



**FASTEST<sup>®</sup>**



# PORTMAX<sup>™</sup>

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

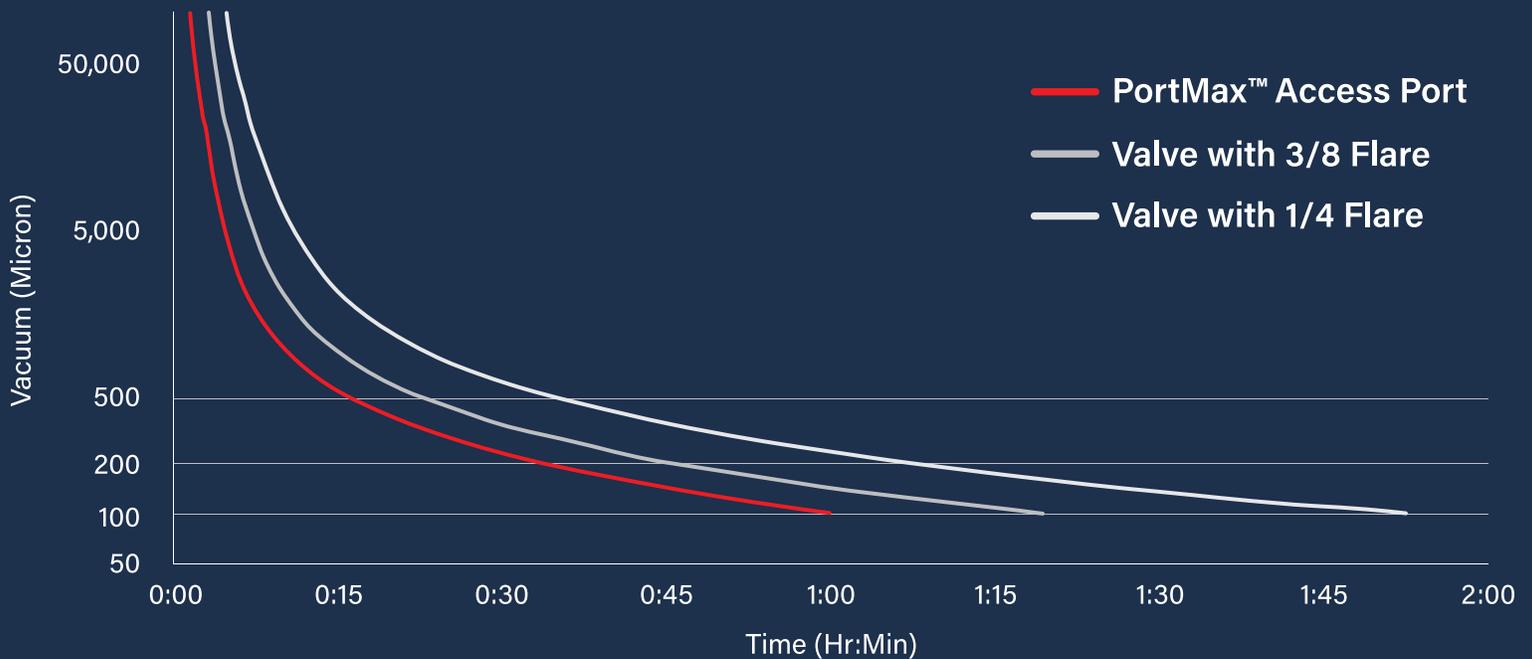
[fastestinc.com/portmax](http://fastestinc.com/portmax)



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

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



## COMMERCIAL REFRIGERATION

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



## AIR & WATER COOLED CHILLERS

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

Reduce Processing Time

Lower Emissions

Next-Gen Refrigerants

## COLD CHAIN

CO<sub>2</sub> & Conventional Condenser Packages used in Food Warehouses, Grocery Super Stores, Pharmaceutical Facilities.



