



CARBIDE INSERT & HOLDER

Being the best through innovation






i - Xmill

- 可应用于普通钢和硬度达到HRc65的高硬度钢

Available for General Steels and for Hardened Steels up to HRc65

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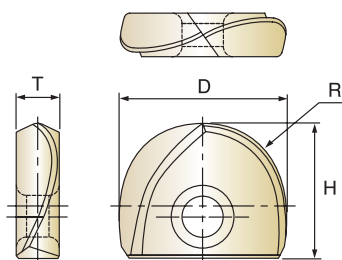
◎ : 优(Excellent) ○ : 良(Good)

碳钢		合金钢		工具钢		铸铁	硬化钢	不锈钢	铝
Carbon Steels		Alloy Steels		Tool Steels		Cast Iron	Hardened Steels	Stainless Steels	Aluminum
~HRc35	HRc35~	~HRc35	HRc35~	~HRc35	HRc35~	~HRc35	HRc50~	~HRc28	~HRc8
◎	○	◎	○	◎	○	○		○	○
○	◎	○	◎	○	◎	◎	◎		
◎	○	◎	○	◎	○	○		○	○
○	◎	○	◎	○	◎	◎	◎		

i-Xmill 球头刀片
i-Xmill BALL INSERTS

- ▶ 可替换性球头铣刀可实现经济性利用
- ▶ 两种刀片可使用-普通用途(~HRc50)&硬质材料(HRc40~HRc65)
- ▶ 特殊的几何参数和涂层具有极好的性能

- ▶ Indexable Ball End Mill for economic use
- ▶ Two Types of Inserts are available - For General Purpose (~HRc50) & For Hardened Material (HRc40~HRc65)
- ▶ Special Geometry and Coating for Excellent Performance



单位(Unit) : mm

型号 EDP No.		球头半径 Radius of Ball Nose	刃部直径 Mill Diameter	高度 Height	厚度 Thickness
用于普通材料 For General Material	用于硬质材料 For Hardened Material	R	D	H	T
XMB110A080	XMB120C080	R4.0	8.0	8	2.4
XMB110A100	XMB120C100	R5.0	10.0	9.5	2.7
XMB110A120	XMB120C120	R6.0	12.0	11	3.2
XMB110A160	XMB120C160	R8.0	16.0	13	4.2
XMB110A200	XMB120C200	R10.0	20.0	16	5.2
XMB110A250	XMB120C250	R12.5	25.0	19.5	6.2
XMB110A300	XMB120C300	R15.0	30.0	23.5	7.2
XMB110A320	XMB120C320	R16.0	32.0	24.5	7.2

- 球头半径公差是±0.01mm, 结构精度是±0.02mm.
The ball radius tolerance is ±0.01mm and the set-up accuracy is ±0.02mm.

◎ : 优(Excellent) ○ : 良(Good)

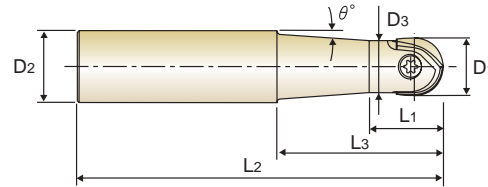
	碳钢		合金钢		工具钢		铸铁	硬化钢	不锈钢	铝
	Carbon Steels		Alloy Steels		Tool Steels		Cast Iron	Hardened Steels	Stainless Steels	Aluminum
	~HRc35	HRc35~	~HRc35	HRc35~	~HRc35	HRc35~	~HRc35	HRc50~	~HRc28	~HRc8
XMB110A	◎	○	◎	○	◎	○	○		○	○
XMB120C	○	◎	○	◎	○	◎	◎	◎		



i-Xmill 球头刀柄 - 钢用 i-Xmill BALL HOLDERS - STEEL

- ▶ 使用高强度的超合金钢
- ▶ 精确柄部 公差(h6)
- ▶ 黑色氧化处理, 能够提高耐腐蚀性和润滑性

- ▶ Premium alloy steel with excellent strength.
- ▶ Precise shank, Tolerance (h6).
- ▶ Black oxide treated, to prevent corrosion and improve lubricity.

