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A close-up photograph of a blue industrial tool, likely a diamond-tipped drill bit. The tool has a series of blue, ribbed sections and a dark, metallic cutting edge. The background is blurred, showing more of the tool's structure.

**Innovation Is
Our Tool**

SWISS  QUALITY

URMA MX diamond



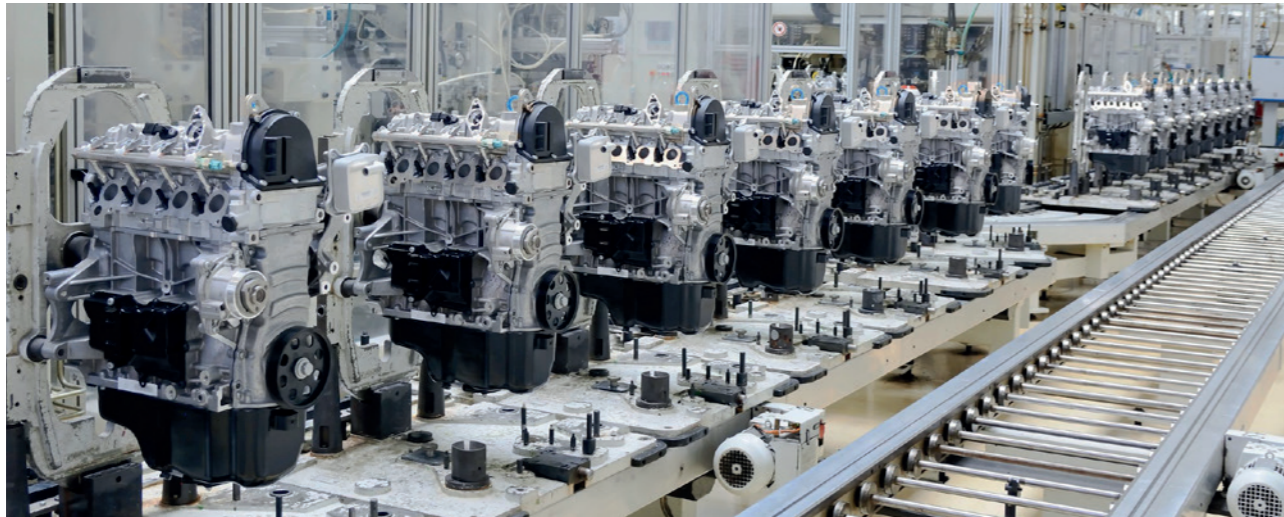
BRAND-NEW

**Précision et rapidité fusionnée :
La toute dernière technologie
avancée pour le surfaçage.**

Precision and speed in one:
The latest generation of face milling.

Automobile

Automotive



Exigences

- Précision
- Fiabilité du processus
- Manipulation facile
- Productivité

Requirements

- Precision
- Process reliability
- Simple handling
- Productivity

Exemple d'application «Boîte à transmission automatique»

Matériel: G-AISI7

Example of a "Slider box automatic transmission"

Material: G-AISI7

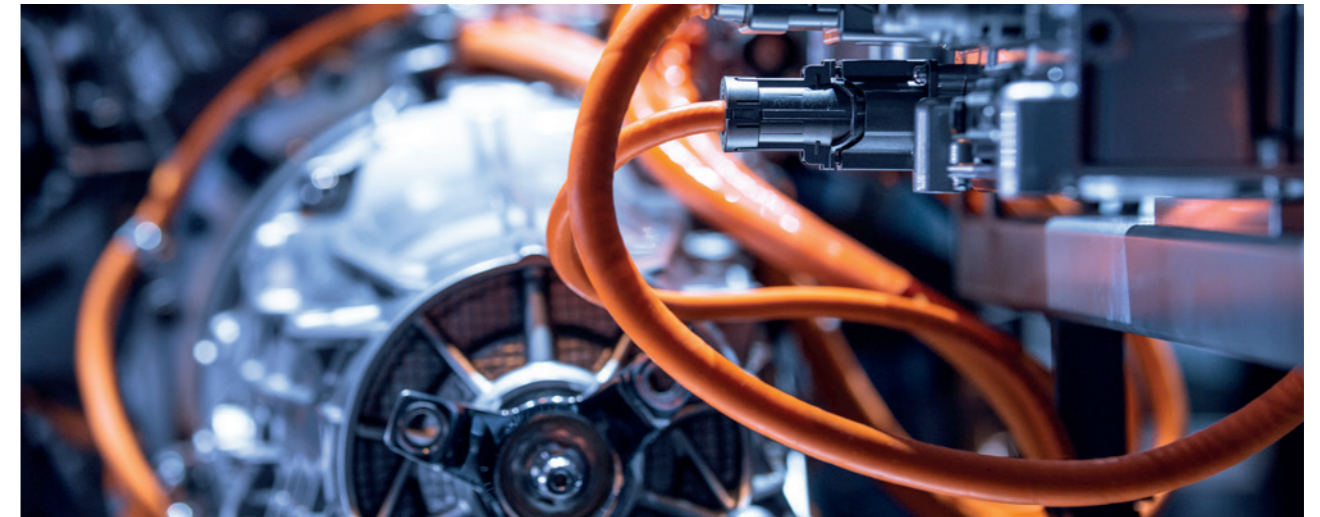
Données d'application

vc	3'500	m/min
fz	0.15	mm
z	20	
vf	26'700	mm/min
ap	1	mm
ae	110	mm
Ra	0.35	µm
Ø	125	mm