## VRV / VRF

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



## 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 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 Valve**



**Processing  
Tools**



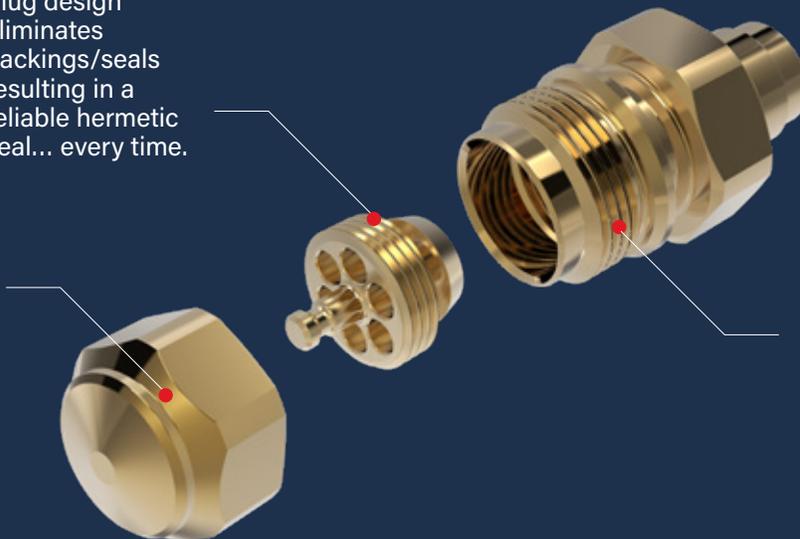
**Evacuation Cart**



# 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



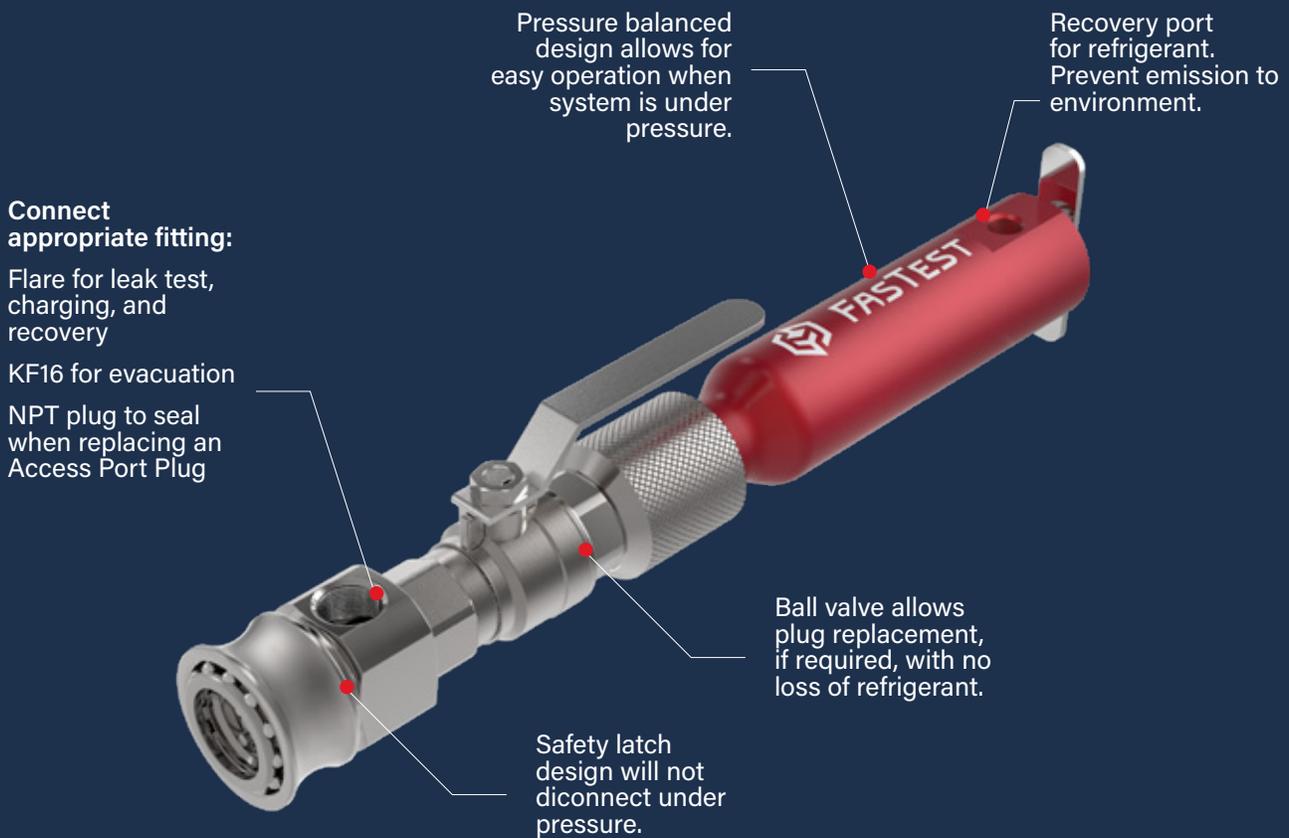
### Safe Charging

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.

