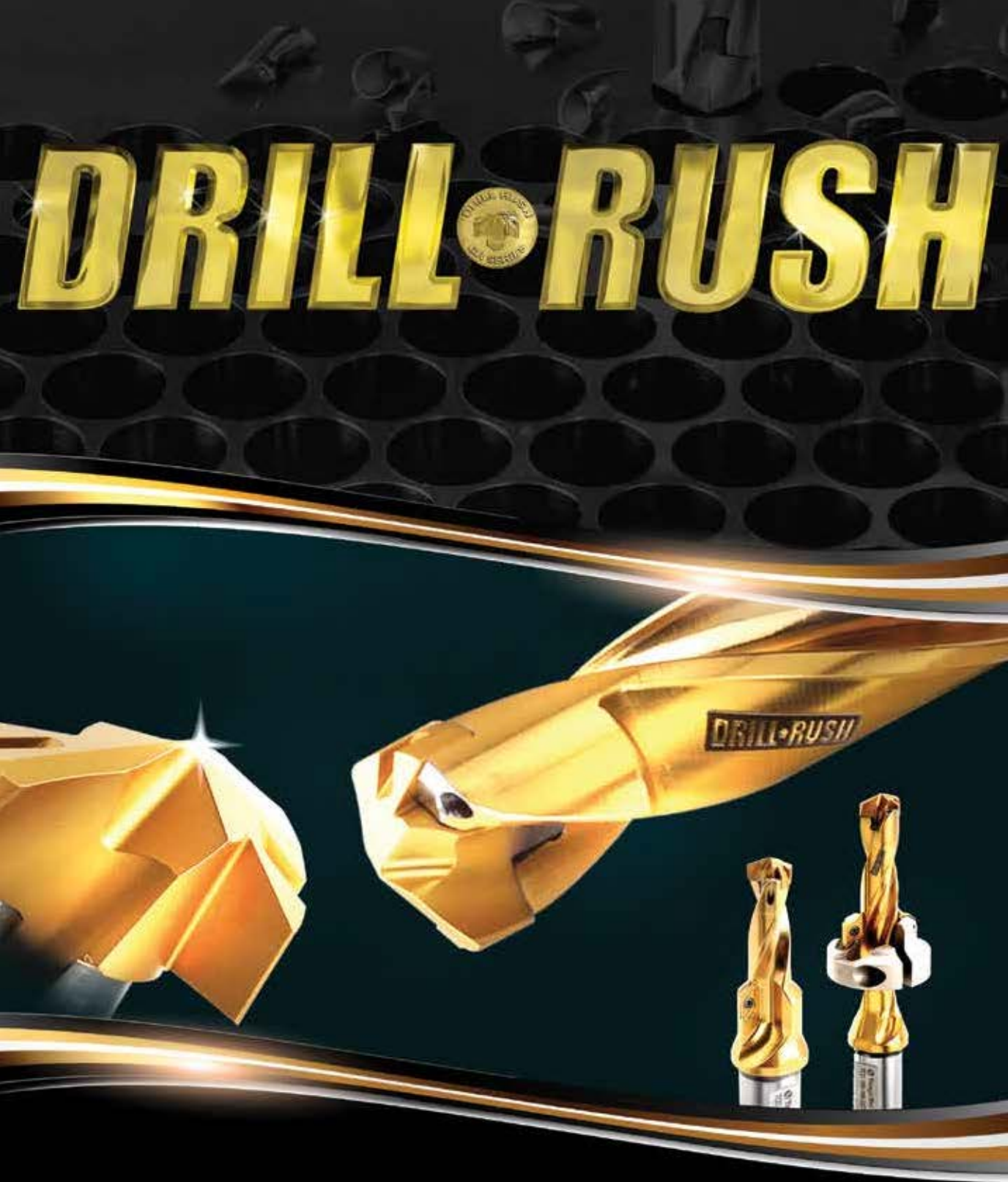




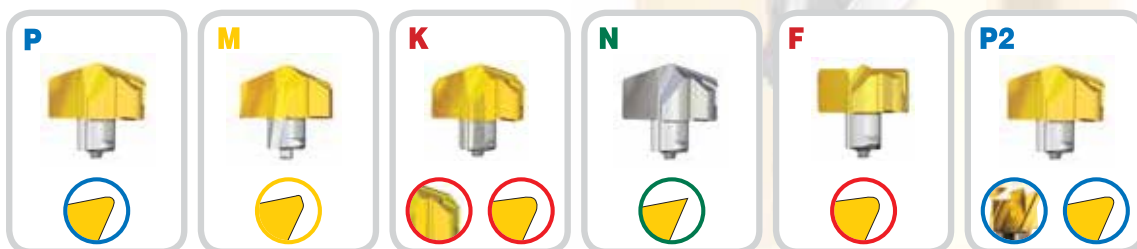
DRILL•RUSH

Unique wave geometry

- Low cutting force
- Excellent chip disposal
- Smoother cutting



Optimum solution in drilling



New multi-layered coating & Special treatment (TT9080 PVD)

- High wear & chipping resistance for long tool life
- High speed & feed endurance



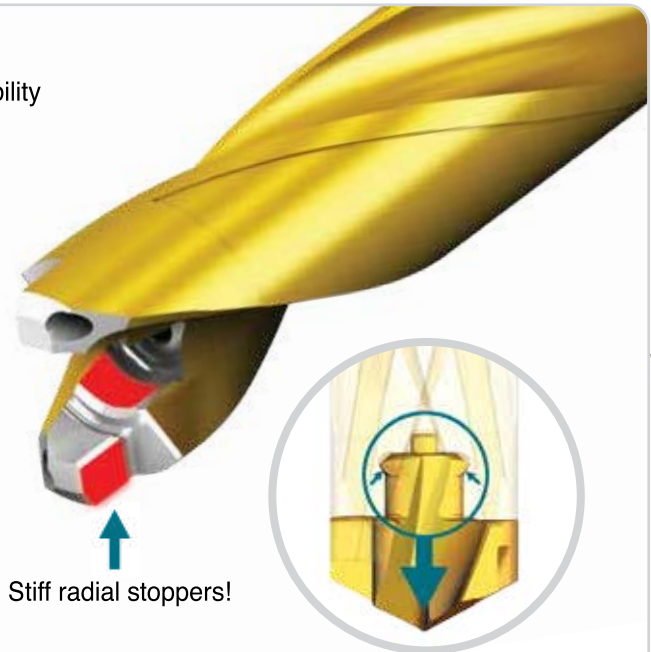
Unique clamping system

Innovative clamping

Optimized pocket shape for higher durability

High accuracy

- Cylindricity
- Perpendicularity
- Run-out



Stiff radial stoppers!

Dovetail design prevents head pull-out

Quick change

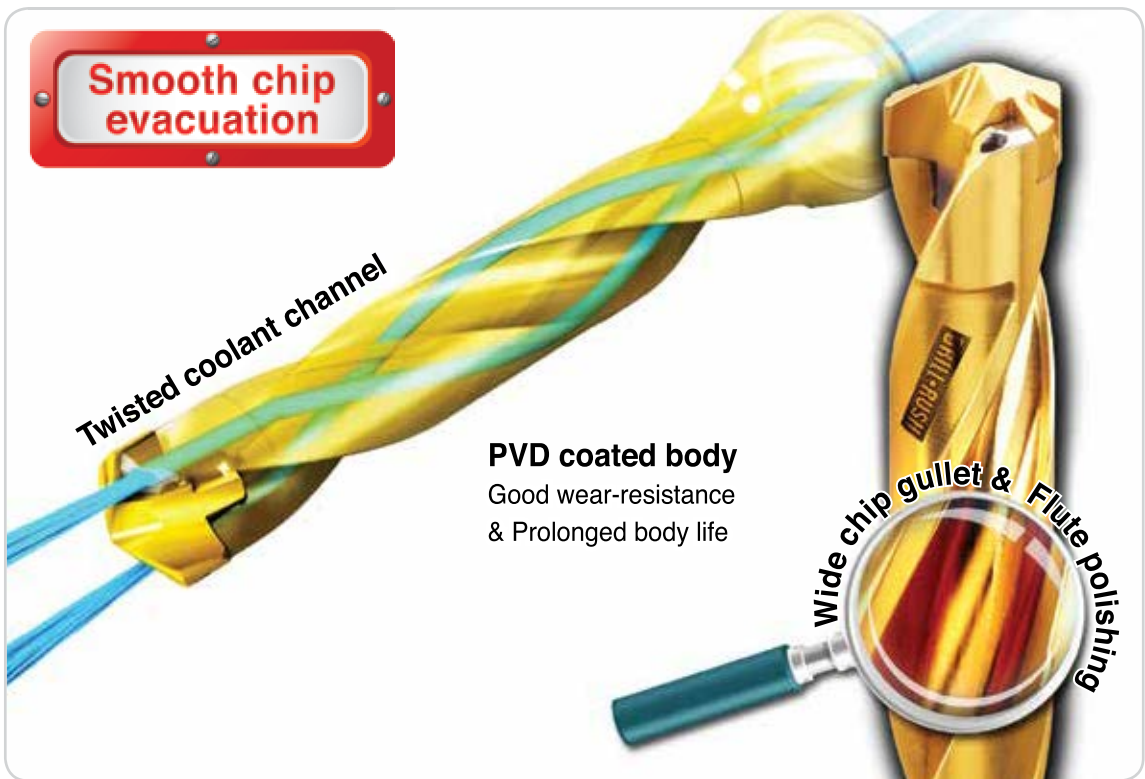
Head indexing on the machine



No set-up time

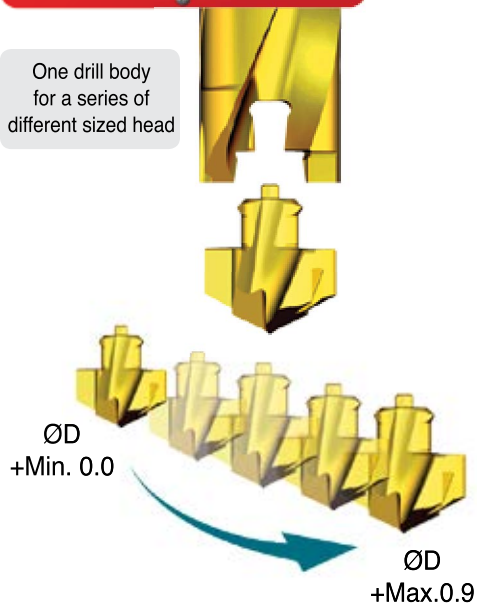


Smooth chip evacuation



Flexibility

One drill body
for a series of
different sized head



* For further information, refer to the body tables
(page 9-16)

High head indexing repeatability



Versatile products

DRILLRUSH for adjustable chamfering

- Drill & chamfer in a single operation
 - Minimized machining time & improved economy
- Adjustable step length
- High cutting condition in productivity
 - Two standard chamfering inserts



DRILLRUSH for pre-thread drilling

- Cost effective solution
 - Replacing the high cost solid carbide drills
- Optimal performance via balanced cutting
 - Double effective design
- Available for both chamfering and counter boring
 - Both blind & through-hole applications