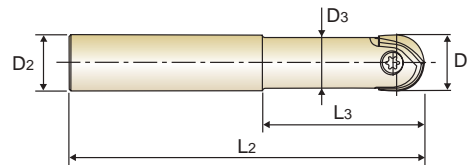


锥开颈型 / TAPER NECK TYPE

单位(Unit) : mm

型号 EDP No.	刃部直径 Mill Diameter D1	柄部直径 Shank Diameter D2	刃长 Length of Cut L1	颈长 Length Below Shank L3	全长 Overall Length L2	颈径直径 Neck Diameter D3	锥度 Taper Angle θ°	长度类型 Length Type	扳手型号 Wrench No.	螺丝型号 Screw No.
ZBT0801120	8.0	12	12	35	90	7.2	4° 43'	Short	TWFT07	TX2508T07
ZBT0802120			25	55	110		3° 37'	Regular		
ZBT1001120	10.0	12	15	35	90	9	2° 51'	Short	TWFT08	TX3010T08
ZBT1002120			30	55	110		2° 17'	Regular		
ZBT1201160	12.0	16	17	55	110	10.5	3° 23'	Short	TWFT10	TX3512T10
ZBT1601200	16.0	20	20	65	125	14.5	2° 51'	Short	TWFT15	TX4016T15
ZBT2001250	20.0	25	25	75	145	18	3° 26'	Short	● TWBT20	TX5020T20
ZBT2501320	25.0	32	30	90	170	22.5	4° 03'	Short	● TWBT25	TX6025T25
ZBT3001320	30.0 32.0	32	40	110	195	27	1° 38'	Short	● TWBT30	TX8030T30

● 需要使用T型扳手(TWH600) / Need to use T-HANDLE (TWH600)



直型颈型 / STRAIGHT NECK TYPE

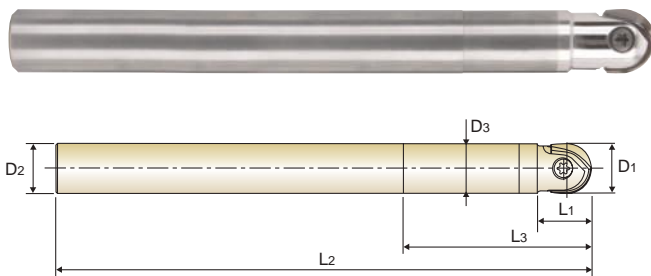
单位(Unit) : mm

型号 EDP No.	刃部直径 Mill Diameter D1	柄部直径 Shank Diameter D2	颈长 Length Below Shank L3	全长 Overall Length L2	颈径直径 Neck Diameter D3	长度类型 Length Type	扳手型号 Wrench No.	螺丝型号 Screw No.
ZBS1201120	12.0	12	35	90	10.5	Short	TWFT10	TX3512T10
ZBS1202120			55	110		Regular		
ZBS1601160	16.0	16	35	95	14.5	Short	TWFT15	TX4016T15
ZBS1602160			65	125		Regular		
ZBS2001200	20.0	20	40	110	18	Short	● TWBT20	TX5020T20
ZBS2002200			75	145		Regular		
ZBS2501250	25.0	25	45	125	22.5	Short	● TWBT25	TX6025T25
ZBS2502250			90	170		Regular		
ZBS3001320	30.0, 32.0	32	55	140	27	Short	● TWBT30	TX8030T30
ZBS3002320			110	195		Regular		

● 需要使用T型扳手(TWH600) / Need to use T-HANDLE (TWH600)

i-Xmill 球头刀柄 硬质合金用
i-Xmill BALL HOLDERS - CARBIDE

- ▶ 硬质合金铣刀均等的刚性可以在较小的振动下保证稳定性和高精度加工
 - ▶ 模具深处的高精加工
 - ▶ 硬质合金刀柄的刀具寿命要长于钢铁刀柄
 - ▶ 可应用在冷缩配合的夹持系统
 - ▶ 如果邀请的话, 用过的刀柄可以再修理
- ▶ Equal tool rigidity with solid carbide end mill makes the stable and high finishing machining with the less vibration.
 - ▶ The high finishing machining for the deeper part of mold.
 - ▶ The tool's life of carbide ball holders is longer than steel holder.
 - ▶ Shrink Fit Holding system can be applied.
 - ▶ Upon request, the worn holder is able to be fixed.



