ALL IN ONE

Imperial Tools — now exclusively offered by ATP



From now on, your Imperial Eastman tools and spare parts, with unique benefits, will be available from ATP Europe. 2 Due to our comprehensive stock holdings, ATP Europe ensures 3 Just In Time supply, 4 without any additional shipping costs**. 5 Lifetime guarantee.







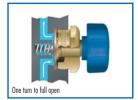




	refrigerant	Manifold port	Units
740-CB	R404, R407, R134a	1/4" SAE	bar, °C
745-CB	R410 A	1/4" SAE	bar, °C







	refrigerant	Manifold port	Units
640-CB	R410A	1/4" and 3/8" SAE	bar, °C
660-CB	R404, R407, R134a	1/4"	bar, °C

740-CB/745-CB SERVICE MANIFOLD KWIK-CHARGER® MANIFOLD

Charging the system is faster and easier than ever. Imperial® has designed manifolds with built-in Kwik-Charge®.

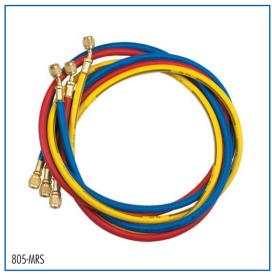
- Dual Action Valve Operates as a conventional manifold, or engage the Kwik-Charge valve and the manifold accepts liquid refrigerant from cylinder and discharges into the low side of the system. Charging rate is up to eight times faster than vapor charging.
- Safe Internal metering element reduces liquid flow to a level below capacity of the compressor.
 Assures a safe, fast charge without endangering the compressor.
- All-In-One No connecting or disconnecting special adapters for charging new blended refrigerants.
- No Pressure Drop-In Cylinder No need to heat refrigerant cylinder.
- Works With All Refrigerants CFC, HFC, HCFC, Zeotropic and Azeotropic.
- Filters In All Manifold Port Fittings To keep out particulate material that may be present during recovery or reclaim or in recovered refrigerant. Filters are easily serviceable.
- Deep Vacuum Valve Design Proven diaphragm type, soft seat valves require only fingertip
 pressure to close completely. One turn to full open/close. Superior for deep vacuum service.
- Precision Gauges & Protective Boots Unique gauges provide superior resistance to shock, vibration & pulsation for accurate performance and extended gauge life.
- Ergonomic Handles Durable, soft touch non-slip surface, even with oily fingers.
- Svivel Hanger

640-CB/660-CB SERVICE MANIFOLD 4-VALVE MANIFOLD

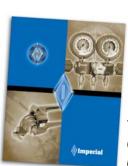
- 4-Valve Efficiency Vacuum, low side, high side, and refrigerant lines are individually connected and controlled. No need to switch charging lines.
- 4 Times Faster Evacuation 3/8" vacuum port and oversize internal passages evacuate systems four times faster than ordinary manifolds. 3/8" port has greater area than combined inlets of high and low side lines.
- Deep Vacuum Valve Design Proven diaphragm type, soft seat valves require only fingertip
 pressure to close completely. One turn to full open/close. Superior for deep vacuum service.
- Precision Gauges & Protective Boots Unique design with easy to read color-coded scales provides superior resistance to shock, vibration and pulsation for superior performance and extended gauge life.
- UL® Recognized The 600 Series manifold is recognized by UL.
- Ergonomic Handles Durable, soft touch non-slip surface, even with oily fingers.
- Svivel Hanger











The whole array of Imperial products contains more than 1600 articles.
Ask for our union catalog!

805-MRS HI-PERFORMANCE HOSE PolarShield® PREMIUM HI-PERFORMANCE CHARGING HOSE

- All Imperial PolarShield charging hoses are UL recognized and meet UL-1963. SAE-J2196 & EPA
- requirements for strength, pressure and refrigerant permeation.

 Rugged, Multi-Refrigerant Nylon Barrier Construction PolarShield hoses are compatible with all
- CFC, HCFC & HFC refrigerants (R410A, R404A, R407C, R134a).