e-Mobilité

E-Mobility



Exigences

- Précision
- Sécurité du processus
- Faible coût
- Manipulation simple

Requirements

- Precision
- Process reliability
- Low costs
- Simple handling

Exemple d'application

«Boîtier de stator du moteur électrique»

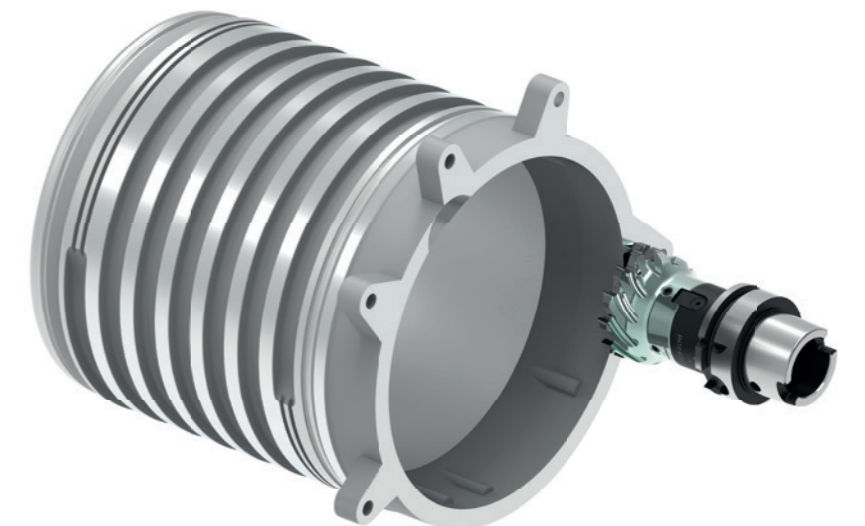
Matériel: G-AISI9

Example of a "Electric Motor Stator Housing"

Material: G-AISI9

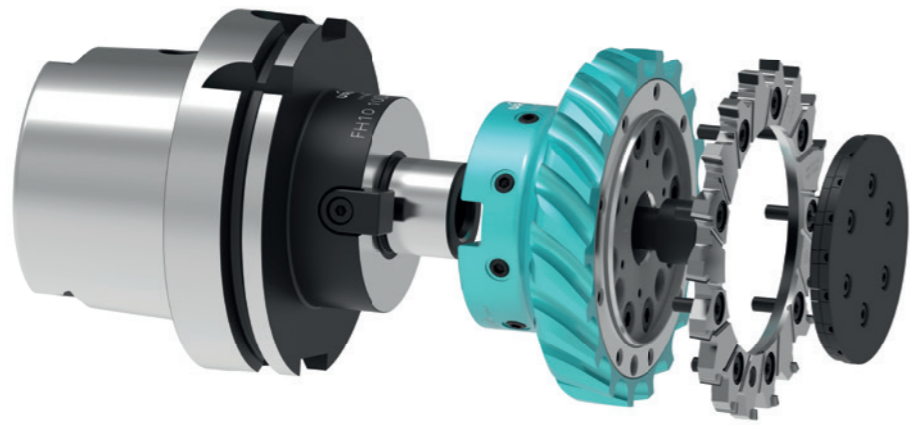
Données d'application

vc	4'000	m/min
fz	0.2	mm
z	12	
vf	48'500	mm/min
ap	1	mm
ae	25-50	mm
Ra	0.4	µm
Ø	63	mm



Vos avantages avec MX diamond

Your Advantages



Caractéristiques principales

- Diamètre : 63 mm/100 mm/125 mm
- Haute précision et manipulation facile grâce à la conception MX très fiable
- Des économies importantes avec une géométrie de coupe innovante et de haute performance
- Rigidité maximale d'avant-garde de la fraise carbure monobloc avec plaquettes en PCD
- Pas de réglage nécessaire
- Reconditionnement simple et rapide des plaquettes PCD usagées

Key Points

- Diameter 63 mm/100 mm/125 mm
- High precision and easy handling based on the very reliable RX-technology
- Significant savings thanks to high-performance cutting
- Highest rigidity thanks to pcd tipped solid carbide cutting ring
- No adjustment efforts for the customer
- Quick and easy reconditioning of worn-out reaming heads