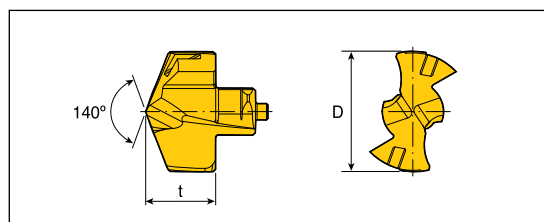


TCD...P/M/K



• Grade: TT9080

Designation	Dimension (mm)		
	D	t	Pocket size
TCD - 060-P/M/K	6.0	4.0	6
061-P/M/K	6.1	4.0	6
062-P/M/K	6.2	4.0	6
063-P/M/K	6.3	4.0	6
064-P/M/K	6.4	4.0	6
065-P/M/K	6.5	4.3	6.5
066-P/M/K	6.6	4.3	6.5
067-P/M/K	6.7	4.3	6.5
068-P/M/K	6.8	4.3	6.5
069-P/M/K	6.9	4.3	6.5
070-P/M/K	7.0	4.6	7
071-P/M/K	7.1	4.6	7
072-P/M/K	7.2	4.6	7
073-P/M/K	7.3	4.6	7
074-P/M/K	7.4	4.6	7
075-P/M/K	7.5	4.6	7
076-P/M/K	7.6	4.6	7
077-P/M/K	7.7	4.6	7
078-P/M/K	7.8	4.6	7
079-P/M/K	7.9	4.6	7
080-P/M/K	8.0	5.4	8
081-P/M/K	8.1	5.4	8
082-P/M/K	8.2	5.4	8
083-P/M/K	8.3	5.4	8
084-P/M/K	8.4	5.4	8
085-P/M/K	8.5	5.4	8
086-P/M/K	8.6	5.4	8
087-P/M/K	8.7	5.4	8
088-P/M/K	8.8	5.4	8
089-P/M/K	8.9	5.4	8
090-P/M/K	9.0	5.8	9
091-P/M/K	9.1	5.8	9
092-P/M/K	9.2	5.8	9
093-P/M/K	9.3	5.8	9
094-P/M/K	9.4	5.8	9
095-P/M/K	9.5	5.8	9
096-P/M/K	9.6	5.8	9
097-P/M/K	9.7	5.8	9
098-P/M/K	9.8	5.8	9
099-P/M/K	9.9	5.8	9
100-P/M/K	10.0	6.2	10
101-P/M/K	10.1	6.2	10
102-P/M/K	10.2	6.2	10
103-P/M/K	10.3	6.2	10
104-P/M/K	10.4	6.2	10
105-P/M/K	10.5	6.2	10
106-P/M/K	10.6	6.2	10
107-P/M/K	10.7	6.2	10
108-P/M/K	10.8	6.2	10
109-P/M/K	10.9	6.2	10



Designation	Dimension (mm)		
	D	t	Pocket size
TCD - 110-P/M/K	11.0	6.6	11
111-P/M/K	11.1	6.6	11
112-P/M/K	11.2	6.6	11
113-P/M/K	11.3	6.6	11
114-P/M/K	11.4	6.6	11
115-P/M/K	11.5	6.6	11
116-P/M/K	11.6	6.6	11
117-P/M/K	11.7	6.6	11
118-P/M/K	11.8	6.6	11
119-P/M/K	11.9	6.6	11
120-P/M/K	12.0	7.0	12
121-P/M/K	12.1	7.0	12
122-P/M/K	12.2	7.0	12
123-P/M/K	12.3	7.0	12
124-P/M/K	12.4	7.0	12
125-P/M/K	12.5	7.0	12
126-P/M/K	12.6	7.0	12
127-P/M/K	12.7	7.0	12
128-P/M/K	12.8	7.0	12
129-P/M/K	12.9	7.0	12
130-P/M/K	13.0	7.6	13
131-P/M/K	13.1	7.6	13
132-P/M/K	13.2	7.6	13
133-P/M/K	13.3	7.6	13
134-P/M/K	13.4	7.6	13
135-P/M/K	13.5	7.6	13
136-P/M/K	13.6	7.6	13
137-P/M/K	13.7	7.6	13
138-P/M/K	13.8	7.6	13
139-P/M/K	13.9	7.6	13
140-P/M/K	14.0	8.1	14
141-P/M/K	14.1	8.1	14
142-P/M/K	14.2	8.1	14
143-P/M/K	14.3	8.1	14
144-P/M/K	14.4	8.1	14
145-P/M/K	14.5	8.1	14
146-P/M/K	14.6	8.1	14
147-P/M/K	14.7	8.1	14
148-P/M/K	14.8	8.1	14
149-P/M/K	14.9	8.1	14
150-P/M/K	15.0	8.7	15
151-P/M/K	15.1	8.7	15
152-P/M/K	15.2	8.7	15
153-P/M/K	15.3	8.7	15
154-P/M/K	15.4	8.7	15
155-P/M/K	15.5	8.7	15
156-P/M/K	15.6	8.7	15
157-P/M/K	15.7	8.7	15
158-P/M/K	15.8	8.7	15
159-P/M/K	15.9	8.7	15

• Drill head can be ordered by an application.

Order example) Diameter 10.0mm drill head for ISO P application: TCD-100-P TT9080

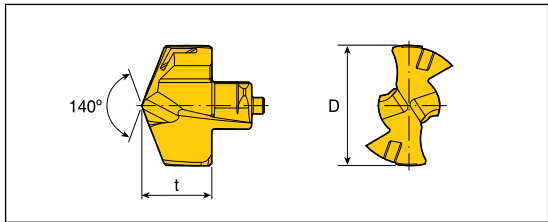


TCD...P/M/K



• Grade: TT9080

Designation	Dimension (mm)		
	D	t	Pocket size
TCD - 160-P/M/K	16.0	9.3	16
161-P/M/K	16.1	9.3	16
162-P/M/K	16.2	9.3	16
163-P/M/K	16.3	9.3	16
164-P/M/K	16.4	9.3	16
165-P/M/K	16.5	9.3	16
166-P/M/K	16.6	9.3	16
167-P/M/K	16.7	9.3	16
168-P/M/K	16.8	9.3	16
169-P/M/K	16.9	9.3	16
170-P/M/K	17.0	9.9	17
171-P/M/K	17.1	9.9	17
172-P/M/K	17.2	9.9	17
173-P/M/K	17.3	9.9	17
174-P/M/K	17.4	9.9	17
175-P/M/K	17.5	9.9	17
176-P/M/K	17.6	9.9	17
177-P/M/K	17.7	9.9	17
178-P/M/K	17.8	9.9	17
179-P/M/K	17.9	9.9	17
180-P/M/K	18.0	10.5	18
181-P/M/K	18.1	10.5	18
182-P/M/K	18.2	10.5	18
183-P/M/K	18.3	10.5	18
184-P/M/K	18.4	10.5	18
185-P/M/K	18.5	10.5	18
186-P/M/K	18.6	10.5	18
187-P/M/K	18.7	10.5	18
188-P/M/K	18.8	10.5	18
189-P/M/K	18.9	10.5	18
190-P/M/K	19.0	11.0	19
191-P/M/K	19.1	11.0	19
192-P/M/K	19.2	11.0	19
193-P/M/K	19.3	11.0	19
194-P/M/K	19.4	11.0	19
195-P/M/K	19.5	11.0	19
196-P/M/K	19.6	11.0	19
197-P/M/K	19.7	11.0	19
198-P/M/K	19.8	11.0	19
199-P/M/K	19.9	11.0	19
200-P/M/K	20.0	11.6	20
201-P/M/K	20.1	11.6	20
202-P/M/K	20.2	11.6	20
203-P/M/K	20.3	11.6	20
204-P/M/K	20.4	11.6	20
205-P/M/K	20.5	11.6	20
206-P/M/K	20.6	11.6	20
207-P/M/K	20.7	11.6	20
208-P/M/K	20.8	11.6	20
209-P/M/K	20.9	11.6	20



Designation	Dimension (mm)		
	D	t	Pocket size
TCD - 210-P/M/K	21.0	12.1	21
211-P/M/K	21.1	12.1	21
212-P/M/K	21.2	12.1	21
213-P/M/K	21.3	12.1	21
214-P/M/K	21.4	12.1	21
215-P/M/K	21.5	12.1	21
216-P/M/K	21.6	12.1	21
217-P/M/K	21.7	12.1	21
218-P/M/K	21.8	12.1	21
219-P/M/K	21.9	12.1	21
220-P/M/K	22.0	12.7	22
221-P/M/K	22.1	12.7	22
222-P/M/K	22.2	12.7	22
223-P/M/K	22.3	12.7	22
224-P/M/K	22.4	12.7	22
225-P/M/K	22.5	12.7	22
226-P/M/K	22.6	12.7	22
227-P/M/K	22.7	12.7	22
228-P/M/K	22.8	12.7	22
229-P/M/K	22.9	12.7	22
230-P/M/K	23.0	13.3	23
231-P/M/K	23.1	13.3	23
232-P/M/K	23.2	13.3	23
233-P/M/K	23.3	13.3	23
234-P/M/K	23.4	13.3	23
235-P/M/K	23.5	13.3	23
236-P/M/K	23.6	13.3	23
237-P/M/K	23.7	13.3	23
238-P/M/K	23.8	13.3	23
239-P/M/K	23.9	13.3	23
240-P/M/K	24.0	13.9	24
241-P/M/K	24.1	13.9	24
242-P/M/K	24.2	13.9	24
243-P/M/K	24.3	13.9	24
244-P/M/K	24.4	13.9	24
245-P/M/K	24.5	13.9	24
246-P/M/K	24.6	13.9	24
247-P/M/K	24.7	13.9	24
248-P/M/K	24.8	13.9	24
249-P/M/K	24.9	13.9	24
250-P/M/K	25.0	14.5	25
251-P/M/K	25.1	14.5	25
252-P/M/K	25.2	14.5	25
253-P/M/K	25.3	14.5	25
254-P/M/K	25.4	14.5	25
255-P/M/K	25.5	14.5	25
256-P/M/K	25.6	14.5	25
257-P/M/K	25.7	14.5	25
258-P/M/K	25.8	14.5	25
259-P/M/K	25.9	14.5	25

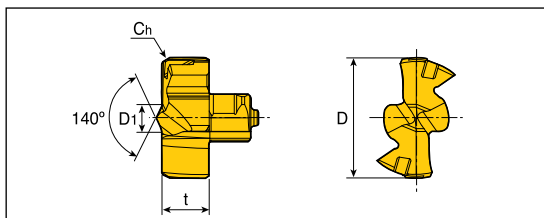
• **P** Steel **M** Stainless steel **K** Cast iron **N** Non ferrous (On request)

