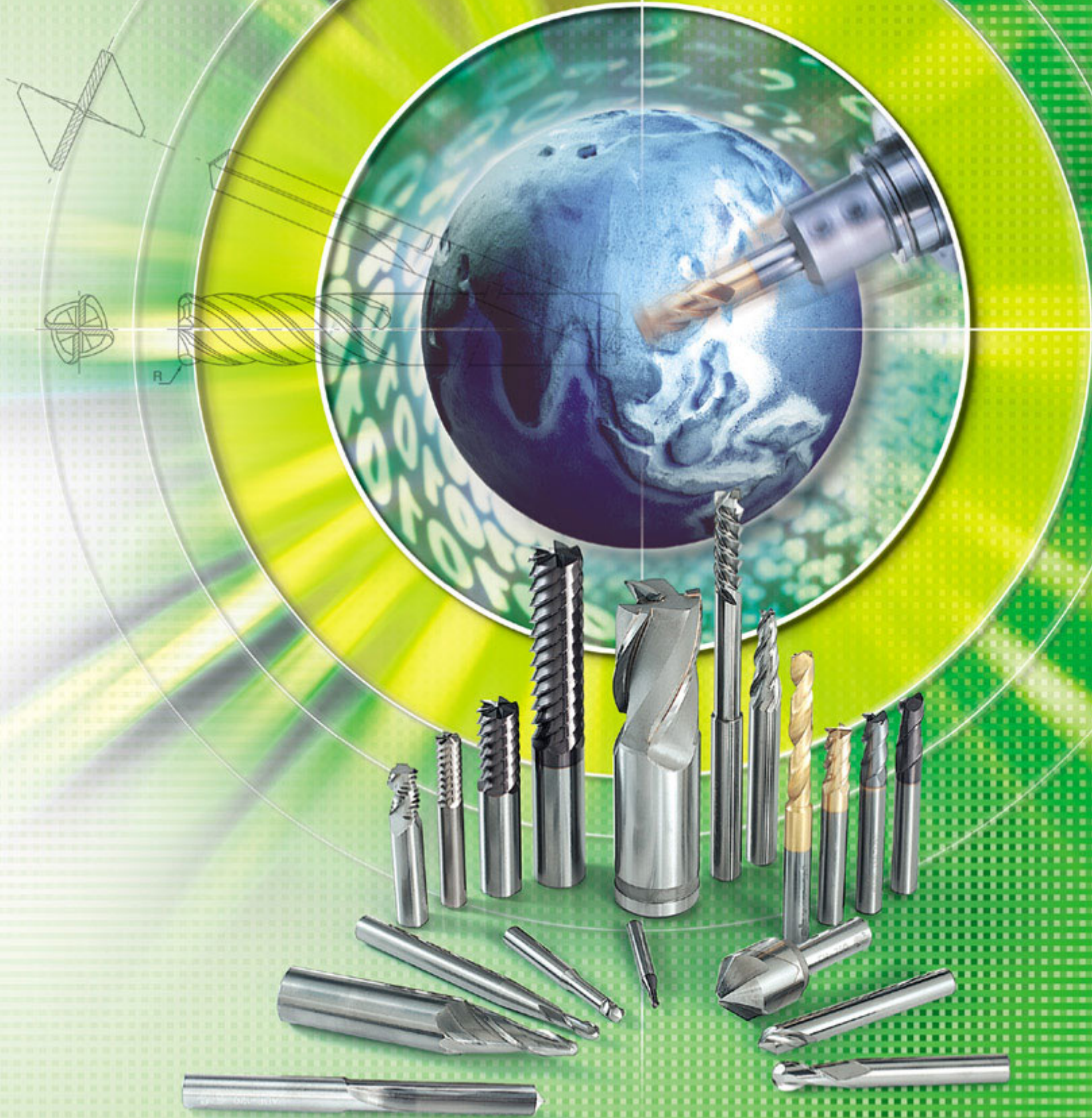




# KOVA CARBIDE TOOLS

## 超硬切削工具

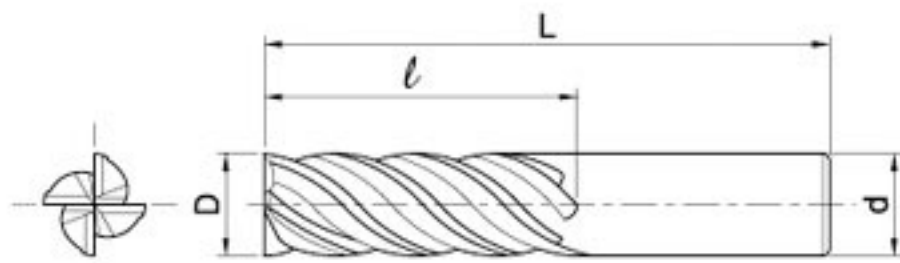


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**WM 型**
**碳化鎢鋼端銑刀 (標準刃)**  
 SOLID CARBIDE ENDMILLS  
 REGULAR TYPE

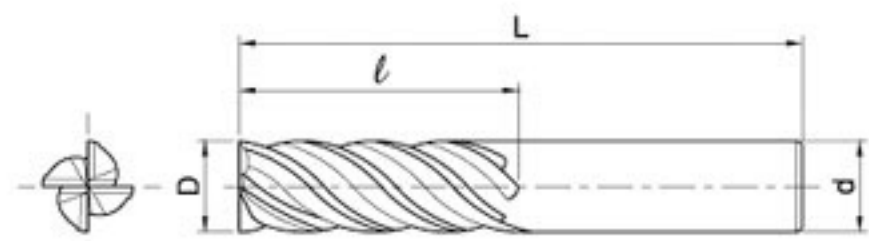
螺旋角 SPIRAL: 45°



型號 Order No.			規格 Dimensions (mm)			
2 刃 Teeth	3 刃 Teeth	4 刃 Teeth	ØD	ℓ	Ød	L
WM2-002			0.2	0.4	3	38
WM2-003			0.3	0.6	3	38
WM2-004			0.4	0.8	3	38
WM2-005			0.5	1.0	3	38
WM2-006			0.6	1.2	3	38
WM2-007			0.7	1.4	3	38
WM2-008			0.8	1.6	3	38
WM2-009			0.9	1.8	3	38
WM2-010			1.0	2.0	3	38
WM2-015			1.5	3.5	4	50
WM2-020	WM3-020		2.0	6.0	4	50
WM2-025	WM3-025		2.5	6.0	4	50
WM2-030	WM3-030	WM4-030	3.0	10	4	50
WM2-035	WM3-035	WM4-035	3.5	10	4	50
WM2-040	WM3-040	WM4-040	4.0	11	4	50
WM2-045	WM3-045	WM4-045	4.5	11	6	50
WM2-050	WM3-050	WM4-050	5.0	13	6	50
WM2-055	WM3-055	WM4-055	5.5	16	6	50
WM2-060	WM3-060	WM4-060	6.0	16	6	50
WM2-065	WM3-065	WM4-065	6.5	16	8	60
WM2-070	WM3-070	WM4-070	7.0	16	8	60
WM2-075	WM3-075	WM4-075	7.5	19	8	60
WM2-080	WM3-080	WM4-080	8.0	19	8	60
WM2-085	WM3-085	WM4-085	8.5	19	10	60
WM2-090	WM3-090	WM4-090	9.0	19	10	60
WM2-095	WM3-095	WM4-095	9.5	22	10	80
WM2-100	WM3-100	WM4-100	10.0	22	10	80
WM2-105	WM3-105	WM4-105	10.5	22	12	80
WM2-110	WM3-110	WM4-110	11.0	22	12	80
WM2-120	WM3-120	WM4-120	12.0	26	12	80
WM2-125	WM3-130	WM4-130	13.0	26	13	80
WM2-140	WM3-140	WM4-140	14.0	28	14	80
WM2-150	WM3-150	WM4-150	15.0	28	15	80
WM2-160	WM3-160	WM4-160	16.0	32	16	80
WM2-180	WM3-180	WM4-180	18.0	32	18	80
WM2-200	WM3-200	WM4-200	20.0	35	20	100
WM2-220	WM3-220	WM4-220	22.0	35	20	100
WM2-250	WM3-250	WM4-250	25.0	35	25	100

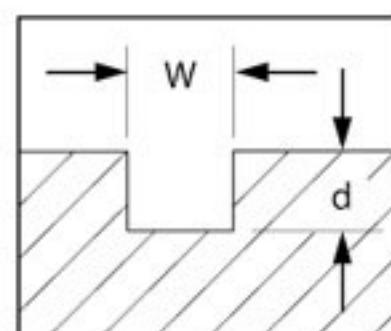
**WML 型**
**碳化鎢鋼端銑刀 (長刃)**  
 SOLID CARBIDE ENDMILLS  
 LONG TYPE

螺旋角 SPIRAL: 45°

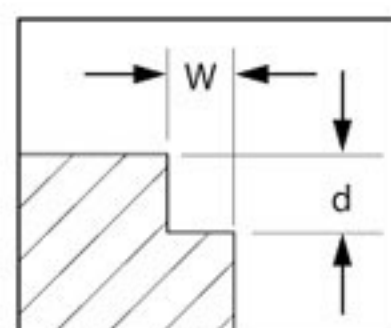


型號 Order No.		規格 Dimensions (mm)			
2 刃 Teeth	4 刃 Teeth	ØD	ℓ	Ød	L
WML2-040	WML4-040	4	18	4	60
WML2-050	WML4-050	5	20	6	80
WML2-060	WML4-060	6	20	6	80
WML2-070	WML4-070	7	25	8	80
WML2-080	WML4-080	8	25	8	80
WML2-100	WML4-100	10	40	10	100
WML2-120	WML4-120	12	40	12	100
WML2-140	WML4-140	14	40	14	100
WML2-160	WML4-160	16	40	16	100
WML2-180	WML4-180	18	40	18	100
WML2-200	WML4-200	20	45	20	150
WML2-220	WML4-220	22	45	20	150
WML2-250	WML4-250	25	45	25	150

**切削條件 (Cutting Parameter):**

 溝槽切削 (slotting):  
 2 刃 W=D, d=0.5D


被削材	碳鋼 S45C		工具鋼 SNCM48		鑄鐵 FC, FCD	
	轉數 (rpm)	進給 (mm)	轉數 (rpm)	進給 (mm)	轉數 (rpm)	進給 (mm)
Ø 刃徑						
4	6350	250	5200	200	6360	300
6	4300	300	3450	200	4300	330
8	3200	320	2600	200	3200	330
10	2550	310	2100	190	2550	320
12	2150	280	1750	170	2150	290
16	1600	240	1300	160	1600	260
20	1270	200	1050	140	1270	240
25	1100	180	850	130	1100	230

 側銑切削 (shoulder):  
 4 刃 W=0.1D, d=1.5D


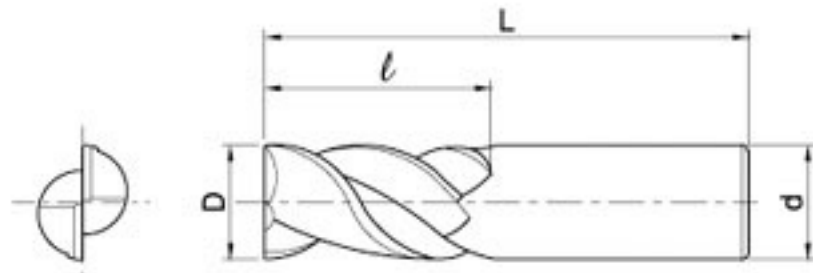
被削材	碳鋼 S45C		工具鋼 SNCM48		鑄鐵 FC, FCD	
	轉數 (rpm)	進給 (mm)	轉數 (rpm)	進給 (mm)	轉數 (rpm)	進給 (mm)
Ø 刃徑						
4	6350	1000	5200	780	6360	1000
6	4300	900	3450	690	4300	900
8	3200	770	2600	600	3200	770
10	2550	650	2100	520	2550	660
12	2150	600	1750	470	2150	600
16	1600	560	1300	450	1600	560
20	1270	480	1050	380	1270	480
25	1100	440	850	340	1100	440

(鍍層) COATING ALTERNATIVES, EX:WM2-100N FOR TIN / WM2-100TN FOR TICN / WM2-100ALN FOR TIALN COATING.

### ALM 型

銅鋁用碳化鎢鋼端銑刀  
SOLID CARBIDE ENDMILLS  
FOR ALUMINUM and COPPER

螺旋角 SPIRAL: 45°

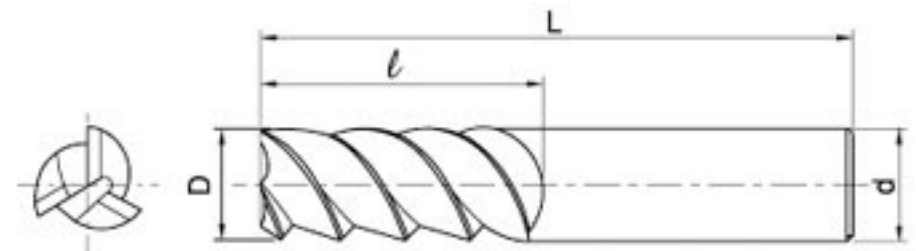


型號 Order No.		規格 Dimensions (mm)			
2刃 Teeth	3刃 Teeth	ØD	ℓ	Ød	L
ALM2-010		1.0	3	3	50
ALM2-015		1.5	4	4	50
ALM2-020		2.0	5	6	50
ALM2-030		3.0	8	6	50
ALM2-040		4.0	10	6	50
ALM2-050		5.0	11	6	50
ALM2-060	ALM3-060	6.0	13	6	50
ALM2-080	ALM2-080	8.0	19	8	60
ALM2-100	ALM2-100	10.0	22	10	80
ALM2-120	ALM2-120	12.0	26	12	80
ALM2-160	ALM2-160	16.0	32	16	80
ALM2-200	ALM2-200	20.0	35	20	100

### ALM-H 型

鋁用碳化鎢鋼端銑刀 (高導角)  
SOLID CARBIDE ENDMILLS  
FOR ALUMINUM (HIGH SPIRAL)

螺旋角 SPIRAL: 60°

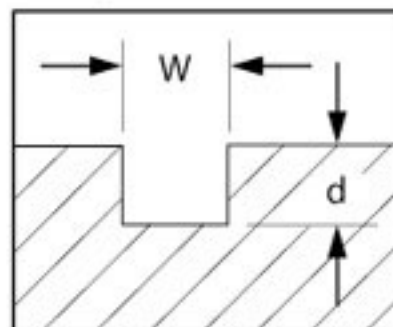
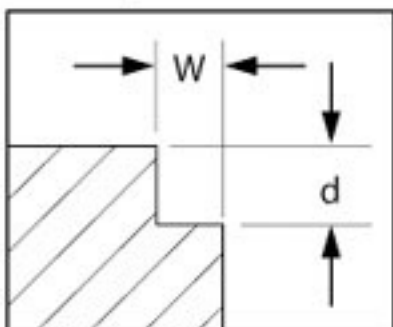


型號 Order No.		規格 Dimensions (mm)			
2刃 Teeth	3刃 Teeth	ØD	ℓ	Ød	L
ALM2-020H		2.0	5	6	50
ALM2-030H		3.0	8	6	50
ALM2-040H		4.0	10	6	50
ALM2-050H		5.0	11	6	50
ALM2-060H		6.0	13	6	50
ALM2-080H		8.0	19	8	60
ALM2-100H	ALM3-100H	10.0	22	10	80
ALM2-120H	ALM3-120H	12.0	26	12	80
ALM2-160H	ALM3-160H	16.0	32	16	80

