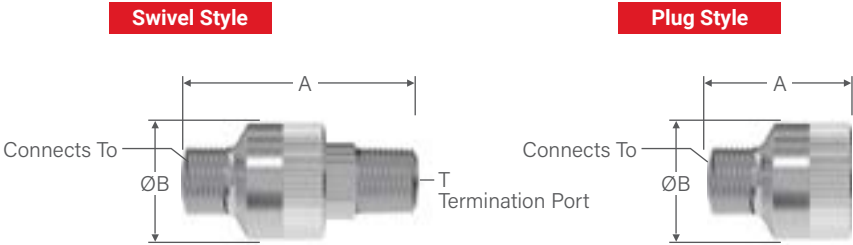


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MIT / INTERNAL CONNECTIONS / SAE ORFS

Swivel Style  
Plug Style



Ordering Information					Dimensions		
Connects To	Part Number*	Replacement Seals Bulk Pack (5)	Rebuild Kit	Pressure Rating	A	B	T
SAE ORFS   Swivel Style							
-4 [9/16-18]	MITH04K042	S1008B70	METR04	10000 (689)	2.11 (53.6)	0.80 (20.3)	1/8 MNPT
-6 [11/16-16]	MITH06K062	S20700291B70	METR06		2.36 (59.9)	0.97 (24.6)	1/4 MNPT
-8 [13/16-16]	MITH08K082	S1012B70	METR08	8000 (552)	2.54 (64.5)	1.18 (30.0)	3/8 MNPT
-10 [1-14]	MITH10K122	S1014B70	METR12	7500 (517)	2.94 (76.7)	1.38 (35.1)	1/2 MNPT
-12 [1 3/16-12]	MITH12K122	S1113B70	METR12	7500 (517)	3.30 (83.8)	1.72 (43.7)	3/4 MNPT
-16 [1 7/16-12]	MITH16K162	S1117B70	METR16	7000 (483)	3.77 (95.8)	2.13 (54.1)	1 MNPT

SAE ORFS   Plug Style							
-4 [7/16-20]	MITH04KP	S1008B70	METR04	10000 (689)	1.42 (36.1)	0.80 (20.3)	N/A  (Plug Style No Termination Port)
-6 [9/16-18]	MITH06KP	S20700291B70	METR06		1.51 (38.4)	0.97 (24.6)	
-8 [3/4-16]	MITH08KP	S1012B70	METR08	8000 (552)	1.65 (41.9)	1.18 (30.0)	
-10 [7/8-14]	MITH10KP	S1014B70	METR12	7500 (517)	1.86 (47.2)	1.38 (35.1)	
-12 [1 1/16-12]	MITH12KP	S1113B70	METR12	7500 (517)	2.03 (51.6)	1.72 (43.7)	
-16 [1 5/16-12]	MITH16KP	S1117B70	METR16	7000 (483)	2.29 (58.2)	2.13 (54.1)	

Dimensions: inch (mm)  
Pressure Rating: psi (bar)

\*Optional seal materials include V = FKM, E = EPDM, and B = Buna-N - Example: MITH04K042V = FKM

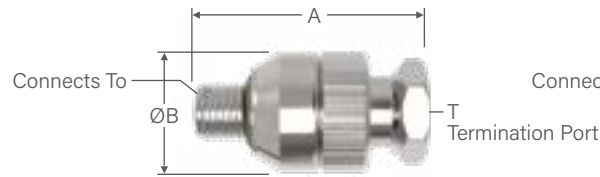
Port Specifications: SAE ORFS per SAE J1453

# MIT / INTERNAL CONNECTIONS / ISO O-RING METRIC

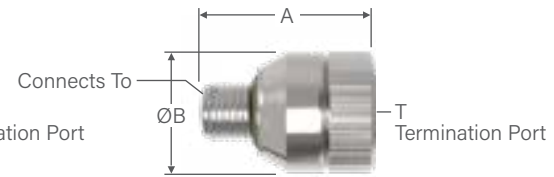
Swivel Style  
Non-Swivel Style  
Plug Style



Swivel Style



Non-Swivel Style / Plug Style



Ordering Information					Dimensions		
Connects To	Part Number	Replacement Seals Bulk Pack (5)	Rebuild Kit	Pressure Rating	A	B	T
ISO O-Ring Metric   Swivel Style							
M10 x 1.0	MIT108021	S1109B70	MITR020	4000 (276)	1.76 (44.7)	0.82 (21.8)	1/8 FNPT
M12 x 1.5	MIT128021	S1110U70	MITR040		1.95 (49.5)	1.00 (25.4)	1/8 FNPT
M14 x 1.5	MIT148041	S1111U70	MITR040		1.84 (46.7)	1.00 (25.4)	1/4 FNPT
M16 x 1.5	MIT168061	S1113U70	MITR060		2.11 (53.6)	1.18 (30.0)	3/8 FNPT
M18 x 1.5	MIT188061	S1114U70	MITR060		2.16 (54.9)	1.18 (30.0)	3/8 FNPT
M20 x 1.5	MIT208081	S1209U70	MITR080		2.57 (65.3)	1.36 (34.5)	1/2 FNPT
M22 x 1.5	MIT228081	S1116U70	MITR080		2.55 (64.8)	1.37 (34.8)	1/2 FNPT
ISO O-Ring Metric   Non-Swivel Style							
M10 x 1.0	MIT108021X	S1109U70	MITR02	5000 (345)	1.30 (33.0)	0.82 (21.8)	1/8 FNPT
M12 x 1.5	MIT128041X	S1110U70	MITR04		1.37 (34.8)	1.00 (25.4)	1/4 FNPT
M14 x 1.5	MIT148041X	S1111U70	MITR04		1.37 (34.8)	1.00 (25.4)	1/4 FNPT
M16 x 1.5	MIT168061X	S1113U70	MITR06	4000 (276)	1.50 (38.1)	1.18 (30.0)	3/8 FNPT
M18 x 1.5	MIT188061X	S1114U70	MITR06		1.56 (39.6)	1.18 (30.0)	3/8 FNPT
M20 x 1.5	MIT208081X	S1209U70	MITR08		1.85 (47.0)	1.36 (34.5)	1/2 FNPT
M22 x 1.5	MIT228081X	S1116U70	MITR08		1.85 (47.0)	1.36 (34.5)	1/2 FNPT
ISO O-Ring Metric   Plug Style							
M10 x 1.0	MIT108P	S1109U70	MITR02	5000 (345)	1.29 (32.8)	0.82 (21.8)	N/A  (Plug Style No Termination Port)
M12 x 1.5	MIT128P	S1111U70	MITR04		1.37 (34.8)	1.00 (25.4)	
M14 x 1.5	MIT148P	S1113U70	MITR06	4000 (276)	1.37 (34.8)	1.00 (25.4)	
M16 x 1.5	MIT168P	S1209U70	MITR08		1.50 (38.1)	1.18 (30.0)	
M18 x 1.5	MIT188P	S1213U70	MITR12		1.56 (39.6)	1.31 (33.3)	
M20 x 1.5	MIT208P	S1209U70	MITR08		1.85 (47.0)	1.36 (34.5)	
M22 x 1.5	MIT228P	S1216U70	MITR16		1.82 (46.2)	1.37 (34.8)	

Dimensions: inch (mm)

Pressure Rating: psi (bar)

\*Optional seal materials include V = FKM, E = EPDM, and B = Buna-N - Example: MIT108021V = FKM

**Port Specifications:** ISO O-RING METRIC per ISO 6149 or SAE J2244



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A detailed close-up photograph of industrial machinery, likely a pump or engine component. The image shows various metal parts, including a large curved pipe with embossed markings such as "274 200 02 56 JP" and "6104". A black flexible hose is connected to the machinery. On the right side, a pair of metal pliers is visible, gripping a component. The overall scene is industrial and technical.

# **EXTERNAL CONNECTIONS**





# ZF / EXTERNAL SEALING CONNECTION TOOL

Wide tolerance sealing connection tool for formed tubes.

**CONNECTS TO:**

Beaded    Barbed    Formed



**SPECIFICATIONS**

Pressure Rating	Operating Temperatures	Materials of Construction
Vacuum to 300 psi (21 bar)	0°F to +200°F (-17°C to +93°C)	Anodized Aluminum
Termination Port		Seal Material*
1/8 NPT to 3/8 NPT		Main seal: Neoprene Internal seal: Buna-N

\* Additional seal material types available, consult factory.

**ACTUATION METHOD**

**Manual Sleeve:** Easy, ergonomic sleeve action eliminates repetitive twisting and turning - push to connect, pull to release

**INTELLIGENT CONNECTION TECHNOLOGY**

Consult Factory

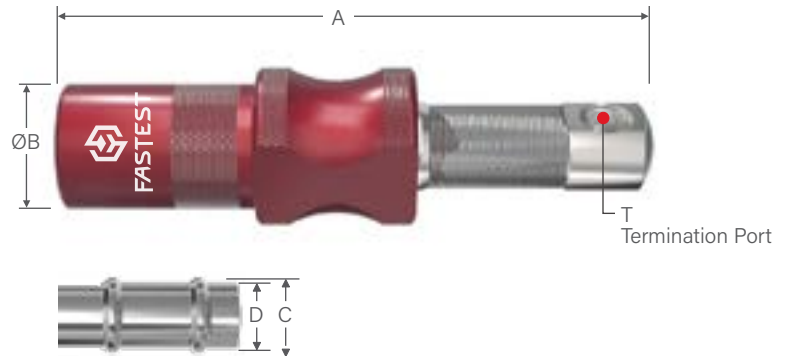
**ACCESSORIES**

Visit [fastestinc.com](http://fastestinc.com)

- 1 Wide tolerance seal design provides fit to a range of tube diameters
- 2 Color coded handles to assist operator in proper tool identification
- 3 Self aligning connector requires no operator adjustment
- 4 Quick and easy seal replacement to minimize down time, maintenance, and tool inventory



# ZF / EXTERNAL SEALING CONNECTION TOOL



Ordering Information						Dimensions		
Connects To:		Part Number	Seal Kit	Rebuild Kit	Pressure Rating	A	B	T
Bead Dia. Range (C)	Tube Dia. Range (D)							
0.310 to 0.400 (7.9 to 10.2)	0.25 to 0.34 (6.5 to 8.7)	ZF1	SZF1	RZF1	300 (21)	4.60 (116.8)	0.98 (24.8)	1/8 NPT
0.400 to 0.490 (10.2 to 12.4)	0.34 to 0.44 (8.7 to 11.0)	ZF2	SZF2	RZF2		4.90 (124.5)	1.14 (28.9)	1/8 NPT
0.490 to 0.580 (12.4 to 14.7)	0.44 to 0.52 (11.0 to 13.2)	ZF3	SZF3	RZF3		4.96 (126.0)	1.23 (31.2)	1/4 NPT
0.580 to 0.670 (14.7 to 17.0)	0.52 to 0.61 (13.2 to 15.5)	ZF4	SZF4	RZF4		5.18 (131.6)	1.38 (35.0)	1/4 NPT
0.670 to 0.760 (17.0 to 19.3)	0.61 to 0.70 (15.5 to 17.8)	ZF5	SZF5	RZF5	250 (17)	5.25 (133.0)	1.55 (39.4)	3/8 NPT

Dimensions: inch (mm)  
Pressure Rating: psi (bar)

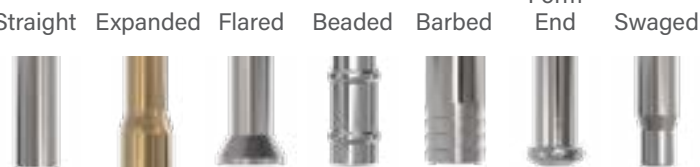


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# FE / EXTERNAL SEALING CONNECTION TOOL

Pneumatic sealing connection tool for external sealing in automated and semi-automated processes.

### CONNECTS TO:



### SPECIFICATIONS

Pressure Rating	Pilot Pressure	Operating Temperatures**
Vacuum to 500 psi (34 bar)	60 psi (4.1 bar)	0°F to +200°F (-17°C to +93°C)
Termination Port	Materials of Construction	Seal Material*
Female 10-32 UNF, M5X8, NPT/BSPP (G): 1/8 to 2 1/2	Anodized Aluminum, Stainless Steel, Potted PCA	Standard: Neoprene, Urethane Optional: FKM, Buna-N, EPDM, FDA White Neoprene



\* Additional seal material types available, consult factory.  
\*\* Operating Temp: 32°F-100°F (0°C-38°C) for ICON™.

**i** Sealing Connection Tool and test part should be rigidly fixtured to prevent separation when under pressure (fixture not required for vacuum applications).

### ACTUATION METHOD

**Pneumatic:** Pilot pressure applied to seals with no metal contact and uniform seal movement seals inside tubes and pipes with no marring.

### ICON™ TECHNOLOGY

-  SURE SEAL™
-  SEAL LIFE™

ACCESSORIES FOR DETAILS, SEE PG. 64



Pilot Booster

- 1** Automated processes and high volume production testing including pick-and-place and delicate robotic handling applications
- 2** Capable of sealing conventional and unique sealing surfaces including threads with the addition of a pilot booster (see page p. 64)
- 3** Quick change seal sets to accommodate multiple sizes of tubing and easy field maintenance - use neoprene for standard sealing, use urethane for maximum abrasion resistance / high pressure and duty cycle applications



# ICON™

## INTELLIGENT CONNECTION TECHNOLOGY

FasTest's ICON™ adds sensing capabilities to our mechanical Sealing Connection Tools. ICON™ Tools include instant LED visual feedback and data output to improve sealing connection accuracy, maximize production efficiency, and optimize maintenance.



### ICON™ features:



#### SURE SEAL™

Instant LED feedback verifies a good connection prior to starting a test.



#### SEAL LIFE™

Alert when the main seal is at end of life and must be replaced.

### System Overview:

#### CONNECTED

Green indication of a good connection.

#### RECONNECT

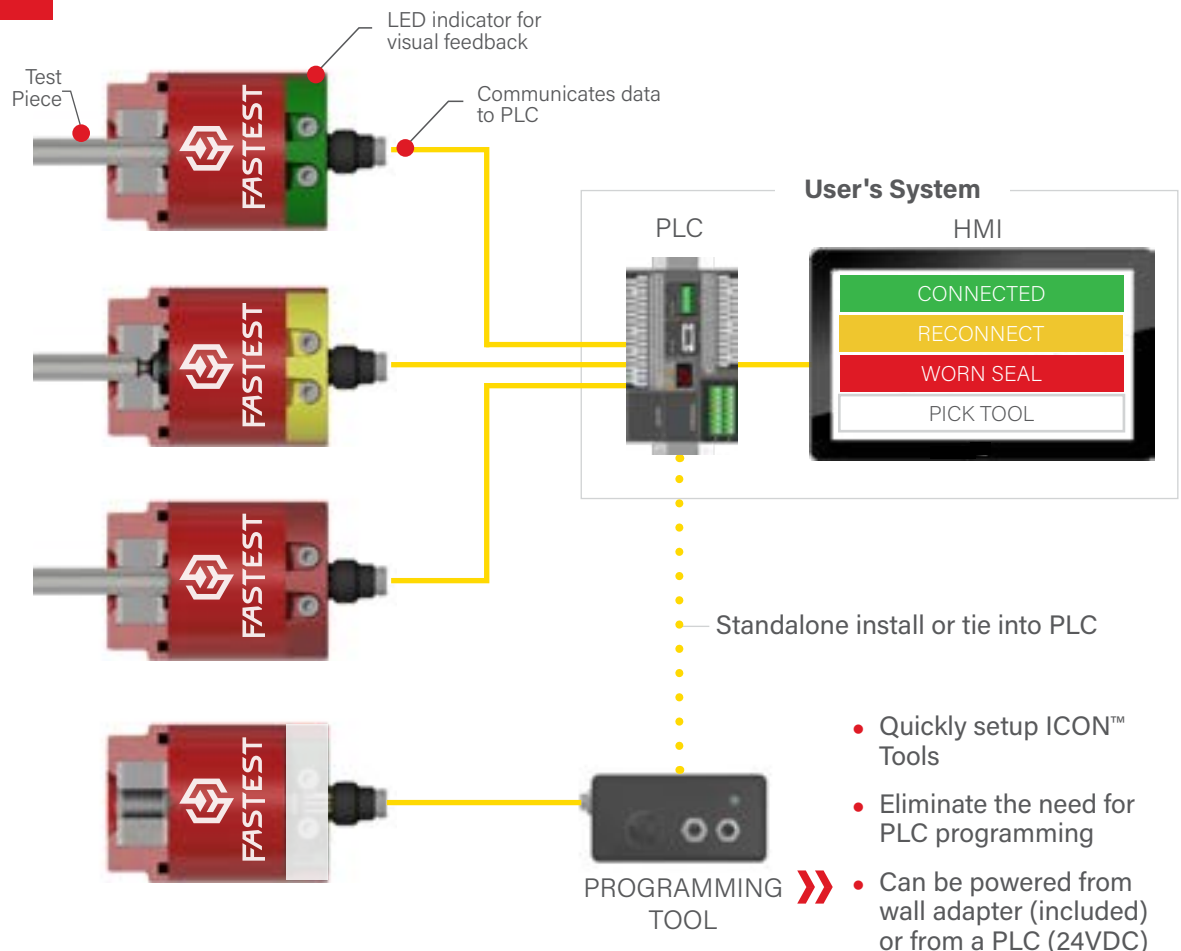
Recognize a connection issue before causing a false failure.

#### WORN SEAL

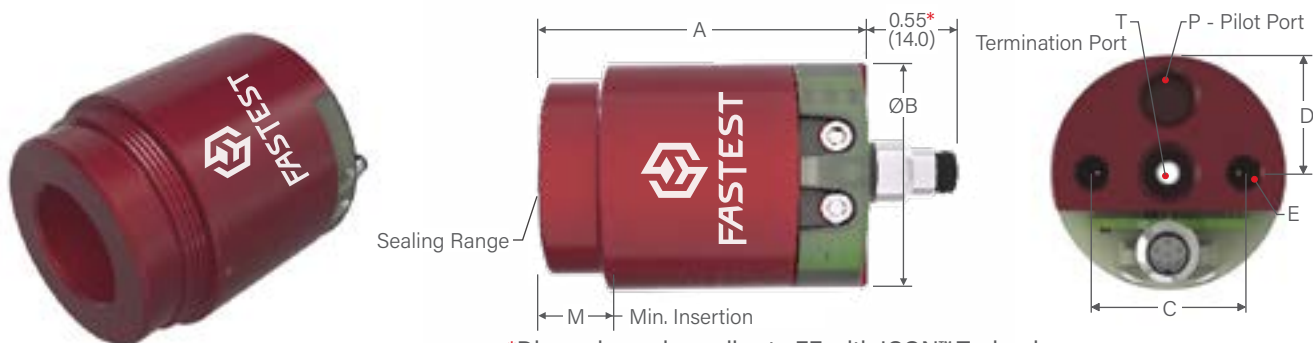
Alert when main seals should be replaced.

#### PICK TOOL

Controllable LED signals operator to use specific tool.



# FE / EXTERNAL SEALING CONNECTION TOOL / STRAIGHT TUBES & BORES



\*Dimension only applies to FE with ICON™ Technology  
(Base Part Numbers that include "CV04ANA" or "CV04SSR").

Ordering Information (Complete Connector = Main Seal Set + Base Part Number)					Dimensions							
Sealing Range	Main Seal Set*	Base Part Number	Replacement Seals Pack (5)	Rebuild Kit	A	B	C	D	E	M	P	T

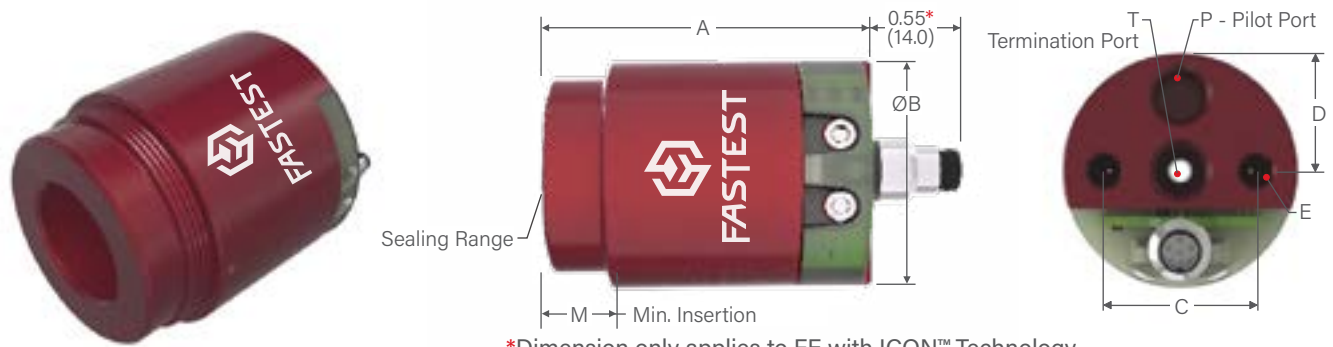
FE | Connectors for Straight Tubes

0.030 to 0.050	FE0010050		FEB0010050	FER001	1.72 (43.7)	0.84 (21.3)	0.63 (16.0)	N/A	4-40 UNC	0.16 (4.1)	10-32 UNF	1/8 NPT
0.050 to 0.080	FE001001		FEB001001									
0.080 to 0.130	FE001002		FEB001002									
0.100 to 0.180	FES0101	FE01 FE01CV04ANA FE01CV04SSR	FEB0101	FER01 FER01CV04ANA FER01CV04SSR	2.05 (52.1)	1.49 (37.8)	1.10 (27.9)	0.55 (14.0)	10-32 UNF	0.58 (14.7)	10-32 UNF	1/8 NPT
0.180 to 0.260	FES0102		FEB0102									
0.260 to 0.340	FES0103		FEB0103									
0.340 to 0.420	FES0104		FEB0104									
0.420 to 0.510	FES0105		FEB0105									
0.433 to 0.512	FES115	FE1 FE1CV04ANA FE1CV04SSR	FEB115	FER1 FER1CV04ANA FER1CV04SSR	2.72 (69.1)	2.22 (56.4)	1.62 (41.1)	0.81 (20.6)	1/4-28 UNF	0.61 (15.5)	1/8 NPT	1/4 NPT
0.512 to 0.591	FES116		FEB116									
0.591 to 0.669	FES117		FEB117									
0.669 to 0.750	FES118		FEB118									
0.750 to 0.827	FES119		FEB119									
0.787 to 0.866	FES221	FE2 FE2CV04ANA FE2CV04SSR	FEB221	FER2 FER2CV04ANA FER2CV04SSR	3.50 (88.9)	3.11 (79.0)	2.50 (63.5)	1.25 (31.8)	1/4-28 UNF	1.06 (26.9)	1/8 NPT	1/2 NPT
0.866 to 0.945	FES222		FEB222									
0.945 to 1.024	FES223		FEB223									
1.024 to 1.102	FES224		FEB224									
1.102 to 1.181	FES225		FEB225									
1.181 to 1.260	FES226		FEB226									
1.260 to 1.339	FES227		FEB227									
1.339 to 1.417	FES228		FEB228									
1.417 to 1.510	FES229		FEB229									
1.496 to 1.614	FES331	FE3 FE3CV04ANA FE3CV04SSR	FEB331	FER3 FER3CV04ANA FER3CV04SSR	4.48 (113.8)	4.23 (107.4)	3.25 (82.6)	1.63 (41.4)	1/4-28 UNF	1.64 (41.7)	1/8 NPT	1 NPT
1.614 to 1.732	FES332		FEB332									
1.732 to 1.850	FES333		FEB333									
1.850 to 1.969	FES334		FEB334									

Dimensions: inch (mm). Sealing Range listed in inches (1 in = 25.4 mm).

\*Includes seals(s) and metal parts for one complete seal set. Neoprene® seals are standard.  
For Urethane seals, add "UR" suffix to Main Seal Set Part Number. Example: FES0101UR

# FE / EXTERNAL SEALING CONNECTION TOOL / STRAIGHT TUBES & BORES



\*Dimension only applies to FE with ICON™ Technology  
(Base Part Numbers that include "CV04ANA" or "CV04SSR").

Ordering Information (Complete Connector = Main Seal Set + Base Part Number)					Dimensions							
Sealing Range	Main Seal Set*	Base Part Number	Replacement Seals Package (5)	Repair Kit	A	B	C	D	E	M	P	T
<b>FE   Connectors for Straight Tubes</b>												
1.969 to 2.087	FES441	FE4 FE4CV04ANA FE4CV04SSR	FEB441	FER4 FER4CV04ANA FER4CV04SSR	4.60 (116.8)	5.48 (139.2)	4.25 (108.0)	2.13 (54.1)	1/4-28 UNF	1.64 (41.7)	1/8 NPT	1 1/2 NPT
2.087 to 2.205	FES442		FEB442									
2.205 to 2.323	FES443		FEB443									
2.323 to 2.441	FES444		FEB444									
2.441 to 2.559	FES445		FEB445									
2.559 to 2.677	FES446		FEB446									
2.677 to 2.795	FES447		FEB447									
2.795 to 2.913	FES448		FEB448									
2.913 to 3.032	FES449	FE5 FE5CV04ANA FE5CV04SSR	FEB449	FER5 FER5CV04ANA FER5CV04SSR	4.60 (116.8)	6.98 (177.3)	5.50 (139.7)	2.25 (57.15)	3/8-24 UNF	1.64 (41.7)	1/8 NPT	2 NPT
2.970 to 3.100	FES551		FEB551									
3.100 to 3.230	FES552		FEB552									
3.230 to 3.360	FES553		FEB553									
3.360 to 3.490	FES554		FEB554									
3.490 to 3.620	FES555		FEB555									
3.620 to 3.750	FES556		FEB556									
3.750 to 3.880	FES557		FEB557									
3.880 to 4.010	FES558	FE6 FE6CV04ANA FE6CV04SSR	FEB558	FER6 FER6CV04ANA FER6CV04SSR	4.97 (126.2)	7.48 (190.0)	6.12 (155.4)	3.06 (77.7)	3/8-24 UNF	1.64 (41.7)	1/8 NPT	2 1/2 NPT
4.010 to 4.130	FES559		FEB559									
4.130 to 4.260	FES661		FEB661									
4.260 to 4.390	FES662		FEB662									
4.390 to 4.520	FES663		FEB663									
4.520 to 4.650	FES664		FEB664									
4.650 to 4.780	FES665		FEB665									
4.780 to 4.910	FES666		FEB666									
4.910 to 5.040	FES667		FEB667									

Dimensions: inch (mm). Sealing Range listed in inches (1 in = 25.4 mm).

