

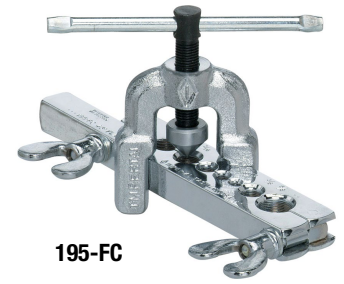
45° FLARING TOOLS

45° FLARING TOOL

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. Wt. 2.0 lbs.

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



195-FC

45° LARGE SIZE FLARING TOOL

Flares larger tube sizes. Quick slip-on yoke with hardened steel, 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.

203-FA For sizes 5/8", 3/4", 7/8" and 1-1/8" O.D. tubing. Wt. 3.75 lbs.

375-FS For sizes 1/8", 3/16", 1/4", 5/16", 3/8", 7/16", 1/2", 5/8" and 3/4" O.D. tubing. Includes tool case. Wt. 3.75 lbs.

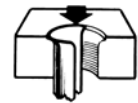
Outside Tube Diameter (in.)	1/8	3/16	1/4	5/16	3/8	7/16	1/2	5/8	3/4	7/8	1	1-1/8
Wall Thickness (in.)	.025	.028	.035	.035	.035	.035	.035	.049	.049	.049	.058	.058



203-FA



SELF GAUGING - Just insert tube flush with top of die for accurate flare size.



FORMS STRONGER FLARES- Stronger flares assured by smooth, even radius formed at base of every flare by engineered chamfer.

HI-DUTY® 45° FLARING TOOL

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

300-FB Hardened steel, chrome finished cone makes exceptionally smooth, high strength flares with a radius at base of flare – instead of the sharp angle formed by ordinary tools. Slip-on yoke permits use in tight quarters, allows flaring where there is little space between nut and tube end. Feed screw design provides smoother, easier operation. Positive gripping and self-gauging of tube for exact flare size. Sliding die blocks lock in place by lever clamp action to ensure even dispersal of force around full diameter of tube for superior grip. Wt. 1.6 lbs.

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



300-FB

45° ROL-AIR™ FLARING TOOLS

45° ROL-AIR™ FLARING TOOL

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. 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. Wt. 1.5 lbs.

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

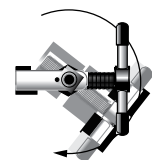


500-FC

WORKS WITH R-410A



Flares rolled out above die bar by super-smooth faceted cone. Makes stronger flares.



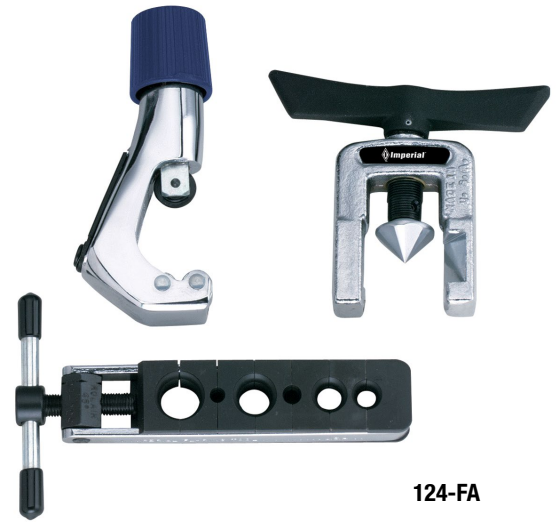
Unique detention mechanism for rapid engagement and release of die blocks.

TUBE WORKING KITS

CUTTING AND FLARING KITS

Each kit contains a TC-1000 tube cutter for 1/8" to 1-1/8" O.D. tubing and a 45° or 37° flaring tool. Includes tool case.