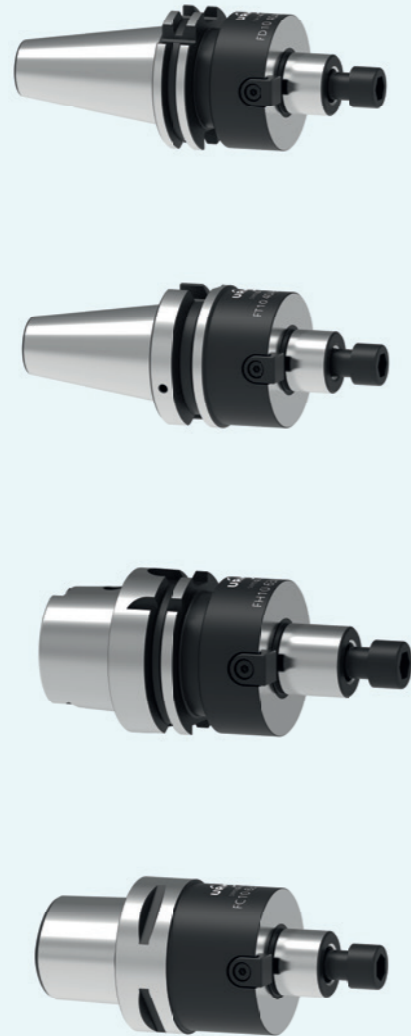


Bloc moteur en aluminium. Aluminium motor block. Source: URMA AG

Fraises URMA MX diamond

URMA Milling MX diamond

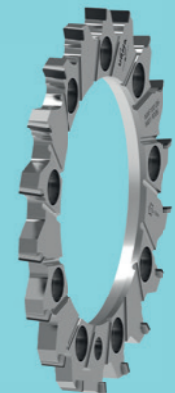
Porte-fraises
Adaptors



Fraises à tenons
Cutter Body

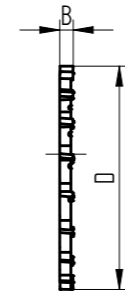


Fraises
Milling Cutter



Fraises

Milling Cutter



Fraises
Milling Cutter

System Size	Order Number	d	B	z	kg	Geometry	Grade	Stock
MX063	MXF63 06-M01 PD06	63	6	12	0.091	M01	PD06	•
MX100	MXF100 06-M01 PD06	100	6	18	0.210	M01	PD06	•
MX125	MXF125 06-M01 PD06	125	6	20	0.398	M01	PD06	•

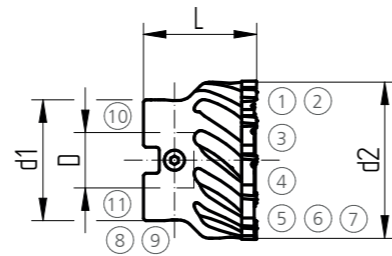
Fraises à tenons

Cutter Body



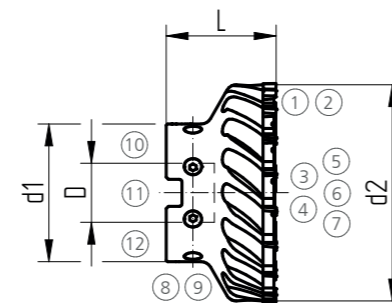
Fraise à tenons en Acier
Cutter Body Steel

System Size	Order Number	L	D	d1	d2	kg	Stock
MX063	MXK63 22 045	45	22	48	62	0.601	•



Fraise à tenons en Aluminium
Cutter Body Aluminium

System Size	Order Number	L	D	d1	d2	kg	Stock
MX100	MXKL100 27 050A	50	27	63	99	0.956	•
MX125	MXKL125 32 055A	55	32	78	124	1.527	•



Pièces détachées pour Fraises à tenons page 13

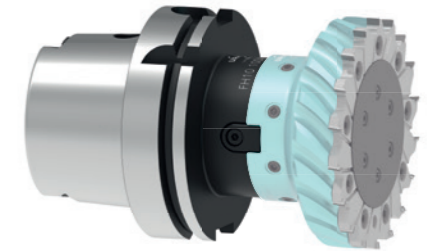
Spare parts blade carrier on page 13

z Nombre de dents • En stock ▲ Disponible rapidement ○ Disponible sur demande
Number of teeth On stock Short-term availability Availability on request

