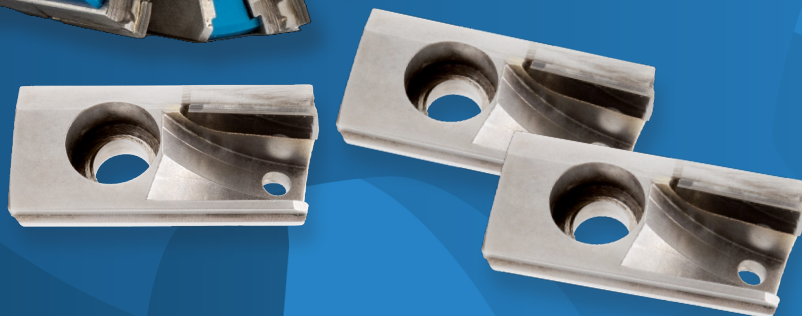
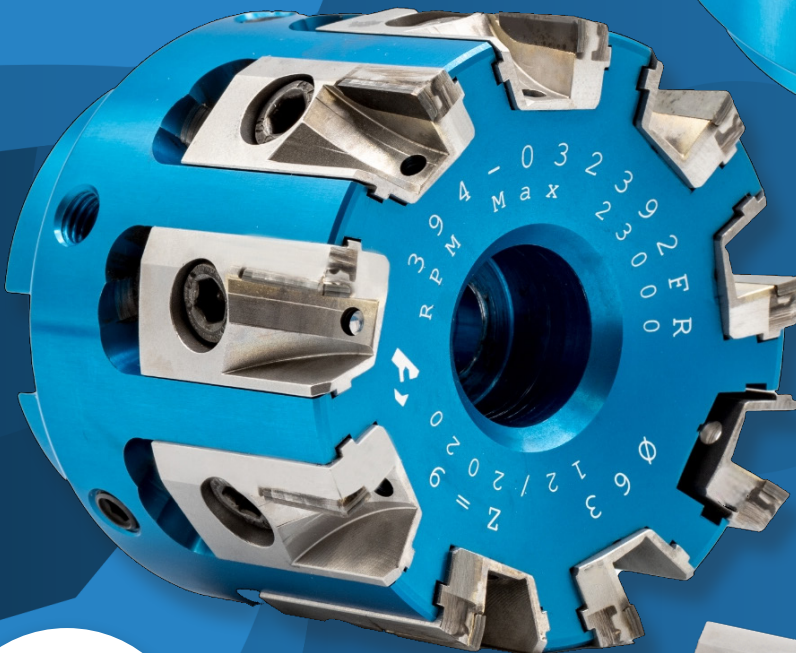


