

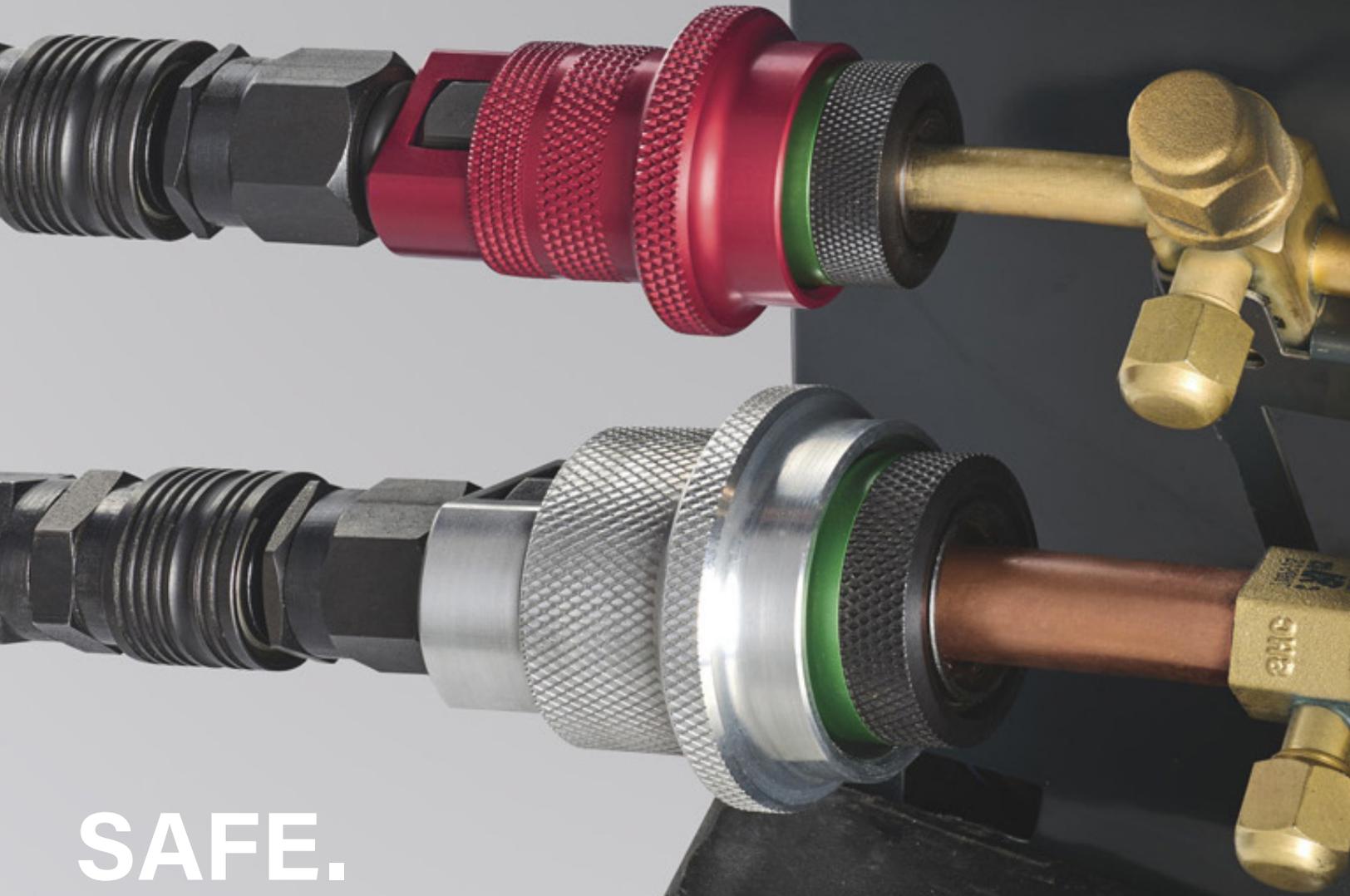
HVAC-R

SEALING CONNECTION TOOLS

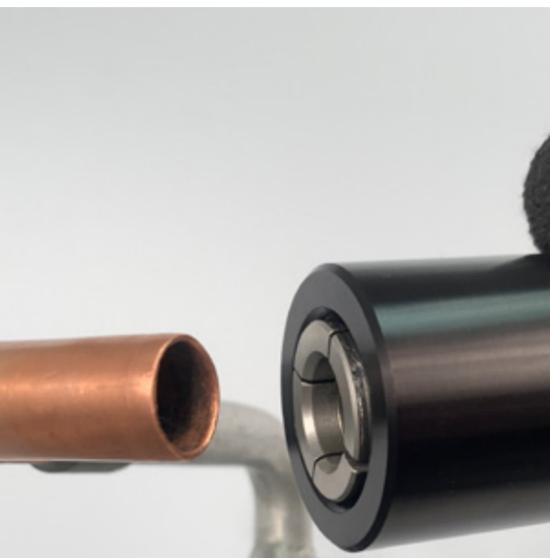


TOOLS & SYSTEMS

FASTEST®



**SAFE.
RELIABLE.
FAST.**



FASTEST®

SAFE, RELIABLE, FAST SEALING CONNECTIONS

Enhance Test Safety | Drive Continuous Improvement | Ensure Product Quality

FasTest® is a dedicated manufacturer of advanced engineered sealing connection tools and process valves that provide improved safety and efficiency - lowering operating costs.

Refrigeration Access Ports & Valves - page 6-45
CoreMax, PortMax & ZeroMax. FasTest Access Ports and Valves offer complete solutions for efficient processing of HVAC refrigerant systems.

EvacMax Mobile Evacuation Cart - page 46-57
Fully automated easy-to-use intuitive design, set target vacuum, vacuum decay limits and monitor in real time.

Connection Tools - page 58-107
FasTest® connection tools have become the standard for safe and reliable connection requirements. Ergonomic designs and easy maintenance makes FasTest® the industry preferred source.

Custom Engineered Solutions - page 108-109
Custom Sealing Connection Tools

ICON - page 110-111
Intelligent Connection Technology

Applications

- SPLIT SYSTEMS
- PACKAGE UNITS
- HEAT EXCHANGER
- COMPRESSORS
- ICE MACHINES
- HEAT PUMPS
- VRF SYSTEMS
- CHILLERS
- 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.

Zero Emissions Processing/ Zero Refrigerant Loss



What is Zero Emission Processing:

At its core, Zero Emission Processing embodies the collective effort to minimize or eradicate the release of hydro fluorocarbons (HFCs) into the environment, particularly from HVAC-R systems and related equipment. These refrigerants, prevalent in various cooling systems like air conditioners, heat pumps, chillers, PTAC Units, ice makers and pool heat pumps, have been identified as significant contributors to atmospheric pollution and climate change. Thus, the industry's focus is on preventing these emissions during manufacturing, servicing, and even during the disposal of equipment, hence the term "Zero Emission Processing."

Zero Emissions Processing/ Zero Refrigerant Loss

How we address this in our connectors with "recovery features":

FasTest Inc. stands firmly in support of these critical environmental initiatives. Our commitment is evident through the incorporation of "recovery features" into our processing and service connectors/tools. These innovative features are designed to seamlessly connect with refrigerant recovery equipment, effectively preventing the escape of refrigerants into the atmosphere during crucial stages like charging, run tests, servicing, and end-of-life recycling processes.

By utilizing connectors with recovery features, manufacturers can achieve Zero Emission Processing goals without compromising efficiency or performance. This ensures compliance with environmental regulations and contributes to a cleaner, more sustainable future for the HVAC-R industry and beyond.

How we address this through our seal materials:

Recognizing the evolving landscape of refrigerants, e.g. the move to new A2L/A3 refrigerants and compressor lubricants, FasTest Inc. has taken proactive measures to ensure the compatibility of our seal materials with the latest industry standards. We understand the importance of material compatibility in maintaining leak-free connections and preventing emissions.

Through rigorous in-house testing, collaboration with industry partners, and customer feedback, we are taking steps to verify the compatibility of our seal compounds with the new generation of refrigerants. This comprehensive approach ensures that our products meet the stringent requirements of Zero Emission Processing, providing peace of mind to manufacturers and service technicians alike. With FasTest, you can trust that your operations are aligned with the highest standards of environmental responsibility.



**PROCESS FASTER.
MINIMIZE REFRIGERANT LOSS.**
NEW ACCESS PORTS + PROCESSING TOOLS



FASTEST®

Global Leader in Industrial Sealing Connection Technology

HVAC-R | Vehicle Systems | Compressed Gas | Medical Life Science | Aerospace

At FasTest, our mission is to reduce our customer's manufacturing costs, improve safety and lower the environmental impact from refrigerant emissions.

As an industry leader of Sealing and Connection Technologies, FasTest offers standard products for most ports/threads/tubes, and a dedicated team of Custom Design Experts to engineer optimized solutions for demanding applications. Connect fast, seal reliably, test safely.



BROAD OFFERING
Extensive standard and Custom Engineered Solutions.



INTELLIGENT TOOLS
Sensing & data generation tools that support process automation.



APPLICATION EXPERTS
Optimized solutions, tailored to your unique needs.



GLOBAL SUPPORT
Global distribution network provides local, responsive support.



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

NEW

Access Ports & Processing Tools

COREMAX™ Faster Processing of Systems Using Schrader® Type Valves

NEW PORTMAX™ Rapid Evacuation of Large Capacity Systems

NEW ZEROMAX™ Easy Access for Small Systems using Processing "Stub" Tubes



HVAC-R OEM ACCESS PORT SYSTEMS

ZEROMAX™

Easy Access for Small Systems using Processing "Stub" Tubes



PORTMAX™

Rapid Evacuation of Large Capacity Systems



COREMAX™

Faster Processing of Systems Using Schrader Type Valves



ZEROMAX[™] SYSTEM

The NEW ZeroMax[™] System is specifically designed to eliminate the need for Process "Stub" Tubes, while adding easy access without sacrificing hermetic metal-to-metal sealing. ZeroMax[™] has the capability for near zero emission processing and field servicing, and is compatible with both current and next generation refrigerants.

High Flow Access Port



Processing Tools



Core Plug & Seat are shipped preassembled at factory



- Safer processing of flammable (A2L & A3) refrigerants
- Cost reducing elimination of Process/Stub Tubes and the pinch & weld operation
- Accessibility while providing a hermitic metal to metal seal
- Eliminate leak-prone "Piercing Valves" to access system
- Increased product quality
- Complete Processing Tool System is easy to use and optimizes manufacturing efficiency
- Zero refrigerant emissions when processing
- Use with FasTest Evacuation Cart to optimize evacuation

ZEROMAX[™]

Zero Leak Access Port System for Refrigerant Systems using Process Tubes

fastestinc.com/zeromax



Industry's Fastest Evacuation System

High Flow Access Port



Processing Tools



Evacuation Cart



SMALL CAPACITY REFRIGERATION SYSTEMS

SPLIT SYSTEMS



PTAC/VTAC & HEAT PUMPS

HERMETIC REFRIGERATION COMPRESSORS



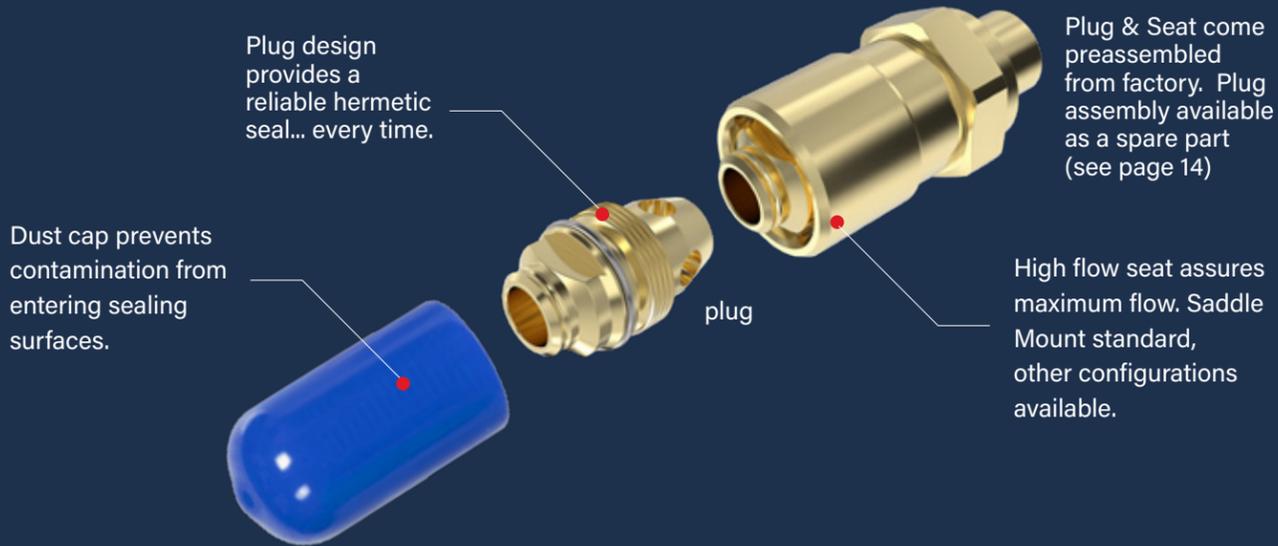
COMMERCIAL SELF-CONTAINED DISPLAY UNITS

ANYWHERE A PROCESS "STUB" TUBE IS USED



HIGH-END REFRIGERATORS

Zero Refrigerant Emissions Maximum Accessibility



Leak/Proof Test



Quick Filling
Pressurize & empty system quickly.

Evacuation



Fast Evacuation
Flow path yields maximum flow.

Charge

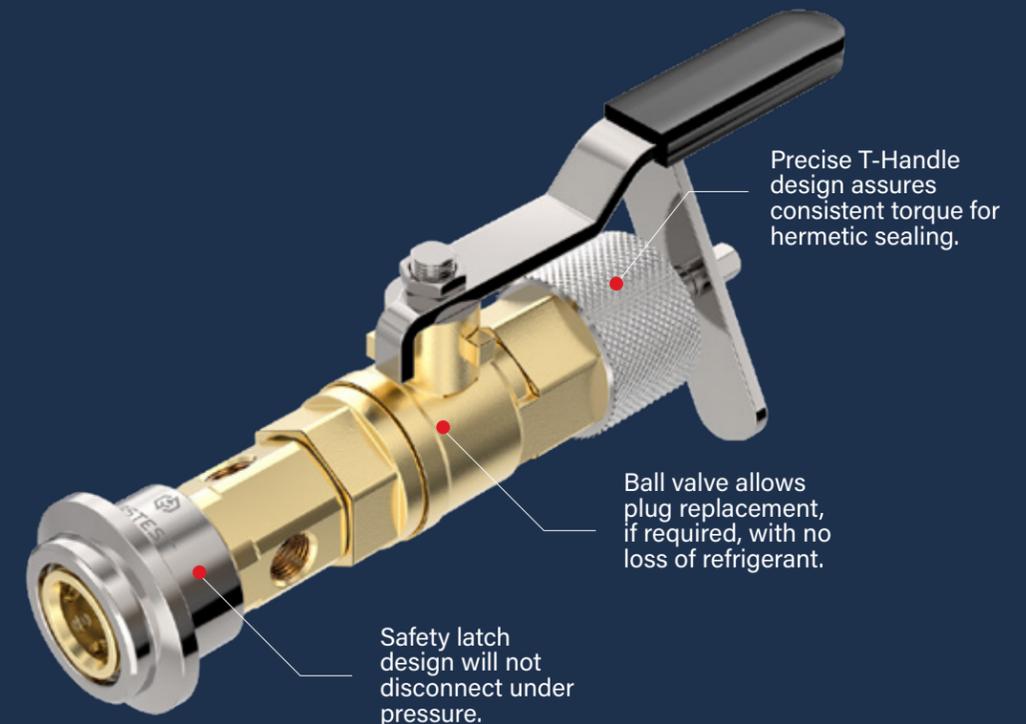


Safe Charging
Charge Tool latch will not accidentally disconnect when under pressure.

FIELD SERVICE TOOL

All-In-One Tool for Installation and Service Technicians

Gain access to the refrigerant system for servicing. Designed to provide installation & service technicians with a single tool that can be used to perform multiple tasks - refrigerant recovery, leak test, evacuation, charge and replace a ZeroMax™ Access Port Plug.



All-In-One Tool

- Recover Refrigerant
- Perform Leak Test
- Evacuate System
- Charge System
- Replace Access Port Plug

ZEROMAX™ Access Port

Compact Access Port System for Efficient Processing and Hermetic Sealing.



- 1 Patent pending Seat & Plug design.
- 2 Metal to metal hermetic sealing - no elastomers
- 3 Non-restrictive flow path
- 4 Multiple Seat mounting options

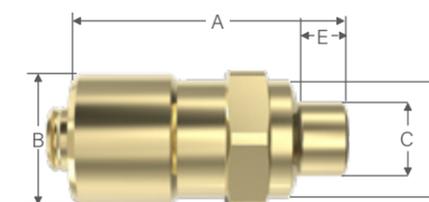
Plug & Seat come preassembled from factory. Plug assembly available as a spare part (see page 15)

SPECIFICATIONS

Seat Styles	Saddle Mount/Stub Tube standard, others available (Contact Factory)
Pressure Rating	750 psig (51.7 bar)
Leak Rating	Not measurable, hermetic
Flow Diameter	Ø.2" (5 mm) nominal
Flow Rate	5.0 scfm (8.0 Nm3/hr)
Material	Brass, PVC Dust Cap
Tightening Torque	4 ft-lbs (.45 N-m)

* Seat Only, No Plug with MBE Tool (CMPT10) connected.

ZeroMax™ Access Port



Ordering Information			Dimensions				
Style	Size	Part Number	A*	B	C**	D	E
ZeroMax™ Seats Multiple Styles for User's Application							
Saddle Mount/Stub Tube Combination	1/4" OD Tube/5/16" Hole	CMC04A01	0.89 (22.6)	0.54 (13.7)	0.312 (7.92) Min Hole for Saddle Mount Installation	0.37 (9.5)	0.12 (3.1)
Thread Mount	Contact Factory		Contact Factory				
Stub Tube	CMC04A01 (See ** NOTE)		Contact Factory				
Panel Mount	Contact Factory		Contact Factory				

Dimensions: inch (mm)

*NOTE: Add 0.05" (1.2) to dimension "A" when dust cap is added (Full Assembly).

**NOTE: CMC04A01 Seat can also be used in a Process/Stub Tube application and will slip onto a standard .250 (6.35) tube."



ZeroMax™ Plug | Mates with ZeroMax™ Seat

Part Number
CMC04C Plug + Retaining Ring assembly



ZeroMax™ Dust Cap

Part Number
SCH07CAP2

MBE Leak Test Tool

PN: CMPT10



APPLICATION

Ball latching connector, valveless design to maximize flow. Connect to Seat at Leak Test station to pressurize and relieve testing gas.

- Ergonomic ball & sleeve action.
- Safety Latch system will not disconnect under pressure.
- ¼ NPT media port.

SPECIFICATIONS

Pressure Rating	750 psig (51.7 bar)
Flow Diameter	17.0 SCFM = 27.3 Nm ³ /hr
Flow Rate	9.0 scfm (14.5 Nm ³ /hr) vacuum, 17.0 scfm (Nm ³ /hr) @ 80 psid
Dimensions	1.5" (38 mm) Ø x 1.5" (38 mm) long
Material	Stainless Steel, Neoprene

Main Seal for CMPT10, 40 & 50 Tools (2 per Tool, Qty 10) PN: S1015N70

Traveler

PN: CMPT40

SCFTM03 Torque Wrench, CMFT375531DS Socket



APPLICATION

Ball latching connector with an internal valve that will hold vacuum or charge when disconnected from processing tool. It "travels" down the assembly line with seat from evacuation, to charge to run stations after which it is used to torque plug into seat and then removed from seat.

- Ergonomic ball & sleeve action. Safety Latch system will not disconnect under pressure.
- Use Traveler hex (17/32") to torque Plug into Seat (4 ft-lbs/5.4 N-m).

SPECIFICATIONS

Pressure Rating	750 psig (51.7 bar)
Flow Diameter	Ø.2" (5mm) nominal
Flow Rate	5.5 scfm (8.9 Nm ³ /hr) under vacuum, 11.0 scfm (17.7 Nm ³ /hr) @ 80 psid
Dimensions	1.5" (38 mm) Ø x 2.4" (61 mm) long
Material	Stainless Steel, Neoprene

Seat with Traveler (CMPT40) & MBV (CMPT20) or RQD (CMPT30).
Traveler Tool, External Body Seal (Qty 5) - PN: S1018N70

MBV Evacuation Tool

PN: CMPT20



APPLICATION

Ball latching connector with internal valve instantly seals vacuum when disconnected. Connect to Traveler at Evacuation station to evacuate system.

- Ergonomic ball & sleeve action.
- Safety Latch system will not disconnect under pressure.
- ¼ NPT media port.

SPECIFICATIONS

Pressure Rating	20 micron (0.02 torr) to 750 psig (51.7 bar)
Flow Diameter	Ø.2" (5mm) nominal
Flow Rate*	5.5 scfm (8.9 Nm ³ /hr) under vacuum, 11.0 scfm (17.7 Nm ³ /hr) @ 80 psid
Dimensions	1.9" (48 mm) Ø x 1.5" (86 mm) long
Material	Stainless Steel, Neoprene

* Seat with Traveler (CMPT40) & MBV (CMPT20).

MBV Evacuation Tool, Rebuild Kit (Qty 1) - PN: CMPTR20

RQD

PN: CMPT30/CMPT31



APPLICATION

Ball latching connector with a lever operated internal valve allows easy connection to Traveler. Connect at charge station to fill refrigerant into system. If using CMPT31, must use a control valve on recovery port and activate refrigerant recovery system prior to disconnecting RQD tool from Traveler to prevent refrigerant escape to atmosphere. CMPT30 (vents to atmosphere) CMPT31 (vents to 1/8 female NPT thread recovery port).