Toutes les dimensions en mm
All dimensions in mm

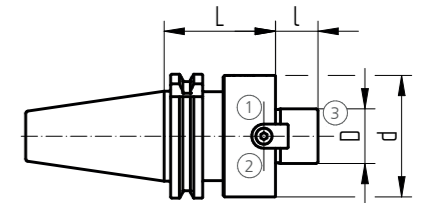
Porte-fraises

Adaptors



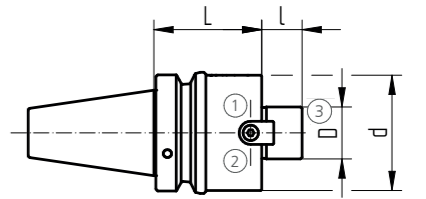
DIN 69871 – AD

System Size	L	I	D	d	Order Number	Stock
SK40	55	19	22	48	FD10 40AB 22 055	•
SK40	55	21	27	60	FD10 40AB 27 055	•
SK40	60	24	32	78	FD10 40AB 32 060	•
SK50	55	19	22	48	FD10 50AB 22 055	•
SK50	55	21	27	60	FD10 50AB 27 055	•
SK50	55	24	32	78	FD10 50AB 27 055	•



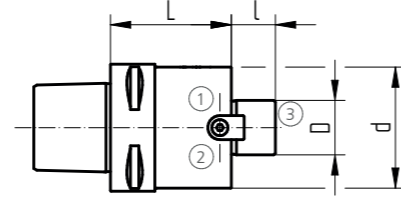
MAS-BT JIS 6339 – AD

System Size	L	I	D	d	Order Number	Stock
BT40 - Ø22	55	19	22	48	FT10 40AB 22 055	•
BT40 - Ø27	55	21	27	60	FT10 40AB 27 055	•
BT40 - Ø32	60	24	32	78	FT10 40AB 32 060	•
BT50 - Ø22	55	19	22	48	FT10 50AB 22 055	•
BT50 - Ø27	55	21	27	60	FT10 50AB 27 055	•
BT50 - Ø32	55	24	32	78	FT10 50AB 32 055	•



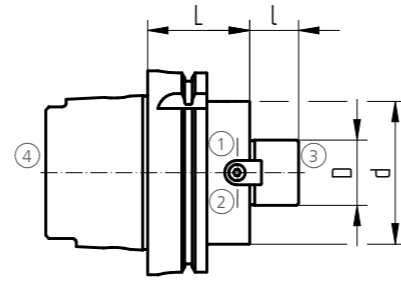
DIN 26623-1-PSC

System Size	L	I	D	d	Order Number	Stock
PSC 60	50	19	22	48	FC10 63 22 050	•
PSC 60	60	21	27	60	FC10 63 27 060	•
PSC 60	60	24	32	78	FC10 63 32 060	•



DIN 69893 HSK-A

System Size	L	I	D	d	Order Number	Stock
HSK63	50	19	22	48	FH10 63A 22 050	•
HSK63	60	21	27	60	FH10 63A 27 060	•
HSK63	60	24	32	78	FH10 63A 32 060	•
HSK100	50	19	22	48	FH10 100A 22 050	•
HSK100	50	21	27	60	FH10 100A 27 050	•
HSK100	50	24	32	78	FH10 100A 32 050	•



Pièces de rechange

Spare Parts

D	①	②	③
22	Z00 70 22	C00 22 05	C00 24 08
27	Z00 70 27	C00 22 07	C00 24 04
32	Z00 70 32	C00 24 05	C00 24 09

Tube d'arrosage

Coolant Tube

Size	④
63	H00 63 01
100	H00 100 01

Accessoires

Accessories

Tournevis

Screw Driver

System Size	Dimension	Torque	Order Number	Stock
MX 063	T10	3,5 Nm	G00 40 18	▲
MX 100	T15	3,5 Nm	G00 40 13	▲
MX 125	T15	3,5 Nm	G00 40 13	▲



Clé à douilles et Douille six pans

Hex Bit Socket

System Size	Dimension	Torque	Order Number	Stock
MX 063 - MX 125	SW8 / SW10 / SW14	40 - 200 Nm	G00 40 40	▲
MX 063	SW8	80 Nm	G00 40 44	▲
MX 100	SW10	85 Nm	G00 40 43	▲
MX 125	SW14	160 Nm	G00 40 42	▲



Instruments de mesure

Measuring Device

Type	Description	Order Number	Stock
Twin T10	Instrument de mesure électronique, piles incl. Electronic measuring instrument, batteries incl.	04430013	○
LRC 6, AA	Piles (3 pièces) Batteries (3 pieces)	04768002	○
GT 31	Palpeur à levier Lever probe	03210802	○
MGA	Bras articulé magnétique Magnetic articulated arm	01639022	○



