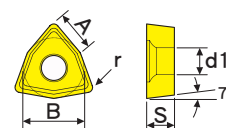


鎢鋼鑽刀片

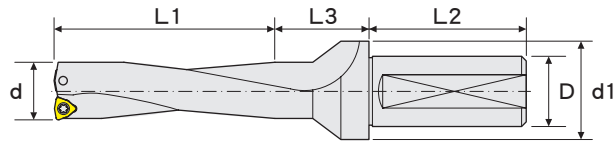
CARBIDE DRILLING INSERTS

加工材質	P	鋼材 Alloy Steels							◎	◎	◎	◎：第一推薦 First Recommend ○：第二推薦 Second Recommend —：不推薦 NO Recommend							
	M	不銹鋼 Stainless Steels							◎	◎	◎								
	K	鑄鐵 Cast Iron							◎	◎	◎								
	N	鋁合金 Aluminum Alloys							—	—	—	F：精加工 Finishing S：半精加工 Semi Finishing M：中加工 Medium R：粗加工 Roughing							
	S	高溫合金 High-Temp Alloys							◎	◎	◎								
	H	調質鋼 Hardened Steels							◎	◎	—								
刀片 Insert		訂購編號 Order No.	材質碼 Grade							尺寸 Dimension (mm)					刀片 2D 圖 Drawing	刀桿頁數 Tool Page			
																</			



DW 快速鑽頭 - 2 倍長

INDEXABLE- HIGH SPEED DRILLS- DW- 2xd



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訂購編號 Order No.	尺寸 Dimensions (mm)						搭配刀片 Insert	Screw 	Wrench 
	d	L1	L2	L3	D	d1			
DW03-02018-02D-C	18.0	36	52	24	20	29	WC..0302..	MS2506E	ETF08
DW03-02019-02D-C	19.0	38	52	24	20	29			
DW03-02020-02D-C	20.0	40	52	24	20	29			
DW03-02018-02D-116L-C	18.0	36	56	24	25	35			
DW03-020185-02D-117L-C	18.5	37	56	24	25	35			
DW03-02019-02D-118L-C	19.0	38	56	24	25	35			
DW03-02020-02D-120L-C	20.0	40	56	24	25	35	WC..0402..	MS2506E	ETF08
DW04-02021-02D-C	21.0	42	56	24	25	35			
DW04-02022-02D-C	22.0	44	56	24	25	35			
DW04-02023-02D-C	23.0	46	56	24	25	35			
DW04-02024-02D-C	24.0	48	56	24	25	35			
DW04-02025-02D-C	25.0	50	56	24	25	35	WC..0503..	MS3008E	ETF09
DW05-02026-02D-C	26.0	52	60	29	32	43			
DW05-02027-02D-C	27.0	54	60	29	32	43			
DW05-02028-02D-C	28.0	56	60	29	32	43			
DW05-02029-02D-C	29.0	58	60	29	32	43			
DW05-02030-02D-C	30.0	60	60	29	32	43	WC..06T3..	MS3510E	ETF10
DW06-02031-02D-C	31.0	62	60	29	32	43			
DW06-02032-02D-C	32.0	64	60	29	32	43			
DW06-02033-02D-C	33.0	66	60	29	32	43			
DW06-02034-02D-C	34.0	68	60	29	32	43			
DW06-02035-02D-C	35.0	70	60	29	32	43			
DW06-02036-02D-C	36.0	72	60	29	32	43			
DW06-02037-02D-C	37.0	74	60	29	32	43			
DW06-02038-02D-C	38.0	76	60	29	32	43			
DW06-02039-02D-C	39.0	78	60	29	32	43			
DW06-02040-02D-C	40.0	80	60	29	32	43			

→ 搭配刀片
Insert P.401

→ 切削條件表
Cutting Condition P.610

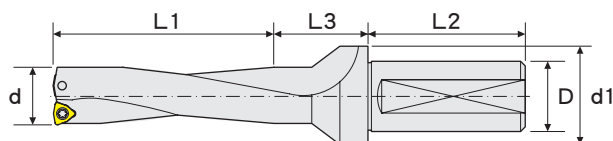
※ 型號後端 -C 為出水孔設計。 Product number end in -C are coolant-through design.