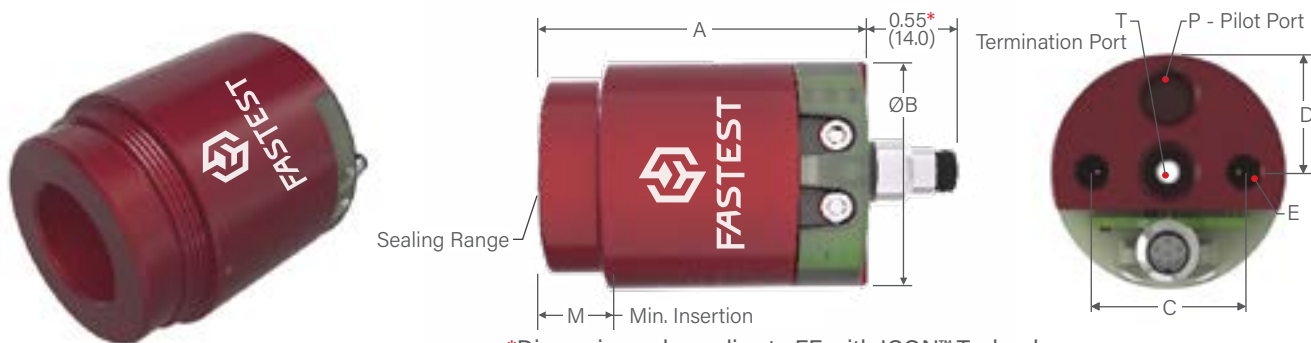
\*Includes seals(s) and metal parts for one complete seal set. Neoprene seals are standard. For Urethane seals, add "UR" suffix to Main Seal Set Part Number. Example: FES0101UR



**DON'T SEE A SOLUTION FOR YOUR APPLICATION?** Submit a custom application form and drawing to [fastsales@fastestinc.com](mailto:fastsales@fastestinc.com) or to your local distributor.



# FE / EXTERNAL SEALING CONNECTION TOOL / NPT, BSPP (G), & BSPT THREADS



\*Dimension only applies to FE with ICON™ Technology (Base Part Numbers that include "CV04ANA" or "CV04SSR").

Ordering Information (Complete Connector = Main Seal Set + Base Part Number)					Dimensions							
Connects To	Main Seal Set*	Base Part Number	Replacement Seals Pack (5)	Rebuild Kit	A	B	C	D	E	M	P	T

FE | Connectors for NPT, BSPP (G) and BSPT Threads

1/8	FES011/8NPT	FE01 FE01CV04ANA FE01CV04SSR	FEB011/8 NPT	FER01	1.72 (43.7)	0.84 (21.3)	0.63 (16.0)	N/A	10-32 UNF	0.58 (14.7)	10-32 UNF	1/8 NPT
1/4	FES11/4NPT	FE1 FE1CV04ANA FE1CV04SSR	FEB11/4NPT	FER1	2.72 (69.1)	2.22 (56.4)	1.62 (41.1)	0.81 (20.6)	1/4-28 UNF	0.61 (15.5)	1/8 NPT	1/4 NPT
3/8	FES13/8NPT	FE1 FE1CV04ANA FE1CV04SSR	FEB13/8NPT									
1/2	FES21/2NPT	FE2 FE2CV04ANA FE2CV04SSR	FEB21/2NPT	FER2	3.50 (88.9)	3.11 (79.0)	2.50 (63.5)	1.25 (31.8)	1/4-28 UNF	0.89 (22.6)	1/8 NPT	1/2 NPT
3/4	FES23/4NPT	FE2 FE2CV04ANA FE2CV04SSR	FEB23/4NPT									
1	FES21NPT	FE2 FE2CV04ANA FE2CV04SSR	FEB21NPT									
1-1/4	FES311/4NPT	FE3 FE3CV04ANA FE3CV04SSR	FEB311/4NPT	FER3	4.48 (113.8)	4.23 (107.4)	3.25 (82.6)	1.63 (41.4)	1/4-28 UNF	0.89 (22.6)	1/8 NPT	1 NPT
1-1/2	FES311/2NPT	FE3 FE3CV04ANA FE3CV04SSR	FEB311/2NPT									
2	FES42NPT	FE4 FE4CV04ANA FE4CV04SSR	FEB42NPT	FER4	4.60 (116.8)	5.48 (139.2)	4.25 (108.0)	2.13 (54.1)	1/4-28 UNF	0.89 (22.6)	1/8 NPT	1 1/2 NPT
2-1/2	FES421/2NPT	FE4 FE4CV04ANA FE4CV04SSR	FEB421/2NPT									

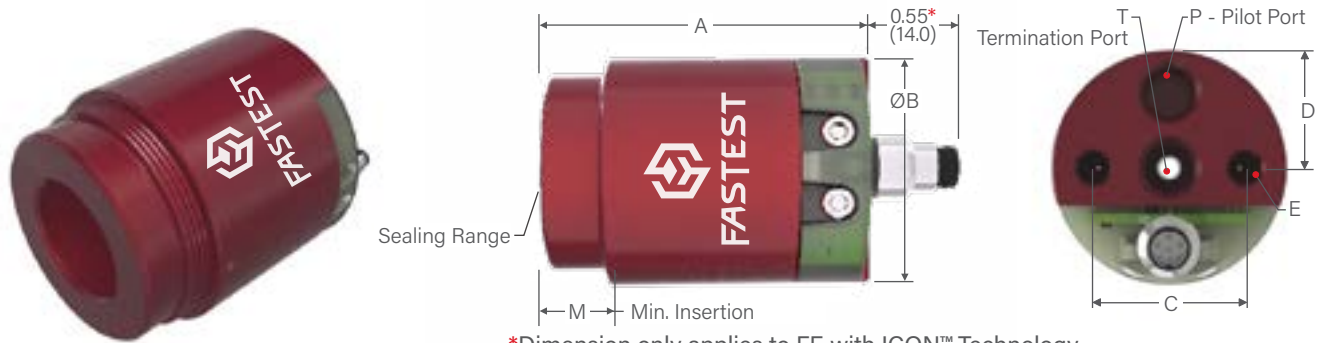
Dimensions: inch (mm)

\*Includes seals(s) and metal parts for one complete seal set. Urethane seals are standard.

**Port Specifications:** NPT per SAE J476; BSPP (G) per ISO 228; BSPT per ISO 7

**NOTE:** For sealing external threads or irregular shapes with the FE connectors, typically 400 to 600 psi (27.6-41.4 bar) pilot pressure is required to seal deep rooted external threads (see pg. 64 Pilot Booster).  
DO NOT use a pilot booster with FI connectors.

# FE / EXTERNAL SEALING CONNECTION TOOL / SAE O-RING BOSS PORT THREADS



\*Dimension only applies to FE with ICON™ Technology  
(Base Part Numbers that include "CV04ANA" or "CV04SSR").

Ordering Information (Complete Connector = Main Seal Set + Base Part Number)					Dimensions							
Connects To	Main Seal Set*	Base Connector Part Number	Replacement Seals Package (5)	Rebuild Kit	A	B	C	D	E	M	P	T

FE | Connectors for Male Inch Straight Threads

7/16	FES010450UR	FE01 FE01CV04ANA FE01CV04SSR	FEB010450UR	FER01 FER01CV04ANA FER01CV04SSR	2.05 (52.1)	1.49 (37.8)	1.10 (27.9)	0.55 (14.0)	10-32 UNF	0.58 (14.7)	10-32 UNF	1/8 NPT
1/2	FES10510UR	FE1 FE1CV04ANA FE1CV04SSR	FEB10510UR	FER1 FER1CV04ANA FER1CV04SSR	2.72 (69.1)	2.22 (56.4)	1.62 (41.1)	0.81 (20.6)	1/4-28 UNF	0.61 (15.5)	1/8 NPT	1/4 NPT
9/16	FES10570UR		FEB10570UR									
5/8	FES10640UR		FEB10640UR									
11/16	FES10700UR		FEB10700UR									
3/4	FES2T0760UR	FE2 FE2CV04ANA FE2CV04SSR	FEB2T0760UR	FER1 FER1CV04ANA FER1CV04SSR	3.50 (88.9)	3.11 (79.0)	2.50 (63.5)	1.25 (31.7)	1/4-28 UNF	0.69 (17.5)	1/8 NPT	1/2 NPT
13/16	FES2T0800UR		FEB2T0800UR									
7/8	FES2T0885UR		FEB2T0885UR									
1	FES2T1010UR		FEB2T1010UR									
1-1/16	FES23/4NPT		FEB23/4NPT									
1-3/16	FES2T1200UR		FEB2T1200UR									
1-1/4	FES2T1260UR		FEB2T1260UR									
1-5/16	FES21NPT		FEB21NPT									
1-3/8	FES2T1385UR		FEB2T1385UR									
1-7/16	FEST1460UR	FE3 FE3CV04ANA FE3CV04SSR	FEBT1460UR	FER3 FER3CV04ANA FER3CV04SSR	4.48 (113.8)	4.23 (107.4)	3.25 (82.6)	1.63 (41.4)	1/4-28 UNF	0.89 (22.6)	1/8 NPT	1 NPT
1-5/8	FEST1640UR		FEBT1640UR									
1-11/16	FEST1710UR		FEBT1710UR									
1-7/8	FEST1890UR		FEBT1890UR									
2	FES4T2020UR	FE4 FE4CV04ANA FE4CV04SSR	FEB4T2020UR	FER3 FER3CV04ANA FER3CV04SSR	4.60 (116.8)	5.48 (139.2)	4.25 (108.0)	2.13 (54.1)	1/4-28 UNF	0.89 (22.6)	1/8 NPT	1 1/2 NPT
2-1/2	FES4T2520UR		FEB4T2520UR									

Dimensions: inch (mm)

\*Includes seals(s) and metal parts for one complete seal set. Urethane seals are standard.

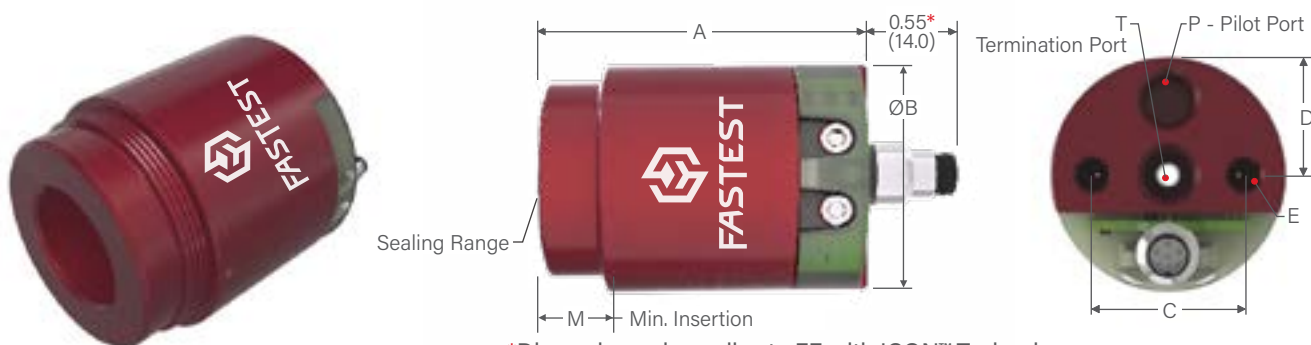
**Port Specifications:** O-Ring Port per SAE J1453; JIC 37° Flare per SAE J514; 45° Flare per SAE J512/513; 24° Cone per SAE J514

**NOTE:** For sealing external threads or irregular shapes with the FE connectors, typically 400 to 600 psi (27.6-41.4 bar) pilot pressure is required to seal deep rooted external threads (see pg. 64 Pilot Booster).  
DO NOT use a pilot booster with FI connectors.



**DON'T SEE A SOLUTION FOR YOUR APPLICATION?** Submit a custom application form and drawing to [fastsales@fastestinc.com](mailto:fastsales@fastestinc.com) or to your local distributor.

# FE / EXTERNAL SEALING CONNECTION TOOL / METRIC STRAIGHT THREADS



\*Dimension only applies to FE with ICON™ Technology  
(Base Part Numbers that include "CV04ANA" or "CV04SSR").

Ordering Information (Complete Connector = Main Seal Set + Base Part Number)					Dimensions							
Connects To	Main Seal Set*	Base Connector Part Number	Replacement Seals Package (5)	Rebuild Kit	A	B	C	D	E	M	P	T

FE | Connectors for Metric Straight Threads

M10	FES011/8NPT	FEM01 FEM01CV04ANA FEM01CV04SSR	FEB011/8NPT	FER01 FER01CV04ANA FER01CV04SSR	2.05 (52.1)	1.49 (37.8)	1.10 (27.9)	0.55 (14.0)	M5 x 1.0	0.58 (14.7)	M5 x 1.0	1/8 BSPP (G)
M12	FES10480UR	FEM1 FEM1CV04ANA FEM1CV04SSR	FEB10480UR	FER1 FER1CV04ANA FER1CV04SSR	2.72 (69.1)	2.22 (56.4)	1.62 (41.1)	0.81 (20.6)	M6 x 1.0	0.61 (15.5)	1/8 BSPP (G)	1/4 BSPP (G)
M14	FES10570UR		FEB10570UR									
M16	FES10640UR		FEB10640UR									
M18	FES10720UR	FEM2 FEM2CV04ANA FEM2CV04SSR	FEB10720UR	FER2 FER2CV04ANA FER2CV04SSR	3.50 (88.9)	3.11 (79.0)	2.50 (63.5)	1.25 (31.8)	M6 x 1.0	0.69 (17.5)	1/8 BSPP (G)	1/2 BSPP (G)
M20	FES2T0800UR		FEB2T0800UR									
M22	FES2T21UR		FEB2T21UR									
M24	FES2T22UR		FEB2T22UR									
M26	FES2T23UR		FEB2T23UR									
M27	FES2T1075UR		FEB2T1075UR									
M28	FES2T24UR		FEB2T24UR									
M30	FES2T25UR		FEB2T25UR									
M33	FES2T1320UR	FEM3 FEM3CV04ANA FEM3CV04SSR	FEB2T1320UR	FER3 FER3CV04ANA FER3CV04SSR	4.48 (113.8)	4.23 (107.4)	3.25 (82.6)	1.63 (41.4)	M6 x 1.0	0.89 (22.6)	1/8 BSPP (G)	1 BSPP (G)
M35	FES2T1400UR		FEB2T1400UR									
M36	FEST1440UR		FEBT1440UR									
M40	FEST1595UR		FEBT1595UR									
M42	FEST1675UR	FEM4 FEM4CV04ANA FEM4CV04SSR	FEBT1675UR	FER4 FER4CV04ANA FER4CV04SSR	4.60 (116.8)	5.48 (139.2)	4.25 (108.0)	2.13 (54.1)	M6 x 1.0	0.89 (22.6)	1/8 BSPP (G)	1 1/2 BSPP (G)
M45	FEST1790UR		FEBT1790UR									
M48	FES4T1910UR		FEB4T1910UR									
M52	FES4T2070UR	FEM4 FEM4CV04ANA FEM4CV04SSR	FEB4T2070UR	FER4 FER4CV04ANA FER4CV04SSR	4.60 (116.8)	5.48 (139.2)	4.25 (108.0)	2.13 (54.1)	M6 x 1.0	0.89 (22.6)	1/8 BSPP (G)	1 1/2 BSPP (G)
M60	FES4T2380UR		FEB4T2380UR									

Dimensions: inch (mm)

\*Includes seals(s) and metal parts for one complete seal set. Urethane seals are standard.

**Port Specifications:** 24° Cone Flareless per ISO 8434-1 and -4, JIS B2353, DIN3902/3853/3861. 60° Cone per DIN 7831/7647.

**NOTE:** For sealing external threads or irregular shapes with the FE connectors, typically 400 to 600 psi (27.6-41.4 bar) pilot pressure is required to seal deep rooted external threads (see pg. 64 Pilot Booster).  
DO NOT use a pilot booster with FI connectors.

## FE / ACCESSORIES

### Pilot Booster PBA02

The Pilot Pressure Booster is an air over oil pressure intensifier. It uses 30-65psi (2.1-4.5bar) air pressure to generate 400-600psi (27.6-41.4bar) hydraulic pressure for sealing external threads and irregular surfaces with the FE Sealing Connection Tool. A sealing system consisting of an FE with a urethane main seal and the PB1015 Pressure Booster can produce the seal movement and long life performance needed in production testing applications.

Urethane sealing material is superior to Neoprene® material in high pressure, high abrasion, and high cycle applications. The increased elastomer movement required for sealing irregular shapes or into threads requires urethane seal material. Up to 600 psi pilot pressure is needed to seal deep root external threads. Production testing of threads and hard to seal surfaces can now be automated using the Pilot Pressure Booster and a proper sized urethane seal set in an FE.

**DO NOT USE WITH FI.**



### SPECIFICATIONS

Ordering Information	
Part Number	Description
PB1015	Pilot Pressure Booster
PBH32	1 quart hydraulic oil, 60 SSU petroleum based
A02M3	Manifold - 1/8" FNPT inlet with three 1/8" FNPT outlets
A02M4	Manifold - 1/8" FNPT inlet with four 1/8" FNPT outlets
A02M5	Manifold - 1/8" FNPT inlet with five 1/8" FNPT outlets
AT021R	Run Tee - 1/8" NPT
H012X036	Hose - 10-32 male x 1/8" NPT male - 36" length
H012X072	Hose - 10-32 male x 1/8" NPT male - 72" length
H022X018	Hose - 1/8" NPT male x 1/8" NPT male - 18" length
H022X036	Hose - 1/8" NPT male x 1/8" NPT male - 36" length
H022X072	Hose - 1/8" NPT male x 1/8" NPT male - 72" length
PBA01	1 quart hydraulic oil, 0-600 psi Gauge, Run Tee, Hose - 10-32 male by 1/8" MNPT - 72" length
PBA02	1 quart hydraulic oil, 0-600 psi Gauge, Run Tee, Hose - 1/8" MNPT by 1/8" MNPT - 72" length

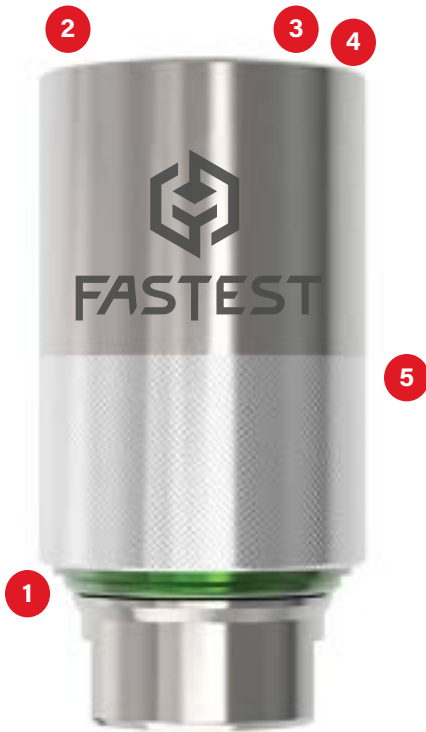
Seals	Material	Inlet Port	
Buna-N	Aluminum	1/4 NPT	
Inlet Pressure	Outlet Pressure	Pressure Ratio	Displacement
65 psi max.	600 psi (41.4 bar)	9.2 to 1	1.5 in. <sup>3</sup>

Booster Guidelines
FE01 - 8 Connectors
FE1 - 4 Connectors
FE2 - 2 Connectors
FE3 - 1 Connector
FE4 - 1 Connector

# 60 / EXTERNAL SEALING CONNECTION TOOL

Sleeve actuated external grip and seal connection tool for threaded applications.

### CONNECTS TO:



### SPECIFICATIONS

Pressure Rating	Operating Temperatures	Materials of Construction
Vacuum to 750 psi (51 bar)	-40°F to +250°F (-40°C to +121°C)	Stainless Steel, Anodized Aluminum
Termination Port		Seal Material*
NPT, BSPP (G)		Buna-N

\* Additional seal material types available, consult factory.

### ACTUATION METHOD

**Manual Sleeve:** Easy, ergonomic sleeve action eliminates repetitive twisting and turning - push to connect, pull to release

### ICON™ TECHNOLOGY

Consult Factory

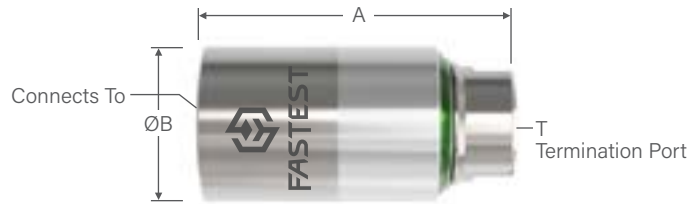
### ACCESSORIES

Visit [Fastestinc.com](http://Fastestinc.com)

- 1 SurConnect™ - Green to go visible indicator to ensure complete connection
- 2 Instant external threaded connection with floating piston to ensure proper face / ID sealing position
- 3 Collet design locks securely into external threads or behind the threads
- 4 Connect and seal to compression fittings, NPT, SAE 37° "AN" and 45° flare male threads - custom sizes also available
- 5 Internal shut-off valve option stops flow upon disconnection



# 60 / EXTERNAL SEALING CONNECTION TOOL



Ordering Information				Dimensions		
Connects To	Part Number	Replacement Seals Bulk Pack (5)	Rebuild Kits	A	B	T

## 60 Series | Sleeve Actuated for NPT Threads

1/8 NPT	60G1T02	S1105B70	R60G03	2.95 (74.9)	1.19 (30.2)	1/8 NPT/BSPP (G)
1/4 NPT	60G1T04	S1109B70	R60GBG3			1/4 NPT/BSPP (G)
3/8 NPT	60G1T06	S1110B70	R60GBG4	3.15 (80.0)	1.38 (35.0)	3/8 NPT/BSPP (G)
1/2 NPT	60G1T08	S1112B70	R60GBG5		1.58 (40.1)	1/2 NPT/BSPP (G)
3/4 NPT	60G1T12	S1115B70	R60GBG6	3.54 (89.9)	1.78 (45.2)	3/4 NPT/BSPP (G)
1 NPT	60G1T16	S1212B70	R60GBG7		1.97 (50.0)	

## 60 Series | Sleeve Actuated for AN SAE 37° Flare Threads

-4 [7/16-20]	60G049	S1010B70	R60GBG2	2.95 (74.9)	0.99 (25.2)	1/8 NPT/BSPP (G)
-6 [9/16-18]	60G069	S1012B70	R60GBG3		1.19 (30.2)	1/4 NPT/BSPP (G)
-8 [3/4-16]	60G089	S1014B70	R60GBG4	3.15 (80.0)	1.38 (35.0)	3/8 NPT/BSPP (G)
-10 [7/8-14]	60G109	S1016B70	R60G05		1.58 (40.1)	1/2 NPT/BSPP (G)
-12 [1-1/16-12]	60G129	S1116B70	R60GBG6	3.54 (89.9)	1.78 (45.2)	3/4 NPT/BSPP (G)
-16 [1-5/16-12]	60G169	S1120B70	R60GBG7		1.97 (50.0)	3/4 NPT/BSPP (G)

## 60 Series | Sleeve Actuated for SAE 45° Flare Threads

-4 [7/16-20]	60GA04	S1010B70	R60GBG2	2.95 (74.9)	0.99 (25.2)	1/8 NPT/BSPP (G)
-6 [5/8-18]	60GA06	S1012B70	R60GBG4	3.15 (80.0)	1.38 (35.0)	3/8 NPT/BSPP (G)
-8 [3/4-16]	60GA08	S1014B70	R60GBG4			
-10 [7/8-14]	60GA10	S1016B70	R60GBG5	3.15 (80.0)	1.58 (40.1)	1/2 NPT/BSPP (G)
-12 [1-1/16-14]	60GA12	S1117B70	R60GBG6	3.54 (89.9)	1.78 (45.2)	3/4 NPT/BSPP (G)
-14 [1-1/4-12]	60GA14	Consult Factory				
-16 [1-3/8-12]	60GA16					

Dimensions: inch (mm)

**NOTE:** Table above shows common connections. Additional sizes available for 60 Series connectors. Consult factory for details.

**Port Specifications:** NPT per SAE J476; SAE 37° Flare per SAE J514; SAE 45° Flare per SAE J512/513



**DON'T SEE A SOLUTION FOR YOUR APPLICATION?** Submit a custom application form and drawing to [fastsales@fastestinc.com](mailto:fastsales@fastestinc.com) or to your local distributor.

# 70 / EXTERNAL SEALING CONNECTION TOOL

Custom sleeve actuated external grip and seal connection tool for formed tube applications.

## CONNECTS TO:



## SPECIFICATIONS

Pressure Rating	Operating Temperatures	Materials of Construction
Vacuum to 750 psi (51 bar)	-40°F to +250°F (-40°C to +121°C)	Stainless Steel, Anodized Aluminum
Termination Port		Seal Material*
NPT, BSPP (G)		Buna-N

\* Additional seal material types available, consult factory.

