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Tube Cutters - Metal Tubing

For hard or soft copper, aluminum, brass, thin wall steel, stainless steel, monel, titanium and other tubing.

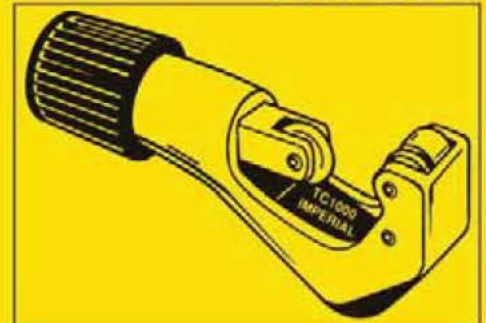
HI-DUTY® TUBE CUTTERS

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

Unique design eliminates spiraling. Makes clean, right-angle cuts with no burrs or chips to clog tubing. Both cutters include: rollers with flare cut-off groove, fold away reamer and spare cutting wheel. Rugged aluminum alloy body designed for handling ease. Finish: hand buffed high luster nickel-chrome plated body.

- \$ 151.00 **FT-TC-1000** Hi-Duty® tube cutter for 1/8" to 1-1/8" (4 to 28 mm) O.D. tubing. Length 5". Wt. 6.5 oz.
- \$ 208.46 **FT-312-FC** Hi-Duty® tube cutter for 1/4" to 1-5/8" (7 to 41 mm) O.D. tubing. Length 5-1/2". Wt. 7.0 oz.
- \$ 185.15 **FT-TC-1020** Combination tube constrictor and tube cutter for 1/8" to 1-1/8" (4 to 26 mm) O.D. tubing. Includes constrictor wheel for making brazed connections. Wt. 6.5 oz.
- \$ 233.77 **FT-S75015** Replacement cutting wheel for soft copper aluminum brass and steel tubing (supplied with FT-TC-1000, FT-312-FC and FT-TC-1020).
- \$ 146.69 **FT-S75046** Replacement cutting wheel for stainless steel, monel and hard temper copper tubing.
- \$ 37.85 **FT-S76637** Replacement constrictor roller wheel.
Conforms to Federal Specification GGG-C-771d, Type II, Class 1.

FT-TC-1000



ENCLOSED THRUST BEARING FEED
Hardened tool steel thrust bearing feed.



FLARE CUT-OFF GROOVE
Groove in rollers reduces tube loss when cracked flare is removed.



RETRACTABLE REAMER
Fold away hardened steel reamer with turned cutting edge removes inside burrs cleanly. Filing surface removes outside burrs.



SPARE CUTTING WHEEL
Spare cutting wheel carried under retractable locking reamer.



FILL WITH SOLDER
Joint is ready for sweating when constricted tube contracts smaller tube. Can be used for crimping applications.

FT-TC-1020

IMP® TUBE CUTTERS

For 1/8" to 5/8" and 3/16" to 7/8" O.D. tubing

- \$ 71.85 **FT-TC-1050** For 1/8" to 5/8" (4 to 15 mm) O.D. tubing. Requires only 1-1/4" swing radius (requires only 1-3/8" swing radius with 5/8" tube). Unique design eliminates spiraling. Repositioned rollers to bottom of tool allows for easier cutter engagement on tubing. Enclosed feed screw minimizes contamination, assuring continued smooth operation. Redesigned feed mechanism and new stainless steel rollers improves overall cutting action. New handle for better grip. Finish: hand buffed high luster nickel-chrome plated body. Length: 1-3/4". Wt. 2.5 oz.
- \$ 92.54 **FT-S32633** Replacement cutting wheel.
- \$ 106.15 **FT-TC-2050** For 3/16" to 7/8" (5 to 22 mm) O.D. tubing. (Requires only 1-11/16" swing radius). Wt. 4.0 oz.
- \$ 233.77 **FT-S75015** Replacement cutting wheel.



FT-TC-1050



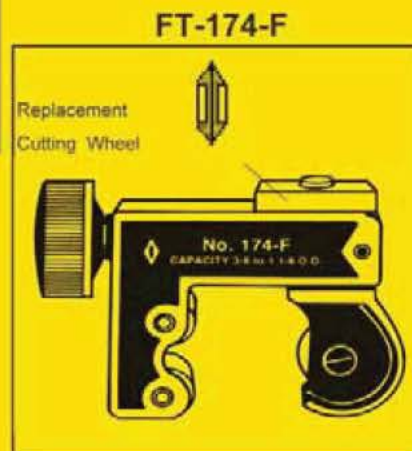
Tube Cutters - Metal Tubing

For hard or soft copper, aluminum, brass, thin wall steel, stainless steel, monel, titanium and other tubing.

"BIG-IMP"® TUBE CUTTER

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

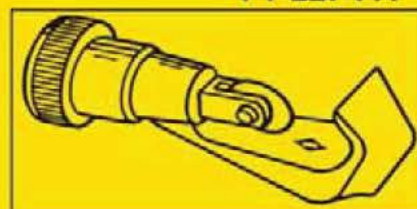
- \$ 143.15 **FT-174-F** Big capacity, small size. Designed for use in tight quarters where other cutters won't fit. Requires only 1-15/16" swing radius (2-1/4" swing radius with 1-1/8" tube). Perfect for instrument panels, control cabinets, refrigeration units, freezers, air-conditioning, heating units, machine tools, etc. Aluminum alloy body, black finish with brushed highlights. Length: 2-11/16". Wt. 5.0 oz.
- \$ 233.77 **FT-S75015** Replacement cutting wheel for soft copper, aluminum, brass and steel tubing (supplied with cutter).
- \$ 146.69 **FT-S75046** Replacement cutting wheel for stainless steel, monel and hard temper copper tubing.



JUNIOR TUBE CUTTER

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

- \$ 81.38 **FT-227-FA** Exceptionally handy in close quarters - only 3-1/2" overall length. Makes quick, clean, right-angle cuts without flattening tube. Enclosed feed mechanism. Satin finish. Wt. 5.0 oz.
- \$ 92.54 **FT-S32633** Replacement cutting wheel.
Conforms to Federal Specification GGG-C-771d, Type II, Class I



ADJUST-O-MATIC® TUBE CUTTERS

For 3/8" to 2-5/8" and 2" to 4-1/8" O.D. tubing.

Ratchet feed mechanism speeds up cutting operation - opens quickly to insert tubing, slides to cutting position instantly, fine feed adjustment for cutting action. 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.

- \$ 324.23 **FT-206-FB** Adjust-O-Matic® satin nickel finish chrome plated tube cutter for tubing from 3/8" to 2-5/8" (10 to 66mm) O.D. tubing. Length closed 7-3/4". Wt. 2.0 lbs.
- \$ 215.00 **FT-S74761** Replacement cutting wheel
- \$ 642.15 **FT-406-FA** Adjust-O-Matic® for 2" to 4-1/8" (51 to 104mm) O.D. tubing. Length closed 11-1/4". Wt. 3.5 lbs.
- \$ 65.69 **FT-S74833** Replacement cutting wheel.
Conforms to Federal Specification GGG-C-771d, Type II, Class I.



RATCHET FEED

Ratchet release opens cutter instantly to maximum size.



Push on handle to slide cutting wheel to tubing. Rotate handle for fine adjustment.



FLARE CUT-OFF GROOVE

Wide flare cut-off groove in rollers to accommodate flares on large size tubing.



SPARE CUTTING WHEEL

Spare cutting wheel included in handle under snap-off cap.

Tube Cutters - Metal Tubing

For hard or soft copper, aluminum, brass, thin wall steel, stainless steel, monel, titanium and other tubing.

Sawing Vice

For 1/8" to 1-1/2" (4 to 38mm) O.D. tube or hose.

- \$ 883.46 FT-384-FA Grips tube or hose securely for perfect right-angle cuts. Excellent for holding stainless steel tubing and wire braid hose when cutting with hacksaw. Quick clamp adjustment to tube size with instant tube release. Replaceable hardened steel hacksaw guides. No loose parts. Fastens on bench or clamps in vise. Size: 5" x 3-1/8" x 5-1/8". Wt. 2.5 lbs.

Conforms to Federal Specification GGG-V-435d.



Fast ratchet clamping action.



Press to release.

FT-384-FA



Tube Cutters - Plastic & Rubber Hose

For non-metal reinforced hose and tubing.

SNIMP® PLASTIC TUBE AND HOSE SHEAR

For 1/16" to 1/2" (1 to 13mm) O.D. hose* or tubing.

- \$ 40.71 FT-307-FP Compact shear is spring loaded for safety.
Replacable hardened steel blade.
Length: 2-7/8" Wt. 1.0 oz.
- \$ 17.69 FT-S8115601 Replacement blade.

*Not for use with metal reinforced hose



FT-307-FP

For non-metal reinforced hose and tubing.

PRODUCTION PLASTIC TUBE AND HOSE SHEAR

For 1/8" to 13/16" (4 to 20mm) O.D. hose* or tubing.

- \$ 350.31 FT-327-FP Replaceable hardened steel blade. Can be bench or wall mounted for production, or carried in tool kit. Wt. 1 lb.
- \$ 78.92 FT-S77615 Replacement cutting blade.

*Not for use with metal reinforced hose



FT-327-FP

Tube Benders - Lever Type

For soft copper, aluminum, brass, steel, stainless steel and other metals.

LEVER-TYPE TUBE BENDERS

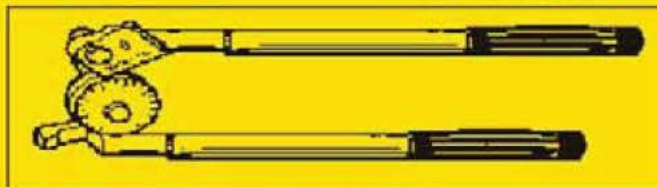
For 1/8" to 1" O.D. tubing.

FT-364-FHA 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.



Easy 90° start

FT-364-FHA-06



Style furnished for 1/4" through 1/2" O.D. tubing.

Each tool bends only one size.

List Price	Catalog Number	Tube O.D. (in.)	Radius to Center of Tube (in.)	Weight Each (lbs.)
\$ 211.69	FT-364-FH-02	1/8"	3/8"	0.5 lbs.
\$ 211.69	FT-364-FH-03	3/16"	7/16"	0.5 lbs.
\$ 264.00	FT-364-FHA-04	1/4"	9/16"	1.0 lbs.
\$ 332.92	FT-364-FHA-05	5/16"	11/16"	1.01 lbs.
\$ 283.23	FT-364-FHA-06	3/8"	15/16"	1.75 lbs.
\$ 534.46	FT-364-FHA-07	7/16"	1-1/2"	3.5 lbs.
\$ 510.46	FT-364-FHA-08	1/2"	1-1/2"	3.5 lbs.
\$ 671.00	FT-364-FHA-10*	5/8"	2-1/4"	5.5 lbs.
\$ 965.85	FT-364-FHA-12*	3/4"	3"	7.0 lbs.
\$ 1,244.77	FT-364-FHA-14*	7/8"	3"	10.5 lbs.
\$ 1,854.62	FT-364-FHA-16*	1"	3-1/2"	10.5 lbs.

FT-364-FH-02



Style furnished for 1/8" and 3/16" O.D. tubing.

Conforms to Federal Specifications GGG-B-191a Type III, Class 2.

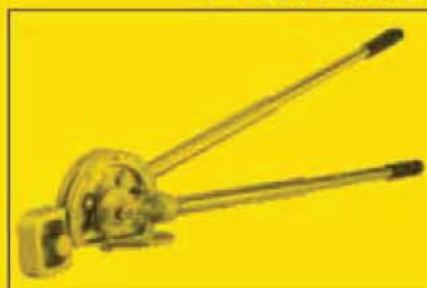
*For bending annealed copper and aluminum tubing only.

FT-364-FHA-10



Style furnished for 5/8" and 3/4" O.D. tubing.

FT-364-FHA-14



Features telescopic handles for increased leverage.

Expandable style furnished for 7/8" and 1" O.D. tubing.