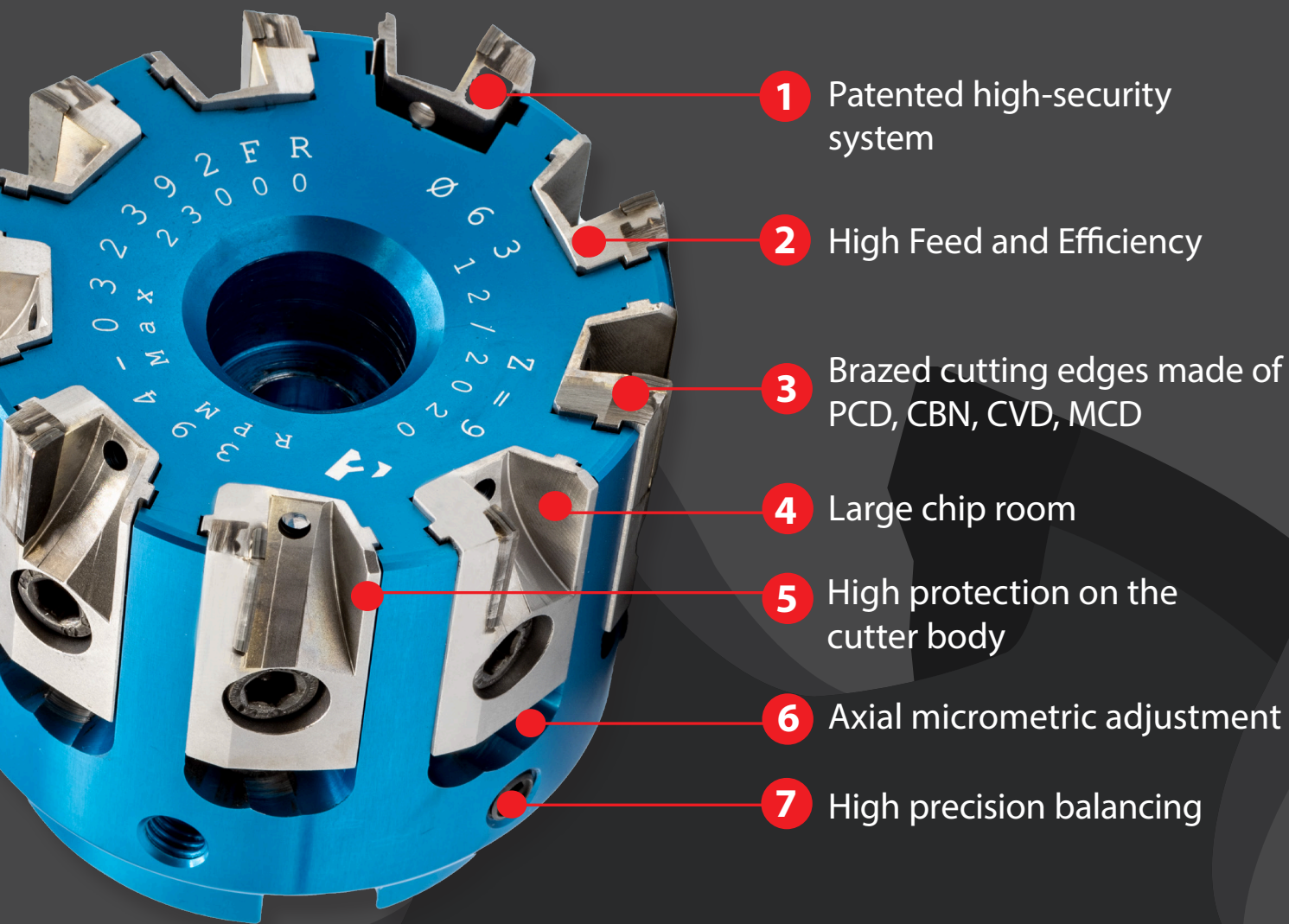


F800

Edition 1



PRODUCT DETAILS: F800



Cartridge with brazed cutting edges

CARTRIDGES

Available with PCD, CBN, CVD and MCD cutting edge for machining Aluminium, Cast Iron, Copper, Brass and Composite Materials

FIUDI F800

Aluminium milling head

A wide range of different diameters and number of cutting edges is available.

The density of this aluminium alloy ($2,7\text{g/cm}^3$) is widely used in the aerospace structures and allows a perfect balance between low inertia and high strength.

PCD, CBN, CVD, MCD cartridges

Different cartridge can be assembled on the same cutter body: PCD, CBN, CVD, MCD. These superabrasive materials used in Fiudi give outstanding wear resistance and quality of the machined surface. The patented shape of the cartridges guarantees both great torsional stiffness of the assembly and total shielding of the anodized milling head against chip flow wear.

Cutting edge length

Four different cutting edge lengths depending on the volume of material to be removed:

$A_p=3\text{mm}$

$A_p=6\text{mm}$

$A_p=8\text{mm}$

$A_p=12\text{mm}$



F800 Ø100 z12 over HSK-A63



Spindle

HSK-A63
Weight 1,5 kilo

+

F800 Ø100 Z12

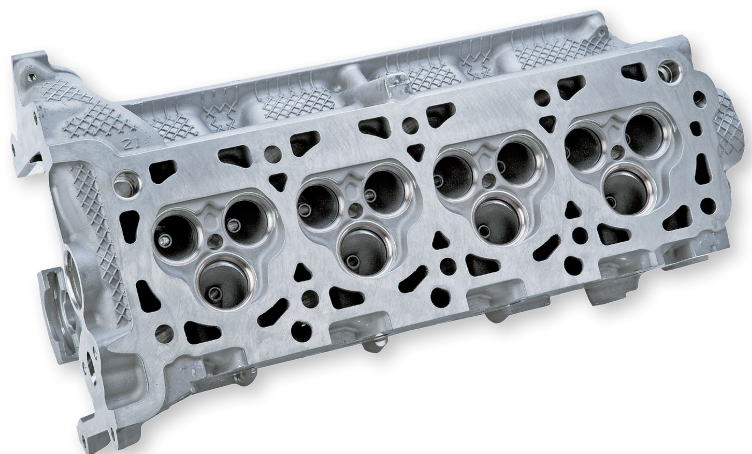
F800 394-032801FR
Weight 1,12 kilo

= Total weight
2,62 kg

Applications

Solutions for automotive/aerospace aluminium components

- Gearbox
- Trasmission
- Cylinder head
- Cylinder block
- Components in Ergal 7075 T6



Spare parts

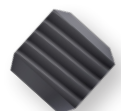
The parts are compatible with cutters of all sizes and the easy set-up reduces set-up time.



