

# 4

## ***Tubend Tools for tube facing***

Maus Italia offers a range of tools for machining the ends of heat exchanger tubes.

Maus Italia's technical staff are at your disposal to recommend the optimum solution for each situation.



## F/796

Used in the manufacturing of new tube sheets, it solves the problem of the total removal of excess tube protrusion, up to 70 mm (2.756").

This tool is designed to be used before the traditional portable milling cutters, significantly reducing process times and tool consumption.



## F/751R

**F/751R**, with right hand cutting, faces the tubes to the same protrusion after expansion. It is also suitable for tube finishing. It is equipped with a rotating bell designed to protect the tube sheet surface during processing. The blades are **HSS** for longer life.

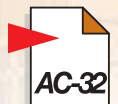
The tool is selected according to the tube external diameter and thickness. Tailor-made guide bushes are delivered upon request.



## F/753

**F/753**, with right hand cutting and by combining two cutting tools, it simultaneously chamfers the tube externally and internally at 90°.

The tool is selected according to the tube external and internal diameter.



## Portable electrical and pneumatic motorised control gears

For the driving of **Tubend** tools Maus Italia offers a comprehensive range of high-quality electrical and pneumatic motorised control gears.



**MDse 648 - electrical**



**MOF - pneumatic**



# F/796

Motorised tube cutter to remove excess sections from tubes with diameters ranging between **1/2"** and **1.1/2"** (12,70 to 38,10 mm)

Used in the manufacturing of new tube sheets, it solves the problem of the **total removal of excess tube protrusions**, up to 70 mm (2.756"). This tool is designed to be used **before the traditional portable milling cutters, significantly reducing process times and tool consumption.**

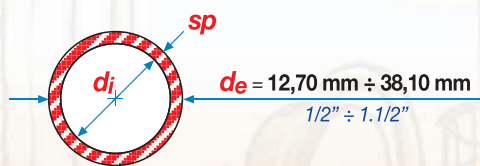
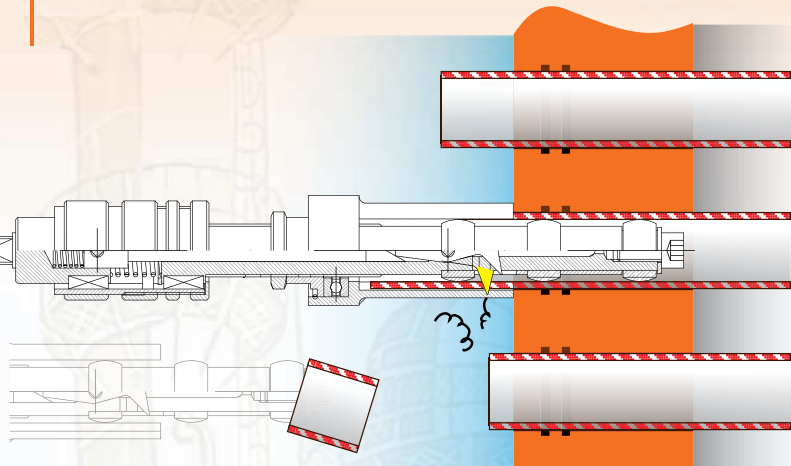
The **F796** model is chosen according to the outer diameter **de** and to the thickness **sp** of the tube to be

The **SET of 3 bushes**, supplied separately according to the specific requirement, allows the tool to adapt to different wall thicknesses.

**F796** is inserted into the tube until it stops on the tube sheet; the stopping point is defined by the adjustable thrust collar. **A rotating blade is gradually pushed on the tube internal wall** until cutting is completed.

The tool is **driven using** a portable electric or pneumatic motor.