## ACTUATION METHOD

**Manual Sleeve:** Easy, ergonomic sleeve action eliminates repetitive twisting and turning - push to connect, pull to release

## ICON™ TECHNOLOGY

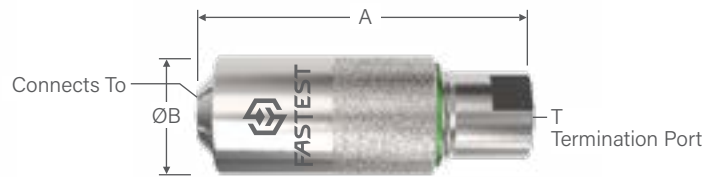
Consult Factory

## ACCESSORIES

Visit website: [fastestinc.com](http://fastestinc.com)

- 1 SurConnect™ - Green to go visible indicator to ensure complete connection
- 2 Instant external threaded connection with floating piston to ensure proper OD / face / ID sealing position
- 3 Collet design locks securely into external threads or behind the threads
- 4 Connect and seal to expanded, flared, beaded, barbed and formed end tubing - custom built per application
- 5 Internal shut-off valve option stops flow upon disconnection

# 70 / EXTERNAL SEALING CONNECTION TOOL



Ordering Information			Dimensions		
Sealing Range	Part Number	Main Seal Package	A	B	T
Up to 0.32 (8.0)	Determined by Application Consult Factory	Determined by Application Consult Factory	2.91 (74.0)	0.87 (22.0)	1/8 NPT/BSPP (G)
0.32 to 0.43 (8.0 to 11.0)				0.99 (25.0)	1/8 NPT/BSPP (G)
0.43 to 0.59 (11.0 to 15.0)				1.19 (30.0)	1/4 NPT/BSPP (G)
0.59 to 0.79 (15.0 to 20.0)			3.15 (80.0)	1.38 (35.0)	3/8 NPT/BSPP (G)
0.79 to 0.98 (20.0 to 25.0)				1.58 (40.0)	1/2 NPT/BSPP (G)
0.98 to 1.18 (25.0 to 30.0)			3.54 (90.0)	1.78 (45.0)	3/4 NPT/BSPP (G)
1.18 to 1.42 (30.0 to 36.0)				1.97 (50.0)	3/4 NPT/BSPP (G)
1.42 to 1.65 (36.0 to 42.0)				2.17 (55.0)	3/4 NPT/BSPP (G)
1.65 to 1.85 (42.0 to 47.0)			4.28 (109.0)	2.36 (60.0)	1 NPT/BSPP (G)
1.85 to 2.04 (47.0 to 52.0)			3.92 (100.0)	2.75 (70.0)	1 1/4 NPT/BSPP (G)

Dimensions: inch (mm)

**NOTE:** Dimensions for reference.

## How to Order

The 70 Series connectors are designed, engineered and manufactured to your specific application requirements.

For part number and a price quotation:

- 1) Identify the gripping and sealing areas of your test piece.
- 2) Contact FasTest with information on test pressure, media and provide detailed drawing, including tolerances of test piece.
- 3) Two sample parts will be required at the time of order for final design and testing purposes.



**DON'T SEE A SOLUTION FOR YOUR APPLICATION?** Submit a custom application form and drawing to [fastsales@fastestinc.com](mailto:fastsales@fastestinc.com) or to your local distributor.

# JXL / EXTERNAL SEALING CONNECTION TOOL

Manual lever actuated external grip and seal connection tool for straight tube.

### CONNECTS TO:

Straight Swaged



### SPECIFICATIONS

Pressure Rating*	Operating Temperatures	Materials of Construction
10 mtorr (micron) to 1,000 psi (69 bar)	0°F to +200°F (-17°C to +93°C)	Anodized Aluminum, Stainless Steel, and Acetal (POM)
Termination Port		Seal Material**
1/8 to 1/4 NPT/BSPP (G)		Neoprene®

**i** \*Pressure rating based on metal test piece not exceeding 30 Rockwell C hardness. As a general guideline, surface must be 5 micro inches or greater. Surfaces less than 5 micro inches not recommended.

\*\*Additional seal material types available, consult factory.

### ACTUATION METHOD

**Lever Actuated:** Simply flip the ergonomic handle in either direction for ease of use

### ICON™ TECHNOLOGY

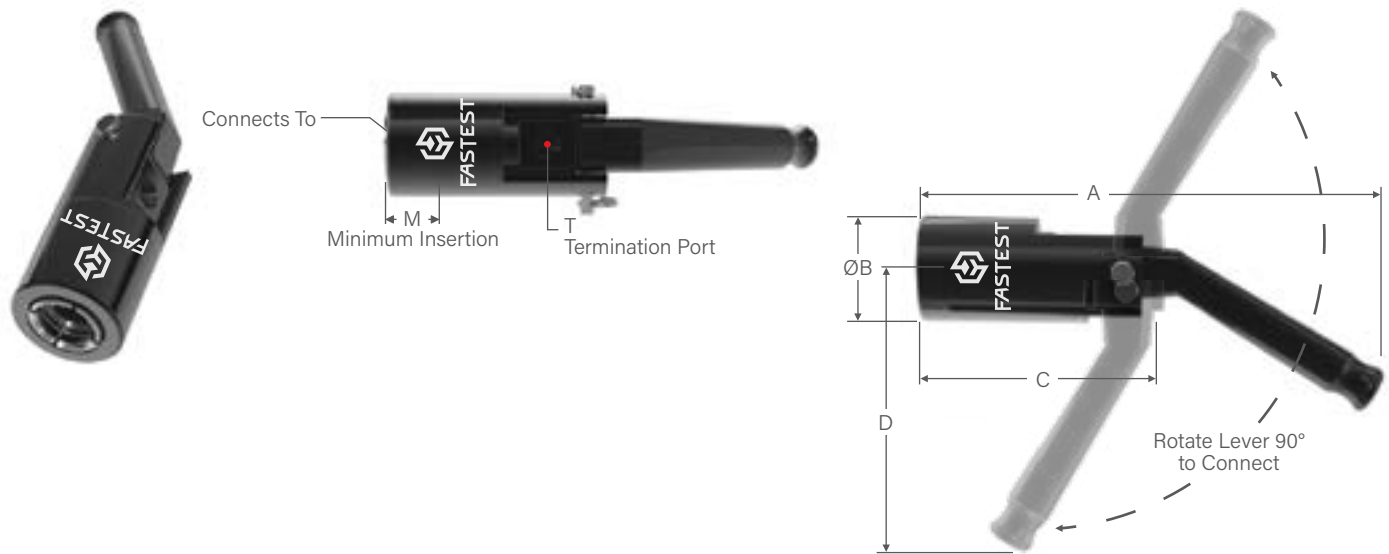
Consult Factory

### ACCESSORIES

Visit [fastestinc.com](http://fastestinc.com)

- 1** Pressure assisted sealing and gripping with internal safety lock feature resists accidental disconnection under high pressure if handle is released
- 2** Instant connection for copper, steel, and aluminum tubes commonly used in refrigeration and other industrial applications
- 3** Stainless steel collets provide maximum grip with minimum distortion of the test piece
- 4** Quick and easy seal replacement to minimize down time, maintenance, and tool inventory
- 5** Self aligning connector requires no operator adjustment

# JXL / EXTERNAL CONNECTION TOOL / IMPERIAL / METRIC EXTERNAL TUBES



Ordering Information			Dimensions						
Sealing Range	Part Number	Main Seal Set	A	B	C	D	M	T	Flow Diameter

## JXL0 and JXL1 | Lever Actuated Connectors for Imperial External Tubes

0.25 ± .010	JXL00250	SXL00250	7.27 (184.7)	1.13 (28.8)	3.65 (92.7)	4.22 (107.2)	0.79 (20.1)	1/8 NPT	0.24 (6.1)
0.312 ± .010	JXL00312	SXL00312							
0.375 ± .010	JXL00375	SXL00375							
0.500 ± .010	JXL00500	SXL00500		1.62 (41.2)	3.58 (90.9)		0.85 (21.6)	1/4 NPT	0.27 (6.9)
0.625 ± .010	JXL0625	SXL0625							
0.750 ± .010	JXL0750	SXL0750							
0.875 ± .010	JXL0875	SXL0875							

## JXL0 and JXL1 | Lever Actuated Connectors for Metric External Tubes

6mm ± 0.25mm	JXL0M6	SXL00236	7.27 (184.7)	113 (28.8)	3.65 (92.7)	4.22 (107.2)	0.79 (20.1)	1/8 BSPP (G)	0.24 (6.1)
8mm ± 0.25mm	JXL0M8	SXL00312							
10mm ± 0.25mm	JXL0M10	SXL00394							
12mm ± 0.25mm	JXL0M12	SXL00472							
16mm ± 0.25mm	JXL1M16	SXL10630							
18mm ± 0.25mm	JXL1M18	SXL10710							
20mm ± 0.25mm	JXL1M20	SXL10787							
22mm ± 0.25mm	JXL1M22	SXL10865							

Dimensions: inch (mm)

**NOTE:** Table above shows common connections. Additional sizes available for JXL Series connectors. Consult factory or details.



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# FX / EXTERNAL SEALING CONNECTION TOOL

External grip and seal connection tool that uses collets to grip threads or part feature for high pressures.

**CONNECTS TO:**



- 1 Pressure assisted grip and proprietary design locks the connector securely to the test part under pressure
- 2 Instant threaded sealing connection up to 5000 psig without tape sealant or wrenches - significantly reduces process time
- 3 Stainless steel collets provide maximum grip with minimum distortion of the test piece
- 4 Self aligning connector requires no operator adjustment
- 5 Three ergonomic modular operating methods - lever, thumb valve, and pneumatic (straight through port for remote operation ie. foot valve)

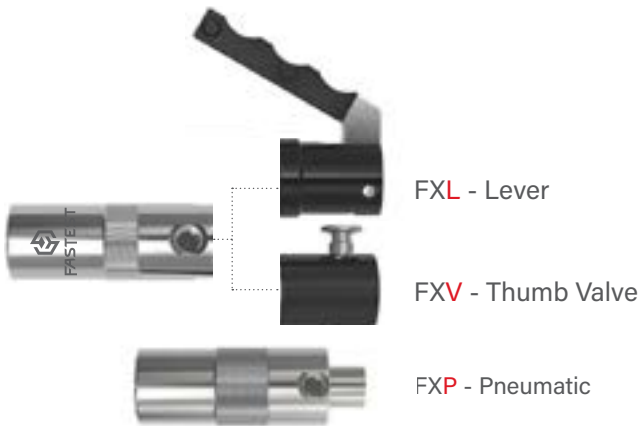


**SPECIFICATIONS**

Pressure Rating	Operating Temperatures	Materials of Construction
Vacuum to 5,000 psi (345 bar)	-40°F to +250°F (-40°C to +121°C)	Anodized Aluminum, Stainless Steel
Termination Port		Seal Material*
BSPP (G) or FNPT		Buna-N

\* Additional seal material types available, consult factory.

**ACTUATION OPTIONS**



**ICON™ TECHNOLOGY**

Consult Factory

**ACCESSORIES**

Visit [fastestinc.com](http://fastestinc.com)

## FX / MODULAR DESIGN

### FASMATE FX MODULAR DESIGN

The innovative modular design of the connectors allows the technician to change the method of actuation by simply unscrewing the rear portion of the connector and replacing it with the desired form of actuation.

This feature provides flexibility to accommodate changes in the manufacturing processes, production increases and operator use preference. An additional advantage is the ease of field service for these components should they become damaged or require maintenance.



#### LEVER

Simple, straight forward mechanical operation.



#### THUMB VALVE

Easy, ergonomic thumb button. When depressed, allows insertion / removal of connector from port.

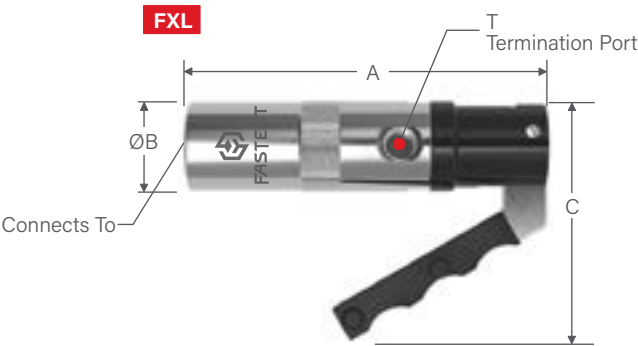


#### PNEUMATIC

Requires a separate air valve. Desired for applications that require freedom of movement of technician's hands.



**FX** / EXTERNAL SEALING CONNECTION TOOL / **NPT**

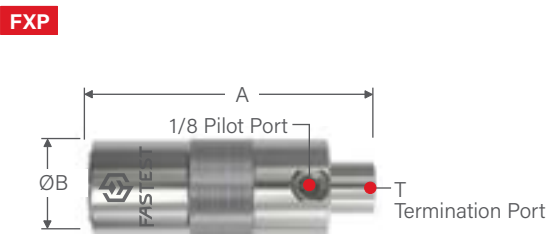
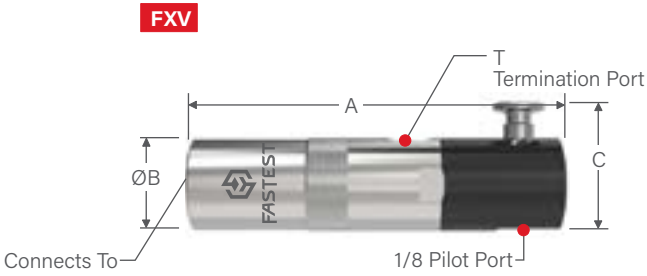


Ordering Information							
Connects To	FXL Part Number (with Lever)	FXV Part Number (with Thumb Valve)	FXP Part Number (with Pneumatic Pilot)	Replacement Seals Bulk Pack (5)	Rebuild Kit (FXL)	Rebuild Kit (FXV and FXP)	Pressure Rating

FasMate® FX   NPT							
1/8 NPT	FXL021041	FXV021041	FXP021041	S1105B70	RFXL021	RFX021	5,000 psi (345 bar)
1/4 NPT	FXL041041	FXV041041	FXP041041	S1108B70	RFXL041	RFX041	
3/8 NPT	FXL061061	FXV061061	FXP061061	S1110B70	RFXL061	RFX061	
1/2 NPT	FXL081061	FXV081061	FXP081061	S1112B70	RFXL081	RFX081	

FasMate® FX   NPT Thin Walled Pipe							
3/8 NPT	FXL061061PT	FXV061061PT	FXP061061PT	METB06PR	RFXL061PT	RFX061PT	750 psi (51 bar)
1/2 NPT	FXL081061PT	FXV081061PT	FXP081061PT	SFX081PT	RFXL081PT	RFX081PT	

**Port Specifications:** NPT per SAE J476 or ANSI B1.20

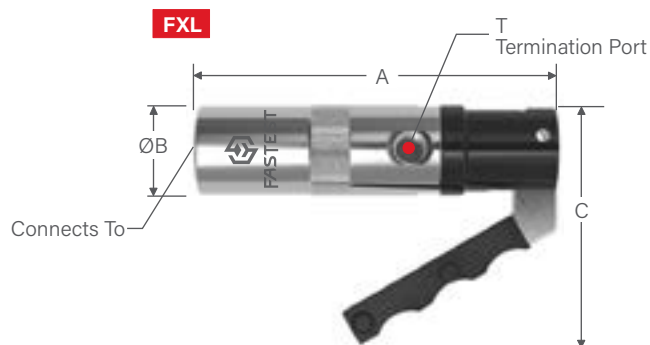


Dimensions						
A (FXL)	A (FXV)	A (FXP)	B	C (FXL)	C (FXV)	T
5.25 (133.4)	5.04 (128.0)	3.78 (96.0)	1.26 (32.0)	3.45 (87.6)	1.77 (45.0)	1/4 NPT
5.27 (133.9)	5.04 (128.0)	3.80 (96.5)	1.26 (32.0)	3.45 (87.6)	1.77 (45.0)	
5.44 (138.2)	5.22 (132.6)	3.87 (98.3)	1.48 (37.6)	3.57 (90.7)	1.87 (47.5)	3/8 NPT
5.45 (138.4)	5.22 (132.6)	3.87 (98.3)	1.48 (37.6)	3.57 (90.7)	1.87 (47.5)	
5.44 (138.2)	5.22 (132.6)	3.87 (98.3)	1.48 (37.6)	3.57 (90.7)	1.87 (47.5)	3/8 NPT
5.45 (138.4)	5.22 (132.6)	3.87 (98.3)	1.48 (37.6)	3.57 (90.7)	1.87 (47.5)	3/8 NPT

Dimensions: inch (mm)  
Pressure Rating: psi (bar)



# FX / EXTERNAL SEALING CONNECTION TOOL / BSPP (G) / BSPT / SAE



## Ordering Information

Connects To	FXL Part Number (with Lever)	FXV Part Number (with Thumb Valve)	FXP Part Number (with Pneumatic Pilot)	Replacement Seals Pack (5)	Rebuild Kit (FXL)	Rebuild Kit (FXV and FXP)	Pressure Rating
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### FasMate® FX | BSPP (G)

1/8 BSPP (G)	FXL025041	FXV025041	FXP025041	S1105B70	RFXL021	RFX021	5,000 psi (345 bar)
1/4 BSPP (G)	FXL045041	FXV045041	FXP045041	S1108B70	RFXL041	RFX041	
3/8 BSPP (G)	FXL065061	FXV065061	FXP065061	S1110B70	RFXL061	RFX061	
1/2 BSPP (G)	FXL085061	FXV085061	FXP085061	S1112B70	RFXL081	RFX081	

### FasMate® FX | BSPT

1/8 BSPT	FXL025T041	FXV025T041	FXP025T041	S1105B70	RFXL021	RFX021	5,000 psi (345 bar)
1/4 BSPT	FXL045T041	FXV045T041	FXP045T041	S1108B70	RFXL041	RFX041	
3/8 BSPT	FXL065T061	FXV065T061	FXP065T061	S1110B70	RFXL061	RFX061	
1/2 BSPT	FXL085T061	FXV085T061	FXP085T061	S1112B70	RFXL081	RFX081	

### FasMate® FX | SAE 37° Flare

-4 [7/16-20]	FXL049041	FXV049041	FXP049041	S20700270B70	RFXL049	RFX049	5,000 psi (345 bar)
-5 [1/2-20]	FXL059041	FXV059041	FXP059041	S20700334B70	RFXL059	RFX059	
-6 [9/16-18]	FXL069041	FXV069041	FXP069041	S1012B70	RFXL069	RFX069	
-8 [3/4-16]	FXL089061	FXV089061	FXP089061	S1015B70	RFXL089	RFX089	

### FasMate® FX | SAE 45° Flare

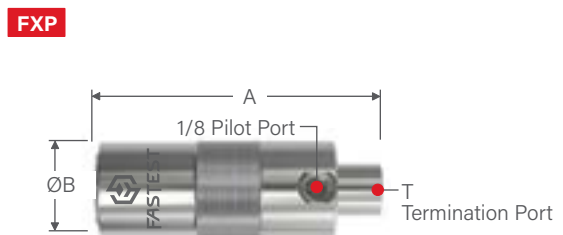
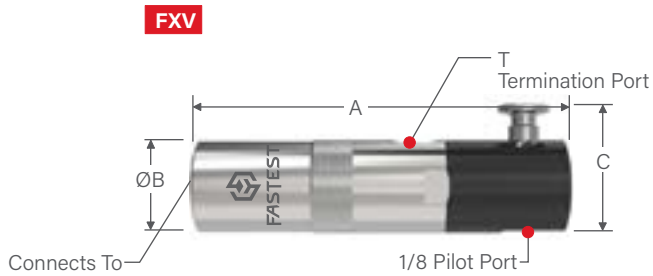
-4 [7/16-20]	FXL04A041	FXV04A041	FXP04A041	S20600246B70	RFXL04A	RFX04A	5,000 psi (345 bar)
-5 [1/2-20]	FXL05A041	FXV05A041	FXP05A041	S1011B70	RFXL05A	RFX05A	
-6 [5/8-18]	FXL06A061	FXV06A061	FXP06A061	S1012B70	RFXL06A	RFX06A	
-8 [3/4-16]	FXL08A061	FXV08A061	FXP08A061	S1014B70	RFXL08A	RFX08A	

### FasMate® FX | SAE O-Ring Face Seal

-4 [9/16-18]	FXL009041	FXV009041	FXP009041	S1020U70	RFXL009	RFX009	5,000 psi (345 bar)
-6 [11/16-16]	FXL011061	FXV011061	FXP011061	S1023U70	RFXL011	RFX011	
-8 [13/16-16]	FXL013061	FXV013061	FXP013061	S1023U70	RFXL013	RFX013	

**Port Specifications:** BSPP (G) per ISO 228 or BS 2279; BSPT per ISO 7 or BS 21; SAE 37° Flare per SAE J514 or ISO 12151-5; SAE 45° Flare per SAE J512 or J513; SAE O-Ring Face Seal per SAE J1453





Dimensions						
A (FXL)	A (FXV)	A (FXP)	B	C (FXL)	C (FXV)	T
5.25 (133.4)	5.04 (128.0)	3.78 (96.0)	1.26 (32.0)	3.45 (87.6)	1.77 (45.0)	1/4 NPT
5.27 (133.9)	5.04 (128.0)	3.80 (96.5)	1.26 (32.0)	3.45 (87.6)	1.77 (45.0)	
5.44 (138.2)	5.22 (132.6)	3.87 (98.3)	1.26 (32.0)	3.57 (90.7)	1.87 (47.5)	3/8 NPT
5.45 (138.4)	5.22 (132.6)	3.87 (98.3)	1.48 (37.6)	3.57 (90.7)	1.87 (47.5)	
5.25 (133.4)	5.04 (128.0)	3.78 (96.0)	1.26 (32.0)	3.45 (87.6)	1.77 (45.0)	1/4 NPT
5.27 (133.9)	5.04 (128.0)	3.80 (96.5)	1.26 (32.0)	3.45 (87.6)	1.77 (45.0)	
5.44 (138.2)	5.22 (132.6)	3.87 (98.3)	1.26 (32.0)	3.57 (90.7)	1.87 (47.5)	3/8 NPT
5.45 (138.4)	5.22 (132.6)	3.87 (98.3)	1.48 (37.6)	3.57 (90.7)	1.87 (47.5)	
5.25 (133.4)	5.04 (128.0)	3.77 (95.6)	1.26 (32.0)	3.45 (87.6)	1.77 (45.0)	1/4 NPT
5.25 (133.4)	5.04 (128.0)	3.77 (95.6)	1.26 (32.0)	3.45 (87.6)	1.77 (45.0)	
5.25 (133.4)	5.04 (128.0)	3.77 (95.6)	1.26 (32.0)	3.45 (87.6)	1.77 (45.0)	
5.45 (138.4)	5.22 (132.6)	3.87 (98.3)	1.48 (37.6)	3.57 (90.7)	1.87 (47.5)	3/8 NPT
5.25 (133.4)	5.04 (128.0)	3.77 (95.6)	1.26 (32.0)	3.45 (87.6)	1.77 (45.0)	1/4 NPT
5.25 (133.4)	5.04 (128.0)	3.77 (95.6)	1.26 (32.0)	3.45 (87.6)	1.77 (45.0)	
5.36 (136.1)	5.13 (130.3)	3.77 (95.6)	1.48 (37.6)	3.45 (87.6)	1.87 (47.5)	
5.51 (140.0)	5.28 (134.1)	3.92 (99.6)	1.48 (37.6)	3.57 (90.7)	1.87 (47.5)	3/8 NPT
5.25 (133.4)	5.04 (128.0)	3.77 (95.6)	1.26 (32.0)	3.45 (87.6)	1.77 (45.0)	1/4 NPT
5.36 (136.1)	5.13 (130.3)	3.77 (95.6)	1.48 (37.6)	3.57 (90.7)	1.87 (47.5)	3/8 NPT
5.56 (141.2)	5.33 (135.4)	3.97 (100.8)	1.48 (37.6)	3.57 (90.7)	1.87 (47.5)	

Dimensions: inch (mm)  
Pressure Rating: psi (bar)



**DON'T SEE A SOLUTION FOR YOUR APPLICATION?** Submit a custom application form and drawing to [fastsales@fastestinc.com](mailto:fastsales@fastestinc.com) or to your local distributor.

# HPB / EXTERNAL SEALING CONNECTION TOOL

Sleeve actuated tool that uses collets to grip threads or part feature for high pressures.

**CONNECTS TO:**

NPT    SAE 37°    Compression Fitting    JIC or ORFS Swivel Nut



**SPECIFICATIONS**

Pressure Rating	Operating Temperatures	Materials of Construction
Vacuum to 6,000 psi (414 bar)	-40°F to +250°F (-40°C to +121°C)	Stainless Steel
Termination Port		Seal Material*
1/8 Female NPT		Standard: Buna-N Optional: FKM, EPDM, Neoprene®

\* Additional seal material types available, consult factory.