TCD...F

Drill head for flat bottom machining



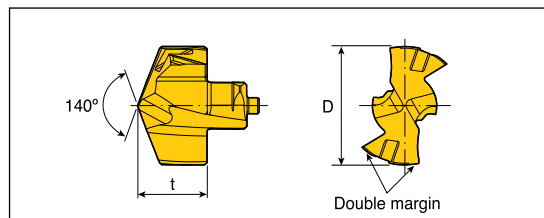
• Grade: TT9080



Designation	Dimension (mm)				
	D	D1	t	Ch	Pocket size
TCD - 080-F	8.0	1.2	4.0	0.7	8
085-F	8.5	1.2	4.0	0.7	8
090-F	9.0	1.21	4.2	0.7	9
095-F	9.5	1.21	4.2	0.7	9
100-F	10.0	1.27	4.4	0.7	10
105-F	10.5	1.27	4.4	0.7	10
110-F	11.0	1.49	4.5	0.7	11
115-F	11.5	1.49	4.5	0.7	11
120-F	12.0	1.5	4.8	0.7	12
125-F	12.5	1.5	4.8	0.7	12
130-F	13.0	1.64	5.1	0.7	13
135-F	13.5	1.64	5.1	0.7	13
140-F	14.0	1.68	5.5	0.7	14
145-F	14.5	1.68	5.5	0.7	14
150-F	15.0	1.78	5.9	0.7	15
155-F	15.5	1.78	5.9	0.7	15
160-F	16.0	1.89	6.3	0.7	16
165-F	16.5	1.89	6.3	0.7	16
170-F	17.0	1.91	6.6	0.7	17
175-F	17.5	1.91	6.6	0.7	17
180-F	18.0	1.97	6.9	0.7	18
185-F	18.5	1.97	6.9	0.7	18
190-F	19.0	1.96	7.2	0.7	19
195-F	19.5	1.96	7.2	0.7	19
200-F	20.0	3.42	8.2	0.7	20
205-F	20.5	3.42	8.2	0.7	20
210-F	21.0	3.6	8.6	0.7	21
215-F	21.5	3.6	8.6	0.7	21
220-F	22.0	3.8	8.9	0.7	22
225-F	22.5	3.8	8.9	0.7	22
230-F	23.0	3.9	9.3	0.7	23
235-F	23.5	3.9	9.3	0.7	23
240-F	24.0	4.1	9.7	0.7	24
245-F	24.5	4.1	9.7	0.7	24
250-F	25.0	4.3	10.1	0.7	25
254-F	25.4	4.3	10.1	0.7	25
255-F	25.5	4.3	10.1	0.7	25

TCD...P2

Double margin drill head



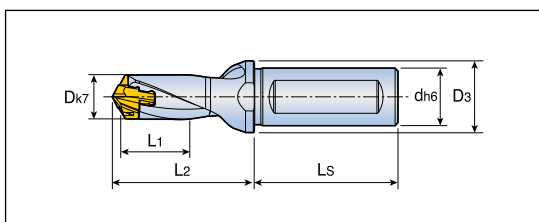
Designation	Dimension (mm)		
	D	t	Pocket size
TCD - 080-P2	8.0	5.40	8
085-P2	8.5	5.40	8
090-P2	9.0	5.80	9
095-P2	9.5	5.80	9
100-P2	10.0	6.20	10
105-P2	10.5	6.20	10
110-P2	11.0	6.60	11
115-P2	11.5	6.60	11
120-P2	12.0	7.00	12
125-P2	12.5	7.00	12
130-P2	13.0	7.60	13
135-P2	13.5	7.60	13
140-P2	14.0	8.15	14
145-P2	14.5	8.15	14
150-P2	15.0	8.73	15
155-P2	15.5	8.73	15
160-P2	16.0	9.30	16
165-P2	16.5	9.30	16
170-P2	17.0	9.90	17
175-P2	17.5	9.90	17
180-P2	18.0	10.50	18
185-P2	18.5	10.50	18
190-P2	19.0	11.00	19
195-P2	19.5	11.00	19

• Other diameters available upon request.



TCD...T...-1.5D

Head changeable drill holder - Weldon type shank

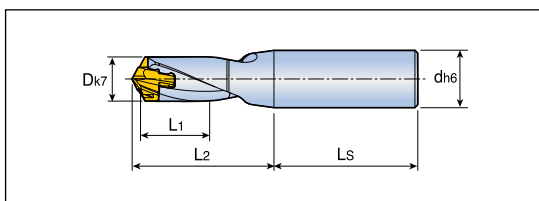


- Drilling depth: 1.5xDiameter

Designation	Dimension (mm)							Clamping key
	D range	d	D3	L1	L2	LS	Pocket size	
TCD 060-064-12T3-1.5D	6.0-6.4	12	16	9	23.0	45	6	K TCD D060-D099
065-069-12T3-1.5D	6.5-6.9	12	16	10	24.1	45	6.5	
070-074-12T3-1.5D	7.0-7.4	12	16	11	25.1	45	7	
075-079-12T3-1.5D	7.5-7.9	12	16	11.3	25.9	45	7	
080-089-12T3-1.5D	8.0-8.9	12	16	12	27.4	45	8	
090-099-12T3-1.5D	9.0-9.9	12	16	14	29.3	45	9	K TCD D100-D199
100-109-16T3-1.5D	10.0-10.9	16	20	15	31.2	48	10	
110-119-16T3-1.5D	11.0-11.9	16	20	17	33.1	48	11	
120-129-16T3-1.5D	12.0-12.9	16	20	18	35.0	48	12	
130-139-16T3-1.5D	13.0-13.9	16	20	20	37.1	48	13	
140-149-16T3-1.5D	14.0-14.9	16	20	21	41.1	48	14	K TCD D200-D269
150-159-20T3-1.5D	15.0-15.9	20	25	23	46.2	50	15	
160-169-20T3-1.5D	16.0-16.9	20	25	24	49.3	50	16	
170-179-20T3-1.5D	17.0-17.9	20	25	26	52.4	50	17	
180-189-25T2-1.5D	18.0-18.9	25	32	27	55.5	56	18	
190-199-25T2-1.5D	19.0-19.9	25	32	29	58.5	56	19	
200-209-25T2-1.5D	20.0-20.9	25	32	30	61.6	56	20	
210-219-25T2-1.5D	21.0-21.9	25	32	32	64.7	56	21	
220-229-25T2-1.5D	22.0-22.9	25	32	33	67.8	56	22	
230-239-32T2-1.5D	23.0-23.9	32	42	35	70.8	60	23	
240-249-32T2-1.5D	24.0-24.9	32	42	36	73.9	60	24	
250-259-32T2-1.5D	25.0-25.9	32	42	38	77.0	60	25	

TCD...S0-1.5D

Head changeable drill holder - Cylindrical type shank

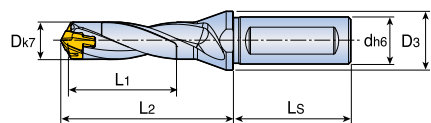


- Drilling depth: 1.5xDiameter

Designation	Dimension (mm)						Clamping key
	D range	d	L1	L2	LS	Pocket size	
TCD 060-064-12S0-1.5D	6.0-6.4	12	9	23.0	45	6	K TCD D060-D099
065-069-12S0-1.5D	6.5-6.9	12	10	24.1	45	6.5	
070-074-12S0-1.5D	7.0-7.4	12	11	25.1	45	7	
075-079-12S0-1.5D	7.5-7.9	12	11.3	25.9	45	7	
080-089-12S0-1.5D	8.0-8.9	12	12	27.4	45	8	
090-099-12S0-1.5D	9.0-9.9	12	14	29.3	45	9	K TCD D100-D199
100-109-16S0-1.5D	10.0-10.9	16	15	31.2	48	10	
110-119-16S0-1.5D	11.0-11.9	16	17	33.1	48	11	
120-129-16S0-1.5D	12.0-12.9	16	18	35.0	48	12	
130-139-16S0-1.5D	13.0-13.9	16	20	37.1	48	13	
140-149-16S0-1.5D	14.0-14.9	16	21	41.1	48	14	K TCD D200-D269
150-159-20S0-1.5D	15.0-15.9	20	23	46.2	50	15	
160-169-20S0-1.5D	16.0-16.9	20	24	49.3	50	16	
170-179-20S0-1.5D	17.0-17.9	20	26	52.4	50	17	
180-189-25S0-1.5D	18.0-18.9	25	27	55.5	56	18	
190-199-25S0-1.5D	19.0-19.9	25	29	58.5	56	19	
200-209-25S0-1.5D	20.0-20.9	25	30	61.6	56	20	
210-219-25S0-1.5D	21.0-21.9	25	32	64.7	56	21	
220-229-25S0-1.5D	22.0-22.9	25	33	67.8	56	22	
230-239-32S0-1.5D	23.0-23.9	32	35	70.8	60	23	
240-249-32S0-1.5D	24.0-24.9	32	36	73.9	60	24	
250-259-32S0-1.5D	25.0-25.9	32	38	77.0	60	25	

TCD...T...-3D

Head changeable drill holder - Weldon type shank



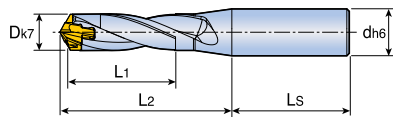
- Drilling depth: 3xDiameter

Designation	Dimension (mm)							Clamping key
	D range	d	D3	L1	L2	LS	Pocket size	
TCD 060-064-12T3-3D	6.0-6.4	12	16	18	32.0	45	6	K TCD D060-D099
065-069-12T3-3D	6.5-6.9	12	16	20	33.8	45	6.5	
070-074-12T3-3D	7.0-7.4	12	16	21	35.6	45	7	
075-079-12T3-3D	7.5-7.9	12	16	23	37.1	45	7	
080-084-12T3-3D	8.0-8.4	12	16	24	39.4	45	8	
085-089-12T3-3D	8.5-8.9	12	16	26	40.9	45	8	
090-094-12T3-3D	9.0-9.4	12	16	27	42.8	45	9	
095-099-12T3-3D	9.5-9.9	12	16	29	44.3	45	9	
100-104-16T3-3D	10.0-10.4	16	20	30	46.2	48	10	K TCD D100-D199
105-109-16T3-3D	10.5-10.9	16	20	32	47.7	48	10	
110-114-16T3-3D	11.0-11.4	16	20	33	49.6	48	11	
115-119-16T3-3D	11.5-11.9	16	20	35	51.1	48	11	
120-124-16T3-3D	12.0-12.4	16	20	36	53.0	48	12	
125-129-16T3-3D	12.5-12.9	16	20	37	54.5	48	12	
130-134-16T3-3D	13.0-13.4	16	20	39	56.6	48	13	
135-139-16T3-3D	13.5-13.9	16	20	41	58.1	48	13	
140-144-16T3-3D	14.0-14.4	16	20	42	62.2	48	14	
145-149-16T3-3D	14.5-14.9	16	20	44	63.7	48	14	
150-159-20T3-3D	15.0-15.9	20	25	45	68.7	50	15	K TCD D200-D269
160-169-20T3-3D	16.0-16.9	20	25	48	73.3	50	16	
170-179-20T3-3D	17.0-17.9	20	25	51	77.9	50	17	
180-189-25T2-3D	18.0-18.9	25	32	54	82.5	56	18	
190-199-25T2-3D	19.0-19.9	25	32	57	87.0	56	19	
200-209-25T2-3D	20.0-20.9	25	32	60	91.6	56	20	
210-219-25T2-3D	21.0-21.9	25	32	63	96.2	56	21	
220-229-25T2-3D	22.0-22.9	25	32	66	100.8	56	22	
230-239-32T2-3D	23.0-23.9	32	42	69	105.3	60	23	
240-249-32T2-3D	24.0-24.9	32	42	72	109.9	60	24	
250-259-32T2-3D	25.0-25.9	32	42	75	114.5	60	25	