Cartridges setting screw



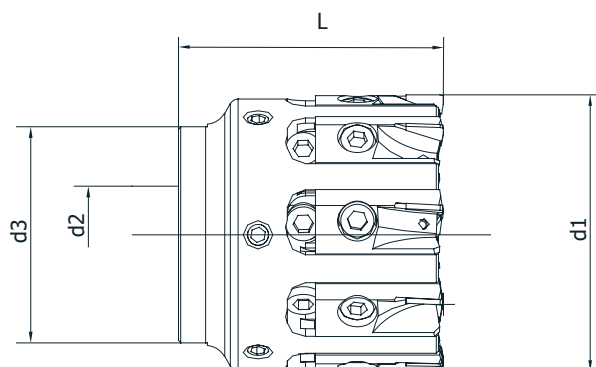
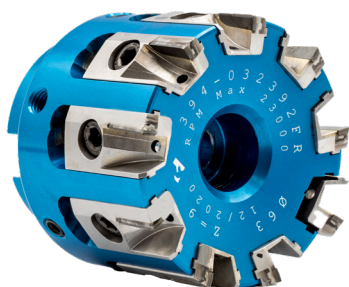
Cartridges lock screw



Balancing grub screw

F800 CUTTER BODY

Milling | Mechanical Fixing



- Face milling cutter for aluminium, cast iron, copper, brass and composite materials
- Cutting edge in PCD, CBN, CVD, MCD
- Ap max. 12mm
- Size Ø 63 - Ø 250 mm



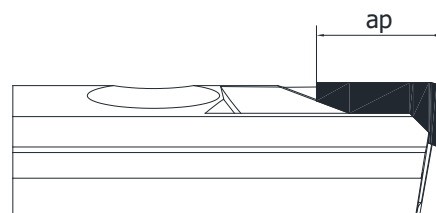
☒ In Stock ☐ By request

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Accessories & spare parts

Applicable bodies	 Cartridges lock screw	 Cartridges setting screw	 Grub screw	 Cutter locking screw	 Coolant distributor
Ø 63	011-032821	012-032404RIC	011-032820	012-032737RIC	
Ø 80	011-032821	012-032404RIC	011-032820	012-021112RIC	012-033909RIC
Ø 100	011-032821	012-032404RIC	011-032820	012-020795RIC	012-033908RIC
Ø 125	011-032821	012-032404RIC	011-032820	012-020786RIC	012-033907RIC
Ø 160	011-032821	012-032404RIC	011-032820	012-032822RIC	012-033906RIC
Ø 200	011-032821	012-032404RIC	011-032820	012-032822RIC	012-033905RIC
Ø 250	011-032821	012-032404RIC	011-032820	012-032822RIC	012-033904RIC

Milling | Mechanical Fixing

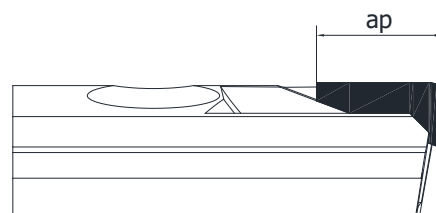


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☒ In Stock ☐ By Request

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Milling | Mechanical Fixing



-

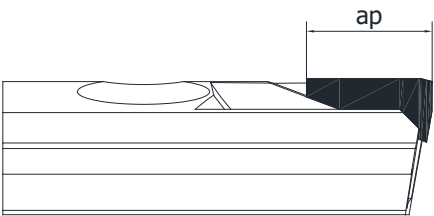
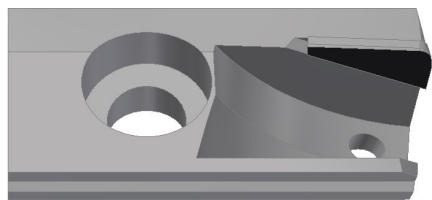
Milling | Mechanical Fixing

Cartridge

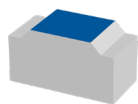
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F800 CARTRIDGES

Milling | Mechanical Fixing

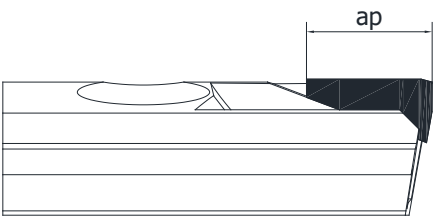
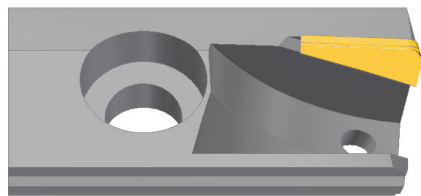


- Cartridge for finishing or controlled roughness
- PCD cutting edge

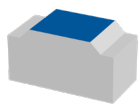


● In Stock ○ By Request

EDP	Description	ap max	QUALITY			Weight
			57	66	69	
359-032816-57	F800C-WC.03	3	●			15 gr.
359-032816-66	F800C-WC.03	3		○		15 gr.
359-032816-69	F800C-WC.03	3			○	15 gr.
359-034067-66	F800C-WC.06	6		●		15 gr.
359-032408-69	F800C-RZ.03	3			●	15 gr.
359-033007-57	F800C-CC.03	3	●			15 gr.
359-033007-69	F800C-CC.03	3			○	15 gr.



