



**FASTEST®**



# PORTMAX™

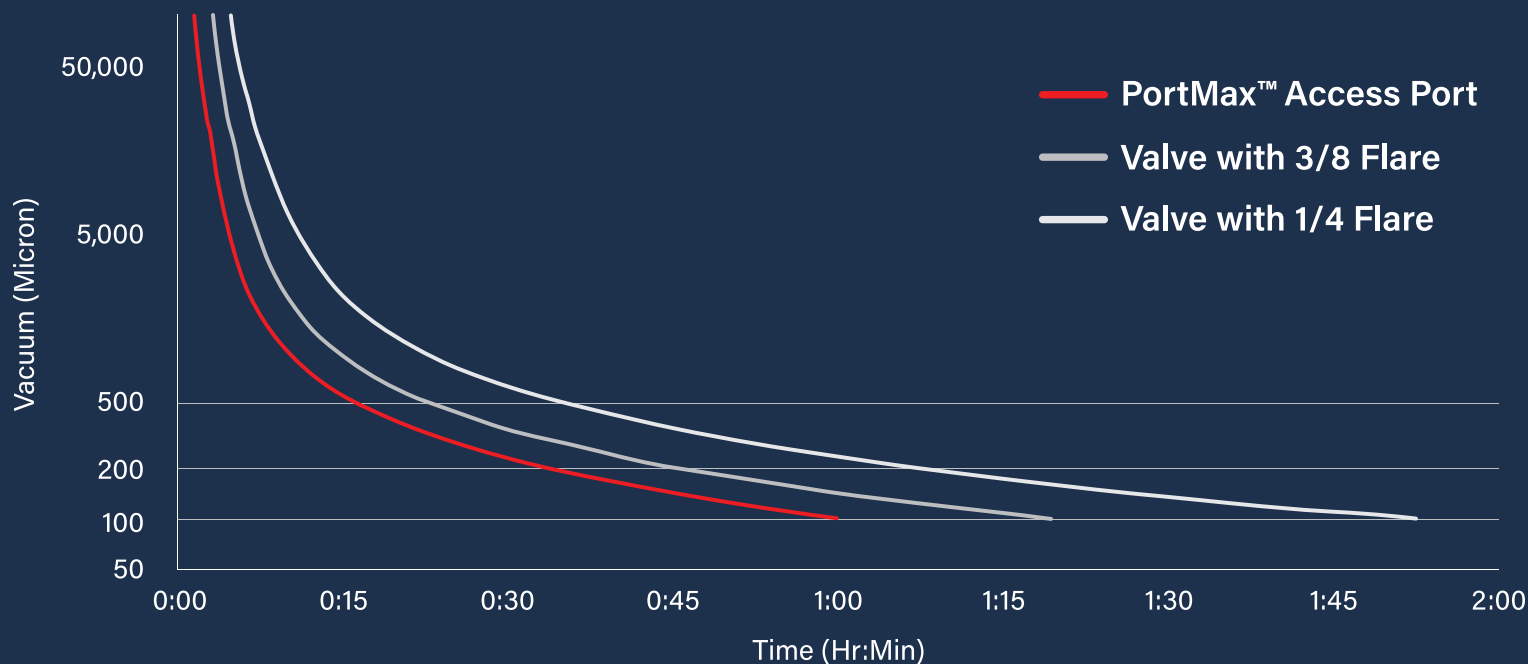
High Flow Access Port System  
for Rapid Evacuation of Large  
HVAC-R Packages

[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, Schhols 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

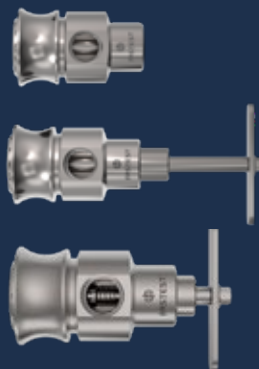
**High Flow  
Access Valve**



**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  $\frac{1}{2}$ " flow path.

## Evacuation

PN: CMFT80



### Fast Evacuation

Unobstructed flow path yields maximum flow.