TCD...S0-3D

Head changeable drill holder - Cylindrical type shank

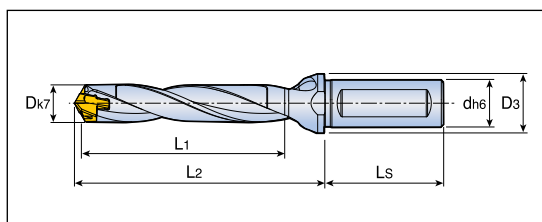


- Drilling depth: 3xDiameter

Designation	Dimension (mm)						Clamping key
	D range	d	L1	L2	LS	Pocket size	
TCD 060-064-12S0-3D	6.0-6.4	12	18	32.0	45	6	K TCD D060-D099
065-069-12S0-3D	6.5-6.9	12	20	33.8	45	6.5	
070-074-12S0-3D	7.0-7.4	12	21	35.6	45	7	
075-079-12S0-3D	7.5-7.9	12	23	37.1	45	7	
080-084-12S0-3D	8.0-8.4	12	24	39.4	45	8	
085-089-12S0-3D	8.5-8.9	12	26	40.9	45	8	
090-094-12S0-3D	9.0-9.4	12	27	42.8	45	9	
095-099-12S0-3D	9.5-9.9	12	29	44.3	45	9	
100-104-16S0-3D	10.0-10.4	16	30	46.2	48	10	K TCD D100-D199
105-109-16S0-3D	10.5-10.9	16	32	47.7	48	10	
110-114-16S0-3D	11.0-11.4	16	33	49.6	48	11	
115-119-16S0-3D	11.5-11.9	16	35	51.1	48	11	
120-124-16S0-3D	12.0-12.4	16	36	53.0	48	12	
125-129-16S0-3D	12.5-12.9	16	37	54.5	48	12	
130-134-16S0-3D	13.0-13.4	16	39	56.6	48	13	
135-139-16S0-3D	13.5-13.9	16	41	58.1	48	13	
140-144-16S0-3D	14.0-14.4	16	42	62.2	48	14	
145-149-16S0-3D	14.5-14.9	16	44	63.7	48	14	
150-159-20S0-3D	15.0-15.9	20	45	68.7	50	15	K TCD D200-D269
160-169-20S0-3D	16.0-16.9	20	48	73.3	50	16	
170-179-20S0-3D	17.0-17.9	20	51	77.9	50	17	
180-189-25S0-3D	18.0-18.9	25	54	82.5	56	18	
190-199-25S0-3D	19.0-19.9	25	57	87.0	56	19	
200-209-25S0-3D	20.0-20.9	25	60	91.6	56	20	
210-219-25S0-3D	21.0-21.9	25	63	96.2	56	21	
220-229-25S0-3D	22.0-22.9	25	66	100.8	56	22	
230-239-32S0-3D	23.0-23.9	32	69	105.3	60	23	
240-249-32S0-3D	24.0-24.9	32	72	109.9	60	24	
250-259-32S0-3D	25.0-25.9	32	75	114.5	60	25	

TCD...T...-5D

Head changeable drill holder - Weldon type shank



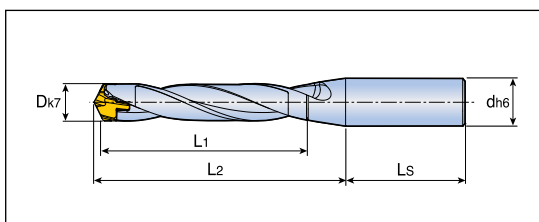
- Drilling depth: 5xDiameter

Designation	Dimension (mm)							Clamping key
	D range	d	D3	L1	L2	LS	Pocket size	
TCD 060-064-12T3-5D	6.0-6.4	12	16	30	44.0	45	6	K TCD D060-D099
065-069-12T3-5D	6.5-6.9	12	16	33	46.8	45	6.5	
070-074-12T3-5D	7.0-7.4	12	16	35	49.6	45	7	
075-079-12T3-5D	7.5-7.9	12	16	38	52.1	45	7	
080-084-12T3-5D	8.0-8.4	12	16	40	55.4	45	8	
085-089-12T3-5D	8.5-8.9	12	16	43	57.9	45	8	
090-094-12T3-5D	9.0-9.4	12	16	45	60.8	45	9	
095-099-12T3-5D	9.5-9.9	12	16	48	63.3	45	9	
100-104-16T3-5D	10.0-10.4	16	20	50	66.2	48	10	K TCD D100-D199
105-109-16T3-5D	10.5-10.9	16	20	53	68.7	48	10	
110-114-16T3-5D	11.0-11.4	16	20	55	71.6	48	11	
115-119-16T3-5D	11.5-11.9	16	20	58	74.1	48	11	
120-124-16T3-5D	12.0-12.4	16	20	60	77.0	48	12	
125-129-16T3-5D	12.5-12.9	16	20	62	79.5	48	12	
130-134-16T3-5D	13.0-13.4	16	20	65	82.6	48	13	
135-139-16T3-5D	13.5-13.9	16	20	68	85.1	48	13	
140-144-16T3-5D	14.0-14.4	16	20	70	90.2	48	14	
145-149-16T3-5D	14.5-14.9	16	20	73	92.7	48	14	K TCD D200-D269
150-159-20T3-5D	15.0-15.9	20	25	75	98.7	50	15	
160-169-20T3-5D	16.0-16.9	20	25	80	105.3	50	16	
170-179-20T3-5D	17.0-17.9	20	25	85	111.9	50	17	
180-189-25T2-5D	18.0-18.9	25	32	90	118.5	56	18	
190-199-25T2-5D	19.0-19.9	25	32	95	125.0	56	19	
200-209-25T2-5D	20.0-20.9	25	32	100	131.6	56	20	
210-219-25T2-5D	21.0-21.9	25	32	105	138.2	56	21	
220-229-25T2-5D	22.0-22.9	25	32	110	144.8	56	22	
230-239-32T2-5D	23.0-23.9	32	42	115	151.3	60	23	
240-249-32T2-5D	24.0-24.9	32	42	120	157.9	60	24	
250-259-32T2-5D	25.0-25.9	32	42	125	164.5	60	25	



TCD...S0-5D

Head changeable drill holder - Cylindrical type shank

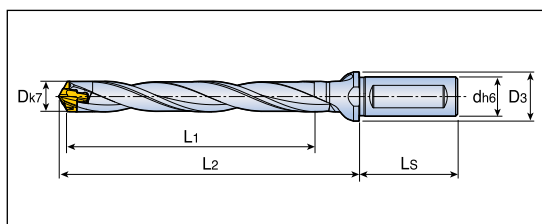


- Drilling depth: 5xDiameter

Designation	Dimension (mm)						Clamping key
	D range	d	L1	L2	LS	Pocket size	
TCD 060-064-12S0-5D	6.0-6.4	12	30	44.0	45	6	K TCD D060-D099
065-069-12S0-5D	6.5-6.9	12	33	46.8	45	6.5	
070-074-12S0-5D	7.0-7.4	12	35	49.6	45	7	
075-079-12S0-5D	7.5-7.9	12	38	52.1	45	7	
080-084-12S0-5D	8.0-8.4	12	40	55.4	45	8	
085-089-12S0-5D	8.5-8.9	12	43	57.9	45	8	
090-094-12S0-5D	9.0-9.4	12	45	60.8	45	9	
095-099-12S0-5D	9.5-9.9	12	48	63.3	45	9	
100-104-16S0-5D	10.0-10.4	16	50	66.2	48	10	K TCD D100-D199
105-109-16S0-5D	10.5-10.9	16	53	68.7	48	10	
110-114-16S0-5D	11.0-11.4	16	55	71.6	48	11	
115-119-16S0-5D	11.5-11.9	16	58	74.1	48	11	
120-124-16S0-5D	12.0-12.4	16	60	77.0	48	12	
125-129-16S0-5D	12.5-12.9	16	62	79.5	48	12	
130-134-16S0-5D	13.0-13.4	16	65	82.6	48	13	
135-139-16S0-5D	13.5-13.9	16	68	85.1	48	13	
140-144-16S0-5D	14.0-14.4	16	70	90.2	48	14	
145-149-16S0-5D	14.5-14.9	16	73	92.7	48	14	
150-159-20S0-5D	15.0-15.9	20	75	98.7	50	15	K TCD D200-D269
160-169-20S0-5D	16.0-16.9	20	80	105.3	50	16	
170-179-20S0-5D	17.0-17.9	20	85	111.9	50	17	
180-189-25S0-5D	18.0-18.9	25	90	118.5	56	18	
190-199-25S0-5D	19.0-19.9	25	95	125.0	56	19	
200-209-25S0-5D	20.0-20.9	25	100	131.6	56	20	
210-219-25S0-5D	21.0-21.9	25	105	138.2	56	21	
220-229-25S0-5D	22.0-22.9	25	110	144.8	56	22	
230-239-32S0-5D	23.0-23.9	32	115	151.3	60	23	
240-249-32S0-5D	24.0-24.9	32	120	157.9	60	24	
250-259-32S0-5D	25.0-25.9	32	125	164.5	60	25	

TCD...T...-8D

Head changeable drill holder - Weldon type shank



- Drilling depth: 8xDiameter

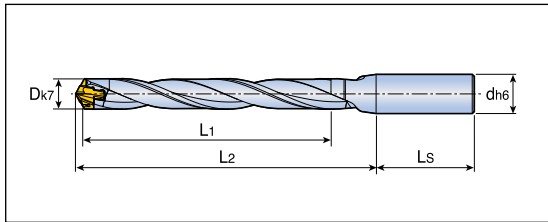
Designation	Dimension (mm)							Clamping key
	D range	d	D3	L1	L2	LS	Pocket size	
TCD 070-074-12T3-8D	7.0-7.4	12	16	56	70.6	45	7	K TCD D060-D099
075-079-12T3-8D	7.5-7.9	12	16	60	74.6	45	7	
080-084-12T3-8D	8.0-8.4	12	16	64	79.4	45	8	
085-089-12T3-8D	8.5-8.9	12	16	68	83.4	45	8	
090-094-12T3-8D	9.0-9.4	12	16	72	87.8	45	9	
095-099-12T3-8D	9.5-9.9	12	16	76	91.8	45	9	
100-104-16T3-8D	10.0-10.4	16	20	80	96.2	48	10	K TCD D100-D199
105-109-16T3-8D	10.5-10.9	16	20	84	100.2	48	10	
110-114-16T3-8D	11.0-11.4	16	20	88	104.6	48	11	
115-119-16T3-8D	11.5-11.9	16	20	92	108.6	48	11	
120-124-16T3-8D	12.0-12.4	16	20	96	113.0	48	12	
125-129-16T3-8D	12.5-12.9	16	20	100	117.0	48	12	
130-134-16T3-8D	13.0-13.4	16	20	104	121.6	48	13	
135-139-16T3-8D	13.5-13.9	16	20	108	125.6	48	13	
140-144-16T3-8D	14.0-14.4	16	20	112	132.2	48	14	
145-149-16T3-8D	14.5-14.9	16	20	116	136.2	48	14	
150-159-20T3-8D	15.0-15.9	20	25	120	143.7	50	15	
160-169-20T3-8D	16.0-16.9	20	25	128	153.3	50	16	
170-179-20T3-8D	17.0-17.9	20	25	136	162.9	50	17	
180-189-25T2-8D	18.0-18.9	25	32	144	172.5	56	18	K TCD D200-D269
190-199-25T2-8D	19.0-19.9	25	32	152	182.0	56	19	
200-209-25T2-8D	20.0-20.9	25	32	160	191.6	56	20	
210-219-25T2-8D	21.0-21.9	25	32	168	201.2	56	21	
220-229-25T2-8D	22.0-22.9	25	32	176	210.8	56	22	
230-239-32T2-8D	23.0-23.9	32	42	184	220.3	60	23	
240-249-32T2-8D	24.0-24.9	32	42	192	229.9	60	24	
250-259-32T2-8D	25.0-25.9	32	42	200	239.5	60	25	