单位(Unit) : mm

型号	刃部直径	柄部直径	刃长	颈长	全长	脖颈直径	长度类型	扳手型号	螺丝型号
EDP No.	Mill Diameter	Shank Diameter	Length of Cut	Length Below Shank	Overall Length	Neck Diameter	Length Type	Wrench No.	Screw No.
	D1	D2	L1	L3	L2	D3			
ZBC0801080	8.0	8	12	25	130	7.7	Long	TWFT07	TX2508T07
ZBC1001100	10.0	10	15	30	140	9.7	Long	TWFT08	TX3010T08
ZBC1201120	12.0	12	17	35	150	11.7	Long	TWFT10	TX3512T10
ZBC1601160	16.0	16	20	50	200	15.7	Long	TWFT15	TX4016T15
ZBC2001200	20.0	20	25	60	200	19.7	Long	● TWBT20	TX5020T20
ZBC2501250	25.0	25	30	75	200	24.7	Long	● TWBT25	TX6025T25
ZBC3001320	30.0 32.0	32	40	90	250	29.7	Long	● TWBT30	TX8030T30

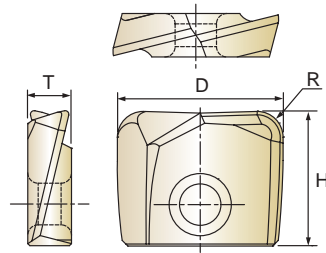
● 需要使用T型扳手(TWH600) / Need to use T-HANDLE (TWH600)



HSS

i-Xmill 圆弧角型刀片 i-Xmill CORNER RADIUS INSERTS

- ▶ 刀具的最佳几何尺寸能够达到较好的可靠性及较小的振动和切削负荷
 - ▶ i-Xmill球头刀柄的可交换性, 但是为了得到刀具的高稳定性和高应力, 使用i-Xmill圆弧角型刀柄可以达到精密切削
 - ▶ 广而多的切削范围使其可以完成粗铣和精铣的多种加工
 - ▶ 特殊涂层使高硬度, 高热稳定性的抗氧化
 - ▶ 两种刀片可供选择-普通用途(~HRc50)&硬质材料(HRc40~HRc65)
- ▶ The optimum geometry of the tool to achieve the better reliability and less vibration and cutting load.
 - ▶ Interchangeability with i-Xmill ball holder, but the precise cutting is possible with i-Xmill corner radius holder due to higher stability and strength of tool.
 - ▶ The various and wide cutting range makes it possible to machine over the roughing and finishing.
 - ▶ Special coating makes high hardness with high thermal stability against oxidation.
 - ▶ Two Types of Inserts are available - For General Purpose (~HRc50) & For Hardened Material (HRc40~HRc65)



单位(Unit) : mm

型号 EDP No.		圆弧半径 Corner Radius	刃部直径 Mill Diameter	高度 Height	厚度 Thickness
用于普通材料 For General Material	用于硬质材料 For Hardened Material	R	D	H	T
XMR110A080 03	XMR120C080 03	R0.3	8.0	8	2.4
XMR110A080 05	XMR120C080 05	R0.5			
XMR110A080 10	XMR120C080 10	R1.0			
XMR110A100 05	XMR120C100 05	R0.5	10.0	9.5	2.7
XMR110A100 10	XMR120C100 10	R1.0			
XMR110A100 20	XMR120C100 20	R2.0			
XMR110A120 05	XMR120C120 05	R0.5	12.0	11	3.2
XMR110A120 10	XMR120C120 10	R1.0			
XMR110A120 20	XMR120C120 20	R2.0			
XMR110A130 05	XMR120C130 05	R0.5	13.0	11.2	3.2
XMR110A130 10	XMR120C130 10	R1.0			
XMR110A130 20	XMR120C130 20	R2.0			
XMR110A160 05	XMR120C160 05	R0.5	16.0	13	4.2
XMR110A160 10	XMR120C160 10	R1.0			
XMR110A160 20	XMR120C160 20	R2.0			
XMR110A170 05	XMR120C170 05	R0.5	17.0	13	4.2
XMR110A170 10	XMR120C170 10	R1.0			
XMR110A170 20	XMR120C170 20	R2.0			

- 其他的圆弧值可根据要求定做。
The other corner radius values are available on request.
- 圆弧半径公差是±0.015mm, 结构精度是±0.02mm。
The corner radius tolerance is ±0.015mm and the set-up accuracy is ±0.02mm.