Metric Size Bending Tools

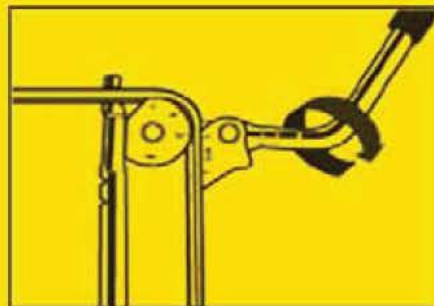
List Price	Catalog Number	Tube O.D. (mm)	Radius to Center of Tube		Weight Each	
			(mm)	(in.)	kg.	lbs.
\$ 286.62	FT-364-FHAM-6mm	6mm	14.2 mm	9/16"	0.45 kg	1.0 lbs.
\$ 357.85	FT-364-FHAM-8mm	8mm	17.5 mm	11/16"	0.45 kg	1.0 lbs.
\$ 328.08	FT-364-FHAM-10mm	10mm	24.0 mm	15/16"	0.79 kg	1.75 lbs.
\$ 627.15	FT-364-FHAM-12mm	12mm	38.1 mm	1-1/2"	1.6 kg	3.5 lbs.

Tube Benders - Lever Type

For soft copper, aluminum, brass, steel, stainless steel and other metals.

SWIVEL HANDLE TUBE BENDERS

FT-364-FHB Our newest lever type bender, 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 type benders.

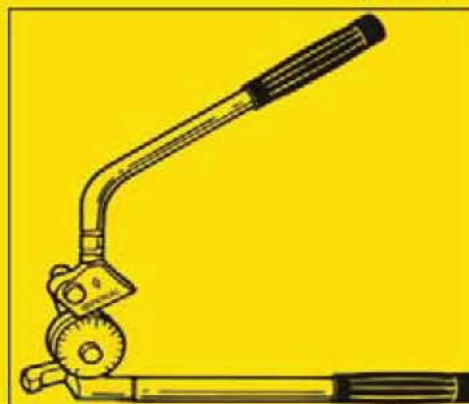


Each tool bends only one size.

List Price	Catalog Number	Tube O.D. (in.)	Radius to Center of Tube (in.)	Weight Each (lbs.)
\$ 300.31	FT-364-FHB-04	1/4"	9/16"	1.0 lbs.
\$ 368.69	FT-364-FHB-05	5/16"	11/16"	1.0 lbs.
\$ 330.00	FT-364-FHB-06	3/8"	15/16"	1.75 lbs.
\$ 584.23	FT-364-FHB-07	7/16"	1-1/2"	3.5 lbs.
\$ 548.38	FT-364-FHB-08	1/2"	1-1/2"	3.5 lbs.

FT-364-FHB-06

PATENTED



Style furnished for 1/4" through 1/2" O.D. tubing.

Metric Size Bending Tools

List Price	Catalog Number	Tube O.D. (mm)	Radius to Center of Tube		Weight Each	
			(mm)	(in.)	kg.	lbs.
\$ 291.15	FT-364-FHBM-6mm	6 mm	14.2 mm	9/16"	0.45 kg.	1.0 lbs.
\$ 361.15	FT-364-FHBM-8mm	8 mm	17.5 mm	11/16"	0.45 kg.	1.0 lbs.
\$ 338.15	FT-364-FHBM-10mm	10 mm	24.0 mm	15/16"	0.79 kg.	1.75 lbs.
\$ 649.08	FT-364-FHBM-12mm	12 mm	38.1 mm	1-1/2"	1.6 kg.	3.5 lbs.

Tube Benders - Lever & Spring Type

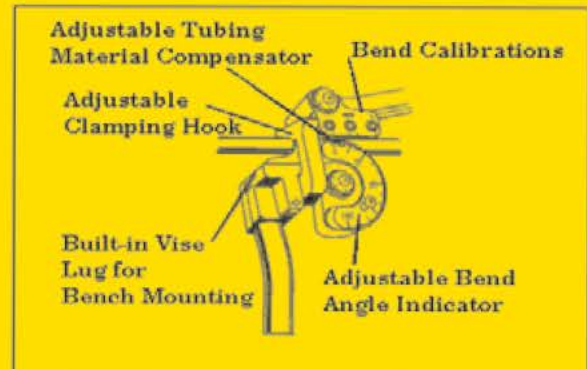
For bending soft copper, aluminum, brass, steel, stainless steel and other tubing.

FT-564-FH and FT-564-FHT LEVER TYPE HEAVY DUTY TUBE BENDERS

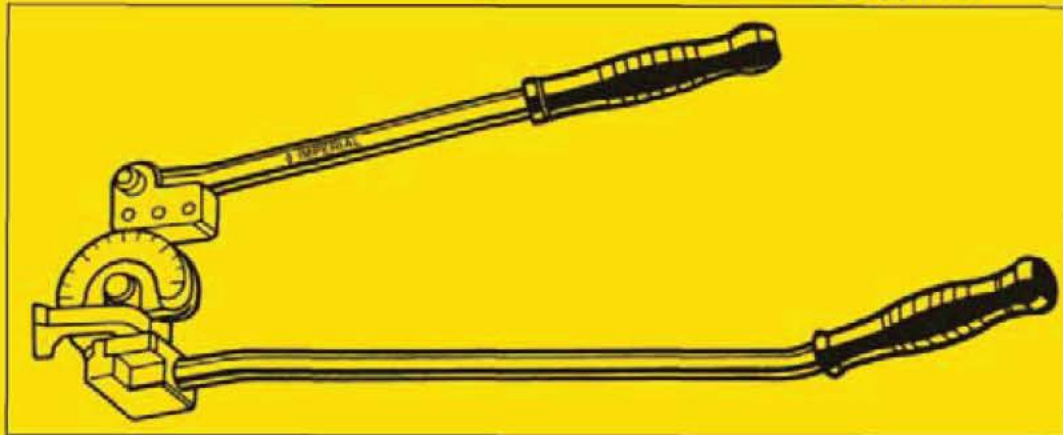
For 3/8" and 1/2" O.D. tubing.

- Meets ANSI/ASME Boiler/Power requirements.
- Vise mountable.
- Prevents slippage and flattening.
- Fully adjustable to compensate for variances in tube tolerance.
- Starts with handles at 90° angle.
- Built for rugged day-in and day-out use.
- Precise bends!
- Self aligning rollers eliminate scoring and reduce bending effort.

These heavy-duty tube benders feature high-strength tool steel construction on all components subjected to stress during the bending process- including forming rollers, form wheel, stop pins, hook, cam adjustment shaft. Unique offset handle design assures maximum power transfer between worker and bender. Bender will not "gyrate" as handles are brought to closed position.



FT-564-FH



PATENTED

List Price	Catalog Number	Tube O.D. (in.)	Bend Radius (in.) to Ctr. of Tube	Weight (lbs.) Each
\$ 1,473.62	FT-564-FHT-06	3/8"	15/16"	5 lbs.
\$ 1,473.62	FT-564-FH-06	3/8"	1-1/8"	5.5 lbs.
\$ 1,518.46	FT-564-FH-08	1/2"	1-1/2"	7 lbs.

Tube Benders - Lever & Spring Type

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

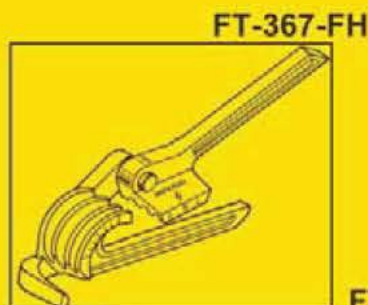
IMP® TRIPLE HEADER BENDERS

For soft copper, aluminum and thin wall steel tubing.
For 1/8", 3/16", 1/4" and 3/16", 1/4", 5/16", 3/8" O.D. tubing.

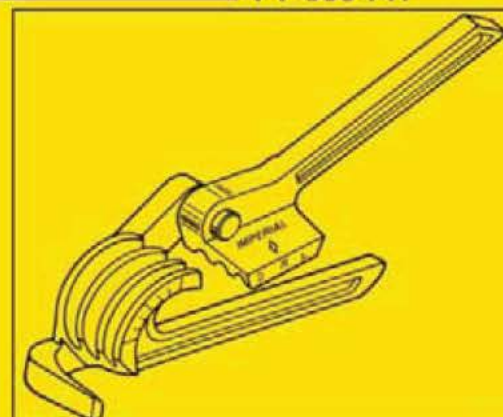
Calibrated markings for making accurate left-hand, right-hand and offset bends. Ninety degree start requires less effort - making bending fast and easy. For soft copper aluminum and steel.

\$ 141.08 **FT-367-FH** For 1/8", 3/16" and 1/4" (3, 4, and 6 mm) O.D. tubing. 9/16" (14.2 mm) radius to center of tube. Wt. 0.5 lbs.

\$ 151.85 **FT-368-FH** For 3/16", 1/4", 5/16" and 3/8" (6 and 8 mm) O.D. tubing. 15/16" (17.5 mm) radius to center of tube. Wt. 1.0 lbs.



FT-368-FH



Bends 1/8"
O.D. tube
(FT-367-FH)



Bends 1/4"
O.D. tube
(FT-367-FH)



Bends 3/16"
O.D. tube
(FT-367-FH)

SPRING TYPE TUBE BENDERS

For soft copper and aluminum tubing.
For 1/4" to 7/8" O.D. tubing.

Tools allow hand bending of soft tubing to any shape without collapsing walls.

Special spring steel, chrome finish. End belled for quick tube removal.

List Price	Catalog Number	Tube O.D. (in.)	Length (in.)	Weight (oz.)
\$ 15.00	FT-102-F-04	1/4"	10"	3 oz.
\$ 15.00	FT-102-F-05	5/16"	10"	3 oz.
\$ 17.92	FT-102-F-06	3/8"	10"	4 oz.
\$ 19.77	FT-102-F-07	7/16"	12"	6.25 oz.
\$ 19.77	FT-102-F-08	1/2"	12"	6.5 oz.
\$ 20.38	FT-102-F-10	5/8"	12"	8 oz.
\$ 24.38	FT-102-F-12	3/4"	12"	10 oz.
\$ 25.54	FT-102-F-14	7/8"	12"	10 oz.



FT-102-F

- \$ 134.23 **FT-201-F** Set of 8 benders for 1/4", 5/16", 3/8", 7/16", 1/2", 5/8", 3/4" and 7/8" O.D. tubing.
- \$ 108.85 **FT-101-F** Set of 6 benders for 1/4", 5/16", 3/8", 7/16", 1/2" and 5/8" O.D. tubing.
- \$ 88.46 **FT-163-F** Set of 4 benders for 1/4", 3/8", 1/2" and 3/8" O.D. tubing.
- \$ 45.92 **FT-112-F** Set of 3 benders for 1/4", 5/16" and 3/8" O.D. tubing.

Tube Benders - Lever Type

For bending soft copper, aluminum, brass, steel, stainless steel and other metal tubing.

WIDE RANGE TUBE BENDER KITS

For 1/4" to 7/8" O.D. tubing.

Each tool quickly adapts to all sizes in its range by changing forming wheel and block. Telescopic handles reposition during bend for best leverage. Calibrations show precise bend angle. One piece benders furnished for 1/4" and 5/16" O.D. sizes. Furnished in tool case with space for other tools needed on the job.

\$ 3,531.97 **FT-260-FHA** for 7 sizes Wt. 23 lbs.

Tube O.D. (in.)	Radius to Ctr. of Tube (in.)
1/4"	9/16"
5/16"	11/16"
3/8"	1-5/8"
1/2"	1-5/8"
5/8"	2-1/4"
3/4"	3"
7/8"	3"

\$ 2,609.32 **FT-350-FHA** for 6 sizes Wt. 20 lbs.

Tube O.D. (in.)	Radius to Ctr. of Tube (in.)
1/4"	9/16"
5/16"	11/16"
3/8"	1-5/8"
1/2"	1-5/8"
5/8"	2-1/4"
3/4"	3"

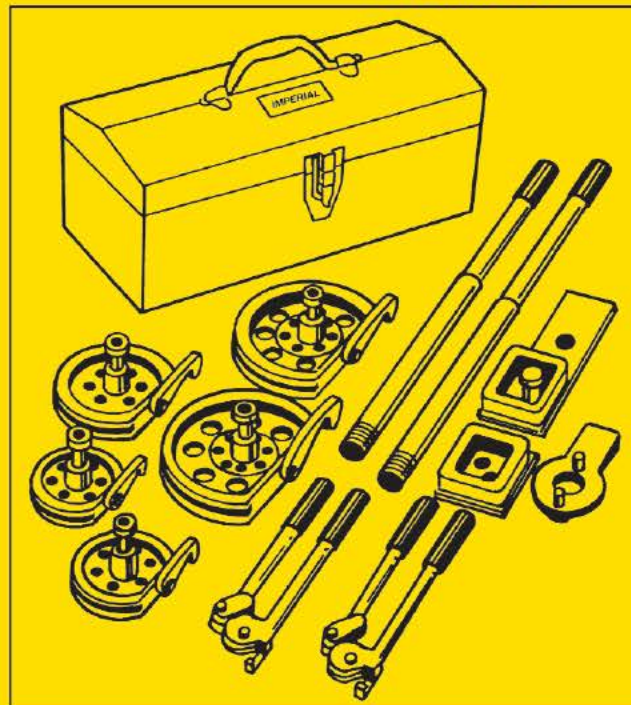
\$ 1,948.15 **FT-360-FHA** for 4 sizes Wt. 20 lbs.

