

# Tube Facing Tools

## Prepare Tube Ends for Welding



### TF16, TF24, TF40, and TF72 Series

- Tube sizes 1/8 to 4 1/2 in. and 3 to 114.3 mm
- Maximum wall thickness 0.118 in. or 3 mm
- Portable and lightweight design for mobility and easy operation
- Corded and cordless tools

## Features

The Swagelok® tube facing tools are designed to machine flat, smooth, square, burr-free and, chamfer-free tube ends and Micro-Fit® miniature tube butt weld fittings. The tools can be used on 316 stainless steel, carbon steel, titanium, and most nickel-based alloys.

- Graduated microfeed advancement for controlled material removal
  - High-performance coated tool bit with two cutting edges
  - Heavy-duty industrial motor with easy speed adjustment and control
  - No tools required to change the collet sets to different sizes
  - Removable bench mount bracket included with corded tools
  - Clear safety shield or guards protect operator from the cutting area
  - Optional holder enables bevel cutting
  - Storage and shipping case included
  - CE marked
- Cordless tools also feature:
- Robust lithium ion battery packs with capacity display
  - Electronic overload protection with integrated temperature monitoring
  - Air-cooled technology for quick charging and long service life



## Technical Data

Series	TF16	TF16 Cordless	TF24	TF24 Cordless	TF40	TF40 Cordless	TF72
<b>Basic Ordering Number</b>	MS-TF16-	MS-TF16C-	MS-TF24-	MS-TF24C-	MS-TF40-	MS-TF40C-	MS-TF72-
<b>Nominal Tube OD, in. / mm</b>	1/8 <sup>①</sup> to 1 / 3 to 25		1/8 <sup>①</sup> to 1 1/2 / 3 to 38		1/4 <sup>②</sup> to 2 1/2 / 6 to 63		1/2 to 4 1/2 / 12 to 114.3
<b>Maximum Wall Thickness in. / mm</b>	0.118 / 3						
<b>Minimum Tangent Length in. / mm</b>	Standard collets: 0.45 / 11.4 Micro-Fit collets: 0.20 / 5.1		Standard collets: 0.65 / 16.5 Micro-Fit collets: 0.20 / 5.1		Standard collets: 0.65 / 16.5 Micro-Fit collets: 0.20 / 5.1		1.00 / 25.4
<b>Input Voltage</b>	Single-phase alternating current, protection class II						
	110 V 50/60 Hz		110 V 50/60 Hz		110 V 50/60 Hz		110 V 50/60 Hz
	230 V 50/60 Hz		230 V 50/60 Hz		230 V 50/60 Hz		230 V 50/60 Hz
<b>Power, W</b>	1100	—	1100	—	1100	—	1100
<b>Voltage Rechargeable Battery, V</b>	—	18	—	18	—	18	—
<b>Speed r/min</b>	145 to 380	0 to 400	145 to 380	0 to 400	Speed 1: 9 to 52 Speed 2: 27 to 153	Speed 1: 0 to 24 Speed 2: 0 to 83	0 to 52
<b>Sound Level (EN 23741), dB</b>	Approx 78						Approx 83
<b>Vibration Level (EN 50144), m/s<sup>2</sup></b>	< 2.5	< 2.5	< 2.5	< 2.5	< 2.5	< 2.5	2.5
<b>Service Current Requirement A</b>	10 minimum	—	10 minimum	—	10 minimum	—	10 minimum

① MS-TF-16-24-40-HOLDER-S, must be purchased to face tubing sizes below 1/4 in. / 7 mm.

