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A close-up photograph of a precision tool, likely a boring tool. The tool is made of polished metal. In the foreground, there is a black component with several yellow circular inserts and one yellow square insert. In the background, a circular gauge with a scale and a needle is visible, showing a reading between 3 and 4. The background is a blurred, light-colored surface.

**Innovation Is
Our Tool**

SWISS  QUALITY

URMA Boring System

DIGITEC



DIGITEC

模块化及通用的-
用于精密孔加工成熟的数显和
模拟镗刀系统

Modular and Universal - the
Well Established Digital and
Analog Boring System for
Precise Holemaking

Ø 0.2 - 2'400 mm

创新 The Innovation



- 最新的现代数字技术与直径 0,2到2,400mm 精镗刀的完美结合
- 最佳精度及质量源于对线性移动的直接数字测量
- 非标刀具可按客户需求定制

- Latest generation of modern digital technology with fine boring heads in diameters 0,2 to 2.400 mm
- Highest precision and quality thanks to direct digital measurement of linear movement
- Special tools tailored to customer needs

性能 The Performance

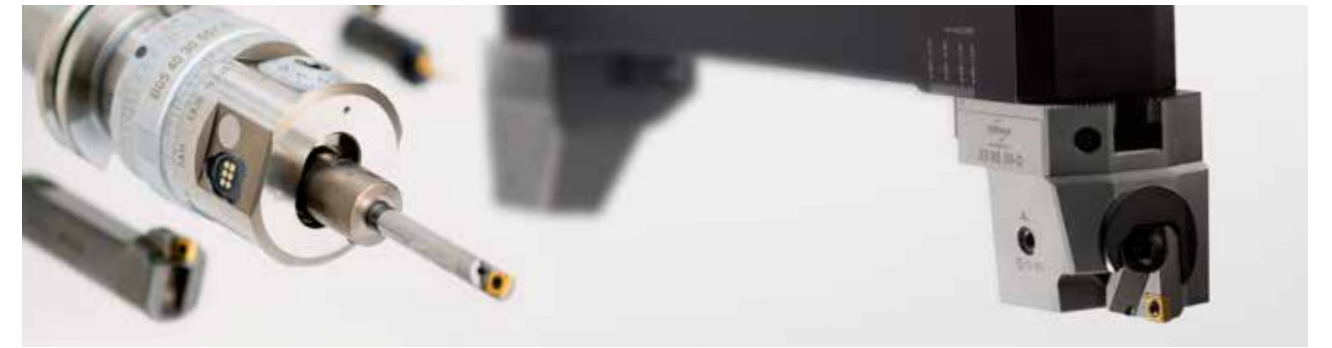


- 稳定的标准刀具允许粗加工有更大的切深
- 可实现粗精组合镗
- 所有钨马标准镗刀均使用 ISO 刀片座并有内冷通道

- More depth of cut for roughing operations with stable standard tools
- Roughing and finishing in one operation
- All standard URMA tools have ISO insert holder and internal coolant supply

Ø 0.2 - 2'400 mm

范围 The Range



- 镗刀直径范围 从0,2到2,400 mm
- 灵活的模块化系统
- 多功能复合孔加工刀具

- Largest available diameter range from 0,2 to 2.400 mm
- Flexible modular system
- Multifunctional combination for holmaking

可靠性 The Reliability



- 两种高可靠性的连接方式：轴向螺纹连接 (Alpha接口) 和径向侧压锁紧(Beta 接口)
- 加工工艺可靠性源于非常稳定的刀具结构和高精度 调整单元
- 瑞士品质成就最高精度和优异的刀具寿命

- Two highly reliable connections with an axial threaded system (Alpha Module) and a radial side lock system (Beta Module)
- Process reliability machining thanks to very stable tool construction and highly precise adjusting unit
- Highest precision and long tool life thanks to Swiss Quality

Ø 0.2 - 40 mm

DIGITEC

MicroMax



名称: 精镗头
 工序: 精镗
 特点: 可调动平衡
 端面切槽
 精度: 0,001 mm/Ø (数显)
 0,01 mm/Ø (模拟)
 有效深度: 可达 8xD*