**ACTUATION METHOD**

**Manual Sleeve:** Easy, ergonomic sleeve action eliminates repetitive twisting and turning - push to connect, pull to release

**ICON™ TECHNOLOGY**

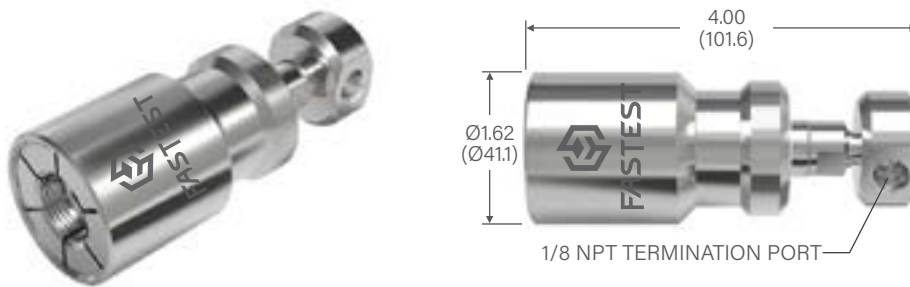
Consult Factory

**ACCESSORIES**

Visit [fastestinc.com](http://fastestinc.com)

- 1 Internal ball latch locking mechanism prevents accidental disconnection under pressure
- 2 Instant threaded sealing connection up to 6000 psi without tape sealant or wrenches - significantly reduces process time
- 3 Collet design locks securely into external threads or behind tube features
- 4 Customizable to external threaded ports or any tube feature
- 5 Self aligning connector requires no operator adjustment

# HPB / EXTERNAL SEALING CONNECTION TOOL



## Ordering Information

Connects To	Part Number*	Replacement Seals Bulk Pack (5)	Rebuild Kits
HPB   NPT Thread			
1/4 NPT	HPB041021	S1108B70	HPB0406R
3/8 NPT	HPB061021	S1110B70	HPB0406R
1/2 NPT	HPB081021	S1112B70	HPB08R
HPB   BSPP (G) Thread			
1/4 BSPP (G)	HPB045021	S1108B70	HPB0406R
3/8 BSPP (G)	HPB065021	S1110B70	HPB0406R
1/2 BSPP (G)	HPB085021	S1112B70	HPB08R
HPB   JIC/SAE 37° Flare/AN Male Fitting			
-4 [7/16-20]	HPB049021	S20700270B70	HPB04HR
-6 [9/16-18]	HPB069021	S1012B70	
-8 [3/4-16]	HPB089021	S1015B70	
HPB   JIC/SAE 37° Flare/AN Swivel Nut Fitting			
-4 [7/16-20]	HPB049H021	S20560176B70	HPB04R
-6 [9/16-18]	HPB069H021	S20760266B70	
-8 [3/4-16]	HPB089H021	S20800406B70	
HPB   SAE ORFS Swivel Nut Fitting			
-4 [7/16-20]	HPB009H021	S1107B70	HPB04R
-6 [9/16-18]	HPB011H021	S1109B70	
-8 [3/4-16]	HPB013H021	S1110B70	
HPB   Compression Fitting (Swagelok® or Equivalent)			
1/4 [7/16-20]	HPBCF04021	S1008B70	HPB04HR
3/8 [9/16-20]	HPBCF06021	S1011B70	
1/2 [3/4-20]	HPBCF08021	S1013B70	

\*Buna-N seals are standard. Optional seal materials include V = FKM, E = EPDM. Example: HPB041021**V**. For HPB Ferulok Style Compression Fittings, add suffix of "F" to HPB Compression Fitting Part Number. Example: HPBCF04021**F**

**Port Specifications:** NPT per SAE J476; BSPP (G) per ISO 228; SAE 37° Flare per SAE J514; SAE ORFS per SAE J1453



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# MET / EXTERNAL SEALING CONNECTION TOOL

Manual twist sealing connection tool for external threads.

**CONNECTS TO:**  
NPT   SAE 37°   SAE 45°   BSPP(G)   BSPT



### SPECIFICATIONS

Pressure Rating	Operating Temperatures	Materials of Construction
Vacuum to 10,000 psi (689 bar)	-40°F to +200°F (-40°C to +93°C)	Stainless Steel
Termination Port		Seal Material*
NPT, SAE 37° Flare		Urethane

\* Additional seal material types available, consult factory.

### ACTUATION METHOD

**Manual Twist:** Finger-tight connection eliminates tape and sealants

### ICON™ TECHNOLOGY

Consult Factory

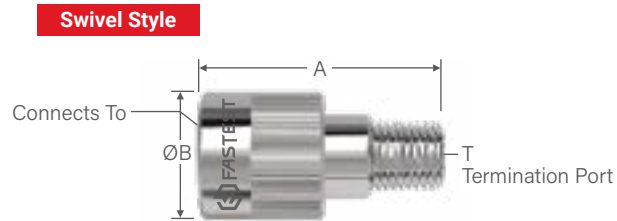
### ACCESSORIES

Visit [fastestinc.com](http://fastestinc.com)

- 1** Pressure assisted sealing eliminates leaks and resists movement under pressure
- 2** Leak-tight seal prevents contamination of media and reduces scrap and test damage
- 3** Available in flow or cap versions
- 4** Quick and easy seal replacement to minimize down time, maintenance, and tool inventory

# MET / EXTERNAL CONNECTIONS / NPT THREADS

Swivel Style  
Swivel Style for High Pressure



Ordering Information					Dimensions		
Connects To	Part Number*	Main Seal Package (5)	Rebuild Kit	Pressure Rating	A	B	T

## NPT | Swivel Style

1/8 NPT	MET021022	S1105U70	METR02	5000 (345)	1.51 (38.4)	0.80 (20.3)	1/8 MNPT
1/4 NPT	MET041042	S1108U70	METR04		1.74 (44.2)	0.93 (23.6)	1/4 MNPT
3/8 NPT	MET061062	S1110U70	METR06	4000 (276)	1.78 (45.2)	1.20 (30.5)	3/8 MNPT
1/2 NPT	MET081082	S1112U70	METR08		2.05 (52.1)	1.36 (34.5)	1/2 MNPT
3/4 NPT	MET121122	S1115U70	METR12	4000 (276)	2.34 (59.4)	1.68 (42.7)	3/4 MNPT
1 NPT	MET161162	S1212U70	METR16		2.74 (69.6)	1.99 (50.5)	1 MNPT
1-1/4 NPT	MET201202	S1217U70	METR20	2500 (172)	3.27 (83.1)	2.37 (60.2)	1-1/4 MNPT
1-1/2 NPT	MET241161	METB24	METR24	1000 (67)	3.27 (83.1)	2.50 (63.5)	1 FNPT
2 NPT	MET321161	METB32	METR32	750 (52)	2.53 (64.3)	3.00 (76.2)	
2-1/2 NPT	MET401161	METB40	METR40	500 (34)	2.54 (64.5)	3.40 (86.4)	
3 NPT	MET481161	METB48	METR48		2.61 (66.3)	4.25 (108.0)	

## NPT | Swivel Style for High Pressure

1/8 NPT	METH021022	S1105U70	METR02	10,000 (689)	1.51 (38.4)	0.80 (20.3)	1/8 MNPT
1/4 NPT	METH041042	S1108U70	METR04	8000 (522)	1.74 (44.2)	0.93 (23.6)	1/4 MNPT
3/8 NPT	METH061062	S1110U70	METR06		1.78 (45.2)	1.20 (30.5)	3/8 MNPT
1/2 NPT	METH081082	S1112U70	METR08	6000 (414)	2.05 (52.1)	1.36 (34.5)	1/2 MNPT
3/4 NPT	METH121122	S1115U70	METR12	5500 (379)	2.34 (59.4)	1.68 (42.7)	3/4 MNPT
1 NPT	METH161162	S1212U70	METR16	5000 (345)	2.74 (69.6)	1.99 (50.5)	1 MNPT

Dimensions: inch (mm)

Pressure Rating: psi (bar)

\*Optional seal materials include V = FKM, E = EPDM, and B = Buna-N - Example: MET021022V = FKM

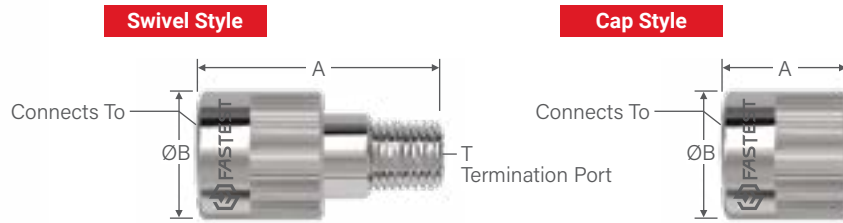
**Port Specifications:** NPT per ISO J476 or ANSI B1.20



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# MET / EXTERNAL CONNECTIONS / NPT THREADS (continued)



Ordering Information					Dimensions		
Connects To	Part Number	Main Seal Package(5)	Rebuild Kit	Pressure Rating	A	B	T

## NPT | Swivel Style for Thin Walled Threaded Pipe

1/4 NPT	MET041042PT	METB04PT	METR04	750 (52)	1.74 (44.2)	0.93 (23.6)	1/4 NPTM
3/8 NPT	MET061062PT	METB06PT	METR06		1.78 (45.2)	1.20 (30.5)	3/8 NPTM
1/2 NPT	MET081082PT	METB08PT	METR08		2.05 (52.1)	1.36 (34.5)	1/2 NPTM
3/4 NPT	MET121122PT	METB12PT	METR12		2.34 (59.4)	1.68 (42.7)	3/4 NPTM
1 NPT	MET161162PT	METB16PT	METR16		2.74 (69.6)	1.99 (50.5)	1 NPTM
1-1/4 NPT	MET201202PT	METB20PT	METR20		3.27 (80.1)	2.37 (60.2)	1 1/4 NPTM
1-1/2 NPT	MET241161*	METB24PT	METR24		3.27 (80.1)	2.50 (63.5)	1 NPTM
2 NPT	MET321161*	METB32PT	METR32	500 (35)	2.53 (64.3)	3.00 (76.2)	
2-1/2 NPT	MET401161*	METB40PT	METR40		2.54 (64.5)	3.40 (86.4)	
3 NPT	MET481161*	METB48PT	METR48		2.61 (66.3)	4.25 (108.0)	

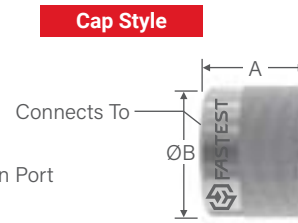
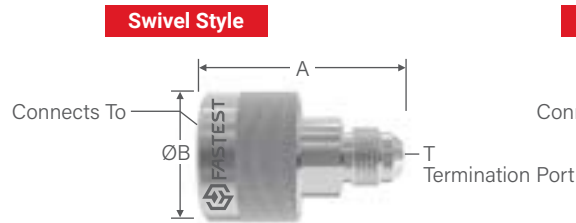
## NPT | Cap Style

1/8 NPT	MET021C	S1105U70	METR02	5000 (345)	0.83 (21.1)	0.80 (20.3)	N/A (Cap Style No Termination Port)
1/4 NPT	MET041C	S1108U70	METR04		0.88 (22.4)	0.93 (23.6)	
3/8 NPT	MET061C	S1110U70	METR06	4000 (276)	0.90 (22.9)	1.20 (30.5)	
1/2 NPT	MET081C	S1112U70	METR08		0.97 (24.6)	1.36 (34.5)	
3/4 NPT	MET121C	S1115U70	METR12		1.08 (27.4)	1.68 (42.7)	
1 NPT	MET161C	S1112U70	METR16		1.26 (32.0)	1.99 (50.5)	

Dimensions: inch (mm)  
Pressure Rating: psi (bar)

\*Optional seal materials include V = FKM, E = EPDM, and B = Buna-N - Example: MET041042PTV = FKM

**Port Specifications:** NPT per ISO J476 or ANSI B1.20

**MET** / EXTERNAL CONNECTIONS / SAE 37° & 45° FLARE THREADS

Ordering Information					Dimensions		
Connects To	Part Number*	Main Seal Package (5)	Rebuild Kit	Pressure Rating	A	B	T

**SAE 37° FLARE** | Swivel Style

-6 [9/16-18]	MET069040	S1012B70	METR06	5000 (345)	1.82 (46.2)	1.20 (30.5)	-4 [7/16-20] (male)
-8 [3/4-16]	MET089060	S1015B70	METR08	4000 (276)	1.90 (48.3)	1.38 (35.1)	-6 [9/16-18] (male)
-10 [7/8-14]	MET109080	S1016B70	METR08		2.25 (57.2)	1.51 (38.4)	-8 [3/4-16] (male)
-12 [1-1/16-12]	MET129100	S1018B70	METR12		2.52 (64.0)	1.70 (43.2)	-10 [7/8-14] (male)
-16 [1-5/16-12]	MET169120	S1020B70	METR16	1000 (69)	2.70 (68.6)	1.99 (50.6)	-12 [1-1/16-12] (male)
-20 [1-5/8-12]	MET209160	S1024U70	METR20		3.21 (81.5)	2.37 (60.2)	-16 [15/16-12] (male)
-24 [1-7/8-12]	MET249200	S1029B70	METR24		3.38 (85.9)	2.50 (63.5)	-20 [1-5/8-12] (male)
-32 [2-1/2-12]	MET329240	S1227B70	METR32AN	750 (52)	3.49 (88.6)	3.25 (82.6)	-24 [1-7/8-12] (male)

**SAE 37° FLARE** | Swivel Style for High Pressure

-4 [7/16-20]	METH049040	S120700270B70	METR049	10,000 (689)	1.76 (44.7)	0.95 (24.1)	-4 [7/16-20] (male)
-6 [9/16-18]	METH069060	S1012B70	METR06		1.82 (46.2)	1.20 (30.5)	-6 [9/16-18] (male)
-8 [3/4-16]	METH089080	S1015B70	METR08		2.00 (50.8)	1.38 (35.1)	-8 [3/4-16] (male)
-10 [7/8-14]	METH109100	S1016B70	METR08		2.35 (59.7)	1.51 (38.4)	-10 [7/8-14] (male)
-12 [1-1/16-12]	METH129120	S1018B70	METR12	6500 (433)	2.52 (64.0)	1.70 (43.2)	-12 [1-1/16-12] (male)
-16 [1-5/16-12]	METH169160	S1120B70	METR16		2.74 (69.6)	1.99 (50.6)	-16 [15/16-12] (male)

**SAE 37° FLARE** | Cap Style

-4 [7/16-20]	MET049C	S120700270B70	METR049	5000 (345)	0.88 (22.4)	0.95 (24.1)	N/A
-6 [9/16-18]	MET069C	S1012B70	METR06		0.90 (22.9)	1.20 (30.5)	(Plug Style No Termination Port)
-8 [3/4-16]	MET089C	S1015B70	METR08	4000 (276)	0.97 (24.6)	1.38 (35.1)	

**SAE 45° FLARE** | Swivel Style (per SAE J512 or J513)

-4 [7/16-20]	MET04A042B	S20600246B70	METR049	5000 (345)	1.76 (44.7)	0.95 (24.1)	1/4 MNPT
-6 [5/8-18]	MET06A062N	S1012N70	METR06A		1.80 (45.7)	1.18 (30.0)	3/8 MNPT
-8 [3/4-16]	MET08A082N	S1014N70	METR08A	4000 (276)	2.10 (53.3)	1.31 (33.3)	1/2 MNPT
-10 [7/8-14]	MET10A082N	S1015N70	METR10A		2.26 (57.4)	1.51 (38.4)	
-12 [1-1/16-14]	MET12A122N	S1018N70	METR12A		2.54 (64.5)	1.70 (43.2)	3/4 MNPT

Dimensions: inch (mm)  
Pressure Rating: psi (bar)

\*Optional seal materials include V = FKM, E = EPDM, and B = Buna-N - Example: MET069040V = FKM

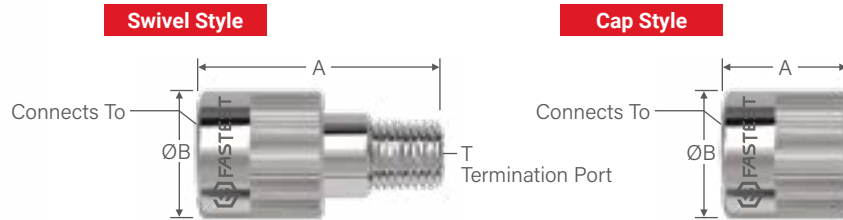
**Port Specifications:** SAE 37° & 45° FLARE THREADS per SAE J514 or ISO 12151-5



**DON'T SEE A SOLUTION FOR YOUR APPLICATION?** Submit a custom application form and drawing to [fastsales@fastestinc.com](mailto:fastsales@fastestinc.com) or to your local distributor.

# MET / EXTERNAL CONNECTIONS / BSPP (G) THREADS

Swivel Style (per ISO 228 or BS 2779)  
Cap Style (per ISO 228 or BS 2779)



Ordering Information					Dimensions		
Connects To	Part Number	Main Seal Package (5)	Rebuild Kit	Pressure Rating	A	B	T

## BSPP (G) | Swivel Style

1/8 BSPP (G)	MET025022	S1105U70	METR02	5000 (345)	1.62 (41.1)	0.80 (20.3)	1/8 NPT
1/4 BSPP (G)	MET045042	S1108U70	METR04		1.63 (41.4)	0.93 (23.6)	1/4 NPT
3/8 BSPP (G)	MET065062	S1110U70	METR06	4000 (276)	1.31 (33.3)	1.20 (30.5)	3/8 NPT
1/2 BSPP (G)	MET085082	S1112U70	METR08		1.46 (37.1)	1.36 (34.5)	1/2 NPT
3/4 BSPP (G)	MET125122	S1115U70	METR12		2.35 (59.7)	1.70 (43.2)	3/4 NPT
1 BSPP (G)	MET165162	S1212U70	METR16		2.74 (69.6)	1.99 (50.6)	1 NPT

## BSPP (G) | Cap Style

1/8 BSPP (G)	MET025C	S1105U70	METR02	5000 (345)	0.83 (21.1)	0.80 (20.3)	N/A (Plug Style No Termination Port)
1/4 BSPP (G)	MET045C	S1108U70	METR04		0.88 (22.4)	0.93 (23.6)	
3/8 BSPP (G)	MET065C	S1110U70	METR06	4000 (276)	0.90 (22.9)	1.20 (30.5)	
1/2 BSPP (G)	MET085C	S1112U70	METR08		0.97 (24.6)	1.36 (34.5)	
3/4 BSPP (G)	MET125C	S1116U70	METR12	4000 (276)	1.08 (27.3)	1.68 (42.7)	

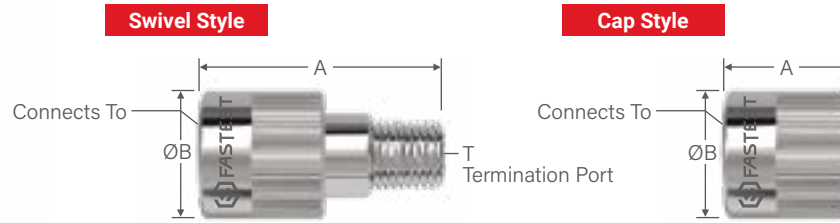
Dimensions: inch (mm)  
Pressure Rating: psi (bar)

\*Optional seal materials include V = FKM, E = EPDM, and B = Buna-N - Example: MET025022V = FKM

**Port Specifications:** BSPP (G) per ISO 228 or BS 2779

# MET / EXTERNAL CONNECTIONS / BSPT THREADS

Swivel Style  
Cap Style



Ordering Information					Dimensions		
Connects To	Part Number	Main Seal Package (5)	Rebuild Kit	Pressure Rating	A	B	T
BSPT   Swivel Style							
1/8 BSPT	MET025T022	S1105U70	METR02	5000 (345)	1.62 (41.1)	0.80 (20.3)	1/8 NPT
1/4 BSPT	MET045T042	S1108U70	METR04		1.63 (41.4)	0.93 (23.6)	1/4 NPT
3/8 BSPT	MET065T062	S1110U70	METR06	4000 (276)	1.31 (33.3)	1.20 (30.5)	3/8 NPT
1/2 BSPT	MET085T082	S1112U70	METR08		1.46 (37.1)	1.36 (34.5)	1/2 NPT
3/4 BSPT	MET125T122	S1115U70	METR12		2.35 (59.7)	1.70 (43.2)	3/4 NPT
1 BSPT	MET165T162	S1212U70	METR16		2.74 (69.6)	1.99 (50.6)	1 NPT
BSPT   Cap Style							
1/8 BSPT	MET025TC	S1105U70	METR02	5000 (345)	0.83 (21.1)	0.80 (20.3)	N/A
1/4 BSPT	MET045TC	S1108U70	METR04		0.88 (22.4)	0.93 (23.6)	
3/8 BSPT	MET065TC	S1110U70	METR06	4000 (276)	0.90 (22.9)	1.20 (30.5)	(Plug Style No Termination Port)
1/2 BSPT	MET085TC	S1112U70	METR08		0.97 (24.6)	1.36 (34.5)	

Dimensions: inch (mm)  
Pressure Rating: psi (bar)

\*Optional seal materials include V = FKM, E = EPDM, and B = Buna-N - Example: MET025T022V = FKM

**Port Specifications:** BSPT per ISO 228 or BS 2779; per ISO 7 or BS 21



**DON'T SEE A SOLUTION FOR YOUR APPLICATION?** Submit a custom application form and drawing to [fastsales@fastestinc.com](mailto:fastsales@fastestinc.com) or to your local distributor.

## Product Accessories

### Charge Valve PN: ADM06102



- Use with Charge Coupler to pressure up and hold pilot charge when an affixed airline is not useable
- Manually actuate pneumatic sealing connection tools

### Charge Coupler PN: ADF05102



- Used with Charge Valve to introduce pressure without latching
- Internally valved

### Slide Valve PN: AV1021022



- Used to pressurize and exhaust pilot pressure for manual operation



ICON™  
Accessories

Programming Tool

- Quickly program / calibrate ICON™ Sealing Connection Tools
- Eliminate the need for PLC programming
- LED connection status visual feedback
- Powered from wall adapter (included) or from a PLC (24VDC)

Part Number	Input Signal	Output Signal	Current Limit
SPCT0204	SSR	SSR	max 100 mA load
SPCT0204A	SSR	N/A	N/A



M8 Cable PN: SPCAFS0602AMS06

- Straight Female M8 threaded Connector to straight Male M8 connector (6-wire 2m cable)

M8 Cable PN: SPCAFS0602C

- Straight Female M8 to Flying Leads (6-wire 2m cable)





**SPECIALTY  
CONNECTIONS**

# 70FR / EXTERNAL CONNECTIONS TO FUEL RAILS

Custom sleeve actuated external grip and seal connection tool for J2044 fuel rail applications.

## CONNECTS TO:

Fuel Rail



## SPECIFICATIONS

Pressure Rating	Operating Temperatures	Materials of Construction
Vacuum to 750 psi (51 bar)	-40°F to +250°F (-40°C to +121°C)	Stainless Steel, Anodized Aluminum
Termination Port		Seal Material*
Inline NPT termination port		Buna-N/Nitrile

\* Additional seal material types available, consult factory.

## ACTUATION METHOD

**Manual Sleeve:** Easy, ergonomic sleeve action eliminates repetitive twisting and turning - push to connect, pull to release

## ICON™ TECHNOLOGY

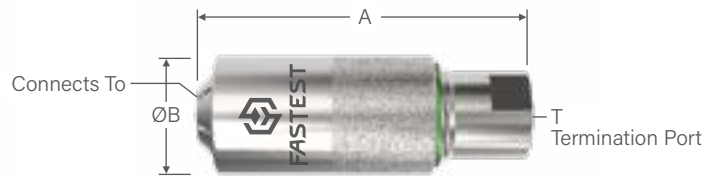
Consult Factory

## ACCESSORIES

Visit [fastestinc.com](http://fastestinc.com)

- 1 SurConnect™ - Green to go visible indicator to ensure complete connection and internally valved to prevent gas flow once disconnected
- 2 Instant external forced tube connection with floating piston to ensure proper OD / face / ID sealing position
- 3 Collet design locks securely over formed tube feature
- 4 Connect and seal to standard fuel rail bead /SAE J2044

# 70FR / EXTERNAL CONNECTIONS TO FUEL RAILS



Ordering Information				Dimensions		
Connects To	Part Number	Replacement Seals Bulk Pack (5)	Rebuild Kit	A	B	T
70FR   Non-Valved						
1/4	FR7004041	S1106B70	RFR04	3.02 (76.7)	0.99 (25.1)	1/4 NPT
5/16	FR7005041	S1108B70	RFR05			
3/8	FR7006061	S1109B70	RFR06	3.30 (83.8)	1.19 (30.2)	3/8 NPT
1/2	FR7008061	S1111B70	RFR08	3.50 (89.9)	1.38 (35.1)	
70FR   Valved						
1/4	FRV7004041	S1106B70	RFR04	3.02 (76.7)	0.99 (25.1)	1/4 NPT
5/16	FRV7005041	S1108B70	RFR05			
3/8	FRV7006061	S1109B70	RFR06	3.30 (83.8)	1.19 (30.2)	3/8 NPT
1/2	FRV7008061	S1111B70	RFR08	3.50 (89.9)	1.38 (35.1)	

Dimensions: inch (mm)

Port Specifications: SAE J2044



**DON'T SEE A SOLUTION FOR YOUR APPLICATION?** Submit a custom application form and drawing to [fastsales@fastestinc.com](mailto:fastsales@fastestinc.com) or to your local distributor.



# GZNV / INTERNAL GAS BURNER TESTING

Internally valved manual sealing connection tool for Natural Gas or Propane Burner Testing.

CONNECTS TO:

FNPT

BSPP (G)/  
BSPT



SPECIFICATIONS

Pressure Rating	Operating Temperatures	Materials of Construction
Vacuum to 5 psi (0.345 bar)	0°F to +200°F (-17°C to +93°C)	Anodized Aluminum, Brass, Molded Nylon Handle
Termination Port		Seal Material*
1/4, 1/2 NPT		Main: Urethane Internal: Buna-N

\* Additional seal material types available, consult factory.