② An adapter is included with the TF40 series that allows the use of the TF24 series collets, extending the nominal tube OD minimum to 1/4 in. or 6 mm. With the standard TF40 series collets, the minimum size is 2 in. or 40 mm. Additional adapters can be ordered separately.  
Ordering number: **MS-TF40-CS-ADAPTER-24**

## Dimensions

TF16	TF16 Cordless	TF24	TF24 Cordless	TF40	TF40 Cordless	TF72
<b>Dimensions, in. (mm)</b>						
15.4 W, 7.87 H, 2.76 D (390 W, 200 H, 70 D)	10.3 W, 10.0 H, 3.15 D (261 W, 255 H, 80 D)	15.8 W, 13.8 H, 6.30 D (400 W, 350 H, 160 D)	10.8 W, 10.0 H, 3.54 D (275 W, 255 H, 90 D)	19.7 W, 11.8 H, 6.69 D (500 W, 300 H, 170 D)	10.2 W, 11.8 H, 12.6 D (260 W, 300 H, 320 D)	20.7 W, 10.1 H, 8.9 D (525 W, 256 H, 226 D)
<b>Weight Without Accessories, lb (kg)</b>						
9.13 (4.14)	6.35 (2.88)	10.4 (4.70)	7.58 (3.44)	14.6 (6.60)	11.5 (5.23)	22.5 (10.2)

## Ordering Information

### Tube Facing Tool

Each TF series tube facing tool is shipped in a custom case for ease of storage and transport. The case includes dedicated space for extra collets and the bench mount stand, charger, and extra batteries where applicable.



**TF72 Case Shown**  
(Heavy-duty, upgraded TF72 case available separately; see page 4.)

To order, select a basic ordering number from the **Technical Data** table, page 2.

Example: **MS-TF24C-**

Add a power cord designator and user's manual designator from the tables at right.

Example: **MS-TF24C-11-E**

### Included Items

- TF series tube facing tool
- Shipping case
- Standard cutting insert holder (MS-TF-16-24-40-HOLDER-S offered as accessory for facing tube sizes 1/8 in. / 3 to 6 mm)
- Cutting insert
- Tool set
- User's manual
- Bench mount bracket (TF40 and TF72 *only*)
- Collet set adapter (TF40 series *only*)
- Replacement breakaway nut (TF40 and TF72 *only*)
- Tube clamp (TF24 series *only*)
- Set of keys (2) for shipping case (TF16 and TF24 *only*)

### Additional Items Included With Cordless Tools

- 2 lithium ion rechargeable batteries
- Battery charger

### Collets

Stainless steel collet sets are available in standard sizes and must be ordered separately. The collets ensure precise mounting of tubes and quick change without the use of tools. Micro-Fit collets require a Micro-Fit insert holder; see **Cutting Inserts and Holders**, next page. Each collet set ships in a plastic case.



To order, replace **##** in the ordering number with a nominal tubing OD designator from the tables at right.

Examples: **MS-TF16-CS-08**  
**MS-TF16-CS-12MM**

Description	Ordering Number
TF16 collet set	MS-TF16-CS-##
TF16 collet set—Micro-Fit weld fittings	MS-TF16-CS-##-MF
TF24 collet set	MS-TF24-CS-##
TF24 collet set—Micro-Fit weld fittings	MS-TF24-CS-##-MF
TF40 collet set	MS-TF40-CS-##
TF72 collet set	MS-TF72-CS-##

### Power Cord

Region	Voltage	Plug Type	Designator
Australia, China, New Zealand	230 V 50/60 Hz	AS 3112	18
Continental Europe, Korea	230 V 50/60 Hz	CEE 7/7	17
Japan, Taiwan	100/115 V 50/60 Hz	NEMA 5-15	13
India	230 V 50/60 Hz	BS 546	21
North America	115 V 50/60 Hz	NEMA 5-15	11
United Kingdom	115 V 50/60 Hz	IEC 309	15 <sup>①</sup>
	230 V 50/60 Hz	BS 1363	16

① Not available for cordless tools.

### User's Manual

Language	Designator
Chinese (simplified)	-C
English	-E
French	-F
German	-G
Japanese	-J
Korean	-K
Russian	-R
Spanish	-S

For more information about Swagelok tube facing tools, see the *TF16, TF24, TF40 Tube Facing Tool User's Manual*, MS-13-214, and the *TF72 Tube Facing Tool User's Manual*, MS-13-215.

