



**FASTEST**<sup>®</sup>



# PORTMAX<sup>™</sup>

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

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





# FASTEST<sup>®</sup>

## 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.

## HVAC-R OEM ACCESS PORT SYSTEMS

### PORTMAX<sup>™</sup>

Rapid Evacuation of Large Capacity Systems



### ZEROMAX<sup>™</sup>

Easy Access for Small Systems using Processing "Stub" Tubes



### COREMAX<sup>®</sup>

Faster Processing of Systems Using Schrader Type Valves

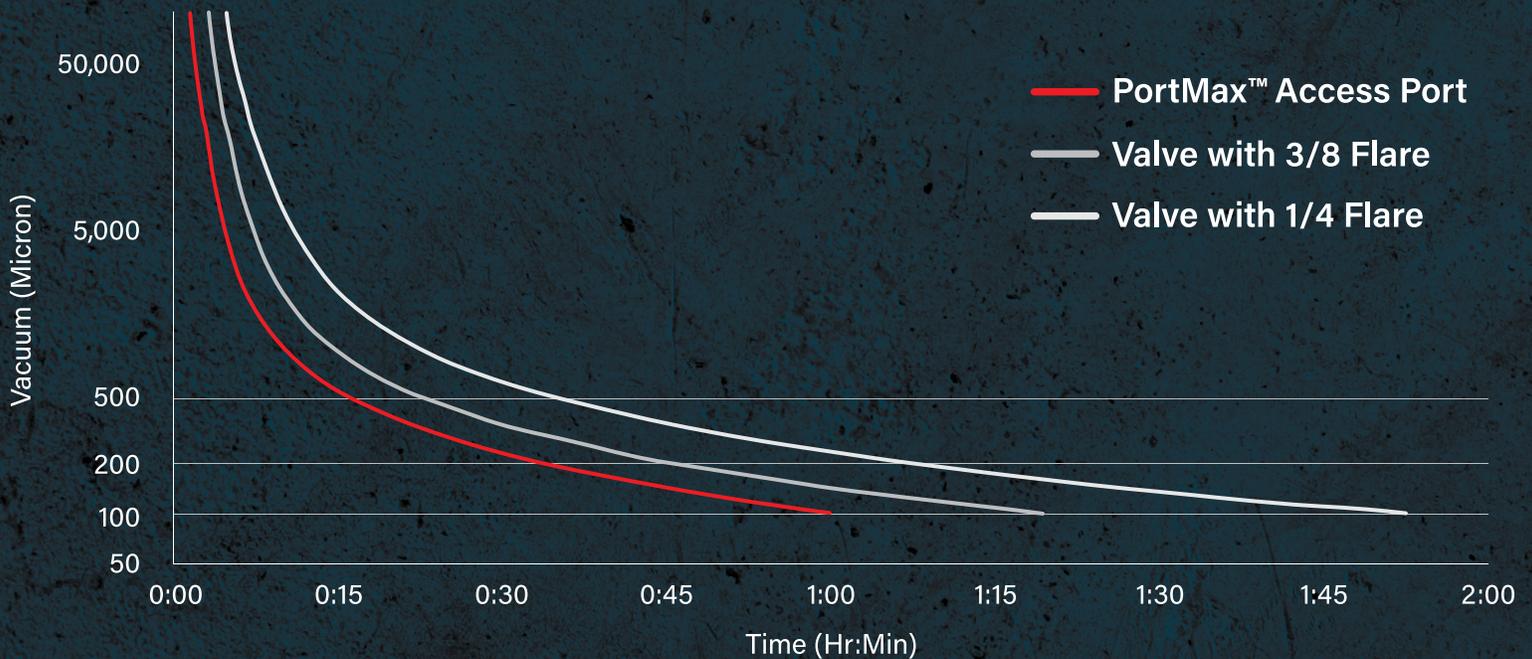


# PORTMAX™

Patented  
Access Port Technology

## 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



## INDUSTRIAL REFRIGERATION

Manufacturing, Chemical, Petro  
Chemical, Power Plants.