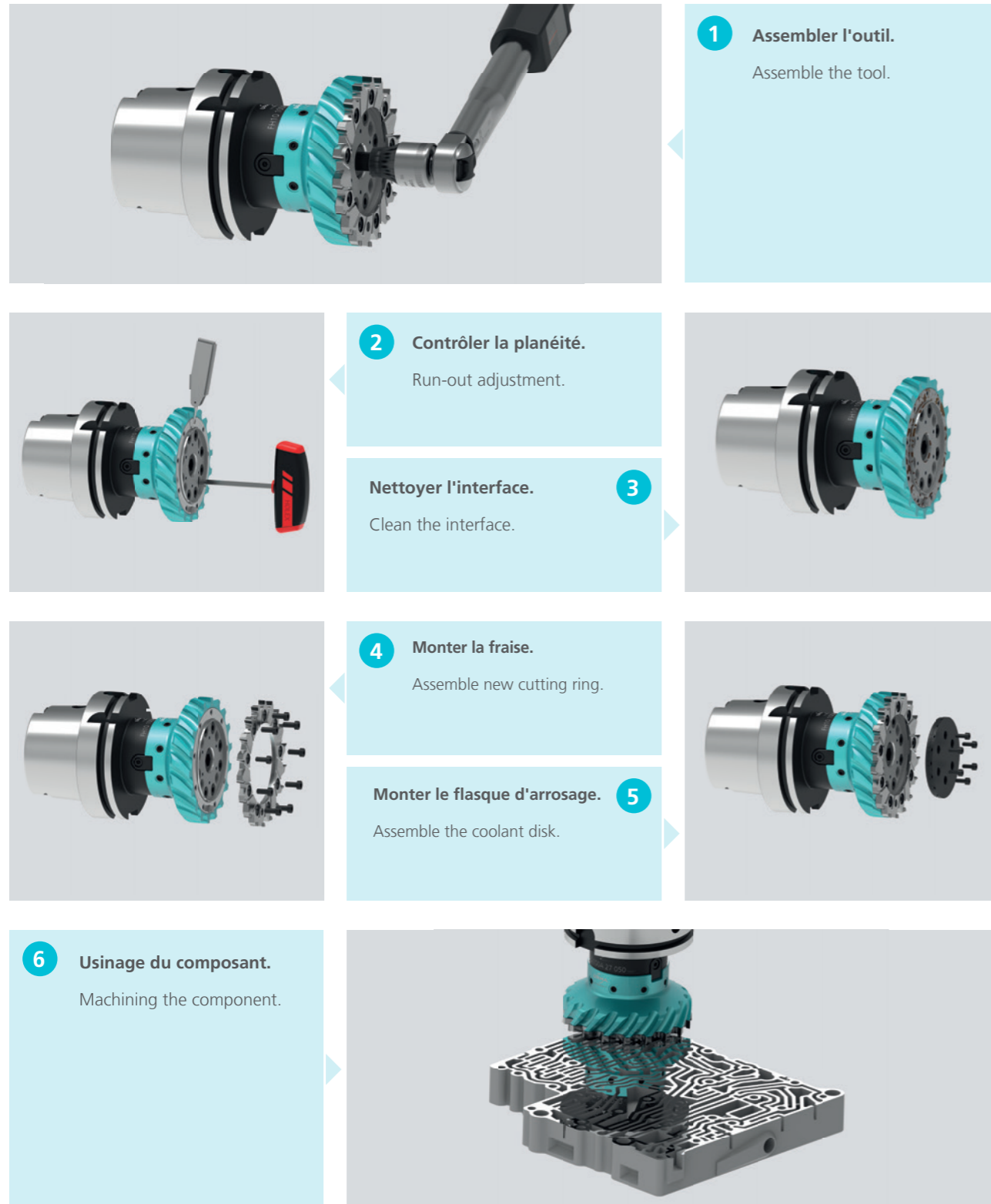
Pièces détachées pour la Fraise à tenons