The **HSS** blades are coated with Titanium Aluminium Nitride - **TIAlN**



## F/796

Tube		Tube cutter	Blade	Shank		SET of 3 bushes
<b>de</b>		<b>F796</b>	<b>F796-BIT</b>	<b>M</b>		<b>F796-PILOTS</b>
inches	mm	Code	Code	inches	mm	Code
1/2"	12,70	F796-0	F796-BIT-0	3/8"	9,52	F796-PILOTS-0-##
5/8"	15,87	F796-1	F796-BIT-1			F796-PILOTS-1-##
3/4"	19,05	F796-2	F796-BIT-2÷4			F796-PILOTS-2-##
7/8"	22,22	F796-3				F796-PILOTS-3-##
1"	25,40	F796-4	F796-BIT-5÷6	1/2"	12,70	F796-PILOTS-4-##
1.1/4"	31,75	F796-5				F796-PILOTS-5-##
1.1/2"	38,10	F796-6				F796-PILOTS-6-##

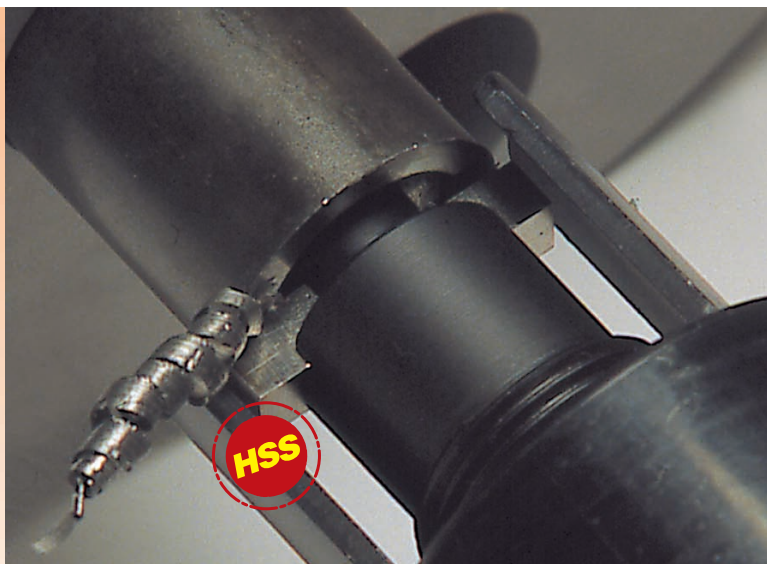
F796-PILOTS - nn - ##

Size

B.W.G.

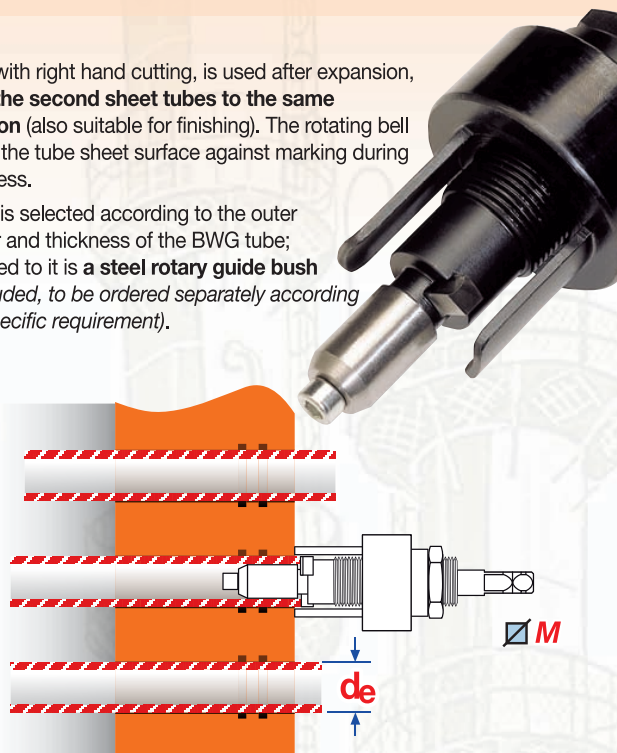
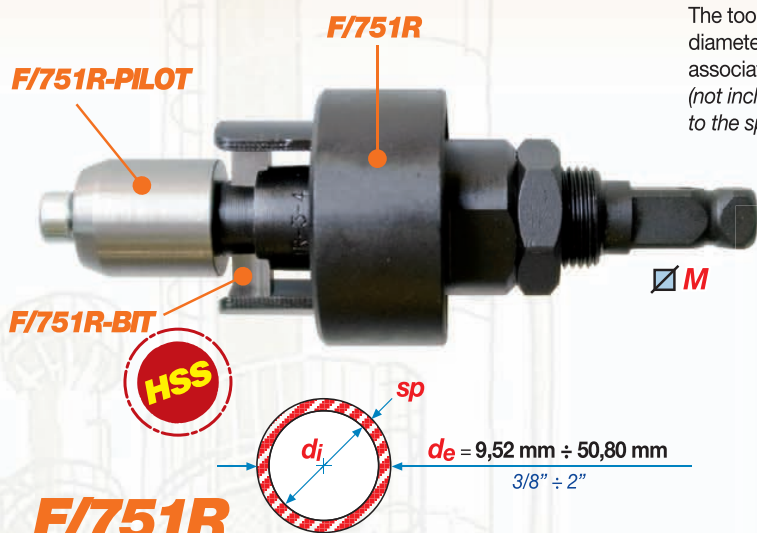
# F/751R