## COMMERCIAL REFRIGERATION

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



## AIR & WATER COOLED CHILLERS

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

Reduce Processing Time

Lower Emissions

Next-Gen Refrigerants

## COLD CHAIN

Food Warehouses, Grocery Super Stores, Pharmaceutical Facilities.



## VRV / VRF

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



## AIR HANDLERS

Industrial Facilities, Warehouses, 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



- High flow – high conductance design
- Access Port seals hermetically
- Quick connect Processing Tools are easy to use, very durable and can work with reclaim systems
- Compatible with current and Next-Gen refrigerants including transcritical CO<sub>2</sub> 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 Port



+ Processing Tools



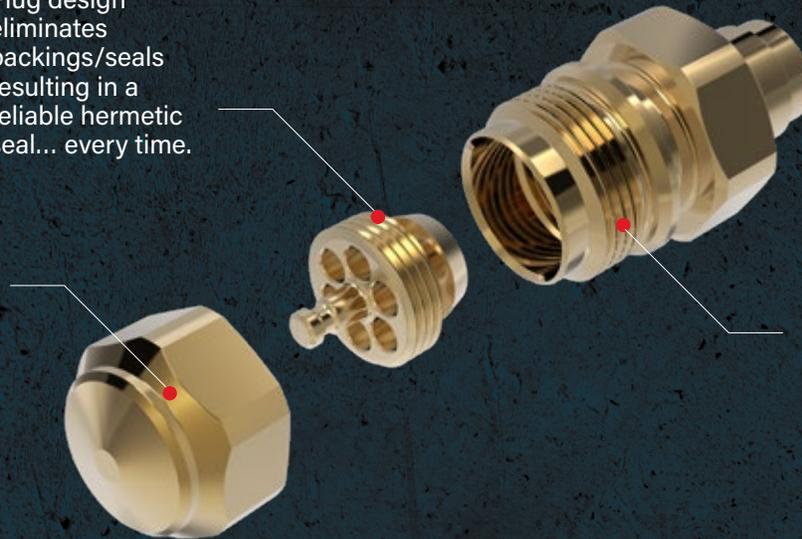
+ Evacuation Cart



# 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.

# EVACUATION CART

Optimized for PortMax™

Reducing evacuation time requires both a high flow access port/connector system AND a properly designed evacuation system... a TOTAL SOLUTION. FasTest's new turn-key Evacuation Cart is optimized for the PortMax™ system - the fastest evacuation possible, at the lowest cost.

Large diameter, high conductance hoses.

High visibility Andon Light Tower indicates process status.

An optimized system of matched components that will result in the fastest evacuation time possible.

Mobility for easy maneuverability around large refrigeration packages with large, industrial grade lockable casters.