- It is recommended to make the pilot hole with a 1.5D holder



TCD...S0-8D

Head changeable drill holder - Cylindrical type shank



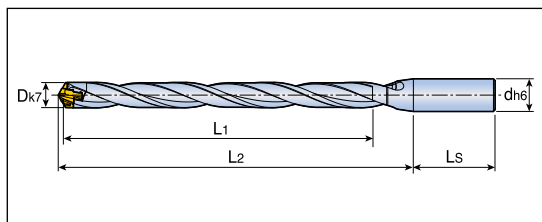
- Drilling depth: 8xDiameter

Designation	Dimension (mm)						Clamping key
	D range	d	L1	L2	Ls	Pocket size	
TCD 070-074-12S0-8D	7.0-7.4	12	56	70.6	45	7	K TCD D060-D099
075-079-12S0-8D	7.5-7.9	12	60	74.6	45	7	
080-084-12S0-8D	8.0-8.4	12	64	79.4	45	8	
085-089-12S0-8D	8.5-8.9	12	68	83.4	45	8	
090-094-12S0-8D	9.0-9.4	12	72	87.8	45	9	
095-099-12S0-8D	9.5-9.9	12	76	91.8	45	9	
100-104-16S0-8D	10.0-10.4	16	80	96.2	48	10	K TCD D100-D199
105-109-16S0-8D	10.5-10.9	16	84	100.2	48	10	
110-114-16S0-8D	11.0-11.4	16	88	104.6	48	11	
115-119-16S0-8D	11.5-11.9	16	92	108.6	48	11	
120-124-16S0-8D	12.0-12.4	16	96	113.0	48	12	
125-129-16S0-8D	12.5-12.9	16	100	117.0	48	12	
130-134-16S0-8D	13.0-13.4	16	104	121.6	48	13	
135-139-16S0-8D	13.5-13.9	16	108	125.6	48	13	
140-144-16S0-8D	14.0-14.4	16	112	132.2	48	14	
145-149-16S0-8D	14.5-14.9	16	116	136.2	48	14	
150-159-20S0-8D	15.0-15.9	20	120	143.7	50	15	K TCD D200-D269
160-169-20S0-8D	16.0-16.9	20	128	153.3	50	16	
170-179-20S0-8D	17.0-17.9	20	136	162.9	50	17	
180-189-25S0-8D	18.0-18.9	25	144	172.5	56	18	
190-199-25S0-8D	19.0-19.9	25	152	182.0	56	19	
200-209-25S0-8D	20.0-20.9	25	160	191.6	56	20	
210-219-25S0-8D	21.0-21.9	25	168	201.2	56	21	
220-229-25S0-8D	22.0-22.9	25	176	210.8	56	22	
230-239-32S0-8D	23.0-23.9	32	184	220.3	60	23	
240-249-32S0-8D	24.0-24.9	32	192	229.9	60	24	
250-259-32S0-8D	25.0-25.9	32	200	239.5	60	25	

- It is recommended to make the pilot hole with a 1.5D holder

TCD...S0-12D

Head changeable drill holder - Cylindrical type shank



- Drilling depth: 12xDiameter

Designation	Dimension (mm)						Clamping key
	D range	d	L1	L2	Ls	Pocket size	
TCD 120-124-16S0-12D	12.0-12.4	16	144	161.0	48	12	K TCD D100-D199
125-129-16S0-12D	12.5-12.9	16	150	167.0	48	12	
130-134-16S0-12D	13.0-13.4	16	156	173.6	48	13	
135-139-16S0-12D	13.5-13.9	16	162	179.6	48	13	
140-144-16S0-12D	14.0-14.4	16	168	188.2	48	14	
145-149-16S0-12D	14.5-14.9	16	174	194.2	48	14	
150-159-20S0-12D	15.0-15.9	20	180	203.7	50	15	
160-169-20S0-12D	16.0-16.9	20	192	217.3	50	16	
170-179-20S0-12D	17.0-17.9	20	204	230.9	50	17	
180-189-25S0-12D	18.0-18.9	25	216	244.5	56	18	
190-199-25S0-12D	19.0-19.9	25	228	258.0	56	19	K TCD D200-D269
200-209-25S0-12D	20.0-20.9	25	240	271.6	56	20	
210-219-25S0-12D	21.0-21.9	25	252	285.2	56	21	
220-229-25S0-12D	22.0-22.9	25	264	298.8	56	22	
230-239-32S0-12D	23.0-23.9	32	276	312.3	60	23	
240-249-32S0-12D	24.0-24.9	32	288	325.9	60	24	
250-259-32S0-12D	25.0-25.9	32	300	339.5	60	25	

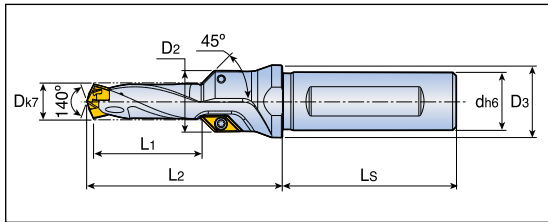
- It is recommended to make the pilot hole with a 1.5D holder





TCD...-M

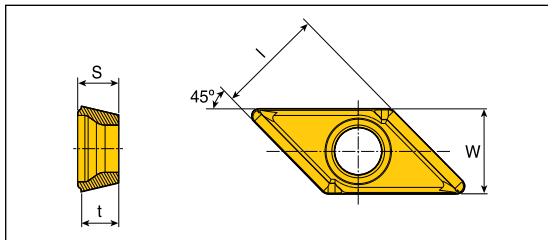
Head changeable drill holder for pre-thread hole



Designation	ISO thread	Drill Dia.(D)	Dimension (mm)						Drill dia. range	Insert	Clamping key
			L1	L2	Ls	D2	d	D3			
TCD 068X21X12T3-M8	M8	6.8	21	45	45	13.5	12	16	6.5-6.9	AOMT 060204-C45	K TCD D060-D099
085X26X12T3-M10	M10	8.5	26	50	45	15.5	12	16	8.5-8.9		K TCD D060-D099
102X30X16T3-M12	M12	10.2	30	54	48	17.0	16	20	10.0-10.4		K TCD D100-D199
120X35X16T3-M14	M14	12.0	35	61	48	19.0	16	20	12.0-12.4		K TCD D100-D199
140X39X20T3-M16	M16	14.0	39	69	50	21.0	20	25	14.0-14.4		K TCD D100-D199
175X42X20T3-M20	M20	17.5	42	72	50	24.5	20	27	17.0-17.9		K TCD D100-D199
210X48X25T2-M24	M24	21.0	48	80	56	28.0	25	32	21.0-21.9		K TCD D200-D269

AOMT 060204-C45

Chamfering insert for pre-thread hole

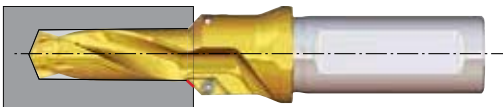


• Grade: TT9080

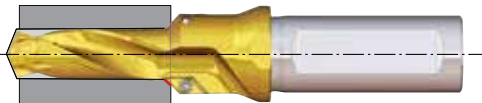
Description	W	l	S	t
AOMT 060204-C45	4.4	5.66	2.16	1.96

Drilling with **chamfer (45°)**

Blind hole

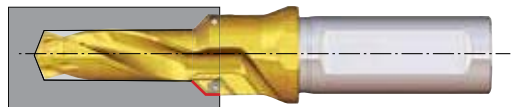


Through hole

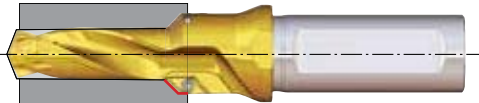


Drilling with **counter boring**

Blind hole

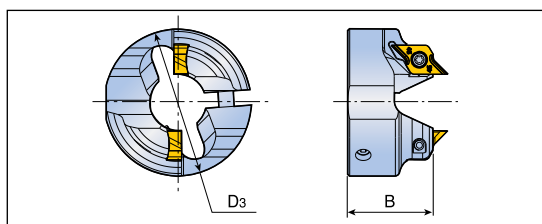


Through hole



CFR D...-A45

Chamfering ring tool

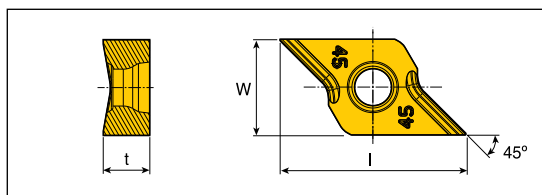


Designation	Dimension (mm)		Chamfer size	Insert screw	Wrench	Clamping screw	L-wrench
	D3	B					
CFR D100-A45	34	20	2.5	SO 25065I	TD 7	SH M3x0.5x10 ⁽¹⁾	L-W2.5
D105-A45	34	20	2.5				
D110-A45	34	20	2.5				
D115-A45	34	20	2.5				
D120-A45	34	20	2.5				
D125-A45	34	20	2.5				
D130-A45	34	20	2.5				
D135-A45	34	20	2.5				
D140-A45	38	22	2.5	SO 25065I	TD 7	SH M4x0.7x12 ⁽²⁾	L-W3
D145-A45	38	22	2.5				
D150-A45	38	22	2.5				
D160-A45	42	23	2.5	SO 25065I	TD 7	SH M5x0.8x16 ⁽³⁾	L-W4
D170-A45	42	23	2.5				
D180-A45	42	23	2.5				
D190-A45	42	24	2.5				
D200-A45	42	24	2.5				
D210-A45	47	24	2.5				
D220-A45	47	24	2.5				
D230-A45	47	24	2.5				
D240-A45	47	24	2.5				
D250-A45	47	24	2.5				

• ⁽¹⁾Clamping torque: 2-3 [N·m] ⁽²⁾Clamping torque: 3.5-4.5 [N·m] ⁽³⁾Clamping torque: 5-6 [N·m]

CRNG 0802-45CD

Chamfering insert for chamfering ring



• Grade: TT9080

Designation	W	L	t
CRNG 0802-45CD	7.5	14.80	3.65

Assembly

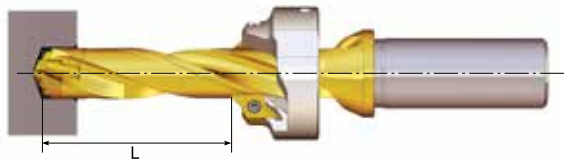


Diameter range	Chamfering ring description
10.0-10.4	CFR D100-A45
10.5-10.9	CFR D105-A45
11.0-11.4	CFR D110-A45
11.5-11.9	CFR D115-A45
12.0-12.4	CFR D120-A45
12.5-12.9	CFR D125-A45
13.0-13.4	CFR D130-A45
13.5-13.9	CFR D135-A45
14.0-14.4	CFR D140-A45
14.5-14.9	CFR D145-A45
15.0-15.9	CFR D150-A45