Tube O.D. (in.)	Radius to Ctr. of Tube (in.)
3/8"	1-5/8"
1/2"	1-5/8"
5/8"	2-1/4"
3/4"	3"

Conforms to Federal Specification GGG-B-191 Type III, Class 1.

*Recommended for bending annealed copper and aluminum tubing only.

FT-260-FHA



All wide range benders furnished in tool case with space for other tools.

Tube Benders - Gear Type

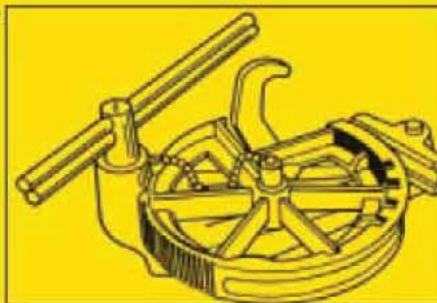
*For aircraft grade stainless steel (MIL-T-6845)
and all other metal tubing of bending temper.*

FT-270-F GEAR TYPE TUBE BENDER

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

For all bending work. Spur-gear type with 10-to-1 ratio for easy bending of all tempered tubing. Floating shoe aligns tube perfectly on calibrated forming wheel. Pull-pin on wheel speeds repositioning for bends over 90°. Portable. Can be hand held, clamped in vise or bolted to bench. Adapts to pipe vise with handle FT-271-F.

FT-270-F



FT-271-F



FT-271-F Pipe vise extension (fits all FT-270-F Benders).
For use when clamping bender in pipe vise. Wt. 1.75 lbs.

Each tool bends only one size.

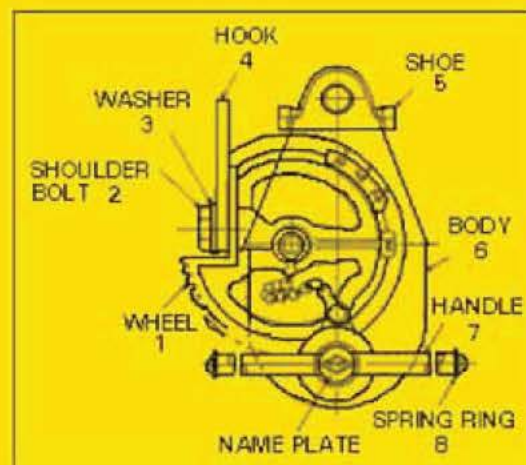
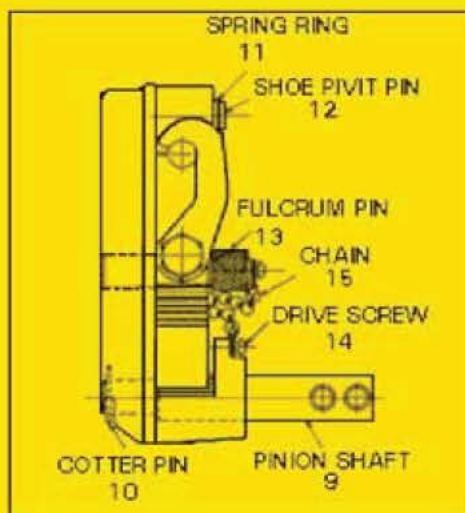
List Price	Catalog Number	Tube O.D. (in.)	Radius from Ctr. to Ctr. of Tube (in.)	Min. Return from Ctr. to Ctr. of Tubing (in.)	Weight Each (lbs.)	Wall Thickness (in.)
\$ 707.69	FT-270-F-06	3/8"	1-3/4"	4-1/2"	3 lbs.	.030" to .060"
\$ 884.46	FT-270-F-08	1/2"	2-1/2"	6"	4.75 lbs.	.035" to .065"
\$ 1,179.38	FT-270-F-10	5/8"	3"	7-1/2"	8.5 lbs.	.040" to .072"
\$ 1,383.54	FT-270-F-12	3/4"	4"	9-1/2"	15 lbs.	.042" to .083"
\$ 1,383.54	FT-270-F-14	7/8"	4"	9-1/2"	14.75 lbs.	.045" to .083"
\$ 1,383.54	FT-270-F-16	1"	4"	9-1/2"	14.75 lbs.	.065" to .095"
\$ 1,383.54	FT-270-F-18	1-1/8"	4"	9-1/2"	14.25 lbs.	.065" to .095"

Tube Benders - Gear Type

For aircraft grade stainless steel (MIL-T-6845)
and all other metal tubing of bending temper.

REPLACEMENT PARTS

For FT-270-F Gear Type Tube Benders



Order by Catalog Number and O.D. size. (See page 12 & 13 of FT 12/08 for List Price.)

Each bender handles only one size.

Size (in.)	Catalog Number	1 Part No.	2 Part No.	3 Part No.	4 Part No.	5 Part No.	6 Part No.	7 Part No.	8 Part No.	9 Part No.	10 Part No.	11 Part No.	12 Part No.	13 Part No.	14 Part No.	15 Part No.
3/8"	FT-270-F-06	FT-S62244	FT-S62245	FT-S62246	FT-S62247	FT-S62250	FT-S62251	FT-S62252	FT-S62253	FT-S62254	FT-S62255	FT-S62257	FT-S62258	FT-S62838	FT-S62836	FT-S62839
1/2"	FT-270-F-08	FT-S62261	FT-S62264	FT-S62246	FT-S62263	FT-S62262	FT-S62260	FT-S62269	FT-S62253	FT-S62268	FT-S62255	FT-S62266	FT-S62265	FT-S62840	FT-S62836	FT-S62839
5/8"	FT-270-F-10	FT-S62275	FT-S62280	FT-S62279	FT-S62278	FT-S62277	FT-S62276	FT-S62284	FT-S62285	FT-S62283	FT-S62255	FT-S62281	FT-S62282	FT-S62841	FT-S62836	FT-S62837
3/4"	FT-270-F-12	FT-S62305	FT-S62294	FT-S62298	FT-S62307	FT-S62306	FT-S62288	FT-S62292	FT-S62297	FT-S62291	FT-S62255	FT-S62296	FT-S62295	FT-S62835	FT-S62836	FT-S62837
7/8"	FT-270-F-14	FT-S62302	FT-S62294	FT-S62298	FT-S62304	FT-S62303	FT-S62288	FT-S62292	FT-S62297	FT-S62291	FT-S62255	FT-S62296	FT-S62295	FT-S62835	FT-S62836	FT-S62837
1"	FT-270-F-16	FT-S62299	FT-S62294	FT-S62298	FT-S62301	FT-S62300	FT-S62288	FT-S62292	FT-S62297	FT-S62291	FT-S62255	FT-S62296	FT-S62295	FT-S62835	FT-S62836	FT-S62837
1-1/8"	FT-270-F-18	FT-S62267	FT-S62294	FT-S62298	FT-S62290	FT-S62288	FT-S62288	FT-S62292	FT-S62297	FT-S62291	FT-S62255	FT-S62296	FT-S62295	FT-S62835	FT-S62836	FT-S62837

Tube Benders - Gear Type

*For aircraft grade stainless steel (MIL-T-6845)
and all other metal tubing of bending temper.*

REPLACEMENT PARTS

For FT-270-F Gear Type Tube Benders

List Price	Catalog Number	Tube Bender Size
\$ 707.69	FT-270-F-06	3/8" O.D. Gear Type Bender
\$ 344.15	FT-S62244	3/8" O.D. Gear Type Bender
\$ 38.85	FT-S62245	3/8" O.D. Gear Type Bender
\$ 11.15	FT-S62246	3/8" O.D. Gear Type Bender
\$ 72.54	FT-S62247	3/8" O.D. Gear Type Bender
\$ 92.77	FT-S62250	3/8" O.D. Gear Type Bender
\$ 285.31	FT-S62251	3/8" O.D. Gear Type Bender
\$ 72.54	FT-S62252	3/8" O.D. Gear Type Bender
\$ 6.89	FT-S62253	3/8" O.D. Gear Type Bender
\$ 181.46	FT-S62254	3/8" O.D. Gear Type Bender
\$ 7.23	FT-S62255	3/8" O.D. Gear Type Bender
\$ 8.15	FT-S62257	3/8" O.D. Gear Type Bender
\$ 21.15	FT-S62258	3/8" O.D. Gear Type Bender
\$ 4.77	FT-S62836	3/8" O.D. Gear Type Bender
\$ 46.89	FT-S62838	3/8" O.D. Gear Type Bender
\$ 19.69	FT-S62839	3/8" O.D. Gear Type Bender

List Price	Catalog Number	Tube Bender Size
\$ 1,179.38	FT-270-F-10	5/8" O.D. Gear Type Bender
\$ 7.23	FT-S62255	5/8" O.D. Gear Type Bender
\$ 674.15	FT-S62275	5/8" O.D. Gear Type Bender
\$ 542.62	FT-S62276	5/8" O.D. Gear Type Bender
\$ 121.08	FT-S62277	5/8" O.D. Gear Type Bender
\$ 103.08	FT-S62278	5/8" O.D. Gear Type Bender
\$ 13.92	FT-S62279	5/8" O.D. Gear Type Bender
\$ 51.54	FT-S62280	5/8" O.D. Gear Type Bender
\$ 4.92	FT-S62281	5/8" O.D. Gear Type Bender
\$ 33.31	FT-S62282	5/8" O.D. Gear Type Bender
\$ 228.31	FT-S62283	5/8" O.D. Gear Type Bender
\$ 92.77	FT-S62284	5/8" O.D. Gear Type Bender
\$ 6.62	FT-S62285	5/8" O.D. Gear Type Bender
\$ 4.77	FT-S62836	5/8" O.D. Gear Type Bender
\$ 18.15	FT-S62837	5/8" O.D. Gear Type Bender
\$ 63.46	FT-S62841	5/8" O.D. Gear Type Bender

List Price	Catalog Number	Tube Bender Size
\$ 884.46	FT-270-F-08	1/2" O.D. Gear Type Bender
\$ 11.15	FT-S62246	1/2" O.D. Gear Type Bender
\$ 6.69	FT-S62253	1/2" O.D. Gear Type Bender
\$ 7.23	FT-S62255	1/2" O.D. Gear Type Bender
\$ 325.89	FT-S62260	1/2" O.D. Gear Type Bender
\$ 496.46	FT-S62261	1/2" O.D. Gear Type Bender
\$ 109.15	FT-S62262	1/2" O.D. Gear Type Bender
\$ 73.31	FT-S62263	1/2" O.D. Gear Type Bender
\$ 55.46	FT-S62264	1/2" O.D. Gear Type Bender
\$ 27.85	FT-S62265	1/2" O.D. Gear Type Bender
\$ 8.15	FT-S62266	1/2" O.D. Gear Type Bender
\$ 198.54	FT-S62268	1/2" O.D. Gear Type Bender
\$ 91.00	FT-S62269	1/2" O.D. Gear Type Bender
\$ 4.77	FT-S62836	1/2" O.D. Gear Type Bender
\$ 19.69	FT-S62839	1/2" O.D. Gear Type Bender
\$ 45.38	FT-S62840	1/2" O.D. Gear Type Bender

List Price	Catalog Number	Tube Bender Size
\$ 1,383.54	FT-270-F-12	3/4" O.D. Gear Type Bender
\$ 7.23	FT-S62255	3/4" O.D. Gear Type Bender
\$ 547.23	FT-S62288	3/4" O.D. Gear Type Bender
\$ 262.89	FT-S62291	3/4" O.D. Gear Type Bender
\$ 91.00	FT-S62292	3/4" O.D. Gear Type Bender
\$ 91.00	FT-S62294	3/4" O.D. Gear Type Bender
\$ 42.46	FT-S62295	3/4" O.D. Gear Type Bender
\$ 5.15	FT-S62296	3/4" O.D. Gear Type Bender
\$ 14.31	FT-S62297	3/4" O.D. Gear Type Bender
\$ 24.23	FT-S62298	3/4" O.D. Gear Type Bender
\$ 862.23	FT-S62305	3/4" O.D. Gear Type Bender
\$ 145.46	FT-S62306	3/4" O.D. Gear Type Bender
\$ 127.23	FT-S62307	3/4" O.D. Gear Type Bender
\$ 63.46	FT-S62835	3/4" O.D. Gear Type Bender
\$ 4.77	FT-S62836	3/4" O.D. Gear Type Bender
\$ 18.15	FT-S62837	3/4" O.D. Gear Type Bender

Tube Benders - Gear Type

For aircraft grade stainless steel (MIL-T-6845)
and all other metal tubing of bending temper.