◎ : 优(Excellent) ○ : 良(Good)

	碳钢		合金钢		工具钢		铸铁	硬化钢	不锈钢	铝
	Carbon Steels		Alloy Steels		Tool Steels		Cast Iron	Hardened Steels	Stainless Steels	Aluminum
	~HRc35	HRc35~	~HRc35	HRc35~	~HRc35	HRc35~	~HRc35	HRc50~	~HRc28	~HRc8
XMB110A	◎	○	◎	○	◎	○	○	◎	○	○
XMB120C	○	◎	○	◎	○	◎	◎	◎		

CBN
END MILLS

i-Xmill
END MILLS

X5070
END MILLS

X-POWER
END MILLS

JET-POWER
END MILLS

V7 Mill INOX
END MILLS

V7 Mill STEEL
END MILLS

ALU-POWER
END MILLS

CRX S

D-POWER
END MILLS

K-2 CARBIDE
END MILLS

GENERAL
CARBIDE
END MILLS

TANK-POWER
END MILLS

GENERAL
HSS
END MILLS

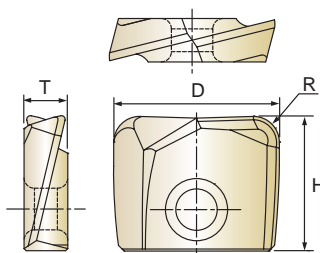
MILLING
CUTTERS

TECHNICAL
DATA

i-Xmill 圆弧角型刀片
i-Xmill CORNER RADIUS INSERTS

- ▶ 刀具的最佳几何尺寸能够达到较好的可靠性及较小的振动和切削负荷
- ▶ i-Xmill球头刀柄的可交换性, 但是为了得到刀具的高稳定性和高应力, 使用i-Xmill圆弧角型刀柄可以达到精密切削
- ▶ 广而多的切削范围使其可以完成粗铣和精铣的多种加工
- ▶ 特殊涂层使高硬度, 高热稳定性的抗氧化
- ▶ 两种刀片可供选择-普通用途(~HRc50)&硬质材料(HRc40~HRc65)

- ▶ The optimum geometry of the tool to achieve the better reliability and less vibration and cutting load.
- ▶ Interchangeability with i-Xmill ball holder, but the precise cutting is possible with i-Xmill corner radius holder due to higher stability and strength of tool.
- ▶ The various and wide cutting range makes it possible to machine over the roughing and finishing.
- ▶ Special coating makes high hardness with high thermal stability against oxidation.
- ▶ Two Types of Inserts are available - For General Purpose (~HRc50) & For Hardened Material (HRc40~HRc65)



单位(Unit) : mm

型号 EDP No.		圆弧半径 Corner Radius	刃部直径 Mill Diameter	高度 Height	厚度 Thickness
用于普通材料 For General Material	用于硬质材料 For Hardened Material	R	D	H	T
XMR110A200 05	XMR120C200 05	R0.5	20.0	16	5.2
XMR110A200 10	XMR120C200 10	R1.0			
XMR110A200 20	XMR120C200 20	R2.0			
XMR110A210 05	XMR120C210 05	R0.5	21.0	16	5.2
XMR110A210 10	XMR120C210 10	R1.0			
XMR110A210 20	XMR120C210 20	R2.0			
XMR110A250 05	XMR120C250 05	R0.5	25.0	19.5	6.2
XMR110A250 10	XMR120C250 10	R1.0			
XMR110A250 20	XMR120C250 20	R2.0			
XMR110A260 05	XMR120C260 05	R0.5	26.0	19.5	6.2
XMR110A260 10	XMR120C260 10	R1.0			
XMR110A260 20	XMR120C260 20	R2.0			
XMR110A300 05	XMR120C300 05	R0.5	30.0	23.5	7.2
XMR110A300 10	XMR120C300 10	R1.0			
XMR110A300 20	XMR120C300 20	R2.0			
XMR110A320 05	XMR120C320 05	R0.5	32.0	23.5	7.2
XMR110A320 10	XMR120C320 10	R1.0			
XMR110A320 20	XMR120C320 20	R2.0			

- 其他的圆弧值可根据要求定做。
The other corner radius values are available on request.
- 圆弧半径公差是±0.015mm, 结构精度是±0.02mm。
The corner radius tolerance is ±0.015mm and the set-up accuracy is ±0.02mm.