#### 切削條件 (Cutting Parameter):

側銑切削 (shoulder):  
W=0.5D, d=1D

溝槽切削 (slotting):  
W=D, d=1D

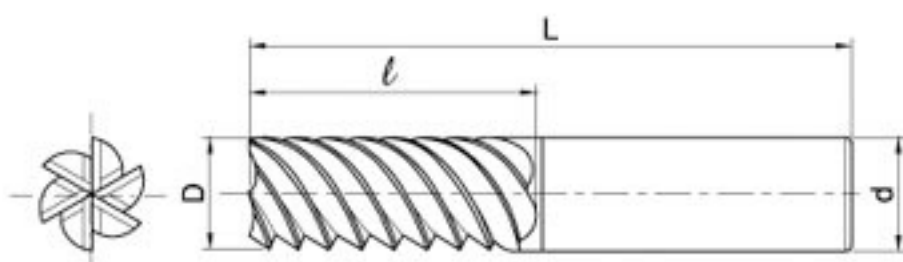


Ø 刃徑 (mm)	迴轉數 (r.p.m.)	進給量			
		側銑切削		溝槽切削	
		床台進給	每刃進給	床台進給	每刃進給
2	15900	630	0.02	320	0.010
3	10600	630	0.03	320	0.015
4	7950	630	0.04	320	0.020
5	6360	630	0.05	320	0.025
6	5300	630	0.06	320	0.030
8	3980	560	0.07	320	0.040
10	3200	510	0.08	320	0.050
12	2650	480	0.09	320	0.060

### SCM 型

**高導角碳化鎢鋼端銑刀**  
SOLID CARBIDE HIGH SPIRAL  
ANGLE ENDMILLS WITH COATING

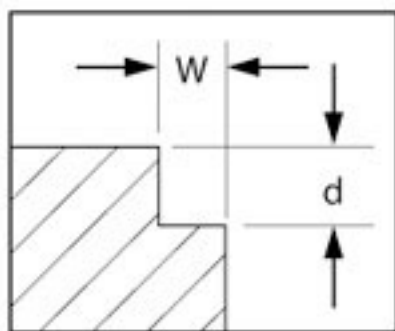
螺旋角 SPIRAL: 45°  
(高硬度難削材用) for hardened material



型號 Order No.		規格 Dimensions (mm)			
3 刃 Teeth	6 刃 Teeth	∅D	l	∅d	L
SCM3-060	SCM6-060N	6	12	6	50
SCM3-080	SCM6-080N	8	16	8	60
SCM3-100	SCM6-100N	10	25	10	80
SCM3-120	SCM6-120N	12	25	12	80
SCM3-140	SCM6-140N	14	28	16	80
SCM3-160	SCM6-160N	16	32	16	80
SCM3-200	SCM6-200N	20	35	20	100
SCM3-250	SCM6-250N	25	35	25	100

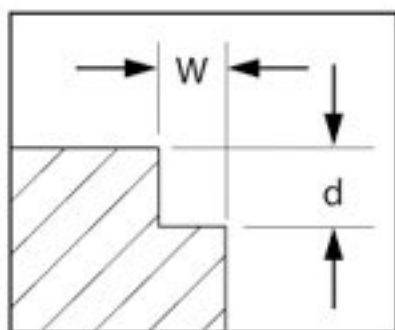
切削條件 (Cutting Parameter):

3 刃側銑切削  
(shoulder)  
W=0.1D, d=1.5D



被削材	鑄鐵 FC30		合金鋼 SNCM (HRC40°)		模具鋼 SKD (HRC60°)	
	轉數 (rpm)	進給 (mm)	轉數 (rpm)	進給 (mm)	轉數 (rpm)	進給 (mm)
∅ 刃徑						
6	1550	180	1060	80	800	40
8	1200	180	800	80	590	40
10	950	180	650	80	480	40
12	800	180	530	80	400	40
14	680	180	450	80	340	40
16	600	180	400	80	300	40
20	480	180	320	80	240	40
25	380	180	255	80	190	40

6 刃側銑切削  
(shoulder)  
W=0.05D, d=1.5D

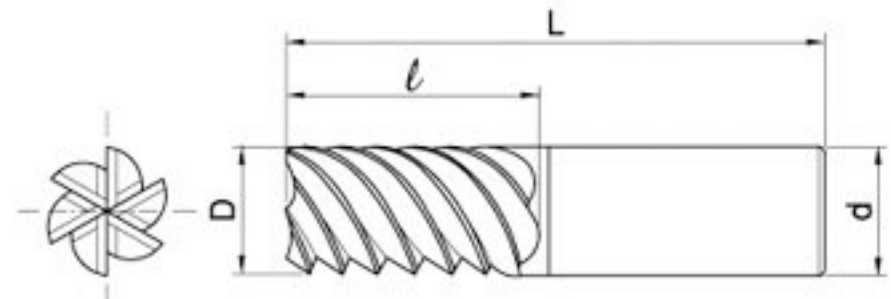


被削材	鑄鐵 FC30		合金鋼 SNCM (HRC40°)		模具鋼 SKD (HRC60°)	
	轉數 (rpm)	進給 (mm)	轉數 (rpm)	進給 (mm)	轉數 (rpm)	進給 (mm)
∅ 刃徑						
6	1550	360	1060	160	800	80
8	1200	360	800	160	590	80
10	950	360	650	160	480	80
12	800	360	530	160	400	80
14	680	360	450	160	340	80
16	600	360	400	160	300	80
20	480	360	320	160	240	80
25	380	360	255	160	190	80

### SKM 型

**高導角碳化鎢鋼端銑刀**  
SOLID CARBIDE HIGH SPIRAL ANGLE  
ENDMILLS LONG TYPE WITH COATING

螺旋角 SPIRAL: 45°  
(高硬度難削材用) for hardened material

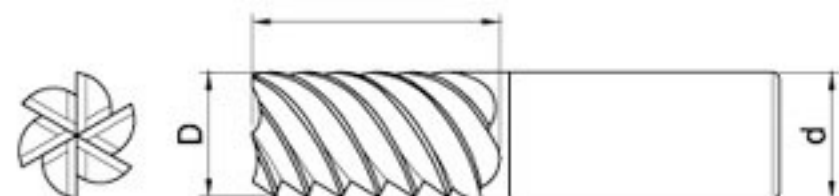


型號 Order No.	規格 Dimensions (mm)				
	∅D	l	∅d	L	Teeth
SKM6-160N	16	50	16	105	6
SKM6-200N	20	75	20	140	6
SKM6-250N	25	90	25	160	6
SKM6-300N	30	90	32	160	6
SKM6-320N	32	90	32	160	6

### SCX 型

**瓷金高導角端銑刀**  
CERMET HIGH SPIRAL ANGLE  
ENDMILLS

螺旋角 SPIRAL: 60°

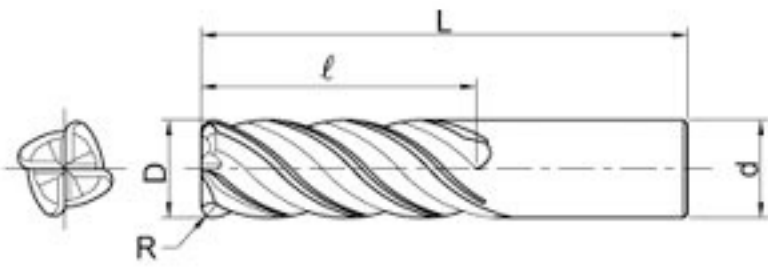


型號 Order No.	規格 Dimensions (mm)				
	∅D	l	∅d	L	Teeth
SCX6-060	6	12	6	50	6
SCX6-080	8	16	8	60	6
SCX6-100	10	25	10	70	6
SCX6-120	12	25	12	75	6
SCX6-160	16	32	16	90	6
SCX6-200	20	35	20	110	6

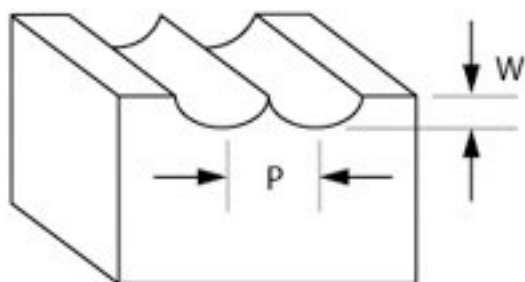
### WR 型

#### 全鎢鋼超硬圓角端銑刀 SOLID CARBIDE ENDMILLS WITH CORNER RADIUS

螺旋角 SPIRAL: 45°



型號 Order No.	規格 Dimensions (mm)				
	4刃 Teeth	∅D	R	l	∅d
WR4-060	6.0	0.5	16	6	50
WR4-060	6.0	1.0	16	6	50
WR4-060	6.0	1.5	16	6	50
WR4-060	6.0	2.0	16	6	50
WR4-080	8.0	0.5	19	8	60
WR4-080	8.0	1.0	19	8	60
WR4-080	8.0	1.5	19	8	60
WR4-080	8.0	2.0	19	8	60
WR4-100	10.0	0.5	22	10	80
WR4-100	10.0	1.0	22	10	80
WR4-100	10.0	1.5	22	10	80
WR4-100	10.0	2.0	22	10	80
WR4-120	12.0	0.5	26	12	80
WR4-120	12.0	1.0	26	12	80
WR4-120	12.0	1.5	26	12	80
WR4-120	12.0	2.0	26	12	80



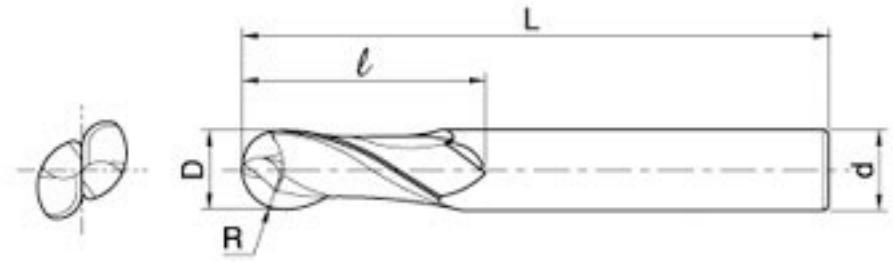
切削條件 (Cutting Parameter) : W=0.1D, P=0.1D

被削材	模具鋼 NAK-80		模具鋼 SKD-61(MRC52*)	
	轉數 (rpm)	進給 (mm)	轉數 (rpm)	進給 (mm)
∅6	11600	2300	11600	1800
∅8	8800	2300	8800	1800
∅10	7000	2300	7000	1800
∅12	5800	2300	5800	1800

### RXL 型

#### 瓷金球形銑刀 CERMET BALL NOSED ENDMILLS

螺旋角 SPIRAL: 30°



型號 Order No.	規格 Dimensions (mm)				
	∅D	R	l	∅d	L
RXL-020	2	1.0	4	6	50
RXL-030	3	1.5	6	6	50
RXL-040	4	2.0	8	6	80
RXL-050	5	2.5	10	6	80
RXL-060	6	3.0	12	6	80
RXL-080	8	4.0	14	8	90
RXL-100	10	5.0	18	10	100
RXL-120	12	6.0	22	12	110
RXL-160	16	8.0	30	16	160
RXL-200	20	10.0	38	20	170

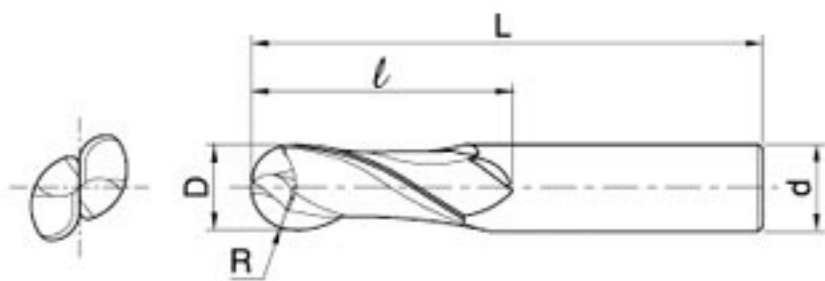
切削條件 (Cutting Parameter) :

被削材	NAK, SK61					
	HRC40* 以下		HRC52*		HRC60*	
R 半徑	轉數 (rpm)	進給 (mm)	轉數 (rpm)	進給 (mm)	轉數 (rpm)	進給 (mm)
3R	13500	1600	13500	1350	11000	900
4R	10000	1600	10000	1350	8000	900
5R	8000	1600	8000	1350	6400	900
6R	6600	1600	6600	1350	5300	900
8R	5000	1600	5000	1350	4000	900

**RM 型**

**碳化鎢鋼球形銑刀**  
SOLID CARBIDE BALL NOSED ENDMILLS  
REGULAR TYPE

螺旋角 SPIRAL: 30°

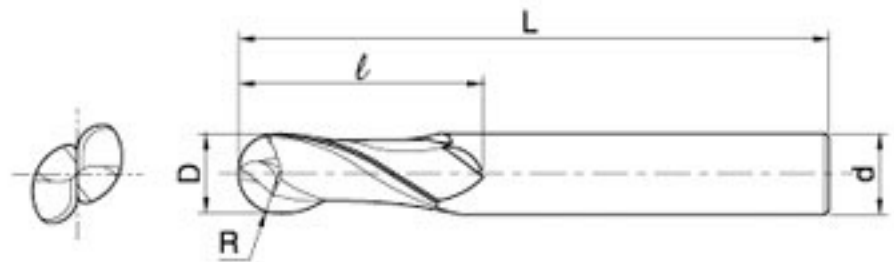


型號 Order No.	規 格 Dimensions (mm)				
	ØD	R	ℓ	Ød	L
RM-002	0.2	0.10	0.4	3	38
RM-003	0.3	0.15	0.6	3	38
RM-004	0.4	0.20	0.8	3	38
RM-005	0.5	0.25	1.0	3	38
RM-006	0.6	0.30	1.2	3	38
RM-007	0.7	0.35	1.4	3	38
RM-008	0.8	0.40	1.6	3	38
RM-009	0.9	0.45	1.8	3	38
RM-010	1.0	0.50	2.0	3	38
RM-015	1.5	0.75	3.0	4	50
RM-020	2.0	1.0	4.0	4	50
RM-030	3.0	1.5	6.0	4	50
RM-040	4.0	2.0	8.0	4	50
RM-050	5.0	2.5	10	6	50
RM-060	6.0	3.0	12	6	50
RM-070	7.0	3.5	14	8	60
RM-080	8.0	4.0	16	8	60
RM-090	9.0	4.5	18	10	60
RM-100	10.0	5.0	20	10	80
RM-120	12.0	6.0	24	12	80
RM-140	14.0	7.0	28	14	80
RM-160	16.0	8.0	32	16	80
RM-180	18.0	9.0	32	18	80
RM-200	20.0	10.0	35	20	100
RM-250	25.0	12.5	35	25	100

**RML 型**

**碳化鎢鋼球形銑刀 (長刃)**  
SOLID CARBIDE BALL NOSED ENDMILLS  
LONG TYPE

螺旋角 SPIRAL: 30°

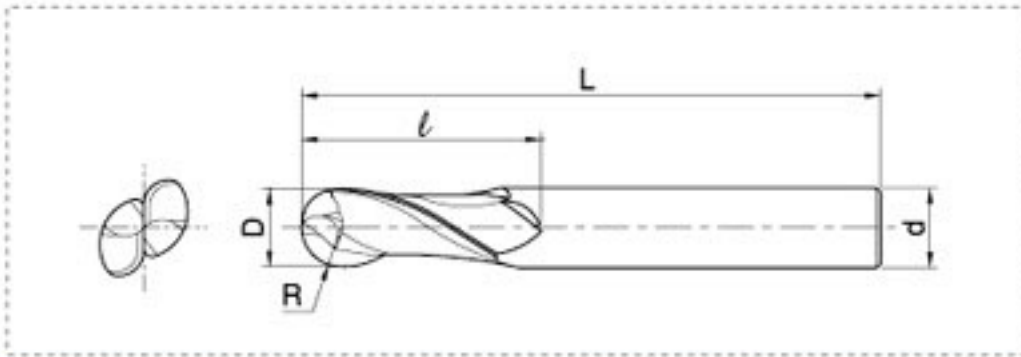


型號 Order No.	規 格 Dimensions (mm)				
	ØD	R	ℓ	Ød	L
RML-040	4.0	2.0	12	6	80
RML-050	5.0	2.5	15	6	80
RML-060	6.0	3.0	20	6	80
RML-070	7.0	3.5	20	8	80
RML-080	8.0	4.0	25	8	80
RML-100	10.0	5.0	25	10	100
RML-120	12.0	6.0	30	12	100
RML-140	14.0	7.0	35	14	100
RML-160	16.0	8.0	40	16	100
RML-180	18.0	9.0	40	18	100
RML-200	20.0	10.0	45	20	160
RML-200	22.0	11.0	45	20	160
RML-250	25.0	12.5	45	25	160

