

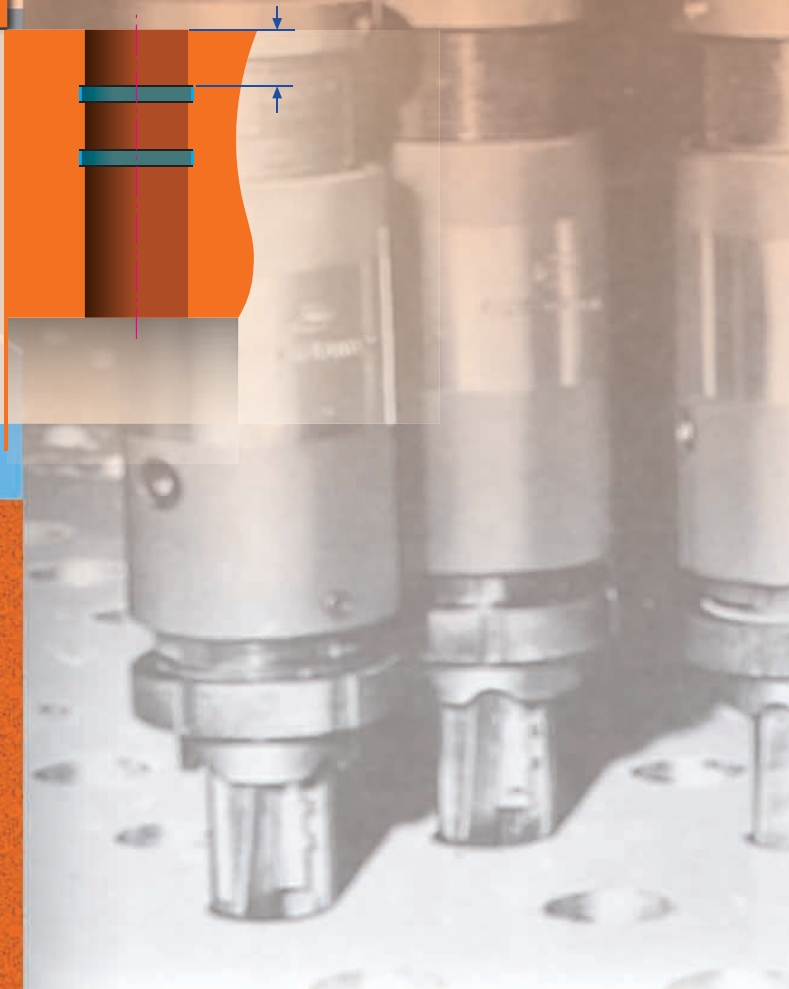
Holetool

MAUS ITALIA



F/26

Self-centering grooving tool
with **adjustable B** depth and
interchangeable
HSS-Co blades



MA-2501

Automatic grooving

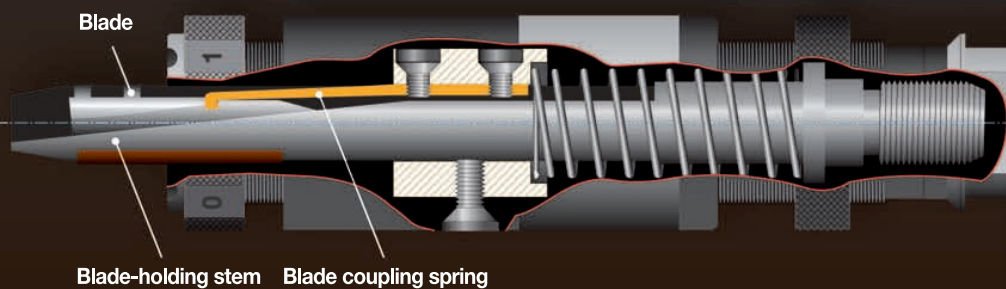
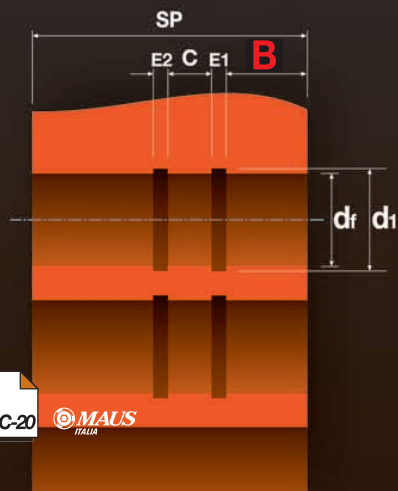
A due reference to the **MA-2501** work centre, the flagship of Maus Italia, the leading company for industrial automation in this market sector (see catalogue "**Automation**")

This **fully automatic** system (single or double axis), can be used for tube expansion, facing and welding and for grooving tube sheet holes.