- Cartridge for mirror finishing
- MCD cutting edge for Ra <0,1 micron



● In Stock ○ By Request

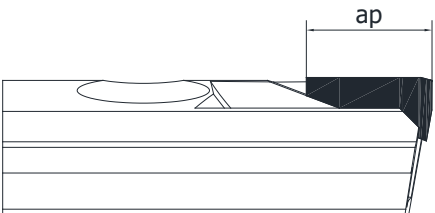
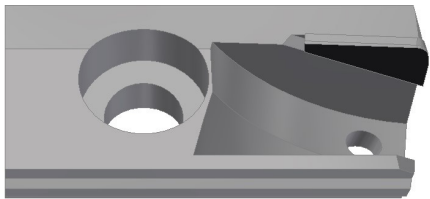
EDP	Description	ap max	QUALITY	Weight
			160	
359-033338-160	F800C-MCD.02	0,2	○	15 gr.

Milling | Mechanical Fixing

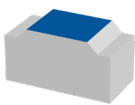
Cartridge

F800 CARTRIDGE

Milling | Mechanical Fixing



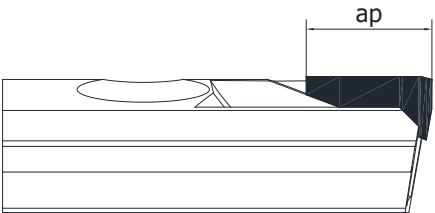
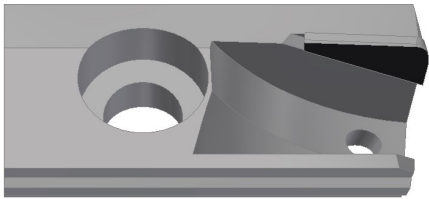
- Cartridges for general face milling
- CVD cutting edge



● In Stock ○ By Request

EDP	Description	R	ap max	CFRP	Weight
				100	
359-033755-100	F800C-FM.3		3	●	15 gr.

Milling | Mechanical Fixing



- Cartridge for straight shoulder
- CVD cutting edge



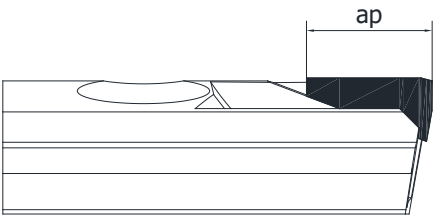
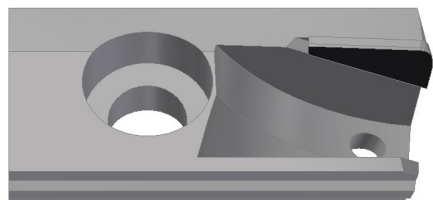
● In Stock ○ By Request

EDP	Description	R	ap max	CFRP	Weight
				100	
359-033757-100	F800C-SM.03-04	0,4	3	●	15 gr.
359-033759-100	F800C-SM.03-08	0,8	3	○	15 gr.

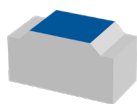
Cartridge

F800 CARTRIDGE

Milling | Mechanical Fixing

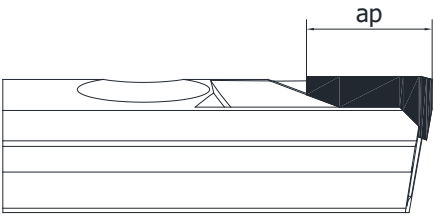
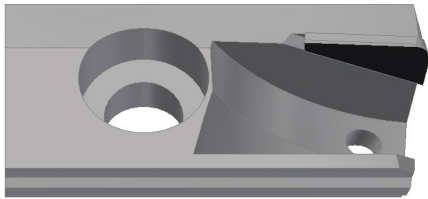


- Cartridge for general face milling
- CBN cutting edge



● In Stock ○ By Request

EDP	Description	R	ap max	GG	Weight
				11	
359-033754-11	F800C-FM.03		3	○	15 gr.



- Cartridge for straight shoulder
- CBN cutting edge



● In Stock ○ By Request

EDP	Description	R	ap max	GG	Weight
				11	
359-033756-11	F800C-SM.03-04	0,4	3	○	15 gr.
359-033758-11	F800C-SM.03-08	0,8	3	○	15 gr.