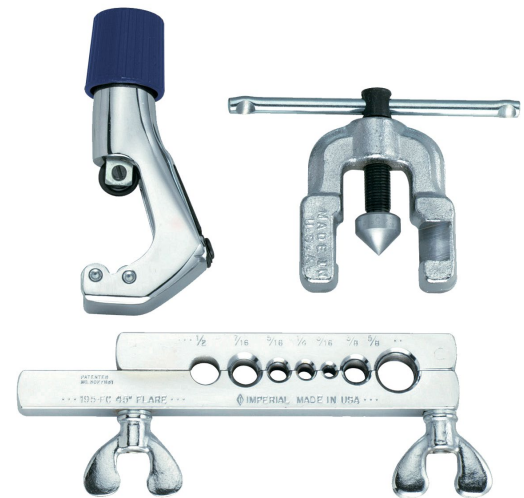
PART NO.	TUBE CUTTER	FLARING TOOL	RANGE OF FLARING TOOL (in.)	WEIGHT (lbs.)
120-F	TC-1000	375-FS (45°)	1/8, 3/16, 1/4, 5/16, 3/8, 7/16, 1/2, 5/8, 3/4 O.D.	2.75
122-FA	TC-1000	437-FB (37°)	3/16, 1/4, 5/16, 3/8, 1/2, 5/8 O.D.	2.75
123-FA	TC-1000	300-FB (45°)	3/16, 1/4, 5/16, 3/8, 1/2, 5/8 O.D.	2.75
124-FA	TC-1000	500-FC (45° Rol-Air™)	3/16, 1/4, 5/16, 3/8, 1/2, 5/8 O.D.	2.75
1226-FA	TC-1000	195-FC (45°)	3/16, 1/4, 5/16, 3/8, 7/16, 1/2, 5/8 O.D.	3.0



124-FA



120-F



1226-FA

INSTRUCTIONS FOR USING No. 120-F KIT

Tube Cutter
 No. 120-F (TC-1000) - 1000 Series Tubing

Place tubing (A) against cutting die. Turn from clockwise direction. (Clockwise means rotating when die moves either directly or indirectly, from wheel end of cutter.) Turn wheel end of cutter until wheel end of tubing is cut completely through. To remove die from end of tubing, slide die to green (Stop) mark, and operate as above. After cutting, reverse end of tubing.

To move cutter into operating position, place handle on reverse end and push toward handle. Spring tension stop will snap in position, then push forward to locking position.

EXTRA PARTS
 No. 12000 Cutter Wheel
 No. 7923-04 Sawyer Wheel
 No. 12000 Screw for Cutting Wheel
 No. 00001000 Screw for Sawyer
 No. 12000 Spring Washer for Sawyer

Flaring Tool with Slip-on Yoke
 No. 375-FS (45°) or 437-FB (37°)

1. After selecting bar having die of the same size as that of the tubing to be flared, insert the wing nut which will permit separation of the two halves of the bar.
 2. Insert tubing into the die of the corresponding size so that it is slightly above the top of the die. Bar should be used so that the tapered side of the die faces and faces flaring operation.
 3. Tighten wing die. It is a good practice to tighten the wing nut nearest the die first and then tighten the other one. The wing on the nuts are of a special shape that permits using the end of the bar as a hand in tightening. This results in accurate adjustment on items to be flared.
 4. Place the wheel bar (with wheel removed) of compressor is over the tubing (see Fig. 3). The inside edges of the die are beveled so that, once in position by thumb and forefinger as shown in Fig. 2, the flange can slide into hole. In pump, tube should be held in position by thumb and forefinger as shown in Fig. 2.
 5. Turn the compressor screw down firmly. The result will be an accurate 45° flare. Occasionally all compressor screws.

EXTRA PARTS
 No. 00100 Flaring bar for 1/8", 3/16", 1/4", 5/16", 3/8" and 1/2" O.D. tubing.
 No. 00101 Flaring bar for 5/8", 3/4", 7/8" and 1" O.D. tubing.
 No. 00102 Flaring bar for 1 1/8" O.D. tubing.
 No. 00103 Flaring bar for 1 1/4" O.D. tubing.
 No. 00104 Flaring bar for 1 1/2" O.D. tubing.
 No. 00105 Flaring bar for 1 3/4" O.D. tubing.
 No. 00106 Flaring bar for 2" O.D. tubing.