The **F/26** series is designed with a special connector and provides excellent results in large productions.



900 holes/hr (2 holes in 8 sec.)



AC-20

MAUS
ITALIA

F/26

Self-centering grooving tool with **adjustable B depth** and interchangeable **HSS-Co blades**

The **F/26** self-centering grooving tool creates grooves in tube sheet holes (it is also effectively used for trueing existing grooves) up to a **standard depth B** that can be **adjusted** to a value ranging between 1 and 12 mm (0.47" to 0.04").

Greater depths, up to 300 mm (11.81"), can be easily reached using the **modular stem, spring and bush kits**, while retaining the ability to perform the adjustment mentioned above.

Equipped with a channel allowing coolant to flow through, like the other drilling tools of the **Holetool** series, the **F/26** is used on radial drills and programmed drilling machines (even with multiple heads).

Entirely designed and manufactured by Maus Italia using high quality materials, the **F/26** is offered in 7 sizes, to process holes with diameters ranging between 9,75 and 51,50 mm (0.384" to 2.028").

It is equipped with **HSS blades**, to perform multiple channels/grooves or multiple special processes at the same time.

Blades



The **F/26** self-centering grooving tool is equipped with interchangeable **HSS-Co 10%** blades, for performing multiple operations.

Blades come in **3 different sizes**.

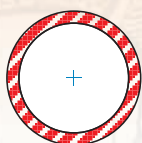
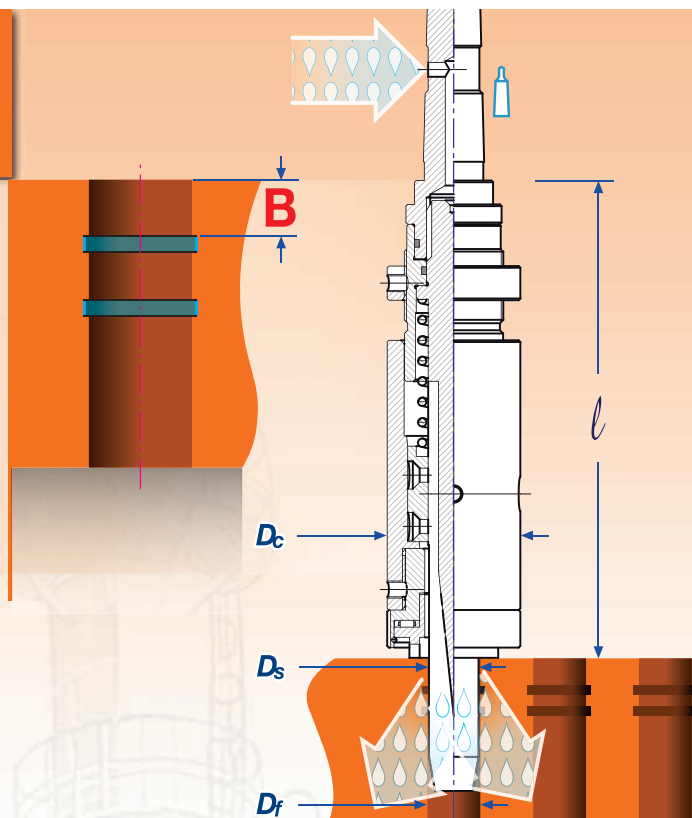
Maus Italia's technical staff are at the Customers' disposal to design and produce customised blades for special processes.





F/26

Self-centering grooving tool with adjustable **B** depth and interchangeable **HSS-Co** blades