- Ergonomic ball & sleeve Action. Safety Latch system will not disconnect under pressure.
- ¼ NPT media port.

SPECIFICATIONS

Pressure Rating	750 psig (51.7 bar)
Flow Diameter	Ø.2" (5mm) nominal
Flow Rate*	5.5 scfm (8.9 Nm ³ /hr) under vacuum, 11.0 scfm (17.7 Nm ³ /hr) @ 80 psid
Dimensions	1.95" (50 mm) Ø x 1.5" (119 mm) long (plus handle 7.68" (195 mm))
Material	Stainless Steel, Brass, Aluminum, Neoprene

* Seat with Traveler (CMPT40) & RQD (CMPT30).

RQD Evacuation Tool, Rebuild Kit (Qty 1) - PN: CMPTR30
RQD Charge Tool (With Recovery Port), Rebuild Kit (Qty 1) - PN: CMPTR31

Service/Rework Tool

PN: CMPT50

1/4" Hex, SCFTM03 Torque Wrench, CMFT375250DS Socket



APPLICATION

Ball valve repair tool allows for removal and replacement of the Plug without loss of system pressure. Also use to recovery, evacuate or charge system.

- Ball valve shut-off to isolate system when changing Plug.
- 1/8 FNPT ports allow processing (Recovery, evacuation or charge) using Tool.
- Safety Lock Sleeve prevents disconnect when under pressure.

SPECIFICATIONS

Pressure Rating	600 psig (43 bar)
Flow Diameter	Does not contain a flow port directly but does have 1/8 NPT ports for recovery
Flow Rate	No flow if 1/8 NPT ports are plugged, or 9.0 scfm (14.5 nm ³ /hr) vacuum, 17.0 scfm (27.3 nm ³ /hr) @ 80 psid if using 1/8 NPT ports
Dimensions	1.5" (38 mm) Ø x 5.5" (140 mm) long
Material	Stainless Steel, Brass, Aluminum, Neoprene

ZeroMax Service Tool, Rebuild Kit - PN: CMPTR50

ZeroMax® Torque Tools

Pistol Grip Torque Gun (Gun only, no Drive Head)

PN: SCFTP07



Image shown with Drive Head installed

- Light weight and ergonomic design to reduce torque reaction resulting in reduced fatigue & injury
- Programmable - easy adjustment on site via USB port using ICS software (pre-programmed to 4 lb-ft (5.4 N-m) at 200 RPM)
- Long battery life with LED "Fuel Gauge", 20V, 5 Ah lithium ion battery offers long lasting life with quick recharging



Electric Torque Gun Drive Head
SCFTP17

Gun Drive Head only, includes 5544A63

Manual Torque Wrench

PN: SCFTM03



- Break away torque wrench pre-set to proper torque of 4ft-lbs (5.4 N-m)
- Manually twist wrench to pre-set torque



3/8" Drive x 17/32" Socket
CMFT375531DS

For SCFTM03 Torque Wrench, Use on CMPT40



3/8" Drive x 1/4" Socket
CMFT375250DS

For SCFTM03 Torque Wrench, Use on CMPT50



Electric Torque Gun Charger
PN: SCFTP0C



Electric Torque Gun Battery
PN: SCFTP05B

Electric Torque Wrench KIT (Gun, Head, 2 Batteries & Charger) PN: SCFTP0720



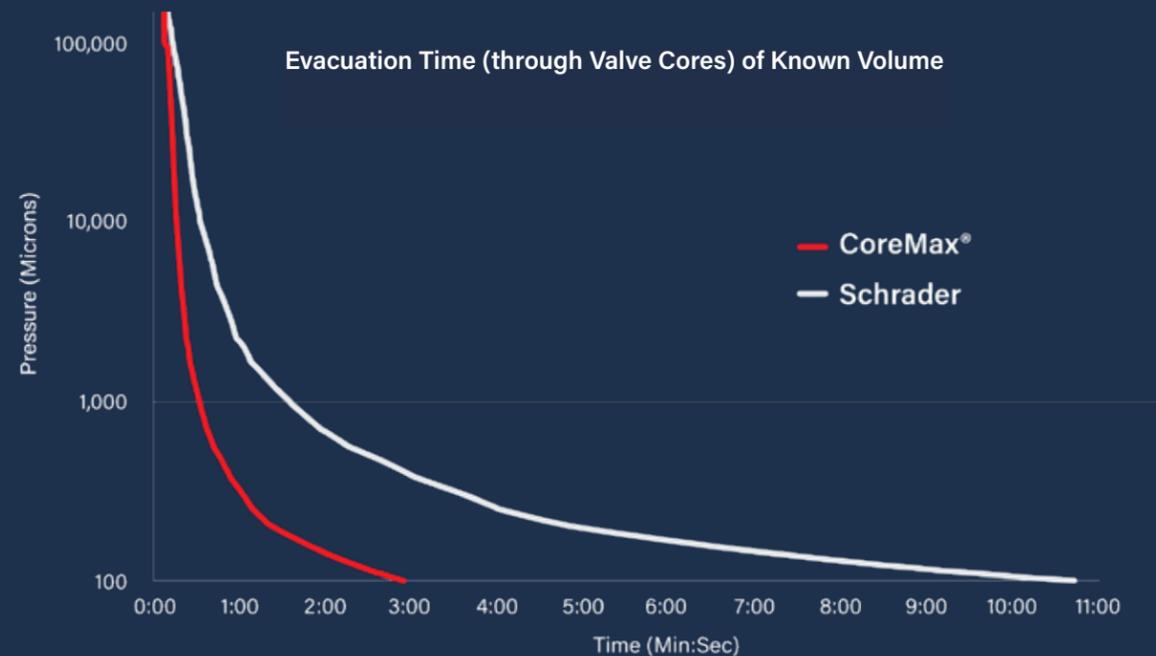
COREMAX[®]

High Flow Access Valve System
for Rapid Evacuation of HVAC-R
Systems using Schrader Valves

fastestinc.com/CoreMax



The CoreMax[®] System eliminates process tubes and Schrader valves resulting in dramatically faster evacuation times, improved quality, greater throughput, less rework and maintenance costs.



Proven Productivity Improvement

- Highest flow capacity
- Improve takt time
- Easy-to-use production tooling system
- Increase first pass yield

Reduces Total Processing Cost

- Dramatically faster evacuation
- Fewer processing tools required
- Fewer connections per unit processed
- Less tool maintenance

Highest Quality

- Reliable leak-free valve for dramatically improved sealing
- Six Sigma (6σ) quality level
- ISO 9001:2015 certified

FASTER PROCESSING OF SYSTEMS USING SCHRADER TYPE VALVES

Faster Processing
Superior Sealing



**UNITARY AC
PACKAGES &
HEAT PUMPS**

**COMMERCIAL
ICE MAKERS**



**SELF CONTAINED
DISPLAY CASES**

**POOL HEAT
PUMPS**



**REFRIGERATED
AIR HANDLER /
CONDENSING
UNITS**

**ANYWHERE A
RESTRICTIVE
& LEAK PRONE
SCHRADER
VALVE IS USED**



COREMAX[®] SYSTEM

The CoreMax Access Valve & Seat System provides up to five times greater processing flow than common Schrader valves and has dramatically improved sealing performance. Plus, it provides easy and reliable system accessibility compared to stub tubes and leak prone "Line Piercing Saddle Valves".

High Flow Access Valve



Processing Tools



COREMAX[®] SYSTEM

- An entire processing solution for HVAC-R applications that has millions of units installed globally
- Provides increased efficiencies and throughput, resulting in reduced total processing cost
- Maximum flow area results in high conductance during evacuation process
- Proven family of tools specifically designed for manufacturing and service that reduce plant tooling costs by up to 15%
- Accessibility while providing a hermetic metal to metal seal
- Ergonomic tools reduce operator fatigue and overall manufacturing costs
- Reduce rework from leaking Schrader valves by up to 99%
- The SAE 1/4" 45° flare (7/16-20 thread) is compatible with standard refrigeration tooling, hoses, and swivel fittings
- Use with FasTest's EvacMax™ Evacuation Cart to optimize evacuation

Industry's Fastest Evacuation System

High Flow Access Valve



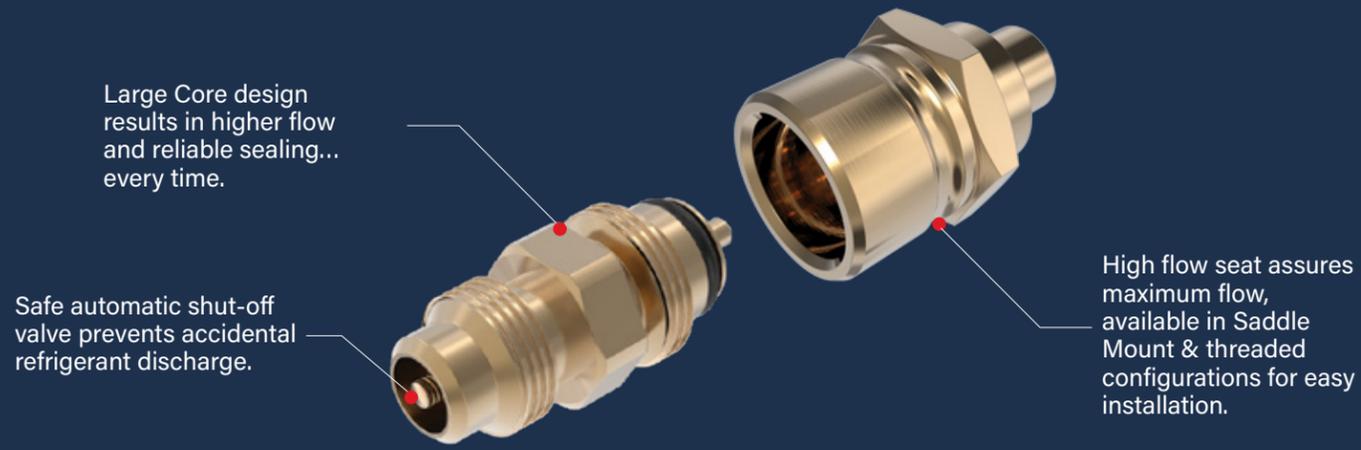
Processing Tools



Evacuation Cart



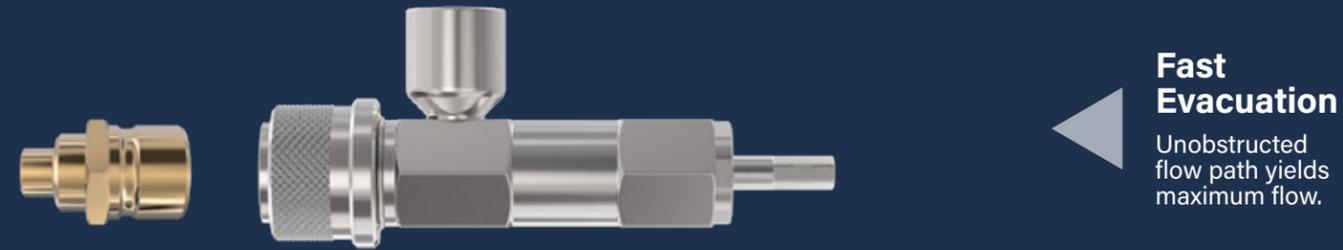
The Refrigeration Industry's Highest Flow Access Valve



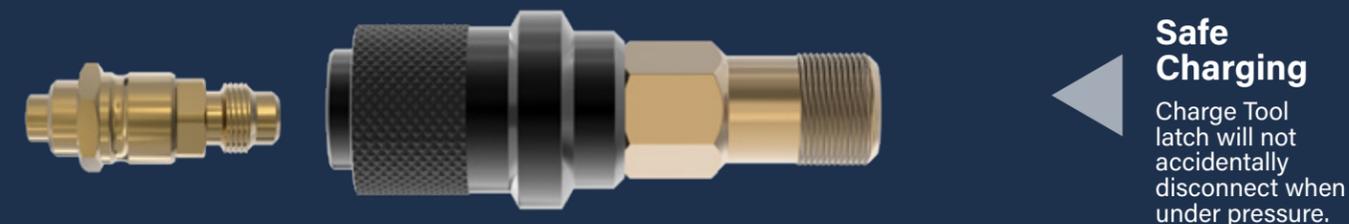
Leak/Proof Test



Evacuation



Charge



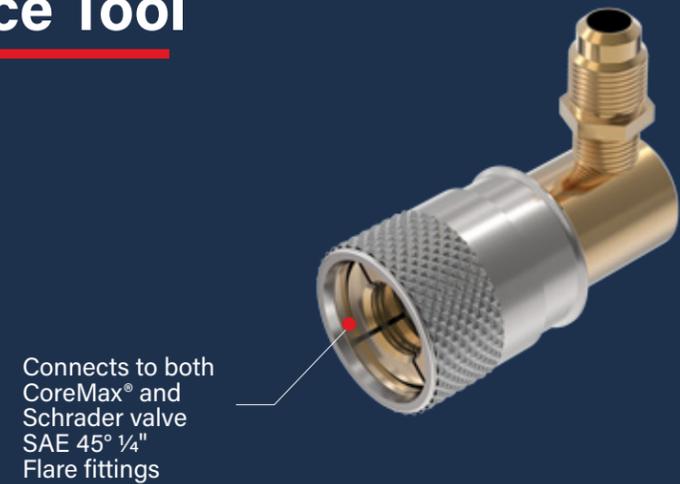
FIELD SERVICE TOOLS

For Installation and Service Technicians

Gain access to the refrigerant system for servicing. Designed to provide installation & service technicians with tools that can be used to perform multiple tasks - refrigerant recovery, leak test, evacuation, charge and replace a CoreMax® Access Valve Core.

SnapMate™ Service Tool

- Leak Test
- Evacuate
- Charge



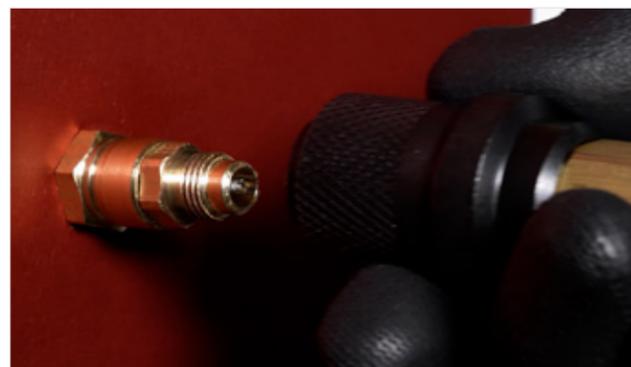
Core Removal Tool

- Replace Core with minimal refrigerant loss



CoreMax[®] / HIGH FLOW Access Valve

Access Valve System for Maximum Flow & Faster Processing.

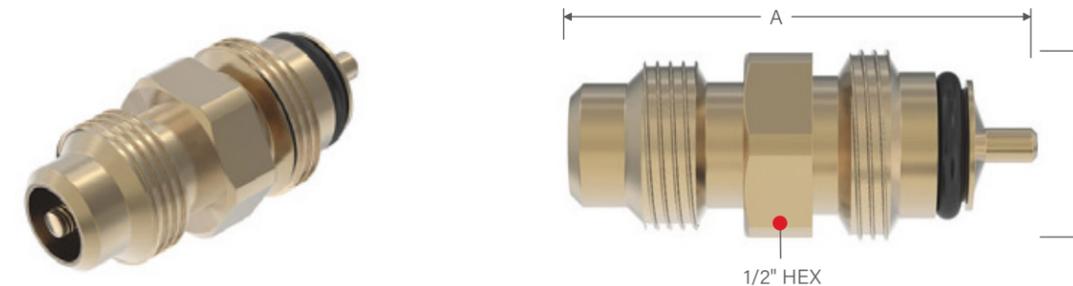


- 1 Specifically designed for refrigeration applications maximizing flow and robust sealing technology
- 2 The CoreMax[®] Core utilizes one elastomeric seal to seal both the valve and the joint between the Core and the Seat - metal-to-metal seal between the Core and Seat to ensure a complete seal
- 3 The Core pin position is manufactured to exact tolerances for consistent sealing and maximum valve opening for the highest flow available - conforms to ARI standard 720 for pin height
- 4 CoreMax[®] has a SAE 45° 1/4" flare (7/16-20 thread) which is the industry standard for access valves, allowing use of standard service tools

SPECIFICATIONS

Seat Styles	Stub Tube, Saddle Mount, Panel Mount, NPT
Pressure Rating	10 millitorr (micron) vacuum to 750 psi (51.7 bar)
Leak Rating	less than 0.018 oz/yr of R-410A
Flow Diameter	Valve Core: Ø 0.21" (5.3mm) nominal (must use OEM SnapMate™ Tool - PN: SCP062H) Seat: Ø 0.31" (7.9mm) nominal seat size dependent (must use Core Insertion Tool - PN: SCFT10)
Flow Rate*	Vacuum: 4.9 SCFM (7.9 Nm ³ /hr) (using use OEM SnapMate™ Tool - PN: SCP062H) Pressure: up to 35 SCFM (56.4 Nm ³ /hr) (using use Core Insertion Tool - PN: SCFT10)
Material	Brass, Neoprene*
Tightening Torque	8 ft-lbs (11 N-m) (Valve into Seat Torque) Note: FasTest recommends using SCFTM01 Manual Torque Wrench or SCFTP05/SCFTP06 Electric Torque Wrenches

*Flow rate indicated is through the valve core using the OEM SnapMate connector. Processing/flowing through the Seat only using the Core Insertion Tool will provide significantly more flow capacity.



Ordering Information		Dimensions	
Part Number	A	B	
CoreMax [®] Valve Mates with CoreMax [®] Seat for Complete Access Valve			
SCCA07H	1.30 (33.0)	.5 (12.7)	

Dimensions: inch (mm)



Ordering Information			Dimensions				
Style	Size	Part Number	A	B	C	D	Installed Length*
CoreMax [®] Seats Multiple Styles for User's Application							
Stub Tube	1/4	SCH0730A01	1.00 (25.4)	0.59 (17.5)	0.26 (6.6)	0.31 (7.9)	1.26 (32.0)
	5/16	SCH0730A02			.32 (8.1)	.37 (9.4)	
	3/8	SCH0730A03			0.38 (9.7)	0.43 (10.9)	
Saddle Mount	Hole Ø = .375" Min	SCH0730B02	0.92 (23.4)	0.59 (17.5)	0.28 (.71)	0.37 (9.4)	1.33 (33.8)
	Hole Ø = .225" Min	SCH0730B03			0.17 (4.3)	0.22 (5.6)	
	Hole Ø = .250" Min	SCH0730B04			0.18 (4.6)	0.25 (6.4)	
Panel Mount	5/16 Tube	SCH0730C03	1.29 (32.8)	0.59 (17.5)	0.26 (6.6)	0.35 (8.9)	1.33 (33.8)
	3/8 Tube	SCH0730C04			0.38 (9.7)	0.44 (11.2)	
NPT	1/4	SCH0730E01	1.15 (29.2)	0.59 (17.5)	0.31 (7.9)	-----	-----

Dimensions: inch (mm)

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



CoreMax® RQD / HVAC-R EXTERNAL SEALING CONNECTION TOOL

Connection tool to easily connect to CoreMax Access Port

CONNECTS TO:

CoreMax Access Port Seat, with or without CoreMax Valve installed



Part Number	Shut-Off Valve	Vents To
KA04CMAT	✓	Atmosphere
KA04CMCH	✗	Reclaim Port
KA04CMEV	✓	Reclaim Port

SPECIFICATIONS

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

* Additional seal material types available, consult factory.

ACTUATION METHOD

Sleeve / Lever Handle: CoreMax RQD eliminates high force to connect under pressure!

Easy sleeve latch action is ergonomic and eliminates repetitive twisting and turning. Cam over lever handle easily opens valves, even when under pressure.