### RMS 型

**碳化鎢鋼球形銑刀 (超長)**  
SOLID CARBIDE BALL NOSED ENDMILLS  
LONG SHANK TYPE

螺旋角 SPIRAL: 30°

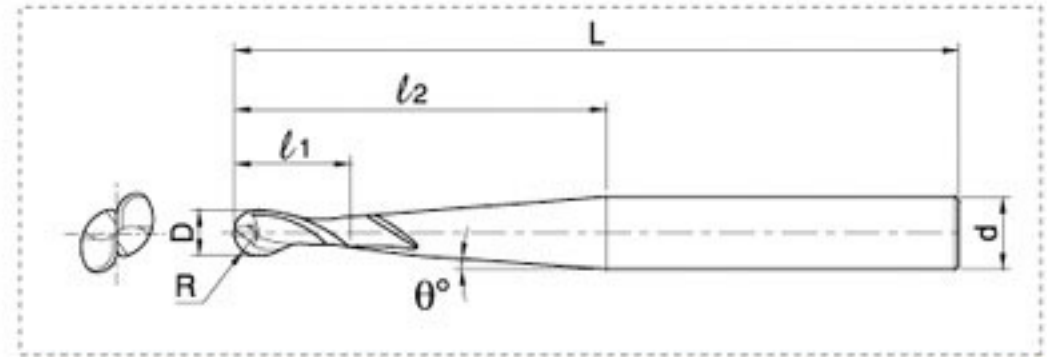


型號 Order No.	規格 Dimensions (mm)				
	∅D	R	l	∅d	L
RMS-060	6.0	3.0	20	6	100
RMS-080	8.0	4.0	25	8	100
RMS-100	10.0	5.0	25	10	160
RMS-120	12.0	6.0	30	12	160
RMS-140	14.0	7.0	35	12	160
RMS-160	16.0	8.0	40	16	160
RMS-180	18.0	9.0	40	16	160
RMS-200	20.0	10.0	45	20	200
RMS-220	22.0	11.0	45	20	200
RMS-250	25.0	12.5	45	25	200

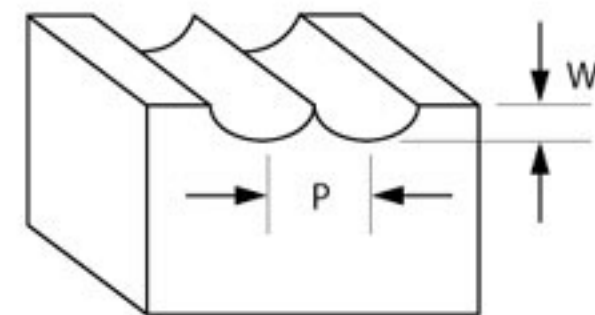
### RMT 型

**碳化鎢鋼球形銑刀 (加強)**  
SOLID CARBIDE BALL NOSED ENDMILLS  
ENLARGED SHANK

螺旋角 SPIRAL: 30°



型號 Order No.	規格 Dimensions (mm)						
	∅D	R	θ	l1	l2	∅d	L
RMT-020	2.0	1.0	4°00'	5	33	6	80
RMT-030	3.0	1.5	3°30'	8	33	6	80
RMT-040	4.0	2.0	2°30'	10	55	8	100
RMT-050	5.0	2.5	2°00'	12	55	8	100
RMT-060	6.0	3.0	2°00'	15	72	10	100
RMT-080	8.0	4.0	1°30'	20	96	12	160
RMT-100	10.0	5.0	2°00'	25	110	16	160
RMT-120	12.0	6.0	1°30'	30	106	16	160



切削條件 (Cutting Parameter) : W=0.25D, P=0.5D

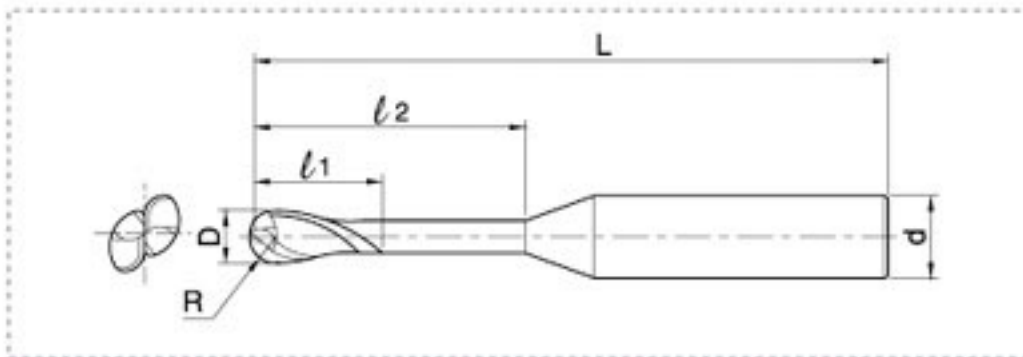
被削材	鑄鐵 FC30		碳鋼 S50C		合金鋼 SCM		模具鋼 SKD.SKT	
	轉數 (rpm)	進給 (mm)	轉數 (rpm)	進給 (mm)	轉數 (rpm)	進給 (mm)	轉數 (rpm)	進給 (mm)
1	7950	120	6300	100	4750	70	3950	48
1.5	5300	120	4250	100	3180	70	2650	48
2	3980	120	3180	100	2380	70	1990	48
2.5	3200	120	2550	100	1900	70	1590	48
3	2650	130	2100	110	1590	70	1320	55
4	1990	130	1590	110	1200	75	995	55
5	1600	130	1300	110	950	75	795	55
6	1350	130	1060	110	795	75	660	55
8	995	130	795	110	600	75	600	55
10	800	130	640	110	480	75	450	55
12.5	650	130	510	100	380	75	380	55



**RM-H 型**
**高速加工球形銑刀**

SOLID CARBIDE BALL NOSED ENDMILLS FOR HIGH SPEED CUTTING

螺旋角 SPIRAL: 30°

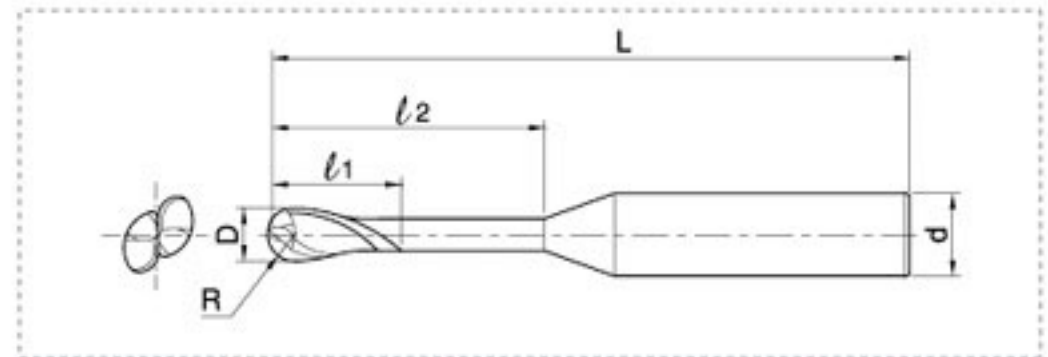


型號 Order No.	規格 Dimensions (mm)					
	ØD	R	l1	l2	Ød	L
RM-002H	0.2	0.10	0.2	0.6	3	38
RM-004H	0.4	0.20	0.4	1.2	3	38
RM-006H	0.6	0.30	0.6	1.8	3	38
RM-008H	0.8	0.40	0.8	2.4	3	38
RM-010H	1.0	0.50	1.0	3.0	3	38
RM-015H	1.5	0.75	1.5	4.5	6	50
RM-020H	2.0	1.0	2.0	6.0	6	50
RM-030H	3.0	1.5	3.0	9.0	6	50
RM-040H	4.0	2.0	4.0	12	6	50
RM-050H	5.0	2.5	5.0	15	6	50
RM-060H	6.0	3.0	6.0	18	6	50
RM-070H	7.0	3.5	7.0	21	8	60
RM-080H	8.0	4.0	8.0	24	8	60
RM-090H	9.0	4.5	9.0	27	10	80
RM-100H	10.0	5.0	10.0	30	10	80
RM-120H	12.0	6.0	12.0	36	12	80

**RML-H 型**
**高速加工球形銑刀 (長刃)**

SOLID CARBIDE BALL NOSED ENDMILLS LONG TYPE FOR HIGH SPEED CUTTING

螺旋角 SPIRAL: 30°



型號 Order No.	規格 Dimensions (mm)					
	ØD	R	l1	l2	Ød	L
RML-030H	3.0	1.5	3.0	9.0	6	80
RML-040H	4.0	2.0	4.0	12	6	80
RML-050H	5.0	2.5	5.0	15	6	80
RML-060H	6.0	3.0	6.0	18	6	80
RML-070H	7.0	3.5	7.0	21	8	80
RML-080H	8.0	4.0	8.0	24	8	80
RML-090H	9.0	4.5	9.0	27	10	100
RML-100H	10.0	5.0	10.0	30	10	100
RML-120H	12.0	6.0	12.0	36	12	100

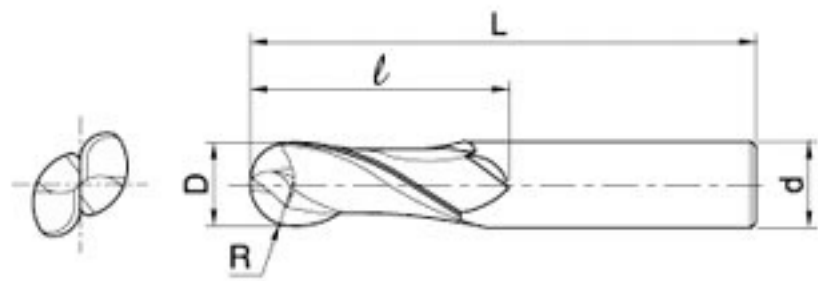
切削條件 (Cutting Parameter) : W=0.2D, P=0.25D

被削材	鑄鐵 FC		碳鋼 (HRC30°) S50C		合金鋼 NAK (HRC40°) SCM		模具鋼 (HRC52°) SKD.SKT	
	轉數 (rpm)	進給 (mm)	轉數 (rpm)	進給 (mm)	轉數 (rpm)	進給 (mm)	轉數 (rpm)	進給 (mm)
R 半徑 0.5	25000	2800	25000	2800	25000	2700	25000	2200
1	23000	2800	23000	2800	23000	2700	23000	2200
2	20000	2800	20000	2800	20000	2700	20000	2200
3	15000	2700	15000	2700	15000	2500	15000	2000
4	11000	2000	11000	2000	11000	1800	11000	1700
5	10000	1800	10000	1800	10000	1600	10000	1500
6	7500	1500	7500	1500	7500	1300	7500	1100

### RM-CU 型

銅鋁專用鎢鋼球形銑刀  
SOLID CARBIDE BALL NOSED ENDMILLS  
FOR ALUMINUM / COPPER

螺旋角 SPIRAL: 30°

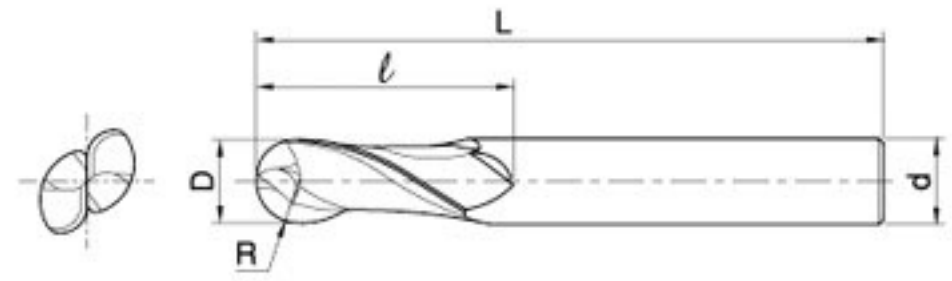


型號 Order No.	規格 Dimensions (mm)				
	ØD	R	l	ød	L
RM-002CU	0.2	0.10	0.4	3	38
RM-004CU	0.4	0.20	0.8	3	38
RM-006CU	0.6	0.30	1.2	3	38
RM-008CU	0.8	0.40	1.6	3	38
RM-010CU	1.0	0.50	2.0	3	38
RM-015CU	1.5	0.75	3.0	4	50
RM-020CU	2.0	1.0	4.0	4	50
RM-030CU	3.0	1.5	6.0	4	50
RM-040CU	4.0	2.0	8.0	4	50
RM-050CU	5.0	2.5	10	6	50
RM-060CU	6.0	3.0	12	6	50
RM-070CU	7.0	3.5	14	8	60
RM-080CU	8.0	4.0	16	8	60
RM-090CU	9.0	4.5	18	10	60
RM-100CU	10.0	5.0	20	10	80
RM-120CU	12.0	6.0	24	12	80

### RML-CU 型

銅鋁專用鎢鋼球形銑刀 (長刃)  
SOLID CARBIDE BALL NOSED ENDMILLS  
LONG TYPE FOR ALUMINUM / COPPER

螺旋角 SPIRAL: 30°

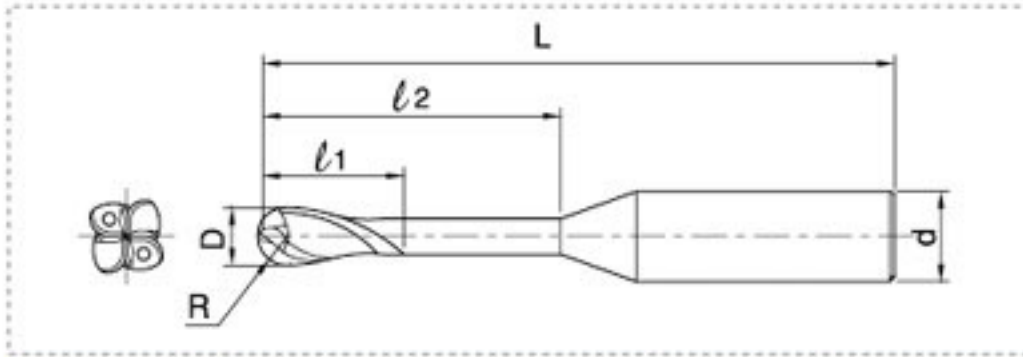


型號 Order No.	規格 Dimensions (mm)				
	ØD	R	l	ød	L
RML-002CU	0.2	0.10	0.4	4	50
RML-004CU	0.4	0.20	0.8	4	50
RML-006CU	0.6	0.30	1.2	4	50
RML-008CU	0.8	0.40	1.6	4	50
RML-010CU	1.0	0.50	2.0	4	60
RML-015CU	1.5	0.75	3.0	4	60
RML-020CU	2.0	1.0	4.0	4	60
RML-030CU	3.0	1.5	6.0	4	60
RML-040CU	4.0	2.0	8.0	4	60
RML-050CU	5.0	2.5	10	6	80
RML-060CU	6.0	3.0	12	6	80
RML-070CU	7.0	3.5	14	8	80
RML-080CU	8.0	4.0	16	8	80
RML-090CU	9.0	4.5	18	10	100
RML-100CU	10.0	5.0	20	10	100
RML-120CU	12.0	6.0	24	12	100