Milling | Mechanical Fixing



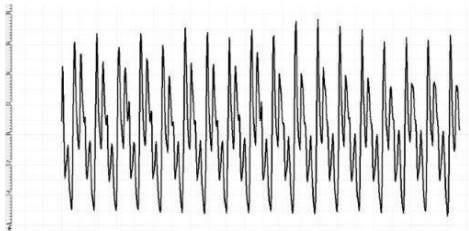
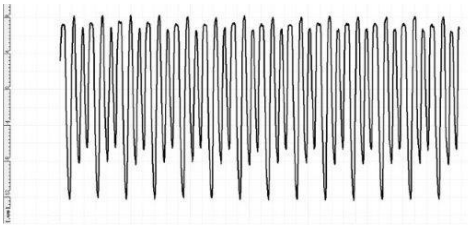
Cartridge

DEGREE OF FINISHING

Milling | Mechanical Fixing

Cartridges for controlled roughness

Tool handling is simplified using a single cartridge article code.
Roughness remains constant in all machining directions, even near shoulders.

Tool	F800 Ø63 z9	
Material	Aluminium 7075-T6	
Machine	Vertical machining centre	
VT	2.200 m/min(11.000 min ⁻¹)	
Fz	0,06 mm/rev	0,13 mm/rev
Ap e Ae	Ap= 3mm Ae=63mm	Ap= 3 mm Ae= 63 mm
Coolant	Emulsion	Emulsion
Surface roughness	Ra=1,78µm Rz=10,64	Ra=5,49µm Rz=21,04
		



Milling | Mechanical Fixing

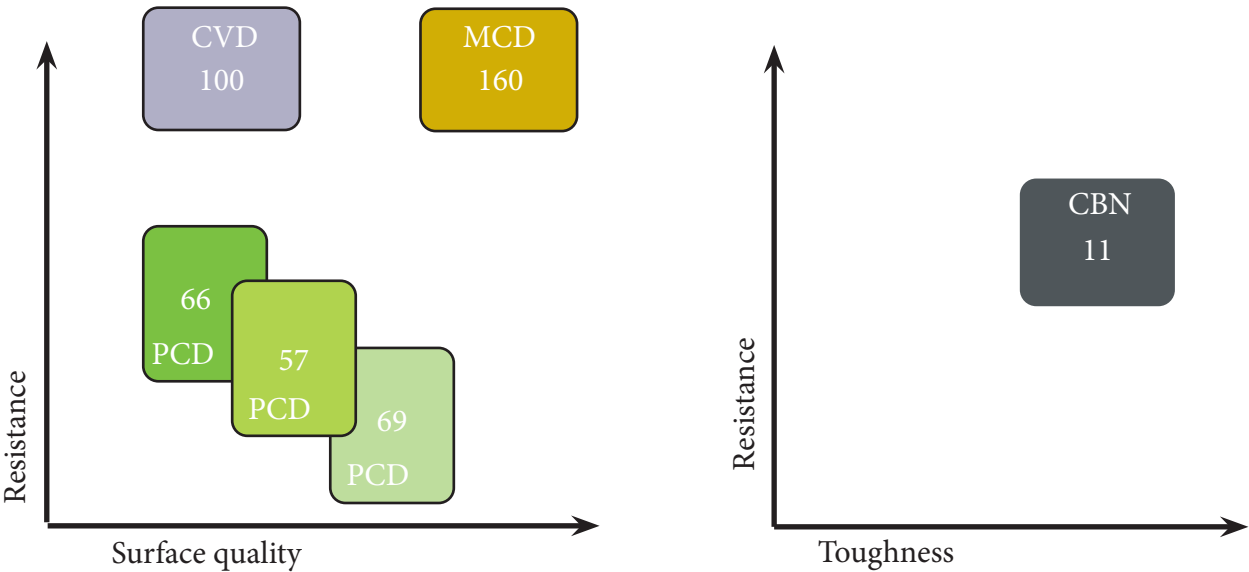
Tool	F800 Ø63 z9
Material	Aluminium AlSi9
VT	1.000 m/min(5.000 min ⁻¹)
F	2.730 mm/min (0,06mm/t)
Ap e Ae	Ap=3mm Ae=50mm
Coolant	Emulsion
Machine	Horizontal machining centre
Surface roughness	Rz=20µm



Cutting parameters

PCD	
69	Sub-micrometer grit with high diamond density, recommended for finishing operations on aluminium. Provides excellent surface Ra.
57	The average diamond grain size makes it suitable for multiple applications by balancing good roughness and high wear resistance.
66	The combined bimodal grit size guarantees an excellent degree of wear resistance. Especially recommended for roughing operations.
MCD	
160	Synthetic mono-crystal diamond ideal for mirror finishes with roughness Ra down to 0,04 microns
CVD	
100	Very high abrasion resistance and particularly suitable for all thermoplastic and thermosetting materials, including CFRP, GFRP, PEEK etc.
CBN	
11	The grain size and its high CBN concentration (90%) together with the characteristics of the binder ensure good toughness and surface finish on grey cast iron.