Diameter range	Chamfering ring description
16.0-16.9	CFR D160-A45
17.0-17.9	CFR D170-A45
18.0-18.9	CFR D180-A45
19.0-19.9	CFR D190-A45
20.0-20.9	CFR D200-A45
21.0-21.9	CFR D210-A45
22.0-22.9	CFR D220-A45
23.0-23.9	CFR D230-A45
24.0-24.9	CFR D240-A45
25.0-25.9	CFR D250-A45



DRILLRUSH



	Designation	CFR designation	L	
			min	max
3D	TCD 130-134-16T3/S0-3D	CFR D130-A45	19	19
	135-139-16T3/S0-3D	CFR D135-A45	19	20
	140-144-16T3/S0-3D	CFR D140-A45	21	22
	145-149-16T3/S0-3D	CFR D145-A45	22	23
	150-159-20T3/S0-3D	CFR D150-A45	23	23
	160-169-20T3/S0-3D	CFR D160-A45	24	25
	170-179-20T3/S0-3D	CFR D170-A45	26	28
	180-189-25T2/S0-3D	CFR D180-A45	27	30
	190-199-25T2/S0-3D	CFR D190-A45	29	33
	200-209-25T2/S0-3D	CFR D200-A45	30	36
	210-219-25T2/S0-3D	CFR D210-A45	32	39
	220-229-25T2/S0-3D	CFR D220-A45	33	42
	230-239-32T2/S0-3D	CFR D230-A45	35	45
	240-249-32T2/S0-3D	CFR D240-A45	36	48
	250-259-32T2/S0-3D	CFR D250-A45	38	51
5D	TCD 100-104-16T3/S0-5D	CFR D100-A45	28	28
	105-109-16T3/S0-5D	CFR D105-A45	29	30
	110-114-16T3/S0-5D	CFR D110-A45	31	33
	115-119-16T3/S0-5D	CFR D115-A45	32	35
	120-124-16T3/S0-5D	CFR D120-A45	33	45
	125-129-16T3/S0-5D	CFR D125-A45	34	40
	130-134-16T3/S0-5D	CFR D130-A45	36	43
	135-139-16T3/S0-5D	CFR D135-A45	37	43
	140-144-16T3/S0-5D	CFR D140-A45	38	48
	145-149-16T3/S0-5D	CFR D145-A45	39	48
	150-159-20T3/S0-5D	CFR D150-A45	41	53
	160-169-20T3/S0-5D	CFR D160-A45	43	58
	170-179-20T3/S0-5D	CFR D170-A45	46	63
	180-189-25T2/S0-5D	CFR D180-A45	48	68
	190-199-25T2/S0-5D	CFR D190-A45	51	73
	200-209-25T2/S0-5D	CFR D200-A45	53	78
	210-219-25T2/S0-5D	CFR D210-A45	56	79
	220-229-25T2/S0-5D	CFR D220-A45	58	84
	230-239-32T2/S0-5D	CFR D230-A45	61	89
	240-249-32T2/S0-5D	CFR D240-A45	63	94
	250-259-32T2/S0-5D	CFR D250-A45	66	99

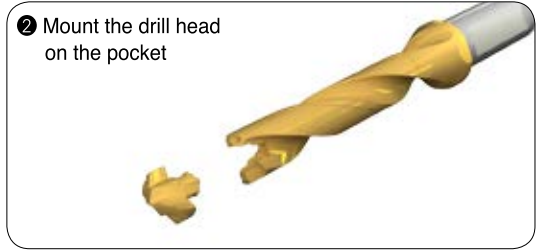
	Designation	CFR designation	L	
			min	max
8D	TCD 100-104-16T3/S0-8D	CFR D100-A45	45	58
	105-109-16T3/S0-8D	CFR D105-A45	49	62
	110-114-16T3/S0-8D	CFR D110-A45	49	66
	115-119-16T3/S0-8D	CFR D115-A45	53	70
	120-124-16T3/S0-8D	CFR D120-A45	53	74
	125-129-16T3/S0-8D	CFR D125-A45	57	78
	130-134-16T3/S0-8D	CFR D130-A45	57	82
	135-139-16T3/S0-8D	CFR D135-A45	61	84
	140-144-16T3/S0-8D	CFR D140-A45	61	88
	145-149-16T3/S0-8D	CFR D145-A45	65	92
	150-159-20T3/S0-8D	CFR D150-A45	65	96
	160-169-20T3/S0-8D	CFR D160-A45	69	103
	170-179-20T3/S0-8D	CFR D170-A45	73	111
	180-189-25T2/S0-8D	CFR D180-A45	77	118
	190-199-25T2/S0-8D	CFR D190-A45	81	126
12D	200-209-25T2/S0-8D	CFR D200-A45	85	134
	210-219-25T2/S0-8D	CFR D210-A45	89	142
	220-229-25T2/S0-8D	CFR D220-A45	93	150
	230-239-32T2/S0-8D	CFR D230-A45	97	158
	240-249-32T2/S0-8D	CFR D240-A45	101	166
	250-259-32T2/S0-8D	CFR D250-A45	105	174
	TCD 120-124-16S0-12D	CFR D120-A45	87	121
	125-129-16S0-12D	CFR D125-A45	90	127
	130-134-16S0-12D	CFR D130-A45	93	133
	135-139-16S0-12D	CFR D135-A45	96	137
	140-144-16S0-12D	CFR D140-A45	99	143
	145-149-16S0-12D	CFR D145-A45	102	149
	150-159-20S0-12D	CFR D150-A45	105	155
	160-169-20S0-12D	CFR D160-A45	111	166
	170-179-20S0-12D	CFR D170-A45	117	178
	180-189-25S0-12D	CFR D180-A45	123	189
	190-199-25S0-12D	CFR D190-A45	129	201
	200-209-25S0-12D	CFR D200-A45	135	213
	210-219-25S0-12D	CFR D210-A45	141	225
	220-229-25S0-12D	CFR D220-A45	147	237
	230-239-32T2-12D	CFR D230-A45	153	249
	240-249-32T2-12D	CFR D240-A45	159	261
	250-259-32T2-12D	CFR D250-A45	165	273

Drilling head mounting procedure

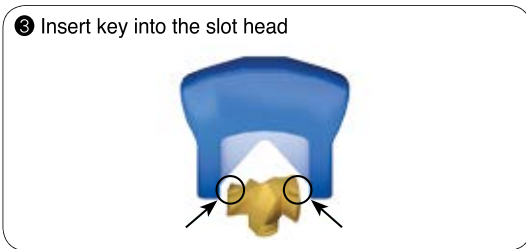
- ① Clean the pocket and add oil



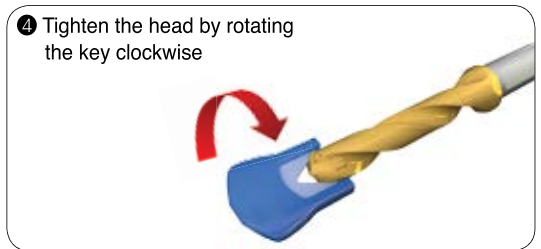
- ② Mount the drill head on the pocket



- ③ Insert key into the slot head

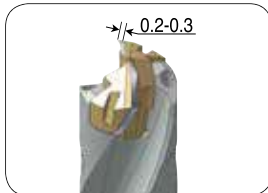


- ④ Tighten the head by rotating the key clockwise

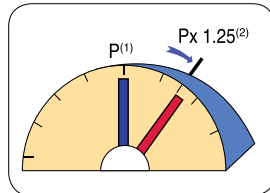


Indication of head wear

Wear limit

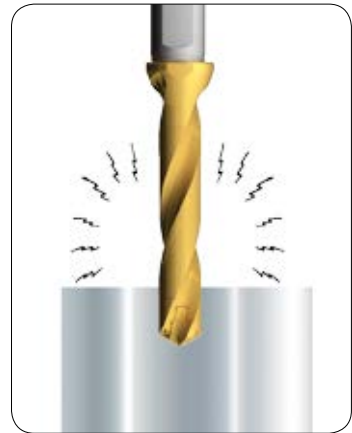


Power restriction

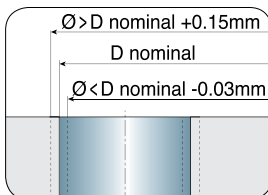


- (1) New drill head
(2) Worn-out drilling head

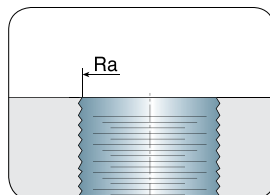
Vibration noise drastically increases



Diameter change

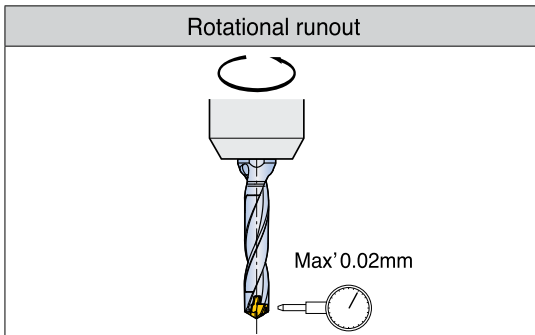


Surface finish declines

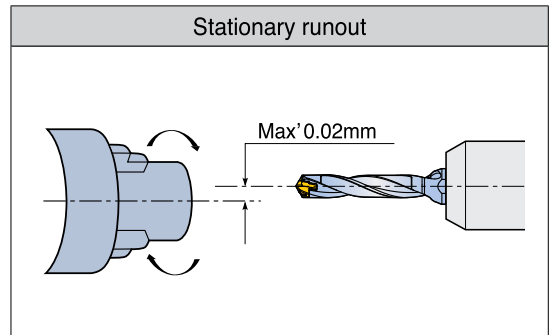


Maximum runout

Rotational runout

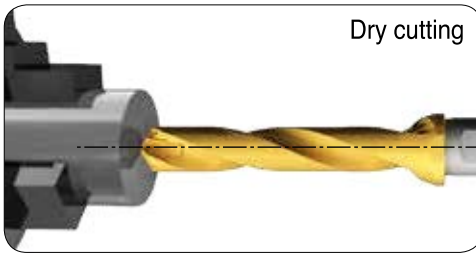
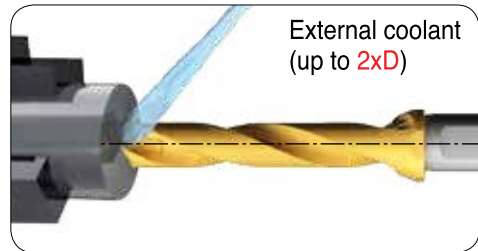
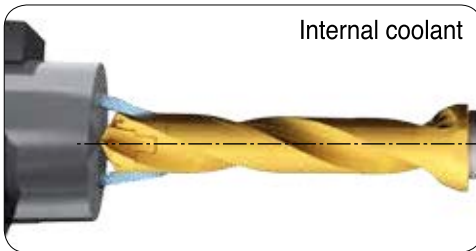