ACTUATION METHOD

**Lever Handle:** Two way actuation handle is simple and ergonomic for production applications

ICON™ TECHNOLOGY

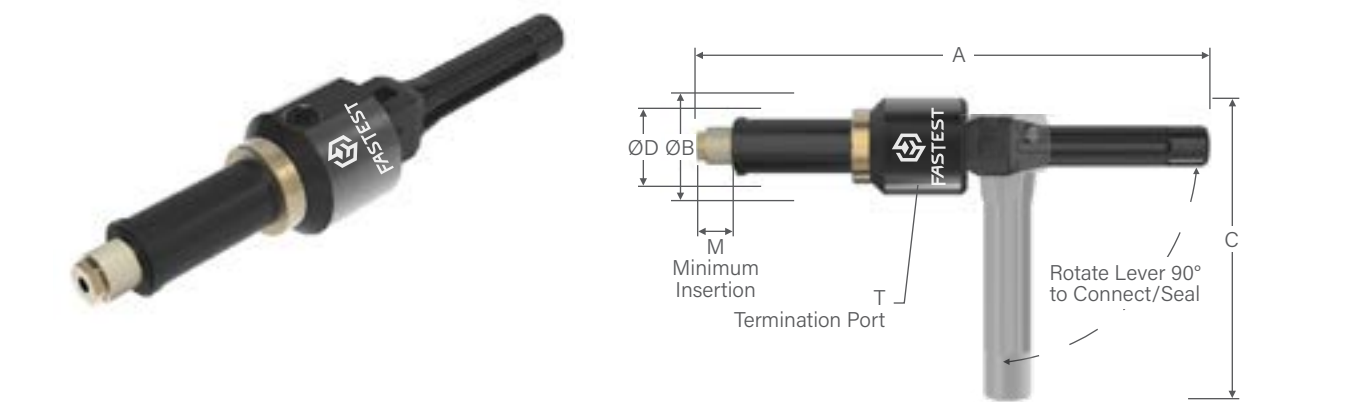
Consult Factory

ACCESSORIES

Visit [fastestinc.com](http://fastestinc.com)

- 1 Lockable collar to keep sealing pressure consistent and internally valved to prevent gas flow once disconnected
- 2 Adjustable ring to accommodate the widest sealing range in the industry
- 3 Internal shut-off valve to stop the flow of gas when handle is in the disconnected position
- 4 Non-sparking aluminum and brass components

# GZNV / INTERNAL GAS BURNER TESTING



Ordering Information					Dimensions					
Connects To	Part Number	Replacement Seals Bulk Pack (5)	Rebuild Kit	Replacement Shaft	A	B	C	D	M	T

GZNV | With 2 in. (51 mm) Extended Shaft

3/8 NPT	GZNV0620410200	GZNVB062	GZNVR062	5ZNV27F380200	9.30 (236.2)	1.88 (47.8)	4.96 (119.1)	1.06 (26.9)	0.63 (16.0)	1/4 NPT
1/2 NPT	GZNV0820410200	GZNVB082	GZNVR082	5ZNV275BR0200						
3/4 NPT	GZNV1220810200	GZNVB122	GZNVR122	5ZNV375BR0200	9.65 (245.1)	2.44 (61.9)	5.21 (132.3)	1.38 (35.1)		1/2 NPT

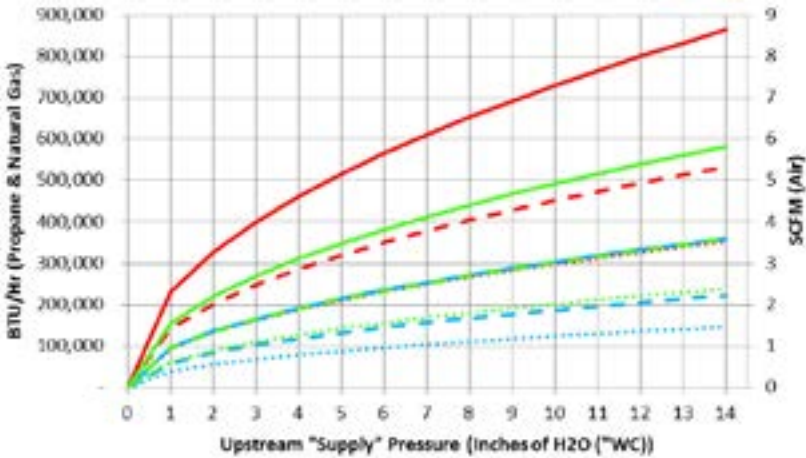
GZNV | Reduced Length Shaft

3/8 NPT	GZNV062041*	GZNVB062	GZNVR062	5ZNV27F38BR	7.30 (185.4)	1.88 (47.8)	4.96 (119.1)	1.06 (26.9)	0.63 (16.0)	1/4 NPT
1/2 NPT	GZNV082041*	GZNVB082	GZNVR082	5ZNV275BR						
3/4 NPT	GZNV122081*	GZNVB122	GZNVR122	5ZNV275BR	7.65 (194.3)	2.44 (61.9)	5.21 (132.3)	1.38 (35.1)		1/2 NPT

Dimensions: inch (mm)

\*Consult Factory for availability.

## GasMate™ GZNV Family Flow Capacity



# G60V / EXTERNAL GAS BURNER TESTING

Internally valved sleeve actuated external grip and seal connection tool for Natural Gas or Propane Burner Testing.

CONNECTS TO:

MNPT



SPECIFICATIONS

Pressure Rating	Operating Temperatures	Materials of Construction
Vacuum to 30 psi (2.1 bar)	0°F to +200°F (-17°C to +93°C)	Stainless Steel, Brass, Anodized Aluminum
Termination Port		Seal Material*
3/8, 1/2, 3/4 NPT		Main: Neoprene® Internal: Buna-N

\* Additional seal material types available, consult factory.

ACTUATION METHOD

**Manual Sleeve:** Easy, ergonomic sleeve action eliminates repetitive twisting and turning - push to connect, pull to release

INTELLIGENT CONNECTION TECHNOLOGY

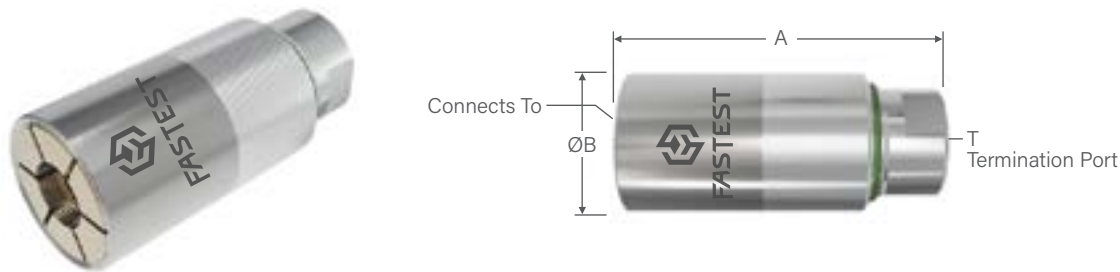
Consult Factory

ACCESSORIES

Visit [fastestinc.com](http://fastestinc.com)

- 1 SurConnect™ - Green to go visible indicator to ensure complete connection and internally valved to prevent gas flow once disconnected
- 2 Instant external threaded connection with floating piston to ensure proper face / ID sealing position
- 3 Collet design locks securely into external threads or behind the threads
- 4 Connect and seal to NPT male threads
- 5 Stainless steel components for demanding production environments - brass collets for non-sparking

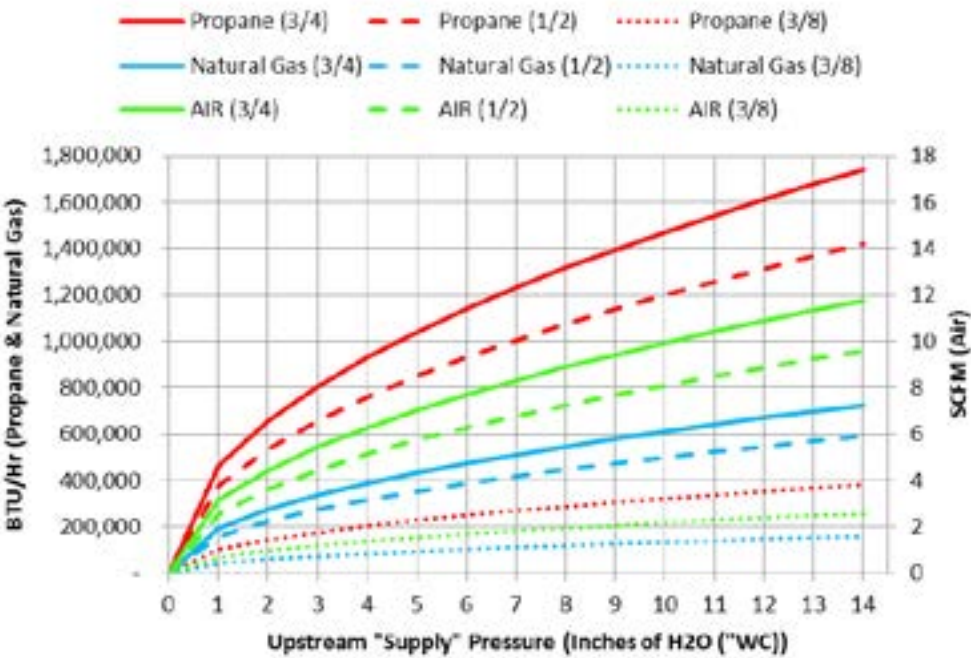
# G60V / EXTERNAL GAS BURNER TESTING



Ordering Information				Dimensions		
Connects To	Part Number	Replacement Seals Bulk Pack (5)	Rebuild Kit	A	B	T
3/8 NPT	G60V1T06	SZF4	G60VR06	3.11 (79.0)	1.38 (35.0)	3/8 NPT
1/2 NPT	G60V1T08	SZF5	G60VR08	3.31 (84.1)	1.58 (40.1)	1/2 NPT
3/4 NPT	G60V1T12	SZF7	G60VR12	3.54 (90.0)	1.78 (45.2)	3/4 NPT

Dimensions: inch (mm)

## GasMate GZNV Family Flow Capacity



DON'T SEE A SOLUTION FOR YOUR APPLICATION? Submit a custom application form and drawing to [fastsales@fastestinc.com](mailto:fastsales@fastestinc.com) or to your local distributor.

# XT / HVAC-R EXTERNAL SEALING CONNECTION TOOL

Sleeve actuated ball grip connection tool for expanded refrigeration tubes.

### CONNECTS TO:

Expanded



- 1 Sleeve locks under pressure to prevent accidental disconnection
- 2 Instant connection for copper and aluminum flared tubes commonly used in refrigeration
- 3 Connects to a broad range of flared ends including rough cut ends
- 4 Deep vacuum capabilities down to 10 millitorr (micron)
- 5 Quick and easy seal replacement to minimize down time, maintenance, and tool inventory



### SPECIFICATIONS

Pressure Rating	Operating Temperatures	Connection Profile
10 mtorr (micron) to 625 psi (43 bar)	-40°F to +250°F (-40°C to +121°C)	Expanded Tubes
Housing Material		
Connector - Black Oxide Steel SurConnect™ - Aluminum		
Termination Profile		Seal Material*
1/4 NPT		Neoprene®

\* More seal material types available, consult factory.

### ACTUATION METHOD

**Manual Sleeve:** Easy, ergonomic sleeve action eliminates repetitive twisting and turning - push to connect, pull to release

### ICON™ TECHNOLOGY

Consult Factory

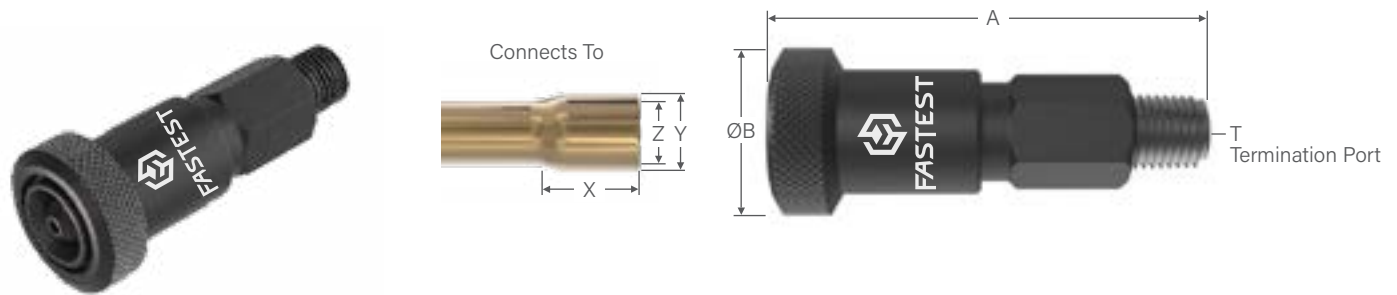
### ACCESSORIES



### The SurConnect™ Advantage

- Green ring indicates a secure connection, improving safety by preventing accidental disconnects.
- Easily installed on existing XT Connectors or available fully assembled.
- Aluminum light weight.
- Color coded by size for easy recognition.

# XT / HVAC-R EXTERNAL SEALING CONNECTION TOOL



Ordering Information							Dimensions			
Connects To				Part Number	Replacement Seals Bulk Pack (5)	Rebuild Kit	A	B	T	Flow Ø
Tube Size	Flare Length (Dim X)	Flare OD (Dim Y)	Flare ID (Dim Z)							

## XT | Sleeve Actuated Connectors for Expanded Tubes

5/16	0.30 to 1.00 (7.6 to 25.4)	0.44 (11.2)	0.31 (7.9)	XT05042	XTB05	XTR05	3.23 (82.0)	1.19 (30.2)	1/4 NPT	.062 (1.6)
3/8		0.50 (12.7)	0.37 (9.4)	XT06042	XTB06	XTR06	3.31 (84.1)	1.25 (31.8)		0.12 (3.1)
1/2		0.63 (15.9)	0.49 (12.4)	XT08042	XTB08	XTR08		1.37 (34.8)		0.22 (5.6)
5/8		0.73 (18.5)	0.62 (15.7)	XT10042	XTB10	XTR10	3.33 (84.6)	1.50 (38.1)		0.25 (6.4)
3/4	0.37 to 1.00 (9.4 to 25.4)	0.86 (21.8)	0.74 (18.8)	XT12042	XTB12	XTR12		1.62 (41.2)		0.27 (6.9)
7/8		0.99 (25.1)	0.87 (22.1)	XT14042	XTB14	XTR14		1.72 (43.7)		0.28 (7.1)

Dimensions: inch (mm)

**NOTE:** Not recommended for water dunk applications.

Ordering Information				
Connects To	SurConnect™ Kit Part Number	XT with SurConnect™	XT with SurConnect™ & Process Tip	Tip

## XT WITH SURCONNECT™ | Sleeve Actuated Connectors for Expanded Tubes with Additional Safety Feature

3/8	XT06SHR3	XT06042SHR3	XT06042SHR3H4	1/4 Hansen®
			XT06042SHR3P4	1/4 PCU®
			XT06042SHR3H6	3/8 Hansen®
			XT06042SHR3P6	3/8 PCU®
3/4	XT12SHR2	XT12042SHR2	XT12042SHR2H4	1/4 Hansen®
			XT12042SHR2P4	1/4 PCU®
			XT12042SHR2H6	3/8 Hansen®
			XT12042SHR2P6	3/8 PCU®
7/8	XT14SHR1	XT14042SHR1	XT14042SHR1H4	1/4 Hansen®
			XT14042SHR1P4	1/4 PCU®
			XT14042SHR1H6	3/8 Hansen®
			XT14042SHR1P6	3/8 PCU®

**NOTE:** Not recommended for water dunk applications.



**DON'T SEE A SOLUTION FOR YOUR APPLICATION?** Submit a custom application form and drawing to [fastsales@fastestinc.com](mailto:fastsales@fastestinc.com) or to your local distributor.



# ST / HVAC-R EXTERNAL SEALING CONNECTION TOOL

Sleeve actuated grip and seal connection tool for straight tubes in refrigeration.

CONNECTS TO:

Straight



SPECIFICATIONS

Pressure Rating	Operating Temperatures	Materials of Construction
10 mtorr (micron) to 1000 psi (69 bar)	-40°F to +250°F (-40°C to +121°C)	Black Oxide Steel
Termination Port		Seal Material*
1/4 NPT		Neoprene®

\* Additional seal material types available, consult factory.

ACTUATION METHOD

**Manual Sleeve:** Easy sleeve action is ergonomic and eliminates repetitive twisting and turning. Pull to connect, push to release.

ICON™ TECHNOLOGY

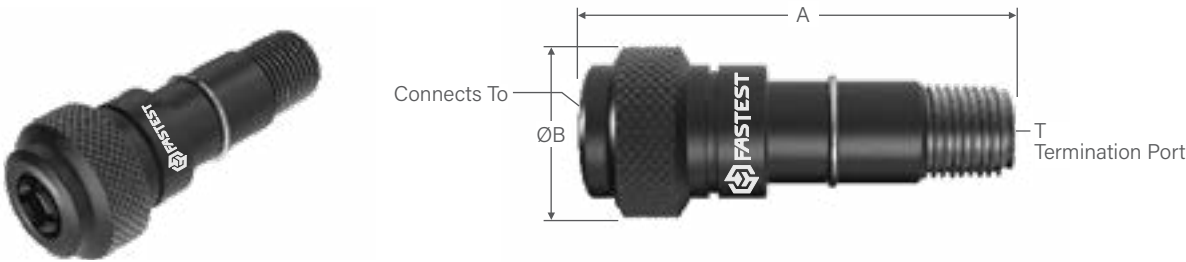
Consult Factory

ACCESSORIES

Visit [fastestinc.com](http://fastestinc.com)

- 1 Pressure assisted sealing eliminates leaks and resists movement under pressure
- 2 Instant connection for copper, steel, and aluminum tubes commonly used in refrigeration
- 3 Designed specifically for the demanding requirements of the refrigeration industry
- 4 Deep vacuum capabilities down to 10millitorr (micron)
- 5 Quick and easy seal replacement to minimize down time, maintenance, and tool inventory

# ST / HVAC-R EXTERNAL SEALING CONNECTION TOOL



Ordering Information				Dimensions			
Connects To +0.015/-0.010	Part Number	Replacement Seals Bulk Pack (5)	Rebuild Kit*	A	B	T	Insertion Depth
0.250 (6.4)	ST04042	STB04	STC04	2.75 (69.9)	1.14 (29.0)	1/4 NPT	0.62 (15.7)
0.312 (7.9)	ST05042	STB05	STC04		1.19 (30.2)		
0.375 (9.5)	ST06042	STB06	STC04	3.23 (82.0)	1.50 (38.1)		0.75 (19.1)

Dimensions: inch (mm)

\*Includes complete collet set.

Additional sizes available, contact factory.



# RQD / HVAC-R EXTERNAL SEALING CONNECTION TOOL

External sealing connection tool for attachment to Hansen® and PCU® tips under pressure.

**CONNECTS TO:**

Hansen® Tips    PCU® Tips



**SPECIFICATIONS**

Pressure Rating	Operating Temperatures	Materials of Construction
Vacuum to 750 psi (52 bar)	-40°F to +250°F (-40°C to +121°C)	Black Oxide Steel
Termination Port		Seal Material*
1/4 or 3/8 NPT		Neoprene®

\* Additional seal material types available, consult factory.

- i** Designed for ISO 7241-1 Series B coupling "Tips"
- i** RQD can mate with, but not limited to, the following brands: Parker® 60, PCU® 250 & 410, Hansen® HK, SABE® IB Series (China), AeroQuip® FD45, Faster® HNV Series, Snap-Tite® 72 series, Stucchi® IRB, Perfecting® H Series, Safeway® S10 Series, Tomco® H Series, Cejn® X75, Foste'r HX-S, and Nitto® 250.

**ACTUATION METHOD**

**Sleeve / Lever Handle:** Easy sleeve connection is ergonomic and eliminates repetitive twisting and turning, cam over lever handle opens poppets under pressure

**ICON™ TECHNOLOGY**

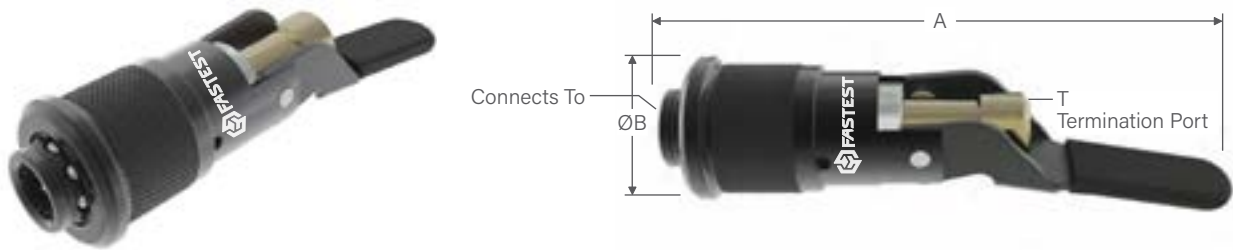
Consult Factory

**ACCESSORIES**

Visit [fastestinc.com](http://fastestinc.com)

- 1** Sleeve lock connection prior to pressure engagement minimizes force to connect through handle activation
- 2** Connects and vents even under pressure using lever handle to keep refrigerant away from the operator
- 3** Internal HTPE seal to keep refrigerant from exhausting back onto operator
- 4** Internal poppet style seal for dry refrigerant operation
- 5** Minimal maintenance required

# RQD / HVAC-R EXTERNAL SEALING CONNECTION TOOL



Ordering Information				Dimensions			
Connects To	Part Number	Replacement Seals Bulk Pack (5)	Rebuild Kit	A	B	C	D

RQD | Lever Action Style for PCU\* Tips

1/4 PCU*— Model 64 Tip	KA04PA	KSA04	KR04A	1.75 (44.5)	4.39 (111.5)	7.00 (177.8)	1/4 NPT
1/4 PCU*— Model 61 Tip	KA04PB	KSM04	KR04				
3/8 PCU*— Model 78 Tip	KA06PA	KSM06PB	KR06PA	1.95 (49.5)	4.54 (115.3)	7.00 (177.8)	3/8 NPT
3/8 PCU*— Model 66 Tip	KA06PB	KSM06PB	KR06PB				

RQD | Lever Action Style for Hansen\* Tips

1/4 Hansen* 2K	KA04HB	KSM04	KR04	1.75 (44.5)	4.39 (111.5)	7.00 (177.8)	1/4 NPT
3/8 Hansen* 3K	KA06HB	KSM06HB	KR06HB	1.95 (49.5)	4.54 (115.3)		3/8 NPT

Dimensions: inch (mm)



# SNAPMATE / EXTERNAL SEALING CONNECTION TOOL

Sleeve actuated external grip and seal connection tool for CoreMax® and Schrader® flare connections.

CONNECTS TO:

45° Flare



SPECIFICATIONS

Pressure Rating	Operating Temperatures	Materials of Construction
Vacuum to 625 psi (43 bar)	-40°F to +250°F (-40°C to +121°C)	Stainless Steel, Brass
Termination Port		Seal Material*
-4 [7/16-20] 45° Flare		Neoprene®

\* Additional seal material types available, consult factory.

ACTUATION METHOD

**Manual Sleeve:** Easy, ergonomic sleeve action eliminates repetitive twisting and turning - push to connect, pull to release

ICON™ TECHNOLOGY

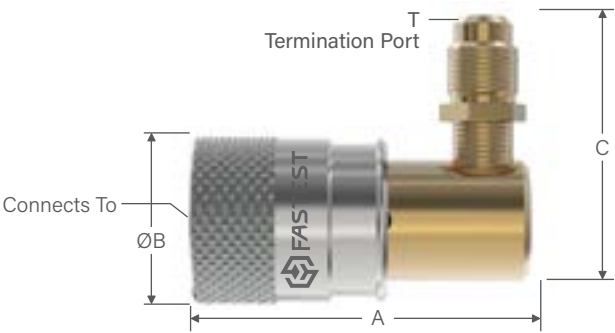
Consult Factory

ACCESSORIES

Visit [fastestinc.com](http://fastestinc.com)

- 1 Internally valved for refrigerant containment upon disconnection
- 2 Collet design locks securely into CoreMax® and common Schrader® valves with 1/4 45° Flare with 7/16-20 thread
- 3 Compact size fits into tight spaces
- 4 90° termination port for best ergonomics of small connection tool
- 5 Quick and easy seal replacement to minimize down time, maintenance, and tool inventory

# SNAPMATE / EXTERNAL SEALING CONNECTION TOOL



Ordering Information				Dimensions			
Connects To	Part Number	Main Seal Set	Repair Kit	A	B	C	T
CoreMax -4 [7/16-20] 45° Flare	SCTA07H	SCBA07H	SCRA07H	0.93 (23.6)	1.94 (49.3)	1.51 (38.3)	-4 [7/16-20] 45° Flare

Dimensions: inch (mm)





# MBE/MRE / HVAC-R EXTERNAL SEALING CONNECTION TOOL

Sleeve actuated external grip and seal connection tools that latches over tube features.

### CONNECTS TO:

Expanded      CoreMax Seat



### SPECIFICATIONS

Pressure Rating	Operating Temperatures	Materials of Construction
Vacuum to 625 psi (43 bar)	-40°F to +250°F (-40°C to +121°C)	Stainless Steel
Termination Port		Seal Material*
1/4 to 1-1/4 NPT		Neoprene®

\* Additional seal material types available, consult factory.