TUBING TOOL SELECTOR

TUBING TOOL SELECTOR				TUBE MATERIAL													
TOOL	PART NO.	PAGE NO.	SIZE RANGE TUBE O.D. (in.)	COPPER							ANNEALED ALUMINUM (SOFT)	ANNEALED BRASS (SOFT)	SAE 1020 STEEL (SOFT)	BRAZED- BUNDY WELD GM STEEL	STAINLESS STEEL ANNEALED (SOFT)	STAINLESS STEEL (1/8 HARD)	TITANIUM
				ANNEALED GENERAL PURPOSE	SOFT	TYPE K		TYPE L									
					BENDING TEMPER (HARD)	HARD	SOFT	BENDING TEMPER (HARD)	HARD	TYPE M							
Tube Cutters	TC-1000	2	1/8 - 1-1/8	•	•	•	•	•	•	•	•	•	•	•	(1)	(1)	(1)
	TC-1050	3	1/8 - 5/8	•	•	•	•	•	•	•	•	•	•	•			
	TC-2050	3	3/16 - 7/8	•	•	•	•	•	•	•	•	•	•	•	(1)	(1)	(1)
	174-F	3	3/8 - 1-1/8	•	•	•	•	•	•	•	•	•	•	•			
Metal Tubing	206-FB	4	3/8 - 2-5/8	•	•	•	•	•	•	•	•	•	•	•			
	227-FA	2	1/8 - 3/4	•	•	•	•	•	•	•	•	•	•	•	(1)	(1)	(1)
	312-FC	2	1/4 - 1-5/8	•	•	•	•	•	•	•	•	•	•	•			
	406-FA	4	2 - 4-1/8	•	•	•	•	•	•	•	•	•	•	•			
	307-FP	4	1/16 - 1/2 (4)														
Thermoplastic Rubber Hose	327-FP	4	1/8 - 13/16 (4)														
	101-F	5	1/4 - 5/8	•	•	•	•	•	•	•	•	•	•	•			
Bending Tools	102-F	5	1/4 - 7/8	•	•	•	•	•	•	•	•	•	•	•			
	112-F	5	1/4 - 3/8	•	•	•	•	•	•	•	•	•	•	•			
	162-F	5	3/16 - 1/4	•	•	•	•	•	•	•	•	•	•	•			
	163-F	5	1/4 - 5/8	•	•	•	•	•	•	•	•	•	•	•			
	201-F	5	1/4 - 7/8	•	•	•	•	•	•	•	•	•	•	•			
	270-F	10	3/4 - 1-1/8	•	•	•	•	•	•	•	•	•	•	•			
	364-FH	8	1/8 - 3/16	•	•	•	•	•	•	•	•	•	•	•			
	364-FHA	8	1/4 - 3/4 (3)	•	•	•	•	•	•	•	•	•	•	•			
	364-FHAM	8	6 - 12 mm	•	•	•	•	•	•	•	•	•	•	•			
	364-FHB	8	1/4 - 1/2	•	•	•	•	•	•	•	•	•	•	•			
	364-FHBM	8	6 - 12 mm	•	•	•	•	•	•	•	•	•	•	•			
	367-FH	7	1/8, 3/16, 1/4	•	•	•	•	•	•	•	•	•	•	•			
	368-FH	7	3/16, 1/4, 5/16, 3/8	•	•	•	•	•	•	•	•	•	•	•			
	370-FH	7	3/16, 1/4, 3/8, 1/2	•	•	•	•	•	•	•	•	•	•	•			
	470-FH	6	3/16, 1/4, 5/16, 3/8	•	•	•	•	•	•	•	•	•	•	•			
	564-FH	9	3/8, 1/2	•	•	•	•	•	•	•	•	•	•	•			
	600-F	10	1/4 - 3/4	•	•	•	•	•	•	•	•	•	•	•			
	664-FH	9	1/4, 3/8, 1/2	•	•	•	•	•	•	•	•	•	•	•			
	664-FH (Metric)	9	6 - 12 mm	•	•	•	•	•	•	•	•	•	•	•			
	37° Flaring Tool	400-F	13	3/16 - 5/8	•	•	•	•	•	•	(2)	•	•	•	•	•	•