◎ : 优(Excellent) ○ : 良(Good)

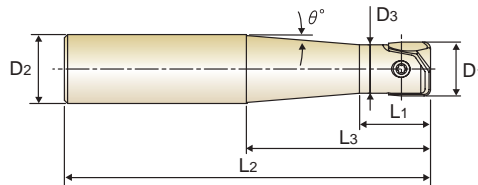
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	~HRc35	HRc35~	~HRc35	HRc35~	~HRc35	HRc35~	~HRc35	HRc50~	~HRc28	~HRc8
XMB110A	◎	○	◎	○	◎	○	○	◎	○	○
XMB120C	○	◎	○	◎	○	◎	◎	◎	◎	◎



i-Xmill 圆弧角型刀柄 - 钢用 i-Xmill CORNER RADIUS HOLDERS - STEEL

- ▶ 具有极好应力的超合金钢
- ▶ 精确柄部 公差(h6)
- ▶ 黑色氧化处理, 能够提高耐腐蚀性和润滑性

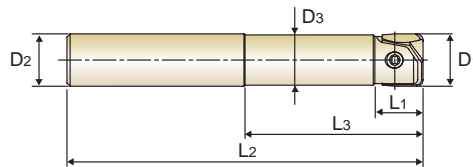
- ▶ Premium alloy steel with excellent strength.
- ▶ Precise shank, Tolerance (h6).
- ▶ Black oxide treated, to prevent corrosion and improve lubricity.



锥开颈型 / TAPER NECK TYPE

单位(Unit) : mm

型号 EDP No.	刃部直径 Mill Diameter D1	柄部直径 Shank Diameter D2	刃长 Length of Cut L1	颈长 Length Below Shank L3	全长 Overall Length L2	颈径 Neck Diameter D3	锥度 Taper Angle θ°	长度类型 Length Type	扳手型号 Wrench No.	螺丝型号 Screw No.
ZRT0801120	8.0	12	10	22	100	6.7	9°	Regular	TWFT07	TX2508T07
ZRT0802120				50	130		2° 43'	Long		
ZRT1001120	10.0	12	13	25	100	8.6	4° 45'	Regular	TWFT08	TX3010T08
ZRT1002120				50	150		1° 32'	Long		
ZRT1202160	12.0 13.0	16	15	60	160	10.2	2° 32'	Long	TWFT10	TX3512T10



直型颈型 / STRAIGHT NECK TYPE

单位(Unit) : mm

型号 EDP No.	刃部直径 Mill Diameter D1	柄部直径 Shank Diameter D2	刃长 Length of Cut L1	颈长 Length Below Shank L3	全长 Overall Length L2	颈径 Neck Diameter D3	长度类型 Length Type	扳手型号 Wrench No.	螺丝型号 Screw No.
ZRS1201120	12.0, 13.0	12	13	30	110	11	Regular	TWFT10	TX3512T10
ZRS1601160				50	130	15	Regular		
ZRS1602160	16.0, 17.0	16	15	65	165		19	Intermediate	TWFT15
ZRS2001200				60	140	19		Regular	
ZRS2002200	20.0, 21.0	20	18	80	180		24	Intermediate	TWBT20
ZRS2501250				70	150	24		Regular	
ZRS2502250	25.0, 26.0	25	23	90	200		29	Intermediate	TWBT25
ZRS3001320				80	160	29		Regular	
ZRS3002320	30.0	32	27	100	220		31	Intermediate	TWBT30
ZRS3201320				80	160	31		Regular	
ZRS3202320	32.0	32	28	100	220		31	Intermediate	TWBT30

● 需要使用T型扳手(TWH600) / Need to use T-HANDLE (TWH600)