ABRASIVE SELECTION



RACCOMMENDED CUTTING PARAMETERS

Milling| Mechanical Fixing

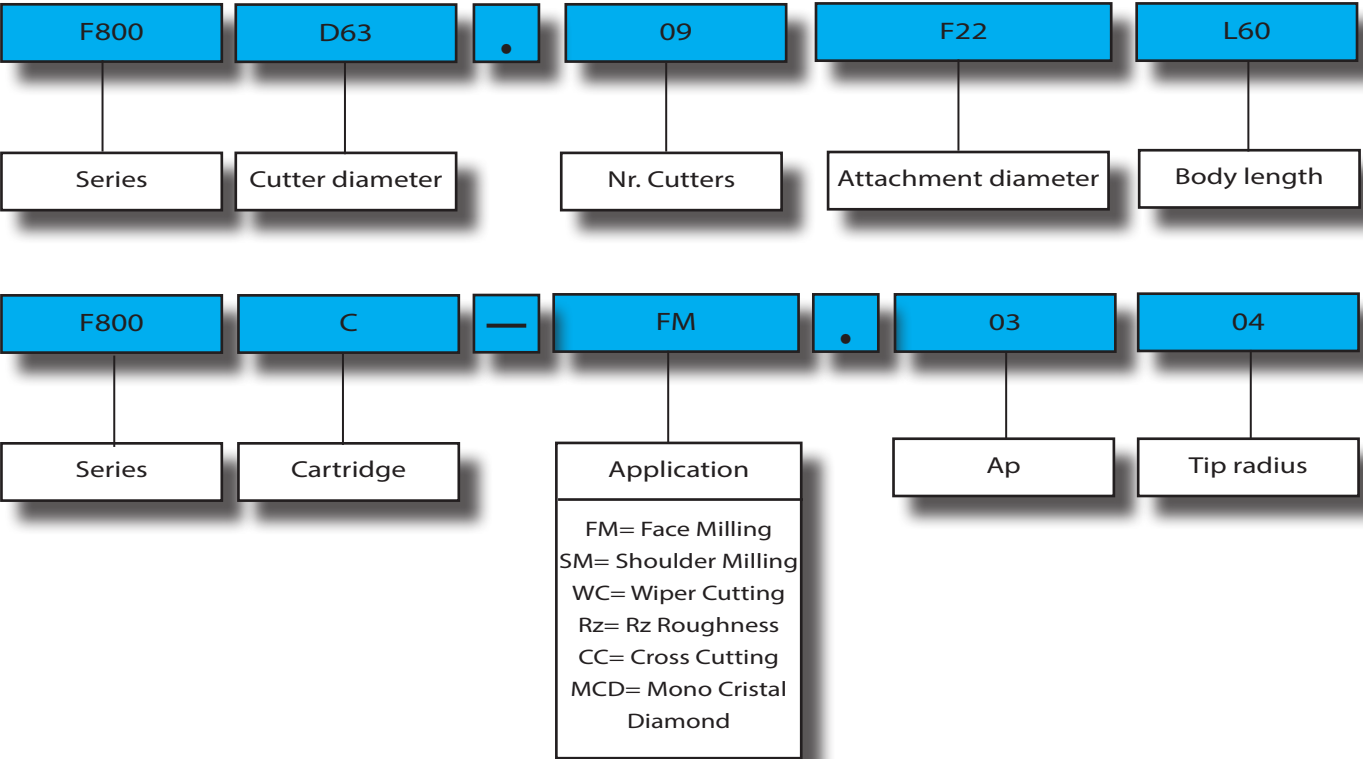
Material		Grade PCD	Cutting parameters		
			Ap (mm)	Fz (mm/rev)	Vc (m/min)
N	Aluminium Si 1-8%	57-66-69	0,03-12	0,12-0,30	1000-6000
N	Aluminium Si 6-12%	57-66-69	0,03-12	0,12-0,30	800-3000
N	Aluminium Si>12%	57-66-69	0,03-5	0,10-0,20	200-1000
N	Brass-Bronze-Copper	57-66-69	0,03-3	0,10-0,25	800-1200
CFRP	Composite 100	57-66-69	0,03-12	0,05-0,15	200-600

Material		Grade MCD	Cutting parameters		
			Ap (mm)	Fz (mm/rev)	Vc (m/min)
N	Aluminium	160	0,03-0,08	0,03-0,07	1000-4000

Material		Grade CVD	Cutting parameters		
			Ap (mm)	Fz (mm/rev)	Vc (m/min)
C	Polymer matrix composites	100	0,03 - 3	0,1 - 0,5	250 - 1000