### ACTUATION METHOD

**Manual Sleeve:** Easy, ergonomic sleeve action eliminates repetitive twisting and turning - push to connect, pull to release

### ICON™ TECHNOLOGY

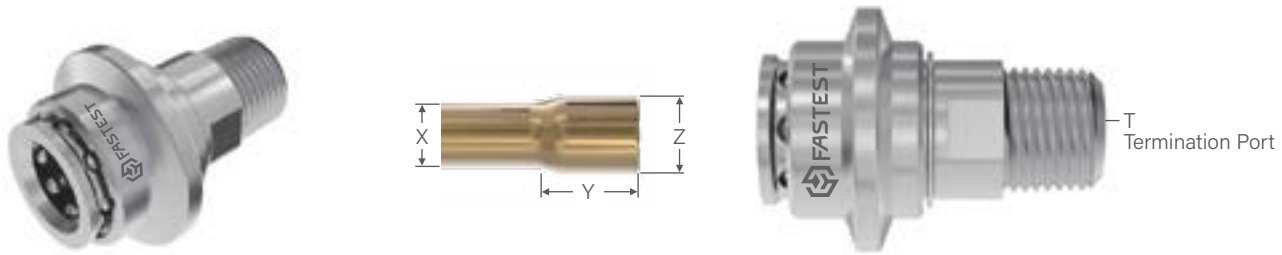
Consult Factory

### ACCESSORIES

Visit [fastestinc.com](http://fastestinc.com)

- 1 Sleeve locks under pressure to eliminate disconnection under pressure
- 2 MBE - ball latch and MRE - ring latch over tube features such as flare or bead
- 3 Straight through flow for full flow requirements
- 4 Quick and easy seal replacement to minimize down time, maintenance, and tool inventory

# MBE/MRE / HVAC-R EXTERNAL SEALING CONNECTION TOOL



Ordering Information					Dimensions	
Connects To			Replacement Seals Pack (5)	Rebuild Kit	Termination	Flow Dia.
Tube ØX	Flare Length Y	Flare ØZ				
0.25 (6.4)	0.20 (5.1)	0.32 (8.0)	Consult Factory	Consult Factory	1/4 NPT	0.19 (4.8)
0.31 (7.9)	0.27 (6.9)	0.38 (9.7)				0.25 (6.3)
0.38 (9.7)	0.35 (8.9)	0.44 (11.3)			3/8 NPT	0.31 (7.9)
0.50 (12.7)	0.45 (11.4)	0.57 (14.5)				0.44 (11.1)
0.63 (16.0)	0.53 (13.5)	0.70 (17.8)				0.56 (14.1)
0.75 (19.1)	0.68 (17.3)	0.84 (21.3)			3/4 NPT	0.67 (16.9)
0.88 (22.4)	0.79 (20.1)	0.97 (24.6)				0.79 (19.9)
1.00 (25.4)	0.83 (21.1)	1.12 (28.5)			1 NPT	0.94 (23.9)
1.13 (28.7)	1.13 (28.7)	1.23 (31.3)			1-1/4 NPT	1.03 (26.0)
1.38 (35.1)	1.40 (35.6)	1.49 (37.9)				1.27 (32.1)

Dimensions: inch (mm)

## How to Order

The MBE and MRE Series connectors are designed for mechanical gripping on expanded tubing. Connectors are designed, engineered and manufactured to your specific application requirements.

For part number and a price quotation:

- 1) Identify the gripping and sealing areas of your test piece.
- 2) Contact FasTest with information on test pressure, media and provide detailed drawing, including tolerances of test piece.



**DON'T SEE A SOLUTION FOR YOUR APPLICATION?** Submit a custom application form and drawing to [fastsales@fastestinc.com](mailto:fastsales@fastestinc.com) or to your local distributor.

# ME / MEDICAL-LIFE SCIENCES SEALING CONNECTION TOOL

Pneumatic external sealing of medical devices in automated and semi-automated processes.

## CONNECTS TO:



- 1 Connector and test part should be rigidly fixtured to prevent separation when under pressure
- 2 Ideally designed for automated processes and high volume production testing
- 3 Seals against standard luers, catheter, tubes and other cylindrical components
- 4 Cleaned and lubricated for oxygen safe environment with FDA approved seals
- 5 Quick and easy seal replacement to minimize down time, maintenance and tool inventory



## SPECIFICATIONS

Pressure Rating	Pilot Pressure	Operating Temperatures**
Vacuum to 500 psi (34 bar)	60-90 psi (4.1-6.2 bar)	0°F to +200°F (-17°C to +93°C)
Termination Port	Materials of Construction	Seal Material*
1/8 FNPT	Anodized Aluminum	FDA White Neoprene®

\* Additional seal material types available, consult factory.  
\*\* Operating Temp: 32°F-100°F (0°C-38°C) for ICON™

- i** Pilot pressure required.  
All parts are washed in an aqueous solution utilizing ultrasonic agitation at a temperature of 140°F. Components are then rinsed in a cascading rinse tank and dried using 99.999% pure nitrogen and assembled in a 100,000ppm level controlled environment.  
Krytox is the standard lubricant.  
White FDA Neoprene seal material is compliant to 21CFR177.2600. Optional material is a FDA listed fluorocarbon..

## ACTUATION METHOD

**Pneumatic:** pilot pressure applied to seals with no metal contact and uniform seal movement seals inside luer

## ICON™ TECHNOLOGY

- SURE SEAL™
- SEAL LIFE™

**ACCESSORIES**  
SEE PG. 85



# ICON™

## INTELLIGENT CONNECTION TECHNOLOGY

FasTest's ICON™ adds sensing capabilities to our mechanical Sealing Connection Tools. ICON™ Tools include instant LED visual feedback and data output to improve sealing connection accuracy, maximize production efficiency, and optimize maintenance.



### ICON™ features:



#### SURE SEAL™

Instant LED feedback verifies a good connection prior to starting a test.



#### SEAL LIFE™

Alert when the main seal is at end of life and must be replaced.

### How To Add ICON™ to ME

Signal Output	Part Number Suffix	Example
ME without ICON™	None	ME01
ME with ICON™; Analog Output Signal	CV04ANA	ME01CV04ANA
ME with ICON™; Solid State Relay	CV04SSR	ME01CV04SSR

### System Overview:

CONNECTED

Green indication of a good connection.

RECONNECT

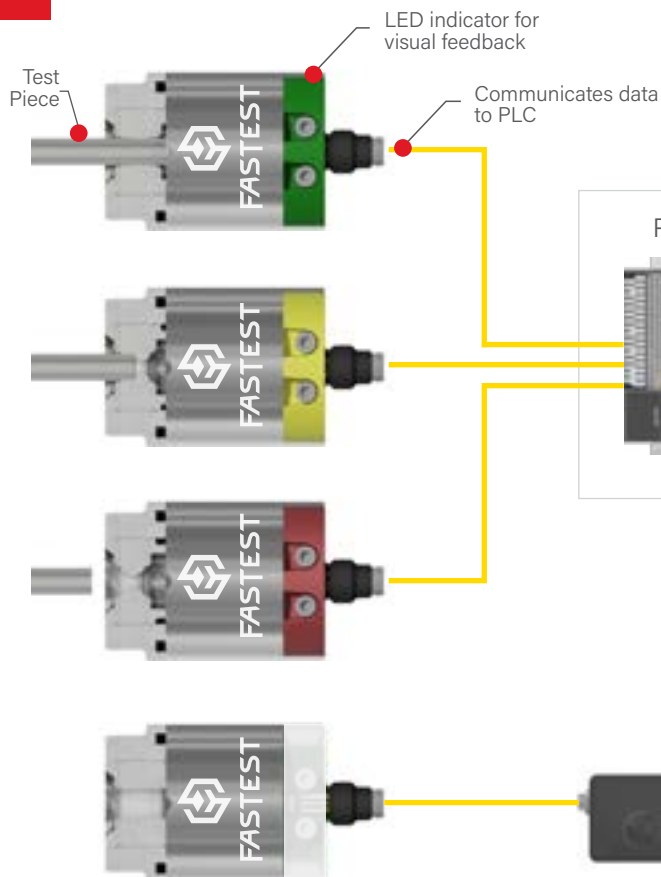
Recognize a connection issue before causing a false failure.

WORN SEAL

Alert when main seals should be replaced.

PICK TOOL

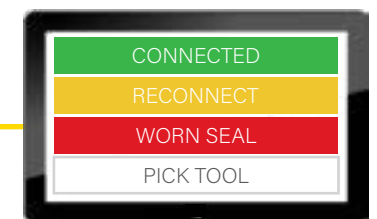
Controllable LED signals operator to use specific tool.



### User's System

PLC

HMI

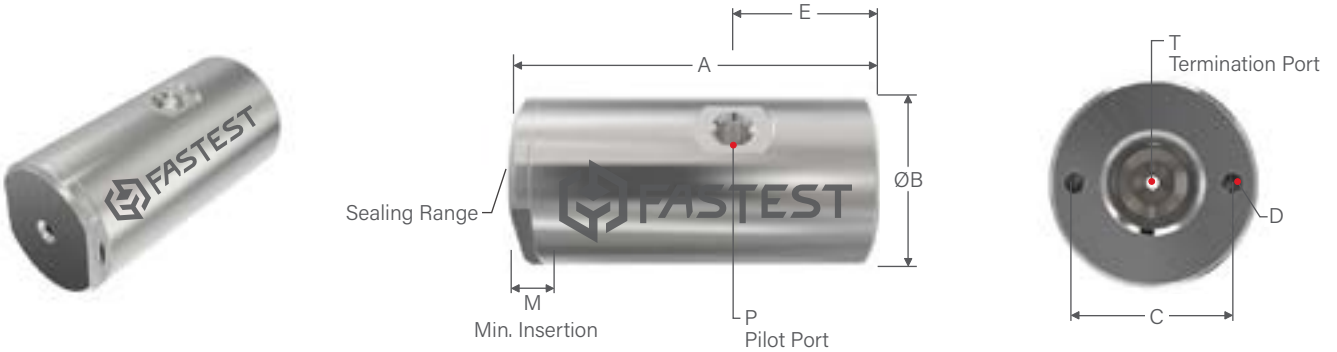


Standalone install or tie into PLC

PROGRAMMING TOOL

- Quickly setup ICON™ Tools
- Eliminate the need for PLC programming
- Can be powered from wall adapter (included) or from a PLC (24VDC)

# ME / MEDICAL-LIFE SCIENCES SEALING CONNECTION TOOL



Ordering Information				Dimensions							
Sealing Range	Part Number	Replacement Seals Pack (5)	Rebuild Kit	A	B	C	D	E	M	P	T

## ME | Imperial Mounting Holes and Pilot Ports

0.015 to 0.030 (0.38 to 0.80)	ME0010030	MEB0010030	MER001	1.72 (43.7)	0.84 (21.3)	0.63 (16.0)	4-40 UNC	0.72 (18.3)	0.16 (4.1)	10-32 UNF	1/8 NPT
0.030 to 0.050 (0.80 to 1.30)	ME0010050	MEB0010050									
0.050 to 0.080 (1.30 to 2.00)	ME001001	MEB001001									
0.080 to 0.130 (2.00 to 3.30)	ME001002	MEB001002									

## ME | Metric Mounting Holes and Pilot Ports

0.015 to 0.030 (0.38 to 0.80)	ME0010030M	MEB0010030	MER001	1.72 (43.7)	0.84 (21.3)	0.63 (16.0)	M2.5	0.72 (18.3)	0.16 (4.1)	M5	1/8 BSPP (G)
0.030 to 0.050 (0.80 to 1.30)	ME0010050M	MEB0000050									
0.050 to 0.080 (1.30 to 2.00)	ME001001M	MEB001001									
0.080 to 0.130 (2.00 to 3.30)	ME001002M	MEB001002									

Dimensions: inch (mm)



\*Dimension only applies to ME with ICON™ Technology  
(Base Part Numbers that include "CV04ANA" or "CV04SSR").

Ordering Information (Complete Connector = Main Seal Set + Base Part Number)					Dimensions						
Sealing Range	Main Seal Set*	Base Connector Part Number	Replacement Seals Package (5)	Rebuild Kit	A	B	C	D	M	P	T

#### ME | Imperial Mounting Holes and Pilot Ports

0.100 to 0.180 (2.5 to 4.6)	MES0101	ME01 MEM01CV04ANA MEM01CV04SSR	MEB0101	MER01	2.05 (52.1)	1.49 (37.9)	1.10 (27.9)	10-32 UNF	0.58 (14.7)	10-32 UNF	1/8 NPT
0.180 to 0.260 (4.6 to 6.6)	MES0102		MEB0102								
0.260 to 0.340 (6.6 to 8.6)	MES0103		MEB0103								
0.340 to 0.420 (8.6 to 10.7)	MES0104		MEB0104								
0.420 to 0.510 (10.7 to 13.0)	MES0105		MEB0105								

#### ME | Metric Mounting Holes and Pilot Ports

0.100 to 0.180 (2.5 to 4.6)	MES0101	MEM01 MEM01CV04ANA MEM01CV04SSR	MEB0101	MER01	2.05 (52.1)	1.49 (37.9)	1.10 (27.9)	M5	0.58 (14.7)	M5	1/8 BSPP (G)
0.180 to 0.260 (4.6 to 6.6)	MES0102		MEB0102								
0.260 to 0.340 (6.6 to 8.6)	MES0103		MEB0103								
0.340 to 0.420 (8.6 to 10.7)	MES0104		MEB0104								
0.420 to 0.510 (10.7 to 13.0)	MES0105		MEB0105								

Dimensions: inch (mm)

\*Includes seals(s) and metal parts for one complete seal change.

*How To Add ICON™ to ME		
Signal Output	Part Number Suffix	Example
ME without ICON™	None	ME0101
ME with ICON™: Analog Output Signal	CV04ANA	ME0101 <b>CV04ANA</b>
ME with ICON™: Solid State Relay	CV04SSR	ME0101 <b>CV04SSR</b>



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# ML / MEDICAL-LIFE SCIENCES SEALING CONNECTION TOOL

Pneumatic nested sealing connection tool for full thread luers in automated and semi-automated processes.

CONNECTS TO:

Luers



SPECIFICATIONS

Pressure Rating	Operating Temperatures	Materials of Construction
Vacuum to 500 psi (34.4 bar)	0°F to +200°F (-17°C to +93°C)	Anodized Aluminum
Termination Port		Seal Material*
1/8 FNPT		FDA White Neoprene*

\* Additional seal material types available, consult factory.

ACTUATION METHOD

**Pneumatic:** pilot pressure applied to seals with no metal contact and uniform seal movement seals inside luer

ICON™ TECHNOLOGY

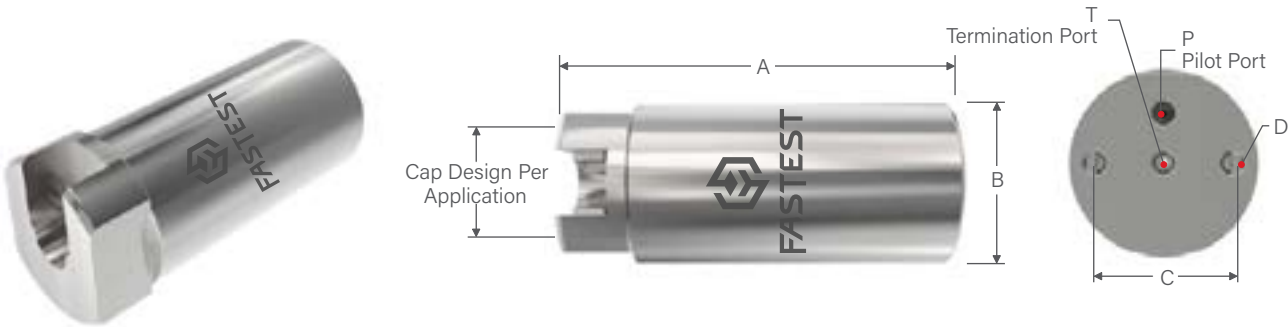
Consult Factory

ACCESSORIES

Visit [fastestinc.com](http://fastestinc.com)

- 1 Specially designed leur nest to contain test part under pressure
- 2 Ideally designed for automated processes and high volume production testing
- 3 Seals against any full thread standard luers
- 4 Cleaned and lubricated for oxygen safe environment with FDA approved seals

ML / MEDICAL-LIFE SCIENCES SEALING CONNECTION TOOL



Ordering Information				Dimensions					
Sealing Range	Part Number	Main Seal Set	Repair Kit	A	B	C	D	P	T

Medical Luer (ML) Connectors | Imperial Mounting Holes and Pilot Ports

Sized to Part	ML001	Consult Factory	MER001	Application Dependent	0.84 (21.3)	0.63 (16.0)	4-40 UNC	10-32 UNF	1/8 NPT
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Medical Luer (ML) Connectors | Metric Mounting Holes and Pilot Ports

Sized to Part	ML001	Consult Factory	MER001	Application Dependent	0.84 (21.3)	0.63 (16.0)	M2.5	M5	1/8 BSPP (G)
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Dimensions: inch (mm)

Luer Specifications: ISO 594

- NOTE:** The Medical Luer “ML Series” connectors are designed to your specific application requirements.
- All parts are washed in an aqueous solution utilizing ultrasonic agitation at a temperature of 140°F. Components are then rinsed in a cascading rinse tank and dried using 99.999% pure nitrogen and assembled in a 100,000ppm level controlled environment.  
Krytox is the standard lubricant.



# 60M / MEDICAL-LIFE SCIENCES SEALING CONNECTION TOOL

Sleeve actuated external grip and seal connection tool for medical luer

CONNECTS TO:



- 1 SurConnect™ - Green to go visible indicator to ensure complete connection
- 2 Instant external threaded connection with floating piston to ensure proper ID sealing position
- 3 Seals against any full and partial threaded standard luers
- 4 Cleaned and lubricated for oxygen safe environment with FDA approved seals



SPECIFICATIONS

Pressure Rating	Operating Temperatures	Materials of Construction
Vacuum to 750 psi (51.7 bar)	0°F to +200°F (0°C to +93°C)	Stainless Steel, Anodized Aluminum
Termination Port		Seal Material*
1/8 FNPT		FDA approved FKM seals

\* Additional seal material types available, consult factory.

ACTUATION METHOD

**Sleeve Actuated:** Easy, ergonomic sleeve action eliminates repetitive twisting and turning - push to connect, pull to release

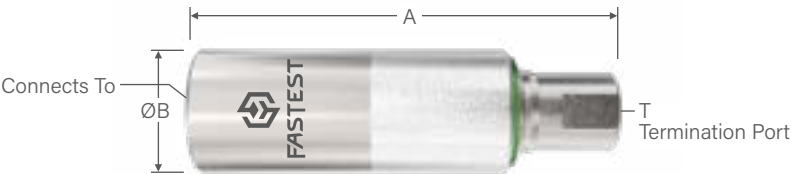
ICON™ TECHNOLOGY

Consult Factory

ACCESSORIES

Visit [fastestinc.com](http://fastestinc.com)


# 60M / MEDICAL-LIFE SCIENCES SEALING CONNECTION TOOL



Ordering Information				Dimensions		
Connects To	Part Number	Replacement Seals Bulk Pack (5)	Rebuild Kit	A	B	T
60M   Luers						
Luer	60MP0340	S60MP0340	R60MP0340	2.92 (74.2)	0.88 (22.5)	1/8 NPT

Dimensions: inch (mm)

**Luer Specifications: ISO 594**

-  All parts are washed in an aqueous solution utilizing ultrasonic agitation at a temperature of 140°F. Components are then rinsed in a cascading rinse tank and dried using 99.999% pure nitrogen and assembled in a 100,000 ppm level controlled environment.
- Krytox is the standard lubricant.
- Optional material is a FDA listed fluorocarbon.
- Components are double bagged for shipping integrity.



# MLL / MEDICAL-LIFE SCIENCES SEALING CONNECTION TOOL

Pneumatic sealing connection tool for external sealing of luers in automated and semi-automated processes.

CONNECTS TO:



- 1 Pilot operated low pressure expanding seal against luer OD's
- 2 Compact design with low particulate generation
- 3 Cleaned and lubricated for oxygen safe environment with FDA approved seals
- 4 Self aligning connector requires no operator adjustment

**i** All parts are washed in an aqueous solution utilizing ultrasonic agitation at a temperature of 140°F. Components are then rinsed in a cascading rinse tank and dried using 99.999% pure nitrogen and assembled in a 100,000ppm level controlled environment.

Krytox is the standard lubricant.

Optional material is a FDA listed fluorocarbon.

Components are double bagged for shipping integrity.



SPECIFICATIONS

Pressure Rating	Pilot Pressure	Operating Temperatures**
Vacuum to 100 psi (6.9 bar)	60-90 psi (4.1-6.2 bar)	0°F to +200°F (-17°C to +93°C)
Termination Port	Materials of Construction	Seal Material*
1/8 FNPT	Stainless Steel, Anodized Aluminum	Masterflex C-Flex R70

ACTUATION METHOD

**Pneumatic:** seals to external surface of luer when pilot pressure is applied

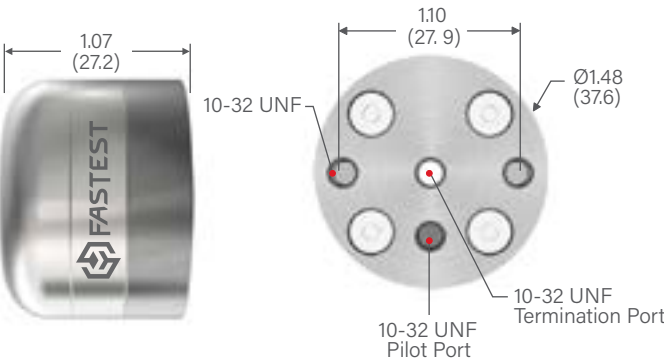
ICON™ TECHNOLOGY

Consult Factory

ACCESSORIES

Visit [fastestinc.com](http://fastestinc.com)

Ordering Information	
Part Number	Replacement Seals Pack (5)
MLL   Luers	
MLL2001	S6LT18120



# MLH / MEDICAL-LIFE SCIENCES SEALING CONNECTION TOOL

Pneumatic sealing connection tool for sealing luers with full threads.

## CONNECTS TO:



- 1 Nest designed for full thread luers
  - 2 Cleaned and lubricated for oxygen safe environment with FDA approved seals.\*
  - 3 Self aligning connector requires no operator adjustment.
  - 4 Quick and easy seal replacement to minimize down time, maintenance and tool inventory
- i** All parts are washed in an aqueous solution utilizing ultrasonic agitation at a temperature of 140°F. Components are then rinsed in a cascading rinse tank and dried using 99.999% pure nitrogen and assembled in a 100,000ppm level controlled environment.

Krytox is the standard lubricant.

FDA listed fluorocarbon seal material is compliant to 21CFR177.2600. Optional material is White FDA Neoprene\*.

Components are double bagged for shipping integrity.



## SPECIFICATIONS

Pressure Rating	Operating Temperatures	Materials of Construction
Vacuum to 500 psi (34.5 bar)	0°F to +200°F (-17°C to +93°C)	Stainless Steel, Anodized Aluminum
Termination Port		Seal Material*
10-32 (M5)		FDA approved FKM seals

\* Additional seal material types available, consult factory.