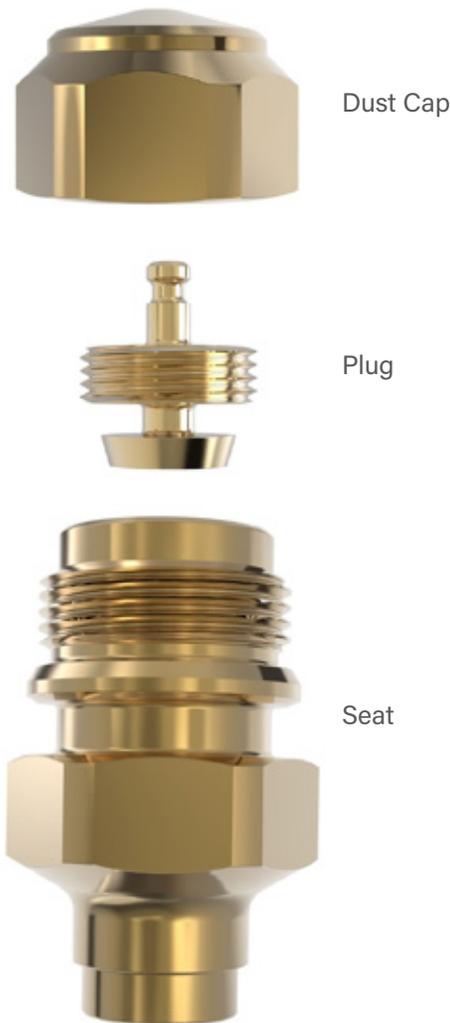


## All-In-One Tool

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

# PortMax™ High Flow Access Port

Large Access Port System for Maximum Flow & Faster Processing.

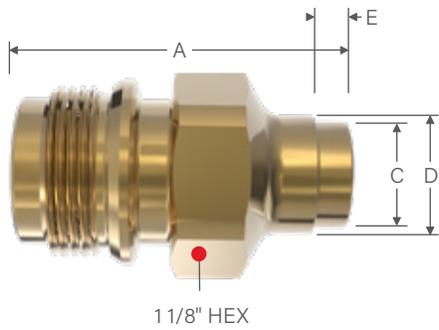


- 1 Designed for refrigeration applications, including Next-Gen refrigerants including transcritical CO<sub>2</sub> applications
- 2 Metal to metal hermetic sealing - no elastomers
- 3 Large unobstructed flow path
- 4 Multiple Seat options for easy integration into system plumbing- Saddle Mount & NPT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

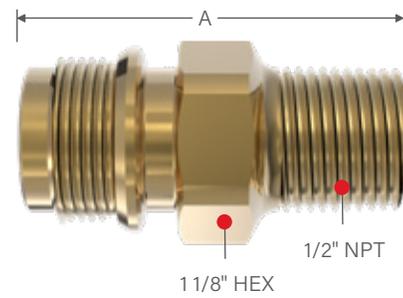
## SPECIFICATIONS

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 <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
Material	Brass
Tightening Torque	<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.

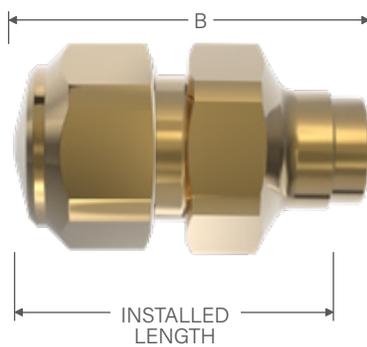
**Saddle Mount:**



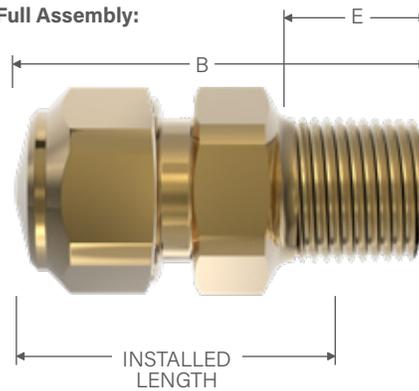
**1/2 NPT:**



**Full Assembly:**



**Full Assembly:**



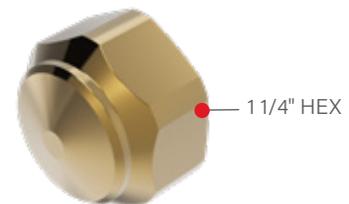
Ordering Information			Dimensions					
Style	Size	Part Number	A	B	C	D	E	Installed Length
<b>PortMax™ Seats</b>   Multiple Styles for User's Application								
Saddle Mount	5/8"	CMHU16B01	1.90 (48.3)	2.15 (54.6)	0.625 (15.9) min hole Ø	0.70 (17.8)	0.20 (5.1)	1.94 (49.3)
Thread Mount	1/2 Male NPT	CMHU16E01	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
CMHU16

# 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

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 <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

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 <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

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 <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 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.