REPLACEMENT PARTS

For FT-270-F Gear Type Tube Benders

List Price	Catalog Number	Tube Bender Size
\$ 1,383.54	FT-270-F-14	7/8" O.D. Gear Type Bender
\$ 7.23	FT-S62255	7/8" O.D. Gear Type Bender
\$ 547.23	FT-S62288	7/8" O.D. Gear Type Bender
\$ 262.69	FT-S62291	7/8" O.D. Gear Type Bender
\$ 91.00	FT-S62292	7/8" O.D. Gear Type Bender
\$ 91.00	FT-S62294	7/8" O.D. Gear Type Bender
\$ 42.46	FT-S62295	7/8" O.D. Gear Type Bender
\$ 5.15	FT-S62296	7/8" O.D. Gear Type Bender
\$ 14.31	FT-S62297	7/8" O.D. Gear Type Bender
\$ 24.23	FT-S62298	7/8" O.D. Gear Type Bender
\$ 862.23	FT-S62302	7/8" O.D. Gear Type Bender
\$ 163.69	FT-S62303	7/8" O.D. Gear Type Bender
\$ 127.23	FT-S62304	7/8" O.D. Gear Type Bender
\$ 64.36	FT-S62835	7/8" O.D. Gear Type Bender
\$ 4.77	FT-S62836	7/8" O.D. Gear Type Bender
\$ 18.15	FT-S62837	7/8" O.D. Gear Type Bender

List Price	Catalog Number	Tube Bender Size
\$ 1,383.54	FT-270-F-18	1-1/8" O.D. Gear Type Bender
\$ 7.23	FT-S62255	1-1/8" O.D. Gear Type Bender
\$ 835.69	FT-S62287	1-1/8" O.D. Gear Type Bender
\$ 547.23	FT-S62288	1-1/8" O.D. Gear Type Bender
\$ 163.70	FT-S62289	1-1/8" O.D. Gear Type Bender
\$ 128.54	FT-S62290	1-1/8" O.D. Gear Type Bender
\$ 262.69	FT-S62291	1-1/8" O.D. Gear Type Bender
\$ 91.00	FT-S62292	1-1/8" O.D. Gear Type Bender
\$ 91.00	FT-S62294	1-1/8" O.D. Gear Type Bender
\$ 42.46	FT-S62295	1-1/8" O.D. Gear Type Bender
\$ 5.15	FT-S62296	1-1/8" O.D. Gear Type Bender
\$ 14.31	FT-S62297	1-1/8" O.D. Gear Type Bender
\$ 24.23	FT-S62298	1-1/8" O.D. Gear Type Bender
\$ 63.46	FT-S62835	1-1/8" O.D. Gear Type Bender
\$ 4.77	FT-S62836	1-1/8" O.D. Gear Type Bender
\$ 18.15	FT-S62837	1-1/8" O.D. Gear Type Bender

List Price	Catalog Number	Tube Bender Size
\$ 1,383.54	FT-270-F-16	1" O.D. Gear Type Bender
\$ 7.23	FT-S62255	1" O.D. Gear Type Bender
\$ 547.23	FT-S62288	1" O.D. Gear Type Bender
\$ 262.69	FT-S62291	1" O.D. Gear Type Bender
\$ 91.00	FT-S62292	1" O.D. Gear Type Bender
\$ 91.00	FT-S62294	1" O.D. Gear Type Bender
\$ 42.46	FT-S62295	1" O.D. Gear Type Bender
\$ 5.15	FT-S62296	1" O.D. Gear Type Bender
\$ 14.31	FT-S62297	1" O.D. Gear Type Bender
\$ 24.23	FT-S62298	1" O.D. Gear Type Bender
\$ 870.31	FT-S62299	1" O.D. Gear Type Bender
\$ 163.69	FT-S62300	1" O.D. Gear Type Bender
\$ 127.23	FT-S62301	1" O.D. Gear Type Bender
\$ 63.46	FT-S62835	1" O.D. Gear Type Bender
\$ 4.77	FT-S62836	1" O.D. Gear Type Bender
\$ 18.15	FT-S62837	1" O.D. Gear Type Bender

Tube Benders - Gear Type

For hard or soft copper, aluminum, brass, thin wall steel, stainless steel, monel, titanium and other metal tubing.

WORM GEAR TUBE BENDER

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

\$ 9,465.15 **FT-600-F** Precision tool for highest quality work. Worm gear type with 50-to-1 ratio and crank with revolving hand grip. Keeps effort at a minimum. Follow bar eliminates drawing action and keeps tube in virtually perfect round. Adjustable pressure roller positions quickly in index holes. Enclosed gears. Furnished in carrying case.

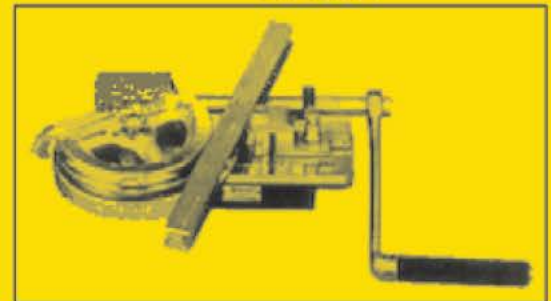
Sizes of kit: 14" x 9" x 6". Wt. 35.0 lbs.

Tube Wall Thickness and Bend Radius

Tube O.D. (in.)	Wall Thickness (in.)	Radius to Ctr of Tube (in.)
1/4"	.016" to .049"	3/4"
5/16"	.020" to .065"	1"
3/8"	.028" to .083"	1-1/4"
1/2"	.035" to .083"	2"
5/8"	.042" to .083"	2-1/2"
3/4"	.049" to .083"	3"

Conforms to Federal Specification GGGB-B-191b, Type I, Class 2. Meets ANSI specification (B31.1) and ASME Section III Nuclear Code.

FT-600-F



Furnished in carrying case.

GEAR TYPE TUBE BENDER

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

\$ 37,257.92 **FT-700-F** Makes bends up to 180° in stainless steel tubing conforming to Specification MIL-T-6845. Precision construction maintains original diameter of tube within 5% at cross section of bend. Also bends copper, aluminum and other types of tubing. Size of kit 16" x 7" x 6-1/5". Wt. 32.0 lbs.

Calibration dial indicates angle on bend.

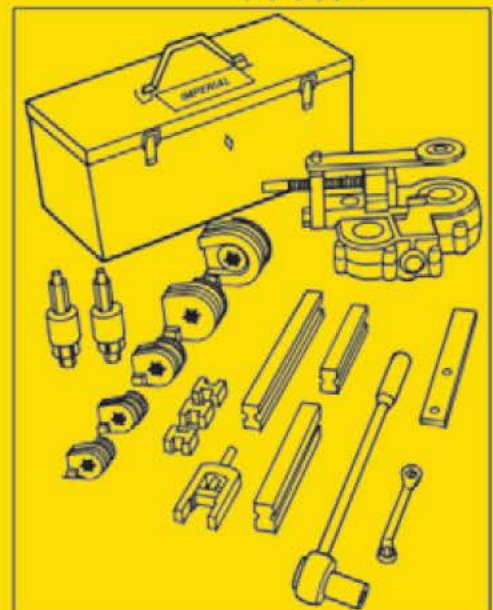
Tubing Wall Thickness and Bend Radius

Tube O.D. (in.)	Wall Thickness (in.)	Bend Radius Ctr of Tube (in.)
1/4"	.016" to .049"	9/16"
5/16"	.020" to .065"	11/16"
3/8"	.028" to .083"	15/16"
1/2"	.035" to .083"	1-1/4"
5/8"	.042" to .083"	1-1/2"
3/4"	.049" to .083"	1-3/4"

(In some cases these wall thicknesses can be exceeded for copper and aluminum tubing. Consult factory.)

Conforms to Federal Specification GGB-B-191a, and Interim Amendment No. 2, Type I, Class 1.

FT-700-F



45° Flaring Tools

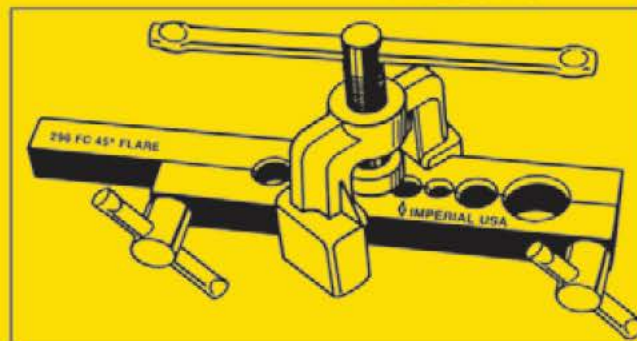
For soft tubing only - copper, aluminum, brass.

45° FLARING TOOLS

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

- \$ 137.85 **FT-296-FC** Flares 7 sizes of tubing. Economical, fast operating tool. Quick slip-on, yoke. Easy operating swivel-type, hardened steel, chrome-finished cone assures smooth flares. Chrome and black finish. Wt. 1.75 lbs.
- \$ 176.08 **FT-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.

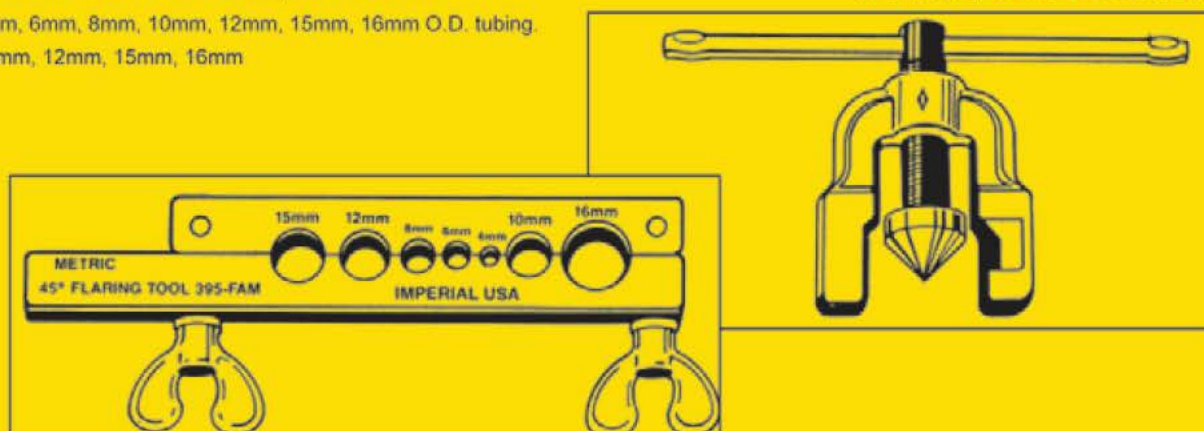
FT-296-FC



45° METRIC SIZE FLARING TOOL

- \$ 231.08 **FT-395-FAM** Same as FT-195-FC except for metric size tubing 4mm, 6mm, 8mm, 10mm, 12mm, 15mm, 16mm O.D. tubing. 8mm, 10mm, 12mm, 15mm, 16mm

FT-195-FC / FT-395-FAM



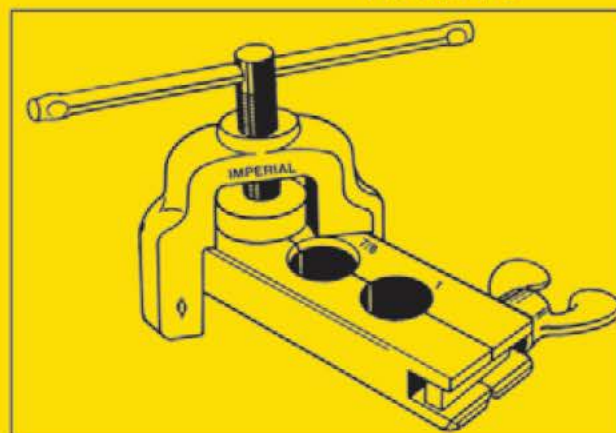
45° LARGE SIZE FLARING TOOLS

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.