### RM-AR 型

油孔高速加工球形銑刀  
SOLID CARBIDE BALL NOSED ENDMILLS WITH COOLANT HOLES FOR HIGH SPEED CUTTING

螺旋角 SPIRAL: 30°

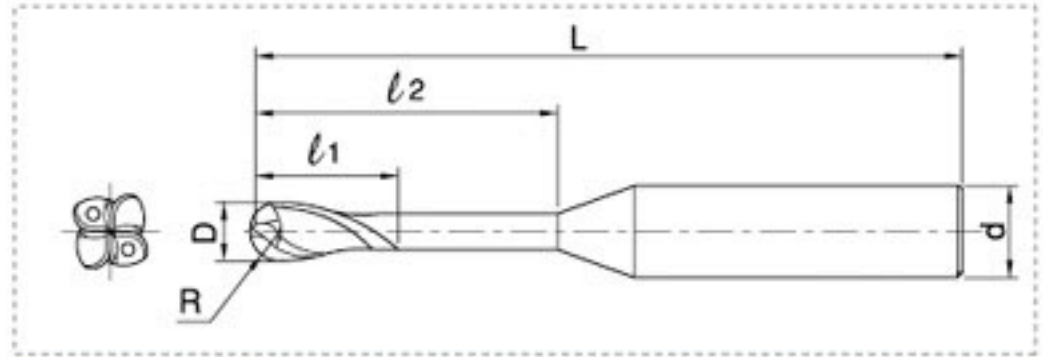


型號 Order No.	規 格 Dimensions (mm)					
	ØD	R	l1	l2	Ød	L
RM-050AR	5.0	2.5	5	15	6	50
RM-060AR	6.0	3.0	6	18	6	50
RM-070AR	7.0	3.5	7	21	8	60
RM-080AR	8.0	4.0	8	24	8	60
RM-090AR	9.0	4.5	9	27	10	80
RM-100AR	10.0	5.0	10	30	10	80
RM-120AR	12.0	6.0	12	36	12	80
RM-140AR	14.0	7.0	14	42	14	
RM-160AR	16.0	8.0	16	48	16	80
RM-180AR	18.0	9.0	18	54	18	80
RM-200AR	20.0	10.0	20	60	20	100

### RML-AR 型

油孔高速加工球形銑刀 (長刃)  
SOLID CARBIDE BALL NOSED ENDMILLS LONG TYPE WITH COOLANT HOLES FOR HIGH SPEED CUTTING

螺旋角 SPIRAL: 30°

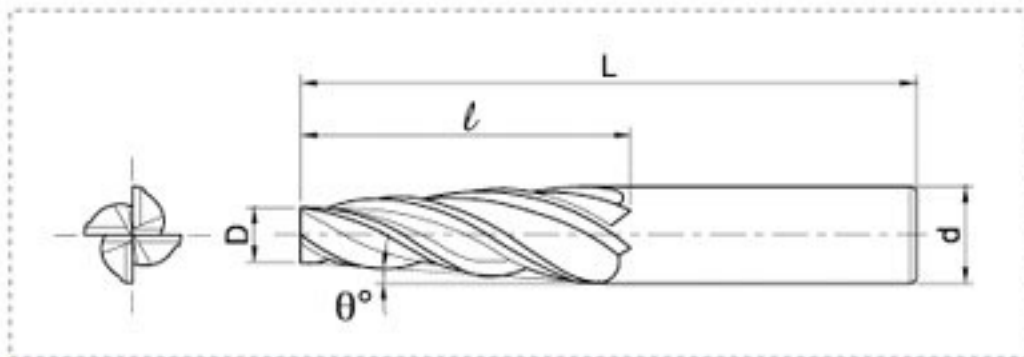


型號 Order No.	規 格 Dimensions (mm)					
	ØD	R	l1	l2	Ød	L
RML-050AR	5.0	2.5	5	15	6	80
RML-060AR	6.0	3.0	6	18	6	80
RML-070AR	7.0	3.5	7	21	8	80
RML-080AR	8.0	4.0	8	24	8	80
RML-090AR	9.0	4.5	9	27	10	100
RML-100AR	10.0	5.0	10	30	10	100
RML-120AR	12.0	6.0	12	36	12	100
RML-140AR	14.0	7.0	14	42	14	100
RML-160AR	16.0	8.0	16	48	16	100
RML-180AR	18.0	9.0	18	54	18	100
RML-200AR	20.0	10.0	20	60	20	160

### TSM 型

**斜邊刃鎢鋼端銑刀**  
SOLID CARBIDE TAPER ENDMILLS  
REGULAR TYPE

螺旋角 SPIRAL: 30°



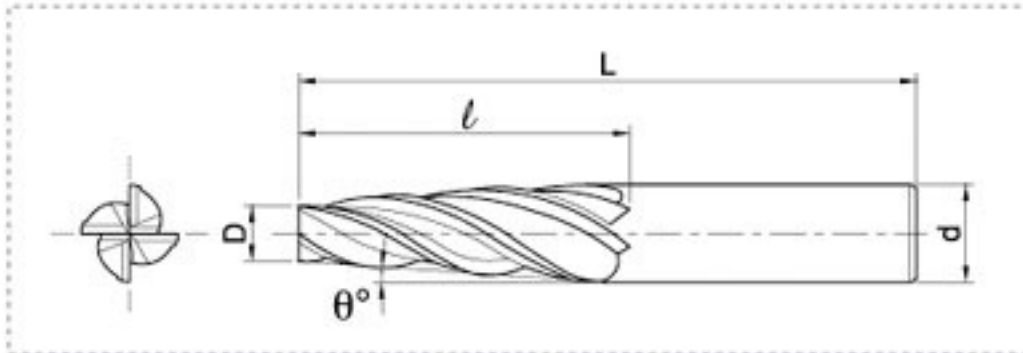
型號 Order No.	規格 Dimensions (mm)					
	ØD	θ	l	Ød	L	Teeth
TSM010-05	1.0	0°30'	4			
TSM010-10		1°00'				
TSM010-15		1°30'				
TSM010-20		2°00'				
TSM010-25		2°30'				
TSM010-30		3°00'				
TSM010-50		5°00'				
TSM015-05		1.5				
TSM015-10	1°00'					
TSM015-15	1°30'					
TSM015-20	2°00'					
TSM015-25	2°30'					
TSM015-30	3°00'					
TSM015-50	5°00'					
TSM020-05	2.0		0°30'	6	50	2
TSM020-10		1°00'				
TSM020-15		1°30'				
TSM020-20		2°00'				
TSM020-25		2°30'				
TSM020-30		3°00'				
TSM020-50						
TSM025-05		2.5	0°30'			
TSM025-10	1°00'					
TSM025-15	1°30'					
TSM025-20	2°00'					
TSM025-25	2°30'					
TSM025-30	3°00'					
TSM025-50	5°00'					
TSM030-05	3.0		0°30'	10	6	
TSM030-10		1°00'				
TSM030-15		1°30'				
TSM030-20		2°00'				
TSM030-25		2°30'				
TSM030-30		3°00'				
TSM030-50		5°00'				

型號 Order No.	規格 Dimensions (mm)					
	ØD	θ	l	Ød	L	Teeth
TSM040-05	4.0	0°30'	15	6	50	
TSM040-10		1°00'				
TSM040-15		1°30'				
TSM040-20		2°00'				
TSM040-25		2°30'				
TSM040-30		3°00'				
TSM040-50		5°00'				
TSM050-05		5.0				
TSM050-10	1°00'					
TSM050-15	1°30'					
TSM050-20	2°00'					
TSM050-25	2°30'					
TSM050-30	3°00'					
TSM050-50	5°00'					
TSM060-05	6.0		0°30'	25	10	80
TSM060-10		1°00'				
TSM060-15		1°30'				
TSM060-20		2°00'				
TSM060-25		2°30'				
TSM060-30		3°00'				
TSM060-50		5°00'				
TSM080-05		8.0	0°30'			
TSM080-10	1°00'					
TSM080-15	1°30'					
TSM080-20	2°00'					
TSM080-25	2°30'					
TSM080-30	3°00'					
TSM080-50	5°00'					
TSM100-05	10.0		0°30'		16	
TSM100-10		1°00'				
TSM100-15		1°30'				
TSM100-20		2°00'				
TSM100-25		2°30'				
TSM100-30		3°00'				
TSM100-50		5°00'				

## TPM 型

斜邊刃鎢鋼端銑刀 (長刃)  
SOLID CARBIDE TAPER ENDMILLS  
LONG TYPE

螺旋角 SPIRAL: 30°



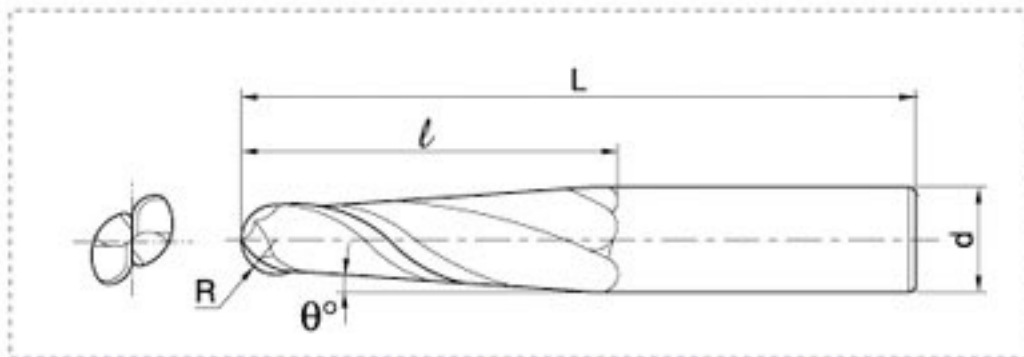
型號 Order No.	規格 Dimensions (mm)					
	ØD	θ	l	ød	L	Teeth
TPM010-10	1.0	1°00'	10	4	50	2
TPM010-15		1°30'				
TPM010-20		2°00'				
TPM010-25		2°30'				
TPM010-30		3°00'				
TPM015-05	1.5	0°30'	10	4	50	
TPM015-10		1°00'				
TPM015-15		1°30'				
TPM015-20		2°00'				
TPM015-25		2°30'				
TPM015-30	3°00'					
TPM020-05	2.0	0°30'	13	6	80	
TPM020-10		1°00'				
TPM020-15		1°30'				
TPM020-20		2°00'				
TPM020-25		2°30'				
TPM020-30	3°00'					
TPM020-50	5°00'					
TPM025-05	2.5	0°30'	15	4	60	
TPM025-10		1°00'				
TPM025-15		1°30'				
TPM025-20		2°00'				
TPM025-25		2°30'				
TPM025-30	3°00'					
TPM025-50	5°00'					

型號 Order No.	規格 Dimensions (mm)					
	ØD	θ	l	ød	L	Teeth
TPM030-05	3.0	0°30'	20	6	60	2
TPM030-10		1°00'				
TPM030-15		1°30'				
TPM030-20		2°00'				
TPM030-25		2°30'				
TPM030-30	3°00'					
TPM030-50	5°00'					
TPM040-05	4.0	0°30'	25	8	80	
TPM040-10		1°00'				
TPM040-15		1°30'				
TPM040-20		2°00'				
TPM040-25		2°30'				
TPM040-30	3°00'					
TPM040-50	5°00'					
TPM050-05	5.0	0°30'	30	6	100	
TPM050-10		1°00'				
TPM050-15		1°30'				
TPM050-20		2°00'				
TPM050-25		2°30'				
TPM050-30	3°00'					
TPM050-50	5°00'					
TPM060-05	6.0	0°30'	35	8	100	
TPM060-10		1°00'				
TPM060-15		1°30'				
TPM060-20		2°00'				
TPM060-25		2°30'				
TPM060-30	3°00'					
TPM060-50	5°00'					

### TPR 型

## 斜邊刃球形鎢鋼端銑刀 SOLID CARBIDE TAPER BALL NOSED ENDMILLS

螺旋角 SPIRAL: 30°



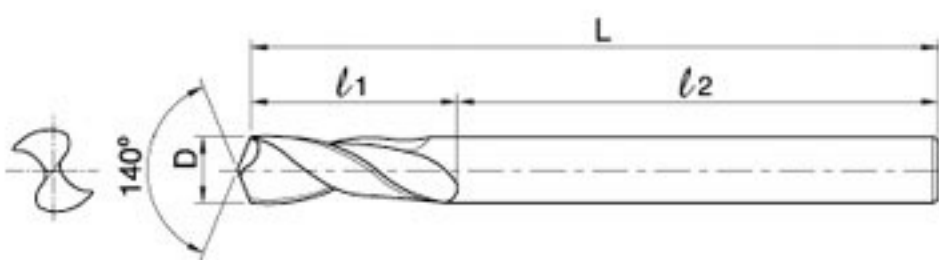
型號 Order No.	規 格 Dimensions (mm)									
	∅D	θ	l	∅d	L	Teeth				
TPR015-05	1.5	0°30'	20	4	80	2				
TPR015-10		1°00'								
TPR015-15		1°30'								
TPR015-20		2°00'								
TPR015-30		3°00'		6						
TPR015-50		5°00'								
TPR015-70		7°00'		8						
TPR015-100		10°00'		10						
TPR020-05		2.0		0°30'			25	6	80	2
TPR020-10				1°00'						
TPR020-15	1°30'									
TPR020-20	2°00'									
TPR020-30	3°00'		8							
TPR020-50	5°00'									
TPR020-70	7°00'		10							
TPR020-100	10°00'		12							
TPR025-05	2.5		0°30'	30	6	80		2		
TPR025-10			1°00'							
TPR025-15		1°30'								
TPR025-20		2°00'								
TPR025-30		3°00'	8							
TPR025-50		5°00'								
TPR025-70		7°00'	10							
TPR025-100		10°00'	12							

型號 Order No.	規 格 Dimensions (mm)									
	∅D	θ	l	∅d	L	Teeth				
TPR030-05	3.0	0°30'	35	8	80	2				
TPR030-10		1°00'								
TPR030-15		1°30'								
TPR030-20		2°00'								
TPR030-30		3°00'		10						
TPR030-50		5°00'								
TPR030-70		7°00'		12						
TPR030-100		10°00'		16						
TPR040-05		4.0		0°30'			40	10	100	2
TPR040-10				1°00'						
TPR040-15	1°30'									
TPR040-20	2°00'									
TPR040-30	3°00'		12							
TPR040-50	5°00'									
TPR040-70	7°00'		16							
TPR040-100	10°00'		20							
TPR050-05	5.0		0°30'	45	12	130		2		
TPR050-10			1°00'							
TPR050-15		1°30'								
TPR050-20		2°00'								
TPR050-30		3°00'	16							
TPR050-50		5°00'								
TPR050-70		7°00'	20							
TPR050-100		10°00'	25							