1 - Slide latch forward to connect to CoreMax Access Port Seat

2 - Lift handle to open valves

3 - Return handle to in-line position to close valves and vent (options to either vent to atmosphere or to recovery for Zero Emission Processing)

ICON™ TECHNOLOGY

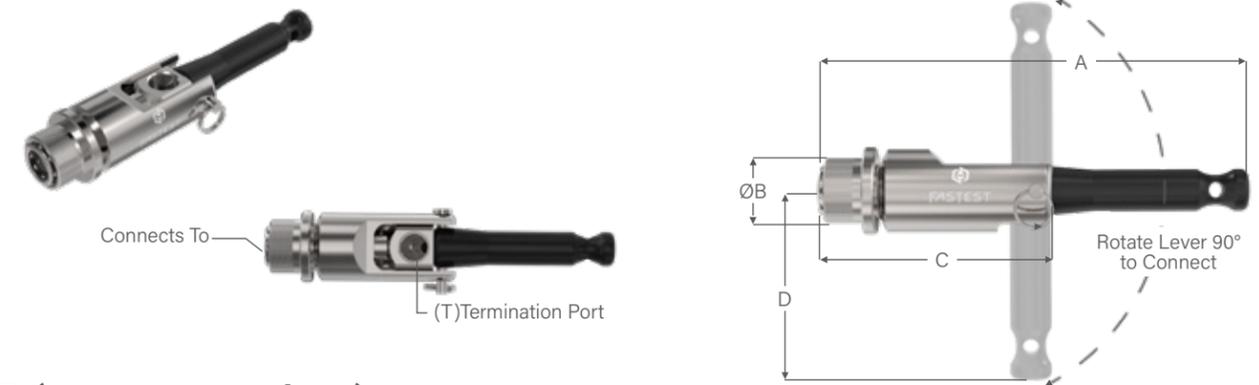
Consult Factory

ACCESSORIES

Visit fastestinc.com

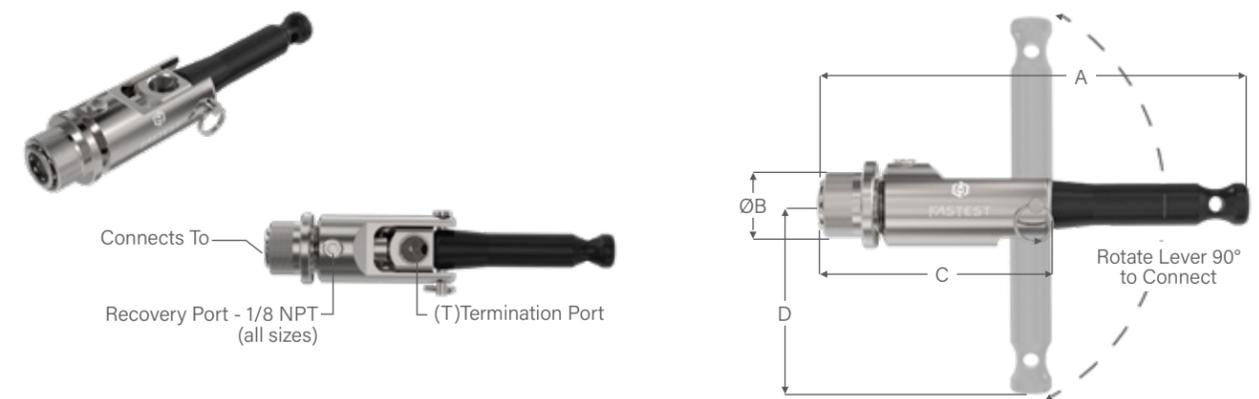
- 1 Sleeve latches RQD to CoreMax Access Port Seat before pressure is applied (by lifting handle) thus eliminating the high force to connect of a pressurized OEM SnapMate connector
- 2 Safety Latch feature prevents accidental disconnection when under pressure
- 3 Lever handle opens/closes valves to charge system. When closing, residual pressure is safely directed away from operator or can be recovered (see 6) in refrigerant applications
- 4 Ergonomic action eliminates repetitive twisting motion & possible operator injuries
- 5 Minimal maintenance required, main Seals are easy to replace.
- 6 Recovery Port versions support Zero Emission Processing
See pg.3 for more information on Zero Emission Processing

CoreMax® RQD / HVAC-R EXTERNAL SEALING CONNECTION TOOL



RQD (vent to atmosphere)

Ordering Information				Dimensions				
Connects To	Part	Replacement	Rebuild	A	B	C	D	T
RQD Lever Action Style for CoreMax Access Ports								
CoreMax RQD Tool w/Shut-Off Valve, Vent to Atmosphere	KA04CMAT	S20700334H70	RKA04CMAT	7.22 (183.4)	1.46 (37.1)	3.92 (99.6)	3.55 (90.2)	3/8 NPT



RQD (with recovery port) See pg.3 for more information on Zero Emission Processing

Ordering Information				Dimensions				
Connects To	Part	Replacement	Rebuild	A	B	C	D	T
RQD Lever Action Style for CoreMax Access Ports								
CoreMax RQD Tool w/Shut-Off Valve, Vent to Recovery Port	KA04CMEV	S1016H70	RKA04CMEV	7.22 (183.4)	1.46 (37.1)	3.92 (99.6)	3.55 (90.2)	3/8 NPT
CoreMax RQD Tool NO Shut-Off Valve, Vent to Recovery Port	KA04CMCH	S1016H70	RKA04CMCH	7.22 (183.4)	1.46 (37.1)	3.92 (99.6)	3.55 (90.2)	3/8 NPT

Dimensions: inch (mm)

PROCESSING TOOLS

MBE Leak Test Tool

PN: SCM062W



APPLICATION

High flow connection tool with no flow restriction. Used to maximize flow through the seat.

- Ergonomic ball & sleeve action.
- Pressure interlock system will not disconnect under pressure.
- 3/8 NPT media port.
- Typically used in Leak/Burst Test Station.

SPECIFICATIONS

Pressure	10 millitorr (micron) vacuum to 700 psi (48.2 bar)
Flow	Ø 0.31" (7.9mm) nominal, Seat size dependent
Flow Rate	Pressure: 35+ SCFM (56.2 Nm ³ /hr), Seat size & pressure dependent.
Dimensions	2.00" (50.8mm) long x Ø 1.22" (31mm)
Material	Stainless steel, Brass, Neoprene*

OEM SnapMate Tool

PN: SCP062H



APPLICATION

Internal valve opens automatically upon connection and closes upon disconnection and has internal actuation pin to open CoreMax® Valve. Designed for OEM processing.

- Ergonomic push/pull sleeve action.
- Connector is internally valved that seals flow when disconnected.
- 3/8 NPT media port.
- Typically used in Evacuation and/or Charging Stations.

SPECIFICATIONS

Pressure	10 millitorr (micron) vacuum to 700 psi (48.2 bar)
Flow Diameter	Ø 0.21" (5.6mm) nominal
Flow Rate	Vacuum: 4.9 SCFM (7.9 Nm ³ /hr), Pressure: up to 30 SCFM (48.0 Nm ³ /hr), Seat size & pressure dependent.
Dimensions	3.4" (86.4mm) long x Ø 1.25" (31.8mm)
Material	Black Oxide steel, Brass, Neoprene*

MBE Leak Test Tool

PN: SCM062W0161Y



APPLICATION

High flow connection tool with no flow restriction. Used to maximize flow through the seat.

- Ball valve isolates the system.
- Pressure interlock system will not disconnect under pressure.
- 3/8 NPT media port.
- Typically used in Leak/Burst Test Station.

SPECIFICATIONS

Pressure	10 millitorr (micron) vacuum to 700 psi (48.2 bar)
Flow	Ø 0.31" (7.9mm) nominal, Seat size dependent
Flow Rate	Pressure: 35+ SCFM (56.2 Nm ³ /hr), Seat size & pressure dependent.
Dimensions	2.00" (50.8mm) long x Ø 1.22" (31mm)
Material	Stainless steel, Brass, Neoprene*

Valve Core Insertion Tool

PN: SCFT10



Use SCFTM01 Torque Wrench with 1/4" socket (CMFT375250DS) to tighten Valve Core into Seat.

APPLICATION

For high flow evac processing through the Seat only. Insert core after processing.

- Ergonomic ball & sleeve action.
- 3/8 NPT media port.
- Use as alternate to SCP06H at Evacuation for faster evacuation rate.

SPECIFICATIONS

Pressure	10 millitorr (micron) vacuum to 700 psi (48.2 bar)
Flow Diameter	Ø 0.31" (12.7mm) nominal, Seat size dependent
Flow Rate	Vacuum: up to 12.5 SCFM (7.9 Nm ³ /hr), Pressure: up to 35+ SCFM (56.2 Nm ³ /hr), Seat size & pressure dependent.
Dimensions	4.68" (119mm) long x Ø 1.22" (31mm)
Material	Stainless steel, Neoprene*

SERVICING TOOLS

SnapMate™ Service Tool

PN: SCTA07H

1/4" Hex, SCFTM01 Torque Wrench, CMFT375250DS Socket



APPLICATION

Internally valved for refrigerant containment upon disconnection.

- Collet design locks securely into CoreMax® and common Schrader® valves with 1/4" 45° Flare with 7/16-20 thread
- 90° termination port for best ergonomics of small connection tool
- 3/8 NPT media port.

SPECIFICATIONS

Pressure	vacuum to 625 psi (43 bar)
Flow Diameter	Ø 0.21" (5.6mm) nominal
Flow Rate	Vacuum: 4.5 SCFM (7.2 Nm ³ /hr), Pressure: up to 26 SCFM (41.8 Nm ³ /hr), Seat size & pressure dependent.
Dimensions	0.93" (23.6) long x 1.94 (49.3)
Material	Stainless Steel, Brass

Removal/Replace Tool

PN: SCFT20A



APPLICATION

For removing and replacing CoreMax core when the system is under pressure. Twist out core, slide shaft back, close ball valve and remove back cap to access the core.

- Ergonomic ball & sleeve action.
- Shaft moves in and out to remove/insert core.

SPECIFICATIONS

Pressure	vacuum to 600 psi (41.4 bar)
Flow Diameter	N/A
Flow Rate	N/A
Dimensions	5.75" (146mm) long x Ø 1.55" (39.4mm) [Does not include Handle]
Material	Stainless steel, Brass, Steel, Teflon, Aluminum, Neoprene*

CoreMax® Torque Tools



Pistol Grip Electric Torque Gun Kit
PN: SCFTP0620
Pistol Grip Gun Only (SCFTP06)



In-Line Electric Torque Gun Kit
PN: SCFTP0520
In-Line Gun Only (SCFTP05)

- Light weight and ergonomic design to reduce torque reaction resulting in reduced fatigue & injury
- Programmable - easy adjustment on site via USB port using ICS software (pre-programmed to 8 lb-ft (10.9 N-m) at 200 RPM)
- Long battery life with LED "Fuel Gauge", 20V, 5 Ah lithium ion battery offers long lasting life with quick recharging

In-Line Electric Torque Gun Pre-programmed to CoreMax specifications of <200RPM and 8ft-lbs (10.9 N-m) torque

Note: Always apply counter-torque to Access Port Seat hex to prevent imparting stress to braze joint when torquing Plug and Dust Cap.

NOTE: Kits include - Includes Gun, 2 Batteries (20V, 5 Ah), Charger, Drive Head & Programming

Torque Wrench Accessories

Torque Gun Type	Charger	Battery	Drive Head Assembly	Internal socket	Socket adapter
Pistol SCFTP06 <small>(Includes, Gun (No Battery or Drive Head) & Programming)</small>	 SCFTP05C	 SCFTP05B <small>(Includes 1 Battery (20V, 5 Ah))</small>	 SCFTP16	 5544A63 <small>(3/8 Drive x 1/2" Deep Socket)</small>	 SCFTP61 <small>(1/4 Hex by 1/4 Drive)</small>
In-Line SCFTP05 <small>(Includes, Gun (No Battery or Drive Head) & Programming)</small>			 SCFTP15		

Manual Torque Wrench



PN: SCFTM01

- Break away torque wrench pre-set to proper torque of 8ft-lbs (10.9 N-m)
- Manually twist wrench to pre-set torque



3/8" Drive x 1/4" Socket
CMFT375312DS

CoreMax® Accessories & Rebuild Kits

Oiler



PN: SCL321

- 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

Core Valve Load Tool



PN: SCFTL10

- Use to properly install valve core (SCCA07H) into Core Insertion Tool (SCFT10) or Core Valve Removal Tool (SCFT20A) prior to making processing connection.

Rebuild Kits

Part Number	Rebuild Kits
SCPR50	2022 SnapMate OEM Rebuild Kit (components for 25 connectors)
SCPR10	Pre-2022 SnapMate OEM Rebuild Kit (components for 25 connectors)
SCRA07H	SnapMate Service Tool rebuild, 50 main and 25 internal seals
SCFTR10	Core Insertion Repair, 10 Repairs
SCFTR20A	Core Removal Repair, 1 Repair

Bulk Seals

Part Number	Bulk Seals
SCPB10	SnapMate OEM, 50 Main Seals
SCBA07H	SnapMate Service Tool, 50 Main Seals
SCFTB	MBE, Core Insertion, Core Removal, 20 Main Seals



PORTMAX™

Patented Access Port Technology



PORTMAX™

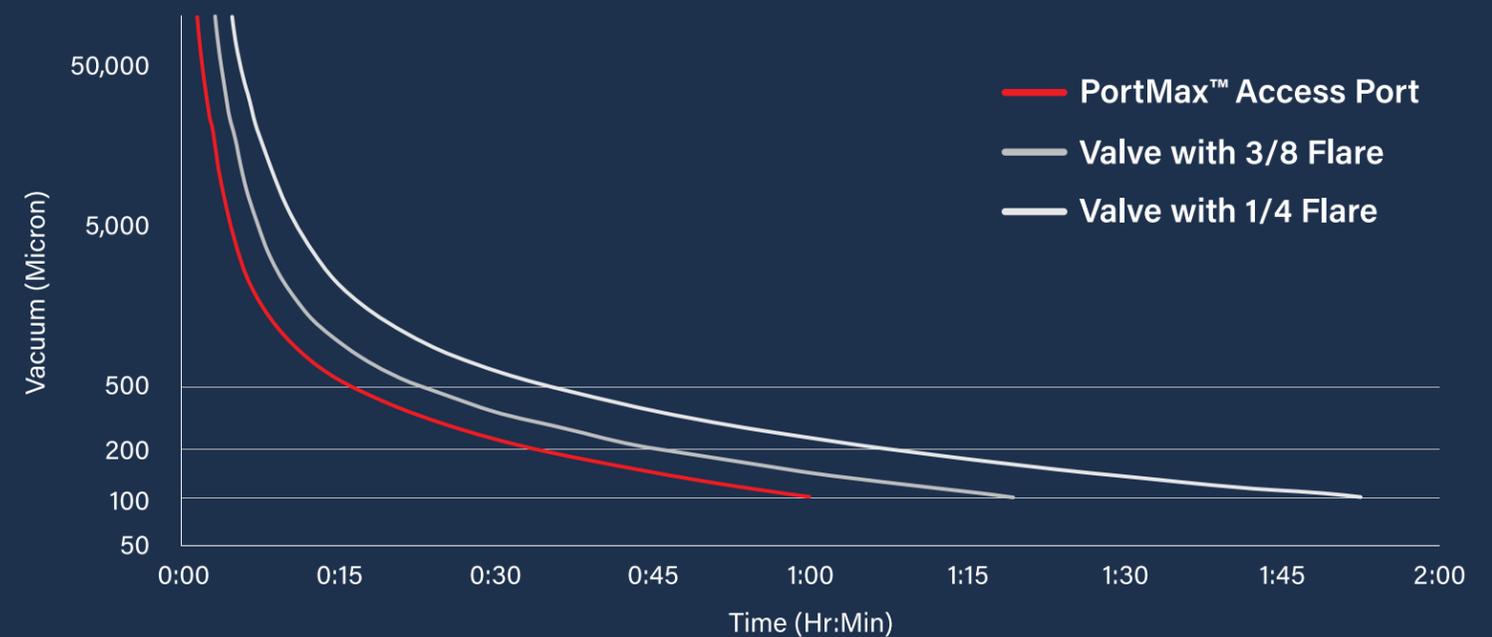
High Flow Access Port System for Rapid Evacuation of Large HVAC-R Packages

fastestinc.com/portmax



Up To **45%** Reduction in Evacuation Time

*compared to commonly used packed angle/ball valves.



Reduce Processing Time | Lower Emissions | Next-Gen Refrigerants

RAPID EVACUATION OF LARGE CAPACITY SYSTEMS

Reduce Processing Time
Lower Emissions
Next-Gen Refrigerants



INDUSTRIAL REFRIGERATION

Chillers & System Piping used in Manufacturing, Chemical, Petro Chemical, Power Plants.

COLD CHAIN

CO₂ & Conventional Condenser Packages used in Food Warehouses, Grocery Super Stores, Pharmaceutical Facilities.



COMMERCIAL REFRIGERATION

Chillers & System Piping High Rise Office Buildings, Ice Rinks, Hospitals, Schools.

VRV / VRF

Office & Apartment Buildings, Hotel, College Campus, MultiUse Facilities. Rapidly evacuate extremely long tubing runs typical in these applications.



AIR & WATER COOLED CHILLERS

Used in a multitude of Air Conditioning and Industrial/ Laboratory applications including Cloud Storage Centers.

AIR HANDLERS

Refrigerated Systems used in Industrial Facilities, Warehouses, Schools and Industrial Kitchens/ Food Service Facilities.



PORTMAX™ SYSTEM

The NEW PortMax™ Access Port System is designed to reduce processing time, specifically the long evacuation times to degass/dehydrate large volume refrigerant systems currently processing through Packed Angle or Ball Valves.

High Flow Access Port



Processing Tools



PORTMAX™ SYSTEM

- High flow – high conductance design
- Access Port seals hermetically
- Quick connect Processing Tools are easy to use, very durable and can work with recovery systems
- Compatible with current and Next-Gen refrigerants including transcritical CO₂ applications
- Compliant with UL207 Standard
- Reduce TOTAL cost of processing
- Improve Takt Time/throughput
- Minimize refrigerant emissions when processing
- Use with FasTest Evacuation Cart to optimize evacuation

Industry's Fastest Evacuation System

High Flow Access Valve



Processing Tools



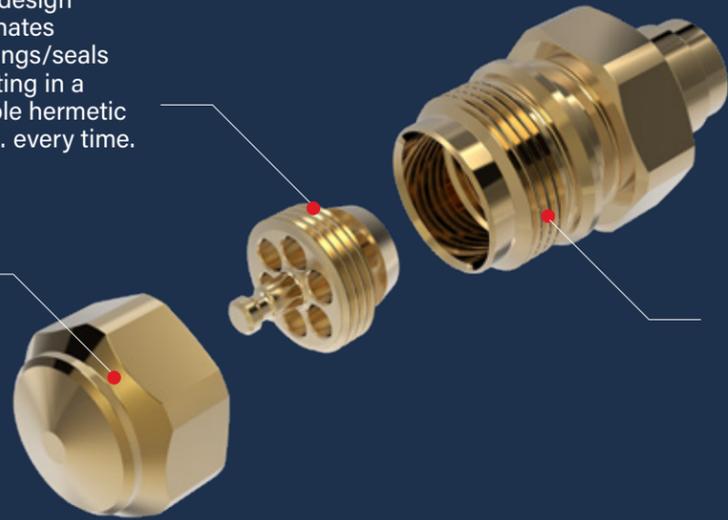
Evacuation Cart



Refrigeration's Largest Access Port for Maximum Flow

Plug design eliminates packings/seals resulting in a reliable hermetic seal... every time.

Sealing Cap provides a secondary hermetic seal and prevents contamination of sealing surfaces.



High flow seat assures maximum flow. Available in Saddle Mount & threaded configurations for easy installation.

Patented

Leak/Proof Test

PN: CMFT60



Quick Filling

Pressurize & empty system quickly through large 1/2" flow path.

Evacuation

PN: CMFT80



Fast Evacuation

Unobstructed flow path yields maximum flow.

Charge

PN: CMFT70



Safe Charging

Charge Tool latch will not accidentally disconnect when under pressure.

FIELD SERVICE TOOL

All-In-One Tool for Installation and Service Technicians

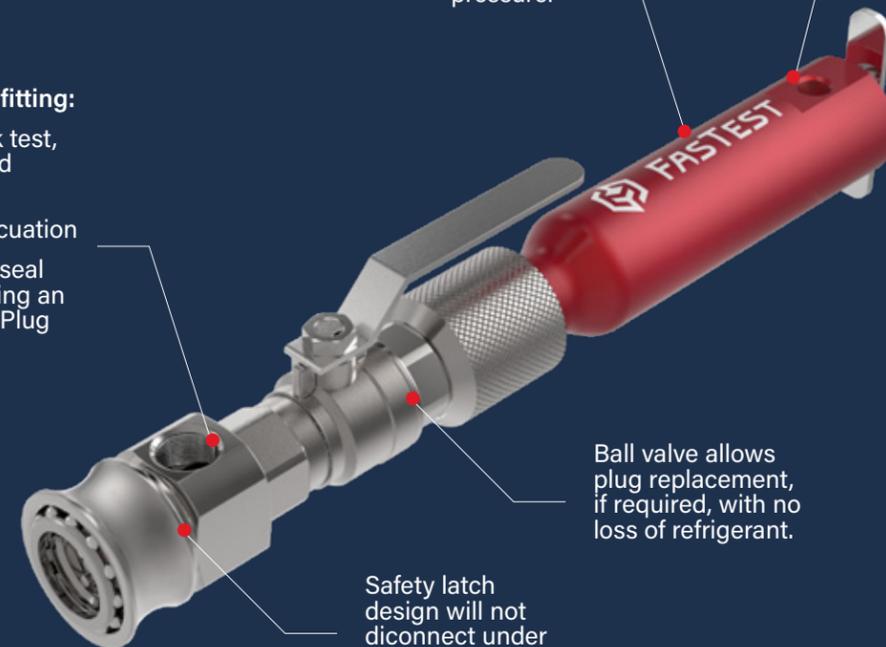
Gain access to the refrigerant system for servicing. Designed to provide installation & service technicians with a single tool that can be used to perform multiple tasks - refrigerant recovery, leak test, evacuation, charge and replace a PortMax™ access port plug without losing refrigerant charge.

Connect appropriate fitting:

Flare for leak test, charging, and recovery
 KF16 for evacuation
 NPT plug to seal when replacing an Access Port Plug

Pressure balanced design allows for easy operation when system is under pressure.

Recovery port for refrigerant. Prevent emission to environment.



Ball valve allows plug replacement, if required, with no loss of refrigerant.

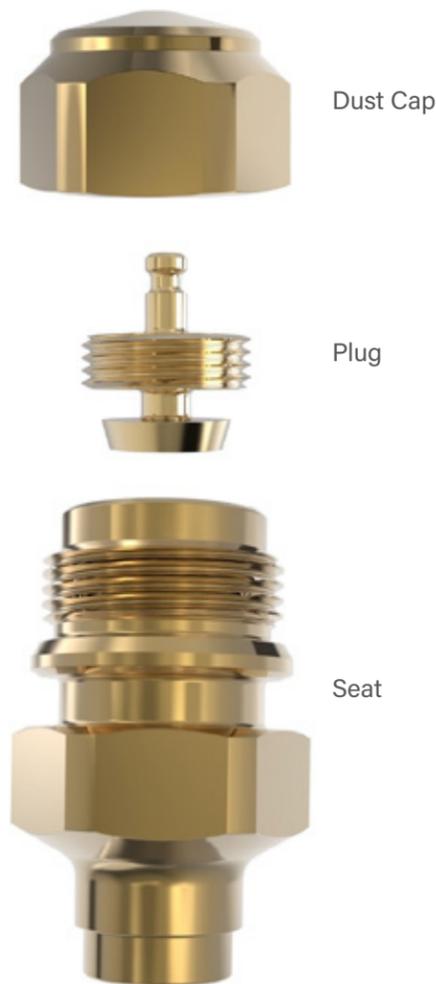
Safety latch design will not disconnect under pressure.

