

# HVAC/R

**Imperial**  
DEPENDABLE UNDER PRESSURE<sup>®</sup>

SERVICE MANIFOLDS   GAUGES   HOSES   COUPLERS   ACCESSORIES   TUBE WORKING TOOLS

TOOLS FOR THE HVAC/R PROFESSIONAL



Australia New Zealand Edition 2011—2012



®





## 400 Series Deluxe 2 Valve Brass Manifold

- **Dual O ring Valve seals and Soft Seat Valves**– Precision engineered with dynamic, full flow design for fast, trouble free evacuation and charging.
- **Ergonomic Handles**– Durable, soft touch, non-slip (even with oily fingers)

## 580 Series 2 Valve 4 Port Manifold

- **2 Auxiliary Valve Ports**– Allows multiple hook-ups for vacuum gauge, vacuum pump, recovery unit, oil injection and add-ons.
- **Deep Vacuum Valve Design**– Proven diaphragm type, soft seat valves require only fingertip pressure to close completely. One turn to fully open/close. Superior for deep vacuum service.

## 680 Series 4 Valve Manifold (840 Series R410A)

- **4 Valve Efficiency**– Vacuum, Lo side, Hi side and refrigerant lines have individual connections and control valves. No need to switch lines between operations.
- **4 Times Faster Evacuation**– 3/8" vacuum port and oversize internal passages evacuate systems 4 times faster than ordinary manifolds.
- **Deep Vacuum Valve Design**– Proven diaphragm type, soft seat valves require only fingertip pressure to close completely. One turn to fully open/close. Superior for deep vacuum service.

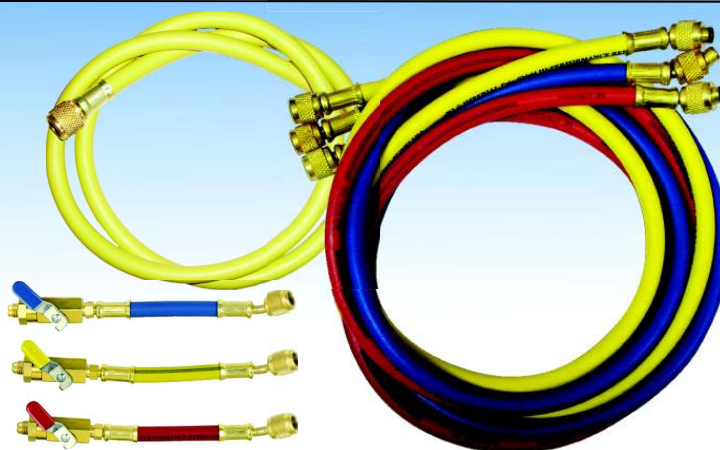
## 510 Series 2 valve manifold, R410A

- **Auxiliary Valve Port**– Allows multiple hook-ups for vacuum gauge, vacuum pump, recovery unit, oil injection and add-ons.
- **Dual O ring Valve seals and Soft Seat Valves**– Precision engineered with dynamic, full flow design for fast, trouble free, evacuation and charging.
- **Ergonomic Handles**– Durable, soft touch, non-slip (even with oily fingers)