Rotating bell tube end facing milling cutter with HSS cutting edges



**F/751R**, with right hand cutting, is used after expansion, to face the second sheet tubes to the same protrusion (also suitable for finishing). The rotating bell protects the tube sheet surface against marking during the process.

The tool is selected according to the outer diameter and thickness of the BWG tube; associated to it is a **steel rotary guide bush** (not included, to be ordered separately according to the specific requirement).



Tube			Milling cutter	Blades	Shank		Bushes
de		sp	F/751R	F/751R-BIT	M		F/751R-PILOT
inches	mm	B.W.G.	Code	Code	inches	mm	Code
3/8"	9,52	14-16-18-20	F751R-0	F751R-BIT-0	3/8"	9,52	F751R-PILOT-0-##
1/2"	12,70	14-16-18-20	F751R-1	F751R-BIT-1			F751R-PILOT-1-##
5/8"	15,87	14-16-18-20	F751R-2	F751R-BIT-2			F751R-PILOT-2-##
3/4"	19,05	12-14-16-18-20	F751R-3	F751R-BIT-3			F751R-PILOT-3-##
7/8"	22,22	14-16-18-20	F751R-4	F751R-BIT-4			F751R-PILOT-4-##
1"	25,40	10-12-14-16-18-20	F751R-5	F751R-BIT-5	1/2"	12,70	F751R-PILOT-5-##
1.1/8"	28,57	10-12-14-16-18	F751R-5/A	F751R-BIT-5/A			F751R-PILOT-5/A-##
1.1/4"	31,75	10-12-14-16-18	F751R-6	F751R-BIT-6			F751R-PILOT-6-##
1.3/8"	34,92	10-12-14-16-18	F751R-6/A	F751R-BIT-6/A			F751R-PILOT-6/A-##
1.1/2"	38,10	10-12-14-16-18	F751R-7	F751R-BIT-7			F751R-PILOT-7-##
1.5/8"	41,27	10-12-14-16-18	F751R-7/A	F751R-BIT-7/A			F751R-PILOT-7/A-##
1.3/4"	44,45	10-12-14-16-18	F751R-8	F751R-BIT-8			F751R-PILOT-8-##
1.7/8"	47,62	10-12-14-16-18	F751R-8/A	F751R-BIT-8/A			F751R-PILOT-8/A-##
2"	50,80	10-12-14-16-18	F751R-9	F751R-BIT-9			3/4"

F751R-PILOT - nn - ##

Size

B.W.G.