Spare Parts Cutter Body

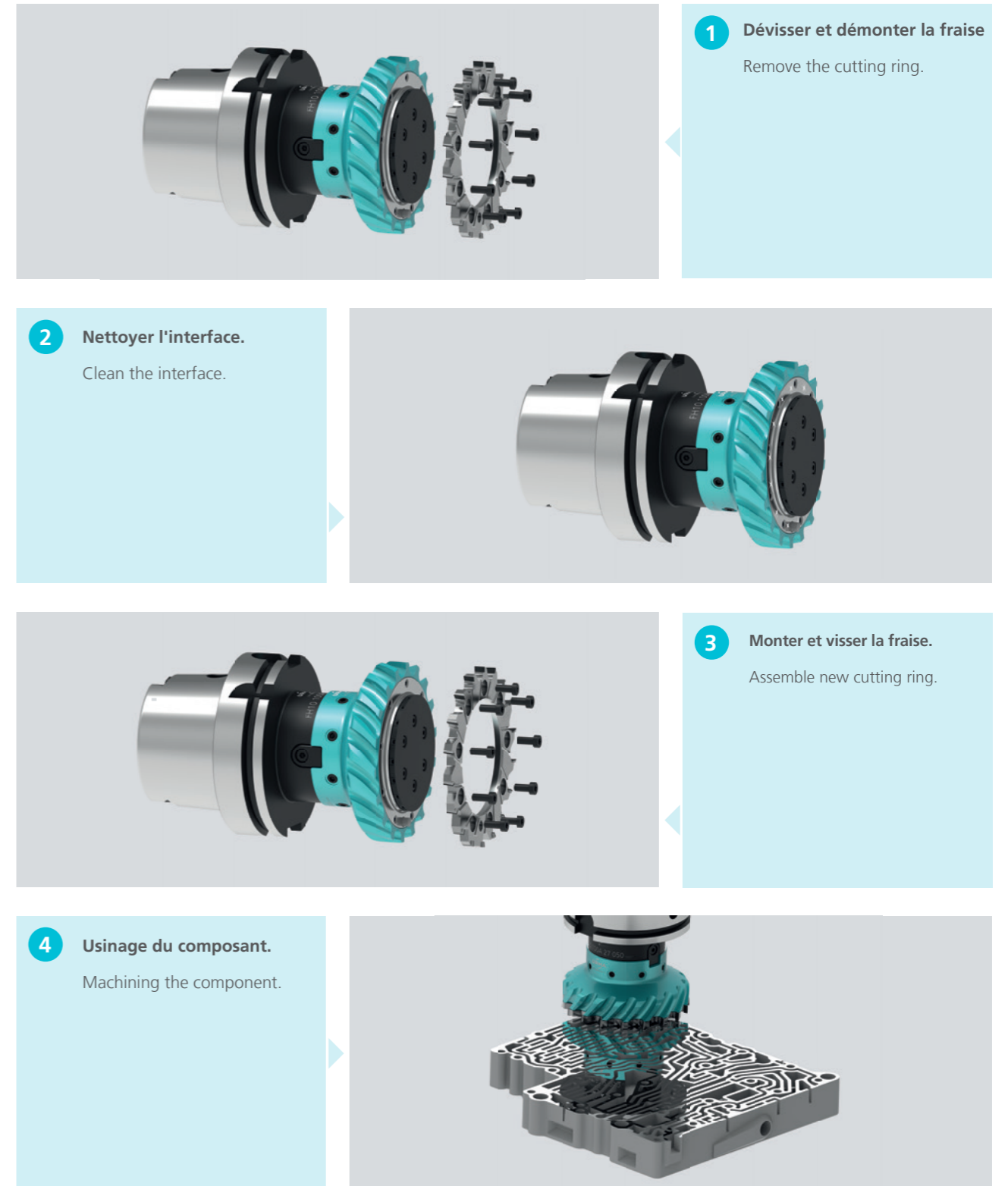
System Size	①	②	③	④	⑤
MX063	C00 70 04	G00 20 07	C00 22 64	G00 02 08	Z90 15 06
MX100	C00 70 05	G00 20 03	C00 70 06	G00 02 09	Z90 15 10
MX125	C00 70 05	G00 20 03	C00 70 07	G00 02 16	Z90 15 12

System Size	⑥	⑦	⑧	⑨	⑩	⑪	⑫
MX063	C00 22 30	G00 02 03	C00 25 03	G00 02 04	ZA00 90 14	C00 70 01	G00 02 25
MX100	C00 22 30	G00 02 03	C00 25 04	G00 02 04	ZA00 90 13	C00 70 02	G00 02 26
MX125	C00 22 56	G00 02 03	C00 25 04	G00 02 04	ZA00 90 07	C00 70 03	G00 02 27

Réglage initial Initial Setup



Changement de disque de fraisage Changing Cutting Ring



Conditions de coupe

Cutting Data

ISO	UMC	Grade	VC	fz
N	N1	PD06	2000-3500-5000	0.05-0.15-0.3
	N2			
	N3			
	N4	PD06	1500-2500-3500	0.05-0.15-0.3
	N5			
	N6	PD06	1000-1800-2500	0.05-0.15-0.3

ISO	UMC	Grade	VC	fz
O	O1	PD06	500-800-1000	0.05-0.15-0.3
	O2			
	O3	PD06	300-600-800	0.05-0.15-0.3
	O4			