 High-Pressure PolarShield hoses feature 55 bar (800 psi) working pressure and
- High-Pressure PolarShield hoses feature 55 bar (800 psi) working pressure and 276 bar (4.000 psi) burst pressure with a 5-to-1 safety factor.
- Selection PolarShield hoses are available with a variety of end connections, in yellow, red or blue, individually or in sets of three. Consult factory for lengths and end connections not listed below.
- With standard 1/4" fitting (5/16" fittings available)
- Length 152 cm (60")/Set of three (blue, yellow, red)

16-C/17-C/18-C/26-C/27-C KWIK-COUPLER® - SERVICES HOSE SHUT-OFF

The Kwik-Coupler set is intended for use with refrigeration and air-conditioning service hoses when connecting to core valve type access fittings. Conventional threaded connecting is converted to push-pull operation which is faster, easier and positive sealing at all times. Valve cores are depressed automatically without adjustments or loss of refrigerant. Disconnecting is also accomplished without loss of refrigerant.

An automatic shut-off valve retains refrigerant pressure in a disconnected hose. This feature permits transferring high side hose refrigerant through the service manifold into the low side, thereby eliminating waste and hazardous high pressure discharge and atmospheric damage.

- Automatic full depression of core valves without adjustment, regardless of core position.
- Coupler halves separately connect to access fitting and hose end, then easy push/pull
 operation automatically opens or closes system without loss of refrigerant.
- Automatic shut-off of hose ends permits discharging high side hose through manifold into low side.
- Eliminates hazardous discharge of refrigerant and oil from system when disconnecting hose.
- Simplifies operation of charging critical amount of refrigerant into small systems.
- Prevents finger burn when disconnecting especially servicing heat pumps in cold weather.
- Core depressors in hose ends no longer necessary speeds servicing of systems with hand valves.

16-C Straight Coupler (45° Flare) 1/4" female x 1/4" male

17-C 90° Elbow Coupler (45° Flare) 1/4" female x 1/4" male

18-C (Set) includes 16-C and 17-C

26-C Straight Coupler (45° Flare) 5/16" female x 5/16" male

27-C 90° Elbow Coupler (45° Flare) 5/16" female x 5/16" male

(26-C and 27-C Not UL Approved)





16-0



PT-109 KWIK-VISE® REFRIGERANT CHARGING & RECOVERY

Refrigerant Recovery Tool

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 sizes of tubing. The patented tension system automatically locks pliers on copper tubing 1/4" to 1/2" (6 - 12 mm) 0.D. tubing. To use simply position the PT-109 on the tubing to be pierced. Close the pliers quickly and firmly. The pliers will automatically adjust and lock into a tightly sealed, secure position.

- Replaceable hardened, stainless steel pierce and brass valve assembly.
- Capacity: 1/4" thru 1/2" O.D. refrigerant copper tubing.
- Durable: made with high carbon, heat treated, steel jaws.
- Works with all refrigerants CFC, HFC, HCFC and Zeotropic, Azeotropic.
- 90° elbow valve eliminates tangling and interference problems.



- **535-C** Kwik-Charge 1/4" female SAE flare inlet, 1/4" male SAE flare outlet
- **545-C** Kwik-Charge 5/16" female SAE flare inlet, 5/16" male SAE flare outlet



535-C/545-C KWIK-CHARGE® REFRIGERANT CHARGING & RECOVERY

Liquid low side charger provides fast, safe charge essential when using tracing dye.

Kwik-Charge accepts liquid refrigerant from the cylinder and discharges into low side of the system. Charging rate is up to eight times faster than vapor charging. In addition, liquid charging is required when using R410A and other blended refrigerants.

Kwik-Charge is attached to the low side of the charging manifold. Charging hose is connected from Kwik-Charge outlet to low side of refrigeration system. Internal Kwik-Charge metering element reduces liquid flow to a level below capacity of compressor. This assures a safe, fast charge without endangering the compressor. A built-in ball check valve automatically opens when drawing a vacuum to assure rapid, unrestricted evacuation. Can be used with all fluorinated hydrocarbon refrigerant systems.

- Up to 8 times faster than vapor charging.
- No need to heat refrigerant cylinder.
- Built-in check valve opens for drawing unrestricted vacuum.
- No pressure drop in cylinder.
- One charger services all units 1/2 ton or larger.