應用材質 Work Material	碳素鋼 Carbon Steels	合金鋼 Alloy Steels		調質鋼 Hardened Steels		不銹鋼 Stainless Steels	鑄鐵 Cast Iron	鋁合金 Aluminum Alloys	高溫合金 High-Temp Alloys
	HRC<20	HRC20~30	HRC30~45	HRC45~55	HRC55~63		HRC<30		HRC<30
	◎	◎	◎	—	—	○	◎	—	—

◎：第一推薦 First Recommend ○：第二推薦 Second Recommend —：不推薦 NO Recommend

DW 快速鑽頭 - 3 倍長

INDEXABLE- HIGH SPEED DRILLS- DW- 3xd



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訂購編號 Order No.	尺寸 Dimensions (mm)						搭配刀片 Insert	Screw 	Wrench 
	d	L1	L2	L3	D	d1			
DW03-02018-03D-C	18.0	54	52	24	20	29	WC..0302..	MS2506E	ETF08
DW03-02019-03D-C	19.0	57	52	24	20	29			
DW03-02020-03D-C	20.0	60	52	24	20	29			
DW03-02018-03D-134L-C	18.0	54	56	24	25	35			
DW03-020185-03D-135L-C	18.5	55.5	56	24	25	35			
DW03-02019-03D-137L-C	19.0	57	56	24	25	35			
DW03-02020-03D-140L-C	20.0	60	56	24	25	35	WC..0402..	MS2506E	ETF08
DW04-02021-03D-C	21.0	63	56	24	25	35			
DW04-02022-03D-C	22.0	66	56	24	25	35			
DW04-02023-03D-C	23.0	69	56	24	25	35			
DW04-02024-03D-C	24.0	72	56	24	25	35			
DW04-02025-03D-C	25.0	75	56	24	25	35	WC..0503..	MS3008E	ETF09
DW05-02026-03D-C	26.0	78	60	29	32	43			
DW05-02027-03D-C	27.0	81	60	29	32	43			
DW05-02028-03D-C	28.0	84	60	29	32	43			
DW05-02029-03D-C	29.0	87	60	29	32	43			
DW05-02030-03D-C	30.0	90	60	29	32	43	WC..06T3..	MS3510E	ETF10
DW06-02031-03D-C	31.0	93	60	29	32	43			
DW06-02032-03D-C	32.0	96	60	29	32	43			
DW06-02033-03D-C	33.0	99	60	29	32	43			
DW06-02034-03D-C	34.0	102	60	29	32	43			
DW06-02035-03D-C	35.0	105	60	29	32	43			
DW06-02036-03D-C	36.0	108	60	29	32	43			
DW06-02037-03D-C	37.0	111	60	29	32	43			
DW06-02038-03D-C	38.0	114	60	29	32	43			
DW06-02039-03D-C	39.0	117	60	29	32	43			
DW06-02040-03D-C	40.0	120	60	29	32	43			

→ 搭配刀片
Insert P.401

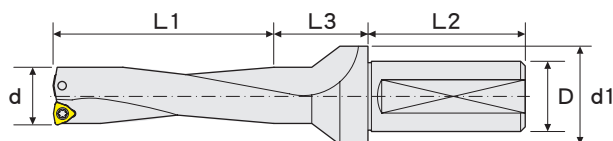
→ 切削條件表
Cutting Condition P.610

※ 型號後端 -C 為出水孔設計。 Product number end in -C are coolant-through design.

應用材質 Work Material	碳素鋼 Carbon Steels	合金鋼 Alloy Steels		調質鋼 Hardened Steels		不銹鋼 Stainless Steels	鑄鐵 Cast Iron	鋁合金 Aluminum Alloys	高溫合金 High-Temp Alloys
	HRC<20	HRC20~30	HRC30~45	HRC45~55	HRC55~63		HRC<30		HRC<30
	◎	◎	◎	—	—	○	◎	—	—

◎：第一推薦 First Recommend ○：第二推薦 Second Recommend —：不推薦 NO Recommend

INDEXABLE- HIGH SPEED DRILLS- DW- 4xd



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→ 搭配刀片 P.401
Insert

➡ 切削條件表 P.610
Cutting Condition

應用材質 Work Material	碳素鋼 Carbon Steels	合金鋼 Alloy Steels		調質鋼 Hardened Steels		不銹鋼 Stainless Steels	鑄鐵 Cast Iron	鋁合金 Aluminum Alloys	高溫合金 High-Temp Alloys
	HRC<20	HRC20~30	HRC30~45	HRC45~55	HRC55~63		HRC<30		HRC<30
	◎	◎	◎	—	—	○	◎	—	—