Designation: fine boring head
 Machining operation: finishing
 Specials: balanceable
 face grooving
 Precision: 0,001 mm/Ø (DigiTec)
 0,01 mm/Ø (analog)
 Machining length: up to 8xD*

* "D" 为镗刀杆直径

* "D" refers to the shaft diameter of the system

Application Data

Part	lever
Operation	finishing
Material	42CrNiMo4
Insert	CCGT 060204-FX UT150
vc	140 m/min
fz	0.10 mm
z	1
vf	212 mm/min
ap	0.20 mm
Ø	21H7
L	40 mm
Ra	1.0 µm



Ø 18 - 153 mm

VersaMax



Type 14

名称: 双刃粗镗刀
工序: 粗镗
特点: 刀座双定位支撑
精度: +/- 0,020 mm (在对刀仪上)
有效深度: 可达 10xD*

Designation: double cutter
Machining operation: roughing
offset roughing
Specials: insert holders with dual support
Precision: +/- 0,020 mm (on tool presetter)
Machining length: up to 10xD*

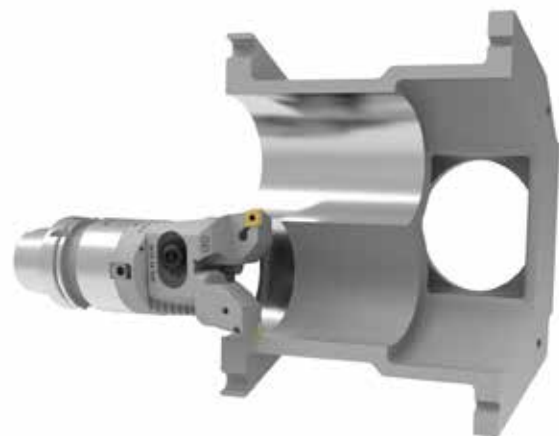
Type 25

名称: 精镗头
工序: 精镗
特点: 高灵活性
精度: 0,001 mm/Ø (数显)
0,01 mm/Ø (模拟)
有效深度: 可达 10xD*

Designation: fine boring head
Machining operation: finishing
Specials: high flexibility
Precision: 0,001 mm/Ø (DigiTec)
0,01 mm/Ø (analog)
Machining length: up to 10xD*

Application Data

Part	screw compressor housing	
Operation	roughing	
Material	GG20	
Insert	CNCN 160608 UMN30	
vc	650 m/min	
fz	0.4 mm	
z	2	
vf	1'226 mm/min	
ap	4 mm	0.25 mm
Ø	134.5 mm	135H8
L	250 mm	
Ra	3.2 µm	



Ø 49 - 297 mm

IntraMax



名称: 大孔径镗刀
工序: 双刃粗镗
特点: 套镗
精度: 0,001 mm/Ø (数显)
有效深度: 可达 8xD*

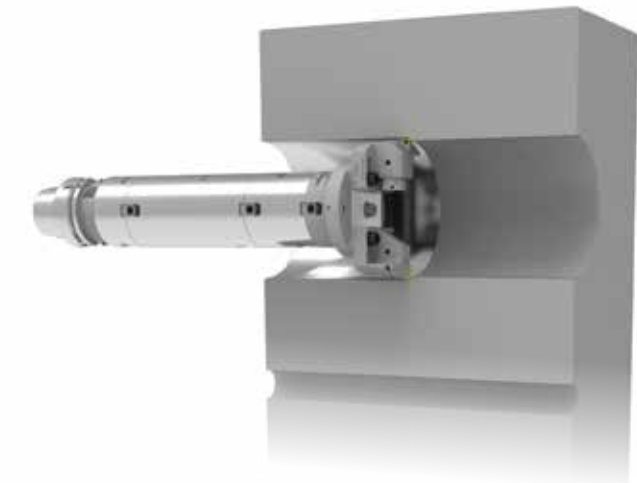
Designation: large diameter system
Machining operation: double roughing
offset roughing
Specials: roughing finishing process (RFP)
Precision: 0,001 mm/Ø (DigiTec)
0,01 mm/Ø (analog)
Machining length: up to 8xD*