$$d_e = 9,52 \text{ mm} \div 50,80 \text{ mm}$$

$$\frac{3/8'' \div 2''}$$

F/26

Tube		Finished tube sheet hole		Grooving tool	Stem Ø		Max. body Ø		Length Body		Shank	Blades
d_e		D_f		F/26	D_s		D_c		l		Morse taper	F/26-BIT
inches	mm	mm	inches	Code	mm	inches	mm	inches	mm	inches	N	Code
3/8"	9,52	9,75	0.384	* F26-00	9,50	0.374						F26-BIT-00
	10,00	10,20 - 10,25	0.402 - 0.404	* F26-00a	10,00	0.394						
1/2"	12,00	12,20 - 12,25	0.480 - 0.482	* F26-1a	12,00	0.472						F26-BIT-1
	12,70	12,90 - 12,95	0.508 - 0.510	* F26-1b	12,70	0.500	39,00	1.535	180,00	7.087	2	
	13,00	13,20 - 13,25	0.520 - 0.522	* F26-1c	13,00	0.512						
	14,00	14,20 - 14,25	0.559 - 0.561	* F26-1d	14,00	0.551						
5/8"	15,00	15,20 - 15,25	0.598 - 0.600	* F26-1e	15,00	0.591						F26-BIT-1
	15,87	16,10 - 16,20	0.634 - 0.638	F26-2a	16,00	0.630						
	16,00	16,20 - 16,25	0.638 - 0.640	F26-2a	16,00	0.630						
3/4"	17,00	17,25 - 17,30	0.679 - 0.681	F26-2as	17,00	0.669	47,00	1.850				F26-BIT-1
	18,00	18,25 - 18,30	0.718 - 0.720	F26-2b	18,00	0.709						
	19,05	19,25 - 19,30	0.758 - 0.760	F26-2c	19,00	0.748			230,00	9.055	3	
7/8"	20,00	20,25	0.797	F26-3a	20,00	0.787						F26-BIT-2÷6
	22,00	22,25 - 22,30	0.876 - 0.878	F26-3b	22,00	0.866						
1"	22,22	22,50	0.886	F26-3b	22,25	0.876	53,00	2.087				F26-BIT-2÷6
	25,00	25,25 - 25,30	0.994 - 0.996	F26-3c	25,00	0.984						
3/4" GAS	25,40	25,65 - 25,70	0.010 - 1.012	F26-3d	25,40	1.000						F26-BIT-2÷6
	26,90	27,20	1.071	F26-4a	26,90	1.059						
1.1/4"	27,00	27,30	1.075	F26-4a	27,00	1.063	66,00	2.598				F26-BIT-2÷6
	31,75	32,10	1.264	F26-4b	31,75	1.250						
1" GAS</td <td>32,00</td> <td>32,25</td> <td>1.270</td> <td>F26-4b</td> <td>32,00</td> <td>1.260</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td rowspan="2">F26-BIT-2÷6</td>	32,00	32,25	1.270	F26-4b	32,00	1.260						F26-BIT-2÷6
	33,70	34,00	1.339	F26-5a	33,75	1.329	72,00	2.835	240,00	9.449	4	
1.1/2"	38,10	38,50	1.516	F26-5b	38,10	1.500						F26-BIT-2÷6
	42,40	42,80	1.685	F26-6a	42,75	1.683						
1.3/4"	44,45	44,80	1.764	F26-6b	44,75	1.762						F26-BIT-2÷6
	48,30	48,80	1.921	F26-6c	48,75	1.919	92,00	3.622				
2"	50,80	51,50	2.028	F26-6d	51,75	2.037						F26-BIT-2÷6

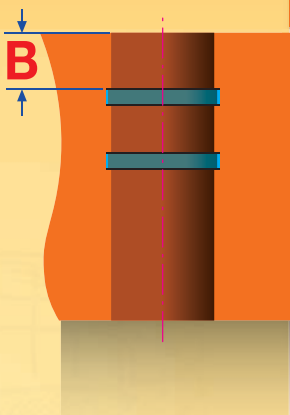
* F/26 without coolant channels

F/26

Sample order codes

If you need to create a 3-6-3 (E-C-E) set of grooves in 3/4" (19,00 mm) holes at a B depth of 10 mm (0.394"), referring to the two tables (on these pages) you can see that the full order to be placed shall include the following items:

F26-2c (1 grooving tool)
F26-BIT-2- 363 (1 blade)



F/26

Components for B depth adjustment (distance between the tubesheet surface and the first groove)

The depth between the tubesheet surface and the first groove, indicated with B, can be set to a value ranging between 1 and 12 mm (0.47" to 0.04") through a ring.

Greater depths, up to 300 mm (11.81"), while retaining the ability to perform the ring adjustment, can be easily reached using optional components: stems, blade coupling springs and thrust bushes.

The table below provides easy identification of the appropriate grooving tool and accessory code.