◎：第一推薦 First Recommend ○：第二推薦 Second Recommend —：不推薦 NO Recommend

Table 184

DSP 快速鑽頭 切削條件表

INDEXABLE- HIGH SPEED DRILLS- DRILLING CONDITION TABLE

加工材質 Material	工件料號 Material Code	硬度 Hardness	切削速度 Vc (m/min)	每轉進給量 f (mm/rev)				
				Φ 13~15	Φ 16~21	Φ 22~27	Φ 28~33	Φ 34~41
碳素鋼 Carbon Steels	S35C,S45C,S50C	HRC<30	100~150	0.04~0.08	0.05~0.09	0.06~0.12	0.07~0.13	0.08~0.15
		HRC30~45	70~140	0.04~0.07	0.05~0.08	0.05~0.09	0.06~0.12	0.07~0.14
調質鋼 Hardened Steels	SKT,SKD	HRC45~55	—	—	—	—	—	—
不銹鋼 Stainless Steels	SUS304	—	80~140	0.04~0.08	0.05~0.09	0.05~0.10	0.06~0.12	0.07~0.14
鑄鐵 Cast Iron	FC,FCD	HRC<30	100~150	0.05~0.08	0.06~0.11	0.07~0.13	0.08~0.15	0.10~0.18
鋁合金 Aluminum Alloys	AI 5052 / 6061 / 7075	—	150~250	0.04~0.08	0.05~0.10	0.06~0.13	0.07~0.15	0.08~0.18
高溫合金 High-Temp Alloys	Ti-6Al-4V	HRC<30	30~60	0.02~0.04	0.03~0.05	0.03~0.05	0.04~0.06	0.05~0.08
備註 Remarks	※ 4倍長請調降主軸轉速(S)和每轉進給量(f) 10%。 When 4xD, please reduce 10% of rpm and feed per tooth.							

※ 切削公式 Cutting Formula : $S(\text{主軸轉速}) = Vc(\text{切削速度}) \times 1000 / D(\text{外徑}) / \pi (3.14)$ $F(\text{進給速度}) = f(\text{每轉進給量}) \times S(\text{主軸轉速})$

Table 185

DW / DDW 快速鑽頭 切削條件表

INDEXABLE- HIGH SPEED DRILLS- DRILLING CONDITION TABLE

加工材質 Material	工件料號 Material Code	硬度 Hardness	切削速度 Vc (m/min)	每轉進給量 f (mm/rev)				
				Φ 14~20.5	Φ 22~25.5	Φ 26~30	Φ 31~39	Φ 40~60
碳素鋼 Carbon Steels	S35C,S45C,S50C	HRC<30	90~140	0.06~0.09	0.06~0.11	0.07~0.13	0.08~0.18	0.10~0.25
		HRC30~45	70~120	0.05~0.07	0.05~0.09	0.06~0.11	0.07~0.14	0.08~0.17
調質鋼 Hardened Steels	SKT,SKD	HRC45~55	—	—	—	—	—	—
不銹鋼 Stainless Steels	SUS304	—	60~140	0.05~0.09	0.05~0.10	0.06~0.13	0.07~0.15	0.08~0.18
鑄鐵 Cast Iron	FC,FCD	HRC<30	90~140	0.06~0.10	0.06~0.12	0.07~0.14	0.08~0.16	0.10~0.20
鋁合金 Aluminum Alloys	AI 5052 / 6061 / 7075	—	150~250	0.06~0.11	0.08~0.13	0.09~0.15	0.11~0.18	0.12~0.25
高溫合金 High-Temp Alloys	Ti-6Al-4V	HRC<30	30~60	0.03~0.05	0.03~0.06	0.04~0.08	0.05~0.10	0.06~0.12
備註 Remarks	※ 4倍長請調降主軸轉速(S)和每轉進給量(f) 10%。 When 4xD, please reduce 10% of rpm and feed per tooth.							

※ 切削公式 Cutting Formula : $S(\text{主軸轉速}) = Vc(\text{切削速度}) \times 1000 / D(\text{外徑}) / \pi (3.14)$ $F(\text{進給速度}) = f(\text{每轉進給量}) \times S(\text{主軸轉速})$

1. 當加工聲音尖銳時，請調降主軸轉速(S) (10~40%)。When the sound is piercing, please lower the spindle speed(S) (10~40%).
2. 當機台震動太大時，請調降進給速度(F) (10~40%)。When the machine is vibrating, please decrease the feed rate(F) (10~40%).
3. 當主軸負載太大時，請調降進給速度(F) (10~40%)。When the spindle load is high, please decrease the feed rate(F) (10~40%).
4. 以上數據為建議值，適當的條件仍需視機台狀況，夾治具品質，潤滑冷卻系統...等而改變。

These are recommended values which depend on the condition of the machine, fixture, lubricating & cooling systems... etc. They may have to be adapted.