All-In-One Tool

- Leak Test
- Replace plug without losing refrigerant
- Evacuate
- Charge

PortMax™ High Flow Access Port

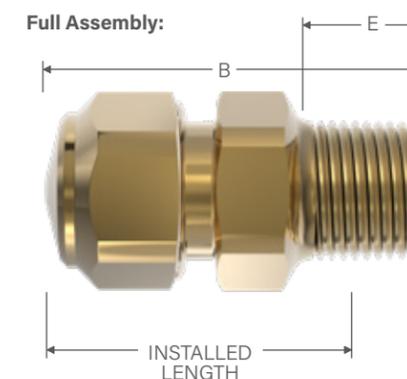
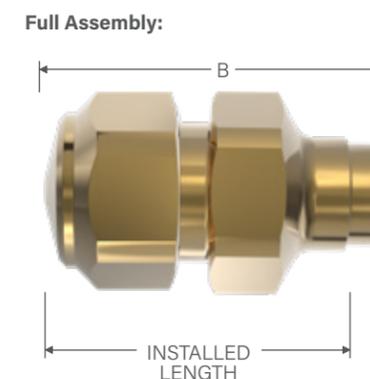
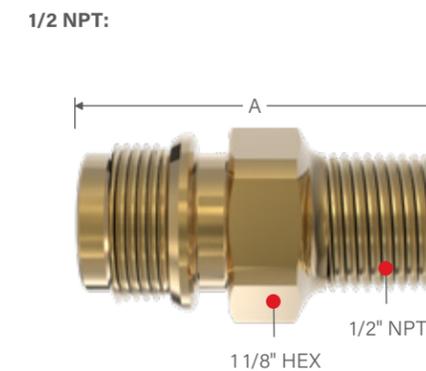
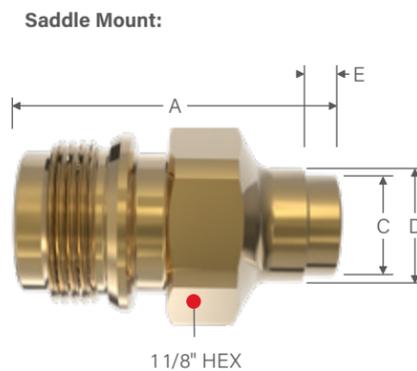
Large Access Port System for Maximum Flow & Faster Processing.



- 1 Designed for refrigeration applications, including Next-Gen refrigerants including transcritical CO₂ applications
- 2 Metal to metal hermetic sealing - no elastomers
- 3 Large unobstructed flow path
- 4 Multiple Seat options for easy integration into system plumbing- Saddle Mount & NPT Thread
- 5 Patented Access Port Technology

SPECIFICATIONS

Seat Styles	Saddle-Mount (Ø .625" (15.9 mm) minimum bore required) & ½ NPT are standard. Other options available (Contact FasTest).
Pressure Rating	20 Micron (0.020 torr) to 2031 psig (140 bar)
Leak Rating	Not measurable, hermetic
Flow Diameter	Ø 0.5" (12.7mm) nominal
Flow Rate	28 scfm (45 Nm ³ /hr) @ 12 psi (0.83 bar) ΔP (vacuum) with CMFT80 Evacuation Tool 50+ scfm (80 Nm ³ /hr) @ 120 psi (8.3 bar) ΔP (charging) with CMFT70 Charge Tool
Material	Brass
Tightening Torque	Plug: 12-14 ft-lbs (16-19 N-m) Dust Cap: 12-14 ft-lbs (16-19 N-m) Note: Do not exceed 14 ft-lb (19 N-m) when tightening Plug. Apply counter-torque to Access Port Seat hex when tightening Plug and Dust Cap to prevent imparting stress to brazed joints.



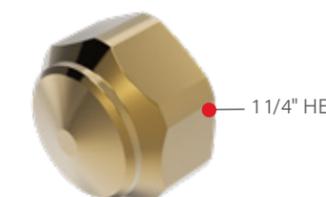
Ordering Information			Dimensions					
Style	Size	Part Number	A	B	C	D	E	Installed Length
PortMax™ Seats Multiple Styles for User's Application								
Saddle Mount	5/8"	CMHU16B01	1.90 (48.3)	2.15 (54.6)	0.625 (15.9) min hole Ø	0.70 (17.8)	0.20 (5.1)	1.94 (49.3)
Thread Mount	1/2 Male NPT	CMHU16E01	2.04 (51.8)	2.29 (58.1)	N/A	N/A	0.75 (19.1)	1.96 (49.8)
Stub Tube	Contact Factory		Contact Factory					
Panel Mount	Contact Factory		Contact Factory					

Dimensions: inch (mm)



PortMax™ Plug | Mates with PORTMAX™ Seat

Part Number
CMC08



PortMax™ Dust Cap

Part Number
CMHU16

PortMax™ Processing Tools

For Repair Kits and Main Seals contact FasTest or visit fastestinc.com

Leak Test Tool

PN: CMFT60



APPLICATION

Ball latching connector, no T-Handle mechanism (cannot use to torque Plug).

- Ball latching connector without an internal valve for high flow.
- Ergonomic ball & sleeve action. Safety latch system will not disconnect under pressure.
- ½ NPT media port.

SPECIFICATIONS

Pressure	20 Micron (0.02 torr) to 2031 psig (140 bar)
Flow Diameter	Ø 0.5" (12.7mm) nominal
Flow Rate	50+ scfm (80 Nm ³ /hr) @ 120 psi (8.3 bar) ΔP (filling & venting)
Dimensions	3.00" (76mm) long x Ø 1.98" (50mm)
Material	Stainless Steel

Main Seal for all PortMax tools (Qty 10) PN: S1118N70
PortMax MBE Leak Test Tool Repair Kit (Qty 1) PN: CMFTR60

Charge Tool

PN: CMFT70



APPLICATION

Ball latching connector with fixed T-Handle mechanism (eliminates pressure loading). Torques Plug to seal system.

- Ball latching connector without an internal valve for high flow.
- Ergonomic ball & sleeve action. Safety latch system will not disconnect under pressure.
- ½ NPT media port.

SPECIFICATIONS

Pressure	20 Micron (0.02 torr) to 2031 psig (140 bar)
Flow Diameter	Ø 0.5" (12.7mm) nominal
Flow Rate	24 scfm (38 Nm ³ /hr) @ 12 psi (0.83 bar) ΔP (vacuum) 50+ scfm (80 Nm ³ /hr) @ 120 psi (8.3 bar) ΔP (charge)
Dimensions	4.14" (105mm) long x Ø 1.98" (50mm)
Material	Stainless Steel

PortMax Charge Tool Repair Kit (Qty 1) PN: CMFTR70

Evacuation Tool

PN: CMFT80



APPLICATION

Ball latching connector with sliding T-Handle mechanism. Retracts out of flow path for maximum evacuation. Torques Plug to seal system.

- Ball latching connector without an internal valve for high flow.
- Ergonomic ball & sleeve action. Safety latch system will not disconnect under pressure.
- ½ NPT media port.

SPECIFICATIONS

Pressure	20 Micron (0.02 torr) to 2031 psig (140 bar)
Flow Diameter	Ø 0.5" (12.7mm) nominal
Flow Rate	28 scfm (45 Nm ³ /hr) @ 12 psi (0.83 bar) ΔP (vacuum) 50+ scfm (80 Nm ³ /hr) @ 120 psi (8.3 bar) ΔP (charge)
Dimensions	4.14" (105mm) long (handle in)/5.87" (149mm) (handle out) x Ø 1.98" (50mm)
Material	Stainless Steel

PortMax Evacuation Tool Repair Kit (Qty 1) PN: CMFTR80

Service Tool

PN: CMFT90



For the Core Plug using the Evac and Charge tools (CMFT80 & CMFT70): CMFT375312DS Socket

For the Dust Cap: CMFT375550DA Drive Adapter + CMFT501250DS Socket

APPLICATION

Use to recovery refrigerant, perform leak test, evacuate or charge refrigerant. Also use to replace Plug while system is under pressure. Torques Plug to seal system.

- Ball latching connector with an internal ball valve.
- Ergonomic ball & sleeve Action. Safety latch system will not disconnect under pressure.
- ½ NPT media port.

SPECIFICATIONS

Pressure	20 Micron (0.02 torr) to 1250 psig (86 bar)
Flow Diameter	Ø 0.5" (12.7mm) nominal
Flow Rate	28 scfm (45 Nm ³ /hr) @ 12 psi (0.83 bar) ΔP (vacuum) 50+ scfm (80 Nm ³ /hr) @ 120 psi (8.3 bar) ΔP (charge)
Dimensions	14.28" (363mm) long (handle in)/19.57" (497mm) (handle out) x Ø1.98" (50mm)
Material	Stainless Steel, Aluminum

PortMax Service Tool Repair Kit (Qty 1) PN: CMFTR90

PortMax™ Accessories & Fittings

Torque Wrench



PN: SCFTM02

- Preset to 12 ft-lb (16 N-m)
- Use with CMFT375312DS socket to torque Plug
- Use with CMFT37550DA Adapter & CMFT5011875DS socket to torque dust cap

Note: Always apply counter-torque to Access Port Seat hex to prevent imparting stress to braze joint when torquing plug and dust cap.



3/8" Drive x 5/16" Socket

CMFT375312DS



3/8" Female x 1/2" Male Drive Adapter

CMFT37550DA



1/2" Drive x 1 1/4" Socket

CMFT501250DS

Leak Test Fitting

PN: AE012



- 3/8 Male Flare x 1/2 NPT
- Pressure Rating: 2031 psig (140 bar)
- Connects PortMax™ Tool to a leak test fill hose

Evacuation Fitting

PN: AE016CF



- KF16 x 1/2 NPT
- Pressure Rating: KF16 fittings and vacuum hoses are not suitable for leak test or charging applications. Maximum pressure rating is 50 psig (3.4 bar)
- Connects PortMax™ Tool for high pressure hoses used for leak test or charging

Note: The PortMax™ Service Tool will require each of the fittings depending on what operation is being performed.



EVAOCMAX™ BY FASTEST

Fully automated evacuation cart for refrigeration system processing with real-time monitoring & data acquisition.



EVAOCMAX™

EvacMax provides rapid and automated evacuation in a portable compact cart.

Integrated with ICON technology, technicians now have the ability to set testing targets, start the evacuation and walk away.

EvacMax will pump down, and if targets are hit, automatically begin a pressure decay test. If targets are not hit, EvacMax will rerun to pass a test, or diagnose area(s) of leak(s). All while reporting real-time data on multiple traces... in half the time of current evacuation methods.



Drastically improve evacuation times



Real-time process monitoring and downloadable data logging



Hands-free automated evacuation and pressure decay testing



Quickly identify problems and optimize your evacuation process



CUT EVACUATION TIMES IN HALF.

RAPID EVACUATION OF LARGE CAPACITY SYSTEMS

- ⚡ Drastically improve evacuation times
- 📄 Real-time process monitoring and downloadable data logging
- 🔄 Automated evacuation and pressure decay testing
- 🔍 Identify multiple areas of leaks



INDUSTRIAL REFRIGERATION

Manufacturing, Chemical, Petro Chemical, Power Plants.

COLD CHAIN

Food Warehouses, Grocery Super Stores, Pharmaceutical Facilities.



COMMERCIAL REFRIGERATION

Grocery/Super Markets, Strip Malls, Office Buildings, Ice Rinks, Hospitals, Schools.

VRV / VRF

Office & Apartment Buildings, Hotel, College Campus, Multi-Use Facilities. Rapidly evacuate extremely long tubing runs typical in these applications.



AIR & WATER COOLED CHILLERS

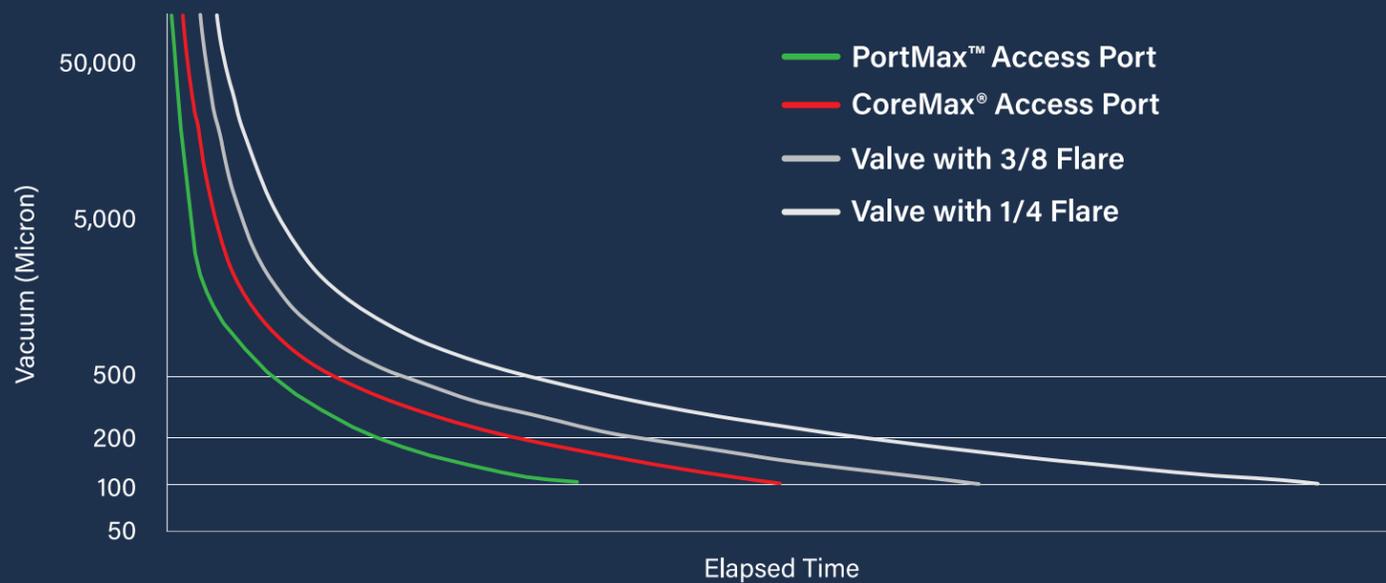
Chillers used in Air Conditioning and many Industrial/Laboratory applications.

AIR HANDLERS

Industrial Facilities, Warehouses, and Industrial Kitchens/Food Service Facilities.



FASTER EVACUATION IS NOW POSSIBLE.



EvacMax™ is an optimized system of matched components to fully utilize the capabilities of the “MAX” family of access ports - CoreMax® & PortMax™ - or even common Packed Angle, Rotolock, Schrader, Ball and other service valves.

While providing the shortest possible evacuation times, EvacMax™ monitors the process in real-time and can monitor multiple vacuum gauges strategically located on the refrigeration system.

The intuitive design allows users to set target vacuum, allowable decay parameters and number of re-tests. EvacMax™ automatically performs the process and records data for later analysis, process optimization and customer record keeping.



SET. START. GO.

1 Set
target vacuum, vacuum decay and number of retry parameters.



2 Start
the evacuation.



3 Go
EvacMax™ will do the rest.



EvacMax™ automatically:

- Pumps down to the target vacuum level that has been programmed, and if target is reached, begins a vacuum decay test.
- Continuously signals process status via the high visibility Andon Tower Light.
- If the system fails the vacuum decay test:
EvacMax will repeat the cycle a predetermined (set) number of times until the refrigeration system passes
- EvacMax™ signals a repeated failure informing the technician that further investigation for leaks or excessive moisture (and possible nitrogen purge) is required.
- Signals a successful completion of the process via the high visibility Andon Tower Light.
- Records the entire process to a downloadable data file.

REAL-TIME PROCESS MONITORING



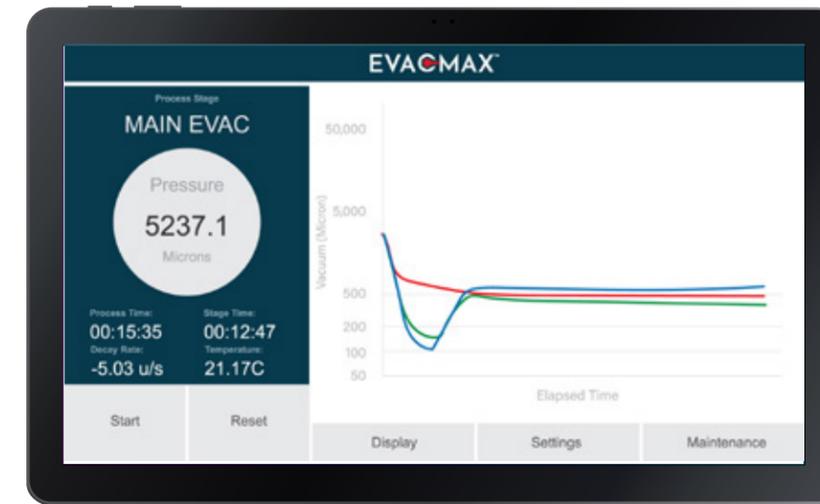
Integrated with ICON technology, technicians now have the ability to perform a fully automated evacuation process, allowing them time to perform other tasks while the EvacMax system performs the evacuation. It's simple, just set testing targets, start the evacuation and walk away.

- Performs a convenient "Self-Test" on the Cart system to check for any leaks (hoses, connectors, vacuum manifold, etc.) prior to performing a lengthy evacuation on a system.
- Automatically perform evacuation and record the data for later evaluation to implement process improvements.
- Track 1, 2, or more wireless vacuum gauges strategically located on refrigeration system to precisely monitor evacuation status.
- Data record to share with/provide to your customer for their quality records.improvement.

ICON Features

Packed with "Smart" features that streamline evacuation, record keeping and productivity.

The heart of the EvacMax automated evacuation cart is the FasTest ICON control & data acquisition system. It is driven by a rugged, full-featured wireless vacuum gauge that is paired with the exclusive ICON software. EvacMax has unprecedented features that allow the system to perform a "Self-Test", checking for internal leaks prior to performing an evacuation, then performing a fully automated evacuation, plotting the evacuation in real time while monitoring multiple locations simultaneously and recording the data for analysis. The technician can set all evacuation and vacuum decay parameters through the UI and then let the system perform its task!



Real time data monitoring.

Track & Display

Track and display the evacuation and vacuum decay test in real time.

Data Capture

Store data records for internal documentation, process validation, and customer documentation.

Process Optimization

Evaluate evacuation traces/data to recognize opportunities for improvement.



Highest accuracy & resolution available.



Wireless Bluetooth

Wireless Bluetooth enabled vacuum gauge pairs with ICON data acquisition system to accurately monitor, track and record the evacuation and vacuum decay processes.

Automatic Notification

The ICON system monitors the process status and the integral "light tower" provides the technician with a visual indicator. Process data is stored in CSV format and easily downloaded to USB drive.

Compatible with commonly used refrigeration system valves...Schrader, Packed Angle, Rotolock & Ball valves

- OR -

For the fastest evacuation integrate with the high flow PortMax™ or CoreMax® access port systems.

PORTMAX™

High Flow Access Port System for Rapid Evacuation of Large HVAC-R Packages

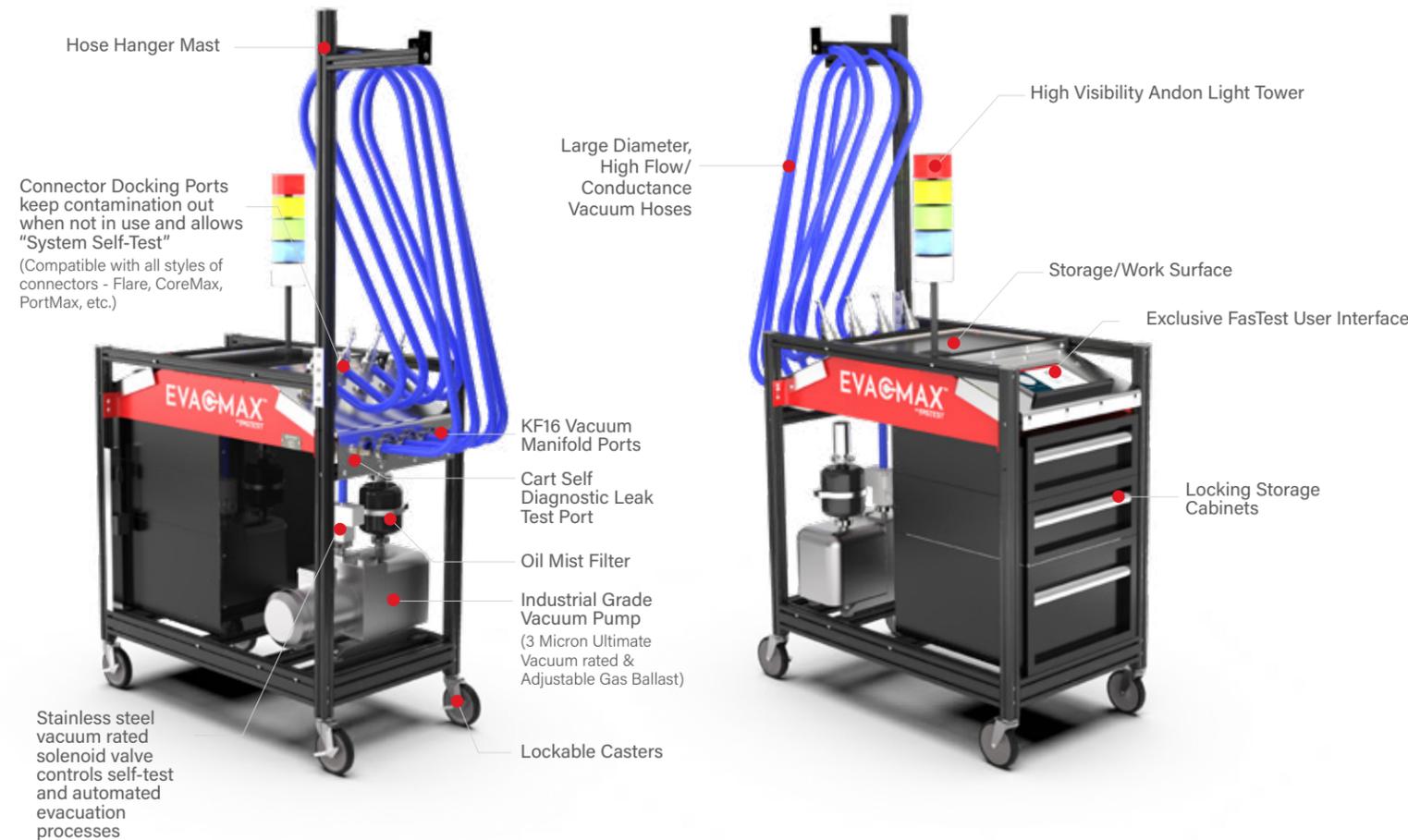


COREMAX®

High Flow Access Valve System for Rapid Evacuation of HVAC-R Systems using Schrader Valves



EvacMax is a turn-key, optimized solution with real-time tracking and data capabilities directly from FasTest.