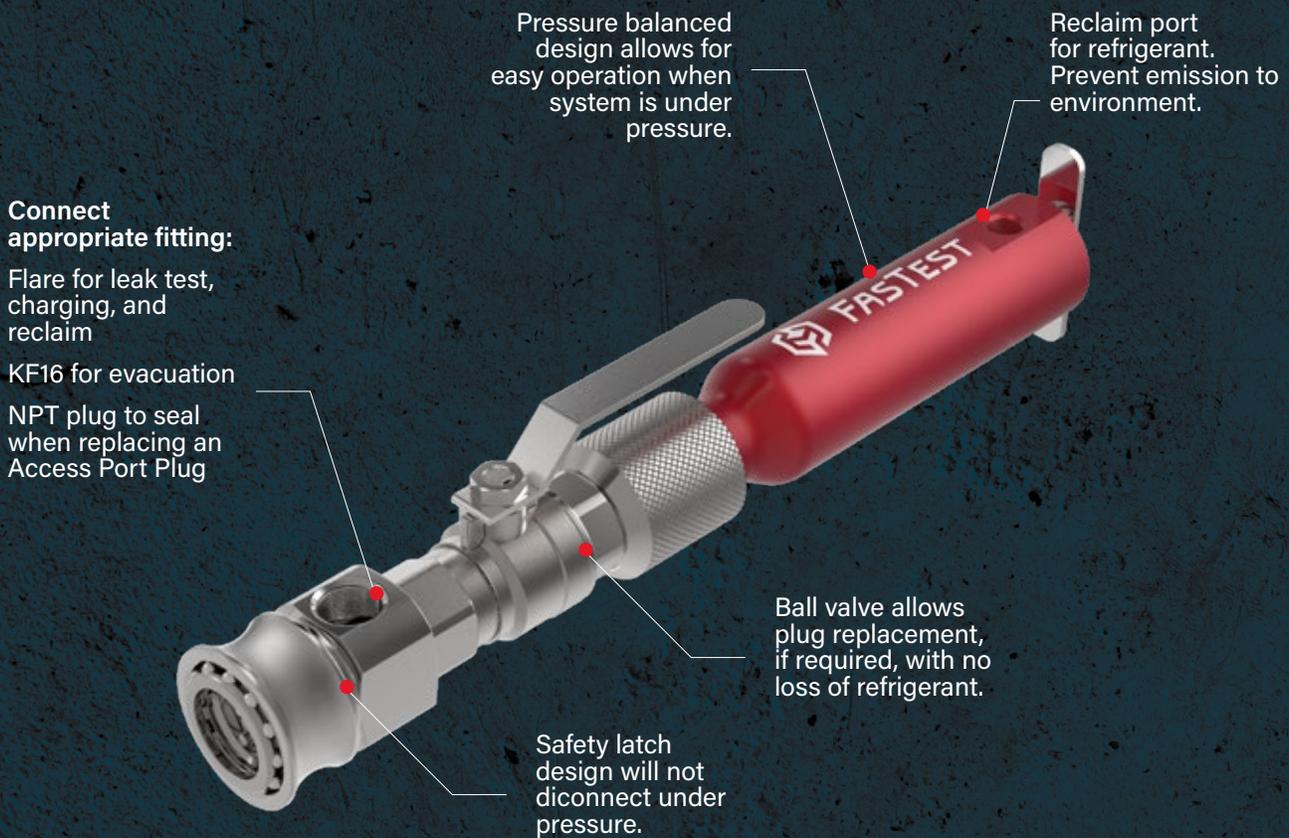
- Real time evacuation tracking & data capture for use in quality, control and performance validation.
- Self diagnostic capability to verify proper operation, e.g., no leaks.
- Data analysis capability facilitating ongoing process improvement, reduced takt time, improved evacuation quality and lower total processing cost.
- Automated operation, automatic shut-off, isolation, decay test, etc.

A turn-key system, from FasTest with a warranty and factory support.

# 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 reclaim, leak test, evacuation, charge and replace a PortMax™ access port plug without losing refrigerant charge.



## 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.

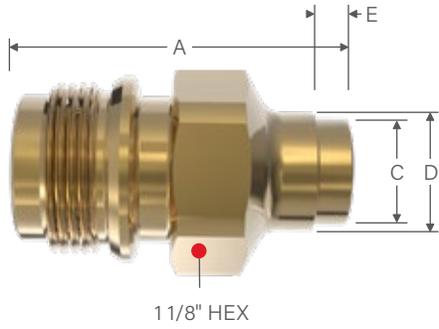


- 1 Designed for refrigeration applications, including Next-Gen refrigerants including transcritical CO<sub>2</sub> applications
- 2 Metal to metal hermetic sealing - no elastomers
- 3 Large unobstructed flow path
- 4 Multiple Seat options for easy integration into system plumbing- Saddle Mount & NPT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

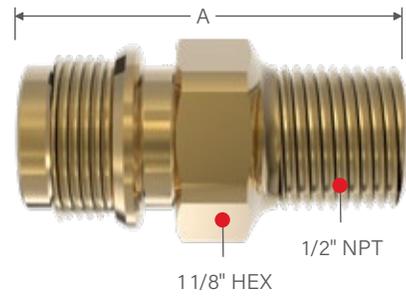
## SPECIFICATIONS

<b>Seat Styles</b>	Saddle-Mount (Ø .625" (15.9 mm) minimum bore required) & ½ NPT are standard. Other options available (Contact FasTest).
<b>Pressure Rating</b>	20 Micron (0.020 torr) to 2031 psig (140 bar)
<b>Leak Rating</b>	Not measurable, hermetic
<b>Flow Diameter</b>	Ø 0.5" (12.7mm) nominal
<b>Flow Rate</b>	28 scfm (45 Nm <sup>3</sup> /hr) @ 12 psi (0.83 bar) ΔP (vacuum) with CMFT80 Evacuation Tool 50+ scfm (80 Nm <sup>3</sup> /hr) @ 120 psi (8.3 bar) ΔP (charging) with CMFT70 Charge Tool
<b>Material</b>	Brass
<b>Tightening Torque</b>	<b>Plug:</b> 12-14 ft-lbs (16-19 N-m)   <b>Dust Cap:</b> 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.