**DM 型**
**碳化鎢鋼高速鑽頭**  
**SOLID CARBIDE SPIRAL POINT DRILLS**  
**REGULAR TYPE**

螺旋角 SPIRAL: 30°

Depth of hole max 4D



型號 Order No.	規 格 Dimensions (mm)			
	ØD	l1	l2	L
DM-010	1.0	6	31	38
DM-011	1.1	6	30	38
DM-012	1.2	7	30	38
DM-013	1.3	7	30	38
DM-014	1.4	7	30	38
DM-015	1.5	8	30	38
DM-016	1.6	8	30	38
DM-017	1.7	9	30	38
DM-018	1.8	9	30	38
DM-019	1.9	10	28	38
DM-020	2.0	11	39	50
DM-021	2.1	11	39	50
DM-022	2.2	11	39	50
DM-023	2.3	11	39	50
DM-024	2.4	11	39	50
DM-025	2.5	11	39	50
DM-025	2.6	11	39	50
DM-027	2.7	11	39	50
DM-028	2.8	11	39	50
DM-029	2.9	11	39	50
DM-030	3.0	11	39	50
DM-031	3.1	17	33	50
DM-032	3.2	17	33	50
DM-033	3.3	17	33	50
DM-034	3.4	17	33	50
DM-035	3.5	17	33	50
DM-036	3.6	20	30	50
DM-037	3.7	20	30	50
DM-038	3.8	20	30	50
DM-039	3.9	20	30	50
DM-040	4.0	22	38	60
DM-041	4.1	22	38	60
DM-042	4.2	22	38	60
DM-043	4.3	22	38	60
DM-044	4.4	24	36	60

型號 Order No.	規 格 Dimensions (mm)			
	ØD	l1	l2	L
DM-045	4.5	24	36	60
DM-046	4.6	24	36	60
DM-047	4.7	24	36	60
DM-048	4.8	26	34	60
DM-049	4.9	26	34	60
DM-050	5.0	26	34	60
DM-051	5.1	26	34	60
DM-052	5.2	26	34	60
DM-053	5.3	26	34	60
DM-054	5.4	28	32	60
DM-055	5.5	28	32	60
DM-056	5.6	28	32	60
DM-057	5.7	28	32	60
DM-058	5.8	28	32	60
DM-059	5.9	28	32	60
DM-060	6.0	28	32	60
DM-061	6.1	31	29	60
DM-062	6.2	31	29	60
DM-063	6.3	31	29	60
DM-064	6.4	31	29	60
DM-065	6.5	31	49	80
DM-066	6.6	31	49	80
DM-067	6.7	31	49	80
DM-068	6.8	32	48	80
DM-069	6.9	32	48	80
DM-070	7.0	32	48	80
DM-071	7.1	32	48	80
DM-072	7.2	32	48	80
DM-073	7.3	32	48	80
DM-074	7.4	32	48	80
DM-075	7.5	32	48	80
DM-076	7.6	35	45	80
DM-077	7.7	35	45	80
DM-078	7.8	35	45	80
DM-079	7.9	35	45	80

型號 Order No.	規 格 Dimensions (mm)			
	∅D	ℓ1	ℓ2	L
DM-080	8.0	35	45	80
DM-081	8.1	35	45	80
DM-082	8.2	35	45	80
DM-083	8.3	35	45	80
DM-084	8.4	35	45	80
DM-085	8.5	35	45	80
DM-086	8.6	35	45	80
DM-087	8.7	35	45	80
DM-088	8.8	35	45	80
DM-089	8.9	35	45	80
DM-090	9.0	35	45	80
DM-091	9.1	35	45	80
DM-092	9.2	35	45	80
DM-093	9.3	35	45	80
DM-094	9.4	35	45	80
DM-095	9.5	35	45	80
DM-096	9.6	43	47	90
DM-097	9.7	43	47	90
DM-098	9.8	43	47	90
DM-099	9.9	43	47	90
DM-100	10.0	43	47	90
DM-101	10.1	43	47	90
DM-102	10.2	43	47	90
DM-103	10.3	43	47	90
DM-104	10.4	43	47	90
DM-105	10.5	43	47	90
DM-106	10.6	43	47	90
DM-107	10.7	47	53	100
DM-108	10.8	47	53	100
DM-109	10.9	47	53	100
DM-110	11.0	47	53	100
DM-111	11.1	47	53	100
DM-112	11.2	47	53	100
DM-113	11.3	47	53	100
DM-114	11.4	47	53	100
DM-115	11.5	47	53	100
DM-116	11.6	47	53	100
DM-117	11.7	47	53	100
DM-118	11.8	47	53	100
DM-119	11.9	51	55	106

型號 Order No.	規 格 Dimensions (mm)			
	∅D	ℓ1	ℓ2	L
DM-120	12.0	51	55	106
DM-121	12.1	51	55	106
DM-122	12.2	51	55	106
DM-123	12.3	51	55	106
DM-124	12.4	51	55	106
DM-125	12.5	51	55	106
DM-126	12.6	51	55	106
DM-127	12.7	51	55	106
DM-128	12.8	51	55	106
DM-129	12.9	51	55	106
DM-130	13.0	51	55	106
DM-131	13.1	51	55	106
DM-132	13.2	51	55	106
DM-133	13.3	52	54	106
DM-134	13.4	52	54	106
DM-135	13.5	52	54	106
DM-136	13.6	52	54	106
DM-137	13.7	52	54	106
DM-138	13.8	52	54	106
DM-139	13.9	52	54	106
DM-140	14.0	52	54	106
DM-141	14.1	54	52	106
DM-142	14.2	54	52	106
DM-143	14.3	54	52	106
DM-144	14.4	54	52	106
DM-145	14.5	54	52	106
DM-146	14.6	54	52	106
DM-147	14.7	54	52	106
DM-148	14.8	54	52	106
DM-149	14.9	54	52	106
DM-150	15.0	54	52	106
DM-151	15.1	58	48	106
DM-152	15.2	58	48	106
DM-153	15.3	58	48	106
DM-154	15.4	58	48	106
DM-155	15.5	58	48	106
DM-156	15.6	58	48	106
DM-157	15.7	58	48	106
DM-158	15.8	58	48	106
DM-159	15.9	58	48	106
DM-160	16.0	58	48	106

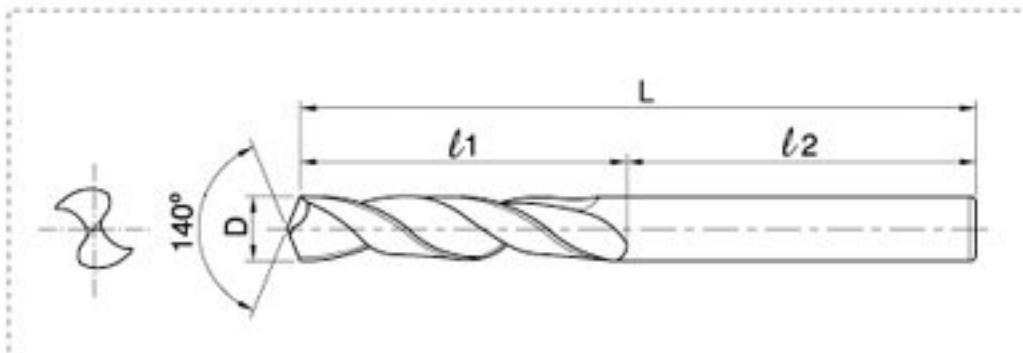


## DML 型

### 碳化鎢鋼高速鑽頭 SOLID CARBIDE SPIRAL POINT DRILLS LONG TYPE

螺旋角 SPIRAL: 30°

Depth of hole max 5D



型號 Order No.	規格 Dimensions (mm)			
	∅D	l1	l2	L
DML-020	2.0	16	34	50
DML-021	2.1	16	34	50
DML-022	2.2	16	34	50
DML-023	2.3	16	34	50
DML-024	2.4	19	31	50
DML-025	2.5	19	31	50
DML-025	2.6	19	31	50
DML-027	2.7	19	31	50
DML-028	2.8	23	27	50
DML-029	2.9	23	27	50
DML-030	3.0	23	27	50
DML-031	3.1	23	27	50
DML-032	3.2	23	27	50
DML-033	3.3	23	27	50
DML-034	3.4	26	24	50
DML-035	3.5	26	24	50
DML-036	3.6	26	24	50
DML-037	3.7	26	24	50
DML-038	3.8	26	24	50
DML-039	3.9	30	30	60
DML-040	4.0	30	30	60
DML-041	4.1	30	30	60
DML-042	4.2	30	30	60
DML-043	4.3	30	30	60
DML-044	4.4	34	26	60
DML-045	4.5	34	26	60
DML-046	4.6	34	26	60
DML-047	4.7	34	26	60
DML-048	4.8	34	26	60
DML-049	4.9	34	26	60
DML-050	5.0	36	44	80
DML-051	5.1	36	44	80
DML-052	5.2	36	44	80
DML-053	5.3	36	44	80
DML-054	5.4	36	44	80

型號 Order No.	規格 Dimensions (mm)			
	∅D	l1	l2	L
DML-055	5.5	36	44	80
DML-056	5.6	40	40	80
DML-057	5.7	40	40	80
DML-058	5.8	40	40	80
DML-059	5.9	40	40	80
DML-060	6.0	40	40	80
DML-061	6.1	40	40	80
DML-062	6.2	40	40	80
DML-063	6.3	40	40	80
DML-064	6.4	40	40	80
DML-065	6.5	44	56	100
DML-066	6.6	44	56	100
DML-067	6.7	44	56	100
DML-068	6.8	48	52	100
DML-069	6.9	48	52	100
DML-070	7.0	48	52	100
DML-071	7.1	48	52	100
DML-072	7.2	48	52	100
DML-073	7.3	48	52	100
DML-074	7.4	48	52	100
DML-075	7.5	48	52	100
DML-076	7.6	48	52	100
DML-077	7.7	48	52	100
DML-078	7.8	48	52	100
DML-079	7.9	48	52	100
DML-080	8.0	48	52	100
DML-081	8.1	48	52	100
DML-082	8.2	48	52	100
DML-083	8.3	53	47	100
DML-084	8.4	53	47	100
DML-085	8.5	53	47	100
DML-086	8.6	55	45	100
DML-087	8.7	55	45	100
DML-088	8.8	55	45	100
DML-089	8.9	55	45	100

型號 Order No.	規格 Dimensions (mm)			
	∅D	ℓ1	ℓ2	L
DML-090	9.0	55	45	100
DML-091	9.1	55	45	100
DML-092	9.2	55	45	100
DML-093	9.3	55	47	102
DML-094	9.4	55	47	102
DML-095	9.5	55	47	102
DML-096	9.6	58	48	106
DML-097	9.7	58	48	106
DML-098	9.8	58	48	106
DML-099	9.9	58	48	106
DML-100	10.0	60	46	106
DML-101	10.1	60	46	106
DML-102	10.2	60	46	106
DML-103	10.3	65	41	106
DML-104	10.4	65	41	106
DML-105	10.5	65	41	106
DML-106	10.6	68	38	106
DML-107	10.7	68	52	120
DML-108	10.8	68	52	120
DML-109	10.9	68	52	120
DML-110	11.0	68	52	120
DML-111	11.1	71	49	120
DML-112	11.2	71	49	120
DML-113	11.3	71	49	120
DML-114	11.4	71	49	120
DML-115	11.5	71	49	120
DML-116	11.6	73	47	120
DML-117	11.7	73	47	120
DML-118	11.8	73	47	120
DML-119	11.9	73	60	133
DML-120	12.0	73	60	133
DML-121	12.1	73	60	133
DML-122	12.2	76	57	133
DML-123	12.3	76	57	133
DML-124	12.4	76	57	133
DML-125	12.5	76	57	133
DML-126	12.6	78	55	133
DML-127	12.7	78	55	133
DML-128	12.8	78	55	133
DML-129	12.9	78	59	137
DML-130	13.0	78	59	137
DML-131	13.1	84	53	137
DML-132	13.2	84	53	137
DML-133	13.3	84	59	143
DML-134	13.4	84	59	143
DML-135	13.5	84	59	143
DML-136	13.6	86	57	143
DML-137	13.7	86	57	143
DML-138	13.8	86	57	143
DML-139	13.9	86	57	143
DML-140	14.0	86	57	143
DML-141	14.1	90	60	150
DML-142	14.2	90	60	150
DML-143	14.3	90	60	150
DML-144	14.4	90	60	150

型號 Order No.	規格 Dimensions (mm)			
	∅D	ℓ1	ℓ2	L
DML-145	14.5	90	60	150
DML-146	14.6	90	60	150
DML-147	14.7	90	60	150
DML-148	14.8	90	60	150
DML-149	14.9	90	60	150
DML-150	15.0	90	60	150
DML-151	15.1	95	62	157
DML-152	15.2	95	62	157
DML-153	15.3	95	62	157
DML-154	15.4	95	62	157
DML-155	15.5	95	62	157
DML-156	15.6	98	59	157
DML-157	15.7	98	59	157
DML-158	15.8	102	58	160
DML-159	15.9	102	58	160
DML-160	16.0	102	58	160
DML-165	16.5	102	58	160
DML-170	17.0	102	58	160
DML-175	17.5	102	58	160
DML-180	18.0	102	58	160
DML-185	18.5	110	50	160
DML-190	19.0	110	50	160
DML-195	19.5	110	50	160
DML-200	20.0	110	50	160

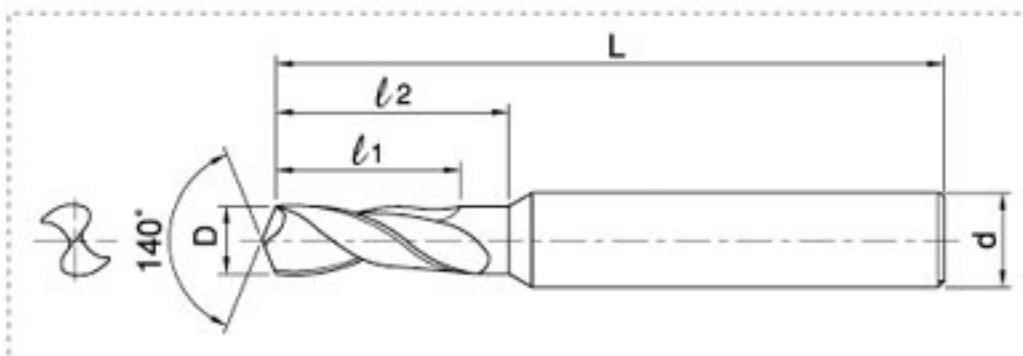
DM/DML 切削條件 (Cutting Parameter) :

刃徑	切削條件	碳鋼 S45C	合金鋼 SCM4	不鏽鋼 SUS304	鈦合金 Ti6 Al-4V	鑄鐵 FC30
6	轉數 r.p.m.	3200	3200	2650	2650	4250
	進給 mm	380	350	210	265	630
9	轉數 r.p.m.	2100	2100	1800	1800	2830
	進給 mm	340	300	180	220	510
12	轉數 r.p.m.	1600	1600	1350	2350	2120
	進給 mm	320	280	160	200	480
14	轉數 r.p.m.	1360	1360	1150	1150	1820
	進給 mm	300	270	150	190	460
20	轉數 r.p.m.	950	950	800	800	1270
	進給 mm	270	240	135	160	440

## DMX 型

### 微小徑碳化錫鋼鑽頭 SOLID CARBIDE MICRO DRILL

螺旋角 SPIRAL: 30°



型號 Order No.	規格 Dimensions (mm)				
	ØD	l1	l2	Ød	L
DMX-0010	0.10	0.5	0.7	1.0	25
DMX-0011	0.11	0.5	0.7	1.0	25
DMX-0012	0.12	0.5	0.7	1.0	25
DMX-0013	0.13	0.8	1.0	1.0	25
DMX-0014	0.14	0.8	1.0	1.0	25
DMX-0015	0.15	0.8	1.0	1.0	25
DMX-0016	0.16	1.1	1.4	1.0	25
DMX-0017	0.17	1.1	1.4	1.0	25
DMX-0018	0.18	1.1	1.4	1.0	25
DMX-0019	0.19	1.1	1.4	1.0	25
DMX-0020	0.20	1.5	1.8	1.0	25
DMX-0021	0.21	1.5	1.8	1.0	25
DMX-0022	0.22	1.5	1.8	1.0	25
DMX-0023	0.23	1.5	1.8	1.0	25
DMX-0024	0.24	1.5	1.8	1.0	25
DMX-0025	0.25	1.9	2.2	1.0	25
DMX-0026	0.26	1.9	2.2	1.0	25
DMX-0027	0.27	1.9	2.2	1.0	25
DMX-0028	0.28	1.9	2.2	1.0	25
DMX-0029	0.29	1.9	2.2	1.0	25
DMX-0030	0.30	1.9	2.2	1.0	25
DMX-0031	0.31	2.4	2.8	1.0	25
DMX-0032	0.32	2.4	2.8	1.0	25
DMX-0033	0.33	2.4	2.8	1.0	25
DMX-0034	0.34	2.4	2.8	1.0	25
DMX-0035	0.35	2.4	2.8	1.0	25
DMX-0036	0.36	2.4	2.8	1.0	25
DMX-0037	0.37	2.4	2.8	1.0	25
DMX-0038	0.38	2.4	2.8	1.0	25
DMX-0039	0.39	3.0	3.6	1.0	25
DMX-0040	0.40	3.0	3.6	1.0	25
DMX-0041	0.41	3.0	3.6	1.0	25
DMX-0042	0.42	3.0	3.6	1.0	25
DMX-0043	0.43	3.0	3.6	1.0	25
DMX-0044	0.44	3.0	3.6	1.0	25