* "D" 为镗刀杆直径

* "D" refers to the shaft diameter of the system

Application Data

Part	nozzle plate	
Operation	roughing finishing process	
Material	St 52-3	
Insert	CCMT 060204-WF UMC15 CNMG 120404-MRG UC250	
vc	250 m/min	
fz	0.15 mm	
z	1	1
vf	207.7 mm/min	
ap	2.35 mm	0.15 mm
Ø	115H7	
L	287 mm	
Ra	0.4 µm	



Ø 150 - 805 mm

MegaMax



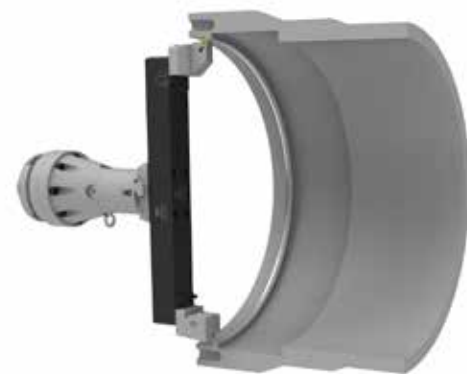
名称:	大孔径镗刀	Designation:	large diameter system
工序:	双刃粗镗 错位镗 粗精组合镗 (RFP) 精镗	Machining operation:	double roughing offset roughing roughing finishing process (RFP) finishing
特点:	轻质结构 (铝合金延长块)	Specials:	lightweight construction
精度:	0,001 mm/Ø (数显) 0,01 mm/Ø (模拟)	Precision:	0,001 mm/Ø (DigiTec) 0,01 mm/Ø (analog)
有效深度:	可达 8xD*	Machining length:	up to 8xD*

* "D" 为镗刀杆直径

* "D" refers to the shaft diameter of the system

Application Data

Part	stator housing	
Operation	roughing finishing process	
Material	GG25	
Insert	CNGA 120404 CBN CCGA 09T304 CBN	
vc	1'000 m/min	
fz	0.35 mm	
z	1	1
vf	172 mm/min	
ap	1.5 mm	0.25 mm
Ø	650 mm	
L	16 mm	
Ra	0.4 µm	



Ø 500 - 2'400 mm

SuperMegaMax



名称:	大孔径镗刀	Designation:	large diameter system
工序:	双刃粗镗 错位镗 粗精组合镗 (RFP) 精镗	Machining operation:	double roughing offset roughing roughing finishing process (RFP) finishing
特点:	轻质结构直接与主轴连接 (推荐)	Specials:	lightweight construction mounting directly to spindle face (recommended)
精度:	0,001 mm/Ø (数显) 0,01 mm/Ø (模拟)	Precision:	0,001 mm/Ø (DigiTec) 0,01 mm/Ø (analog)
有效深度:	可达 8xD*	Machining length:	up to 8xD*

* "D" 为镗刀杆直径

* "D" refers to the shaft diameter of the system

Application Data

Part	wind power bearing housing	
Operation	finishing	
Material	GGG70	
Insert	CCMT 09T308-WFU UC250	
vc	250 m/min	
fz	0.18 mm	
z	1	
vf	8.4 mm/min	
ap	0.5 mm	
Ø	1'700 mm	
L	150 mm	
Ra	0.80 µm	



非标刀具 Special Tools



- 全球众多从事金属切削加工的公司得益于铇马的解决方案
- 非标解决方案是我们的优势
- 现有客户对铇马工艺专家提供的有效支持表示赞赏
- Many metal cutting companies worldwide are counting on URMA's engineering experience
- Strong in unconventional solutions
- Existing customers appreciate the competent support provided by the URMA machining experts

Application Data

Part	Step bores
Operation	finishing
Material	42CrMo4
Insert	CCGT 060204-FX UT150
vc	220 m/min
fz	0.1 mm
z	1
vf	216 mm/min
ap	0.15 mm
Øm	32.5 mm
L	37 mm
Ra	0.4 µm



铇马刀片 URMA Inserts



- 铇马镗刀片按照ISO标准制造并特别适用于镗削
- 大正前角切削刃适用于长悬深加工
- 适用于各种领域的刀片材质和涂层
- URMA inserts are manufactured according to ISO standard and specially adapted to boring operations
- The highly positive cutting edges are also designed for large machining lengths
- A wide range of grades and coatings are available for the machining of all materials

URMA Tools

Drilling, Boring & Reaming





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