## Charge

PN: CMFT70



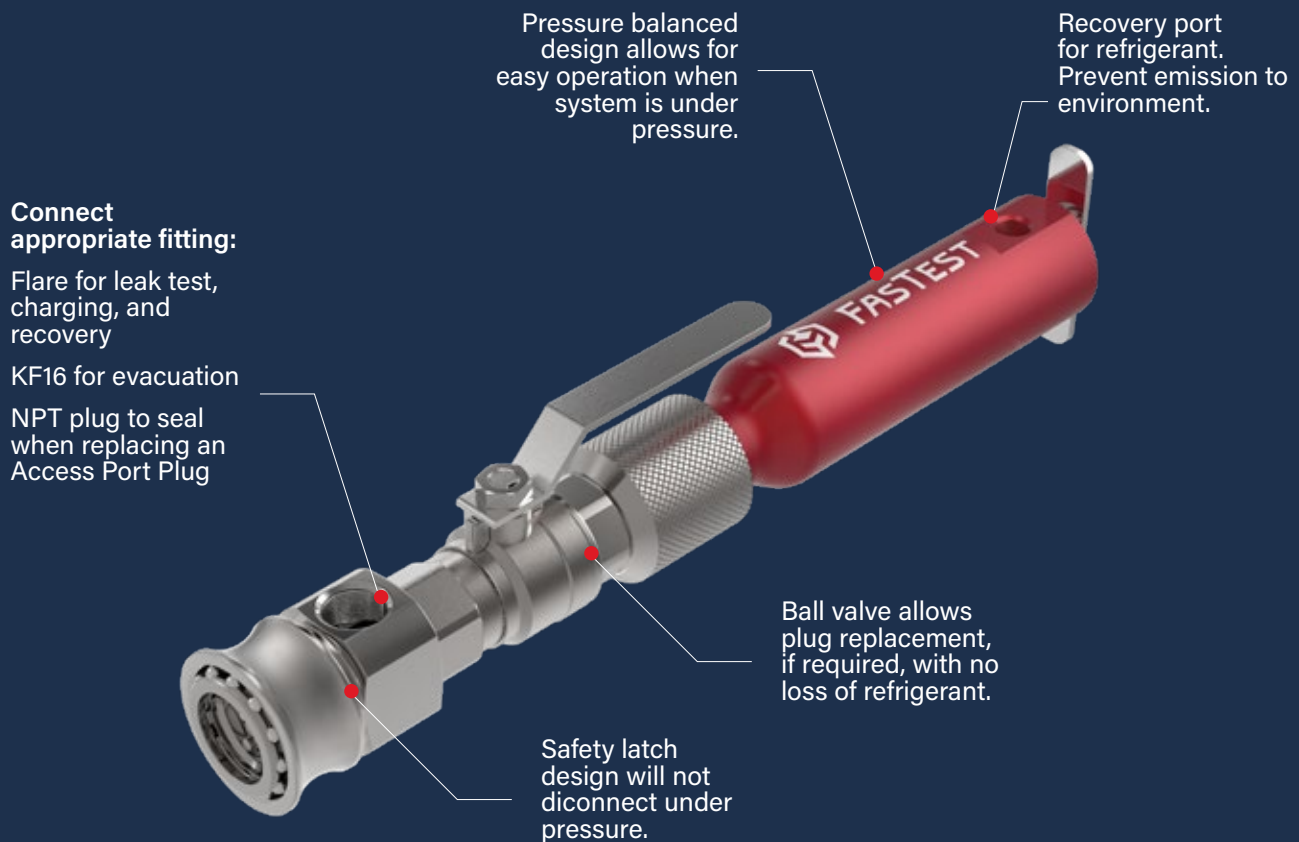
### Safe Charging

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.

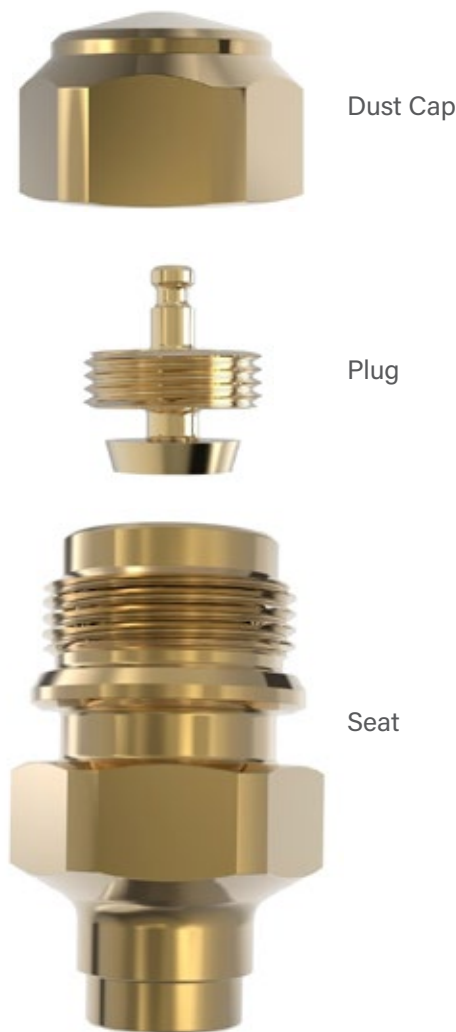


## All-In-One Tool

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

# PortMax™ High Flow Access Port

Large Access Port System for Maximum Flow & Faster Processing.