CBN
END MILLS

i-Xmill
END MILLS

X5070
END MILLS

X-POWER
END MILLS

JET-POWER
END MILLS

V7 Mill INOX
END MILLS

V7 Mill STEEL
END MILLS

ALU-POWER
END MILLS

CRX S

D-POWER
END MILLS

K-2 CARBIDE
END MILLS

GENERAL
CARBIDE
END MILLS

TANK-POWER
END MILLS

GENERAL
HSS
END MILLS

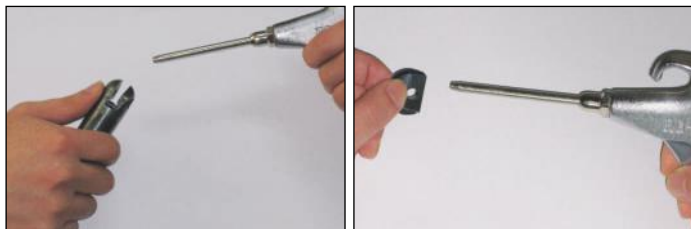
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CUTTERS

TECHNICAL
DATA



i-Xmill的装配

ASSEMBLY OF i-Xmill



◀ 确保刀片和刀片座的清洁
Make sure to clean the insert and insert seat.



◀ 使刀片滑动到刀柄的狭槽里。
使用反向混合扳手拧紧螺丝。
Slide the insert into the slot of the holder.
Tighten the screw using anti-seize compound.

型号 SIZE (ØD)	箱位转矩 CLAMPING TORQUE [N · m]
Ø8	1.0
Ø10	1.5
Ø12, Ø13	2.5
Ø16, Ø17	3.5
Ø20, Ø21	5.0
Ø25, Ø26	6.0
Ø30, Ø32	6.5

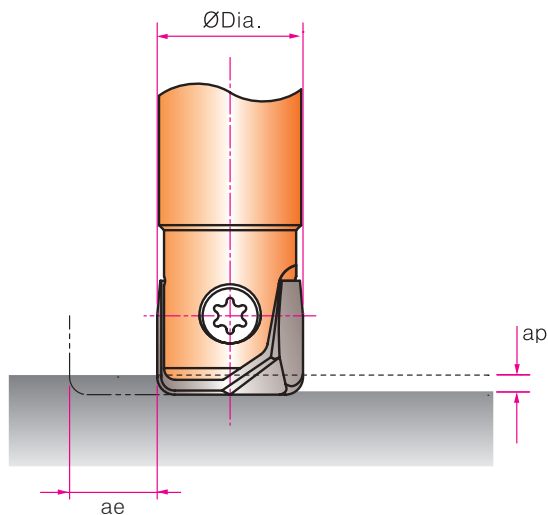
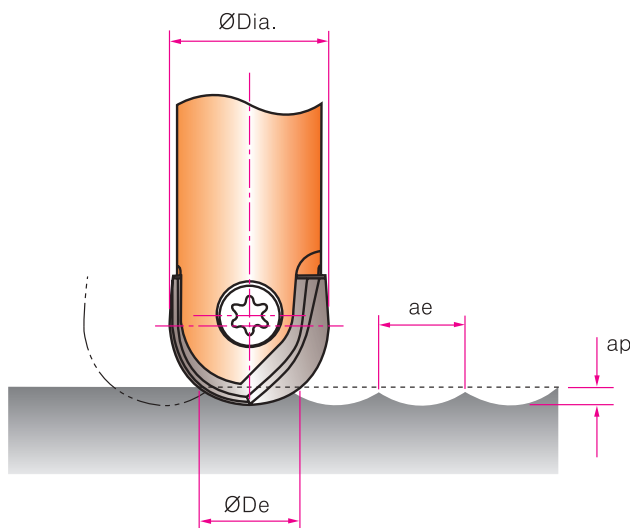
* 当螺丝磨损, 请换用新的螺丝
When the screw is worn out, please change the new screw.

* 请使用推荐的转矩来拧紧螺丝 (请参照表格)
Please tighten up the screw with recommended torque.
(Please refer to the table)

* 螺丝拧紧后, 请不要积压刀片
Don't press down the insert, when the screw is tightened.