- \$ 410.08 **FT-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. Wt. 3.75 lbs.
- \$ 325.54 **FT-376-FS** For sizes 1/2", 5/8", 3/4" O.D. tubing. Wt. 2.0 lbs.
- \$ 499.00 **FT-103-FS** For sizes 3/4", 7/8", and 1" O.D. tubing. Wt. 3.75 lbs.
- \$ 521.92 **FT-203-FA** For sizes 5/8", 3/4", 7/8", and 1-1/8" O.D. tubing. Wt. 3.75 lbs.

FT-103-FS



45° Flaring Tools

For soft tubing only - copper, aluminum, brass.

HI-DUTY® FLARING TOOL

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

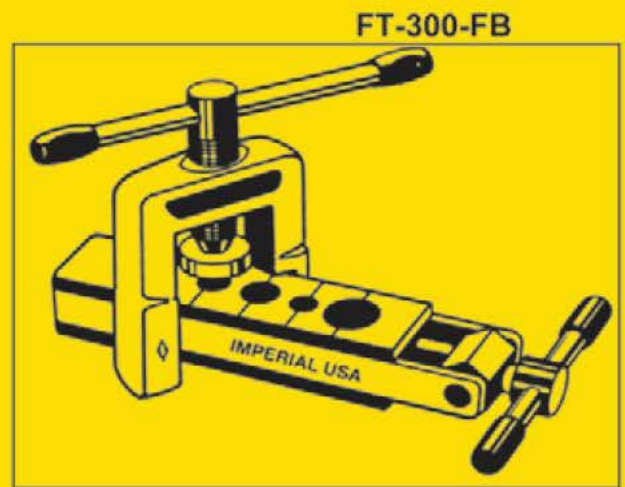
\$ 322.77 **FT-300-FB** Hardened steel, chrome finished cone makes exceptionally smooth, high strength flares with a radius at base of flare - instead of sharp angle formed by ordinary tools. New slip-on yoke permits use in tight quarters, allows flaring where there is little space between nut and tube end. New 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.



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.



45° ROL-AIR® FLARING TOOL

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

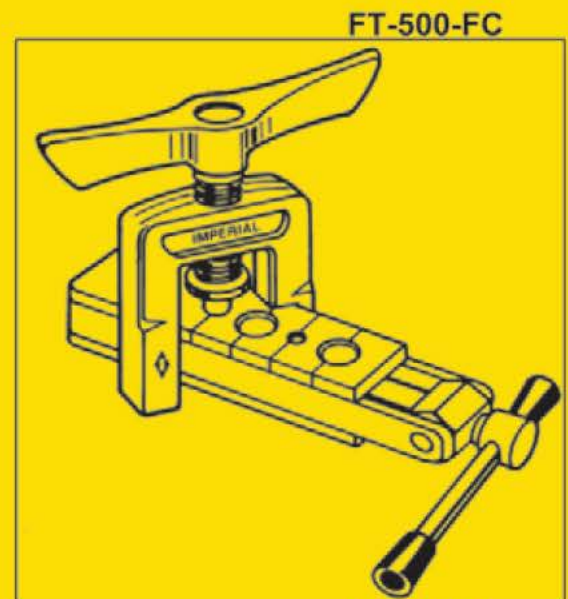
\$ 358.77 **FT-500-FC** Faceted, hardened steel, chrome finished cone rolls out perfect 45° flares above die block, and automatically burnishes flare face reducing the need for deburring. Original wall thickness is maintained at base of flare. New slip-on yoke permits use in tight quarters, where there 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. Wt. 1.5 lbs.



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.



PATENTED

METRIC SIZE 45° ROL-AIR® FLARING TOOL

\$ 350.69 **FT-500-FCM** Same as FT-500-FC except for metric size tubing 6mm, 8mm, 10mm, 12mm, 15mm, and 16mm O.D.

45° Flaring Tools

For soft tubing only - copper, aluminum, brass.

"GRABBER"® ROL-AIR® 45° FLARING TOOL

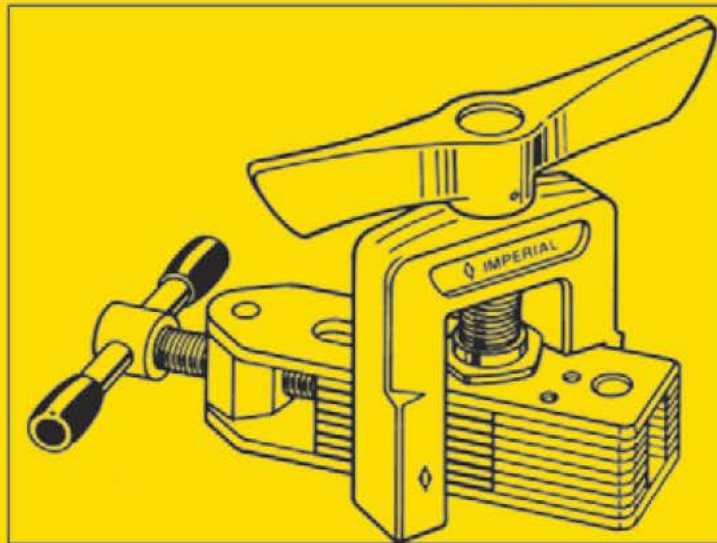
Universal application. Adjustable opening holds all sizes.
Flares and burnishes 3/16" to 5/8" (4.7 to 16mm) O.D. tubing.

- \$ 342.23 **FT-525-F** Unique, self-adjusting, tube holding mechanism permits flaring any size tubing within the range of 3/16" to 5/8" (4.7 to 16mm) O.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. Wt. 1.75 lbs.



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

FT-525-F



- (1) Insert tubing into adjustable opening of tube holding assembly. Position end of tubing approximately 1/8" above the surface of holder.
- (2) Tighten clamp screw approximately 1/2 to 3/4 of a turn beyond free travel position to secure tubing.
- (3) Be certain flaring cone surface is oiled. Slip yoke over tube holding assembly centering on tubing. Twist yoke clockwise to lock in position. Turn yoke handle clockwise to flare.

45° Double Flaring Tools

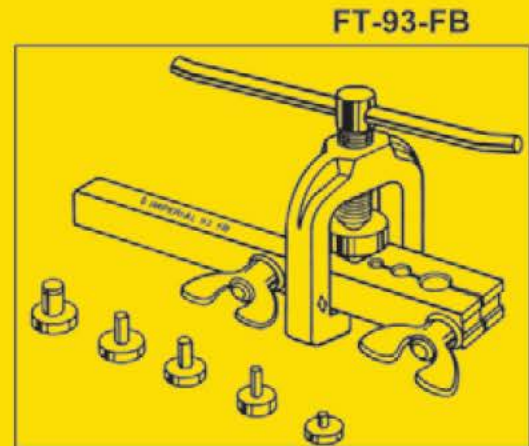
For soft tubing only - steel, copper, aluminum, brass.

45° DOUBLE FLARING TOOL

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

\$ 306.77 **FT-93-FB** Recommended for Bundy and other annealed soft steel tubing (wall thickness to .035"). Also makes single or double flares in soft copper or aluminum tubing. Small, light weight, easy to handle. Forged steel yoke; swivel-type hardened steel chrome-finished flaring cone. Bar provides positive grip of tubing. Includes tool case. Wt. 3.0 lbs.

Conforms to Federal Specification GGG-F-451a, Type 1, Class 2, Style A.



Screw down flaring cone with proper size adapter in tube. Retract cone remove adapter, complete flare.



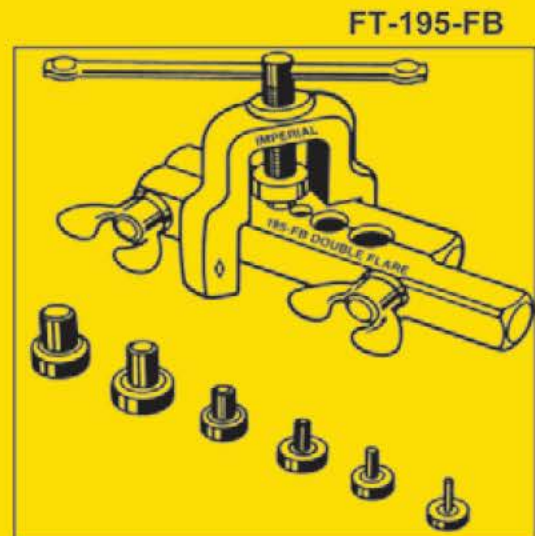
SWIVEL-TYPE BALL BEARING CONE
Ball thrust bearing in flaring cone minimizes friction, makes operation easier.



45° DOUBLE FLARING TOOLS

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

\$ 759.54 **FT-195-FB** Designed for automotive air-conditioning service. Makes double flares in soft copper or aluminum tubing (wall thickness to .035"). Easy operating ball bearing swivel-type hard chrome finished flaring cone. Quick slip-on yoke. Flaring bar offers positive grip of tubing. Also makes single flares. Wt. 5.5 lbs.



Screw down flaring cone with proper size adapter in tube. Retract cone remove adapter, complete flare.



SWIVEL-TYPE BALL BEARING CONE
Ball thrust bearing in flaring cone minimizes friction, makes operation easier.



37° Flaring Tools

For soft, copper, aluminum and brass tubing.

37° FLARING TOOL

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

- \$ 451.77 **FT-437-FB** For use with soft copper, aluminum and brass tubing. 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. New slip-on yoke permits use in tight quarters, allows flaring where there is little space between nut and tube end. New feed screw design provides smooth, easier operation. Positive gripping and self-gauging of tube for exact flare size. Sliding die blocks lock in place by clamp action. Satin chrome and black finish. Wt. 1.75 lbs.

Forms Stronger Flares

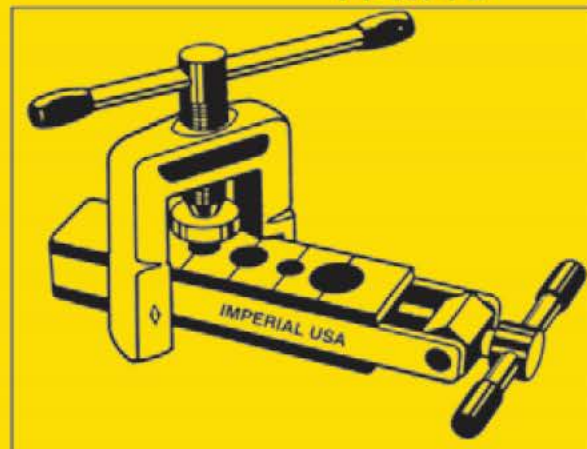
Stronger flares assured by smooth, even radius formed at base of every flare by engineered chamfer.



Self-Gauging

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

FT-437-FB



37° ROL-AIR® FLARING TOOL

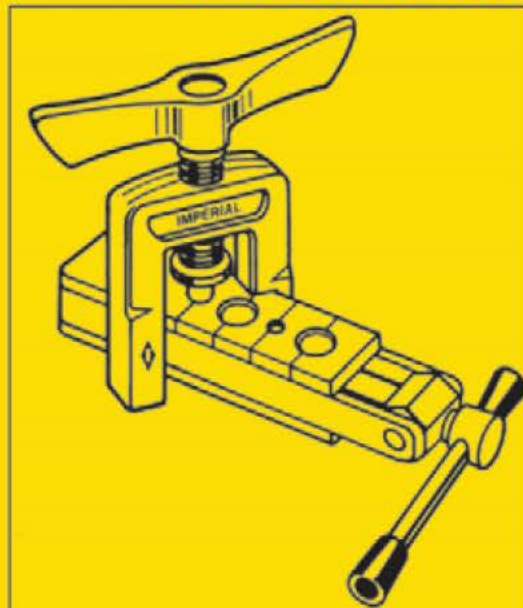
For 3/16", 1/4", 5/16", 3/8", 1/2" and 5/8" O.D. tubing.

- \$ 504.69 **FT-507-FB** For use with soft copper, aluminum and brass tubing. Faceted, hard chrome finished cone rolls out perfect 37° flares above die block-then automatically burnishes flare face. 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 firmly grip tubing. Satin chrome and black nickel finish. Wt. 1.75 lbs.