### Fractional Sizes

Nominal Tubing OD in.	Designator
1/8	02
1/4	04
3/8	06
1/2	08
3/4	12
1	16
1 1/4	20
1 1/2	24
2	32
3	48
4	64
4 1/2	72

### Metric Sizes

Nominal Tubing OD mm	Designator
3	03MM
6	06MM
10	10MM
12	12MM
20	20MM
22	22MM
28	28MM
40	40MM
52	52MM
54	54MM
60.3	60.3MM
104	104MM

Collets for other tubing and Micro-Fit weld fitting sizes are available. Contact your authorized Swagelok sales and service representative.

## Options and Accessories

### Cutting Inserts and Holders

One cutting insert and insert holder are included with each tube facing tool. Replacement cutting inserts come in a convenient ten-pack.

Description	Ordering Number
Cutting insert 10-pack	MS-TF-BIT
<b>TF16, TF24, and TF40 Series</b>	
Insert holder for 1/8 in. / 3 to 6 mm tubing	MS-TF-16-24-40-HOLDER-S <sup>①</sup>
Insert holder for 1/4 to 1/2 in. / 7 to 12 mm tubing	MS-TF-16-24-40-HOLDER <sup>②</sup>
Insert holder for 1/2 to 2 1/2 in. / 12 to 63 mm tubing	MS-TF-16-24-40-SP-HLD
Micro-Fit insert holder	MS-TF-24-40-MF-HLD <sup>③</sup>
-30° bevel insert holder	MS-TF-24-40-BEV30
-35° bevel insert holder	MS-TF-24-40-BEV35
<b>TF72 Series</b>	
Standard insert holder	MS-TF-72-HOLDER
-35° bevel insert holder	MS-TF-72-BEV35
-45° bevel insert holder	MS-TF-72-BEV45

① Sold as accessory.

② Included with each tube facing tool.

③ Required for use with Micro-Fit collets.

### Battery and Chargers

Two lithium ion rechargeable batteries and one charger are included with each cordless tube facing tool. Additional or replacement batteries and chargers can be ordered separately.

Description	Ordering Number
Cordless battery	MS-TF-18V-BATTERY
Battery charger—US 115 V	MS-TF-BAT-CHRGR-11
Battery charger—UK 230 V	MS-TF-BAT-CHRGR-16
Battery charger—EU 230 V	MS-TF-BAT-CHRGR-17
Battery charger—China 230 V	MS-TF-BAT-CHRGR-18

#### Safe Product Selection

**When selecting a product, the total system design must be considered to ensure safe, trouble-free performance. Function, material compatibility, adequate ratings, proper installation, operation, and maintenance are the responsibilities of the system designer and user.**

**⚠ Warning: Do not mix/interchange Swagelok products or components not governed by industrial design standards, including Swagelok tube fitting end connections, with those of other manufacturers.**

### Heavy-Duty TF72 Series Shipping Case

The rugged plastic custom shipping case provides maximum protection of the TF72 series during transport and enhances portability with an extendable handle and wheels. The case can accommodate the same accessories as the standard case.

Case dimensions, with handles folded in and retracted:

26 H by 20 W by 14.5 D in. approx  
(66.0 by 50.8 by 36.8 cm approx)

Ordering number:

**MS-TF-72-CASE-SHIP**



### Additional Products

#### Tube Cutting Tool

For information on tools for cutting tubing up to 4 1/2 in. and 120 mm OD, see the *Swagelok Tube Cutting Tool—TC Series* catalog, MS-02-427.



#### Swagelok Welding System

For orbital welding equipment and accessories see the *Swagelok Welding System M200 Power Supply* catalog, MS-02-342.



### Warranty Information

Swagelok products are backed by The Swagelok Limited Lifetime Warranty. For a copy, visit [swagelok.com](http://swagelok.com) or contact your authorized Swagelok representative.