- Fully automated easy-to-use intuitive design, set target vacuum, vacuum decay limits and monitor in real time. Store and download evacuation data records.
- Facilitates process improvement and optimization.
- Reduced in evacuation time (Takt Time) provides quick return on investment.
- Lockable storage cabinets safely store components when not in use. Full line of accessories to meet your needs.
- Mobile cart can be used in plant, at installation site and for service.
- Durable construction will provide years of reliable service.

Intuitively designed.

HOW TO ORDER

Contact FasTest for assistance with Evacuation Cart configuration.

email: fastsales@fastestinc.com

phone: (800) 444-2373

Evacuation Cart

Part Number	Description
CECBA12N	Evacuation Cart, Automated, 12 cfm model N vacuum pump, 110v/60Hz Single Phase

INCLUDES: Mobile evacuation cart with 4 port manifold, heavy duty locking casters, 3 lockable storage drawers, isolation valve for pressure decay test, vacuum pump (110v/60Hz single phase motor) with oil mist filter, system is wired for Core-n-play operation.

DOES NOT INCLUDE: Hoses, Connectors, adapter fittings or vacuum gauge and tablet computer required for process monitoring & data capture which must be ordered separately. Shipping cost not included (FOB, FasTest Inc. dock).

Evacuation Hoses

Part Number	Description
CECHOSE10	Hose, KF16, 1.0 meter (3.3') long
CECHOSE20	Hose, KF16, 2.0 meter (6.5') long
CECHOSE30	Hose, KF16, 3.0 meter (10') long
CECHOSE40	Hose, KF16, 4.0 meter (13') long
CECHOSE50	Hose, KF16, 5.0 meter (16') long
AE002	Connector Kit KF-16/KF-16 w/two S10752 Clamps (Use to join "daisy chain" two hoses)

Connection to CoreMax Connector Tools (SCFT10 or SCP062H)

Part Number	Description
SCFT10	CoreMax Valve Core Insertion Tool (Use to evacuate through CoreMax Seat for maximum flow)
AE007	Male Fitting, KF16 x 3/8 Male NPT (for Core Insertion Tool to hose)
AE016PE01	Adapter, PortMax x CoreMax (Screw into docking port to dock CoreMax Tools)
AEKF16C	Clamp, KF-16 (Aluminum, use to join KF16 hose fitting to KF16 Connector Tool fitting)
SCFTR10	Repair Kit for Core Insertion Tool (10 Repairs)
S1016N70	CoreMax Valve Core Insertion Tool Main Seal (10 Seals)

Vacuum Gauge & Tablet Computer

Part Number	Description
CECGAB	Vacuum Gauge, Wireless, BVPRO (Includes 1 Gauge Coupler (CECGABCP1) to connect to 1/4 flare fitting)

Spare Parts & Service Items

Part Number	Description
AE011	Vacuum pump oil (Industrial Grade) for Model N vacuum pump
1314B50	Replacement O-Ring (#314) for Hose KF-16 fitting (Pack of 10)
AE003	Protective Plastic Cap for KF-16 Hose Fittings (Pack of 4)

Multi-Purpose Docking Ports

- Rugged FasTest connectors and integral "Docking Ports" keep moisture and contamination out the system when not in use.
- Easily perform a system integrity leak test before beginning an evacuation.
- Can be configured for any connector style... Flare, CoreMax, PortMax, etc.

High Performance Vacuum Pump

- Industrial grade, two-stage rotary vane design with adjustable gas ballast valve and 3 Micron ultimate vacuum rating assures rapid evacuations and long service intervals.
- High quality isolation valve allows for vacuum decay test without disconnecting hoses or closing access ports/valves.

4-Port Manifold & System Test Port

- Connect up to four individual hoses with industry standard KF vacuum fittings assuring quick leak tight connections and rapid evacuations.
- Test port allows connection of vacuum gauge for system integrity leak check.

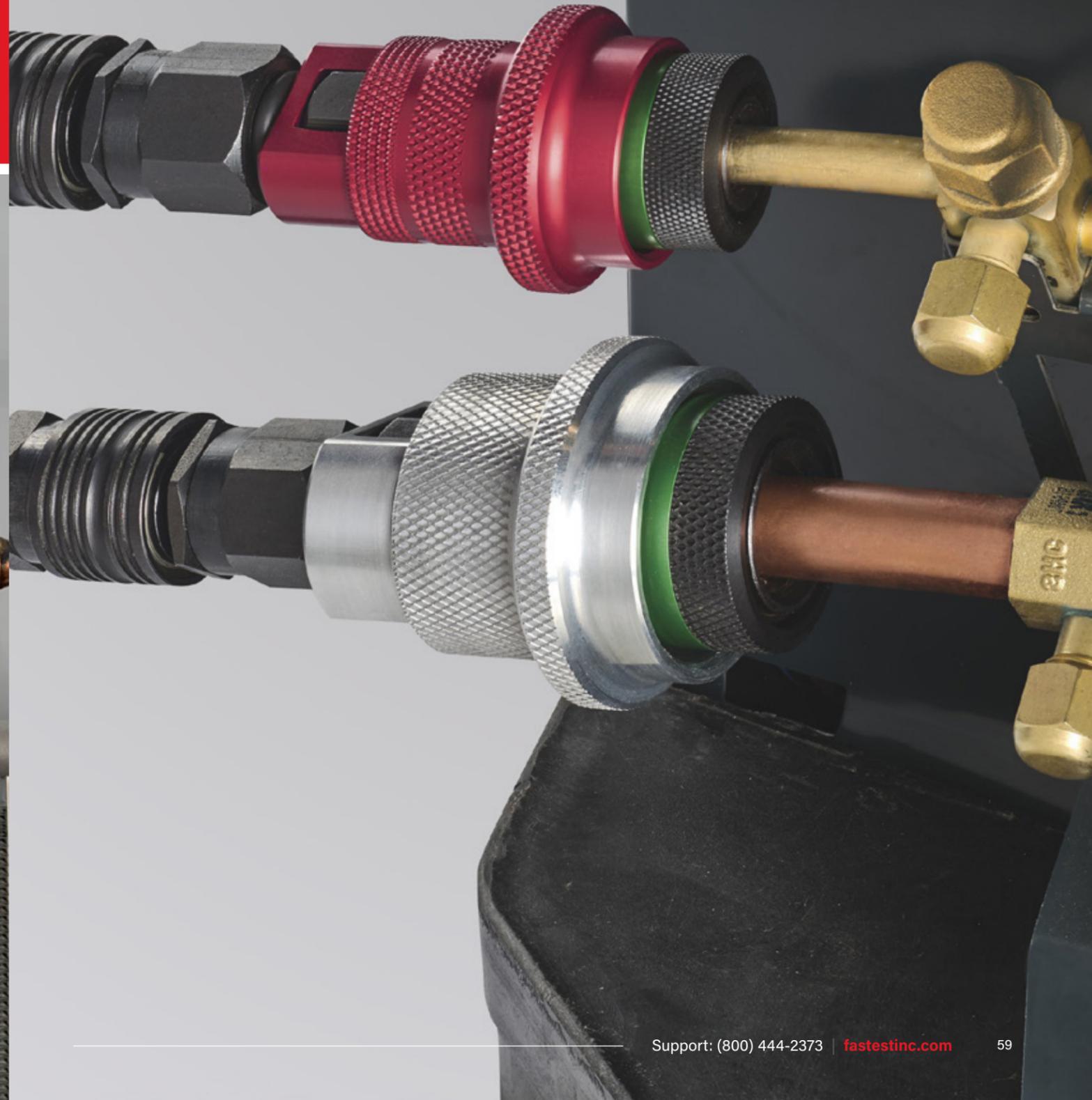
Long Life & Easy to Use

- Rugged construction with convenient work surfaces will provide years of reliable service.
- FasTest user interface allows easy programmability and process monitoring. USB Ports allow data transfer/download.
- Light tower provides visual indication of process status.
- Lockable storage cabinets to keep tools safe.

CONNECTION TOOLS >>

FasTest® sealing tools have become the standard for safe and reliable connection requirements. Ergonomic designs and easy maintenance makes FasTest® the industry preferred connector source.

SAFE. RELIABLE. FAST.



- 1 Identify "Connects to" or Tube/Thread type for application
- 2 Select tool(s) that fit size requirements
- 3 Verify operating/test pressure meets requirements
- 4 Select actuation method - lever/sleeve for manual, pneumatic for automation
- 5 Identify desired ICON™ features



DESIGNED FOR	HVAC-R Tubes / Fittings / Access Ports				
PRODUCT SERIES	XT (p.62)	ST (p.64)	RQD (p.66)	SNAPMATE (p.68)	MBE / MRE (p.70)
Pressure rating	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 (51.7 bar)
Connects to	Expanded Tubes	Straight Tubes	Hansen & PCU Male QD Fittings	CoreMax & Schrader Access Valves	CoreMax Seat, Expanded Tubes
Sealing range	5/16", 3/8", 1/2", 5/8", 3/4", 7/8"	1/4", 5/16", 3/8"	1/4", 5/16", 3/8"	7/16-20 flare	1/4" to 1 1/8"
Application type	Manual	Manual	Manual	Manual	Manual
Actuation method	Sleeve	Sleeve	Sleeve / Lever	Sleeve	Sleeve
Grip method	Ball Latch	Thread Collets	Ball Latch	Thread Collets	Ball / Ring Latch



DESIGNED FOR	Gas Burner Testing	
PRODUCT SERIES	GZNV (p.76)	G60V (p.78)
Pressure rating	Vacuum to 5 psi (0.4 bar)	Vacuum to 30 psi (2.1 bar)
Connects to	Natural Gas and Propane Regulators	Natural Gas and Propane Regulator Extension Pipes
Sealing range	3/8, 1/2, 3/4 Female NPT/BSPP (G)	3/8, 1/2, 3/4 Male NPT/BSPP (G)
Application type	Manual	Manual
Actuation method	Lever	Sleeve
Grip method	Seal Friction	Thread Collets

» 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.



DESIGNED FOR	Internal & External Tubes		Internal Connections to Tubes / Threads			External Connections to Tubes / Threads	
PRODUCT SERIES	JNL (p.72)	JXL (p.74)	FI (p.80)	MIT (p.92)	FN (p.106)	FE (p.84)	MET (p.100)
Pressure rating	Vacuum 10 mtorr (micron) to 1,000 psi (68.9 bar)	Vacuum 10 mtorr (micron) to 1,000 psi (68.9 bar)	Vacuum 10 to 120 psi (8.1 bar)	Vacuum to 10,000 psi (689.5 bar)	Vacuum to 5,000 psi (344.7 bar)	Vacuum to 500 psi (34.5 bar)	Vacuum to 10,000 psi (689.5 bar)
Actuation method	Lever	Lever	Pneumatic	Manual Twist	Squeeze Lever	Pneumatic	Manual Twist
Grip method	Grip Collets	Grip Collets	Fixturing / Seal Friction	Continuous Thread	Thread Collets	Fixturing / Seal Friction	Continuous Thread
ICON™ Technology			SURE SEAL™ SEAL LIFE™		SURE SEAL™	SURE SEAL™ SEAL LIFE™	

Connects to: General guide, contact FasTest for assistance for your specific application.

TUBES	TUBE TYPE	Internal Tubes	External Tubes	FI	MIT	FN	FE	MET
		0.375" to 1.625" 9.53mm to 41.275mm	0.25" to 0.875" 6.3mm to 22.2mm	0.310" to 3.005" 7.87mm to 76.33mm	N/A	N/A	0.030" to 5.040" 0.76mm to 128.02mm	N/A
THREADS	STRAIGHT							
	SWAGED							
	EXPANDED							
	FLARED							
	BEADED							
	BARBED	N/A	N/A	0.310" to 3.005" 7.87mm to 76.33mm	N/A	N/A	0.030" to 5.040" 0.76mm to 128.02mm	N/A
	FORMED							
THREADS	NPT	N/A	N/A	1/8 to 2 1/2	1/8 to 4	1/8 to 3/4	1/8 to 2 1/2	1/8 to 3
	BSPP/BSPT	N/A	N/A	1/8 to 2 1/2	1/8 to 1	1/8 to 3/4	1/8 to 2 1/2	1/8 to 1
	JIC 37° FLARE	N/A	N/A	N/A	7/16-20 to 1 5/16-12 (-4 to -16)	N/A	7/16-20 to 1 5/16-12 (-4 to -16)	7/16-20 to 2 1/2-12 (-4 to -32)
	45° FLARE	N/A	N/A	N/A	N/A	N/A	7/16-20 to 1 3/8-12 (-4 to -16)	7/16-20 to 1 1/16-14 (-4 to -12)
	METRIC	N/A	N/A	M10 to M60	M10 to M22	M10 to M22	M10 to M33	CONSULT FACTORY

XT / HVAC-R EXTERNAL SEALING CONNECTION TOOL

Sleeve actuated ball grip connection tool for expanded refrigeration tubes.

CONNECTS TO:

Expanded



SPECIFICATIONS

Pressure Rating	Operating Temperatures	Connection Profile
10 mtorr (micron) to 750 psi (51.7 bar)	-40°F to +250°F (-40°C to +121°C)	Expanded Tubes
Housing Material		Leak Rate Capability
Connector - Stainless Steel SurConnect © - Aluminum		1E-7cc/s He
Termination Profile		Seal Material*
1/4 NPT		HNBR

* 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

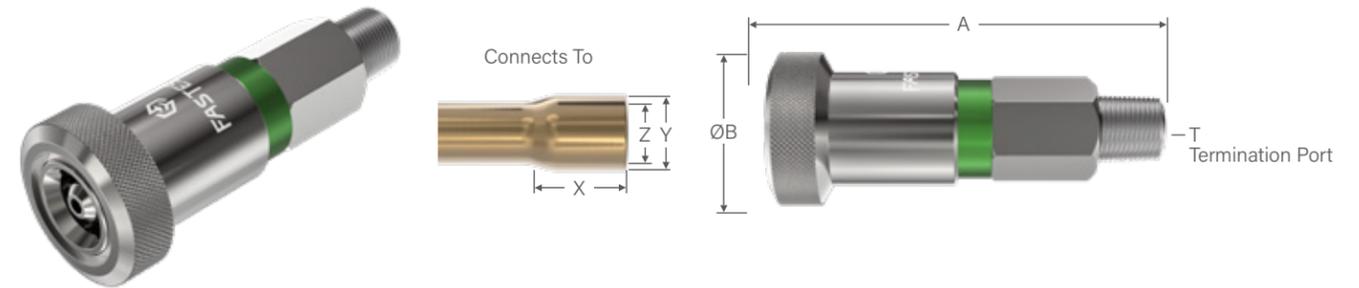


The SurConnect© Advantage

- 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.

- 1 Sleeve locks under pressure to prevent accidental disconnection
- 2 Instant connection for copper and aluminum flared tubes commonly used in refrigeration
- 3 Accommodates wide tolerance of flared section length
- 4 Deep vacuum capabilities down to 10 millitorr (micron)
- 5 Quick and easy seal replacement to minimize down time, maintenance, and tool inventory

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	0.37 to 1.00 (9.4 to 25.4)	0.73 (18.5)	0.62 (15.7)	XT10042	XTB10	XTR10	3.33 (84.6)	1.50 (38.1)	1/4 NPT	0.25 (6.4)		
3/4		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)

Ordering Information				
Connects To	SurConnect © Kit Part Number	XT assembled w/ SurConnect ©	XT assembled w/ SurConnect ©	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*
3/4	XT12SHR2	XT12042SHR2*	XT06042SHR3P6	3/8 PCU*
			XT12042SHR2H4	1/4 Hansen®
			XT12042SHR2P4	1/4 PCU*
7/8	XT14SHR1	XT14042SHR1*	XT12042SHR2H6	3/8 Hansen*
			XT12042SHR2P6	3/8 PCU*
			XT14042SHR1H4	1/4 Hansen®
7/8	XT14SHR1	XT14042SHR1*	XT14042SHR1P4	1/4 PCU*
			XT14042SHR1H6	3/8 Hansen*
			XT14042SHR1P6	3/8 PCU*

NOTE: SurConnect © Kit must be assembled with XT Connector

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)	Stainless Steel
Termination Port	Leak Rate Capability	Seal Material*
1/4 NPT	1E-7cc/s He	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

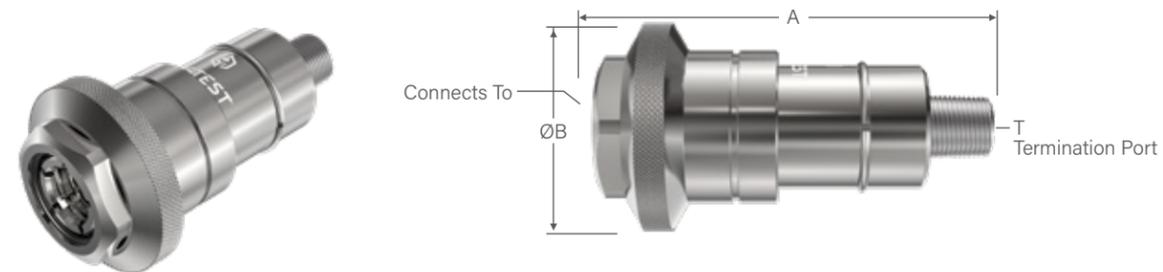
Consult Factory

ACCESSORIES

Visit fastestinc.com

- 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)	Internal Rebuild Kit	Collet Kit	A	B	T	Insertion Depth
0.250 (6.4)	ST04042	STB04	STD04	STC04	2.75 (69.9)	1.14 (29.0)	1/4 NPT	0.62 (15.7)
0.312 (7.9)	ST05042	STB05	STD05	STC05		1.19 (30.2)		
0.375 (9.5)	ST06042	STB06	STD06	STC06	3.23 (82.0)	1.50 (38.1)		

Dimensions: inch (mm)

Additional sizes available, contact factory.

RQD / HVAC-R EXTERNAL SEALING CONNECTION TOOL

Connection Tool for ISO 7241-1 Series B Quick Disconnect Coupling Plugs
Easily connect to pressurized Hansen, PCU and other Plugs ("Tips")

CONNECTS TO:

Hansen® & PCU® Brand Quick Disconnect Male Plugs/ "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/Stainless Steel/Brass/Plastic (Black Delrin®)
Termination Port	Leak Rate Capability	Seal Material*
1/4 or 3/8 NPT	1E-5cc/s He	Neoprene®

i * Additional seal material types available, consult factory.

i Designed for ISO 7241-1 Series B Coupling Plugs/ "Tips"

RQD can mate with, but not limited to, the following brands: PCU, Hansen, Parker, SABE, AeroQuip®, Faster®, Snap-Tite®, Stucchi®, Perfecting®, Safeway®, Tomco® H, Cejn®, Foste®, and Nitto®.

Check with FasTest for proper fitment.

ACTUATION METHOD

Sleeve / Lever Handle: RQD eliminates high force to connect under pressure!

Easy sleeve latch action is ergonomic and eliminates repetitive twisting and turning. Cam over lever handle easily opens valves, even when under pressure.