Stationary runout

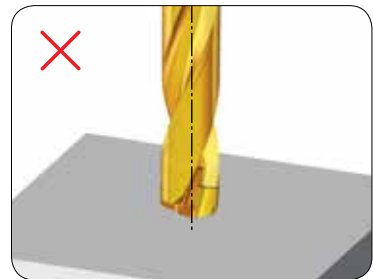
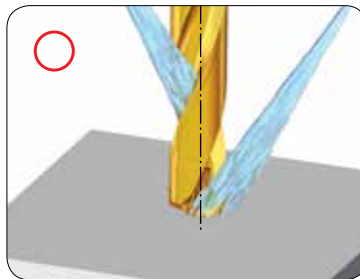
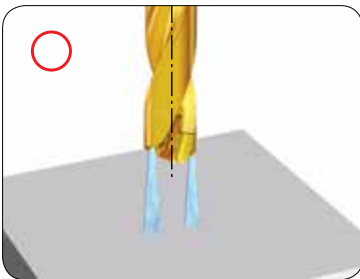




Coolant recommendations (Lathe)



Coolant recommendations (MCT)

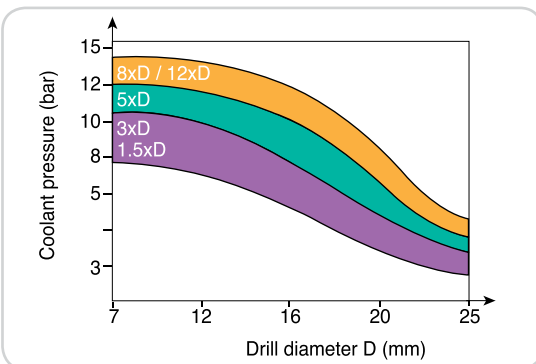


Internal coolant

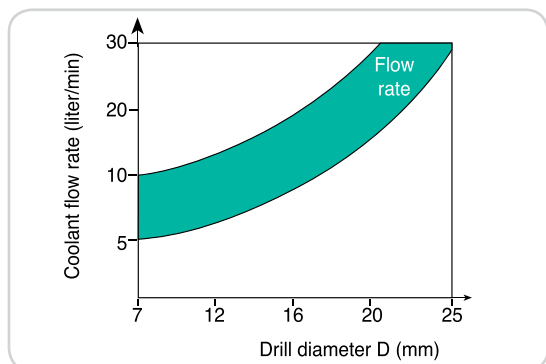
External coolant (up to 2xD)

Dry cutting

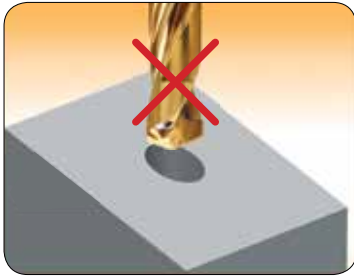
Recommended coolant pressure (bar)



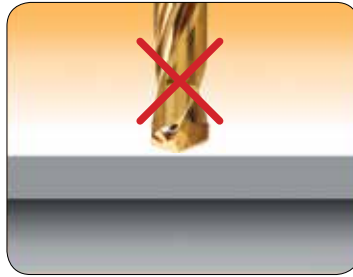
Recommended coolant flow rate (liter/min)



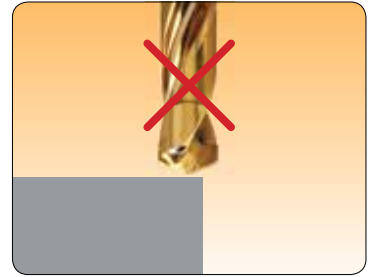
Drilling limitation



Inclined surface

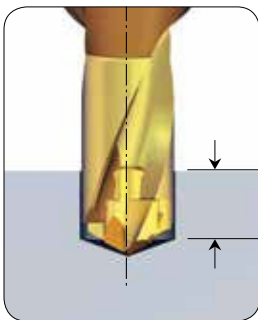


Cross hole



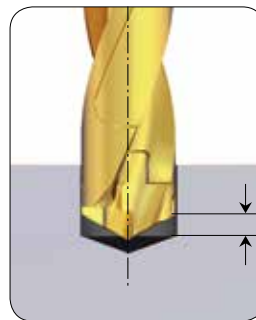
Interrupted cutting

Recommended procedure for using 8xD, 12xD holder



- ① Pre-hole drilling
: diameter(D) X 0.5~
diameter(D) X 1.5 depth
: using standard 1.5xD holder

0.5xD~1.5xD

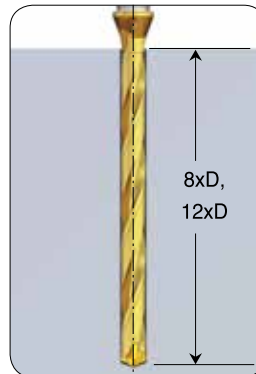


- ② Slow rotation and feed
during entrance to
the pre-hole

2~5mm from bottom for hole



- ③ Activate the cooling system and
maintain for 2~3 seconds



- ④ Start drilling at recommended
cutting conditions

8xD,
12xD

Plug for stationary machines

TaeguTec supplies special plugs with an internal thread for coolant connections used on lathes that can be pressed into the cavity on the back end of the shank.

Item No.	Description	Shank Diameter	Internal Thread
6102019	PL-TCD-12	12	G 1/16
6102020	PL-TCD-16	16	G 1/16
6102021	PL-TCD-20	20	G 1/8
6102022	PL-TCD-25	25	G 1/8
6102023	PL-TCD-32	32	G 1/8

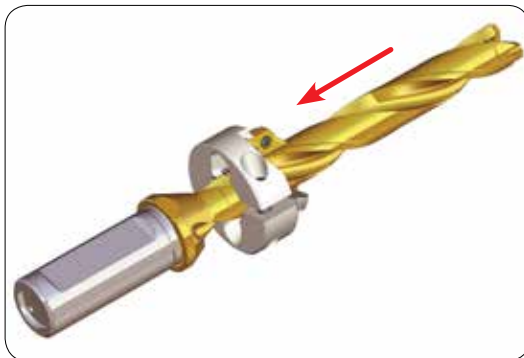




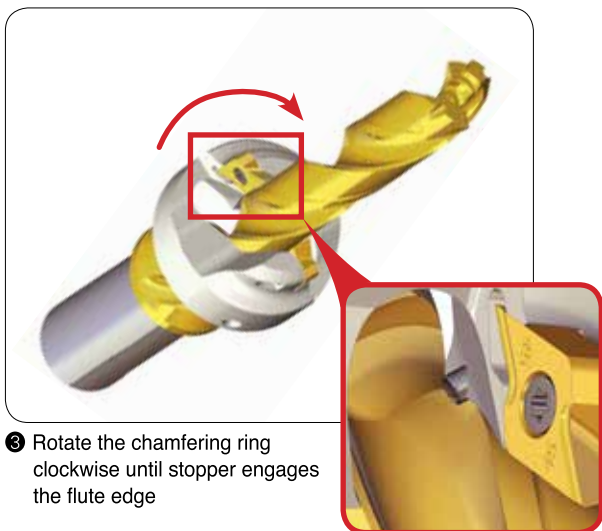
Assembly of chamfering ring



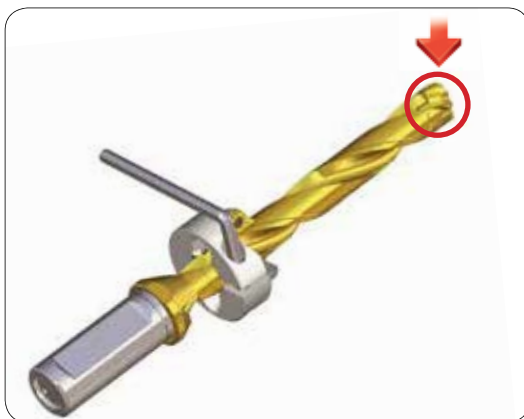
- ❶ Insert the chamfering ring on to the drill body.
The stopper must be inside the flute.



- ❷ Slide the chamfering ring to the desired position

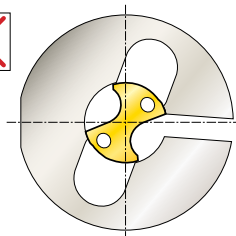
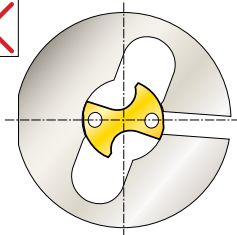
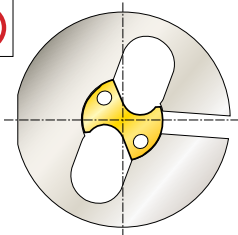


- ❸ Rotate the chamfering ring
clockwise until stopper engages
the flute edge

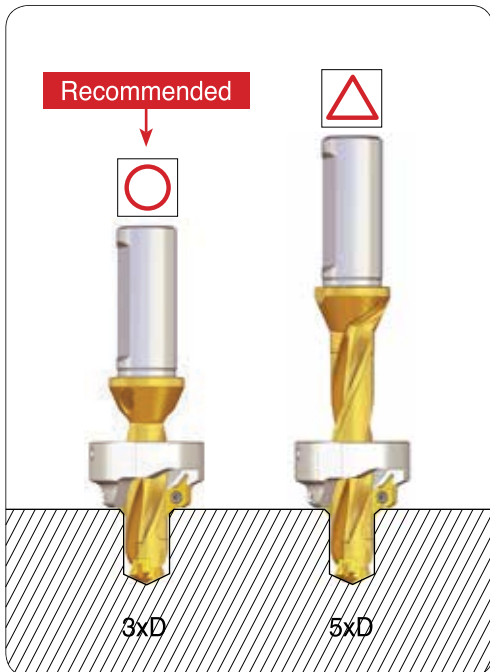


- ❹ Tighten the chamfering ring and clamp the drill head

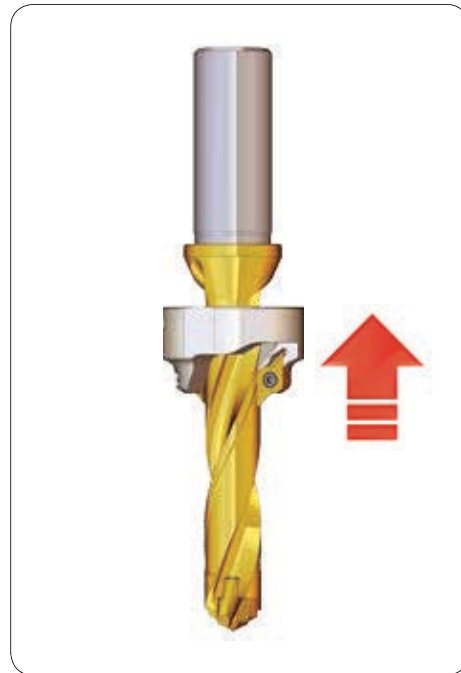
**When the chamfering ring is clamped correctly,
the drill flute will be aligned with the chamfering ring flute.**