PART NUMBER	DESCRIPTION
482CKPC	2 Valve brass manifold, 68mm gauges R22, R404A, R134a, KPa, psi C° complete with 3 x 36" hoses 1/4"SAE. (481CKPC same but supplied without hoses.) Replacement gauges 420BCKP (Blue), 420RCKP (Red)
<b>513CC</b>	<b>R410A</b> 2 valve manifold no sightglass. 5/16" SAE fittings inc centre tee. 68mm gauges R410A, KPa, psi, F°,C°.
<b>514CC</b>	<b>R410A</b> 2 valve manifold no sightglass. 5/16" SAE fittings inc centre tee. 3x 36" hoses with 1/2" 20UNF fittings. 68mm gauges R410A, KPa, psi, F°,C°. Replacement gauges 452-CB (Blue) 452-CR (Red)
580CKPSC	2 valve premium manifold with sightglass 1/4"SAE fittings. 68mm gauges R22, R404A, R134a, KPa, psi C° .
581CKPSC	2 valve manifold with sightglass, 3 x (1.5m) 60" hoses 1/4" SAE fittings 68mm gauges R22, R404A, R134a, KPa, psi C° . Replacement gauges 420BCKP (Blue), 420RCKP (Red)
572CKPC	<b>R410A</b> 2 valve manifold with sightglass, 5/16" SAE fittings inc centre T. 68mm gauges R410A, KPa, psi, F°,C°, hose hanger plus 3 x 60" Hoses. Replacement gauges 452-CB (Blue) 452-CR (Red)
582CKPC	Combination <b>R22</b> R407C <b>R410A</b> 2valve manifold with sightglass. 1/4" SAE fittings. 68mm gauges R22, R407C, R410A, KPa, psi, C° 3x36" hoses 1/4"SAE to 5/16" SAE . Replacement gauges 428-CKP (Blue) 429-CKP (Red)
680CKPSC	4 valve premium manifold with sightglass, 1/4" SAE fittings. 68mm gauges R22, R404A, R134a, KPa, psi C° .
681CKPSC	4 valve manifold with sightglass, 3x 60" 1/4" SAE hoses plus 60" 3/8" vacuum hose, 68mm gauges R22, R404A, R134a, KPa, psi, C° .Replacement gauges 420BCKP (Blue), 420RCKP (Red)
841CKPSC	<b>R410A</b> 4 valve premium manifold with sightglass. 3x 60" 5/16" SAE hoses plus 60" 3/8" vacuum hose, 68mm gauges R410A, KPa, psi, F°,C°. Replacement gauges 452-CB (Blue) 452-CR (Red)

## HOSES

- **Imperial Polarshield® charging hoses are UL recognised** and meet UL-1963, SAEJ2196 & EPA requirements for strength, pressure and refrigerant permeation. 800PSI working, 4000 PSI burst.
- **Rugged Kevlar Multi Refrigerant Nylon Barrier Construction**– Polarshield® hoses are compatible with all CFC, HCFC and HFC refrigerants (R410a, R404A, R407C, R134a).



PART NUMBER	DESCRIPTION
203MRS	Set of 3-36" (3') Charging Hoses (B,Y,R) - R-410A with 5/16" SAE fittings. <b>R410A</b>
205MRS	Set of 3-60" (5') Charging Hoses (B,Y,R) - R-410A with 5/16" SAE fittings <b>R410A</b>
803MRS	Set of 3 - 36" (3') Charging Hoses (B,Y,R) with 1/4"SAE fittings.
805MRS	Set of 3 - 60" (5') Charging Hoses (B,Y,R) with 1/4"SAE fittings.
853MRS	Set of 3 - 36" (3') Charging Hoses (B,Y,R) with 1/4"SAE fittings to 5/16"SAE.
856MRS	Set of 3 - 72" (6') Charging Hoses (B,Y,R) with 1/4"SAE fittings to 5/16"SAE.
956MRS	Set of 3 - 72" (6') Charging Hoses (B,Y,R) with 1/4"SAE Fittings and Ball Valve Shutoff.
536FTY	36" (3') Vacuum Hose 3/8"SAE Fitting
560FTY	60" (5') Vacuum Hose 3/8"SAE Fitting

## Couplers

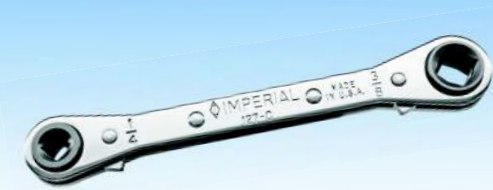
### KWIK-COUPLER™ SERVICE HOSE SHUTOFF

- The Kwik-Coupler and Kwik Coupler set is intended for use with refrigeration or air conditioning service hoses when connecting to core type valve access fittings. The conventional thread is converted to a simple push/pull connection which is simpler, faster and more convenient. Valve cores are depressed automatically without adjustments or loss of refrigerant.
- Simplifies operation of charging critical amount of refrigerant into small systems.
- Eliminates hazardous discharge of refrigerant and oil from system when disconnecting hoses.
- Available in 1/4"SAE and 5/16"SAE (R410a) fittings.



PART NUMBER	DESCRIPTION
16C	Automatic shutoff quick couplers 1/4" SAE straight.
17C	Automatic shutoff quick couplers 1/4" SAE right angle
26C	<b>R410A</b> automatic shutoff quick coupler 5/16" SAE straight.
27C	<b>R410A</b> automatic shutoff quick coupler 5/16" SAE right angle.
S8920074	Replacement Female 1/4" Couplers suit 16C 17C
S10000999	Replacement female 5/16" couplers suit 26C 27C

## WRENCHES For Refrigeration and Air-Conditioning Service



- 127-C** Compressor access valve wrench. Chrome plated. Has 1/4", 3/8", 3/16" and 5/16" square drive reversible ratchets. Specifically designed for use on compressors with access valves in hard to reach places.