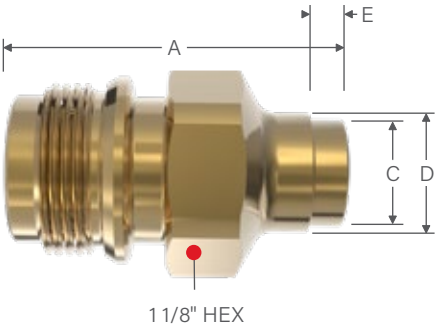


- 1 Designed for refrigeration applications, including Next-Gen refrigerants including transcritical CO<sub>2</sub> applications
- 2 Metal to metal hermetic sealing - no elastomers
- 3 Large unobstructed flow path
- 4 Multiple Seat options for easy integration into system plumbing- Saddle Mount & NPT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

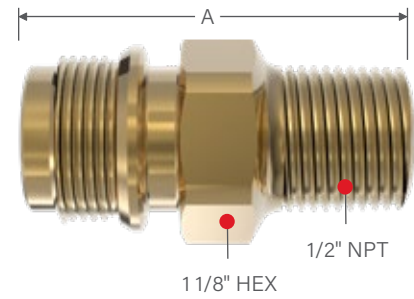
## SPECIFICATIONS

|                   |                                                                                                                                                                                                                                                                               |
|-------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 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 Nm³/hr) @ 12 psi (0.83 bar) ΔP (vacuum) with CMFT80 Evacuation Tool<br>50+ scfm (80 Nm³/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)<br>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. |

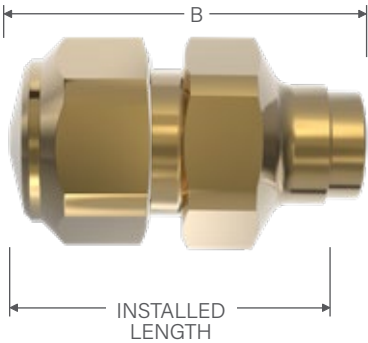
**Saddle Mount:**



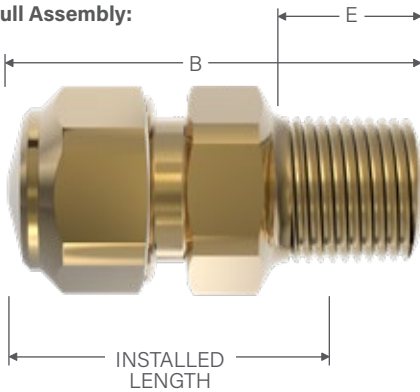
**1/2 NPT:**



**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<br>(48.3)  | 2.15<br>(54.6) | 0.625 (15.9)<br>min hole Ø | 0.70 (17.8) | 0.20<br>(5.1)  | 1.94<br>(49.3)   |
| Thread Mount                                                   | 1/2 Male NPT    | CMHU16E01   | 2.04<br>(51.8)  | 2.29<br>(58.1) | N/A                        | N/A         | 0.75<br>(19.1) | 1.96<br>(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 FastTest 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 Nm³/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 Nm³/hr) @ 12 psi (0.83 bar) ΔP (vacuum)<br>50+ scfm (80 Nm³/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.

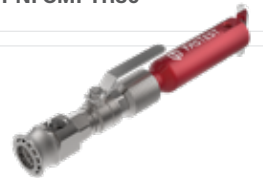
### SPECIFICATIONS

|               |                                                                                                             |
|---------------|-------------------------------------------------------------------------------------------------------------|
| Pressure      | 20 Micron (0.02 torr) to 2031 psig (140 bar)                                                                |
| Flow Diameter | Ø 0.5" (12.7mm) nominal                                                                                     |
| Flow Rate     | 28 scfm (45 Nm³/hr) @ 12 psi (0.83 bar) ΔP (vacuum)<br>50+ scfm (80 Nm³/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 Nm³/hr) @ 12 psi (0.83 bar) ΔP (vacuum)<br>50+ scfm (80 Nm³/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 & CMFT501250DS 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 note 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.