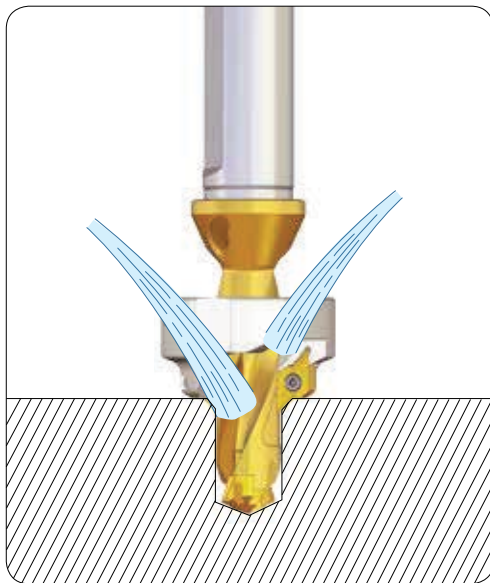
Recommendations for stable machining



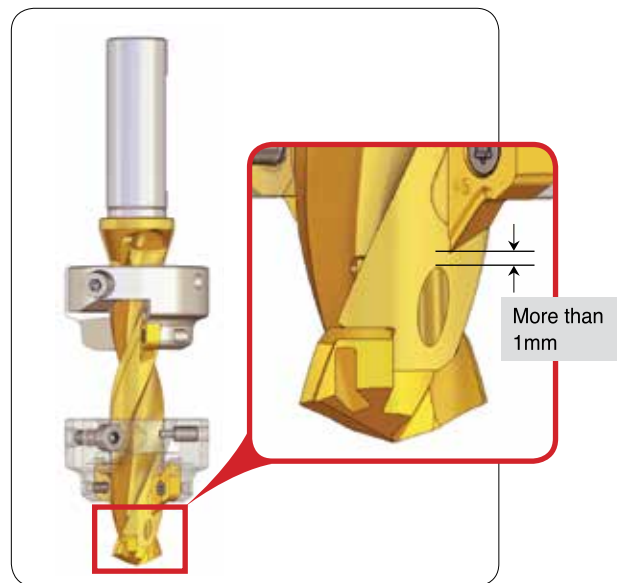
- ❶ If possible, always use a short holder.
If not, reduce the cutting speed to minimize vibration.



- ❷ Mount the chamfering ring as close as possible to the drilling shank



- ❸ For better insert life, apply external and internal coolant to the insert



- ❹ When mounting the chamfering ring, please ensure that it does not block the coolant



Tailor-made order form

Specific dimensions

	Through ☐	Blind ☐
	ØD1 _____	L1 _____
	α1 _____	S _____
	•Hole tolerance _____	

	Through ☐	Blind ☐
	ØD1 _____	ØD2 _____
	L1 _____	L2 _____
	α1 _____	•Hole tolerance _____

	Through ☐	Blind ☐
	ØD1 _____	ØD2 _____
	L1 _____	L2 _____
	α1 _____	α2 _____
S _____		
•Hole tolerance _____		

Comment

Technical data

• Machine type

Machining center ☐ Lathe ☐

Spindle - Vertical ☐ Horizontal ☐

Machine name _____

Power _____ Kw

• Coolant supply

Internal ☐ External ☐

Coolant pressure _____ bar

Coolant type _____

Workpiece

• Part Name _____

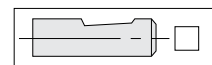
• Material _____

• Hardness _____

Shank type



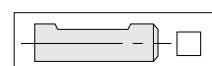
Cylindrical type



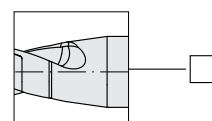
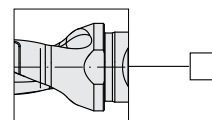
Whistle notch type



Cylindrical with flat type



Weldon type



• Shank dia _____

• Shank length _____

Recommended cutting conditions

Machining data for DRILLRUSH

ISO	Material		Condition	Tensile strength (N/mm ²)	Hardness HB	Material No.	Cutting speed Vc (m/min)
P	Non-alloy steel, cast steel, free cutting steel	<0.25%C	Annealed	420	125	1	80-140
		>=0.25%C	Annealed	650	190	2	80-130
		<0.55%C	Quenched and tempered	850	250	3	80-120
		>=0.55%C	Annealed	750	220	4	70-110
			Quenched and tempered	1000	300	5	50-90
	Low alloy steel and cast steel (Less than 5% of alloying elements)		Annealed	600	200	6	70-120
			Quenched and tempered	930	275	7	70-110
		1000		300	8	50-90	
		1200		350	9	40-70	
	High alloy steel, cast steel and tool steel	Annealed	680	200	10	50-90	
		Quenched and tempered	1100	325	11	40-80	
M	Stainless steel and cast steel	Ferritic / martensitic	680	200	12	40-70	
		Martensitic	820	240	13	40-70	
		Austenitic	600	180	14	30-70	
K	Gray cast iron (GG)	Ferritic		160	15	90-160	
		Pearlitic		250	16	80-140	
	Cast iron nodular (GGG)	Ferritic		180	17	90-180	
		Pearlitic		260	18	80-140	
	Malleable cast iron	Ferritic		130	19	90-160	
		Pearlitic		230	20	80-140	
N	Aluminum - Wrought alloy	Not cureable		60	21	90-220	
		Cured		100	22	90-220	
	Aluminum- cast, alloyed	<=12% Si	Not cureable		75	23	90-220
			Cured		90	24	90-220
	>12% Si	High temp.		130	25	80-160	
		>1% Pb	Free cutting		110	26	90-220
	Copper alloys	Brass		90	27	90-220	
		Electrolitic copper		100	28	90-220	
	Non-metallic	Duroplastics, fiber plastics			29		
Hard rubber				30			
S	High temp. alloys	Fe based	Annealed		200	31	30-60
			Cured		280	32	20-50
		Ni or Co based	Annealed		250	33	20-50
			Cured		350	34	20-50
			Cast		320	35	20-50
	Titanium, Ti alloys		Rm 400		36	20-50	
		Alpha+beta alloys cured	Rm 1050		37	20-50	
H	Hardened steel	Hardened		55HRC	38	20-50	
		Hardened		60HRC	39	20-50	
	Chilled cast iron	Cast		400	40		
	Cast iron nodular	Hardened		55HRC	41		

- For over 8xD, please reduce the cutting condition.
- For more information of material groups, see the TaeguTec concise catalogue "material conversion table" section.

■ Steel
 ■ Stainless steel
 ■ Cast iron
 ■ Nonferrous
 ■ High temp. alloys
 ■ Hardened steel



Recommended cutting conditions

Machining data for DRILLRUSH

Feed (mm/rev) vs. drill diameter						
Ø6 - Ø7.9	Ø8 - Ø9.9	Ø10 - Ø11.9	Ø12 - Ø13.9	Ø14 - Ø15.9	Ø16 - Ø19.9	Ø20 - Ø25.9
0.09-0.13	0.12-0.22	0.15-0.28	0.18-0.30	0.20-0.35	0.25-0.45	0.25-0.45
0.09-0.13	0.12-0.22	0.15-0.28	0.18-0.30	0.20-0.35	0.25-0.45	0.25-0.45
0.09-0.13	0.12-0.22	0.15-0.28	0.18-0.30	0.20-0.35	0.25-0.45	0.25-0.45
0.09-0.13	0.12-0.22	0.15-0.28	0.18-0.30	0.20-0.35	0.25-0.45	0.25-0.45
0.09-0.13	0.12-0.22	0.15-0.28	0.18-0.30	0.20-0.35	0.25-0.45	0.25-0.45
0.09-0.15	0.12-0.25	0.14-0.28	0.16-0.32	0.18-0.35	0.23-0.40	0.25-0.45
0.09-0.15	0.12-0.25	0.14-0.28	0.16-0.32	0.18-0.35	0.23-0.40	0.25-0.45
0.09-0.15	0.12-0.25	0.14-0.28	0.16-0.32	0.18-0.35	0.23-0.40	0.25-0.45
0.09-0.15	0.12-0.25	0.14-0.28	0.16-0.32	0.18-0.35	0.23-0.40	0.25-0.45
0.09-0.12	0.12-0.20	0.12-0.22	0.15-0.25	0.18-0.28	0.20-0.30	0.22-0.33
0.09-0.12	0.12-0.20	0.12-0.22	0.15-0.25	0.18-0.28	0.20-0.30	0.22-0.33
0.08-0.10	0.10-0.15	0.12-0.18	0.14-0.20	0.16-0.24	0.16-0.26	0.18-0.30
0.08-0.10	0.10-0.15	0.12-0.18	0.14-0.20	0.16-0.24	0.16-0.26	0.18-0.30
0.08-0.10	0.10-0.15	0.12-0.18	0.14-0.20	0.16-0.24	0.16-0.26	0.18-0.30
0.12-0.18	0.15-0.30	0.20-0.35	0.25-0.40	0.30-0.45	0.35-0.55	0.35-0.60
0.12-0.18	0.15-0.30	0.20-0.35	0.25-0.40	0.30-0.45	0.35-0.55	0.35-0.60
0.12-0.18	0.15-0.30	0.20-0.35	0.25-0.40	0.30-0.45	0.35-0.55	0.35-0.60
0.12-0.18	0.15-0.30	0.20-0.35	0.25-0.40	0.30-0.45	0.35-0.55	0.35-0.60
0.12-0.18	0.15-0.30	0.20-0.35	0.25-0.40	0.30-0.45	0.35-0.55	0.35-0.60
0.12-0.18	0.15-0.30	0.20-0.35	0.25-0.40	0.30-0.45	0.35-0.55	0.35-0.60
	0.20-0.35	0.25-0.40	0.30-0.45	0.35-0.50	0.40-0.60	0.45-0.70
	0.20-0.35	0.25-0.40	0.30-0.45	0.35-0.50	0.40-0.60	0.45-0.70
	0.20-0.35	0.25-0.40	0.30-0.45	0.35-0.50	0.40-0.60	0.45-0.70
	0.20-0.35	0.25-0.40	0.30-0.45	0.35-0.50	0.40-0.60	0.45-0.70
	0.20-0.35	0.25-0.40	0.30-0.45	0.35-0.50	0.40-0.60	0.45-0.70
	0.20-0.35	0.25-0.40	0.30-0.45	0.35-0.50	0.40-0.60	0.45-0.70
	0.20-0.35	0.25-0.40	0.30-0.45	0.35-0.50	0.40-0.60	0.45-0.70
0.05-0.07	0.06-0.11	0.08-0.13	0.10-0.15	0.12-0.18	0.12-0.20	0.14-0.22
0.05-0.07	0.06-0.11	0.08-0.13	0.10-0.15	0.12-0.18	0.12-0.20	0.14-0.22
0.05-0.07	0.06-0.11	0.08-0.13	0.10-0.15	0.12-0.18	0.12-0.20	0.14-0.22
0.05-0.07	0.06-0.11	0.08-0.13	0.10-0.15	0.12-0.18	0.12-0.20	0.14-0.22
0.05-0.07	0.06-0.11	0.08-0.13	0.10-0.15	0.12-0.18	0.12-0.20	0.14-0.22
0.05-0.07	0.06-0.12	0.08-0.15	0.10-0.18	0.12-0.20	0.14-0.22	0.16-0.25
0.05-0.07	0.06-0.12	0.08-0.15	0.10-0.18	0.12-0.20	0.14-0.22	0.16-0.25
0.05-0.07	0.06-0.12	0.08-0.15	0.10-0.18	0.12-0.20	0.14-0.22	0.16-0.25
0.05-0.07	0.06-0.12	0.08-0.15	0.10-0.18	0.12-0.20	0.14-0.22	0.16-0.25

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