- 127-CO** Same as 127-C except with 25° offset that provides for additional convenience in hard to reach areas.



- 124-C** Combination wrench with the 4 sizes most needed for servicing refrigeration and air-conditioning equipment.
- 9/16" hex for dust cap on access valves and oil plug on compressor
  - 1/2" hex for compressor mounting bolts.
  - 1/4" square for valve stem and service valves.
  - 3/16" square for valve refrigerant charging tanks.



- 125-C** Rugged steel forged wrench with 4 sizes covering almost any application. Ratchet has 1/4" square drive on one end, the other end has 3/16" and 5/16" square openings plus 9/16" hex opening.

## SERVICE ACCESSORIES

### KWIK-VISE™ Refrigerant Recovery Tool.

- PT-109**
- Line piercing / refrigerant recovery tool pierces, seals and locks on to copper lines in one swift motion.
  - Self adjusting! No need to adjust the tool for different sized tubing. The tension system automatically adjusts and locks the pliers on to the copper tubing. Suits 1/4" - 1/2" O.D. Tubing.
  - To use, simply position the PT-109 on to the tubing to be pierced, close the pliers quickly and firmly. The pliers will automatically adjust and lock into a tightly sealed secure position and will stay locked until released.



### FEATURES

- Replaceable hardened steel and brass access valve assembly p/n S16002045
- Handles copper tubing from 1/4" to 1/2" O.D.
- Durable, made with high carbon heat treated jaws.
- Works with all refrigerants, HFC, CFC, HCFC and Zeotropic/Azeotropic.
- 90° elbow on access valve eliminates tangling and interference problems.
- Replacement seals part number S10000539



## HI-DUTY® TUBE CUTTERS

### TC-1550C 1/8" to 1-1/8" O.D Tubing.

- Lower profile swing radius 4-1/4".
- Retractable rotary style reamer blade. Can be used Left or Right handed and with a clockwise or counter clockwise motion for better ergonomic control and better results.
- Rollers feature flare cut-off groove to reduce tube loss when damaged flare is removed.
- Lightweight, die cast solid aluminium body.
- Enclosed, hardened steel thrust bearing feed mechanism for smoothest cutting action and trouble free operation.
- Includes 2 x S75015 general purpose cutter wheels



### Cutters for 1/8" to 1-1/8" and 1/4" to 1-5/8" O.D Tubing.

**TC1000SP** For 1/8" to 1-1/8" O.D. tubing includes 2 x S75015 general purpose cutting wheels.

**TC1010SP** For 1/8" to 1-1/8" O.D. tubing includes 2 x S75046 cutter wheels for stainless steel.

**312FCSP** For 1/4" to 1-5/8" O.D. tubing includes 2 x S75015 general purpose cutting wheels.



### IMP®MINI TUBE CUTTERS for 1/8" to 5/8" , 3/16" to 7/8" and 3/8 to 1 1/8" O.D Tubing.

**TC1050SP** For 1/8" to 5/8" O.D. tubing includes 1 x S32633 general purpose cutting wheel. Swing radius 1-1/4"

**TC2050SP** For 3/16" to 7/8" O.D. tubing includes 1 x S75015 general purpose cutting wheel. Swing radius 1-11/16".

**174FSP** For 3/8" to 1-1/8" O.D. tubing includes 2 x S75015 general purpose cutting wheel. Swing radius 1-15/16" (2-1/4" swing radius with 1-1/8" tube)



### ADJUST-O-MATIC™ LARGE TUBE CUTTERS for 3/8" to 2-5/8" and 2" to 4-1/8" O.D Tubing.

**206FBSP** For 3/8" to 2-5/8" O.D. tubing includes 2 x S74761 general purpose cutting wheels.

**406FA** For 2" to 4-1/8" O.D. tubing includes 2 x S74833 general purpose cutting wheel.



### RATCHETING TUBE CUTTERS for 1/8" to 5/8" and 1/8" to 1-1/8" O.D Tubing.

**TC1050RH** Ideal for tube cutting in tight places where a complete revolution of the cutter can't be made. TC1050 cutter easily removes from handle. Includes ratchet handle, TC1050 tube cutter and 1x S32633 cutting wheel. Capacity 1/8" - 5/8" OD tubing.