341-C TAP-A-LINE® PIERCING VALVES & ADAPTERS

Universal Line Piercing Valve

A quick and economical way to tap into a line at any point for charging, testing or evacuating hermetically sealed units. Valve fits 3/16" to 3/8" O.D. tubing and has 1/4" flare connections for charging lines. Valve clamps on tubing line, one end of charging line is attached to 1/4" flare connection on valve and other end to testing unit or refrigerant tank. Valve stem is turned forward until sharp needle pierces tubing. Stem is then backed off for testing or charging. After service is completed, valve is closed and left on line for future service. Valve has T-Grip handle and forged brass body. Sealing gasket is confined to prevent falling out. V-block centers valve on tube, and is attached to nut so that it can't be lost.



TC-1050 IMP® MINI TUBE CUTTER METAL TUBING

For 1/8" to 5/8" O.D. tubing.

- Big capacity, small size tube cutters designed for use in tight quarters where other cutters won't fit.
- Enclosed feed screw minimizes contamination assuring continued smooth operation.
- Corrosion resistant stainless steel rollers positioned at bottom of cutter allows for easier cutter engagement on tubing and smoother cutting action.
- All Imperial tube cutters are 100% factory tested to ensure accurate spiral free cutting.
- For 1/8" to 5/8" and 4 to 15 mm 0.D. tubing. Includes (1) S32633 general-purpose cutter wheel. Swing radius 1-1/4". Length 1-3/4" (4.5 cm). Weight 0.07 kg.



174-F "BIG IMP"® TUBE CUTTER "Big capacity in small size" METAL TUBING

For 3/8" to 1-1/8" (10 mm to 28 mm) O.D. tubing.

Includes (2) S75015 general-purpose cutter wheels. Swing radius 1-15/16" (2-1/4" swing radius with 1-1/8" tube). Length 2-11/16" (7 cm). Weight 0.14 kg.



206-FB ADJUST-O-MATIC® TUBE CUTTER METAL TUBING

For 3/8" to 2-5/8" tubing.

- Ratchet feed mechanism speeds up cutting operation.
- Extra wide rollers with flare cut-off groove stabilize tubing.
- Spare cutting wheel included under handle cap.
- Enclosed screw-type feed mechanism; light weight aluminum alloy body.
- For 3/8" to 2-5/8" and 10 to 66 mm 0.D. tubing. Includes (2) S74761 general-purpose cutter wheels. Length closed 7-3/4" (20 cm). Weight 0.91 kg.



TC-1000 For 1/8" to 1-1/8" (4 to 28 mm) O.D. tubing. Includes (2) S75015 general-purpose cutter wheels. Length 5" (13 cm). Weight 0.18 kg. **312-FC** For 1/4" to 1-5/8" (7 to 41 mm) O.D. tubing. Includes (2) S75015 general-purpose cutter wheels. Length 5-1/2" (13 cm). Weight 0.20 kg.





TC-1000/312-FC HI-DUTY® TUBE CUTTERS METAL TUBING

For 1/8" to 1-1/8" and 1/4" to 1-5/8" O.D. tubing.

- Enclosed hardened steel, thrust bearing feed mechanism for smoothest cutting action and trouble free operation.
- Imperial's unique design eliminates spiraling for clean right angle cuts. Our high precision machining
 and construction method permits one-piece screw type axle for easy access to cutting wheel
 no clip to lose or replace.
- Rugged aluminum alloy body designed for handling ease. Body is hand buffed and nickel chrome plated to a high luster finish.
- Foldaway hardened steel reamer with turned cutting edge removes inside burrs cleanly.
 Filing surface removes outside burrs.
- Rollers feature flare cut-off groove to reduce tube loss when damaged flare is removed.
- Imperial cutter wheels are made of the highest quality wear & abrasion resistant chromium steel
 and precision machined to exacting specifications for accurate cutting and long life.
 Each tool is supplied with a spare cutter wheel.
- All Imperial tube cutters are 100 % factory tested to ensure accurate spiral free cutting.

TC-1050-RH RATCHETING MINI TUBE CUTTER

For 1/8" to 5/8" and 4 mm to 15 mm O.D. tubing.