- 1 - Slide Latch forward to connect to QD Plug
- 2 - Lift handle to open valves
- 3 - Return handle to in-line position to close valves and vent

ICON™ TECHNOLOGY

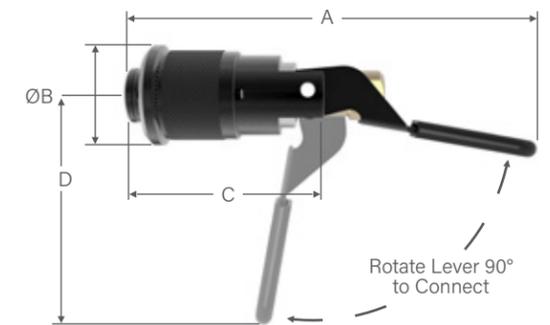
Consult Factory

ACCESSORIES

Visit fastestinc.com

- 1** Sleeve latches RQD to QD Plug before pressure is applied thus eliminating the high force to connect common in conventional Quick Disconnect Couplings
- 2** Safety Latch feature prevents accidental disconnection when under pressure
- 3** All RQD's feature an internal shut-off valve. Lever handle opens/closes valves to charge system. When closing, residual pressure is safely directed away from operator or can be recovered via recovery port
- 4** Ergonomic action eliminates repetitive twisting motion & possible operator injuries
- 5** Minimal maintenance required
- 6** Recovery Port supports Zero Emission Processing See pg.3 for more information on Zero Emission Processing

RQD / HVAC-R EXTERNAL SEALING CONNECTION TOOL



RQD (vent to atmosphere)

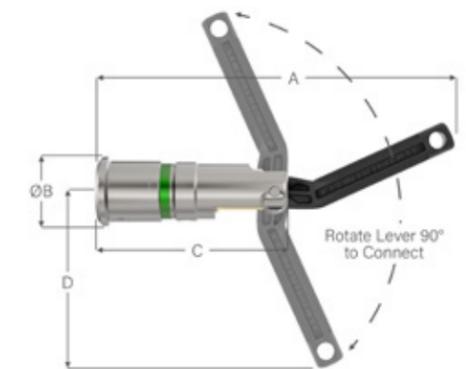
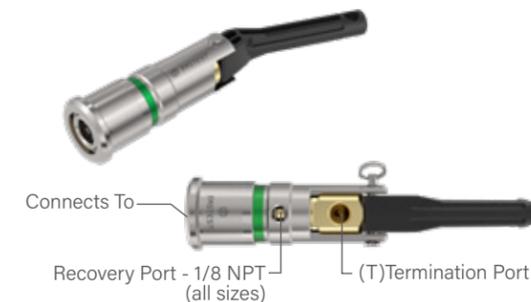
Ordering Information				Dimensions				
Connects To	Part	Replacement	Rebuild	A	B	C	D	T

RQD | Lever Action Style for PCU® Plugs/Tips

1/4 PCU®—Model 64 Tip	KA04PA	KSA04	KR04A	7.00 (177.8)	1.75 (44.5)	3.40 (86.4)	3.30 (83.8)	1/4 NPT
1/4 PCU®—Model 61 Tip	KA04PB	KSM04	KR04					3/8 NPT
3/8 PCU®—Model 78 Tip	KA06PA	KSM06PB	KR06PA					
3/8 PCU®—Model 66 Tip	KA06PB	KSM06PB	KR06PB					

RQD | Lever Action Style for Hansen® Plugs/Tips

1/4 Hansen® 2K Series Tip	KA04HB	KSM04	KR04	7.00 (177.8)	1.75 (44.5)	1.95 (49.5)	3.30 (83.8)	1/4 NPT
3/8 Hansen® 3K Series Tip	KA06HB	KSM06HB	KR06HB					3/8 NPT



RQD (with recovery port) See pg.3 for more information on Zero Emission Processing

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

RQD | Lever Action Style for PCU® Plugs/Tips

1/4 PCU®—Model 64 Tip	KA04PAEV	KSA04	KR04AEV	8.70 (221.0)	1.75 (44.5)	4.7 (119.4)	4.2 (106.7)	1/4 NPT
1/4 PCU®—Model 61 Tip	KA04PBEV	KSM04	KR04EV					3/8 NPT
3/8 PCU®—Model 78 Tip	KA06PAEV	KSM06PB	KR06PAEV					
3/8 PCU®—Model 66 Tip	KA06PBEV	KSM06PB	KR06PBEV					

RQD | Lever Action Style for Hansen® Plugs/Tips

1/4 Hansen® 2K Series Tip	KA04HBEV	KSM04EV	KR04EV	8.70 (221.0)	1.75 (44.5)	4.7 (119.4)	4.2 (106.7)	1/4 NPT
3/8 Hansen® 3K Series Tip	KA06HBEV	KSM06HBEV	KR06HBEV					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	Leak Rate Capability	Seal Material*
-4, 1/4 SAE 45° Flare (7/16-20), non-valved	1E-3cc/s He	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

- 1 Internally valved for refrigerant containment upon disconnection
- 2 Collet design locks securely into CoreMax® and common Schrader® valves with with 1/4 SAE 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	1.94 (49.3)	0.93 (23.6)	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



- 1 Sleeve locks under pressure to eliminate disconnection under pressure
- 2 MBE grips with balls, MRE grips with a ring (eliminates ball "dimples")
- 3 Straight through flow for full flow requirements
- 4 Quick and easy seal replacement to minimize down time, maintenance, and tool inventory
- 5 MBE uses BALLS to latch, MRE uses a RING to latch and leaves less of a "Witness Mark" on test part.

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	Leak Rate Capability	Seal Material*
1/4 to 1-1/4 NPT	1E-7cc/s He	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

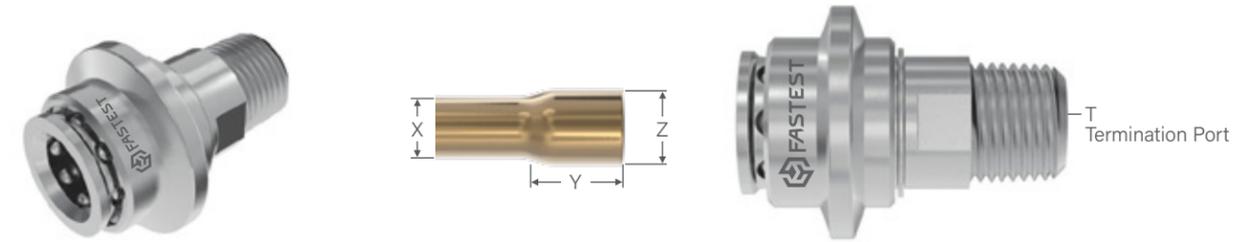
ICON™ TECHNOLOGY

Consult Factory

ACCESSORIES

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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)

MBE Pt # SCM062W is for the CoreMax Seat. MBE's for expanded tubes are custom built to the customer's specific part due to tight tolerances.

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, provide the following information:

- 1) The gripping & sealing area dimensions and material of your test piece.
- 2) The test pressure & media and provide detailed drawing, including tolerances of test piece. Providing a sample of the part is also recommended.

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	Leak Rate Capability	Seal Material**
1/8 NPT	1E-7cc/s He	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

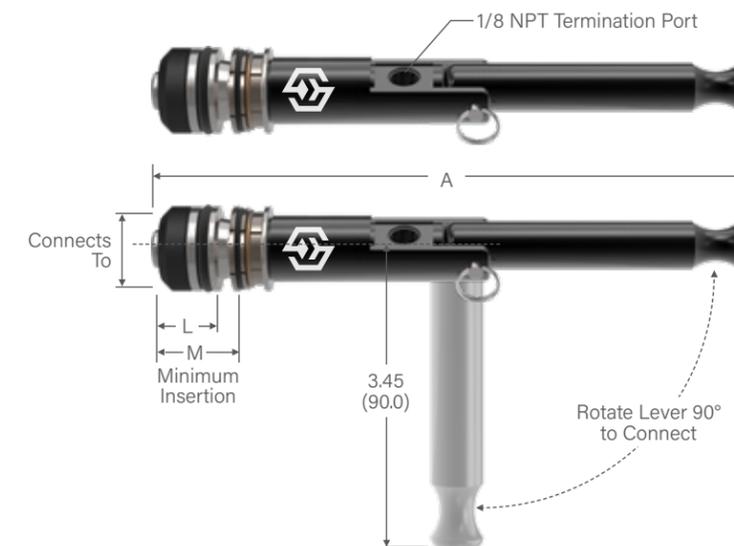
Consult Factory

ACCESSORIES

Visit fastestinc.com

- 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		
Size Tolerance	Connects To	Part Number	Replacement Seals Bulk Pack (5)	A	L	M
JNL0 and JNL1 Lever Actuated Connectors for Internal Tubes / Bores						
+0.010/-0.010 (+0.25/-0.25)	0.375 (9.5)	JNL00375H	SN00375H	700 (177.8)	N/A	0.53 (13.5)
	0.500 (12.7)	JNL00500H	SN00500H			0.63 (16.0)
	0.590 (15.0)	JNL10590	SN10590			
	0.625 (15.9)	JNL10625	SN10625			
	0.750 (19.1)	JNL10750	SN10750			
	0.785 (19.9)	JNL10785	SN10785			
0.875 (22.2)	JNL10875	SN10875				
JNL0 and JNL1 Lever Actuated Connectors for Metric Internal Tubes / Bores						
+0.010/-0.010 (+0.25/-0.25)	10mm ± 0.25mm	JNL0M10H	SN00395H	700 (177.8)	N/A	13.5 (0.53)
	11mm ± 0.25mm	JNL0M11H	SN00435H			
	12mm ± 0.25mm	JNL0M12H	SN00470			
	13mm ± 0.25mm	JNL0M13H	SN00515H			
	14mm ± 0.25mm	JNL0M14H	SN00550H			
	15mm ± 0.25mm	JNL1M15	SN10590			16.0 (0.63)
	16mm ± 0.25mm		SN10630			
	18mm ± 0.25mm	JNL1M18	SN10710			
20mm ± 0.25mm	JNL1M20	SN10785				
JNL2 Lever Actuated Connectors for Internal Tubes / Bores						
+0.030/-0.010 (+0.76/-0.25)	1.000 (25.4)	JNL21000	SN21000	7.71 (195.8)	1.31 (33.3)	1.39 (35.4)
	1.125 (28.6)	JNL21125	SN21125		1.44 (36.6)	1.51 (38.4)
	1.250 (31.8)	JNL21250	SN21250		1.56 (39.7)	2.05 (52.1)
	1.375 (34.9)	JNL21375	SN21375		1.69 (43.0)	2.12 (53.9)
	1.500 (38.1)	JNL21500	SN21500		1.81 (46.0)	2.30 (58.5)
	1.625 (41.3)	JNL21625	SN21625			

Dimensions: inch (mm)

i **NOTE:** Additional JNL2 sizes available per customer request. Consult factory.
NOTE: JNL sizes available to 1.630" (41.4 mm) in .005" (.13 mm) increments per customer request. Consult factory.

JXL / EXTERNAL SEALING CONNECTION TOOL

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

CONNECTS TO:

Straight Swaged/Expanded



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	Leak Rate Capability	Seal Material**
1/8 to 1/4 NPT/BSPP (G)	1E-7cc/s He	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

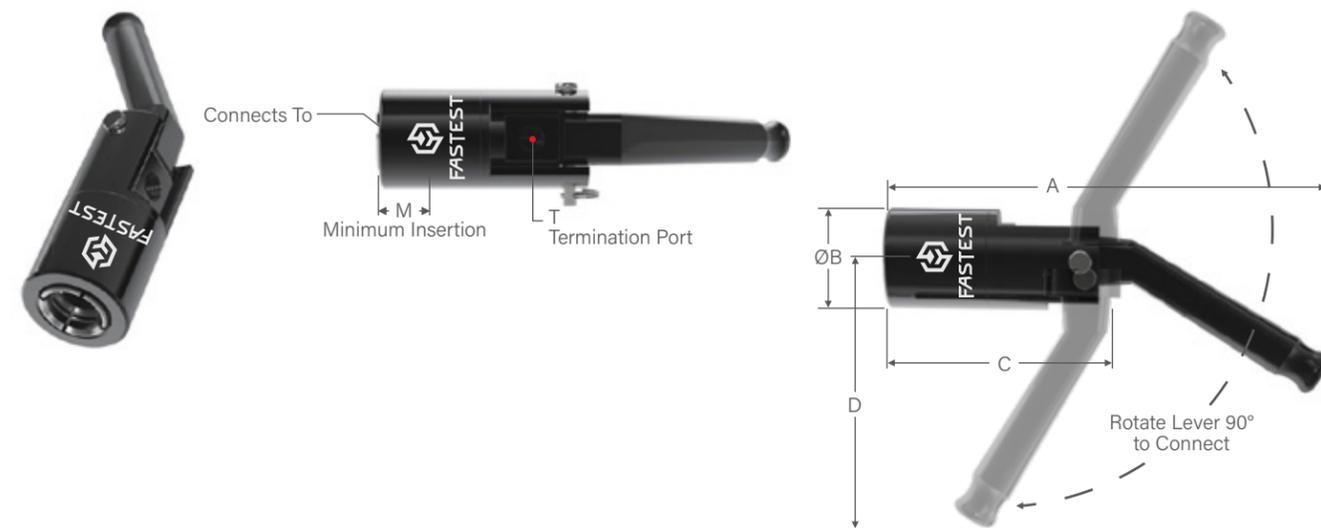
Consult Factory

ACCESSORIES

Visit fastestinc.com

- 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	7.27 (184.7)	1.62 (41.2)	3.58 (90.9)	4.22 (107.2)	0.85 (21.6)	1/4 NPT	0.27 (6.9)
0.625 ± .010	JXL10625	SXL10625							
0.750 ± .010	JXL10750	SXL10750							
0.875 ± .010	JXL10875	SXL10875							

JXL0 and JXL1 | Lever Actuated Connectors for Metric External Tubes

6mm ± 0.25mm	JXL0M6	SXL00236	7.27 (184.7)	1.13 (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	7.27 (184.7)	1.62 (41.2)	3.58 (90.9)	4.22 (107.2)	0.85 (21.6)	1/4 BSPP (G)	0.27 (6.9)
16mm ± 0.25mm	JXL1M16	SXL10630							
18mm ± 0.25mm	JXL1M18	SXL10710							
20mm ± 0.25mm	JXL1M20	SXL10787							
22mm ± 0.25mm	JXL1M22	SXL10865							

Dimensions: inch (mm)

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

GZNV / INTERNAL GAS BURNER TESTING

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

AVAILABLE RANGE: 3/8, 1/2 & 3/4 FNPT/BSPT VERSIONS



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	Leak Rate Capability	Seal Material*
1/4, 1/2 NPT	1E-5cc/s He	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

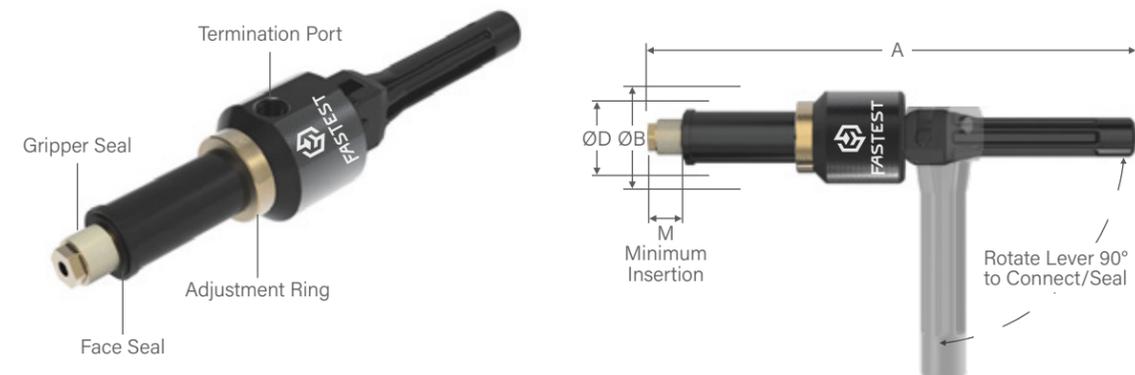
ICON™ TECHNOLOGY

Consult Factory

For part numbers or additional product information:
Contact fastsales@fastestinc.com

- 1 Adjustable collar to keep face seal sealing pressure consistent
- 2 Internal shut-off valve to stop the flow of gas when handle is in the disconnected position
- 3 Non-sparking aluminum and brass components

GZNV / INTERNAL GAS BURNER TESTING



Ordering Information					Dimensions					
Connects To	Part Number	Replacement Seals Bulk Pack	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						1/2 NPT
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

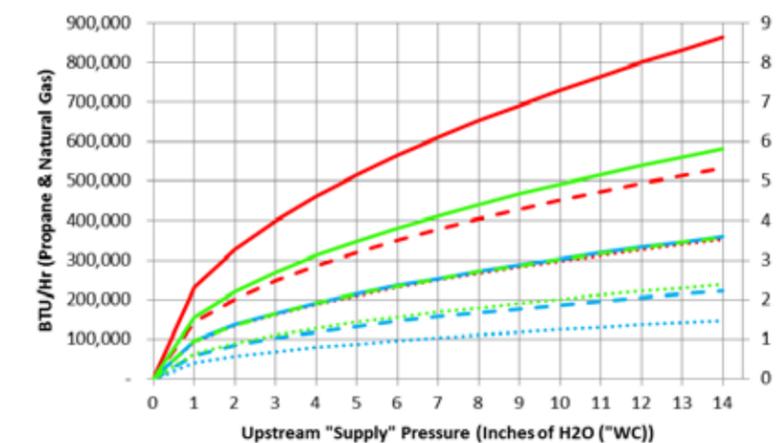
GZNV | Reduced Length Shaft

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						1/2 NPT
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)

Note: Custom Shaft length's available, consult factory

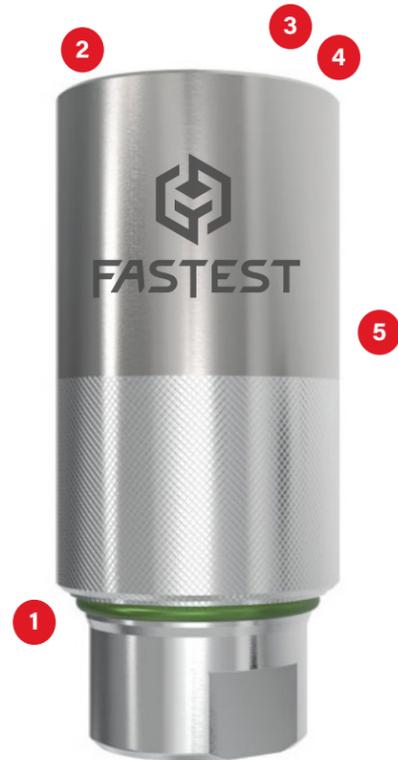
GasMate™ GZNV Family Flow Capacity



G60V / EXTERNAL GAS BURNER TESTING

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

AVAILABLE RANGE: 3/8, 1/2 & 3/4 MNPT
(BSPT AVAILABLE AS CUSTOM)



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	Leak Rate Capability	Seal Material*
3/8, 1/2, 3/4 NPT	1E-5cc/s He	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

ICON™ TECHNOLOGY

Consult Factory

For part numbers or additional product information:
Contact fastsales@fastestinc.com

- Green ring indicator to signal that a complete connection has been made
- Instant external threaded connection with floating piston to ensure proper face / ID sealing position
- Collet design locks securely to external male pipe threads
- Internal shut-off valve seals flow when disconnected
- Stainless steel components for demanding production environments - brass collets are non-sparking

FI / INTERNAL SEALING CONNECTION TOOL

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

AVAILABLE RANGE: .310" to 3.005" (7.87mm to 76.33mm)

Straight Expanded Flared Beaded Barbed Form End Swaged



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	Leak Rate Capability	Materials of Construction	Seal Material*
Female 10-32 UNF, M5 x 0.8, NPT/BSPP (G); 1/8 to 3/4	1E-5cc/s He	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

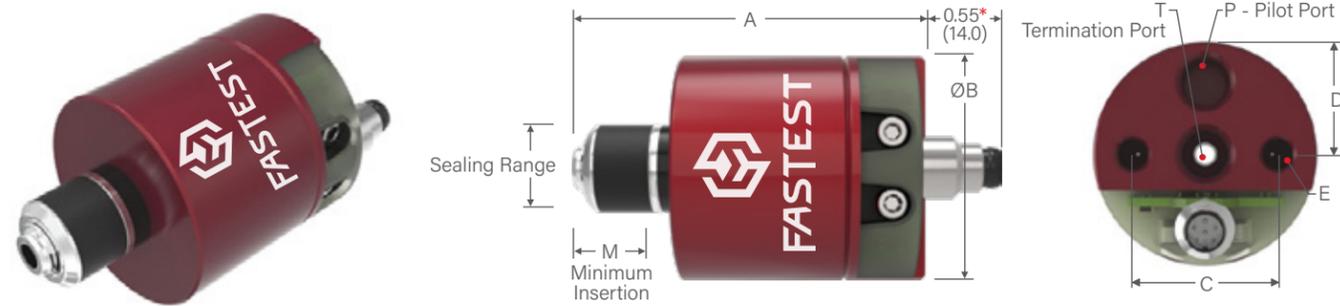
✓ SURE SEAL™

🔄 SEAL LIFE™

For part numbers or additional product information:
Contact fastsales@fastestinc.com

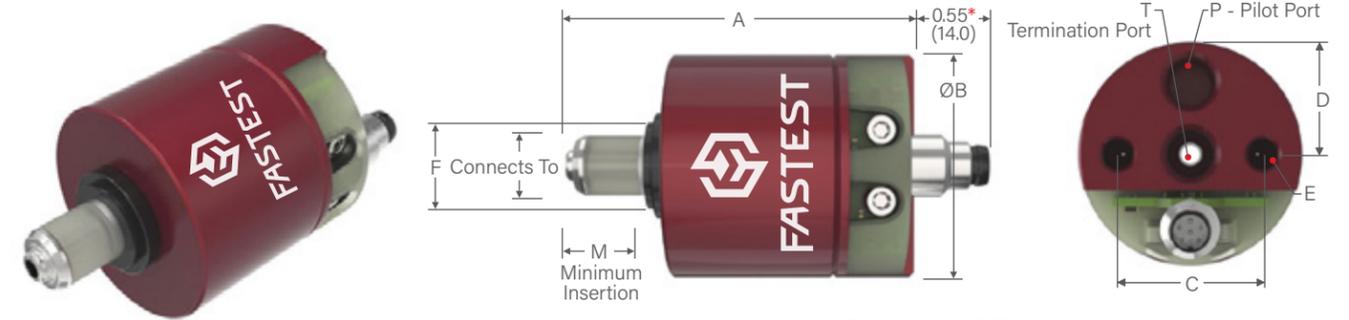
- Automated processes and high-volume production testing including pick and place and delicate robotic handling applications
- Capable of sealing conventional and unique sealing surfaces including smooth, porous, out of round, and threaded
- Quick change seal sets to accommodate multiple sizes of tubing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