**TC3050RH** Larger version of TC1050RH . Kit includes TC3050 cutter, ratchet handle, 1x S75015 general purpose cutting wheel *plus deburring tool*. Capacity 1/8" to 1-1/8" OD tubing.



Replacement Cutting Wheel Part Number	Suits
TC1A	Kit - 3 Wheels #75015, 1 Screw #74762 For General purpose. Suits: Imp 174F, 312FC, TC1000, TC1010, TC1550, TC2050
TC1B	Kit - 3 Wheels #75046, 1 Screw #74762 For hard material. Suits TC1000, TC1010, TC1550, TC2050, 312FC, 174F.
TC1C	Kit - 2 Wheels #32633, 1 Screw #26883 General purpose. Suits TC1050, 227FA
S74761	Cutting Wheel (Pack of 5) for copper suits the 206-FBSP
S74833	Cutting Wheel to Suit 406FA

## TRIPLE HEAD LEVER TYPE



### 370-FHC TRIPLE HEAD 180° TUBE BENDER

- Bends 3/16", 1/4", 3/8" and 1/2" soft drawn or annealed tubing.
- Makes smooth, tight-radius 180° bends.
- Calibrated markings—for making accurate Left handed, Right handed and offset bends.
- Adjustable hook.
- Optimum bending radius for each tubing size.
- Made of durable yet lightweight die-cast aluminium.



### 368-FH TRIPLE HEAD 90° TUBE BENDER

- Bends 3/16", 1/4", 5/16" and 3/8" soft copper, thin wall steel and aluminium tubing.
- Makes smooth, tight-radius 90° bends.
- Calibrated markings -for making accurate Left handed, Right handed and offset bends.
- Optimum bending radius for each tubing size.
- Made of durable yet lightweight die-cast aluminium.



### 470-FHC TRIPLE HEAD 180° TUBE BENDER WITH ROTO-LOK™ INDEXING HANDLE

- Bends 3/16", 1/4", 5/16" and 3/8" tubing.
- Patented quick action indexing lever positions 2 stage handle midway through bend when both handles begin to meet. This allows for easy fabrication of bends up to 180° with reduced effort.
- Makes smooth, tight-radius 180° bends.
- Calibrated markings—for making accurate Left handed, Right handed and offset bends.
- Optimum bending radius for each hook size.
- Made of durable yet lightweight die-cast aluminium.

## LEVER TYPE

### 364-FHA LEVER TYPE TUBE BENDERS

- Bend 1/4" to 1" tubing
- Each tool bends 1 size of tubing
- Open sided bender which slips over tube at any point.
- Makes smooth, tight radius bends up to 180° with minimum effort. No scoring or flattening of tubing.
- Calibrated markings to show angle of bend.



364FHA04



364FHB06

### 364-FHB SWIVEL HANDLE LEVER TYPE TUBE BENDERS

- Bend 1/4" to 1/2" tubing
- Each tool bends 1 size of tubing
- The FHB series has a swivel handle which can be repositioned when both handles begin to meet. This simple feature allows easy fabrication of bends up to 180° with reduced effort, better control and without the crossing of handles, typical of most other lever benders.
- Wide hook grips tube securely.

TUBE SIZE→	1/4"	3/8"	1/2"	5/8"	3/4"	7/8"	1"
FHA SERIES	364FHA04	364FHA06	364FHA08	364FHA10	364FHA12	364FHA14	364FHA16
FHB SERIES	364FHB04	364FHB06	364FHB08				

# TUBE BENDERS & TUBE WORKING



## TUBE EXPANDER



### 175EX XPANDR™ SWAGING/EXPANDING KIT

- Easily expands tube for braze & soldered joints in seconds.
- Floating jaw head design is self-centering for fast, accurate alignment.
- Re-rounds deformed tube ends.
- Accurate joints in seconds without using fittings.
- For soft copper and soft thin wall steel and stainless steel tubing.
- Save 60-70% of time over conventional swaging tools.
- Reduces soldering by 50% over standard fittings.
- Meets ARI tube insertion recommendations.
- Long life with high alloy hardened steel jaw segments.
- XpandR™ Tool comes with non-slip, ergonomically designed grips.
- Supplied in a compact carrying case.
- Includes 5 heads: 3/8", 1/2", 5/8", 3/4" and 7/8".