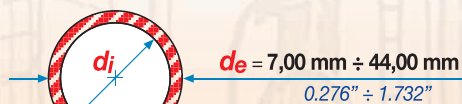
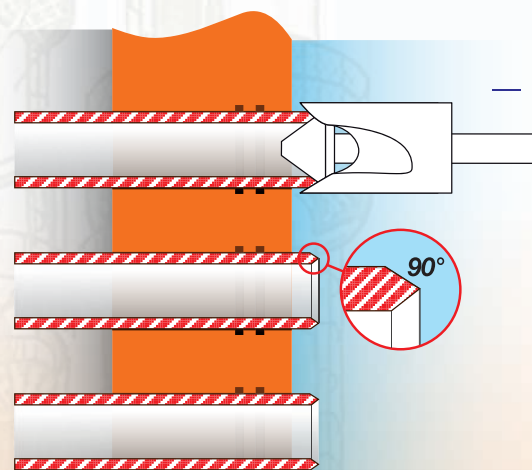
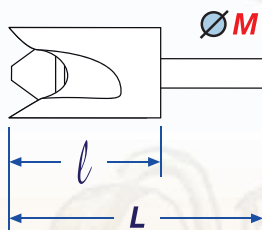
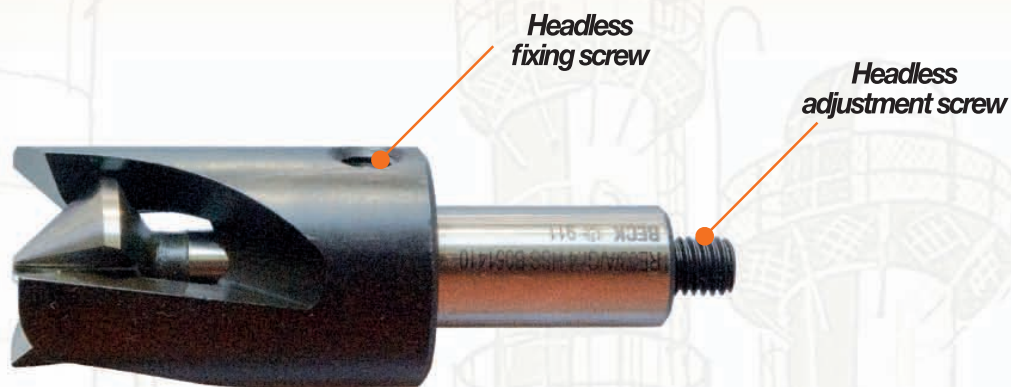
# F/753

Adjustable combined milling cutter for simultaneous deburring/chamfering of tube outer and inner diameters



**F/753**, with right hand cutting and by combining two cutting tools, it simultaneously chamfers the tube externally and internally at 90°.