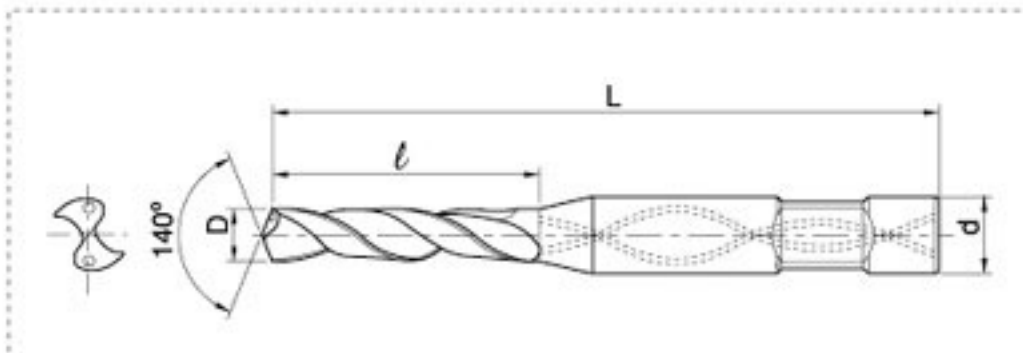
型號 Order No.	規格 Dimensions (mm)				
	ØD	l1	l2	Ød	L
DMX-0045	0.45	3.0	3.6	1.0	25
DMX-0046	0.46	3.0	3.6	1.0	25
DMX-0047	0.47	3.0	3.6	1.0	25
DMX-0048	0.48	3.0	3.6	1.0	25
DMX-0049	0.49	3.4	4.0	1.0	25
DMX-0050	0.50	3.4	4.0	1.0	25
DMX-0051	0.51	3.4	4.0	1.0	25
DMX-0052	0.52	3.4	4.0	1.0	25
DMX-0053	0.53	3.4	4.0	1.0	25
DMX-0054	0.54	3.9	4.5	1.0	25
DMX-0055	0.55	3.9	4.5	1.0	25
DMX-0056	0.56	3.9	4.5	1.0	25
DMX-0057	0.57	3.9	4.5	1.0	25
DMX-0058	0.58	3.9	4.5	1.0	25
DMX-0059	0.59	3.9	4.5	1.0	25
DMX-0060	0.60	3.9	4.5	1.0	25
DMX-0061	0.61	4.2	5.0	1.0	25
DMX-0062	0.62	4.2	5.0	1.0	25
DMX-0063	0.63	4.2	5.0	1.0	25
DMX-0064	0.64	4.2	5.0	1.0	25
DMX-0065	0.65	4.2	5.0	1.0	25
DMX-0066	0.66	4.2	5.0	1.0	25
DMX-0067	0.67	4.2	5.0	1.0	25
DMX-0068	0.68	4.8	5.6	1.0	25
DMX-0069	0.69	4.8	5.6	1.0	25
DMX-0070	0.70	4.8	5.6	1.0	25
DMX-0071	0.71	4.8	5.6	1.0	25
DMX-0072	0.72	4.8	5.6	1.0	25
DMX-0073	0.73	4.8	5.6	1.0	25
DMX-0074	0.74	4.8	5.6	1.0	25
DMX-0075	0.75	4.8	5.6	1.0	25
DMX-0076	0.76	5.3	6.3	1.0	25
DMX-0077	0.77	5.3	6.3	1.0	25
DMX-0078	0.78	5.3	6.3	1.0	25
DMX-0079	0.79	5.3	6.3	1.0	25

型 號 Order No.	規 格 Dimensions (mm)				
	∅D	ℓ1	ℓ2	∅d	L
DMX-0080	0.80	5.3	6.3	1.5	25
DMX-0081	0.81	5.3	6.3	1.5	25
DMX-0082	0.82	5.3	6.3	1.5	25
DMX-0083	0.83	5.3	6.3	1.5	25
DMX-0084	0.84	5.3	6.3	1.5	25
DMX-0085	0.85	5.3	6.3	1.5	25
DMX-0086	0.86	6.0	7.1	1.5	25
DMX-0087	0.87	6.0	7.1	1.5	25
DMX-0088	0.88	6.0	7.1	1.5	25
DMX-0089	0.89	6.0	7.1	1.5	25
DMX-0090	0.90	6.0	7.1	1.5	25
DMX-0091	0.91	6.0	7.1	1.5	25
DMX-0092	0.92	6.0	7.1	1.5	25
DMX-0093	0.93	6.0	7.1	1.5	25
DMX-0094	0.94	6.0	7.1	1.5	25
DMX-0095	0.95	6.0	7.1	1.5	25
DMX-0096	0.96	6.8	8.0	1.5	25
DMX-0097	0.97	6.8	8.0	1.5	25
DMX-0098	0.98	6.8	8.0	1.5	25
DMX-0099	0.99	6.8	8.0	1.5	25

**DM-AR 型**

**碳化鎢鋼油孔鑽頭**  
 SOLID CARBIDE SPIRAL POINT DRILLS  
 WITH COOLANT HOLES REGULAR TYPE

螺旋角 SPIRAL: 30°

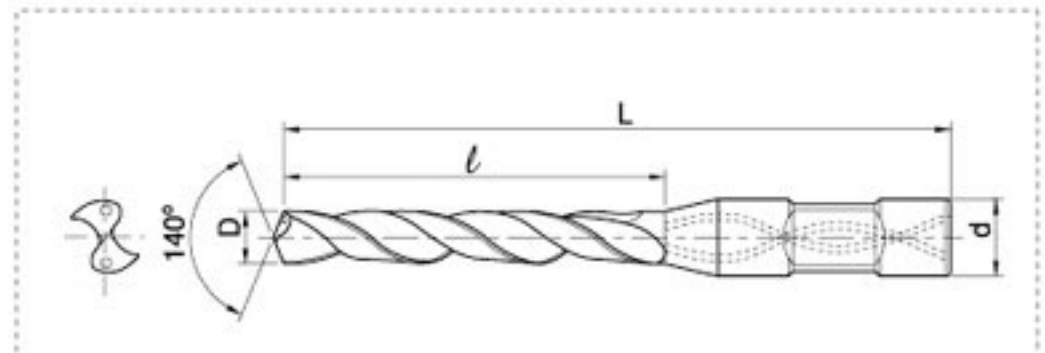


型號 Order No.	規格 Dimensions (mm)			
	ØD	l	Ød	L
DM-040~043AR	4.0~4.3	22	6	60
DM-044~047AR	4.4~4.7	24	6	60
DM-048~053AR	4.8~5.3	26	6	60
DM-054~060AR	5.4~6.0	28	6	60
DM-061~067AR	6.1~6.7	31	8	80
DM-068~075AR	6.8~7.5	32	8	80
DM-076~095AR	7.6~9.5	35	10	80
DM-096~106AR	9.6~10.6	43	12	100
DM-107~118AR	10.7~11.8	47	12	100
DM-119~132AR	11.9~13.2	51	14	100
DM-133~140AR	13.3~14.0	52	14	100
DM-141~150AR	14.1~15.0	54	16	100
DM-151~160AR	15.1~16.0	58	16	100

**DML-AR 型**

**碳化鎢鋼油孔鑽頭**  
 SOLID CARBIDE SPIRAL POINT DRILLS  
 WITH COOLANT HOLES LONG TYPE

螺旋角 SPIRAL: 30°

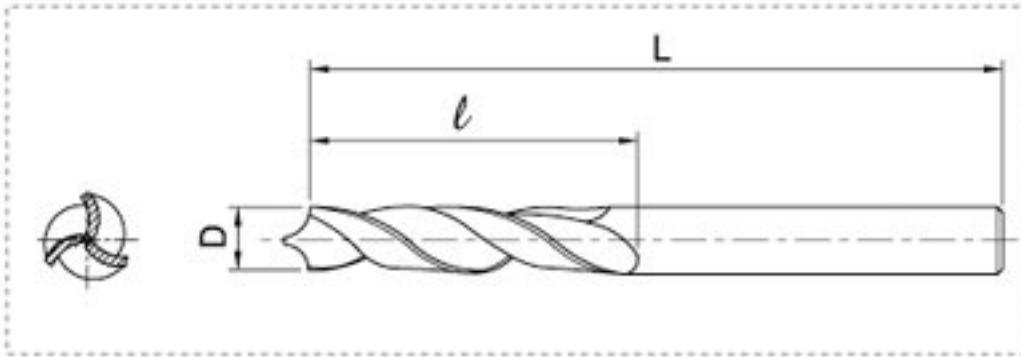


型號 Order No.	規格 Dimensions (mm)			
	ØD	l	Ød	L
DML-050~055AR	5.5~5.5	36	6	80
DML-056~064AR	5.6~6.4	40	8	80
DML-065~067AR	6.5~6.7	44	8	100
DML-068~075AR	6.8~7.5	48	8	100
DML-076~082AR	7.6~8.2	48	10	100
DML-083~085AR	8.3~8.5	53	10	100
DML-086~092AR	8.6~9.2	55	10	100
DML-093~095AR	9.3~9.5	55	10	102
DML-096~099AR	9.6~9.9	58	10	106
DML-100~102AR	10.0~10.2	60	12	106
DML-103~105AR	10.3~10.5	65	12	106
DML-106AR	10.6	68	12	106
DML-107~110AR	10.7~11.0	68	12	120
DML-111~112AR	11.1~11.2	71	12	120
DML-113~115AR	11.3~11.5	71	12	120
DML-116~118AR	11.6~11.8	73	12	120
DML-119~121AR	11.9~12.1	73	14	133
DML-122~125AR	12.2~12.5	76	14	133
DML-126~128AR	12.6~12.8	78	14	133
DML-129~130AR	12.8~13.0	78	14	137
DML-131~132AR	13.1~13.2	84	14	137
DML-133~135AR	13.3~13.5	84	14	143
DML-136~140AR	13.6~14.0	86	14	143
DML-141~150AR	14.1~15.0	90	16	150
DML-151~155AR	15.1~15.5	95	16	157
DML-156~157AR	15.6~15.7	98	16	157
DML-158~160AR	15.8~16.0	102	16	160
DML-165AR	16.5	102	18	160
DML-170AR	17.0	102	18	160
DML-175AR	17.5	102	18	160
DML-180AR	18.0	102	18	160
DML-185AR	18.5	110	20	160
DML-190AR	19.0	110	20	160
DML-195AR	19.5	110	20	160
DML-200AR	20.0	110	20	160

### DMT 型

**三刃高速用鑽頭**  
SOLID/BRAZED 3 FLUTES  
HIGH SPEED DRILLS

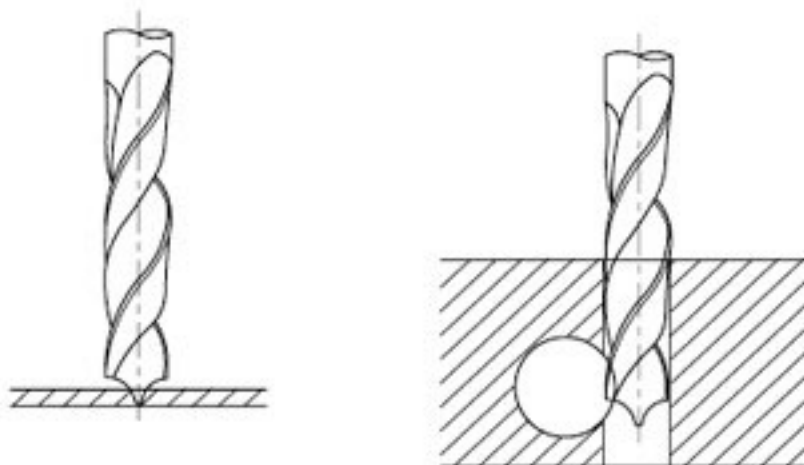
螺旋角 SPIRAL: 30°      Depth of hole max 5D



型號 Order No.	規格 Dimensions (mm)		
	∅D	l	L
DMT3-015~020	1.5~2.0	9~12	50
DMT3-021~030	2.1~3.0	12~18	50
DMT3-031~040	3.1~4.0	18~24	50
DMT3-041~050	4.1~5.0	24~30	60
DMT3-051~060	5.1~6.0	30~36	80
DMT3-061~070	6.1~7.0	36~42	80
DMT3-071~080	7.1~8.0	42~48	100
DMT3-081~090	8.1~9.0	48~54	100
DMT3-091~100	9.1~10.0	54~60	100
DMT3-101~110	10.1~11.0	60~66	106
DMT3-111~120	11.1~12.0	66~72	120
DMT3-121~130	12.1~13.0	72~78	133
DMT3-131~140	13.1~14.0	78~84	143
DMT3-141~150	14.1~15.0	84~90	150
DMT3-151~160	15.1~16.0	90~96	157
DMT3-161~170	16.1~17.0	96~102	160

圖形說明 (ILLUSTRATION):

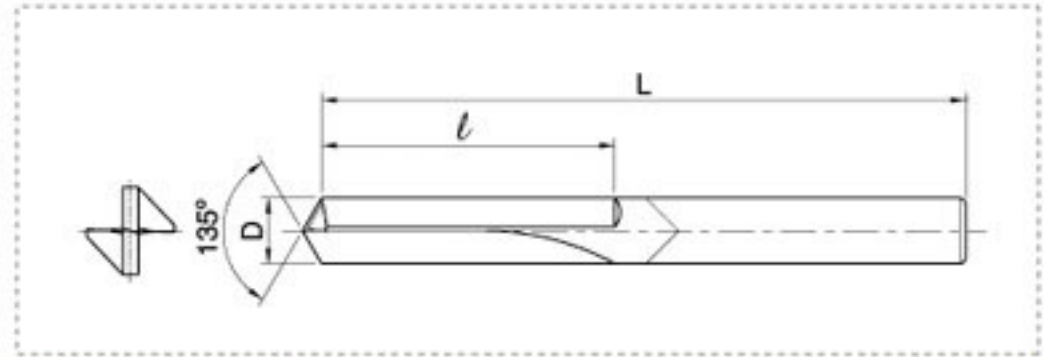
- (1) 鑽薄壁 SHEET METAL DRILLING。
- (2) 相切孔 IMCOMPLETE HOLE DRILLING。