## ACTUATION METHOD

**Pneumatic:** seals to external surface of luer when pilot pressure is applied

## ICON™ TECHNOLOGY

Consult Factory

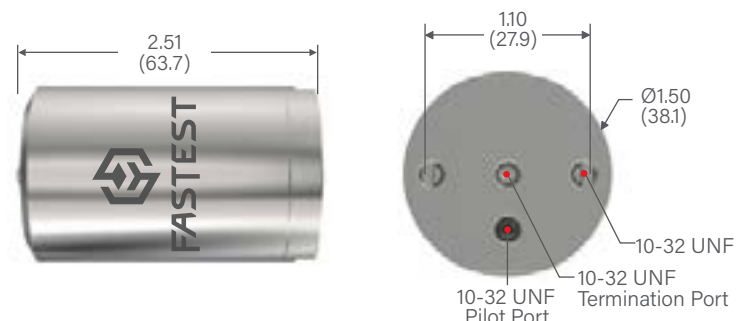
## ACCESSORIES

Visit [fastestinc.com](http://fastestinc.com)

Ordering Information		
Part Number	Replacement Seals Pack (5)	Rebuild Kit

**MLH** | Luers with Full Threads

MLH2001	S1001050B70FDA	MLHR2001
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# **COMPRESSED GAS**





PRODUCT SERIES	G346	G540	G540S	G580	G590	GBS3
Gas Standard	CGA 346	CGA 540	CGA 540	CGA 580	CGA 590	BS NO3
GAS TYPE	Air	Oxygen	Oxygen	Inert and Inert Mixes (Argon, Helium, Nitrogen)	Air	Oxygen
Operation	Bail Handle	Bail Handle	Sleeve	Bail Handle	Bail Handle	Bail Handle
PRESSURE RATING	Vacuum 50 mtorr (micron) to 3600 psi (248 bar)			Vacuum 50 mtorr (micron) 3600 psi (248 bar)		

Yoke Connections



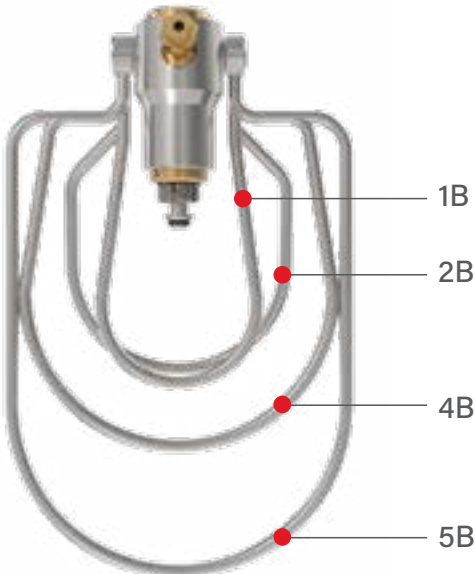
Specialty Connections



G870	G910	G940	950
CGA 870	CGA 910	CGA 940	CGA 950
Oxygen	Nitrous Oxide (venting only)	Carbon Dioxide (Venting only)	Air
Lever Handle	Lever Handle	Lever Handle	Lever Handle
Vacuum 50 mtorr (micron) to 3600 psi (248 bar)			

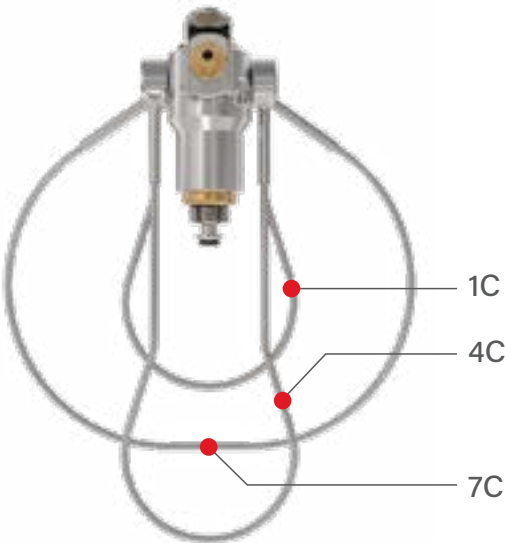
HPG580	G540WOB	CryoVent
CGA 580	CGA 540	RELIEF VALVES
High Purity Inert and Inert Mixes (Argon, Helium, Nitrogen)	Oxygen	Inert and Inert Mixes (Argon, Helium, Nitrogen) - Venting Only
Bail Handle	Bail Handle Pneumatic RPV	Sleeve
Vacuum 50 mtorr (micron) to 3600 psi (248 bar)		Vacuum 30 mtorr (micron) 800 psi (55 bar)

HANDLE OPTIONS



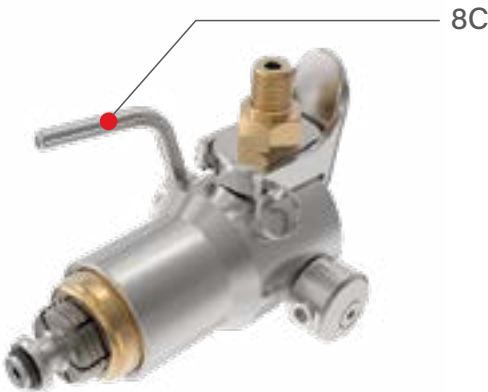
RIGID BAIL HANDLE

1B	Standard Valves
2B	RPV Valves
4B	Valve guards (not for use in palletized fill racks)
5B	Large valve guard (not for use in palletized fill racks)



CABLE HANDLE

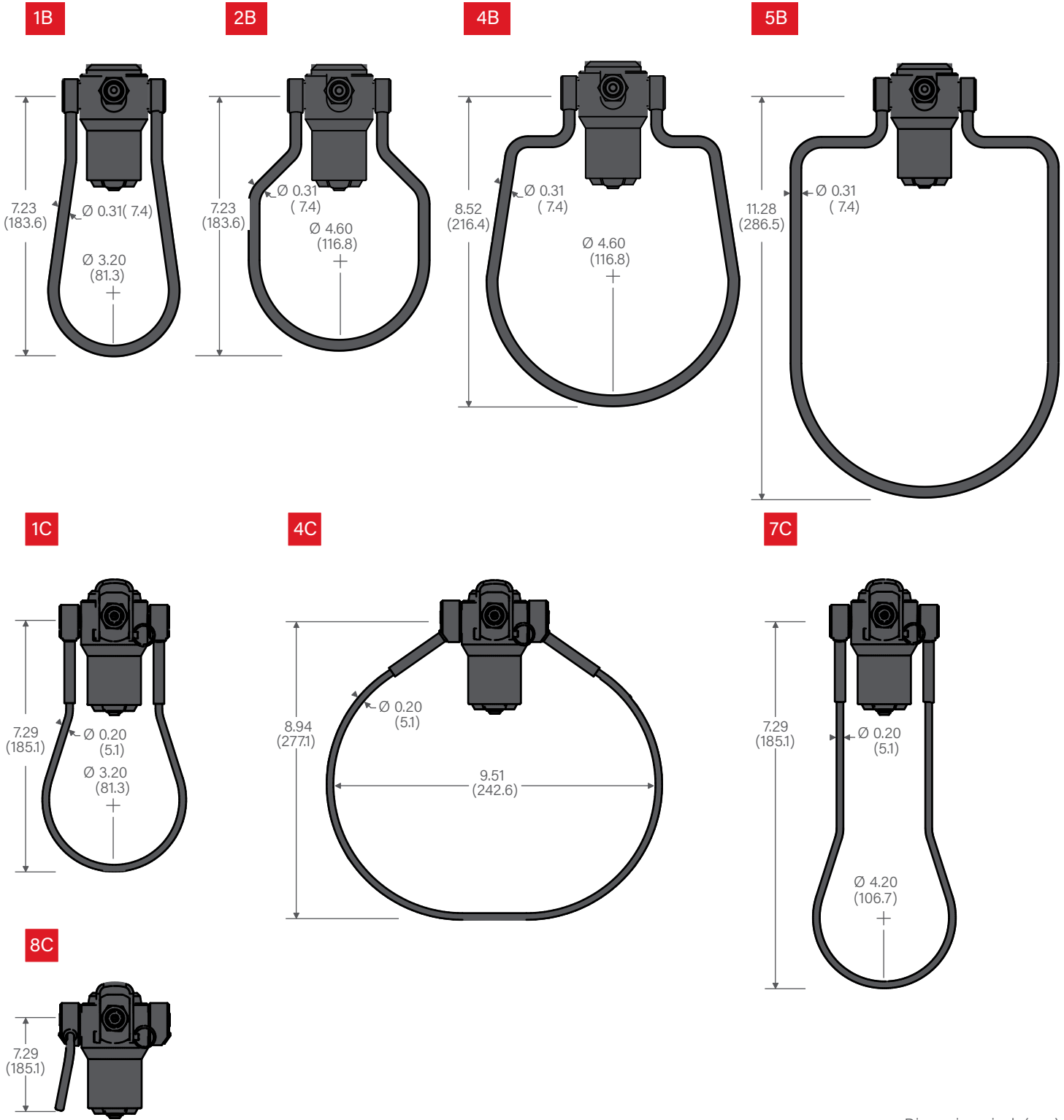
1C	Valve guards, 6 and 12 packs
4C	Valve guards, 6 and 12 packs
7C	Extra large valve guards



LEVER HANDLE

8C	Valve guards, 6 and 12 packs
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# HANDLE DIMENSIONS

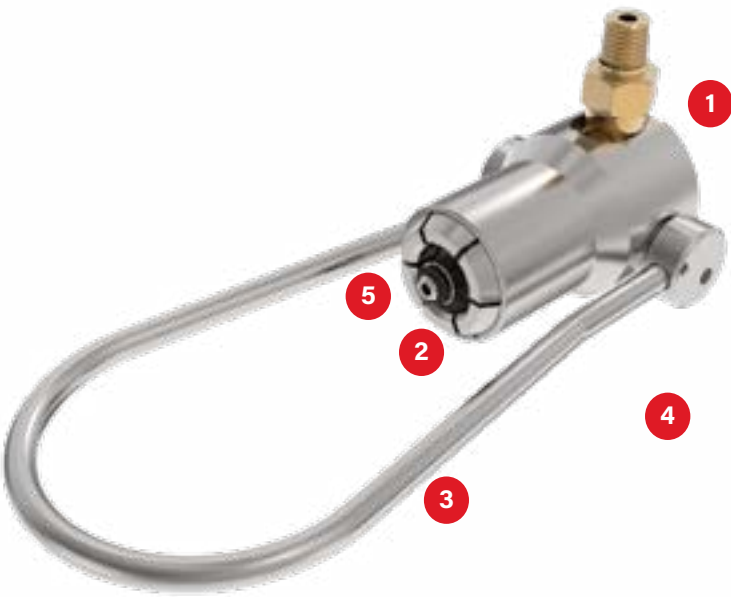


Dimensions: inch (mm)



# EXTERNAL G-SERIES / COMPRESSED GAS CONNECTOR

Bail handle actuated external grip and seal connection tool for compressed gas processing applications.



- 1 Positive pressure safety latch to prevent removal under pressure
- 2 Instant connection to external thread with self-aligning internal floating piston for robust sealing
- 3 Ergonomic bail handle surrounds valve for added safety
- 4 G540S version specifically designed for self contained medical cylinders
- 5 Optional retractable RPV pin (G540 and G540S)



## SPECIFICATIONS

Pressure Rating*	Wetted Materials
Vacuum 50 mtorr (micron) to 3600 psi (248 bar)	Brass, 300 series SST, Monel, Inconel
Operating Temperatures	Seal Materials
0°F to 140°F (-17°C to +60°C)	Teflon
Termination	Other Materials
1/4 Male NPT	Brass, 300 series SST, FKM

**NOTE:** BAM Tested. Cleaned for oxygen service  
\*Pressure rating per criteria of ASME B31.3.

## HANDLE OPTIONS

Bail Handle, Cable Handle, Lever Handle

## ACTUATION METHOD

Bail/Cable/Lever: Rotate handle with roller actuation.  
Sleeve: Push to connect, pull to release.

### G346



**CONNECTS TO**  
CGA 346 Valves

#### GAS TYPE

Air

### G540



**CONNECTS TO**  
CGA 540 Valves

#### GAS TYPE

Oxygen

### G540S



**CONNECTS TO**  
CGA 540 Valves

#### GAS TYPE

Oxygen

## G346 / G540 / G540S / EXTERNAL COMPRESSED GAS CONNECTOR



Ordering Information							Dimensions	
Connects To	Gas Type	Part Number	Handle Type	RPV Pin (Y/N)	Main Seal Material	Main Seal Packs (QTY)	A	B

### CGA 346 | G-Series 346

CGA 346	Air	G3460411BH	1B	N	FKM	SG346 (5) SG346100 (100) SG346250 (250) SG346500 (500)	7.41 (188.2)	3.83 (97.3)
		G3460411CH	1C	N			7.50 (190.5)	3.75 (95.3)
		G3460412BH	2B	N			7.21 (183.1)	5.23 (132.8)
		G3460414BH	4B	N			8.81 (223.8)	7.23 (183.6)
		G3460414CH	4C	N			10.75 (273.0)	5.00 (127)
		G3460418CH	8C	N			--	--

### CGA 540 | G-Series 540

CGA 540	Oxygen	G5400411BH	1B	N	FKM	SG540 (5) SG540100 (100) SG540250 (250) SG540500 (500)	7.41 (188.2)	3.83 (97.3)
		G5400411CH	1C	N			7.50 (190.5)	3.75 (95.3)
		G5400411CRP1	1C	Y			7.50 (190.5)	3.75 (95.3)
		G5400412BH	2B	N			7.21 (183.1)	5.23 (132.8)
		G5400412BRP1	2B	Y			7.21 (183.1)	5.23 (132.8)
		G5400414BH	4B	N			8.81 (223.8)	7.23 (183.6)
		G5400414BRP1	4B	N			8.81 (223.8)	7.23 (183.6)
		G5400414CH	4C	N			10.75 (273.0)	5.00 (127)
		G5400414CRP1	4C	Y			10.75 (273.0)	5.00 (127)
		G5400415BH	5B	N			11.60 (294.6)	7.81 (198.4)
		G5400418CH	8C	N	EPDM	SG540E (5) SG540E100 (100)	--	--
		G5400416BRPE1	6B	Y			10.90 (276.9)	9.81 (249.2)
		G5400418CRPE1	8C	Y			--	--
							--	--

### G540S | G-Series G540S

CGA 540	Oxygen	G540041SH	Sleeve	N	FKM	SG540 (5) SG540S100 (100)	--	--
		G540042SH		N			--	--
		G540041SRPR1		Y			--	--

Dimensions: inch (mm)



**DON'T SEE A SOLUTION FOR YOUR APPLICATION?** Submit a custom application form and drawing to [fastsales@fastestinc.com](mailto:fastsales@fastestinc.com) or to your local distributor.

# INTERNAL G-SERIES / COMPRESSED GAS CONNECTOR

Bail handle actuated internal grip and seal connection tool for compressed gas processing applications.



SPECIFICATIONS

Pressure Rating*	Wetted Materials
Vacuum 50 mtorr (micron) to 3600 psi (248 bar)	Brass, 300 series SST
Operating Temperatures	Seal Materials
0°F to 140°F (-17°C to +60°C)	EPDM
Termination	Other Materials
1/4 Male NPT	Brass, 300 series SST

NOTE: BAM Tested. Cleaned for oxygen service  
\*Pressure rating per criteria of ASME B31.3.

HANDLE OPTIONS

Bail Handle, Cable Handle, Lever Handle

ACTUATION METHOD

Bail/Cable/Lever: Rotate handle with roller actuation.

G580



CONNECTS TO  
CGA 580 Valves

GAS TYPE

Argon, Helium, Nitrogen,  
Inert Mixes

G590



CONNECTS TO  
CGA 590 Valves

GAS TYPE

Air

GBS3

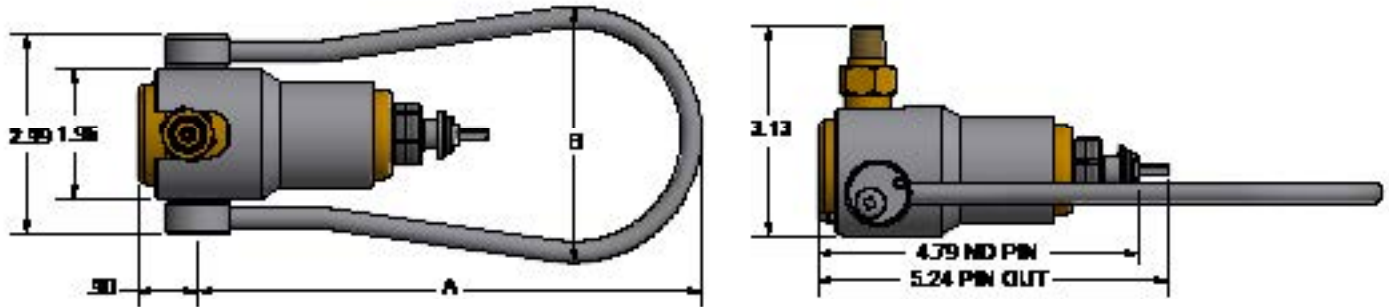


CONNECTS TO  
BS3 Valves

GAS TYPE

Oxygen, Argon, Helium, Nitrogen,  
Inert Mixes

## G580 / G590 / GBS3 / INTERNAL COMPRESSED GAS CONNECTOR



Ordering Information							Dimensions	
Connects To	Gas Type	Part Number	Handle Type	RPV Pin (Y/N)	Main Seal Material	Main Seal Packs (QTY)	A	B

### CGA 580 | G-Series 580

CGA 580	Inerts and Inert Mixes	G5800411BH	1B	N	EPDM	SG580 (5) SG580100 (100) SG580250 (250) SG580500 (500)	7.41	3.83
		G5800411CH	1C	N			7.50	3.75
		G5800412BH	2B	N			7.21	5.23
		G5800414BH	4B	N			8.81	7.23
		G5800414CH	4C	N			10.75	5.00
		G5800415BH	5B	N			11.60	7.81
		G5800417CH	7C	N			9.00	10.00
		G5800418CH	8C	N			--	--
		G580041CRP	1C	Y		SG580RPV (5) SG580RPV100 (100) SG580RPV250 (250) SG580RPV500 (500)	7.50	3.75
		G5800412BRP	2B	Y			7.21	5.23
		G5800414BRP	4B	Y			8.81	7.23
		G5800414CRP	4C	Y			10.75	5.00
		G5800415BRP	5B	Y			11.60	7.81
		G5800416BRP	6B	Y			10.90	9.81
		G5800418CRP	8C	Y			--	--

### CGA 590 | G-Series 590

CGA 590	Air	G5900411BH	1B	N	EPDM	SG580 (5)	7.41	3.83
		G5900412BRP	2B	Y		SG580RPV (5)	7.21	5.23

### BS3 | G-Series BS3

BS341 No. 3	Inerts and Inert Mixes	GBS30411BH	1B	N	EPDM	SG580 (5)	7.41	3.83
		GBS30414CRP	4C	Y	EPDM	SG580 (5)	10.75	5.00
	Oxygen	GBS30414CRPMV	4C	Y	FKM	SG580 (5)	10.75	5.00

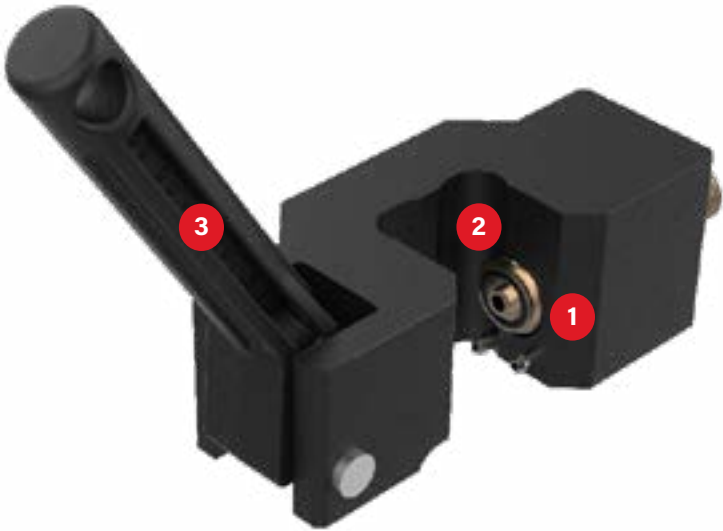
Dimensions: inch (mm)



**DON'T SEE A SOLUTION FOR YOUR APPLICATION?** Submit a custom application form and drawing to [fastsales@fastestinc.com](mailto:fastsales@fastestinc.com) or to your local distributor.

# MEDIMATE SERIES / COMPRESSED GAS CONNECTOR

Lever handle actuated yoke grip and seal connection tool for compressed gas processing applications.



- 1 Positive pressure internal safety mechanism to prevent removal under pressure
- 2 Instant connection to yoke style valves with self-aligning floating piston for robust sealing
- 3 Reduce repetitive motion injuries to improve operator retainment and performance capabilities



### SPECIFICATIONS

Pressure Rating*	Wetted Materials
Vacuum 50 mtorr (micron) to 3600 psi (248 bar)	Brass, 300 series SST
Operating Temperatures	Seal Materials
0°F to 140°F (-17°C to +60°C)	Teflon, See Chart
Termination	Other Materials
1/4 Male NPT	Brass, 300 series SST

NOTE: BAM Tested. Cleaned for oxygen service  
\*Pressure rating per criteria of ASME B31.3.

### ACTUATION METHOD

Lever: Simply flip the ergonomic handle for ease of use.

#### G870



CONNECTS TO  
CGA 870 Valves

GAS TYPE  
Oxygen

#### G910



CONNECTS TO  
CGA 910 Valves

GAS TYPE  
Nitrous Oxide

#### G940



CONNECTS TO  
CGA 940 Valves

GAS TYPE  
Carbon Dioxide

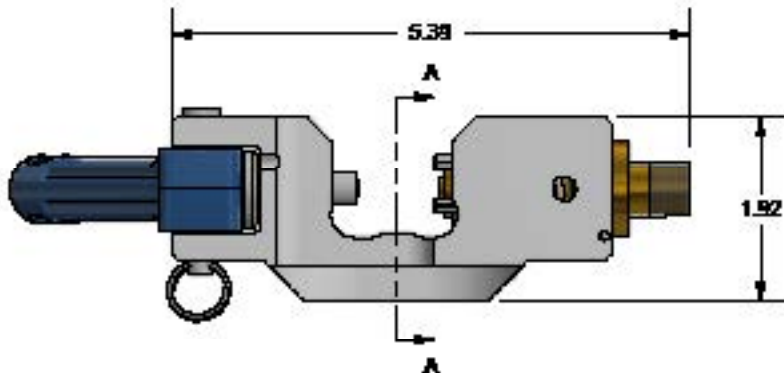
#### G950



CONNECTS TO  
CGA 950 Valves

GAS TYPE  
Air

## MEDIMATE / INERT GAS QUICK CONNECTOR



### Ordering Information

Connects To	Gas Type	Part Number	Main Seal Material	Main Seal Bulk Packs (QTY)
CGA 870   G-Series 870				
CGA 870	Oxygen	G870041	FKM	SG870/950 (5) SG870/950100 (100) SG870/950250 (250) SG870/950500 (500)
		G870041A		
		G870041E	EPDM	SG870/950E (5) SG870/950E100 (100) SG870/950E250 (250) SG870/950E500 (500)
		G870041AE		
CGA 910   G-Series 910				
CGA 910	Nitrous Oxide	G910041	FKM	SG870/950 (5) SG870/950100 (100) SG870/950250 (250) SG870/950500 (500)
		G910041A		
		G910041E	EPDM	SG870/950E (5) SG870/950E100 (100) SG870/950E250 (250) SG870/950E500 (500)
		G910041AE		
CGA 940   G-Series 940				
CGA 940	Carbon Dioxide	G940041	FKM	SG870/950 (5) SG870/950100 (100) SG870/950250 (250) SG870/950500 (500)
		G940041A		
		G940041E	EPDM	SG870/950E (5) SG870/950E100 (100) SG870/950E250 (250) SG870/950E500 (500)
		G940041AE		
CGA 950   G-Series 950				
CGA 950	Air	G950041	FKM	SG870/950 (5) SG870/950100 (100) SG870/950250 (250) SG870/950500 (500)
		G950041A		
		G950041E	EPDM	SG870/950E (5) SG870/950E100 (100) SG870/950E250 (250) SG870/950E500 (500)
		G950041AE		





# HPG580 / HIGH PURITY CONNECTOR FOR INERT SPECIALTY GASES

High Purity bail handle actuated internal grip and seal connection tool for compressed gas processing applications.

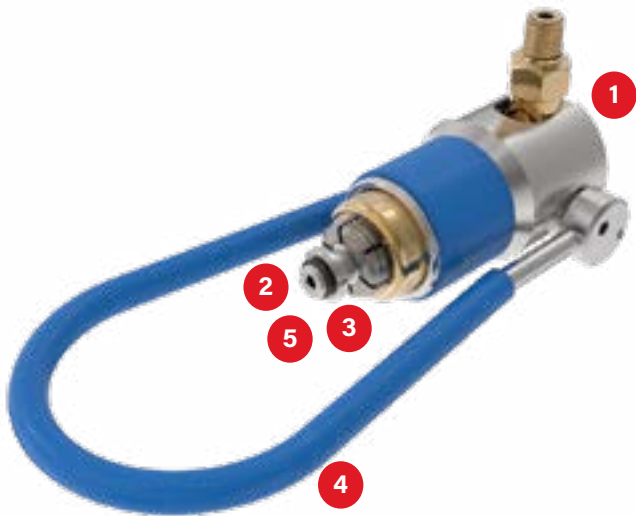
**CONNECTS TO:**

CGA 580 Valves

**GAS TYPE**

High Purity Inert Gases and Mixes

99.9999% Pures and Mixes



**SPECIFICATIONS**

Pressure Rating*	Wetted Materials
Vacuum 30 mtorr (micron) to 3600 psi (248 bar)	SST, Brass
Operating Temperatures	Seal Materials
0°F to 140°F (-17°C to +60°C)	FDA grade FKM, Teflon
Termination	Other Materials
1/4 Male NPT	See Chart

**NOTE:** BAM Tested. Cleaned for oxygen service  
\*Pressure rating per criteria of ASME B31.3.

**HANDLE OPTIONS**

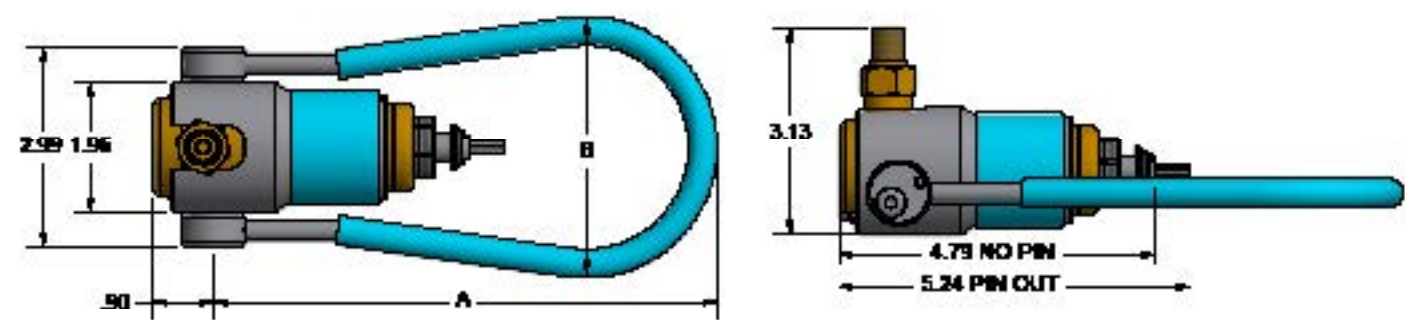
Bail Handle, Cable Handle, Lever Handle

**ACTUATION METHOD**

Bail/Cable/Lever: Rotate handle with roller actuation.