切削条件

CUTTING CONDITION



RPM = 转速 / revolution per minute (rev/min)
Vc = 圆周速度 / surface meter per minute (M/min)
Dia. = 刀片直径 / diameter of insert (mm)
Vf = 进给速度 / feed speed (mm/min)
f = 每转进给 / feed per revolution (mm/rev)
De = 有效刀具直径 / effective tool diameter (mm)
ap = 轴向切削深度 / axial depth of cut (mm)
ae = 径向切削深度 / radial depth of cut (mm)

$$Vc [M/min] = \frac{(RPM) \cdot (\pi) \cdot (Dia.)}{1000}$$

$$Vf [mm/min] = (RPM) \cdot (f)$$

$$RPM [rev/min] = \frac{(Vc) \cdot (1000)}{(\pi) \cdot (Dia.)}$$

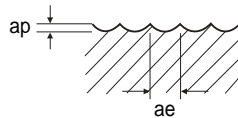
$$De [mm] = 2 \sqrt{(ap) \cdot (Dia. - ap)}$$

**i-Xmill 球头刀片
i-Xmill BALL INSERTS**
CBN
END MILLSi-Xmill
END MILLSX5070
END MILLSX-POWER
END MILLSJET-POWER
END MILLSV7 Mill INOX
END MILLSV7 Mill STEEL
END MILLSALU-POWER
END MILLS

CRX S

D-POWER
END MILLSK-2 CARBIDE
END MILLSGENERAL
CARBIDE
END MILLSTANK-POWER
END MILLSGENERAL
HSS
END MILLSMILLING
CUTTERSTECHNICAL
DATA
XMB110A, XMB120C SERIES

材质 WORK MATERIAL		非合金钢, 合金钢, 铸铁 NON-ALLOYED STEELS ALLOY STEELS CAST IRON		合金钢, 耐热钢 ALLOY STEELS HEAT RESISTANT STEELS		硬模工具钢, 预硬钢 DIE TOOL STEELS PRE-HARDENED		硬化钢 HARDENED STEELS	
HARDNESS	HB	~280		280~380		380~480		480~740	
	HRc	~30		30~40		40~50		50~65	
STRENGTH	N/mm ²	~1000		1000~1250		1250~1500		1500~	
i-Xmill TYPE		XMB110A		XMB110A		XMB110A XMB120C		XMB120C	
CUTTING CONDITION Roughing~Finishing		RPM	Feed (Vf)	RPM	Feed (Vf)	RPM	Feed (Vf)	RPM	Feed (Vf)
8.0		6370~12730	2550~5090	4770~11140	1910~4460	3980~8750	1190~3500	3180~7160	640~2860
10.0		5090~11460	2040~4580	3820~9550	1530~3820	3180~8280	950~3310	2550~6370	510~2550
12.0, 13.0		4240~10080	1700~4030	3180~9280	1270~3710	2650~7430	800~2970	2120~5840	420~2330
16.0, 17.0		3180~9550	1590~5730	2390~7560	1190~4540	1990~6960	800~4180	1590~5170	480~3100
20.0, 21.0		2550~9230	1270~7380	1910~6680	950~5350	1590~6370	640~5090	1270~5090	380~4070
25.0, 26.0		2040~7640	1020~7640	1530~6110	760~6110	1270~5730	510~5730	1020~4580	310~4580
30.0, 32.0		1700~7430	850~8910	1270~5840	640~7000	1060~5310	420~6370	850~4240	250~5090



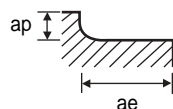
ae : Roughing - 0.1 x D
 Finishing - Under Ø12 : 0.25mm
 Ø12~Ø17 : 0.30mm
 From Ø20 : 0.40mm
 ap : Roughing - Under Ø16 : 0.025 x D
 From Ø16 : 0.05 x D
 Finishing - 0.1mm

▶ 使用长刀具时, 进给速度推荐于减为70%~85%。
 Recommend to reduce the feed rate to 70 ~ 85% when you use long tools.

RPM = rev./min. (转速/分钟)
 FEED = mm/min. (进给量)