437-FB		13	3/16 - 5/8	•	•	•	•	•	•	(2)	•	•	•	•	•	•	•
447-F		14	1/8 - 1/2	•	•	•	•	•	•	(2)	•	•	•	•	•	•	•
507-FB		13	3/16 - 5/8	•	•	•	•	•	•	(2)	•	•	•	•	•	•	•
555-FS		15	3/16 - 5/8	•	•	•	•	•	•	(2)	•	•	•	•	•	•	•
537-F		14	3/4 - 1-1/4	•	•	•	•	•	•	(2)	•	•	•	•	•	•	•
2000-FS		20	1/8 - 3/4	•	•	•	•	•	•	(2)	•	•	•	•	•	•	•
45° Flaring Tool	195-FC	11	3/16 - 5/8	•	•	•	•	•	•	(2)	•	•	•	•	•	•	•
	203-FA	11	5/8 - 1-1/8	•	•	•	•	•	•	(2)	•	•	•	•	•	•	•
	275-FS	16	1/8 - 3/4	•	•	•	•	•	•	(2)	•	•	•	•	•	•	•
	300-FB	11	3/16 - 5/8	•	•	•	•	•	•	(2)	•	•	•	•	•	•	•
	375-FS	11	1/8 - 3/4	•	•	•	•	•	•	(2)	•	•	•	•	•	•	•
	500-FC	11	3/16 - 5/8	•	•	•	•	•	•	(2)	•	•	•	•	•	•	•
	525-F	12	3/16 - 5/8 4.75 - 16 mm	•	•	•	•	•	•	(2)	•	•	•	•	•	•	•
45° Double Flaring Tools	555-FS	15	3/16 - 5/8	•	•	•	•	•	•	(2)	•	•	•	•	•	•	•
	2000-FS	20	1/8 - 3/4	•	•	•	•	•	•	(2)	•	•	•	•	•	•	•
	93-FB	12	3/16 - 1/2	•	•	•	•	•	•	(2)	•	•	•	•	•	•	•
Reaming and Deburring Tools	2000-FS	20	3/16 - 3/4	•	•	•	•	•	•	(2)	•	•	•	•	•	•	•
	208-F	23	3/16 - 1-1/2	•	•	•	•	•	•	•	•	•	•	•	•	•	•
	209-F	23	1/4 - 1-1/2	•	•	•	•	•	•	•	•	•	•	•	•	•	•
	210-F	23	1/4 - 1-1/2	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Tube Constrictor	TC-1020	2	1/8 - 1-1/8	•	•	•	•	•	•	•	•	•	•				
Swaging Tools	93-S	18	3/16 - 7/8	•	•	•	•	•	•	•	•	•	•	•			
	94-SSP	18	1/2, 5/8, 7/8	•	•	•	•	•	•	•	•	•	•	•			
	95-S	18	3/16 - 5/8	•	•	•	•	•	•	•	•	•	•	•			
	193-S	18	1/4 - 5/8	•	•	•	•	•	•	•	•	•	•	•			
	195-SA	18	1/4 - 5/8	•	•	•	•	•	•	•	•	•	•	•			
	275-FS	16	3/16 - 3/4	•	•	•	•	•	•	•	•	•	•	•			
	555-FS	15	3/16 - 5/8	•	•	•	•	•	•	•	•	•	•	•			
	2000-FS	20	3/16 - 3/4	•	•	•	•	•	•	•	•	•	•	•			
Metric Bubble Flaring Tool	293-F	15	4.75 - 10 mm	•	•	•	•	•	•	•	•	•	•				

(1) Heavy duty cutting wheel No. S75046 is recommended for continuous service with steel, stainless steel, monel, titanium and hard temper copper tubing.
 (2) Type M tubing should be torch annealed before flaring.
 (3) No.364-FHA, 5/8" - 3/4" size should be used only with annealed (softened) non-ferrous tubing.
 (4) Not to be used with metal reinforced hose.