

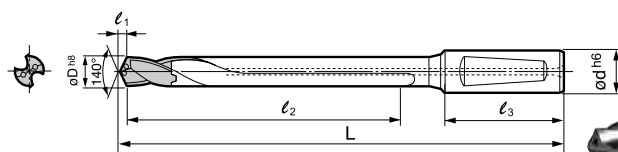
# Brazed Carbide MULTI-DRILLS

## KDS ... FA Type

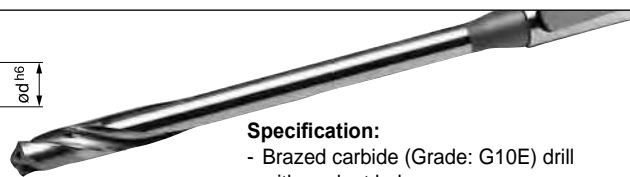
( Available on Request )

### Extra Long Type (10 x D)

Brazed Carbide Drills with Coolant Holes



Helix angle: 25° ---> 0°  
 $L_2$  = Effective drilling length


**Specification:**

- Brazed carbide (Grade: G10E) drill with coolant holes
- Shank with whistle notch

#### ● Diameter ø8.0~15.0mm

Dimensions (mm)				Cat. No.	Extra Long Series (10D)		
øD (mm)	Shank ød	Drill Head øD	Drill Head L1		Stock FA10	Dimensions (mm) L	Dimensions (mm) L2
8,0	16	48	1,5	KDS 080 FA10		156,5	93
~8,5				~085 FA10			
8,6	16	48	1,6	KDS 086 FA10		171,6	104
~9,5				~095 FA10			
9,6	16	48	1,8	KDS 096 FA10		181,8	115
~10,5				~105 FA10			
10,6	16	48	2,0	KDS 106 FA10		197,0	126
~11,5				~115 FA10			
11,6	16	48	2,2	KDS 116 FA10		207,2	137
~12,5				~125 FA10			
12,6	16	48	2,4	KDS 126 FA10		222,4	148
~13,5				~135 FA10			
13,6	16	48	2,5	KDS 136 FA10		232,5	159
~14,5				~145 FA10			
14,6	20	50	2,7	KDS 146 FA10		247,7	170
~15,5				~155 FA10			
15,6	20	50	2,9	KDS 156 FA10		262,9	181
~16,5				~165 FA10			
16,6	20	50	3,1	KDS 166 FA10		273,1	192
~17,5				~175 FA10			
17,6	20	50	3,3	KDS 176 FA10		288,3	203
~18,5				~185 FA10			
18,6	25	56	3,5	KDS 186 FA10		303,5	214
~19,5				~195 FA10			

#### ● Diameter ø15,1~19,5mm

Dimensions (mm)				Cat. No.	Extra Long Series (10D)		
øD (mm)	Shank ød	Drill Head øD	Drill Head L1		Stock FA10	Dimensions (mm) L	Dimensions (mm) L2
19,6	25	56	3,6	KDS 196 FA10		318,6	225
~20,5				~205 FA10			
20,6	25	56	3,8	KDS 206 FA10		328,8	236
~21,5				~215 FA10			
21,6	25	56	4,0	KDS 216 FA10		344,0	247
~22,5				~225 FA10			
22,6	25	56	4,2	KDS 226 FA10		354,2	258
~23,5				~235 FA10			
23,6	32	60	4,4	KDS 236 FA10		374,4	269
~24,5				~245 FA10			
24,6	32	60	4,5	KDS 246 FA10		384,5	280
~25,5				~255 FA10			
25,6	32	60	4,7	KDS 256 FA10		399,7	291
~26,5				~265 FA10			
26,6	32	60	4,9	KDS 266 FA10		409,9	302
~27,5				~275 FA10			
27,6	32	60	5,1	KDS 276 FA10		425,1	313
~28,5				~285 FA10			
28,6	32	60	5,3	KDS 286 FA10		435,3	324
~29,5				~295 FA10			
29,6	32	60	5,5	KDS 296 FA10		450,5	335
~30,5				~305 FA10			

### Brazed Carbide Multi-Drills for Cast Irons and Aluminium Alloys

#### ■ How to Order

Non-Stock Items will be required minimum order quantity for 6 pcs. Please specify the Cat. No.  
 For example, if the diameter of the drill is 10,2 mm, please indicate as follow.

E.g., **KDS 102 FA 10 ,G10E** (Grade)

**KDS series:** Brazed carbide drill with coolant holes

Drill diameter  
**10,2 mm**

**10:** Effective drilling length

**FA:** Extra long type brazed carbide drill with special flutes (Helix angle: 25° ⇄ 0°)



#### ■ Recommended Cutting Conditions

( $v_c$ : Cutting Speed (m/min),  $f$ : Feed rate (mm/rev)) (Min – Standard – Max)

Diameter (mm)		Cast Irons	Aluminium Alloys	Remarks
~ ø12	$v_c$	30 – <b>55</b> – 60	50 – <b>70</b> – 90	To avoid the drill bending, which can cause breakage, please pre-drill or reduce the cutting conditions at the entrance of hole; RPM: 100 ~ 300, $f$ : 0,05 ~ 0,08 mm/rev.
	$f$	0,1 – <b>0,2</b> – 0,25	0,1 – <b>0,2</b> – 0,3	
~ ø20	$v_c$	40 – <b>60</b> – 70	60 – <b>70</b> – 100	Higher feed rates and deep holes require high coolant pressure. Cutting fluid: Water soluble oil Cutting fluid pressure: 4 ~ 10 bar
	$f$	0,2 – <b>0,3</b> – 0,4	0,3 – <b>0,35</b> – 0,5	
~ ø30	$v_c$	40 – <b>60</b> – 70	70 – <b>100</b> – 150	
	$f$	0,3 – <b>0,4</b> – 0,5	0,3 – <b>0,4</b> – 0,5	