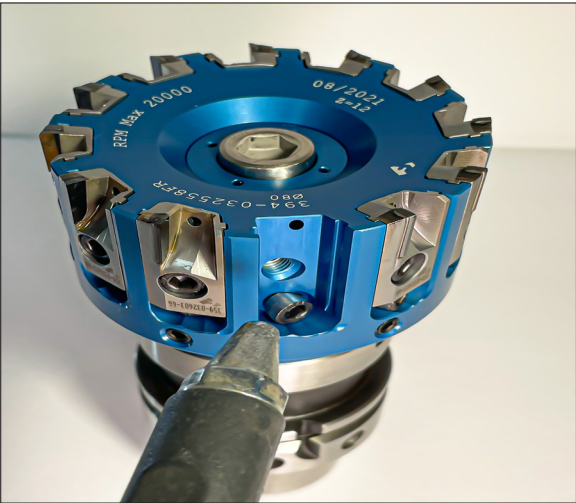
Material		Grade CBN	Cutting parameters		
			Ap (mm)	Fz (mm/rev)	Vc (m/min)
K	Grey cast iron - Interrupted and continuous cutting	11	0,03 - 3	0,1 - 0,5	150 - 1600

Tabella di Designazione

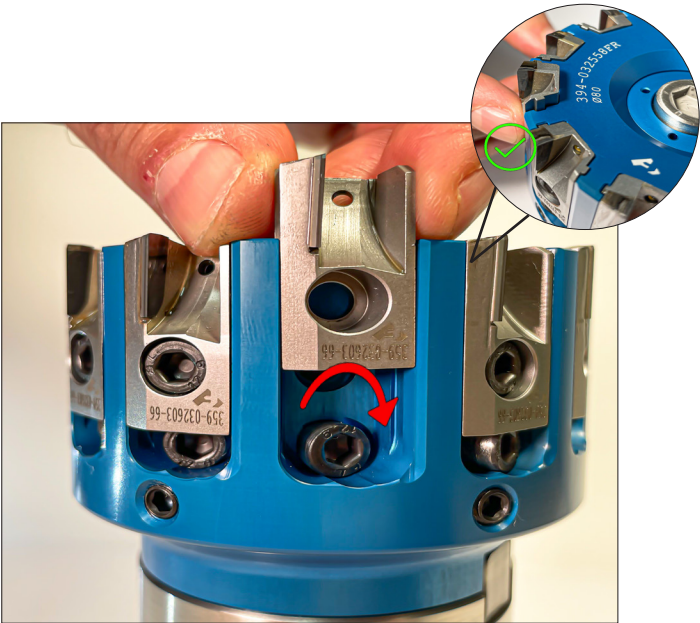


N.B. The manufacturer reserves the right to make modifications.

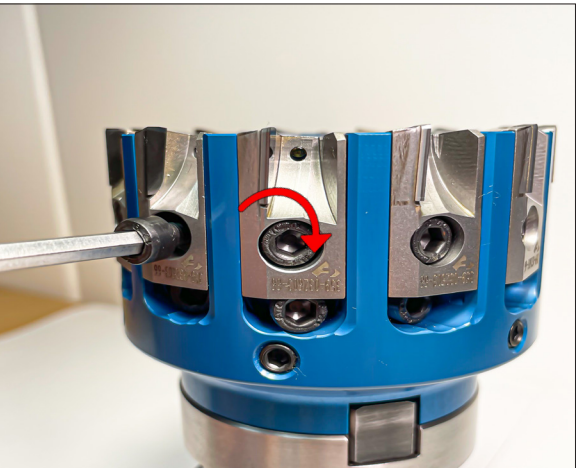
F800 cartridge mounting instructions



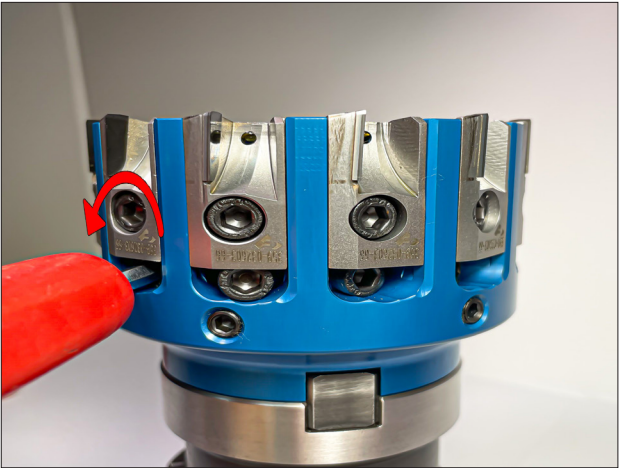
1. Cartridge seat cleaning.