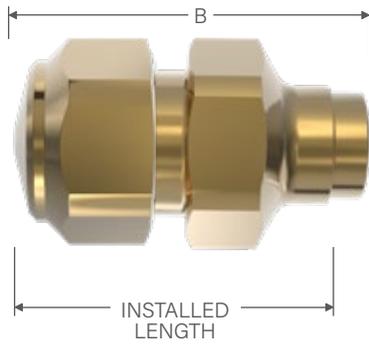
**Saddle Mount:**



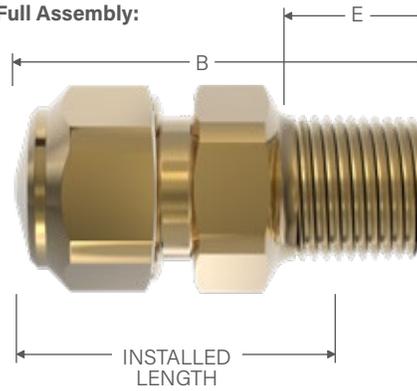
**1/2 NPT:**



**Full Assembly:**



**Full Assembly:**



Ordering Information			Dimensions					
Style	Size	Part Number	A	B	C	D	E	Installed Length
<b>PortMax™ Seats</b>   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
CMHU1601

# PortMax™ Processing Tools

For Repair Kits and Main Seals contact FasTest or visit [fastestinc.com](http://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 <sup>3</sup> /hr) @ 120 psi (8.3 bar) ΔP (filling & venting)
Dimensions	3.00" (76mm) long x Ø 1.98" (50mm)
Material	Stainless Steel

## 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 <sup>3</sup> /hr) @ 12 psi (0.83 bar) ΔP (vacuum) 50+ scfm (80 Nm <sup>3</sup> /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

## 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 <sup>3</sup> /hr) @ 12 psi (0.83 bar) ΔP (vacuum) 50+ scfm (80 Nm <sup>3</sup> /hr) @ 120 psi (8.3 bar) ΔP (charge)
Dimensions	4.14" (105mm) long x Ø 1.98" (50mm)
Material	Stainless Steel

## Service Tool

PN: CMFT90



### APPLICATION

Use to reclaim 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 <sup>3</sup> /hr) @ 12 psi (0.83 bar) ΔP (vacuum) 50+ scfm (80 Nm <sup>3</sup> /hr) @ 120 psi (8.3 bar) ΔP (charge)
Dimensions	14.28" (363mm) long (handle in)/19.57" (497mm) (handle out) x Ø 1.98" (50mm)
Material	Stainless Steel, Aluminum

# 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 3/16" Socket

CMFT5011875DS

## 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 note suitable for Leak Test or Charging applications. Maximum pressure rating is 50 psig (3.4 bar)
- Connects PortMax™ Tool to a FasTest vacuum hose.

## Charge 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.

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

# Evacuation Cart Overview

Optimized for the PortMax™ Access Port System - A Total Evacuation Solution.



**The Evacuation Cart is a turn-key, optimized solution with real-time tracking and data capabilities directly from FasTest.**

Designed to integrate with the PortMax™, CoreMax®, and ZeroMax™ access port systems.

- OR -

Can be used with common refrigeration system access valves.

- 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.
- 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.

Contact FasTest for details on specifying EvacMax for your application.

# Notes:

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## FASTEST GLOBAL DISTRIBUTION NETWORK



**Interested in Learning More? Have Questions?**

**Contact Us.**

[fastsales@fastestinc.com](mailto:fastsales@fastestinc.com)

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**Designed in the U.S.A.**

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