ISO	UMC	Matériaux	Description	Rm [N/mm ²]	HB	Kc1.1	mc	DIN Nr.	Example
N	N1	Alliage d'aluminium corroyés avec Si < 2%	Aluminum wrought alloy with Si < 2%	< 300	< 150	600	0.23	3.3535	AlMg3
	N2	Alliages d'aluminium avec Si < 7%	Aluminum alloys, Si < 7%	< 400	< 120	700	0.25	3.2152	AlSi6Cu4
	N3	Alliages d'aluminium avec Si > 8% < 15% et alliages de magnésium	Aluminum alloys 8% < Si < 15% and alloys Magnesium	< 400	< 120	700	0.25	3.2163 3.2581	AlSi9Cu3 AlSi12
	N4	Alliages d'aluminium avec Si > 15%	Aluminum alloys, Si > 15%	> 400	> 120	800	0.25		AlSi17Cu4Mg
	N5	Alliage de cuivre usinable	Copper alloys, good machinability	< 700	< 210	800	0.2	2.0401 2.1090	CuZn39Pb3 CuSn7Zn4Pb7-C
	N6	Alliage de cuivre Plus difficile à usiner	Copper alloys, more difficult machinability	> 500	> 150	1100	0.25	2.0966	CuAl10Ni5Fe4

Matières plastiques et composites

Composite Materials

ISO	UMC	Matériaux	Description	Rm [N/mm ²]	HB	Kc1.1	mc	DIN Nr.	Example
O	O1	Thermoplastiques Plastiques	Thermoplastic polymers			150	0.26		Polyamid 6 (PA 6) Polyoxyméthylène (POM)
	O2	Plastiques thermodurcis-sables	Thermosetting plastics			150	0.26		Epoxydharze (EP)
	O3	Plastiques avec < 50% de verre	Reinforced plastics with < 50% glass fibers			300	0.26		Polyamid 6 mit 30% GF (PA 6 GF 30)
	O4	Fibres de verre, de carbone, d'aramide renforcés	Glass fiber-, carbon fiber- and aramid reinforced plastics			300	0.26		GFK CFK

Vitesse maximale

Maximum Revolution

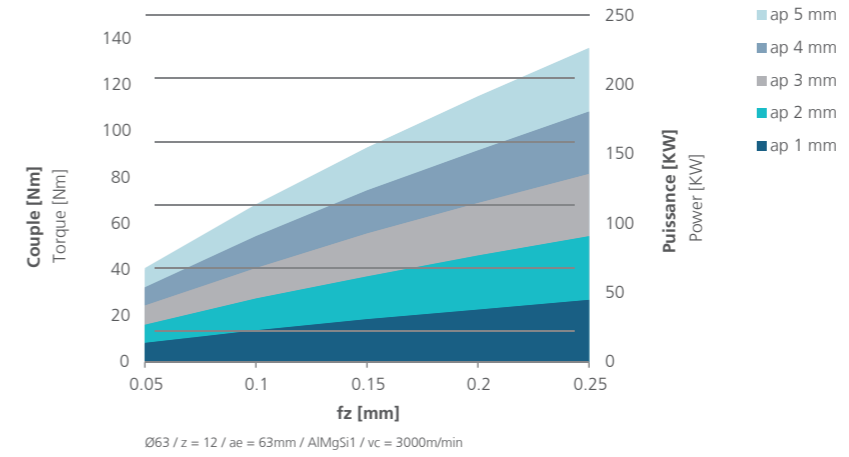
Référence système	D	max. Vc	max. rpm
MX063	63	4948 m/min	25000 1/min
MX100	100	4712 m/min	15000 1/min
MX125	125	4712 m/min	12000 1/min