- Minimal clearance radius of 1-1/4".
- Easily completes a full revolution, maximizing leverage.
- TC-1050RH cutter can easily be removed from the handle. Includes (1) S32633 general purpose cutter wheel.
- Ergonomic handle with non-slip grip.
- 100% factory tested to ensure accurate spiral-free cutting.
- Six independent drive pawls provide 15" arc-swing.
- 5" (13 cm) nominal length.

227-FA JUNIOR TUBE CUTTER METAL TUBING

For 1/8" to 3/4" (4 mm to 19 mm) O.D. tubing.

Includes S32633 general-purpose cutter wheel. Swing radius 2". Length 3-1/2" (9 cm).
 Weight 0.140 kg.











144-F NEW TUBE CUTTER SERVICE CENTER METAL TUBING

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

Selling Imperial® replacement cutter wheels, reamer blades and fasteners just got easier. Our new Service Center organizes a popular selection of replacement parts for Imperial cutters. Display on the counter or bring it with you when making sales calls. You can even sell the whole unit to customers!

144-F IMPERIAL TUBE CUTTER SERVICE CENTER

- 15 most common replacement parts stocked in one handy container.
- Includes a visual replacement chart for quick and easy identification.

PART #	QUANTITY	DESCRIPTION	CUTTER
S75015	10	General Purpose Cutter Wheel	TC-1000, TC-1010, 312-FC, 174-F, TC-2050
S75046	5	Cutter Wheel for Stainless Steel	TC-1000, TC-1010, 312-FC, 174-F, TC-2050
S32633	10	Cutter Wheel	TC-1050, 227-FA
S74761	5	Cutter Wheel	206-FB, 206-FBP
S74762	5	Cutter Wheel Retaining Screw	TC-1000, TC-1010, 312-FC, 174-F, TC-2050
S74833	3	Cutter Wheel	406-FA
S26883	3	Cutter Wheel Retaining Screw	TC-1050
S77511	3	Cutter Wheel Retaining Screw	206-FB, 206-FBP
S74834	3	Cutter Wheel Retaining Screw	406-FA
S76637	3	Constrictor Roller Wheel	TC-1000, TC-1010, TC-1020, 312-FC
S16003162	5	Cutter Wheel for Soft Copper Only	TC-1000, TC-1010, 312-FC, 174-F, TC-2050
S10000770	3	Cutter Wheel for PVC	206-FB, 206-FBP
S7931801	3	Reamer Blade	TC-1000, TC-1010, 312-FC
S8201501	3	Retaining Screw for Reamer Blade	TC-1000, TC-1010, 312-FC
S74197	3	Spring Washer for Reamer Blade	TC-1000, TC-1010, 312-FC
144FB	1	Container only	

CUTTER WHEEL Part# S74833 for Cutter # 406-FA	CUTTER WHEEL FOR PVC Part# \$10000770 for Cutters # 206-FB, 206-FBP	CUTTER WHEEL Part# S74761 for Cutters # 206-FB, 206-FBP	Part# S74761 CUTTER WHEEL	
CONSTRICTOR ROLLER WHEEL Part# S76637 for Cutters # TC-1000, TC-1010, TC-1020, 312-FC	CUTTER WHEEL FOR STAINLESS STEEL Part# 575046 for Cutters # TC-1000, TC-1010, 312-FC, 174-F, TC-2050	CUTTER WHEEL Part # S32633 for Cutters # TC-1050, 227-FA	SPRING WASHER FOR REAMER BLADE Part# S74197 for Cutters # TC-1000, TC-1010, 312-FC	REAMER BLADE Part # 57931801 for Cutters # TC-1000, TC-1010, 312-FC
CUTTER WHEEL RETAINING SCREW Part# S26883 for Cutter# TC-1050	CUTTER WHEEL RETAINING SCREW Part# S74834 for Cutter # 406-FA	CUTTER WHEEL RETAINING SCREW Part # S77511 for Cutters # 206-FB, 206-FBP	CUTTER WHEEL RETAINING SCREW Part # S74762 for Cutters # TC-1000, TC-1010, 312-FC, 174-F, TC-2050	RETAINING SCREW FOR REAMER BLADE Part # S8201501 for Cutters # TC-1000, TC-1010, 312-FC
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370-FH TRIPLE HEAD 180° TUBE BENDER TRIPLE HEAD LEVER TYPE

- Bends 1/4", 3/16", 3/8" and 1/2" Tubing.
- Makes Smooth, Tight Radius 180° Bends.
- Calibrated Markings for making accurate left-hand, right-hand and offset bends.
- Adjustable hook.
- Optimum Bending Radius for each tubing size.
- Cushion Grips for extreme comfort.
- Made of Lightweight Die-Cast Aluminum.
- Clamshell packaging available.