The tool is selected according to the tube external and internal diameter

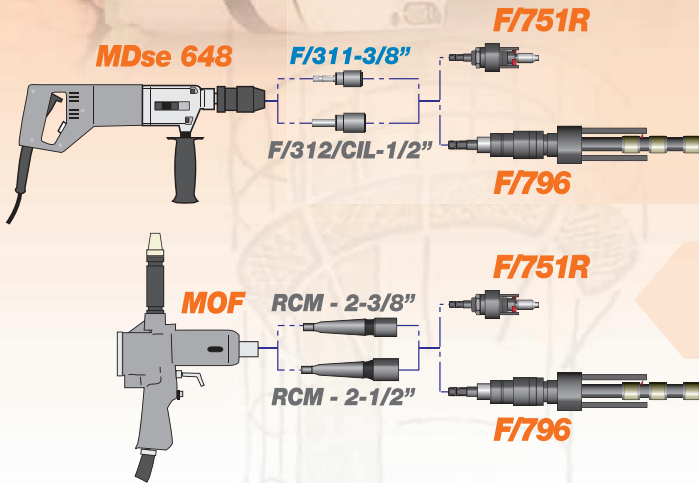


## F/753

Tube				Milling cutter	Dimensions				Shank		
$d_e$		$d_i$		<b>F/753</b>	L		l		$\varnothing M$		Morse taper
mm	inches	mm	inches	Code	mm	inches	mm	inches	mm	inches	N
7,00 ÷ 14,00	0.276" ÷ 0.552"	2,60 ÷ 7,80	0.102" ÷ 0.307"	<b>F/753-0</b>	65,00	2.559"	37,00	1.457"	12,00	0.472"	/
9,00 ÷ 20,00	0.354" ÷ 0.787"	3,60 ÷ 12,80	0.146" ÷ 0.504"	<b>F/753-1</b>	75,00	2.953"	43,00	1.693"	16,00	0.630"	/
16,00 ÷ 27,00	0.630" ÷ 1.063"	4,60 ÷ 24,00	0.181" ÷ 0.945"	<b>F/753-2</b>	85,00	3.346"	53,00	2.087"	16,00	0.630"	/
25,00 ÷ 44,00	0.984" ÷ 1.732"	20,00 ÷ 39,00	0.787" ÷ 1.535"	<b>F/753-3</b>	155,00	6.102"	60,00	2.362"	/	/	2

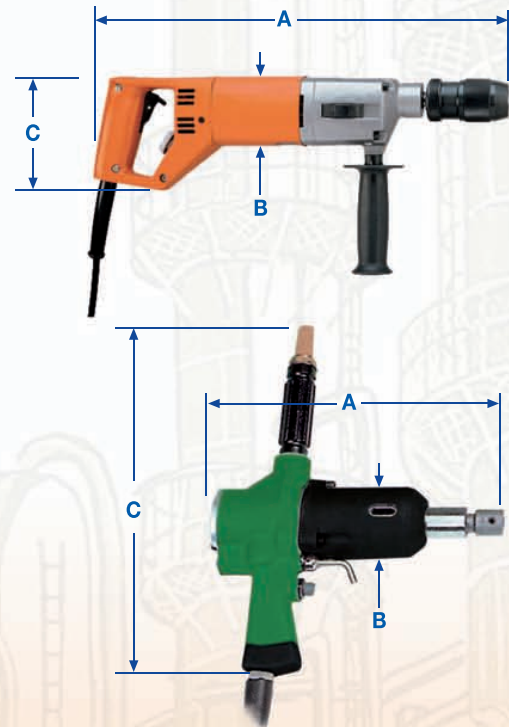
## Electrical and pneumatic motorised control gears for **Tubend** tool driving

The diagram to the side summarises the full fitting equipment required for **Tubend** tool driving.



### MDse 648 - electrical

Power supply / Capacity		MDse 648
Voltage	Volt - Phase (Ph)	220 - 1
Frequency	Hz	50/60
Input power	Kw	0,74
No-load speed	revolution/min (R.P.M)	260-600 / 640-1400
Full load speed	revolution/min (R.P.M)	0-360 / 0-860
Dimensions		MDse 648
Length (depth)	<b>A</b> mm (inches)	487,00 (19.2)
Width (Ø)	<b>B</b> mm (inches)	81,00 (3.2)
Height (without handle)	<b>C</b> mm (inches)	132,00 (5.2)
Weight	Kg (Lb)	4,8 (10.6)



### MOF - pneumatic

Power supply / Capacity		MOF 20 R	MOF 3	MOF 3 R
Max insertion	revolution/min (R.P.M)	470	170	140
Power	Kw	0,745	0,745	0,745
Air consumption	Litres/sec. (cfm)	14 (30)	14 (30)	14 (30)
Dimensions		MOF 20 R	MOF 3	MOF 3 R
Morse taper connector	N	2	2	2
Air connector	" GAS (mm)	3/8" GAS (12.637)	3/8" GAS (12.637)	3/8" GAS (12.637)
Length (depth)	<b>A</b> mm (inches)	236,00 (9.3)	272,00 (10.7)	241,00 (9.5)
Width	<b>B</b> mm (inches)	360,00 (30)	360,00 (30)	360,00 (30)
Height (Ø)	<b>C</b> mm (inches)	66,00 (2.6)	66,00 (2.6)	66,00 (2.6)
Weight	Kg (Lb)	4,5 (9.9)	4,2 (9.3)	4,6 (10.2)