### ADF 型

**鋁用直刃鑽鉸刀**  
SOLID/BRAZED STRAIGHT FLUTE  
DRILLS FOR ALUMINUM

螺旋角 SPIRAL: 30°      Depth of hole max 5D



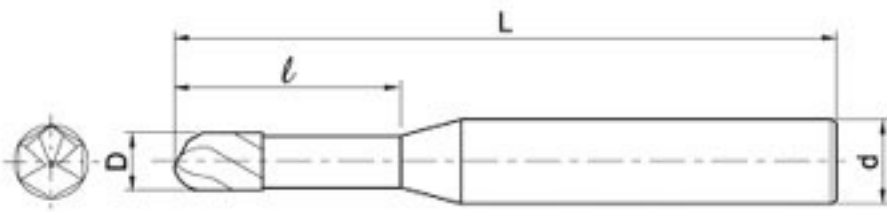
型號 Order No.	規格 Dimensions (mm)				
	∅D	l	L	TYPE	
ADF-020~030	2.0~3.0	12~18	50	全鎢鋼 SOLID	
ADF-031~040	3.1~4.0	18~24	50		
ADF-041~050	4.1~5.0	24~30	60		
ADF-051~060	5.1~6.0	30~36	80		
ADF-061~070	6.1~7.0	36~42	80		
ADF-071~080	7.1~8.0	42~48	100		
ADF-081~090	8.1~9.1	48~54	100		
ADF-091~100	9.1~10.0	54~60	100		
ADF-101~110	10.1~11.0	60~66	100		
ADF-111~120	11.1~12.0	66~72	120		
ADF-121~130	12.1~13.0	72~78	133		
ADF-131~140	13.1~14.0	78~84	143		
ADF-141~150	14.1~15.0	84~90	150		焊接式 BRAZED
ADF-151~160	15.1~16.0	90~96	157		
ADF-161~170	16.1~17.0	96~102	160		
ADF-171~180	17.1~18.0	102~108	160		
ADF-181~190	18.1~19.0	108~114	160		
ADF-191~200	19.1~20.0	114~120	160		

切削條件 (Cutting Parameter):

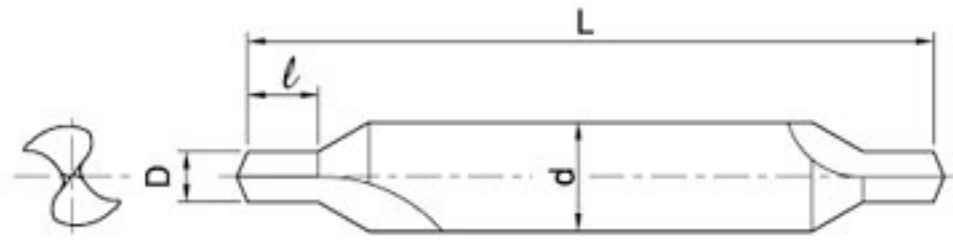
被削材 刃徑	鋁合金	
	轉數 (rpm)	進給 (mm)
6	5300	420
9	3500	315
12	3650	265
14	2300	230
20	1600	190

**TD 型**
**破損絲攻鑽頭**  
**SCREW EXTRACTOR**

螺旋角 SPIRAL: 30°

 專利號碼：新型第**166925**號


型號 Order No.	規 格 Dimensions (mm)			
	ØD	l	Ød	L
TD-030	2.2	9	6	50
TD-040	3.1	12	6	50
TD-050	3.3	15	6	50
TD-060	4.6	18	6	50
TD-080	6.2	21	8	60
TD-100	7.1	30	10	60
TD-120	8.6	32	12	60

**LS 型**
**中心鑽頭**  
**CENTER DRILLS**


型號 Order No.	規 格 Dimensions (mm)			
	ØD	l	Ød	L
LS-010	1.0	1.2	4	50
LS-015	1.5	1.8	4	50
LS-020	2.0	2.5	6	50
LS-025	2.5	3.2	6	60
LS-030	3.0	4.0	6	60
LS-040	4.0	5.2	8	80
LS-050	5.0	6.5	10	80

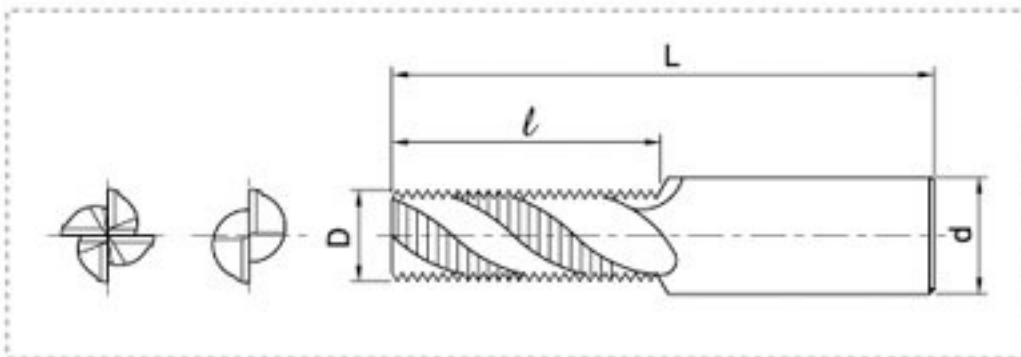
**切削條件 (Cutting Parameter) :**

刃 徑	轉數 (rpm)	進給 (mm)
TD-030	700-750	5-7
TD-040		
TD-050		
TD-060		
TD-080		
TD-100		
TD-120	650-700	

### PM 型

#### 螺牙銑刀 THREAD CUTTER

螺旋角 SPIRAL: 30°

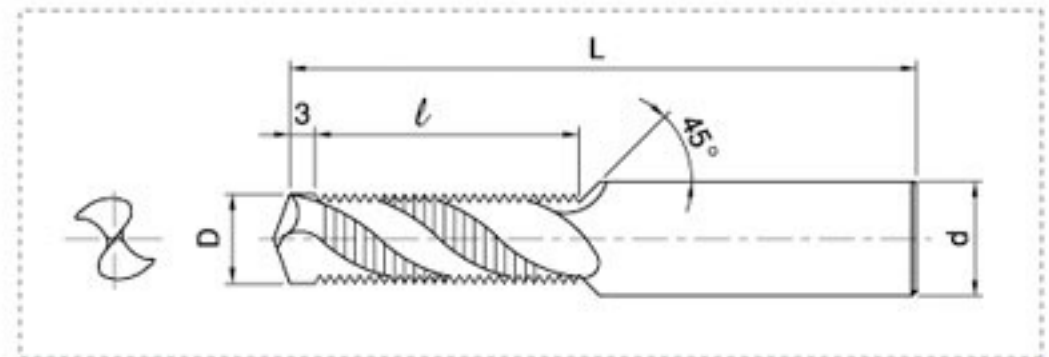


型號 Order No.	規格 Dimensions (mm)					
	ØD	Pitch	l	Ød	L	Teeth
PM060-100	4.8	1.0	12	6	60	2
PM080-125	6.6	1.25	17	8	60	2
PM100-150	8.0	1.5	21	8	60	3
PM120-175	10.0	1.75	25	10	60	3
PM160-200	13.8	2.0	35	14	100	3
PM200-250	17	2.5	43	18	100	4
PM200-250A	20	2.5	50	20	100	6
PM200-300A	20	3.0	50	20	100	6

### DPC 型

#### 複合鑽銑倒角刀 THREAD CUTTER WITH DRILLING AND CHAMFERRING

螺旋角 SPIRAL: 30°



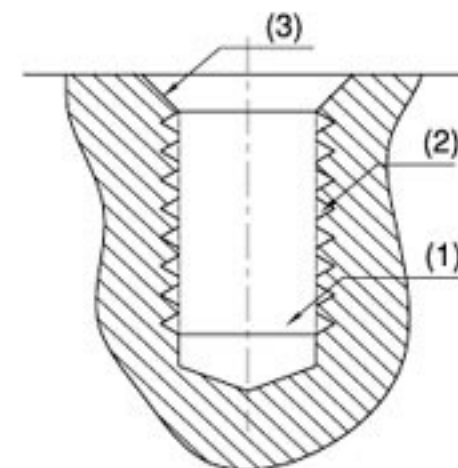
型號 Order No.	規格 Dimensions (mm)					
	ØD	Pitch	l	Ød	L	
DPC050-080	4.2	0.8	12.5	10	60	
DPC060-100	5.0	1.0	15.0	10	60	
DPC080-125	6.75	1.25	20.0	12	60	
DPC100-150	8.5	1.5	25.0	14	80	
DPC120-175	10.25	1.75	30.0	16	80	
DPC160-200	14	2.0	40.0	20	80	

圖形說明 (ILLUSTRATION):

(1)鑽孔 (2)銑牙 (3)倒角，可一加工完成。

(1)DRILLING (2)THREAD CUTTING

(3)CHAMFERRING IN ONE OPERATION





**FLM 型**

碳化鎢鋼螺旋鉋刀 (直柄)  
CARBIDE SPIRAL REAMERS  
STRAIGHT SHANK

螺旋角 SPIRAL: 60°



型號 Order No.		規格 Dimensions (mm)			
無付刃	付刃	ØD	l	Ød	L
FLM-030	FLM-030A	3	55	3	80
FLM-040	FLM-040A	4	55	4	80
FLM-050	FLM-050A	5	70	5	100
FLM-060	FLM-060A	6	70	6	100
FLM-070	FLM-070A	7	70	7	100
FLM-080	FLM-080A	8	80	8	125
FLM-090	FLM-090A	9	85	9	135
FLM-100	FLM-100A	10	90	10	150
FLM-110	FLM-110A	11	90	12	150
FLM-120	FLM-120A	12	90	12	150
FLM-130	FLM-130A	13	100	16	160
FLM-140	FLM-140A	14	100	16	160
FLM-150	FLM-150A	15	100	16	160

A: With Endmill Function on Tip

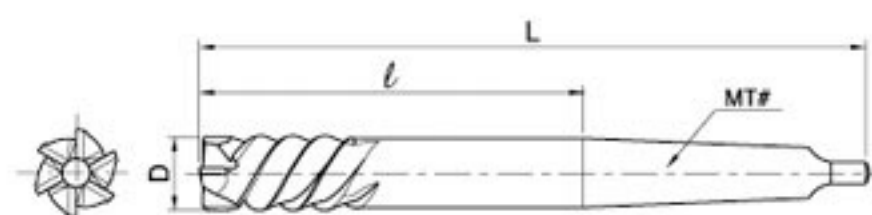
切削條件 (Cutting Parameter):

被削材	工具鋼 SCM4, SNCM8		不鏽鋼 SKD11, SUS		鑄鐵 FCD	
	轉數 (rpm)	進給 (mm)	轉數 (rpm)	進給 (mm)	轉數 (rpm)	進給 (mm)
6	950	190	800	120	1160	175
8	720	144	600	110	875	160
10	570	130	480	96	700	140
12	480	120	400	90	580	127
16	360	90	300	75	440	110
20	290	80	240	68	350	98
25	230	70	290	58	280	85
30	190	60	160	48	240	75
35	165	53	140	45	200	70
40	145	50	120	42	175	66
45	130	45	105	37	155	59
50	115	40	95	33	140	56

**FBS 型**

碳化鎢鋼螺旋鉋刀 (斜柄)  
CARBIDE SPIRAL REAMERS  
MORSE TAPER SHANK

螺旋角 SPIRAL: 60°



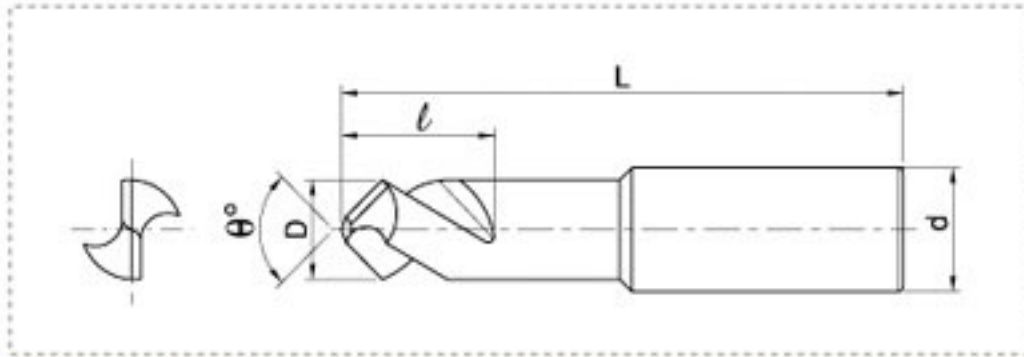
型號 Order No.		規格 Dimensions (mm)			
無付刃	付刃	ØD	l	L	MT#
FBS-160	FBS-160A	16	120	200	MT2
FBS-170	FBS-170A	17	120	200	MT2
FBS-180	FBS-180A	18	140	220	MT2
FBS-190	FBS-190A	19	140	220	MT2
FBS-200	FBS-200A	20	140	220	MT2
FBS-210	FBS-210A	21	160	240	MT2
FBS-220	FBS-220A	22	160	240	MT2
FBS-230	FBS-230A	23	160	240	MT2
FBS-240	FBS-240A	24	160	260	MT3
FBS-250	FBS-250A	25	160	260	MT3
FBS-260	FBS-260A	26	160	260	MT3
FBS-270	FBS-270A	27	160	260	MT3
FBS-280	FBS-280A	28	170	270	MT3
FBS-290	FBS-290A	29	170	270	MT3
FBS-300	FBS-300A	30	180	280	MT3
FBS-320	FBS-320A	32	180	280	MT3
FBS-340	FBS-340A	34	176	300	MT3
FBS-350	FBS-350A	35	176	300	MT4
FBS-360	FBS-360A	36	176	300	MT4
FBS-380	FBS-380A	38	196	320	MT4
FBS-400	FBS-400A	40	196	320	MT4
FBS-420	FBS-420A	42	196	320	MT4
FBS-450	FBS-450A	45	216	340	MT4
FBS-480	FBS-480A	48	226	350	MT4
FBS-500	FBS-500A	50	224	380	MT5

A: With Endmill Function on Tip

### VM 型

90°、120° 碳化鎢鋼定位鑽頭  
90°、120° SOLID CARBIDE  
SPOTTING DRILLS

螺旋角 SPIRAL: 30°



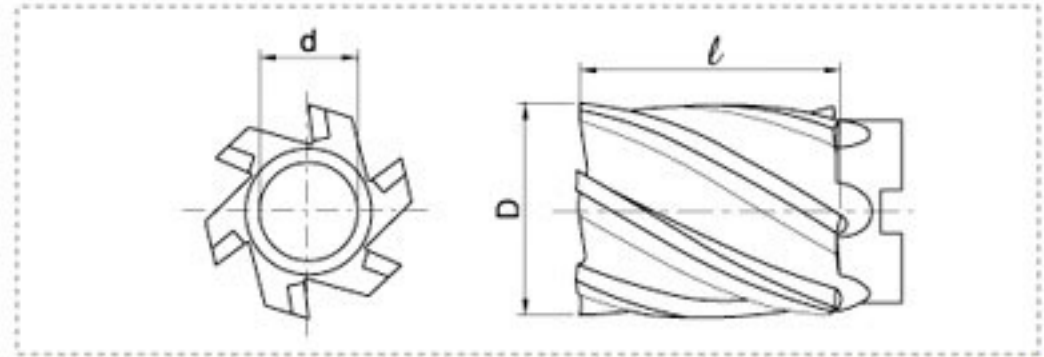
型號 Order No.	規格 Dimensions (mm)					TYPE
	ØD	θ°	l	Ød	L	
VM-06090	6	90	12	6	80	全鎢鋼 SOLID
VM-060120	6	120	12	6	80	
VM-08090	8	90	16	8	80	
VM-080120	8	120	16	8	80	
VM-10090	10	90	20	10	80	
VM-100120	10	120	20	10	80	
VM-12090	12	90	20	12	80	
VM-120120	12	120	20	12	80	
VM-16090	16	90	25	16	100	焊接式 BRAZED
VM-160120	16	120	25	16	100	
VM-20090	20	90	30	20	100	
VM-200120	20	120	30	20	100	