Couple / puissance requise

Torque And Power Requirements

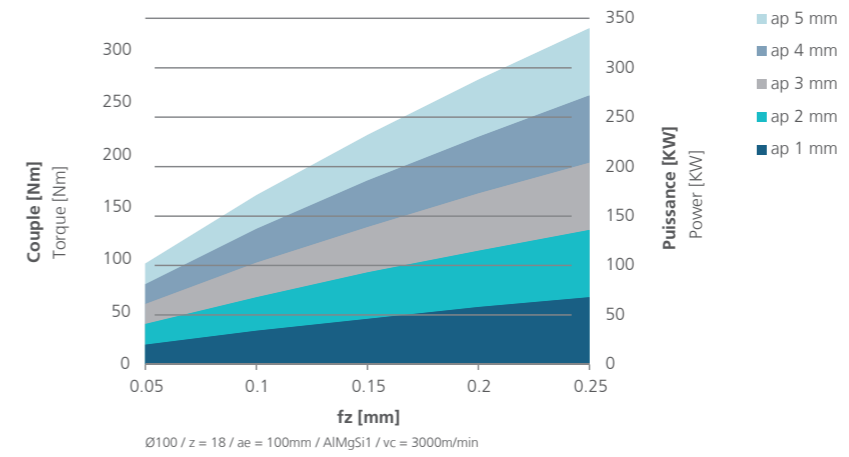
Diamètre de fraisage Ø63

Cutting ring Ø63



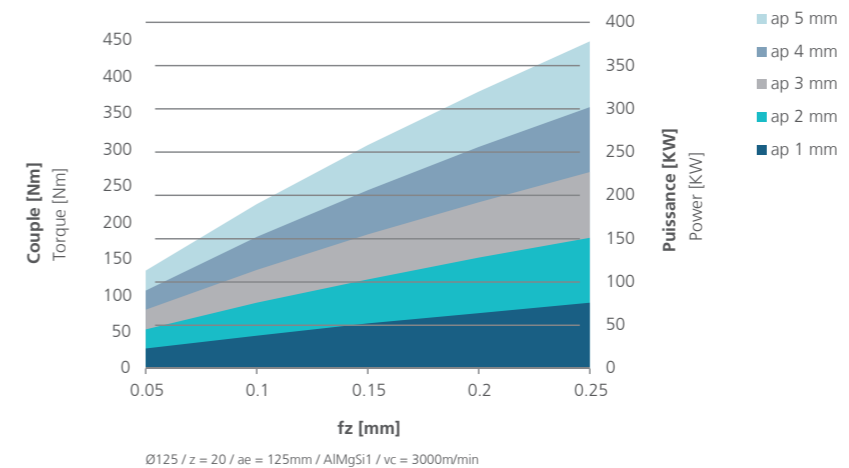
Diamètre de fraisage Ø100

Cutting ring Ø100



Diamètre de fraisage Ø125

Cutting ring Ø125



Etude d'usinage Machining Study

[MAIL TO customerservice@urma.ch](mailto:customerservice@urma.ch)

Expéditeur * Sender		Number	
Entreprise Company		URMA Distributeur URMA Distributor	
Adresse Address		Responsable Contact	
Machine Machine-Tool			
Type et fabricant Machine Type			
Horizontal * Horizontal <input type="checkbox"/>		Vertical * Vertical <input type="checkbox"/>	
Logement de broche * Spindle Holder		Grandeur * Size	
DIN 69893-HSK <input type="checkbox"/>		20 <input type="checkbox"/>	25 <input type="checkbox"/>
DIN 69871 <input type="checkbox"/>		30 <input type="checkbox"/>	32 <input type="checkbox"/>
MAS-BT <input type="checkbox"/>		40 <input type="checkbox"/>	50 <input type="checkbox"/>
Tige Weldon DIN 1835 Cylinder Shank DIN 1835 <input type="checkbox"/>		63 <input type="checkbox"/>	80 <input type="checkbox"/>
DIN 69880 VDI <input type="checkbox"/>		100 <input type="checkbox"/> <input type="checkbox"/>
..... <input type="checkbox"/>			
Lubrification Lubricant			
Huile * Oil <input type="checkbox"/>	MMS * 1) MLS 1) <input type="checkbox"/>	Emulsion * Emulsion <input type="checkbox"/>	Rapport de mélange (en %) Ratio of Mixture (in %)
Arrosage interne * Intern. Coolant Supply <input type="checkbox"/>			Refroidissement interne (bar)* Coolant Pressure (bar)
Pièce à usiner Workpiece			
Désignation de la pièce à usiner Designation		Numéro du matériaux * Material Number	Etat de traitement (dureté) * Treatment Condition (Hardness)
Exigences d'usinage Machining Requirements			
Tolérance * Tolerance		Coupe interrompue Interfering contours <input type="checkbox"/> mm	Méthode de pré-usinage * Method of Pre-Machining
Longueur minimale de l'outil Minimum Tool Length (OAL)		□ //	— ≡
Qualité de la surface (µm) * Surface Quality (µm)			
Date * Date		R _a <input type="checkbox"/>	R _z <input type="checkbox"/>
Notes Notes		Production annuelle: Annual Production:	
		Urgence: Urgency:	

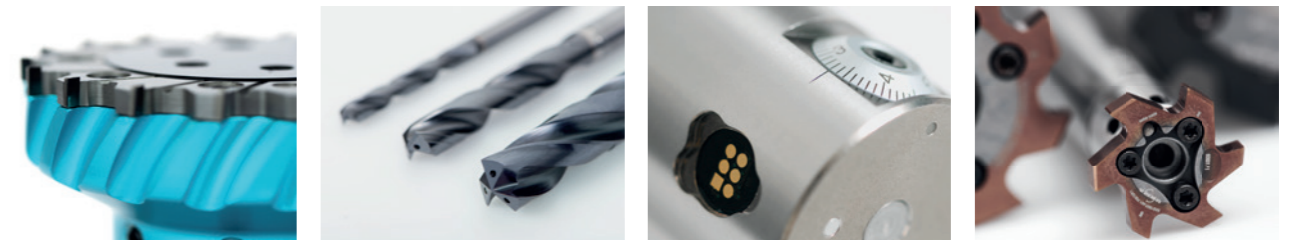
* **Champs de vision**
Mandatory fields

1) **Lubrification en quantité insuffisante**
Minimal lubrication system (mist coolant)

Annexe: votre esquisse d'usinage *
Attachment: Your Application Sketch

URMA Tools

Milling, Drilling, Boring & Reaming





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