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

FT-507-FB / FT-507-FBM



METRIC SIZE 37° ROL-AIR® FLARING TOOL

- \$ 605.00 **FT-507-FBM** Metric 37° Rol-Air® flaring tool. Same as FT-507-FB except for metric size tubing 6mm, 8mm, 10mm, 12mm, 14mm, 15mm O.D. tubing.

37° Flaring Tools

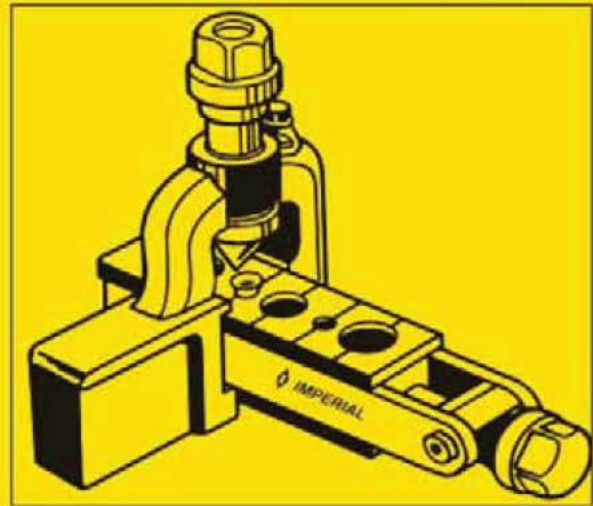
For steel, stainless steel, copper, aluminum tubing.

37° ROL-AIR® FLARING TOOLS

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

- \$ 2,014.23 **FT-400-F** Forms 37° flares to Government Specifications in steel, stainless steel (including MIL-T-6845), titanium and other metal tubing. Positive stop gauge assures correct size of flare. Special burnishing action polishes flare face. Three rollers in flaring cone roll out 37° flare above die block. Roller action cuts effort required, maintains original wall thickness—eliminates stress concentration. Extension on yoke for clamping in vise. Satin chrome and black nickel finish. Furnished in sturdy tool case. Wt. 2.5 lbs.
- \$ 305.92 **FT-401-FA** Reaming yoke for 1/4" to 5/8" O.D. tubing. Recommended for use with steel and stainless steel tubing for proper flaring. Wt. 0.7 lbs.
- \$ 2,259.38 **FT-402-FA** Flaring and reaming kit. Contains No. FT-400-F Flaring Tool and No. FT-401-FA Reaming Yoke for 1/4" to 5/8" O.D. tubing. In tool case. Wt. 3.2 lbs.
- Conforms to Federal Specification GGG-F-451a. Type 1, Class 1, Style A.

FT-400-F



FT-401-FA



Feed release and
burnishing mechanism
Flare control gauge



3 rollers in
flaring cone.
Flare formed above
die block



Feed screw
controls depth
of reaming

37° Flaring Tools

For steel, stainless steel, copper, aluminum tubing.

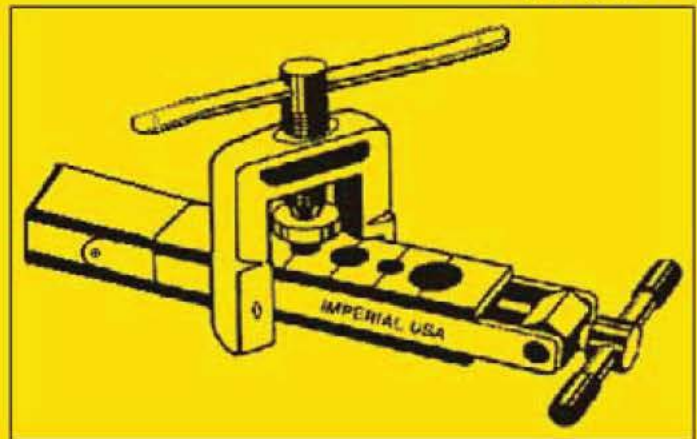
37° HEAVY DUTY FLARING TOOL

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

\$ 1,617.89 **FT-447-F** Forms 37° flares in annealed stainless steel (MIL-T-6345 or AMS5566), cold drawn stainless steel and annealed copper or aluminum tubing. Built to withstand continuous rugged service. Ball thrust bearing mechanism reduces effort required. Hardened tool steel die features non-slip grip of tubing, even after repetitive flaring. Bar has vise extension. Wt. 3.25 lbs.



Ball thrust bearing in flaring cone minimizes friction, makes operation easier.



FT-447-F

LARGE SIZE 37° ROL-AIR® FLARING TOOLS

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

Three cylinders in flaring cone roll out 37° flare above die block. Flares soft steel, copper, aluminum and fully annealed stainless steel tubing. Roller action cuts effort required; maintains original wall thickness; eliminates stress concentration. Feed release and burnishing action. Vice clamp extension on yoke. Heat treated dies clamp tubing without marking it. Satin chrome and black nickel finish. Furnished in tool case.

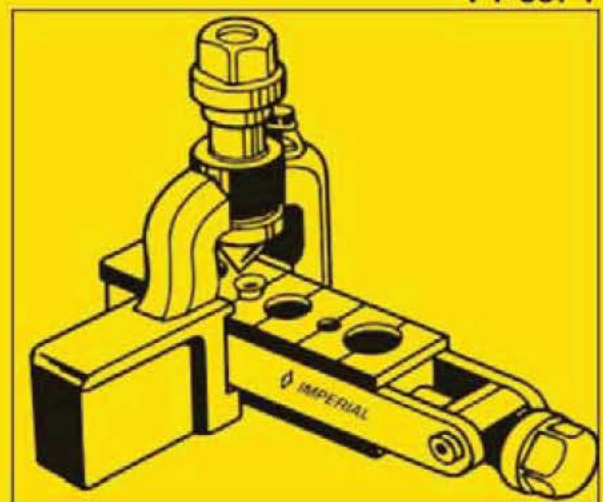
\$ 1,573.04 **FT-537-F** Flares and burnishes 3/4", 7/8", 1", and 1-1/4" O.D. tubing. Wt. 13.0 lbs.

\$ 6,214.93 **FT-637-F** Flares and burnishes 1-1/4", 1-1/2", and 2" O.D. tubing. Wt. 13.0 lbs.

Feed release and burnishing mechanism.



Vise clamp extension.



FT-537-F

Flares rolled out above die bar.



37° Flaring Tools

For steel, stainless steel, copper, aluminum tubing.

37° PRECISION FLARING TOOL

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

\$ 32,263.54 **FT-407-FA** Precision tool flares (37°) 1/8 hard

stainless steel and other tubing to extremely close tolerances. Swivel-head clamp locks tubing in smooth bore die blocks. Lathe type tube feed. Flares rolled out by ball-bearing mounted concentric flaring cone. Tool must be clamped in vise. Will flare 1/8 hard stainless steel tubing in the sizes and wall thicknesses listed below in some cases these wall thicknesses can be exceeded when flaring aluminum, copper or soft steel tubing. In tool case Wt. 50.0 lbs.

Tube O.D. (in.)	Wall Thickness (in.)	Tube O.D. (in.)	Wall Thickness (in.)
1/8"	.020, .028	5/8"	.035, .049
3/16"	.010, .028	3/4"	.028, .035, .049
1/4"	.016, .028, .035	1"	.028, .035
5/16"	.035	1-1/4"	.035, .049
3/8"	.028, .035	1-1/2"	.035, .049, .065
1/2"	.035, .049		

Facing and Deburring Attachments.

(Not included with FT-407-FA)

\$ 52,094.00 **FT-407-F** Same as **FT-407-FA**, except includes the facing and deburring attachments.

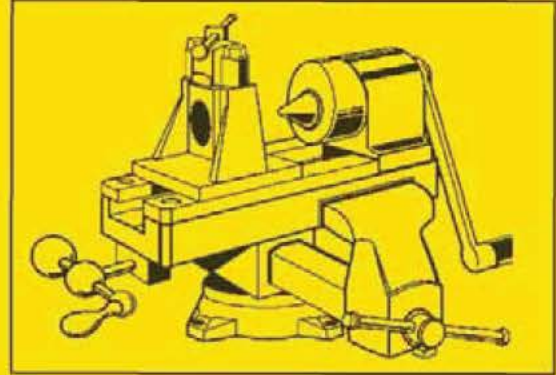
\$ 3,039.15 **FT-S74460** Internal deburring tool for 1/8" to 1/2" O.D. tubing.

\$ 7,437.77 **FT-S74455** Internal deburring tool for 5/8" to 1-1/2" O.D. tubing.

\$ 5,876.62 **FT-S74447** External deburring tool.

\$ 2,996.77 **FT-S74462** Facing tool.

FT-407-FA



FT-407-F

Flaring & Swaging Tools

Production and metric automotive flaring tools.

PRODUCTION FLARING (45° & 37°) AND SWAGING TOOL

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

- \$ 3,223.08 **FT-555-FS** Flares and swages 6 sizes of soft copper, aluminum or brass tubing. Makes both 45° and 37° single flares. Fast cam lever operation. Portable and vise or bench mountable. Change sizes quickly. Built in gauge for accurate flare size or swage depth. Unique jaws provide a positive non-slip grip on tubing. Wt. 6.5 lbs.

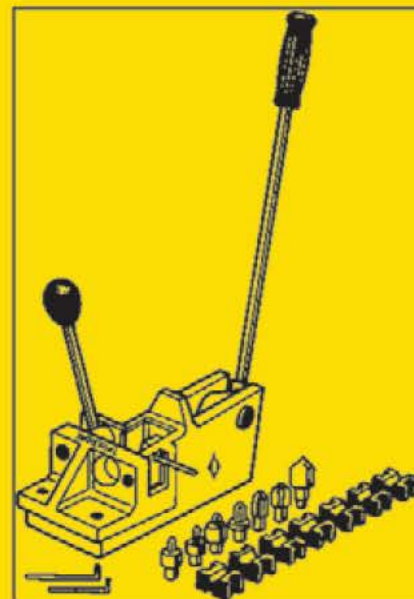


Swages 6 sizes.



Makes 45° and 37° Flares.

FT-555-FS



METRIC BUBBLE FLARING TOOL

For soft steel or Bundy tubing 4.75mm (3/16"), 6mm, 8mm or 10mm O.D. tubing.

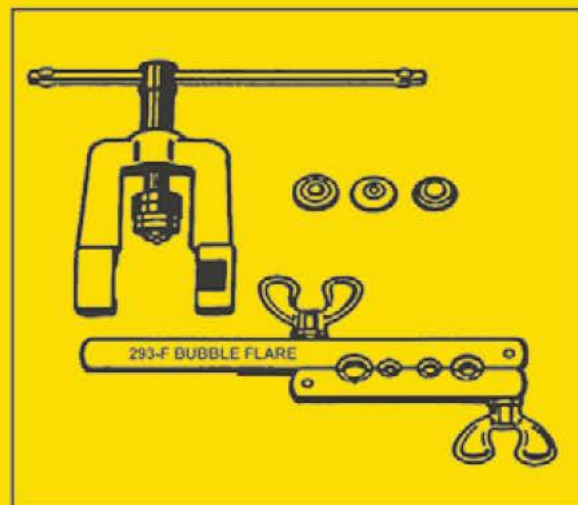
- \$ 378.38 **FT-293-F** Forms International Standard bubble flare in one fast operation. Flares metric hydraulic brake lines used on European, Japanese and American automobiles and light trucks. This unique design makes flares on four sizes of tubing: 4.75mm (3/16"), 6mm, 8mm, and 10mm O.D. Will flare soft double wall steel tubing with a wall thickness up to .028". Can also be used with soft copper and aluminum tubing.

Replacement parts:

- \$ 33.08 **FT-S8771801** 4.75mm (3/16") adapter.
\$ 33.08 **FT-S8771701** 6mm adapter.
\$ 33.08 **FT-S8771601** 8mm adapter.
\$ 33.08 **FT-S8771301** 10mm adapter.
\$ 18.85 **FT-S8694401** Wing nut.



FT-293-F



Flaring & Swaging Tools

For soft tubing only - copper, aluminum, brass.

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.

- \$ 60.51 **FT-94-S** Three-in-one swaging tool for 1/2", 5/8" and 7/8" O.D. tubing. Skin Packaged. Wt. 1.0 lbs.
- \$ 139.46 **FT-193-S** Vinyl case contains 4 swaging punches 1/4", 3/8", 1/2" and 5/8" O.D. tubing. Wt. 1.0 lbs.
- \$ 363.15 **FT-195-SA** Vise mountable flaring bar and 4 swaging punches 1/4", 3/8", 1/2" and 5/8" O.D. tubing. In tool case. Wt. 2.0 lbs.
- \$ 301.00 **FT-S75531** Flaring bar only. Wt. 1.0 lb.