## SPRING BENDERS

### 102F SPRING BENDERS

- Bend 1/4" to 1" to 7/8" O.D soft copper and aluminium tubing.
- Each tool bends 1 size of tubing
- Spring benders allow hand bending of soft tubing to any shape without bending or crushing the tube.
- Manufactured from special spring steel with zinc finish. Spring end is "belled" for quick tube removal.
- 101F set of 6 for 1/4", 5/16", 3/8", 7/16", 1/2" and 5/8" OD tubing.



## FLARING & SWAGING TOOLS

### 45° FLARING TOOLS

For 3/16", 1/4", 5/16", 3/8", 7/16", 1/2" and 5/8" O.D. tubing.

- 195-FC** Flares 7 sizes of tubing. Rugged forged steel slip-on yoke and hardened flaring bar. Positive clamping action of bars prevents tube slippage. Self-centering yoke with swivel-type hardened steel, chrome-finished flaring cone forms better flares with less effort. Design of yoke permits flaring where there is little space between nut and tube end. Satin finish nickel-chrome plated.



### 45° ROL- AIR™ FLARING TOOLS

Flares and burnishes 3/16", 1/4", 5/16", 3/8", 1/2" and 5/8" O.D. tubing.

- 500-FC** Faceted, hardened steel, chrome-finished cone rolls out perfect 45° flares above die block, and automatically burnishes flare face reducing the need for deburring. Original wall thickness is maintained at base of flare. New slip-on yoke permits use in tight quarters, where there is little space between nut and tube end. Larger handle, with better leverage, and precision threads on feed screw make flaring effortless. Heat treated dies grip tubing without scoring. Satin chrome and black finish.



### FLARING (45°) & SWAGING TOOL

For 1/8" to 3/4" O.D. tubing.

- 275-FS** Flares and swages. Converts quickly. Screw-type feed. Ideal for use in close quarters. Two bars included cover 9 sizes. Swivel-type swaging adapters and flaring cone are hardened steel chrome-finished for easy operation. Self-centering, slip-on forged steel yoke. Flares 1/8", 3/16", 1/4", 5/16", 3/8", 7/16", 1/2", 5/8" and 3/4" O.D. tubing. Includes 5 swage adapters that swage 7 tube sizes: 3/16", 1/4", 5/16", 3/8", 1/2", 5/8" and 3/4" O.D. Supplied in hinged durable tool case.







## SWAGING TOOLS

### PUNCH TYPE SWAGING TOOLS

- 95S** Make tubing connections without fittings. Enlarges end of tube, to allow insertion of another tube of original O.D. size to solder together. One tool swages 3/16", 1/4", 5/16", 3/8", 1/2", 5/8" O.D. tubing. Hi-alloy steel, heat-treated for rugged use. Hex design for ease of extraction.
- 193S** Vinyl case contains 4 swaging punches: 1/4", 3/8", 1/2" and 5/8" O.D. tubing. Punches also available individually from 1/4" thru 7/8". Part numbers 93S04 (1/4") to 93S14 (7/8").



## DEBURRING TOOLS



- 208F** Reamer for 3/16" to 1-1/2" OD copper, aluminium and brass tubing. Hardened steel cutter blades. Reams both inside and outside edges of tube with 3 hollow ground cutters. Tough die cast body. Deburrs both clockwise and counter-clockwise. Fluted body is shaped to fit comfortably in palm.

- 210F** Rotary style blade is perfect for removing burrs from holes and edges. Large ergonomic handle reduces user fatigue. Enclosed handy internal storage cavity for storing extra blades. Ships complete with two heavy duty blades. Suitable for deburring copper, steel, aluminium, zinc, cast iron, brass and plastic tubing.



**Your Local Imperial® Stockist is:**

## LIFETIME WARRANTY

Any product manufactured by Imperial that fails to render service due to defect in workmanship or materials will be replaced or repaired at no charge. Product failures due to misuse, abuse, normal wear and tear or alterations are not covered by the Lifetime Warranty. Wear items will need to be replaced over time, and are not included (such as cutter wheels, seals, gaskets, o-rings and gauges). Imperial makes no other warranty, expressed or implied. Tools should be returned to the Buyer's place of purchase.

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