Bend 4 of the most popular sizes of soft copper, aluminum and thin wall steel tubing with one rugged, precise tool!

370-FH

TUBE O.D. (in.)	RADIUS TO CENTER OF TUBE (in.)
1/4	11/16
3/8	1-1/8
1/2	1-1/2

371-FH

TUBE O.D. (mm)	RADIUS TO CENTER OF TUBE (mm)
8	17.5 mm
10	28.6 mm
12	38.1 mm



367-FH/368-FH IMP® TRIPLE HEAD BENDERS TRIPLE HEAD LEVER TYPE

For soft copper, aluminum and thin wall steel tubing. For 1/8", 3/16", 1/4", 5/16", 3/8" O.D. tubing. Makes up to 90° bends.

Calibrated markings for making accurate left-hand, right and offset bends. Ninety degree start requires less effort — making bending fast and easy. For soft copper, aluminum and steel.

367-FH For 1/8", 3/16" and 1/4" (3, 4 and 6 mm) 0.D. tubing. 9/16" (14.2 mm) radius to center of tube. Weight 0.2 kg.

368-FH For 3/16", 1/4", 5/16" and 3/8" (6 and 8 mm) 0.D. tubing. 15/16" (17.5 mm) radius to center of tube. Weight 0.450 kg.



The whole array of Imperial products contains more than 1600 articles. Ask for our union catalog!







102-F-06/08/10/12 SPRING TYPE TUBE BENDERS TRIPLE HEAD LEVER TYPE

For soft copper and aluminum tubing. For 3/8" to 3/4" O.D. tubing.

Tools allow hand bending of soft tubing to any shape without collapsing walls. Special spring steel, zinc finish. End belled for quick tube removal.

	TUBE O.D. (in.)	LENGTH (in.)	WEIGHT EACH (kg)
102-F-06	3/8	10 (254 mm)	0.11
102-F-08	1/2	12 (305 mm)	0.18
102-F-10	5/8	12 (305 mm)	0.23
102-F-12	3/4	12 (305 mm)	0.28



364-FHA-08/10/12 LEVER TYPE TUBE BENDERS LEVER TYPE

For 1/8" to 1" (6 mm to 12 mm) O.D. tubing.

Each tool bends one size. Open side type 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 to show angle of bend. Wide hook grips tubing securely.

	TUBE O.D. (in.)	RADIUS TO CENTER OF TUBE (in.)	WEIGHT EACH (kg)
364-FHA-08	1/2	1-1/2 (38 mm)	1.60
364-FHA-10*	5/8	2-1/4 (57 mm)	2.50
364-FHA-12*	3/4	3 (76 mm)	3.20

Each tool bends only one size. Conforms to Federal Specifications GGG-B-191a Type III, Class 2. *For bending annealed copper and aluminum tubing only.



364-FHB-04/06/08 SWIVEL HANDLE TUBE BENDERS LEVER TYPE

For 1/4" to 1/2" (6 mm to 12 mm) O.D. tubing.

The patented 364-FHB series has a swivel handle that can be repositioned midway through a bend 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 type benders.

	TUBE O.D. (in.)	RADIUS TO CENTER OF TUBE (in.)	WEIGHT EACH (lbs.)
364-FHB-04	1/4	9/16 (14 mm)	0.45
364-FHB-06	3/8	15/16 (24 mm)	0.80
364-FHB-08	1/2	1-1/2 (38 mm)	1.60



470-FH TUBE BENDER

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

- Bends 3/16", 1/4", 5/16" and 3/8" O.D. Tubing.
- Patented, quick-action indexing lever repositions two-stage handle midway through bend when both handles begin to meet. This feature allows easy fabrication of bends up to 180° with reduced effort, better control and no crossing of handles!
- Optimum Bending Radius for each tubing size.
- Calibrated markings for making accurate left-hand, right-hand and offset bends.
- Compact design for working in tight spaces.
- Cushion grips for comfort and stability.
- Made of lightweight, die-cast aluminum.