**i-Xmill 圆弧角型刀片
i-Xmill CORNER RADIUS INSERTS**
XMR110A, XMR120C SERIES

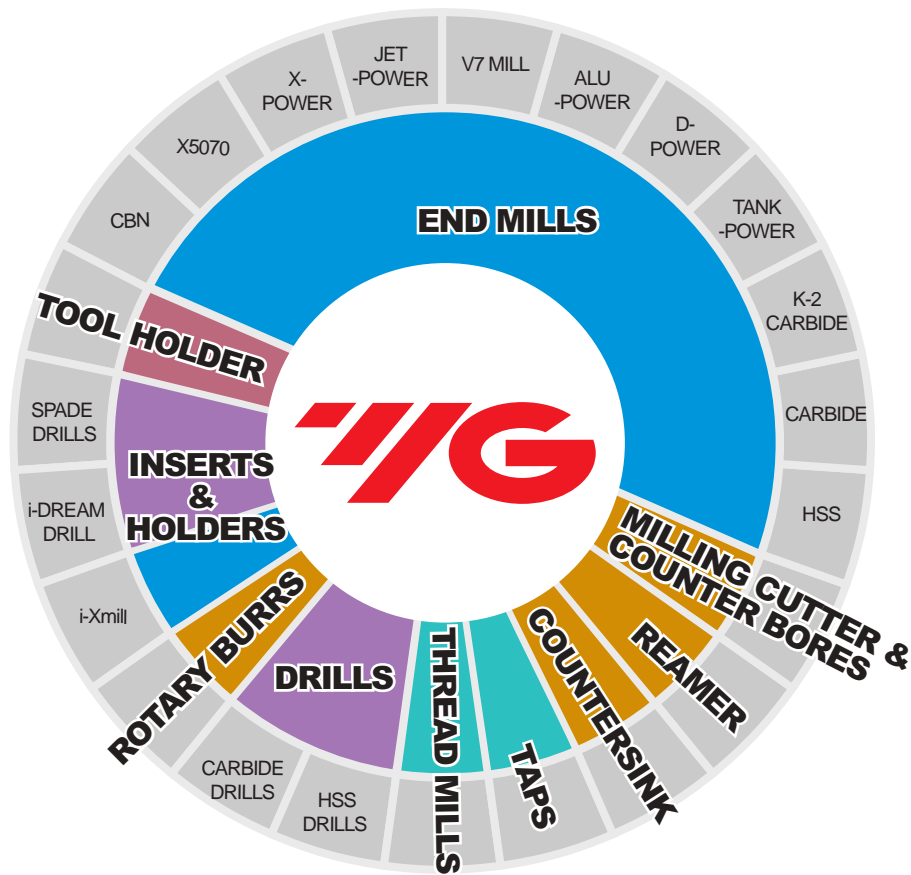
材质 WORK MATERIAL		非合金钢, 合金钢, 铸铁 NON-ALLOYED STEELS ALLOY STEELS CAST IRON		合金钢, 耐热钢 ALLOY STEELS HEAT RESISTANT STEELS		硬模工具钢, 预硬钢 DIE TOOL STEELS PRE-HARDENED		硬化钢 HARDENED STEELS	
HARDNESS	HB	~280		280~380		380~480		480~740	
	HRc	~30		30~40		40~50		50~65	
STRENGTH	N/mm ²	~1000		1000~1250		1250~1500		1500~	
i-Xmill TYPE		XMR110A		XMR110A		XMR110A XMR120C		XMR120C	
CUTTING CONDITION Roughing~Finishing		RPM	Feed (Vf)	RPM	Feed (Vf)	RPM	Feed (Vf)	RPM	Feed (Vf)
8.0		6370~11940	2550~3580	4770~11140	1910~3340	3980~11140	990~1340	3180~8750	640~880
10.0		5090~9550	2040~2860	3820~8910	1530~2670	3180~8910	800~1070	2550~7000	510~700
12.0, 13.0		4240~7960	1700~2390	3180~7430	1270~2230	2650~7430	660~890	2120~5840	420~580
16.0, 17.0		3180~5970	1590~2390	2390~5570	1190~2230	1990~5570	600~840	1590~4380	420~530
20.0, 21.0		2550~4770	1270~1910	1910~4460	950~1780	1590~4460	480~670	1270~3500	380~420
25.0, 26.0		2040~3820	1020~1530	1530~3570	760~1430	1270~3570	380~530	1020~2800	310~340
30.0, 32.0		1700~3180	850~1270	1270~2970	640~1190	1060~2970	320~450	850~2330	250~280



ae : Roughing - 0.1 x D
 Finishing - 0.2mm
 ap : Roughing - Under Ø16 : 0.025 x D
 From Ø16 : 0.05 x D
 Finishing - Under Ø16 : 0.1mm
 From Ø16 : 0.2mm

▶ 使用长刀具时, 进给速度推荐于减为70%~85%。
 Recommend to reduce the feed rate to 70 ~ 85% when you use long tools.

RPM = rev./min. (转速/分钟)
 FEED = mm/min. (进给量)



Challenge Toward a Global Leader-

YG-1 Leads the World Market.