### HM 型

殼形螺旋銑刀  
BRAZED SPIRAL SHELLMILLS

螺旋角 SPIRAL: 30°

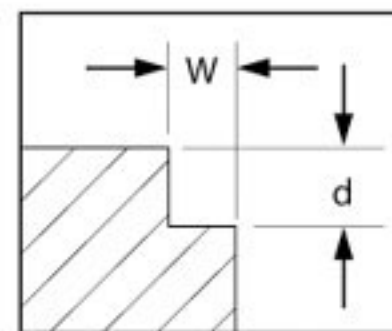
鋼用(M20)；鑄鐵、非鐵金屬用(K10)



型號 Order No.	規格 Dimensions (mm)				材質 Grades	
	ØD	l	Ød	Teeth	M20	K10
HM 50506	50	50	25.4	6		●
HM 50756	50	75	25.4	6		●
HM 65506	65	50	31.75	6	●	●
HM 65756	65	75	31.75	6	●	●
HM 651006	65	100	31.75	6	●	●
HM 75508	75	50	31.75	8	●	●
HM 75758	75	75	31.75	8	●	●
HM 751008	75	100	31.75	8	●	●

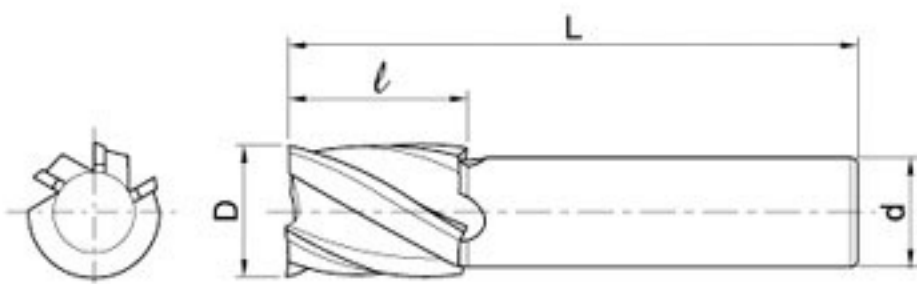
切削條件 (Cutting Parameter) :

側銑切削 (shoulder):  
W=0.2D, d=1D



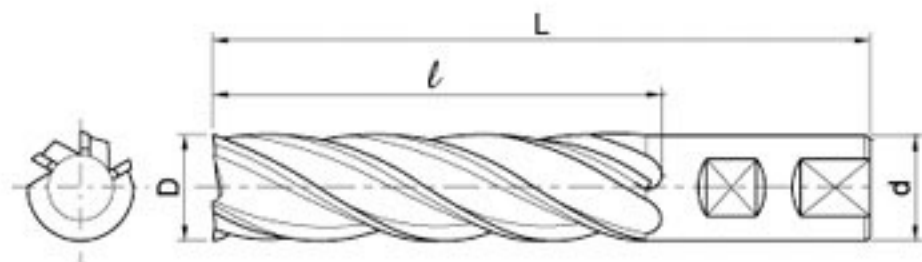
被削材 刃徑	鑄鐵 FC	
	轉數 (rpm)	進給 (mm)
50	320	380
65	270	400
75	230	500

**EM 型**
**焊接式螺旋端銑刀 (標準刃)**  
 BRAZED SPIRAL ENDMILLS  
 REGULAR TYPE

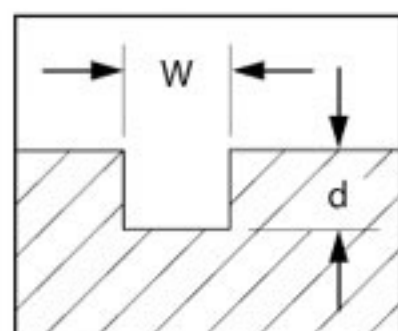
 螺旋角 SPIRAL: 30°  
 鋼用(M20)：鑄鐵、非鐵金屬用(K10)


型號 Order No.	規格 Dimensions (mm)					材質 Grades	
	ØD	l	Ød	L	Teeth	M20	K10
EM 14252	14	25	16	90	2	●	
EM 15252	15	25	16	90	2	●	
EM 16302	16	30	16	95	2	●	●
EM 18303	18	30	20	105	3	●	●
EM 20303	20	30	20	105	3	●	●
EM 20304	20	30	20	105	4	●	●
EM 22303	22	30	20	105	3	●	●
EM 25403	25	40	25	115	3	●	●
EM 25404	25	40	25	115	4	●	●
EM 26404	26	40	25	115	4	●	●
EM 28403	28	40	25	115	3	●	●
EM 28404	28	40	25	115	4	●	●
EM 30504	30	50	32	125	4	●	●
EM 32504	32	50	32	125	4	●	●
EM 35504	35	50	32	135	4	●	●
EM 40504	40	50	32	135	4	●	●
EM 45505	45	50	32	135	5	●	●
EM 50506	50	50	32	135	6	●	●

**EML 型**
**焊接式螺旋端銑刀 (長刃型)**  
 BRAZED SPIRAL ENDMILLS  
 LONG TYPE

 螺旋角 SPIRAL: 30°  
 鋼用(M20)：鑄鐵、非鐵金屬用(K10)


型號 Order No.	規格 Dimensions (mm)					材質 Grades	
	ØD	l	Ød	L	Teeth	M20	K10
EML 20553	20	55	20	125	3	●	●
EML 20554	22	55	20	125	4	●	●
EML 22553	22	55	20	125	3	●	●
EML 25753	25	75	25	145	3	●	●
EML 25754	25	75	25	145	4	●	●
EML 28753	28	75	25	160	3	●	●
EML 28754	28	75	25	160	4	●	●
EML 301004	30	100	32	165	4	●	●
EML 321004	32	100	32	165	4	●	●
EML 351004	35	100	32	175	4		
EML 401004	40	100	42	200	4	●	●
EML 401504	40	150	42	250	4	●	●
EML 451005	45	100	42	200	5		
EML 501004	50	100	42	200	4	●	●
EML 501006	50	100	42	200	6	●	●
EML 501504	50	150	42	250	4	●	●
EML 501506	50	150	42	250	6	●	●
EML 502004	50	200	42	300	4	●	●
EML 502006	50	200	42	300	6	●	●
EML 502506	50	250	42	300	6	●	●

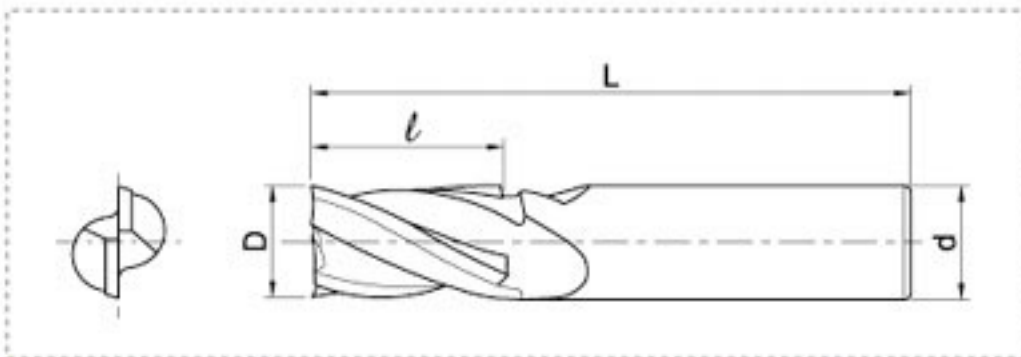
 溝槽切削 (slotting):  
 $W=D, d=1/3D$ 


被削材	鑄鐵 FC	低碳鋼 S30C	高碳鋼, 合金鋼 S50C, SCM
切削速度 (m/min)	30~70	70~120	30~100
Ø12~20	0.02~0.18	0.01~0.015	0.03~0.13
Ø20~30	0.02~0.25	0.06~0.18	0.04~0.15
Ø30~50	0.02~0.30	0.06~0.20	0.04~0.20

### EMC 型

#### 焊接式螺旋端銑刀 (過中心) CENTER CUTTING BRAZED SPIRAL ENDMILLS

螺旋角 SPIRAL: 30°  
鋼用(M20)：鑄鐵、非鐵金屬用(K10)

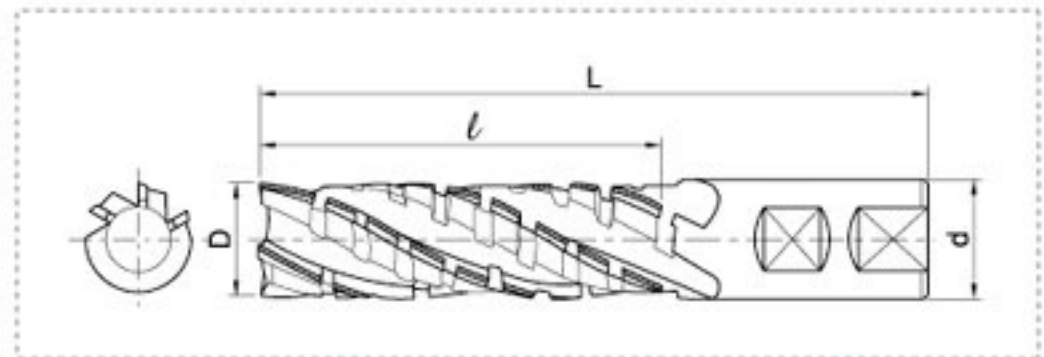


型號 Order No.	規格 Dimensions (mm)					材質 Grades	
	ØD	l	Ød	L	Teeth	M20	K10
EMC 14252	14	25	16	95	2	●	●
EMC 16302	16	30	16	95	2	●	●
EMC 18303	18	30	20	105	3	●	●
EMC 20303	20	30	20	105	3	●	●
EMC 22303	22	30	20	105	3	●	●
EMC 25403	25	40	25	115	3	●	●
EMC 28403	28	40	25	125	3	●	●
EMC 30503	30	50	32	125	3	●	●
EMC 32503	32	50	32	125	3	●	●

### HEM 型

#### 焊接式粗銑刀 BRAZED ROUGHING SPIRAL ENDMILLS

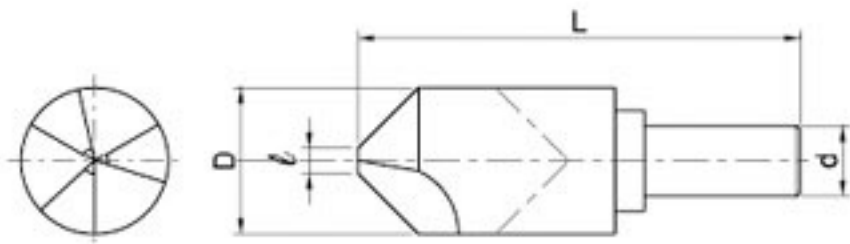
螺旋角 SPIRAL: 30°  
鋼用(M20)：鑄鐵、非鐵金屬用(K10)



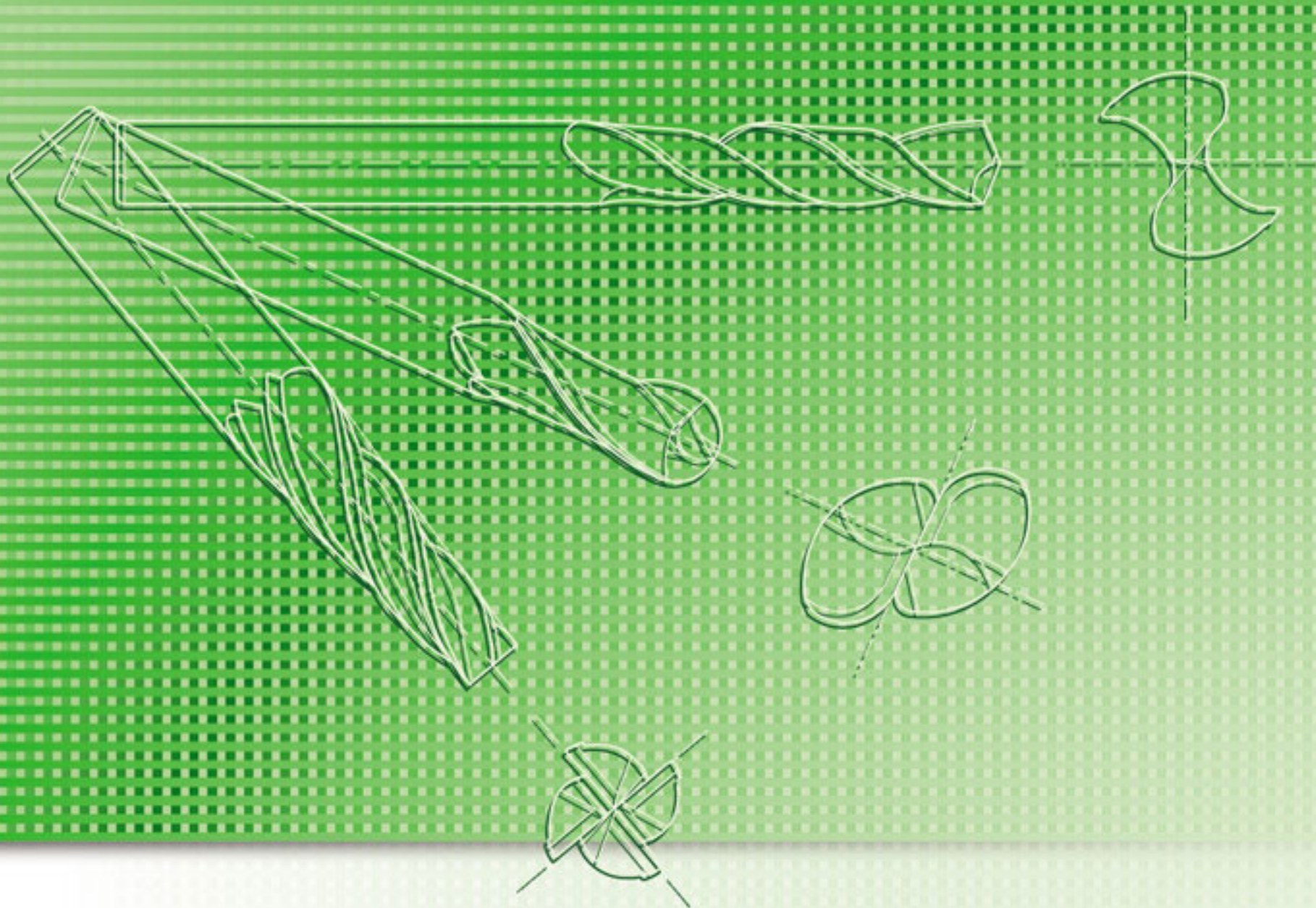
型號 Order No.	規格 Dimensions (mm)					材質 Grades	
	ØD	l	Ød	L	Teeth	M20	K10
HEM 30604	30	60	32	160	4	●	●
HEM 301004	30	100	32	200	4	●	●
HEM 35604	35	60	42	160	4	●	●
HEM 351004	35	100	42	200	4	●	●
HEM 40754	40	75	42	160	4	●	●
HEM 401004	40	100	42	200	4	●	●
HEM 401504	40	150	42	250	4	●	●
HEM 402004	40	200	42	300	4	●	●
HEM 402504	40	250	42	350	4	●	●
HEM 50754	50	75	42	180	4	●	●
HEM 501004	50	100	50.8	200	4	●	●
HEM 501504	50	150	50.8	250	4	●	●
HEM 502004	50	200	50.8	300	4	●	●
HEM 502504	50	250	50.8	350	4	●	●
HEM 502506	50	250	50.8	350	6	●	●

**CM 型**

**碳化鎢鋼三刃倒角刀**  
 SOLID CARBIDE 3 FLUTES  
 COUNTERSINK CUTTERS



型號 Order No.	規 格 Dimensions (mm)			
	∅D	<i>l</i>	∅d	L
CM-120	12	3.0	10	60
CM-160	16	3.5	12	60
CM-200	20	4.0	12	65
CM-250	25	4.5	12	65
CM-320	32	5.0	12	70



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