TUBE O.D. (in.)	RADIUS TO CENTER OF TUBE (in.)
3/16	7/16 (11 mm)
1/4	9/16 (14 mm)
5/16	11/16 (17 mm)
3/8	15/16 (24 mm)
•	·



464-FHT-04/06/08 TUBE BENDER

HEAVY-DUTY 180° TUBE BENDER WITH ROTO-LOK™ INDEXING HANDLE For 1/4" to 1/2" O.D. tubing.

- New design for accurate bends up to 180° in stainless steel and other tough metals.
- Patented, quick action trigger release repositions two-stage handle midway through bend when both handles begin to meet. This feature allows easy fabrication of bends up to 180° with reduced effort, better control and no crossing of handles!
- Rollers in bending handle reduce friction and bending effort; eliminate scoring of tubing.
- Comfortable and durable ergonomically molded cushion grips.
- Vise lug for mounting in vise.

	TUBE O.D. (in.)	RADIUS TO CENTER OF TUBE (in.)	WEIGHT EACH (kg)
464-FHT-04*	1/4	9/16 (14 mm)	0.50
364-FHT-06*	3/8	1-1/8 (29 mm)	1.70
364-FHT-08*	1/2	1-1/2 (38 mm)	3.40

^{*}Optimized tight bend radius







195-FC 45° FLARING TOOL

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

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, chromefinished 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. Weight 0.907 kg.

Outside Tube Diameter (in.)	3/16	1/4	5/16	3/8	7/16	1/2	5/8
Wall Thickness (in.)	.028	.035	.035	.035	.035	.035	.035

375-FS 45° LARGE SIZE FLARING TOOL

Flares larger tube sizes. Quick slip-on yoke with hard chrome-finished, swivel flaring cone reduces effort. Positive clamping action of flaring bar eliminates tube movement. Nickel chrome finish. Conforms to Federal Specification GGG-F-451a Type 1, Class 2. Style A. For sizes 1/8", 3/16", 1/4", 5/16", 3/8", 7/16", 1/2", 5/8" and 3/4" 0.D. tubing. Weight 1.700 kg.



500-FC 45° ROL-AIR FLARING TOOL

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

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. Weight 0.680 kg.

Outside Tube Diameter (in.)	3/16	1/4	5/16	3/8	1/2	5/8
Wall Thickness (in.)	.028	.035	.035	.035	.035	.035

500-FCM METRIC SIZE 45° ROL-AIR FLARING TOOL

Same as 500-FC except for metric size tubing 6, 8, 10, 12, 15 and 16 mm O.D.

Outside Tube Diameter (mm)	6	8	10	12	15	16
Wall Thickness (mm)	1.0	1.0	1.0	1.0	1.0	1.0



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525-F "GRABBER"® 45° ROL-AIR FLARING TOOL

Universal application. Adjustable opening holds all sizes. Flares and burnishes 3/16" to 5/8" (4.75 to 16 mm) O.D. tubing.

Unique, self-adjusting, tube holding mechanism permits flaring any size tubing within the range of 3/16" to 5/8" (4.75 to 16 mm) 0.D. tubing. Innovative, single opening design is more compact and easier to use than conventional multi-opening flaring bars.

Faceted, hardened steel, chrome-finished cone rolls out and burnishes perfect 45° flare above the tube holding mechanism reducing need for deburring. Original wall thickness is maintained at base of flare. Slip-on self-centering yoke permits use in tight quarters. Large handle, with better leverage, and precision threads on feed screw make flaring effortless. High quality construction with satin chrome and black finish. Weight 0.800 kg.

Outside Tube Diameter (in.)		3/16	1/4	5/16	3/8	1/2	5/8
Wall Thickness (in.)		.028	.035	.035	.035	.035	.035
Outside Tube Diameter (mm)	4.75	6	8	10	12	15	16
Wall Thickness (mm)	1.0	1.0	1.0	1.0	1.0	1.0	1.0



95-S/193-S PUNCH TYPE SWAGING TOOLS

Use these tools for making tubing connections without fittings. Enlarge end of tube, insert another tube of original O.D. size and solder together like a sweat fitting.