Depth		Grooving tool
B		F/26
mm	inches	Code
1,00 ÷ 12,00	0.039 ÷ 0.472	F26-##
6,00 ÷ 18,00	0.236 ÷ 0.709	F26-##-CTS06
20,00 ÷ 32,00	0.787 ÷ 1.260	F26-##-EXT20
17,00 ÷ 29,00	0.669 ÷ 1.142	F26-##-THR09
11,00 ÷ 23,00	0.433 ÷ 0.906	F26-##-THR15
2,00 ÷ 14,00	0.079 ÷ 0.551	F26-##-THR24
35,00 ÷ 47,00	1.378 ÷ 1.850	F26-##-EXT35
32,00 ÷ 44,00	1.260 ÷ 1.732	F26-##-THR09
26,00 ÷ 38,00	1.023 ÷ 1.496	F26-##-THR15
17,00 ÷ 29,00	0.670 ÷ 1.142	F26-##-THR24

F/26 standard

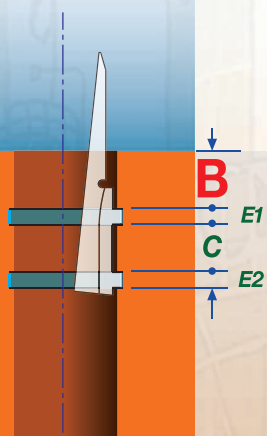
Additional accessory
extended blade coupling spring

F/26 extended by 20 mm (0.787")

Additional accessory
extended thrust bush

F/26 extended by 35 mm (1.378")

Additional accessory
extended thrust bush



F26-BIT-#-##-##

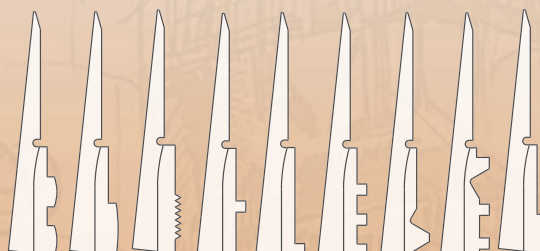
00
1
2÷6

Blades



The fixed groove layout is given by the profile of the blades installed on the F/26 model. Maus Italia offers a comprehensive range for the most common tasks.

Special blades are designed and manufactured according to customer's specifications. In case of stainless steel tube sheets we recommend the blades coated with Titanium Aluminium Nitride - TiAlN, whose order code has the CTD suffix



F26-BIT-#-##-##-CTD

00
1
2÷6



F/112

Universal grooving tool, with **fixed B depth** for tube sheet holes ranging between 7 and 30 mm (0.276" to 1.181")

F/112 is a **universal grooving tool**, designed and manufactured by Maus Italia using high quality materials, for executing one or more grooves at the same time in tube sheet holes.

F/112 is used, through a Morse No.3 taper, on radial drills and programmed drilling machines for holes on tube sheets **D_f** ranging between 7 and 30 mm (0.276" to 1.181")

For its operation **F/112** uses **centering rings** and **special tools tailor made** by Maus Italia's technical staff.

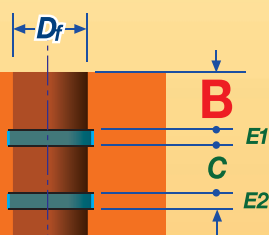
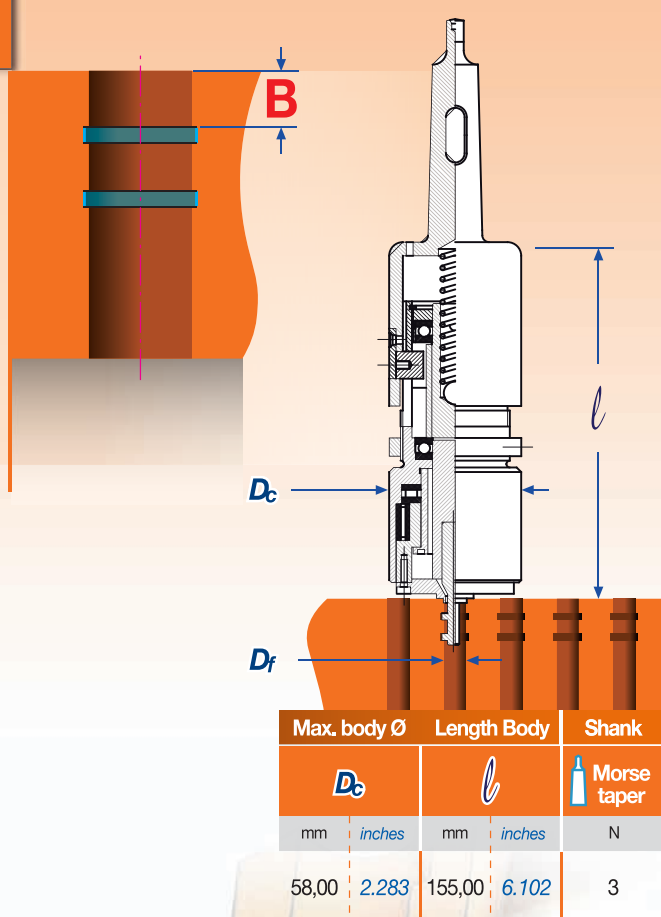