FI / INTERNAL SEALING CONNECTION TOOL / STRAIGHT TUBES & BORES



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

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							
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 UNF	0.48		10-32 UNF
0.330 to 0.394	FIS0101	FI01CV04ANA FI01CV04SSR	FIB0101	FIR01CV04ANA FIR01CV04SSR	(50.3)	(31.7)	(20.3)	(10.2)		(12.2)		
0.394 to 0.472	FIS111	F1	FIB111	FIR1	2.44	1.57	1.02	0.51	1/4-28 UNF	0.57		1/8 NPT
0.472 to 0.551	FIS112	FI1CV04ANA FI1CV04SSR	FIB112	FIR1CV04ANA FIR1CV04SSR	(62.0)	(39.9)	(25.9)	(12.9)		(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 UNF	0.57		1/8 NPT
0.709 to 0.787	FIS222	FI2CV04ANA FI2CV04SSR	FIB222	FIR1CV04ANA FIR1CV04SSR	(62.0)	(39.9)	(25.9)	(12.9)		(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 UNF	1.07		1/8 NPT
0.945 to 1.024	FIS332	FI3CV04ANA FI3CV04SSR	FIB332	FIR3CV04ANA FIR3CV04SSR	(66.3)	(59.9)	(40.6)	(20.3)		(27.2)		
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 UNF	1.07		1/8 NPT
1.181 to 1.260	FIS442	FI4CV04ANA FI4CV04SSR	FIB442	FIR3CV04ANA FIR3CV04SSR	(66.3)	(59.9)	(40.6)	(20.3)		(27.2)		
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 UNF	1.60	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)		(40.6)		
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 UNF	1.60	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)		(40.6)		
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 UNF	1.62	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)		(41.1)		
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 UNF	1.62	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)		(41.1)		
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

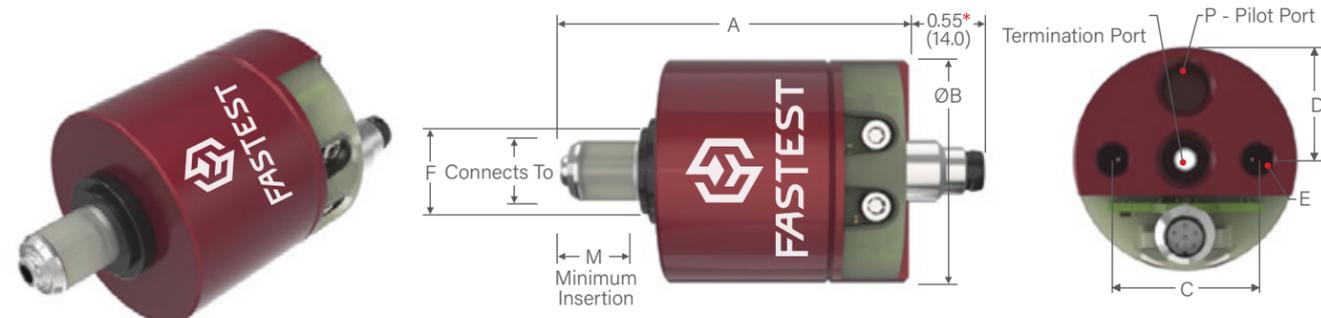
Ordering Information (Complete Connector = Main Seal Set + Base Part Number)					Dimensions								
Connects To	Main Seal Set*	Base Part Number	Replacement Seals Pack (5)	Rebuild Kit	A	B	C	D	E	F	M	P	T
1/8	FIS011/8NPT	FI01	FIB011/8NPT	FIR01	1.98	1.25	0.80	0.40	10-32 UNF	0.62	0.48		10-32 UNF
		FI01CV04ANA FI01CV04SSR		FIR01CV04ANA FIR01CV04SSR	(50.3)	(31.7)	(20.3)	(10.2)		(15.7)	(12.2)		
1/4	FIS11/4NPT	F1	FIB11/4NPT	FIR1	2.44	1.57	1.02	0.51	1/4-28 UNF	0.76	0.57		1/8 NPT
		FI1CV04ANA FI1CV04SSR		FIR1CV04ANA FIR1CV04SSR	(62.0)	(39.9)	(25.9)	(12.9)		(19.3)	(14.5)		
3/8	FIS23/8NPT	FI2	FIB23/8NPT	FIR1	2.44	1.57	1.02	0.51	1/4-28 UNF	0.88	0.57		1/8 NPT
		FI2CV04ANA FI2CV04SSR		FIR1CV04ANA FIR1CV04SSR	(62.0)	(39.9)	(25.9)	(12.9)		(22.3)	(14.5)		
1/2	FIS21/2NPT	FI2	FIB21/2NPT	FIR1	2.44	1.57	1.02	0.51	1/4-28 UNF	1.07	0.57		1/8 NPT
		FI2CV04ANA FI2CV04SSR		FIR1CV04ANA FIR1CV04SSR	(62.0)	(39.9)	(25.9)	(12.9)		(27.2)	(14.5)		
3/4	FIS33/4NPT	FI3	FIB33/4NPT	FIR3	2.61	2.36	1.60	0.80	1/4-28 UNF	1.26	1.07		1/8 NPT
		FI3CV04ANA FI3CV04SSR		FIR3CV04ANA FIR3CV04SSR	(66.3)	(59.9)	(40.6)	(20.3)		(32.0)	(27.2)		
1	FIS41NPT	FI4	FIB41NPT	FIR3	2.61	2.36	1.60	0.80	1/4-28 UNF	1.57	1.07		1/8 NPT
		FI4CV04ANA FI4CV04SSR		FIR3CV04ANA FIR3CV04SSR	(66.3)	(59.9)	(40.6)	(20.3)		(39.9)	(27.2)		
1-1/4	FIS511/4NPT	FI5	FIB511/4NPT	FIR6	3.68	3.49	2.31	1.16	1/4-28 UNF	1.88	1.60	1/8 NPT	1/2 NPT
		FI5CV04ANA FI5CV04SSR		FIR6CV04ANA FIR6CV04SSR	(93.5)	(88.6)	(58.7)	(29.5)		(47.8)	(40.6)		
1-1/2	FIS611/2NPT	FI6	FIB611/2NPT	FIR6	3.68	3.49	2.31	1.16	1/4-28 UNF	2.13	1.60	1/8 NPT	1/2 NPT
		FI6CV04ANA FI6CV04SSR		FIR6CV04ANA FIR6CV04SSR	(93.5)	(88.6)	(58.7)	(29.5)		(54.1)	(40.6)		
2	FIS72NPT	FI7	FIB72NPT	FIR7	3.36	4.20	3.00	1.50	1/4-28 UNF	2.75	1.62	1/8 NPT	3/4 NPT
		FI7CV04ANA FI7CV04SSR		FIR7CV04ANA FIR7CV04SSR	(85.3)	(106.7)	(76.2)	(38.1)		(69.9)	(41.1)		
2-1/2	FIS721/2NPT	FI7	FIB721/2NPT	FIR7	3.36	4.20	3.00	1.50	1/4-28 UNF	2.75	1.62	1/8 NPT	3/4 NPT
		FI7CV04ANA FI7CV04SSR		FIR7CV04ANA FIR7CV04SSR	(85.3)	(106.7)	(76.2)	(38.1)		(69.9)	(41.1)		

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

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

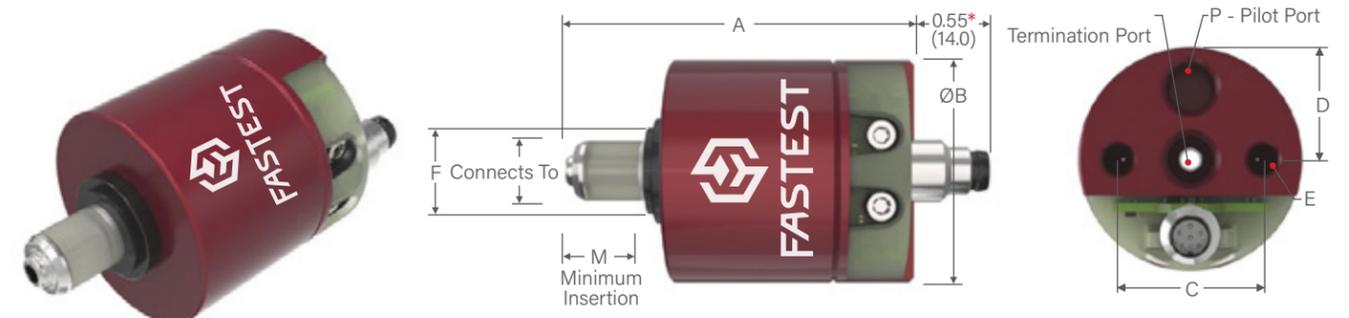
-4 [7/16-20]	FIS014SAE	FI01 FI01CV04ANA FI01CV04SSR	FIB014SAE	FIR01 FIR01CV04ANA FIR01CV04SSR	1.98 (50.3)	1.25 (31.7)	0.80 (20.3)	0.40 (10.2)	10-32 UNF	0.62 (15.7)	0.48 (12.2)	10-32 UNF	
-5 [1/2-20]	FIS15SAE	FI1 FI1CV04ANA FI1CV04SSR	FIB15SAE	FIR1 FIR1CV04ANA FIR1CV04SSR	2.44 (62.0)	1.57 (39.9)	1.02 (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	FI2 FI2CV04ANA FI2CV04SSR	FIB16SAE	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	
-8 [3/4-16]	FIS28SAE	FI3 FI3CV04ANA FI3CV04SSR	FIB28SAE	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)	1.07 (27.2)	1/8 NPT	
-10 [7/8-14]	FIS310SAE	FI4 FI4CV04ANA FI4CV04SSR	FIB310SAE	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)	1.07 (27.2)	1/8 NPT	
-12 [1 1/16-12]	FIS312SAE	FI5 FI5CV04ANA FI5CV04SSR	FIB312SAE	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)	1.60 (40.6)	1/8 NPT	1/2 NPT
-14 [1 3/16-12]	FIS414SAE	FI6 FI6CV04ANA FI6CV04SSR	FIB414SAE	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)	1.60 (40.6)	1/8 NPT	1/2 NPT
-16 [1 5/16-12]	FIS416SAE	FI7 FI7CV04ANA FI7CV04SSR	FIB416SAE	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)	1.62 (41.1)	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	FI2 FI2CV04ANA FI2CV04SSR	FIB1M14	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	
M16 x 1.5	FIS2M16	FI3 FI3CV04ANA FI3CV04SSR	FIB2M16	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)	1.07 (27.2)	1/8 NPT	
M18 x 1.5	FIS2M18	FI4 FI4CV04ANA FI4CV04SSR	FIB2M18	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)	1.07 (27.2)	1/8 NPT	
M20 x 1.5	FIS2M20	FI5 FI5CV04ANA FI5CV04SSR	FIB2M20	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)	1.60 (40.6)	1/8 NPT	1/2 NPT
M22 x 1.5	FIS2M22	FI6 FI6CV04ANA FI6CV04SSR	FIB2M22	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)	1.60 (40.6)	1/8 NPT	1/2 NPT
M24 x 1.5	FIS3M24	FI7 FI7CV04ANA FI7CV04SSR	FIB3M24	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)	1.62 (41.1)	1/8 NPT	3/4 NPT
M26 x 1.5	FIS3M26	FI8 FI8CV04ANA FI8CV04SSR	FIB3M26	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)	1.62 (41.1)	1/8 NPT	3/4 NPT
M27 x 2	FIS3M27	FI9 FI9CV04ANA FI9CV04SSR	FIB3M27	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)	1.62 (41.1)	1/8 NPT	3/4 NPT
M28 x 1.5	FIS3M28	FI10 FI10CV04ANA FI10CV04SSR	FIB3M28	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)	1.62 (41.1)	1/8 NPT	3/4 NPT
M30 x 1.5	FIS4M30	FI11 FI11CV04ANA FI11CV04SSR	FIB4M30	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)	1.62 (41.1)	1/8 NPT	3/4 NPT
M33 x 2	FIS4M33	FI12 FI12CV04ANA FI12CV04SSR	FIB4M33	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)	1.62 (41.1)	1/8 NPT	3/4 NPT
M36 x 2	FIS4M36	FI13 FI13CV04ANA FI13CV04SSR	FIB4M36	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)	1.62 (41.1)	1/8 NPT	3/4 NPT
M42 x 2	FIS5M42	FI14 FI14CV04ANA FI14CV04SSR	FIB5M42	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)	1.62 (41.1)	1/8 NPT	3/4 NPT
M48 x 2	FIS6M48	FI15 FI15CV04ANA FI15CV04SSR	FIB6M48	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)	1.62 (41.1)	1/8 NPT	3/4 NPT
M60 x 2	FIS7M60	FI16 FI16CV04ANA FI16CV04SSR	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)	1.62 (41.1)	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)



FE / EXTERNAL SEALING CONNECTION TOOL

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

AVAILABLE RANGE: .030" to 5.040" (0.76mm to 128.02mm)

Straight Expanded Flared Beaded Barbed Formed Swaged



SPECIFICATIONS

Pressure Rating	Pilot Pressure	Operating	
Vacuum to 500 psi (34 bar)	60 psi (4.1 bar)	0°F to +200°F (-17°C to +93°C)	
Termination Port	Leak Rate Capability	Materials of Construction	Seal Material*
Female 10-32 UNF, M5X8, NPT/BSPP (G): 1/8 to 2 1/2	1E-5cc/s He	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.

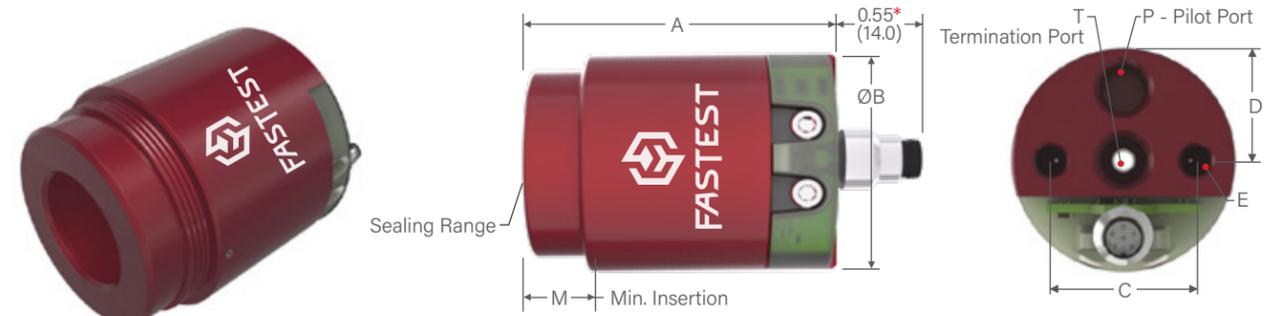
ICON™ TECHNOLOGY

SURE SEAL™

SEAL LIFE™

For part numbers or additional product information:
Contact fastsales@fastestinc.com

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

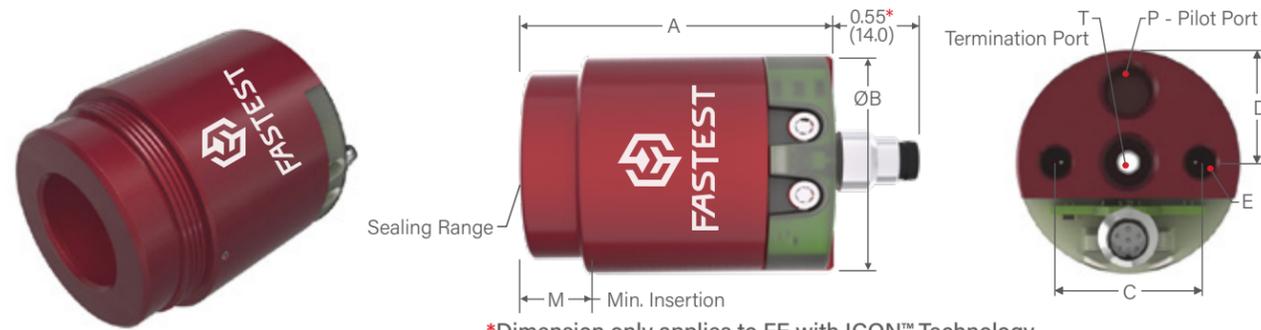
FE | Connectors for Straight Tubes

0.030 to 0.050	FE0010050	FEB0010050										
0.050 to 0.080	FE001001	FEB001001	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
0.080 to 0.130	FE001002	FEB001002										
0.100 to 0.180	FES0101	FEB0101										
0.180 to 0.260	FES0102	FE01	FEB0102	FER01	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
0.260 to 0.340	FES0103	FE01CV04ANA	FEB0103	FER01CV04ANA								
0.340 to 0.420	FES0104	FE01CV04SSR	FEB0104	FER01CV04SSR								
0.420 to 0.510	FES0105		FEB0105									
0.276-0.354	FES113		FEB113									
0.354-0.433	FES1134	FE1	FEB114	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
0.433 to 0.512	FES115	FE1CV04ANA	FEB115	FER1CV04ANA								
0.512 to 0.591	FES116	FE1CV04SSR	FEB116	FER1CV04SSR								
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		FEB221									
0.866 to 0.945	FES222		FEB222									
0.945 to 1.024	FES223		FEB223									
1.024 to 1.102	FES224	FE2	FEB224	FER2	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
1.102 to 1.181	FES225	FE2CV04ANA	FEB225	FER2CV04ANA								
1.181 to 1.260	FES226	FE2CV04SSR	FEB226	FER2CV04SSR								
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		FEB331									
1.614 to 1.732	FES332	FE3	FEB332	FER3	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
1.732 to 1.850	FES333	FE3CV04ANA	FEB333	FER3CV04ANA								
	FES334	FE3CV04SSR	FEB334	FER3CV04SSR								
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
**Neoprene® seals are standard.
For Urethane seals, add "UR" suffix to Main Seal Set Part Number. Example: FEB0101UR

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)**	Repair Kit	A	B	C	D	E	M	P	T

FE | Connectors for Straight Tubes

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		FEB449									
2.970 to 3.100	FES551	FE5 FE5CV04ANA FE5CV04SSR	FEB551	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
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		FEB558									
4.010 to 4.130	FES559		FEB559									
4.130 to 4.260	FES661	FE6 FE6CV04ANA FE6CV04SSR	FEB661	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
4.260 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									

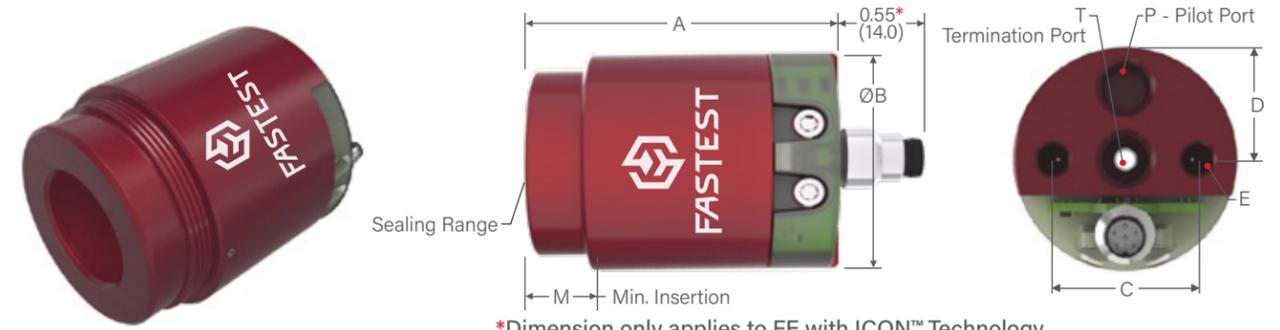
Dimensions: inch (mm). Sealing Range listed in inches (1 in = 25.4 mm).

*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: FES441UR

**Neoprene® seals are standard.

For Urethane seals, add "UR" suffix to Main Seal Set Part Number. Example: FEB441UR

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 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
1/4	FES11/4NPT	FE1 FE1CV04ANA FE1CV04SSR	FEB11/4NPT	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
3/8	FES13/8NPT	FE1 FE1CV04ANA FE1CV04SSR	FEB13/8NPT									
1/2	FES21/2NPT	FE2 FE2CV04ANA FE2CV04SSR	FEB21/2NPT									
3/4	FES23/4NPT	FE2 FE2CV04ANA FE2CV04SSR	FEB23/4NPT	FER2 FER2CV04ANA FER2CV04SSR	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
1	FES21NPT	FE2 FE2CV04ANA FE2CV04SSR	FEB21NPT									
1-1/4	FES311/4NPT	FE3 FE3CV04ANA FE3CV04SSR	FEB311/4NPT	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
1-1/2	FES311/2NPT	FE3 FE3CV04ANA FE3CV04SSR	FEB311/2NPT									
2	FES42NPT	FE4 FE4CV04ANA FE4CV04SSR	FEB42NPT	FER4 FER4CV04ANA FER4CV04SSR	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									

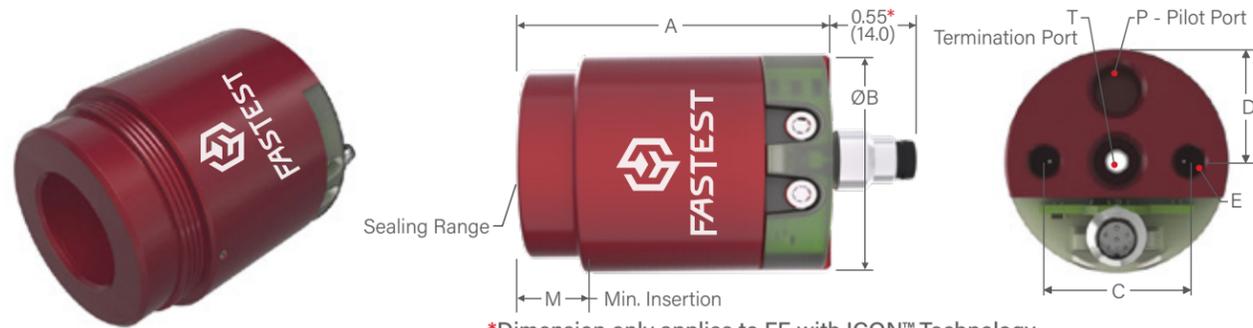
Dimensions: inch (mm)

*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 p. 62 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	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	FE2 FE2CV04ANA FE2CV04SSR	FEB10700UR	FER2 FER2CV04ANA FER2CV04SSR	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
3/4	FES2T0760UR		FEB2T0760UR									
13/16	FES2T0800UR		FEB2T0800UR									
7/8	FES2T0885UR		FEB2T0885UR									
1	FES2T1010UR		FEB2T1010UR									
1-1/16	FES2T1200UR		FEB2T1200UR									
1-3/16	FES2T1260UR		FEB2T1260UR									
1-1/4	FES2T1385UR		FEB2T1385UR									
1-5/16	FES2T1460UR		FEB2T1460UR									
1-3/8	FES2T1595UR		FEB2T1595UR									
1-7/16	FES3T1675UR	FE3 FE3CV04ANA FE3CV04SSR	FEB3T1675UR	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	FES3T1710UR		FEB3T1710UR									
1-11/16	FES3T1890UR		FEB3T1890UR									
1-7/8	FES3T1910UR		FEB3T1910UR									
2	FES4T2070UR	FE4 FE4CV04ANA FE4CV04SSR	FEB4T2070UR	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	FES4T2380UR		FEB4T2380UR									

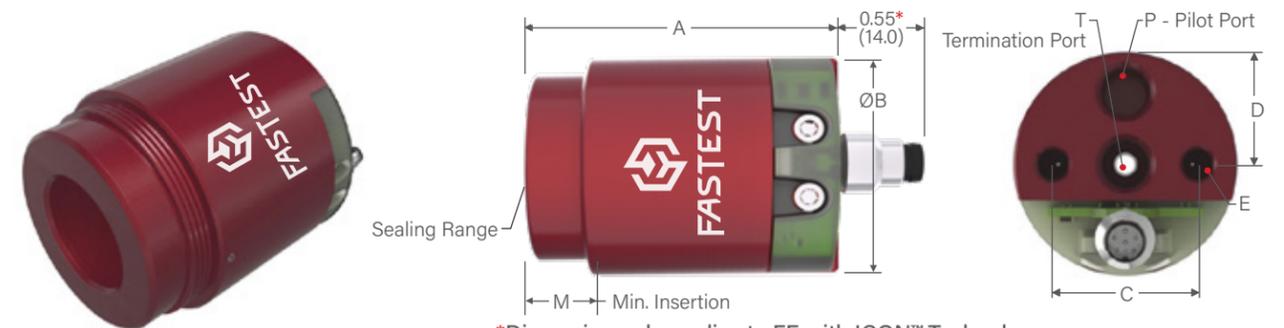
Dimensions: inch (mm)

*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 p. 62 Pilot Booster). DO NOT use a pilot booster with FI connectors.