95-S

- 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.
- Precision machined surface for ease of forming.

103-6

● Vinyl case contains 4 swaging punches 1/4", 3/8", 1/2" and 5/8" O.D. tubing. Weight 0.453 kg.

95-S 6 IN 1 SWAGING TOOL

Outside Tube Diameter (in.)	3/16	1/4	5/16	3/8	1/2	5/8
Wall Thickness (in.)	.028	.035	.035	.035	.035	.035

INDIVIDUAL SWAGING TOOLS

	TUBE O.D. (in.)	WALL THICKNESS (in.)	WEIGHT (kg)
93-S-04	1/4	.035	0.090
93-S-06	3/8	.035	0.113







275-FS FLARING (45°) & SWAGING TOOL

For 1/8" to 3/4" and 4 to 22 mm O.D. tubing.

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. In tool case. Weight 1.587 kg. Flares 1/8", 3/16", 1/4", 5/16", 3/8", 7/16", 1/2", 5/8" and 3/4" 0.D. Includes 5 swage adapters that swage 7 tube sizes 3/16", 1/4", 5/16", 3/8", 1/2", 5/8", 3/4" 0.D.

Replacement parts:

278-FS-03X04X06 Adapter 3/16", 1/4", 3/8". **278-FS-10** Adapter 5/8". **278-FS-12** Adapter 3/4". **278-FS-08** Adapter 1/2". **38600** Flaring Cone.



275-FSC 45° FLARING, CUTTING AND SWAGING KIT

For soft copper, aluminum, steel, stainless steel and brass tubing.

Kit contains a TC-1000 tube cutter for 1/8" to 1-1/8" 0.D. tubing and 275-FS 45° flaring and swaging tool. In tool case. Weight 1.361 kg.

Flares: 1/8", 3/16", 1/4", 5/16", 3/8", 7/16", 1/2", 5/8" and 3/4" O.D. tubing. **Swages:** 3/16", 1/4", 5/16", 3/8", 1/2", 5/8" and 3/4" O.D. tubing.



208-F TESTING AND SERVICE TOOLINNER-OUTER REAMING AND DEBURRING TOOLS

For 3/16" to 1-1/2" O.D. tubing. Reams both inside and outside edges of tube with 3 hollow ground cutters. Tough die cast body. Deburrs both clockwise and counterclockwise. Fluted body is shaped to fit comfortably in palm. Reamer for copper, aluminum and brass tubing. Hardened steel cutter blades. Blue finish. Weight 0.285 kg.



210-F DEBURRING TOOL

Rotary style blade is perfect for removing burrs from holes and edges of any size. Large ergonomic handle reduces user fatigue, encloses handy storage cavity for extra blades. Ships complete with two heavy duty blades for copper, steel, aluminum, zinc, cast iron, brass and plastic tubing.



127-C0







127 C/127-CO 123-C/124-C/125-C/126-C

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 ratchets and is specially designed for use on compressors with access valves in hard to reach places. Reversible ratchets.
- **127-CO** Same as 127-C except with unique 25° offset that provides additional convenience in hard to reach places.
- Rugged steel forged wrench. For use on small refrigerant cylinders, shut-off valves, packing gland nuts, etc. Ratchet has 1/4" square drive and raised face. Handle has 3/16" and 1/4" square drives and 1/2" hex.
- **124-C** Combination wrench with the four sizes most needed for servicing air-conditioning and refrigerator equipment:
 - 9/16" hex for dust cap on access valves and plug oil check on compressor.
 - · 1/2" hex for compressor mounting bolts.
 - 1/4" square for valve stem and service valves and old style compressor valves.
 - · 3/16" square for valve refrigerant charging tanks.
- **125-C** Rugged, steel forged wrench with four sizes covering almost any application. Ratchet has 1/4" drive on one end; other end has 3/16" and 5/16" square openings, plus 9/16" hex opening.
- **126-C** Economy compressor access valve wrench. Chrome plated. Has 1/4", 3/8", 3/16" and 5/16" square drive ratchets and is specially designed for use on compressors with access valves in hard to reach places. Reversible ratchets.











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