- 1 Positive pressure safety latch to prevent removal under pressure
- 2 Designed specifically for high purity applications with vacuum levels down to 30micron and 1x10-9 sccm helium leak rate
- 3 Instant connection to external thread with self-aligning internal floating piston for robust sealing
- 4 Ergonomic bail handle surrounds valve for added safety
- 5 Optional retractable RPV pin

HPG580 / HIGH PURITY CONNECTOR FOR INERT SPECIALTY GASES



Ordering Information							Dimensions	
Connects To	Gas Type	Part Number	Handle Type	RPV Pin (Y/N)	Main Seal Material	Main Seal Packs (QTY)	A	B
CGA 580	High Purity Inerts and Inert Mixes	HPG5800411BH	1B	N	FKM	SHPG580 (5) SHPG580100 (100) SHPG580250 (250) SHPG580500 (500)	7.41 (188.2)	3.83 (97.3)
		HPG5800411CH	1C	N			7.50 (190.5)	3.75 (95.3)
		HPG5800412BH	2B	N			7.21 (183.1)	5.23 (132.8)
		HPG5800414CH	4C	N			10.75 (273.0)	5.00 (127)
		HPG5800412BRP	2B	Y		SHPG580RPV (5) SHPG580RPV100 (100) SHPG580RPV250 (250) SHPG580RPV500 (500)	7.21 (183.1)	5.23 (132.8)
		HPG5800414CRP	4C	Y			7.21 (183.1)	5.23 (132.8)
		HPG5800415BRP	5B	Y			11.60 (294.6)	7.81 (198.4)

Dimensions: inch (mm)



# G540 WOB / COMPRESSED GAS CONNECTOR

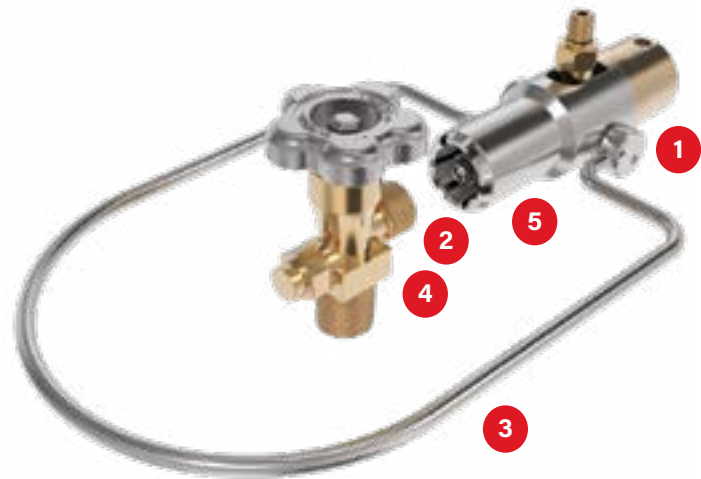
Bail handle actuated external grip and seal connection tool for compressed gas processing applications.

**CONNECTS TO:**

CGA 540 Valves

**GAS TYPE**

Oxygen



**SPECIFICATIONS**

Pressure Rating*	Wetted Materials
Vacuum 50 mtorr (micron) to 3600 psi (248 bar)	Brass, Monel
Operating Temperatures	Seal Materials
0°F to 140°F (-17°C to +60°C)	Teflon, See Chart
Termination	Other Materials
1/4 Male NPT	Brass, 300 series SST

**NOTE:** BAM Tested. Cleaned for oxygen service  
\* Pressure rating per criteria of ASME B31.3.

- 1 Positive pressure safety latch to prevent removal under pressure
- 2 Instant connection to external thread with self-aligning internal floating piston for robust sealing
- 3 Ergonomic bail handle surrounds valve for added safety
- 4 Cannot overtighten and ruin valves
- 5 RPV pin fully retracts to prevent damage

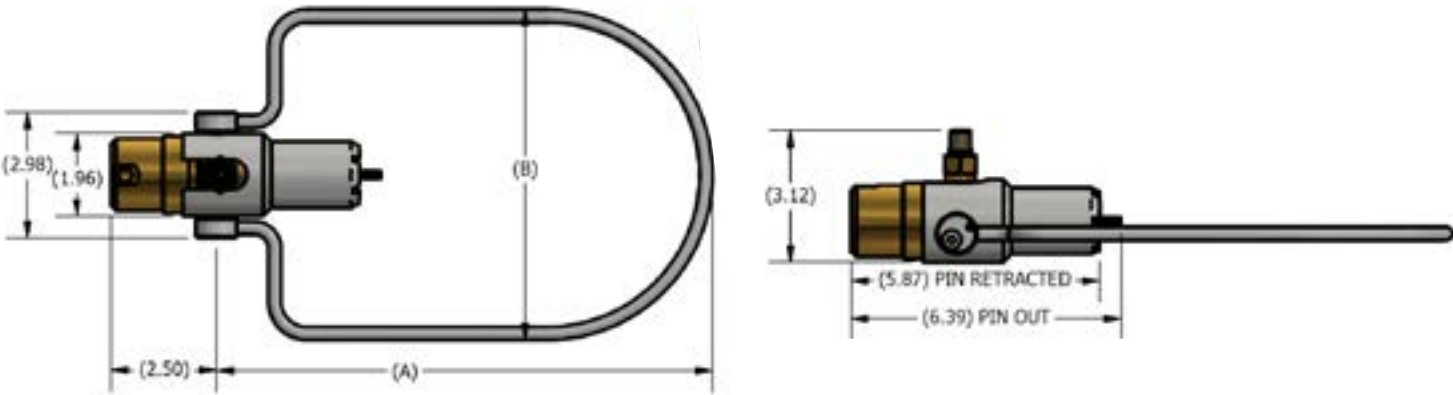
**HANDLE OPTIONS**

Bail Handle

**ACTUATION METHOD**

Bail: Rotate handle with roller actuation.  
Pneumatically activated RPV pin depression

G540 WOB / COMPRESSED GAS CONNECTOR



Ordering Information							Dimensions	
Connects To	Gas Type	Part Number	Handle Type	RPV Pin (Y/N)	Main Seal Material	Main Seal Packs (QTY)	A	B
CGA 540	Oxygen	G5400415WOB	5B	Y	FKM	SG540 (5) SG540100 (100) SG540250 (250) SG540500 (500)	11.60 (294.6)	7.81 (198.4)
		G5400418WOB	8C	Y			--	--

Dimensions: inch (mm)



# CRYOVENT / PRESSURE RELIEF VALVE QUICK CONNECTOR

Sleeve actuated grip and seal connection tool for venting liquid cylinders.

**CONNECTS TO:**

Generant and Rego Pressure Relief Valves

**GAS TYPE**

Argon, Helium, Nitrogen, Inert Mixes



**SPECIFICATIONS**

Pressure Rating	Operating Temperatures	Connection Profile
800 psi (55 bar)	-60°F to 200°F (based on seal material)	Over hex of Generant and Rego pressure relief valves
Housing Material		
Brass		
Seal Material*		
Fluorosilicone		

**NOTE:** Cleaned for oxygen service

\* More seal material types available, consult factory.

**HANDLE OPTIONS**

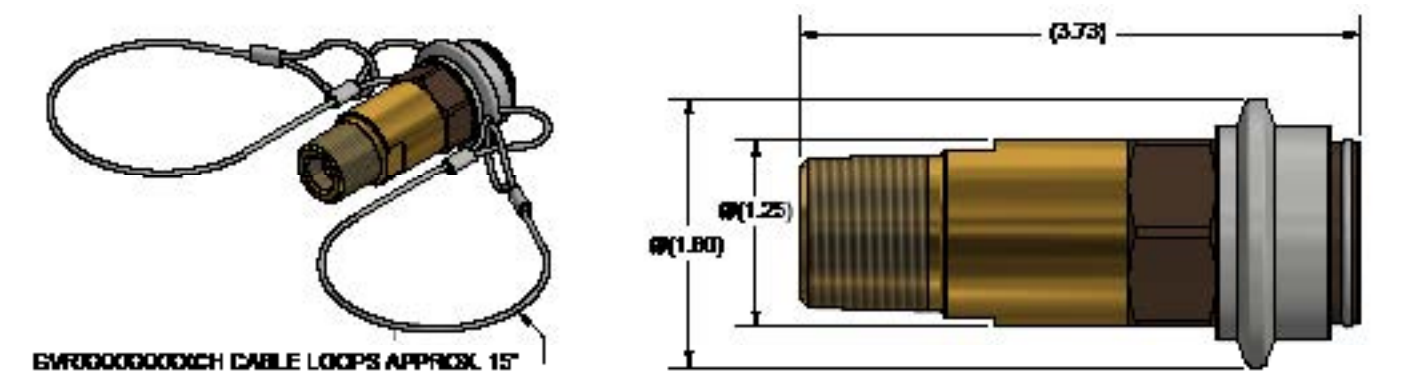
Cable Handle

**ACTUATION METHOD**

Sleeve: Push to connect, pull to release.

- 1** Sleeve latch to prevent disconnection under pressure.
- 2** Instant connection to pressure relief valves to safely direct vented gas to external locations
- 3** Accoustic noise reduction directs sound away from operator when attached to common stack
- 4** Cable option assists with sleeve release for high condensation filling

CRYOVENT / PRESSURE RELIEF VALVE CONNECTOR



Ordering Information					
Connects To	Gas Type	Part Number	Handle	Main Seal Material	Main Seal Packs (QTY)
CryoVent   G-Series 870  Generant and Rego Pressure Relief Valves	Argon, Helium, Nitrogen, Inert Mixes	GVR097121FS	Sleeve	Fluorosilicone	SGVR097 (5)
		GVR097121FSCH	Sleeve + Cable Loops		



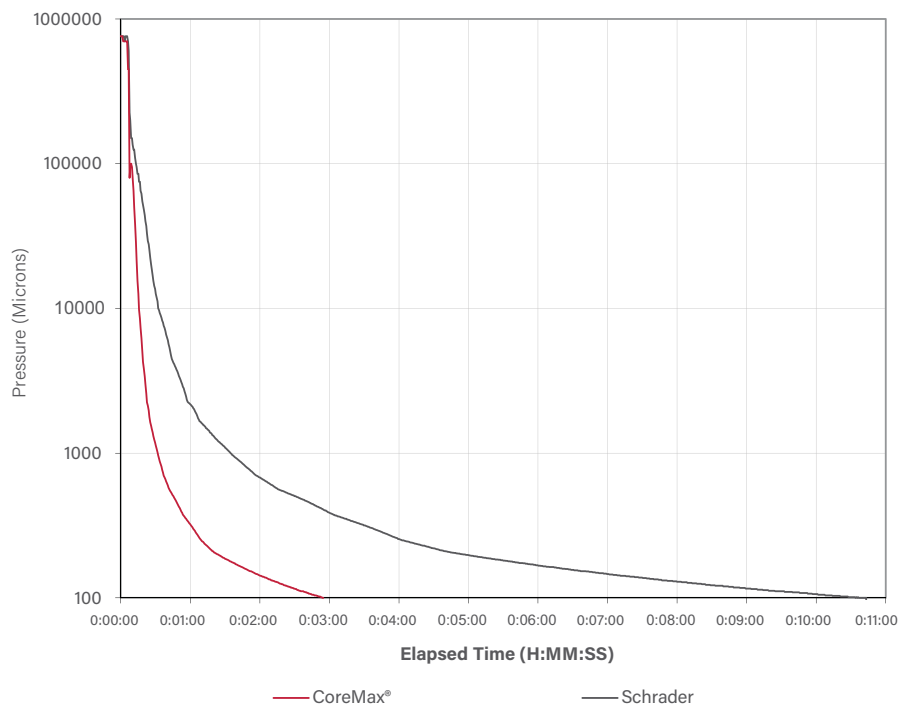


# COREMAX® SYSTEM

## A Complete Solution for Efficient Refrigerant Processing & Leak Testing of HVAC Systems

The **CoreMax®** System eliminates process tubes and Schrader® valves for faster evacuation times, improved quality, greater throughput, and less maintenance costs.

Evacuation Time of known Volume

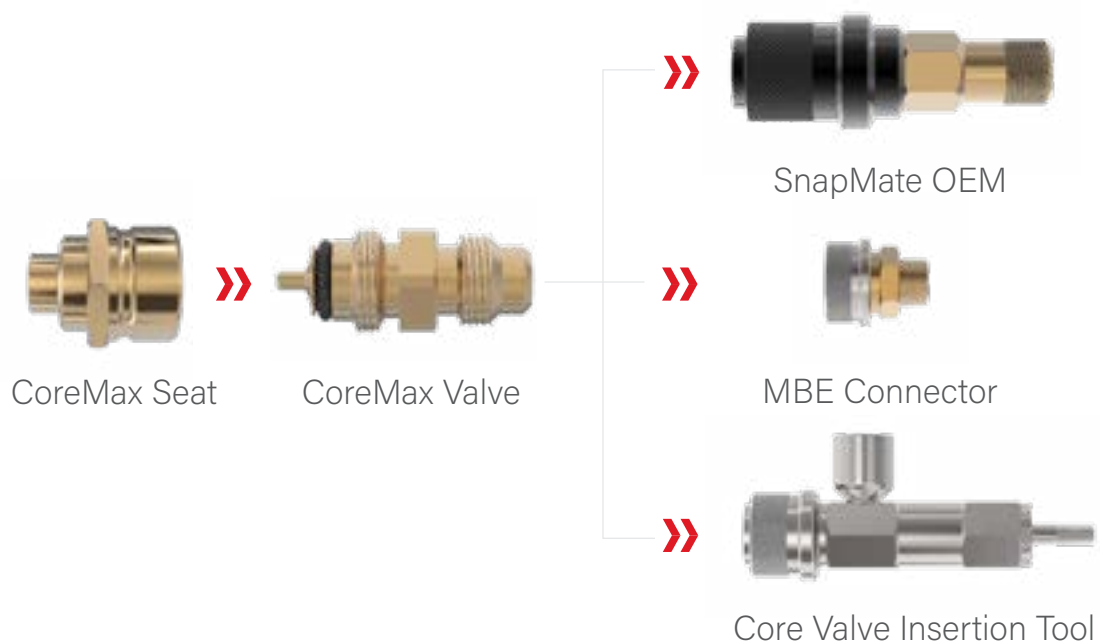


### COREMAX BENEFITS

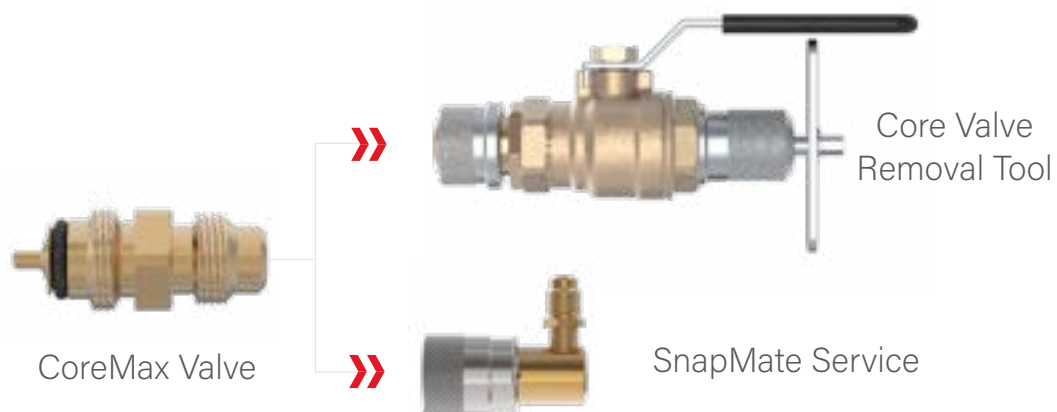
- 1 An entire processing solution for HVAC including tools that has over 20 million units installed in 8 countries and 3 continents
- 2 Eliminates process tubes and Schrader® fittings
- 3 Provides increased efficiencies and throughput due to increased flow, resulting in reduced costs
- 4 Provides the largest vacuum conductance in the industry
- 5 Proven family of tools specifically designed for manufacturing and service that reduce plant tooling costs by up to 15%
- 7 Ergonomic tools reduce operator fatigue and overall manufacturing costs
- 8 Robust sealing solution designed specifically for the HVAC industry for sealing longevity and reduced warranty costs
- 9 Reduce rework from leaking Schrader valves by up to 99%
- 10 Conforms to the 7/16-20 45° flare interchangeable standard commonly used for access valves making it field service friendly. Completely compatible with standard refrigeration tooling and connections



## MANUFACTURING PROCESSING TOOLS



## FIELD / MANUFACTURING SERVICE TOOLS



# CoreMax® / Valve & Seat Styles

CoreMax® Valve mates with the CoreMax® Seat to form the complete access valve.

## MATES WITH COREMAX® SEAT FOR COMPLETE ACCESS VALVE:



## SPECIFICATIONS

Pressure Rating	Operating Temperatures	Materials of Construction
Vacuum to 700 psi (48.2 bar)	-40°F to +250°F (-40°C to +121°C)	Stainless Steel, Neoprene®

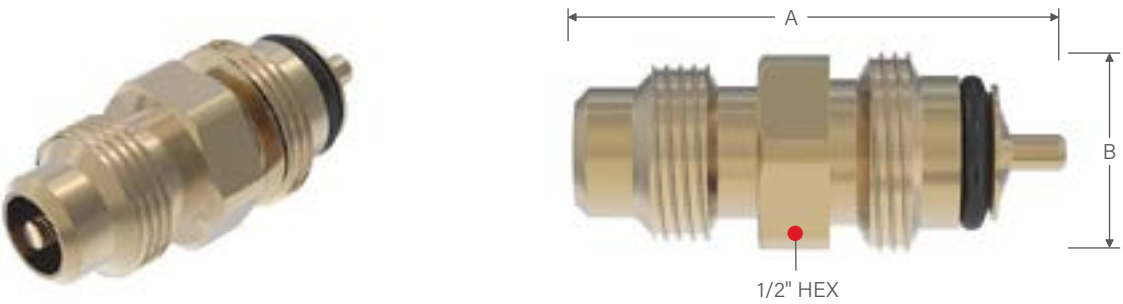
## COREMAX® SEATS

For complete access valve.



- 1 Specifically designed for refrigeration applications maximizing flow and robust sealing technology.
- 2 The CoreMax® core utilizes one elastomeric seal to seal both the valve as well as the joint between the core and the seat. There is a metal to metal seal between the core and seat to ensure a complete seal.
- 3 The valve core pin position is manufactured to exact tolerances for constant sealing and maximum valve opening for the highest flow available. The Valve conforms to ARI standard 720 for pin height
- 4 The CoreMax® valve has a 7/16-20 45° flare which is the industry standard for access valves, so all standard service tools can be used.

- Manufactured to exacting tolerances, the seat is designed to mate with the CoreMax® valve core and form the sealing capability
- Designed with gripping and sealing surfaces to work with the CoreMax® system toolsInternally valved
- Many options are available to fit any user system



Ordering Information		Dimensions	
Part Number		A	B
<b>CoreMax® Valve</b>   Mates with CoreMax® Seat for Complete Access Valve			
SCCA07H		1.00 (25.4)	1.00 (25.4)

Dimensions: inch (mm)



Ordering Information			Dimensions				
Style	Size	Part Number	A	B	C	D	Installed Length*
<b>CoreMax® Seats</b>   Multiple Styles for User's Application							
Stub Tube	1/4	SCH0730A01	1.00 (25.4)	0.21 (5.3)	0.22 (5.6)	0.31 (7.9)	1.26 (32.0)
	3/8	SCH0730A03			0.32 (8.1)	0.43 (10.9)	
Saddle Mount	3/8 - 0.38 Hole	SCH0730B02	0.92 (23.4)	0.13 (3.3)	0.28 (.71)	0.37 (9.4)	
	1/4 - 0.22 Hole	SCH0730B03		0.07 (1.8)	0.17 (4.3)	0.22 (5.6)	
	1/4 - 0.25 Hole	SCH0730B04		0.13 (3.3)	0.18 (4.6)	0.25 (6.4)	
Panel Mount	1/4	SCH0730C03	1.29 (32.8)	0.67 (17.0)	0.22 (5.6)	0.35 (8.9)	1.33 (33.8)
	3/8	SCH0730C04			0.35 (8.9)	0.44 (11.2)	
NPT	1/4	SCH0730E01	1.15 (29.2)	0.54 (13.7)	0.31 (7.9)	-----	

Dimensions: inch (mm)

\* Installed length is CoreMax® Valve and CoreMax® Seat torqued together.

# MANUFACTURING PROCESSING TOOLS

## SnapMate OEM

PN: SCP062H



Pressure Rating	Termination	Materials of Construction
10 millitorr (micron) vacuum to 700 psi (48.2)	3/8 MNPT	Stainless Steel, Brass, Neoprene

- Internal valve opens automatically upon connection and closes upon disconnection.
- Can be actuated under full pressure due to its mechanical advantage design and used in both vacuum and pressure applications
- Grips behind threads to eliminate potential thread damage with matched flow through the CoreMax® valve for efficient processing.
- Easy sleeve action is ergonomic and eliminates repetitive twisting and turning - Push to connect, pull to release

### APPLICATION

Use at burst, evacuation, charge and rework stations for generalized processing. Use at every station to connect to CoreMax® Valve.

## MBE

PN: SCM062W



Pressure Rating	Termination	Materials of Construction
10 millitorr (micron) vacuum to 700 psi (48.2)	3/8 MNPT	Stainless Steel, Brass, Neoprene®

- Pressure interlocks prevent sleeve actuation under pressure
- High flow connection tool with no flow restriction. Used to maximize flow through the seat
- Grips over the seat so it can be used with or without the CoreMax® valve
- Easy sleeve action is ergonomic and eliminates repetitive twisting and turning

### APPLICATION

Use at burst, leak test stations with or without CoreMax® valve. Use at evacuation station with CoreMax® Valve installed.

## Core Valve Insertion Tool

PN: SCFT10



Pressure Rating	Termination	Materials of Construction
10 millitorr (micron) vacuum to 700 psi (48.2)	3/8 FNPT	Stainless Steel, Neoprene®

- Pressure interlocks prevent sleeve actuation under pressure
- Grips over valve seat to allow for maximum evacuation through the seat prior to inserting CoreMax core valve
- Available load tool for easy core insertion into the tool. Fastest PN: SCFTL1010
- Easy sleeve action is ergonomic and eliminates repetitive twisting and turning

### APPLICATION

Use at evacuation stations to maximize flow for extreme volumes to achieve maximum throughput. Insertion of valve core prior to further processing.

## Installation Oiler

PN: SCL321



Materials of Construction
HDPE, Brass

- Custom nest to oil CoreMax core with overflow containment
- Reservoir has check valve to keep small amount of oil available for lubrication
- Oil containment keeps contaminants away and minimizes oil exposure to atmosphere
- Pump to fill reservoir

### APPLICATION

Use to oil the CoreMax® Valve core prior to insertion and torque into valve seat.

# FIELD / MANUFACTURING SERVICE TOOLS

## Core Valve Removal Tool

PN: SCFT20A



Pressure Rating	Termination	Materials of Construction
10 millitorr (micron) vacuum to 750 psi (51.7)	N/A	Stainless Steel, Brass, Neoprene®

- Pressure interlocks prevent sleeve actuation under pressure
- Grips over the valve seat to allow for CoreMax® Valve core removal and replacement without reclaiming the system
- Ball valve design to shut off system pressure
- Easy sleeve action is ergonomic and eliminates repetitive twisting and turning. Thread out/in core, rotate ball valve and replace.

### APPLICATION

Use to remove and replace CoreMax® Valve core in charged units.

## SnapMate Service

PN: SCTA07H



Pressure Rating	Termination	Materials of Construction
Vacuum to 625 psi (43.1)	7/16 45° Flare	Stainless Steel, Brass, Neoprene®

- Internal valve opens automatically upon connection and closes upon disconnection and has internal actuation pin to open CoreMax® Valve
- Threaded collets grip in the threads of any 7/16-20 45° flare access valve (CoreMax and Schrader)
- Can be actuated and removed under standard system pressure
- Easy sleeve action is ergonomic and eliminates repetitive twisting and turning - Push to connect, pull to release

### APPLICATION

Use by HVAC service technicians for field service.

## Electric Torque Wrench

PN: SCFTP0502



Materials of Construction
IR Electronic Tool

- Pre-programmed to CoreMax® specifications of <200RPM and 8ft-lbs torque
- Hold and drive feature supports the seat so no stress is incurred on the system or operator
- 20 volt battery powered tool. Can be programmed to tailor specific needs
- Pull trigger to run tool to proper torque

### APPLICATION

Use to proper torque the CoreMax® Valve core into the core seat.

## Manual Torque Wrench

PN: SCFTM01



Materials of Construction
Stainless Steel

- Break away torque wrench pre-set to proper torque of 8ft-lbs.
- Manually twist wrench to pre-set torque

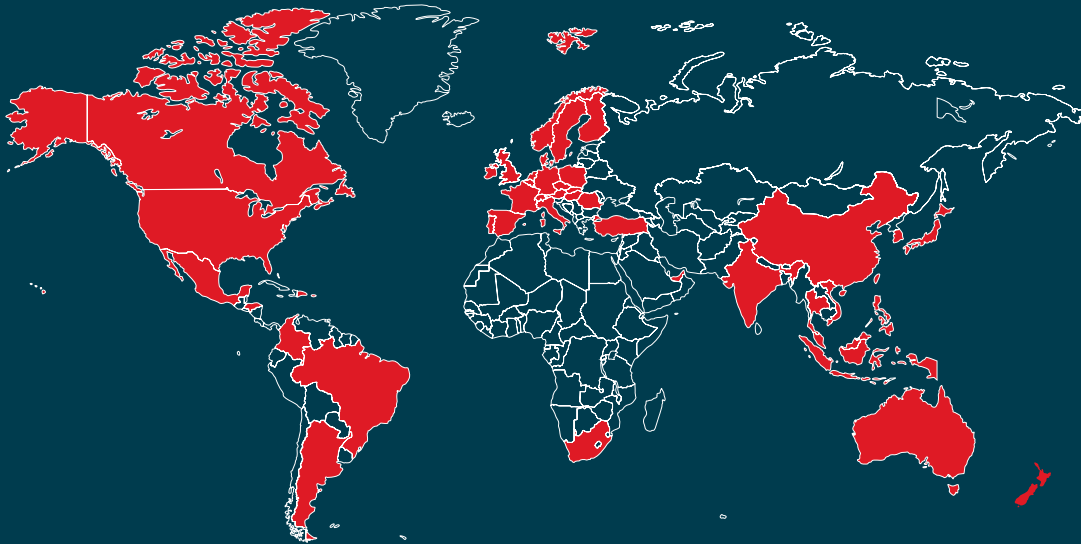
### APPLICATION

Use to proper torque the CoreMax valve core into the core seat.





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