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	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		FEB2T1320UR									
M35	FES2T1400UR		FEB2T1400UR									
M36	FES3T1440UR	FEM3 FEM3CV04ANA FEM3CV04SSR	FEB3T1440UR	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)
M40	FES3T1595UR		FEB3T1595UR									
M42	FES3T1675UR		FEB3T1675UR									
M45	FES3T1790UR		FEB3T1790UR									
M48	FES4T1910UR	FEM4 FEM4CV04ANA FEM4CV04SSR	FEB4T1910UR	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)
M52	FES4T2070UR		FEB4T2070UR									
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 p. 62 Pilot Booster). DO NOT use a pilot booster with FI connectors.

FE / ACCESSORIES

Pilot Booster

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.



FE / ACCESSORIES

Pilot Booster

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

SPECIFICATIONS

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. ³

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

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	Leak Rate Capability	Seal Material*
NPT, SAE 37° Flare	1E-5cc/s He	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

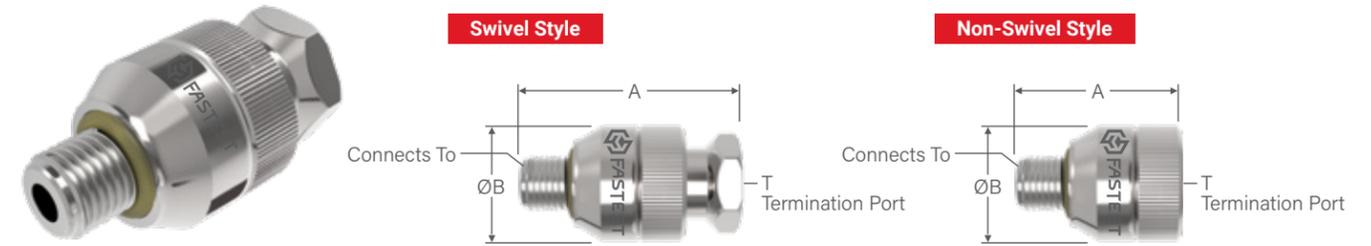
ACCESSORIES

Visit fastestinc.com

- 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		2.09 (53.1)	1.18 (30.0)	3/8 NPT
1/2 NPT	MIT082081	S1209U70	MITR080	4000 (276)	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		3.29 (83.6)	2.38 (60.5)	1 1/4 NPT
1 1/2 NPT	MIT242241	S1327U70	MITR240	3000 (207)	3.73 (94.7)	3.73 (94.7)	1 1/2 NPT

NPT | Non-Swivel Style

1/8 NPT	MIT022021X	S1109U70	MITR02	5000 (345)	1.18 (30.0)	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		1.48 (37.6)	1.18 (30.0)	3/8 NPT
1/2 NPT	MIT082081X	S1209U70	MITR08	4000 (276)	1.85 (47.0)	1.36 (34.5)	1/2 NPT
3/4 NPT	MIT122121X	S1213U70	MITR12		1.94 (49.3)	1.68 (42.7)	3/4 NPT
1 NPT	MIT162161X	S1216U70	MITR16	4000 (276)	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

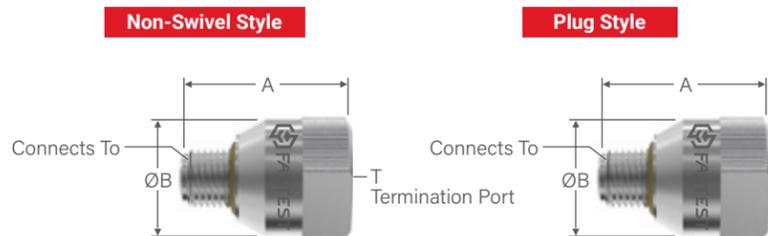
Dimensions: inch (mm)
Pressure Rating: psi (bar)

*Optional seal materials include V = FKM, E = EPDM, and B = Buna-N - Example: MIT022021XV = FKM
**Other terminations in metric / BSPP may be available. Contact factory.

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

Non-Swivel Style for High Pressure Plug Style

MIT / INTERNAL CONNECTIONS / NPT (HIGH PRESSURE <10,000 PSI)



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	1500 (103)	2.13 (54.1)	2.38 (60.5)		
1 ½ NPT	MIT242P	S1327U70	MITR24		3000 (207)	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	1000 (69)	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)

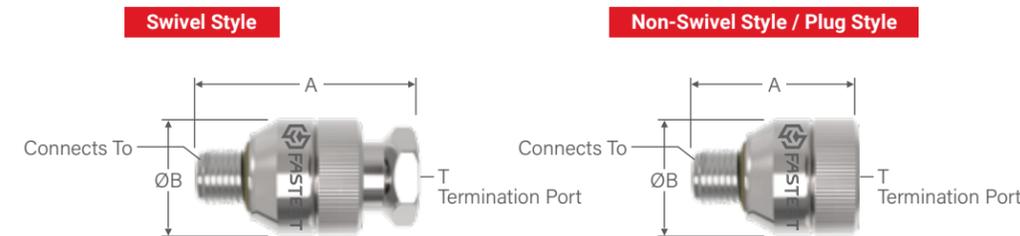
*Optional seal materials include V = FKM, E = EPDM, and B = Buna-N - Example: MITH022021XV = FKM

**Other terminations in metric / BSPP may be available. Contact factory.

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: MIT026021V = FKM

**Other terminations in metric / BSPP may be available. Contact factory.

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

MIT / INTERNAL CONNECTIONS / SAE ORB

Non-Swivel Style
Non-Swivel Style for High Pressure



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)

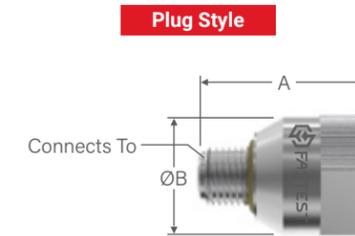
*Optional seal materials include V = FKM, E = EPDM, and B = Buna-N - Example: MIT034021XV = FKM

**Other terminations in metric / BSPP may be available. Contact factory.

Port Specifications: SAE ORB per SAE J1926 or ISO 11926

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)		

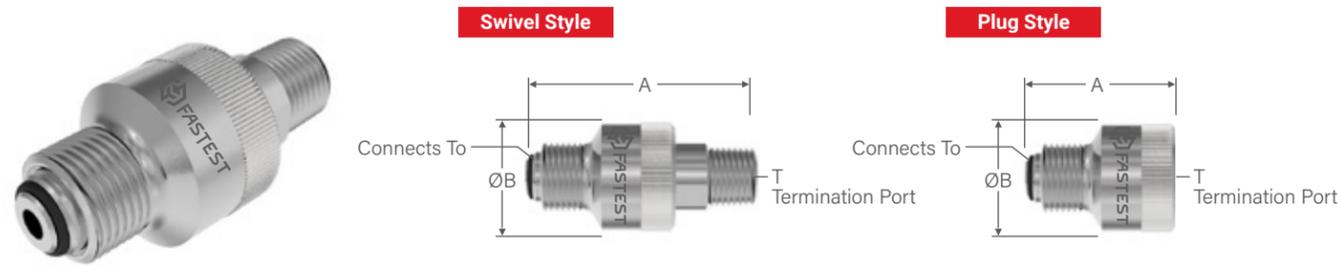
Dimensions: inch (mm)
Pressure Rating: psi (bar)

*Optional seal materials include V = FKM, E = EPDM, and B = Buna-N - Example: MIT044PV = 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)

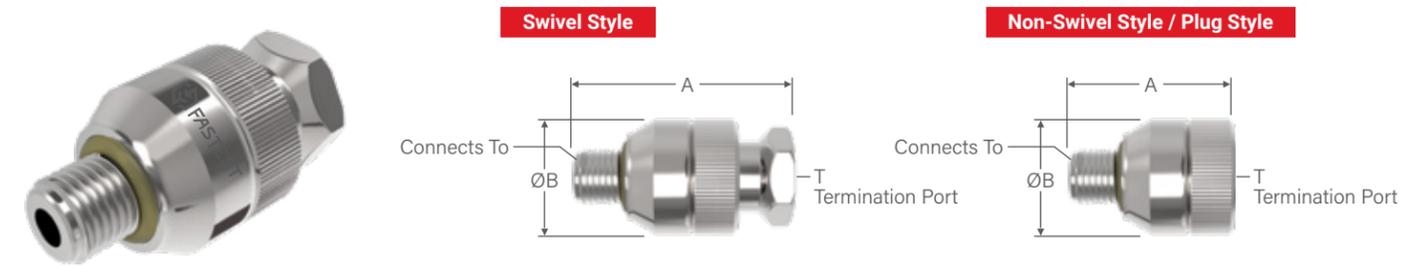
*Optional seal materials include V = FKM, E = EPDM, and B = Buna-N - Example: MITH040022V = FKM

**Other terminations in metric / BSPP may be available. Contact factory.

Port Specifications: SAE 37° FLARE per SAE J514

MIT / INTERNAL CONNECTIONS / ISO O-RING METRIC

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	S1109U70	MITR020	4000 (276)	1.76 (44.7)	0.82 (21.8)	1/8 FNPT
M12 x 1.5	MIT128041	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

**Other terminations in metric / BSPP may be available. Contact factory.

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



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	Leak Rate Capability	Seal Material*
NPT, SAE 37° Flare	1E-5cc/s He	Urethane

* Additional seal material types available, consult factory.

ACTUATION METHOD

Manual Twist: Finger-tight connection eliminates tape and sealants

ICON™ TECHNOLOGY

Consult Factory

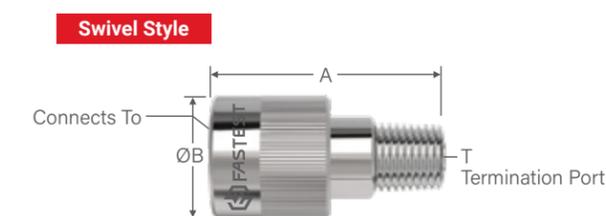
ACCESSORIES

Visit fastestinc.com

- 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

**Other terminations in metric / BSPP may be available. Contact factory.

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

MET / EXTERNAL CONNECTIONS / NPT THREADS (continued)

Swivel Style for Thin Walled Threaded Pipe
Cap Style



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	METR08PT		2.05 (52.1)	1.36 (34.5)	1/2 NPTM
3/4 NPT	MET121122PT	METB12PT	METR12PT		2.34 (59.4)	1.68 (42.7)	3/4 NPTM
1 NPT	MET161162PT	METB16PT	METR16PT		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

NPT Cap Style							
Connects To	Part Number	Main Seal Package(5)	Rebuild Kit	Pressure Rating	A	B	T**
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	S1212U70	METR16		1.26 (32.0)	1.99 (50.5)	

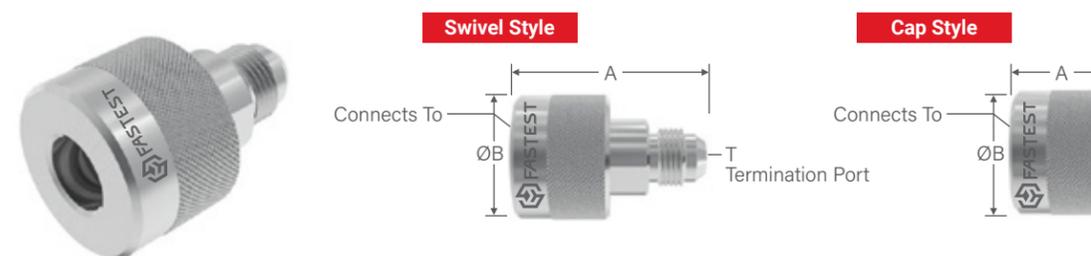
Dimensions: inch (mm)
Pressure Rating: psi (bar)

*Optional seal materials include V = FKM, E = EPDM, and B = Buna-N - Example: MET041042PTV = FKM
**Other terminations in metric / BSPP may be available. Contact factory.

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

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

Swivel Style
Swivel Style for High Pressure
Cap Style



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	S1120B70	METR16		2.70 (68.6)	1.99 (50.6)	-12 [1-1/16-12] (male)
-20 [1-5/8-12]	MET209160	S1124U70	METR20	1000 (69)	3.21 (81.5)	2.37 (60.2)	-16 [15/16-12] (male)
-24 [1-7/8-12]	MET249200	S1129B70	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							
Connects To	Part Number	Main Seal Package(5)	Rebuild Kit	Pressure Rating	A	B	T**
-4 [7/16-20]	METH049040	S20700270B70	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		2.52 (64.0)	1.70 (43.2)	-12 [1-1/16-12] (male)
-16 [1-5/16-12]	METH169160	S1120B70	METR16		6500 (433)	2.74 (69.6)	1.99 (50.6)

SAE 37° FLARE Cap Style							
Connects To	Part Number	Main Seal Package(5)	Rebuild Kit	Pressure Rating	A	B	T**
-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)	(Cap Style No Termination Port)
-8 [3/4-16]	MET089C	S1015B70	METR08		4000 (276)	0.97 (24.6)	

SAE 45° FLARE Swivel Style (per SAE J512 or J513)							
Connects To	Part Number	Main Seal Package(5)	Rebuild Kit	Pressure Rating	A	B	T**
-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
**Other terminations in metric / BSPP may be available. Contact factory.

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

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							
Connects To	Part Number	Main Seal Package (5)	Rebuild Kit	Pressure Rating	A	B	T**
1/8 BSPP (G)	MET025C	S1105U70	METR02	5000 (345)	0.83 (21.1)	0.80 (20.3)	N/A (Cap 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
**Other terminations in metric / BSPP may be available. Contact factory.

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							
Connects To	Part Number	Main Seal Package (5)	Rebuild Kit	Pressure Rating	A	B	T**
1/8 BSPT	MET025TC	S1105U70	METR02	5000 (345)	0.83 (21.1)	0.80 (20.3)	N/A (Cap Style No Termination Port)
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)	
1/2 BSPT	MET085TC	S1112U70	METR08		0.97 (24.6)	1.36 (34.5)	

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

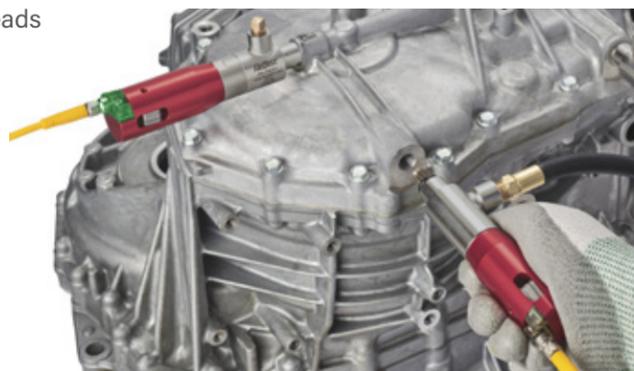
*Optional seal materials include V = FKM, E = EPDM, and B = Buna-N - Example: MET025T022V = FKM
**Other terminations in metric / BSPP may be available. Contact factory.

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

FN / INTERNAL SEALING CONNECTION TOOL

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

AVAILABLE RANGE: 1/8" to 7/8" (3.175mm to 22.225mm) Threads



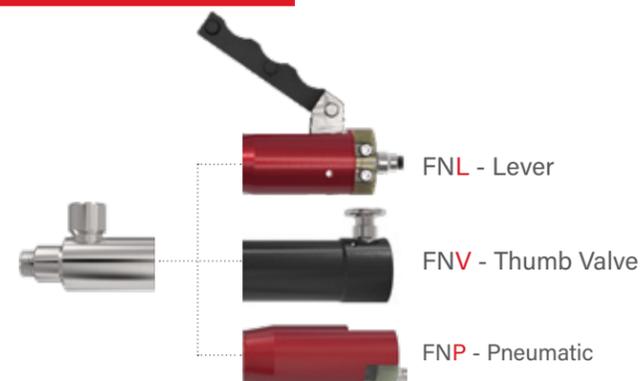
SPECIFICATIONS

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	Leak Rate Capability	Seal Material*
BSPP (G) or FNPT	1E-5cc/s He	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



For part numbers or additional product information:
Contact fastsales@fastestinc.com

- 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

Product Accessories

Charge Valve



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

Charge Coupler PN: ADF05102



- Used with Charge Valve to introduce pressure without latching
- Internally valved
- Thread type: 1/8 NPT

Part Number	Termination
ADM06102	1/8 NPT (standard)
ADM06502	1/8 BSPP
ADM06M5	M5
ADM061032	10-32

i Charge Valve/Coupler & Slide Valve are typically used with FE, FI & FN connectors to actuate gripping function

Slide Valve PN: AV1021022



- Used to pressurize and exhaust pilot pressure for manual operation
- Thread type: 1/8 NPT



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:

HVAC/R

- Distribution manifolds
- Compressor run testing
- Coil leak testing

Appliance

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

Other Applications:

Aerospace

- Specialty pressures/materials
- Hydraulic tubing
- Casting porosity

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

CUSTOM ENGINEERED SOLUTIONS

Start Your Custom Solution Today

1. Submit an Application Evaluation

Submit a custom application form and drawing to fastsales@fastestinc.com or to your local distributor.

2. A FastTest Custom Expert will get in contact with you

One of our Custom experts will reachout to get the process going. We will work with you to make sure all your testing requirements, issues, and desired goals are addressed.

3. We design and deliver the best possible solution

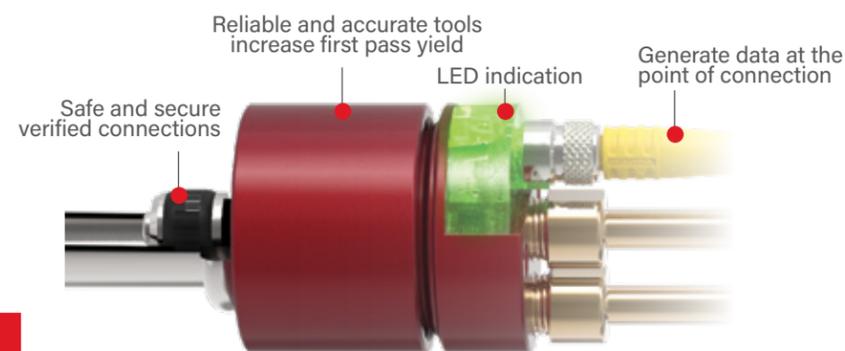
Our Custom Experts will design the best solution for your process.



NEED A SOLUTION FOR YOUR APPLICATION? Submit a custom application form and drawing to fastsales@fastestinc.com or to your local distributor.



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 to prevent spills.
- » **Eliminate leak test false failures to improve first pass yield.**
With ICON™, if the product fails a test, the connections should not be a source of leaks.
- » **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.**
Gather data on historical use, actuations, and cycle count to get better testing results.
- » **Optimize seal maintenance.**
SEAL LIFE™ indicates when the main seal needs to be replaced.

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



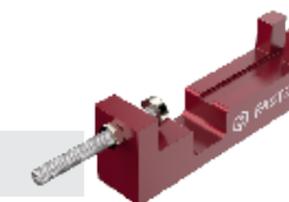
- Straight Female M8 threaded Connector to straight Male M8 connector (6-wire 2m cable)

M8 Cable PN: SPCAFS0602C



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

ICON™ SSR Calibration Cradle PN: SPCTFNFSSR



- Cradle tool used to assist calibration of Pneumatic FasMates with discrete (SSR) programming.
- Calibration Cradle for use with ICON (SSR) FNP's, body sizes 1-4
- Calibration Cradle for use with ICON (SSR) FXP's, all body sizes
- Dimensions: 12.19in L x 2.99in H x 1.99in D (309.63mm L x 75.95mm H x 50.55mm D)

FASTEST GLOBAL DISTRIBUTION NETWORK



Interested in Learning More? Have Questions?

Contact Us.

fastsales@fastestinc.com

1-800-444-2373



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