INDIVIDUAL SWAGING TOOLS

List Price	Catalog Number	Tube O.D. (in.)	Weight (lbs.)
\$ 27.00	FT-93-S-03	3/16"	.20 lbs.
\$ 25.00	FT-93-S-04	1/4"	.20 lbs.
\$ 31.15	FT-93-S-05	5/16"	.25 lbs.
\$ 33.62	FT-93-S-06	3/8"	.25 lbs.
\$ 36.15	FT-93-S-08	1/2"	.50 lbs.
\$ 44.54	FT-93-S-10	5/8"	.50 lbs.
\$ 46.77	FT-93-S-12	3/4"	.75 lbs.
\$ 47.69	FT-93-S-14	7/8"	1.0 lbs.



FT-94-S

FT-193-S



Enlarge end of tube, insert another tube, solder like a sweat fitting.



Tube height gauged by placing tubing even with bevel on swaging punch.

1 1
6-6

Flaring & Swaging Tools

For soft tubing only - copper, aluminum, brass.

45° SWAGING TOOL

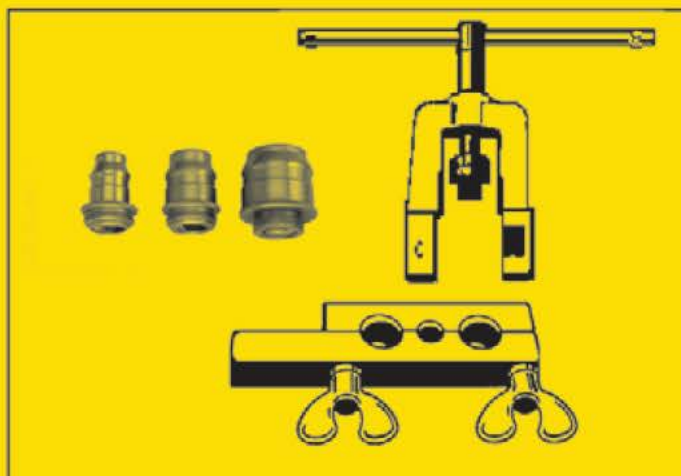
For 1/2", 5/8" and 7/8" O.D. tubing.

- \$ 397.92 **FT-194-S** Screw-type swaging tool. Far easier to work with in close quarters than punch type tools. Perfect swaging alignment of tube every time. Hardened steel chrome finished adapters change quickly. In tool case. Wt. 2.0 lbs.

Replacement Parts:

- \$ 76.38 **FT-278-FS-08** Adapter 1/2"
\$ 76.38 **FT-278-FS-10** Adapter 5/8"
\$ 77.15 **FT-278-FS-14** Adapter 7/8"

FT-194-S



FLARING (45°) & SWAGING TOOLS

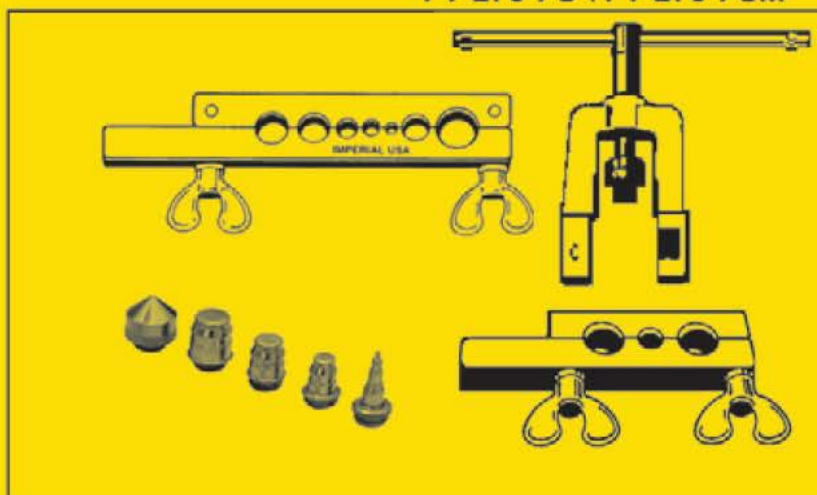
For 1/8" to 3/4" and 4mm to 22mm O.D. tubing.

- \$ 637.85 **FT-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. In tool case. Wt. 3.5 lbs. Flares 1/8", 3/16", 1/4", 5/16", 3/8", 7/16", 1/2", 5/8", and 3/4" O.D. Includes 5 swage adapters for 3/16", 1/4", 5/16", 3/8", 1/2", 5/8", 3/4" O.D. tubing.

Replacement Parts:

- \$ 76.38 **FT-278-FS-03X04X06** Adapter 3/16", 1/4", 3/8"
\$ 76.38 **FT-278-FS-05** Adapter 5/16"
\$ 76.38 **FT-278-FS-08** Adapter 1/2"
\$ 76.38 **FT-278-FS-10** Adapter 5/8"
\$ 76.38 **FT-278-FS-12** Adapter 3/4"
\$ 50.46 **FT-S38600** Flaring Cone

FT-275-FS \ FT-275-FSM



- \$ 617.92 **FT-275-FSM** Metric flaring and swaging tool. Same as FT-275-FS except for metric size tubing 4mm, 6mm, 8mm, 10mm, 12mm, 14mm, 15mm, 16mm, 18mm, 22mm O.D. tubing. In tool case. Wt. 3.5 lbs.

Replacement Parts:

- | | |
|---|--|
| \$ 76.38 FT-278-FSM4-6-10 Adapter 4mm, 6mm, 10mm | \$ 76.38 FT-278-FSM-16 Adapter 16mm |
| \$ 76.38 FT-278-FSM-08 Adapter 8mm | \$ 76.38 FT-278-FSM-18 Adapter 18mm |
| \$ 76.38 FT-278-FSM-12 Adapter 12mm | \$ 76.38 FT-278-FSM-22 Adapter 22mm |
| \$ 76.38 FT-278-FSM-14 Adapter 14mm | \$ 50.46 FT-S38600 Flaring Cone |
| \$ 76.38 FT-278-FSM-15 Adapter 15mm | |

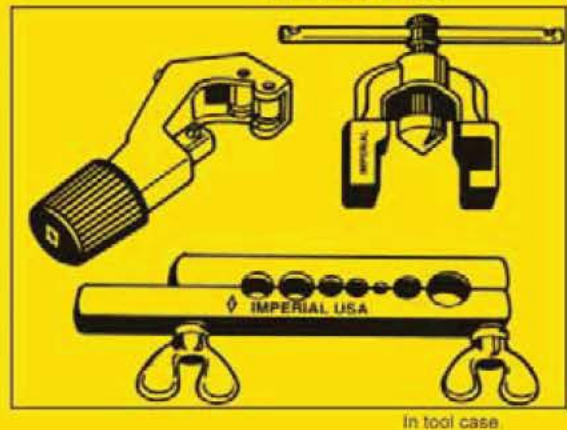
Tubing Tool Kits

CUTTING AND FLARING KITS

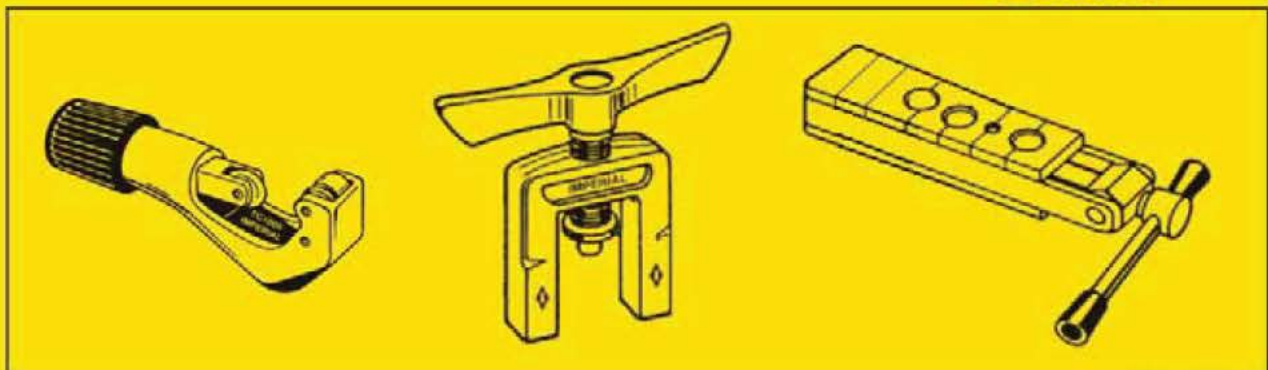
Each kit contains No. FT-TC-1000 tube cutter for 1/8" to 1-1/8" O.D. tubing and a 45° or 37° flaring tool. In tool case.

List Price	Catalog Number	Tube Cutter	Flaring Tool	Range of Flaring Tool	Wt. (lbs.)
\$ 315.23	FT-1226-FA	FT-TC-1000	FT-195-FC (45°)	3/16", 1/4", 5/16", 3/8", 7/16", 1/2", 5/8" O.D.	3.0 lbs.
\$ 476.92	FT-123-FA	FT-TC-1000	FT-300-FB (45°)	3/16", 1/4", 5/16", 3/8", 1/2", 5/8" O.D.	2.75 lbs.
\$ 552.23	FT-124-FA	FT-TC-1000	FT-500-FC (45° Rol-Air®)	3/16", 1/4", 5/16", 3/8", 1/2", 5/8" O.D.	2.75 lbs.
\$ 617.92	FT-122-FA	FT-TC-1000	FT-437-FB (37°)	3/16", 1/4", 5/16", 3/8", 1/2", 5/8" O.D.	2.75 lbs.
\$ 498.38	FT-120-F	FT-TC-1000	FT-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 lbs.

FT-1226-FA



FT-124-FA



Tubing Tool Kits

For flaring, cutting, and bending soft copper, aluminum, and brass tubing.

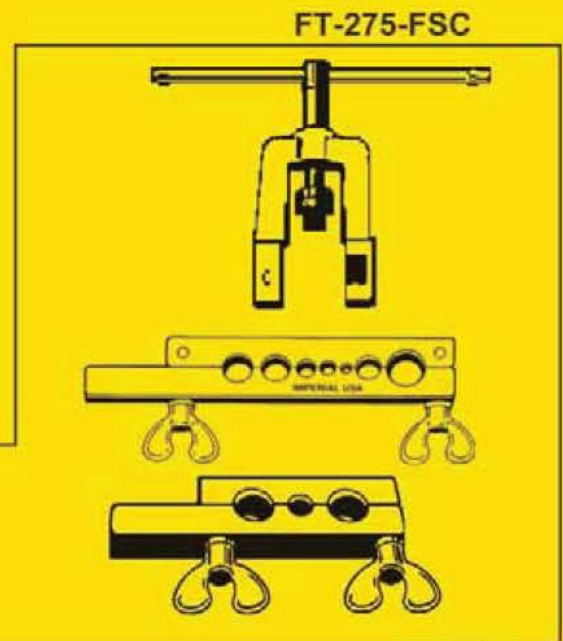
CUTTING FLARING AND SWAGING KIT

For soft copper and aluminum tubing.

\$ 733.92 **FT-275-FSC** Kit contains a FT-TC-1000 tube cutter for 1/8" to 1-1/8" O.D. tubing and FT-275-FS flaring and swaging tool. In tool case. Wt. 3.0 lbs.

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.



In tool case.

FlarePro® FOUR-IN-ONE FLARING & SWAGING TOOL

For copper, aluminum, steel, stainless steel and other metal tubing.

\$ 2,204.08 **FT-2000-FS** Individual size jaw sets are used for positive clamping compactness and operating convenience.

Socket head screws are provided for clamping the jaws to the yoke and feeding the tube forming components. The screws are hand turned for all free travel movement when advancing or retracting.

A hex socket and 3/8" square drive ratchet are furnished for easy operation of the threaded members under load. Tube forming components (flaring cones, double flaring adapters, and swaging adapters) are retained on the feedscrew by a ball detent mechanism and can be snapped on and off for quick change as required.

The tool is designed to permit hand held or vise mounted operation. Wt. 7.0 lbs.