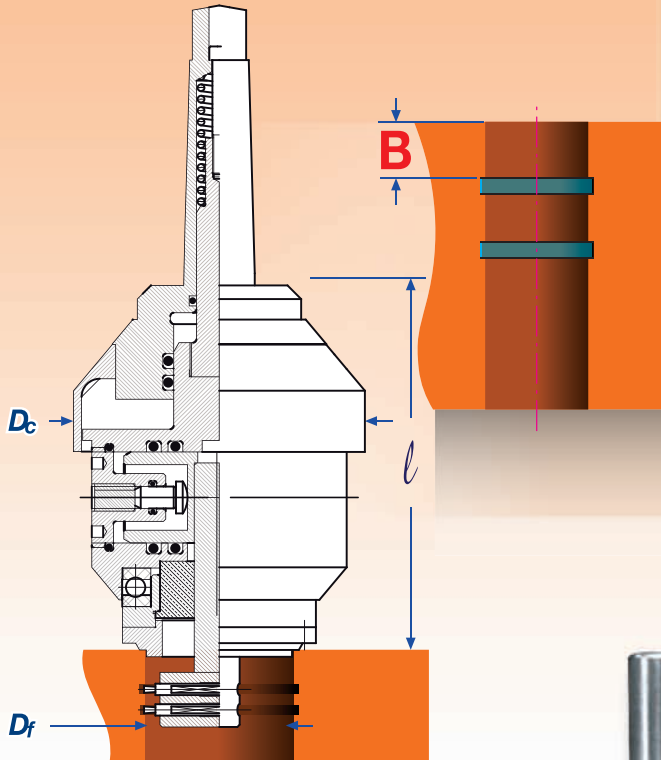
F/112

Order code

The full order to be placed shall include the following items:

F112	Grooving tool
F112-AC- D_f	Centering ring
F112-UT- D_f - B-E1-C-E2	Tool





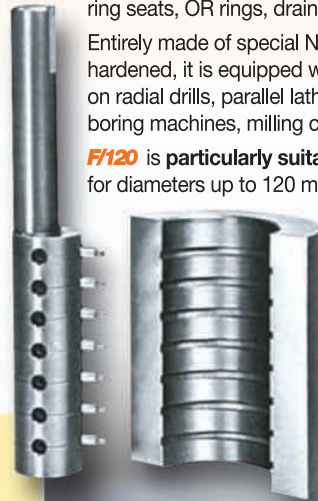
F/120

Universal grooving tool with **fixed B depth** and hydraulic power expansion for holes up to 120 mm (4.724")


F/120, universal equipment with hydraulic power expansion for executing at the same time one or more grooves in tube sheet holes ranging between 15 and 120 mm (0.591" to 4.724"), Seeger ring seats, OR rings, drains, etc.

Entirely made of special NiCr steel, cemented, tempered and hardened, it is equipped with a Morse taper no.4. It can be installed on radial drills, parallel lathes (on the mandrel or on the tailstock), boring machines, milling cutters, operating machines in general.

F/120 is particularly suitable for executing tasks on boiler tubes for diameters up to 120 mm (4.724")



It is supplied with a self-centering ring, a tool holder and tools tailor made by the Maus Italia technical staff.

Max. body Ø		Length Body		Shank
D_c		l		 Morse taper
mm	inches	mm	inches	N
128,00	5.128	155,00	6.102	4

Tungsten Carbide

F/120

Order code

The full order to be placed shall include the following items:

- F120** Grooving tool
- F120-AC- Df** Centering ring
- F120-PU- Df - B-E1-C-E2** Tool holder
- F120-BIT- Df - B-E** Blade