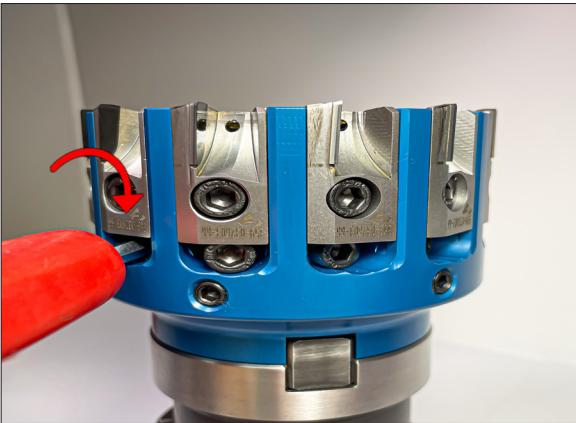
2. Screw in the adjusting screw as far as it will go and insert the cartridge.



3. Aim cartridge locking screw.



4. Unscrew the adjusting screw.

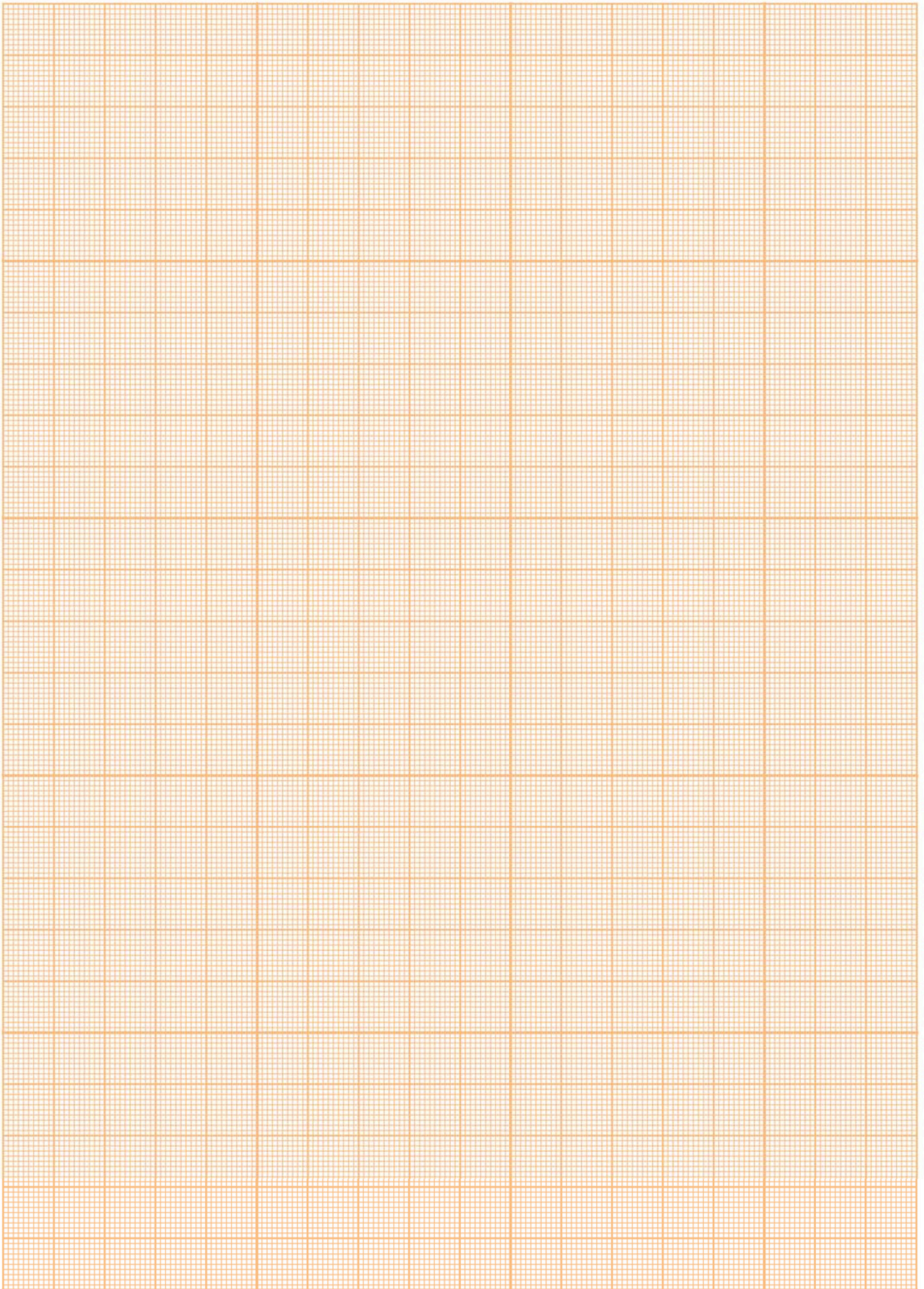


5. Register cartridges with tolerance +/- 0,002.



6. Tighten the cartridges to a torque of 12Nm (check that the presetting is correct).







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