Flaring - 37° and 45°

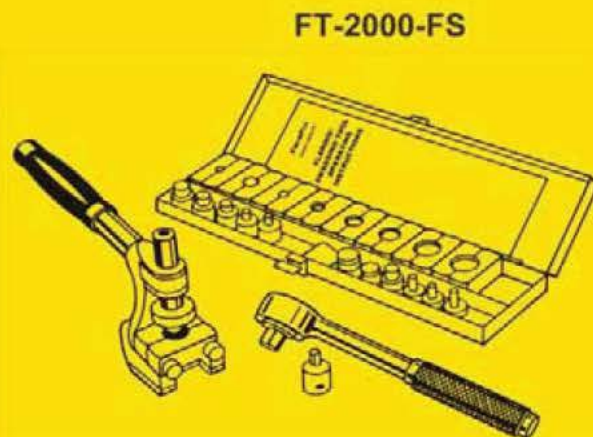
Flares soft copper, brass aluminum, steel and stainless steel in nine tube sizes: 1/8", 3/16", 1/4", 5/16", 3/8", 7/16", 1/2", 5/8", and 3/4" O.D. tubing.

Double Flaring - 45° Only

Double flares soft copper, aluminum and steel (Bundy or G.M. to .035 wall) in seven tube sizes: 3/16", 1/4", 5/16", 3/8", 1/2", 5/8", and 3/4" O.D. tubing.

Swaging

Swages soft copper, aluminum and brass in seven tube sizes: 3/16", 1/4", 5/16", 3/8", 1/2", 5/8", and 3/4" O.D. tubing.



PINCH-OFF TOOL

For 1/4" to 1/2" O.D. tubing.

Temporarily closes soft copper, aluminum or steel tubing so no liquid or gas passes sealed part. Lets you disconnect line while making repairs without loss of liquid or gas. Also opens tubing to allow flow.

\$ 146.62 **FT-105-FF** Pinch-Off Tool for 1/4", 5/16", 3/8", and 1/2" O.D. tubing. Wt. .75 lbs.



FT-105-FF

INNER-OUTER REAMING AND DEBURRING TOOLS

For 3/16" to 1/2" O.D. tubing.

Reams both inside and outside edges of tube with 3 hollow ground cutters. Tough die cast body. Deburs both clockwise and counter clockwise. Fluted body is shaped to fit comfortably in palm.

\$ 111.08 **FT-208-F** Reamer for copper, aluminum and brass tubing. Hardened steel cutter blades. Blue finish. Wt. .63 lbs.



FT-208-F

\$ 353.15 **FT-208-FSS** Reamer for aircraft grade **stainless steel** tubing; hard or soft copper. Aluminum, brass and steel tubing. Tungsten hardened tool steel cutter blades. Black finish. Wt. .63 lbs.



FT-208-FSS

TUBING TEST PLUGS

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

For temporary shut-off of tubing without pinching it off or installing a valve. Especially handy for plumbing, heating, refrigeration and instrumentation when trouble shooting for leaks. Light weight, fast acting, dependable. Insert plug in tube end and tighten wing nut. Expander seals tube and holds pressures to 100 psi.

List Price	Catalog Number	Tube O.D. (in.)	Weight Each (oz.)	List Price	Replacement Sleeve
\$ 36.85	FT-140-F-04	1/4"	.5 oz.	\$ 9.79	FT-S62641
\$ 40.46	FT-140-F-06	3/8"	.75 oz.	\$ 11.69	FT-S62648
\$ 40.46	FT-140-F-08	1/2"	1.0 oz.	\$ 11.69	FT-S62655
\$ 50.08	FT-140-F-10	5/8"	1.5 oz.	\$ 11.69	FT-S62661
\$ 52.08	FT-140-F-12	3/4"	2.0 oz.	\$ 11.69	FT-S62666
\$ 75.69	FT-140-F-14	7/8"	3.0 oz.	\$ 22.46	FT-S66434
\$ 85.00	FT-140-F-18	1-1/8"	4.0 oz.	\$ 33.38	FT-S66435
\$ 175.77	FT-140-F-22	1-3/8"	4.0 oz.	\$ 28.05	FT-S71174
\$ 177.31	FT-140-F-26	1-5/8"	5.0 oz.	\$ 34.69	FT-S71177

\$ 153.00 **FT-142-F** Test plug kit for 1/2", 5/8" and 7/8" O.D. tubing. Wt. .5 lbs.

FT-140-F-06 / FT-142-F



45° REFACING TOOL

For 1/4", 5/16", 3/8", and 1/2" SAE 45° flare fittings.

- \$ 902.00 **FT-345-FA** With cutter and adapters for 1/4", 5/16", 3/8", 1/2" and 5/8" fittings. Makes nicked or marred seats on brass and other nonferrous fittings and valves as good as new. Precision feed. Replaceable cutter. In tool case. Wt. 2.0 lbs.

Adapters:

- \$ 77.85 **FT-346-F-04** 1/4" O.D.
\$ 82.08 **FT-346-F-05** 5/16" O.D.
\$ 97.89 **FT-346-F-06** 3/8" O.D.
\$ 109.62 **FT-346-F-08** 1/2" O.D.
\$ 105.15 **FT-346-F-10** 5/8" O.D.
\$ 239.38 **FT-S63412** Replacement Cutter

FT-345-FA



In tool case.

Ratchet Wrenches

For tube fittings, valves, nuts, bolts.

RATCHET WRENCHES

For Refrigeration and Air-Conditioning Service

- \$ 56.46 **FT-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.

FT-127-C



- \$ 56.46 **FT-127-CO** Same as FT-127-C except with unique 25° offset that provides additional convenience in hard to reach places.

FT-127-CO



- \$ 139.43 **FT-123-C** 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.

FT-123-C



- \$ 88.15 **FT-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.

FT-124-C



- \$ 321.92 **FT-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.

FT-125-C



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FT-270-F-1210,12	FT-400-F.....20	FT-S6228511,12	
FT-270-F-1410,13	FT-401-FA.....20	FT-S6228711,13	
FT-270-F-1610,13	FT-402-FA.....20	FT-S6228811,12,13	
FT-270-F-1810,13	FT-406-FA.....2	FT-S6229011,13	
FT-275-FS.....25	FT-407-F.....22	FT-S6229111,12,13	
FT-275-FSC.....27	FT-407-FA.....22	FT-S6229211,12,13	
FT-278-FS-03X04X06 ..25	FT-437-FB.....19	FT-S6229411,12,13	
FT-278-FS-0525	FT-447-F21	FT-S6229511,12,13	
FT-278-FS-0825	FT-500-FC.....16	FT-S6229611,12,13	
FT-278-FS-1025	FT-500-FCM16	FT-S6229711,12,13	
FT-278-FS-1225	FT-507-FB.....19	FT-S6229811,12,13	
FT-278-FS-1425	FT-507-FBM19	FT-S6229911,13	
FT-278-FSM-08.....25	FT-525-F17	FT-S6230011,13	
FT-278-FSM-12.....25	FT-537-F21	FT-S6230111,13	

Tubing Tool Selector

Tool	Part No.	Size Range Tube O.D.	Annealed General Purpose	Tube Material						
				Copper						
				Type K			Type L			Type M
				Soft	Bending Temper-Hard	Hard	Soft	Bending Temper-Hard	Hard	
Tube Cutters Metal Tubing	TC 1050	1/8-5/8	●	●	●	●	●	●	●	●
	TC 2050	3/16-7/8	●	●	●	●	●	●	●	●
	174-F	3/8-1 1/8	●	●	●	●	●	●	●	●
	206-FB	3/8-2 5/8	●	●	●	●	●	●	●	●
	227-FA	1/8-3/4	●	●	●	●	●	●	●	●
	TC 1000	1/8-1 1/8	●	●	●	●	●	●	●	●
	312-FC	1/8-5/8	●	●	●	●	●	●	●	●
	406-FA	1/8-5/8	●	●	●	●	●	●	●	●
Tube Cutters Thermoplastic Rubber Hose	307-FP	1/16-1/2 ④	●	●	●	●	●	●	●	●
	327-FP	1/8-13/16 ④	●	●	●	●	●	●	●	●
	384-FA	1/8-1 1/2	●	●	●	●	●	●	●	●
Bending Tools	101-F	1/4-5/8	●	●	●	●	●	●	●	●
	102-F	1/4-3/4	●	●	●	●	●	●	●	●
	112-F	1/4-3/8	●	●	●	●	●	●	●	●
	163-F	1/4-5/8	●	●	●	●	●	●	●	●
	260-FHA	1/4-7/8	●	●	●	●	●	●	●	●
	270-F	3/8-1 1/8	●	●	●	●	●	●	●	●
	350-FHA	1/4-3/4	●	●	●	●	●	●	●	●
	364-FH	1/8-3/16	●	●	●	●	●	●	●	●
	364-FHA	1/4-1	●	●	●	●	●	●	●	●
	364-FHB	1/4-1/2	●	●	●	●	●	●	●	●
	364-FHBM	6-12mm	●	●	●	●	●	●	●	●
	367-FH	1/8, 3/16, 1/4	●	●	●	●	●	●	●	●
	368-FH	1/4, 5/16, 3/8	●	●	●	●	●	●	●	●
	564-FH	3/8, 1/2	●	●	●	●	●	●	●	●
	600-F	1/4-3/4	●	●	●	●	●	●	●	●
	700-F	1/4-3/4	●	●	●	●	●	●	●	●
37° Flaring Tool	400-F	3/16-5/8	●	●	●	●	●	●	●	●
	407-FA	1/8-1 1/2	●	●	●	●	●	●	●	●
	437-FB	3/16-5/8	●	●	●	●	●	●	●	●
	447-F	1/8-1/2	●	●	●	●	●	●	●	●
	507-FB	3/16-5/8	●	●	●	●	●	●	●	●
	555-FS	3/16-5/8	●	●	●	●	●	●	●	●
	537-F	3/4-1 1/4	●	●	●	●	●	●	●	●
	637-F	1 1/4-2	●	●	●	●	●	●	●	●
	2000-FS	1/8-3/4	●	●	●	●	●	●	●	●
45° Flaring Tool	103-FS	3/4-1	●	●	●	●	●	●	●	●
	195-FC	3/16-5/8	●	●	●	●	●	●	●	●
	203-FA	5/8-1 1/8	●	●	●	●	●	●	●	●
	275-FS	1/8-3/4	●	●	●	●	●	●	●	●
	296-FC	3/16-5/8	●	●	●	●	●	●	●	●
	300-FB	3/16-5/8	●	●	●	●	●	●	●	●
	375-FS	1/8-3/4	●	●	●	●	●	●	●	●
	376-FS	1/2-3/4	●	●	●	●	●	●	●	●
	395-FAM	4-16mm	●	●	●	●	●	●	●	●
	500-FC	3/16-5/8	●	●	●	●	●	●	●	●
	500-FCM	6-16mm	●	●	●	●	●	●	●	●
	525-F	3/16-5/8	●	●	●	●	●	●	●	●
	555-FS	4, 7-16mm	●	●	●	●	●	●	●	●
	2000-FS	3/16-5/8	●	●	●	●	●	●	●	●
	2000-FS	1/8-3/4	●	●	●	●	●	●	●	●
45° Double Flaring Tools	93-FB	3/16-1/2	●	●	●	●	●	●	●	●
	195-FB	1/4-3/4	●	●	●	●	●	●	●	●
	2000-FS	3/16-3/4	●	●	●	●	●	●	●	●
Reaming and Deburring Tools	208-F	3/16-1 1/2	●	●	●	●	●	●	●	●
	208-FSS	3/16-1 1/2	●	●	●	●	●	●	●	●
Tube Constrictor	TC 1020	1/8-1 1/8	●	●	●	●	●	●	●	●
Swaging Tools	93-S	3/16-7/8	●	●	●	●	●	●	●	●
	94-S	1/2, 5/8, 7/8	●	●	●	●	●	●	●	●
	193-S	1/4-5/8	●	●	●	●	●	●	●	●
	194-S	1/2-7/8	●	●	●	●	●	●	●	●
	195-SA	1/4-5/8	●	●	●	●	●	●	●	●
	275-FS	3/16-3/4	●	●	●	●	●	●	●	●
	555-FS	3/16-5/8	●	●	●	●	●	●	●	●
	2000-FS	3/16-3/4	●	●	●	●	●	●	●	●
Metric Bubble Flaring Tool	293-F	4.75-10mm	●	●	●	●	●	●	●	●