

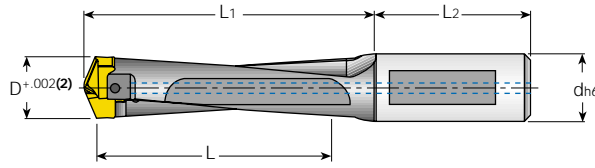
Centering Hole Data

Designation	Drill Dia. D1	L5	Min-Max UNI-CHAMDRILL Adjustment in CHAMRING-L3
DCM 0295-102-031B-3.5D	.295	.054	.433-.807
DCM 0315-110-031B-3.5D	.315	.057	.492-.846
DCM 0335-114-035B-3.5D	.335	.061	.531-.984
DCM 0354-122-035B-3.5D	.354	.065	.551-1.004
DCM 0374-130-039B-3.5D	.374	.068	.610-1.083
DCM 0394-130-039B-3.5D	.394	.072	.492-1.043
DCM 0413-134-043B-3.5D	.413	.075	.492-1.083
DCM 0433-142-043B-3.5D	.433	.079	.630-1.142
DCM 0453-150-047B-3.5D	.453	.082	.531-1.220
DCM 0472-165-047B-3.5D	.472	.086	.669-1.299
DCM 0492-165-047B-3.5D	.492	.089	.669-1.378
DCM 0512-165-051B-3.5D	.512	.093	.748-1.417
DCM 0531-173-055B-3.5D	.531	.096	.669-1.457
DCM 0551-189-055B-3.5D	.551	.100	.748-1.535
DCM 0571-197-059B-3.5D	.571	.104	.689-1.555
DCM 0591-205-059B-3.5D	.591	.107	.886-1.614
DCM 0630-205-063B-3.5D	.630	.111	.925-1.831
DCM 0669-216-067B-3.5D	.669	.115	1.004-1.949
DCM 0709-236-070B-3.5D	.709	.118	1.102-2.126
DCM 0748-244-075B-3.5D	.748	.129	1.142-2.362
DCM 0787-260-079B-3.5D	.787	.143	1.299-2.500

DCM Indexable head Drills Type B⁽³⁾

Drilling Depth 3.5xD

Range .295 to 823



DCM

ØD ⁽¹⁾ Range	L	Designation	d	L1	L2	Pocket Size	Key	Drilling Heads
.295-.311	1.02	DCM 0295-102-031B-3.5D	.314	1.32	1.69	8	K DCM-8	IDI
.315-.331	1.10	DCM 0315-110-031B-3.5D	.314	1.41	1.69	8	K DCM-8	
.335-.350	1.14	DCM 0335-114-035B-3.5D	.354	1.45	1.69	9	K DCM-9	
.354-.370	1.22	DCM 0354-122-035B-3.5D	.354	1.54	1.69	9	K DCM-9	
.374-.390	1.30	DCM 0374-130-039B-3.5D	.393	1.58	1.69	10	K DCM-10	
.394-.409	1.30	DCM 0394-130-039B-3.5D	.393	1.69	1.69	10	K DCM-10	
.413-.429	1.34	DCM 0413-134-043B-3.5D	.433	1.76	1.69	11	K DCM-11	
.433-.449	1.42	DCM 0433-142-043B-3.5D	.433	1.84	1.69	11	K DCM-11	
.453-.469	1.50	DCM 0453-150-0471B-3.5D	.472	1.91	1.69	12	K DCM-12	
.472-.488	1.65	DCM 0472-165-047B-3.5D	.472	2.00	1.69	12	K DCM-12	
.492-.508	1.65	DCM 0492-165-051B-3.5D	.512	2.07	1.69	13	K DCM-13	
.512-.528	1.65	DCM 0512-165-051B-3.5D	.512	2.14	1.77	13	K DCM-13	
.531-.547	1.73	DCM 0531-173-055B-3.5D	.551	2.21	1.77	14	K DCM-14	
.551-.567	1.89	DCM 0551-189-055B-3.5D	.551	2.33	1.77	14	K DCM-14	
.571-.587	1.97	DCM 0571-197-059B-3.5D	.591	2.39	1.77	15	K DCM-15	
.591-.625	2.05	DCM 0591-205-059B-3.5D	.591	2.48	1.77	15	K DCM-15	
.630-.665	2.05	DCM 0630-205-063B-3.5D	.630	2.63	1.89	16	K DCM-16	
.669-.705	2.16	DCM 0669-216-067B-3.5D	.669	2.90	1.89	17	K DCM-17	
.709-.744	2.36	DCM 0709-236-070B-3.5D	.709	3.08	1.89	18	K DCM-18	
.748-.783	2.44	DCM 0748-244-075B-3.5D	.748	3.22	2.12	19	K DCM-19	
.787-.823	2.60	DCM 0787-260-079B-3.5D	.787	3.33	2.12	20	K DCM-20	

(1) Do not mount smaller drilling heads than specified range for drill body.

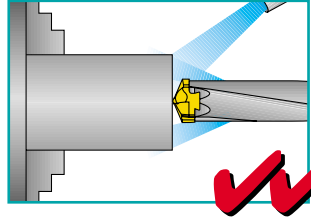
(2) Hole tolerance in average conditions; however; it can be higher or lower according to machine and tooling conditions.

(3) Drill design without a flange. To be used with standard CHAMRING chamfering rings. Can be used for tailor made chamfering rings.

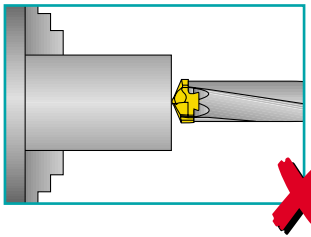
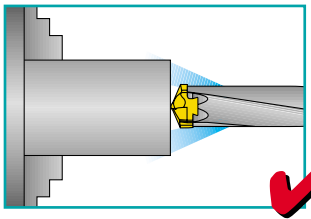
CHAMDRILL

User Guide

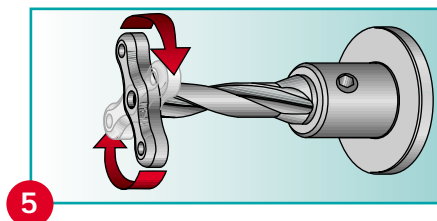
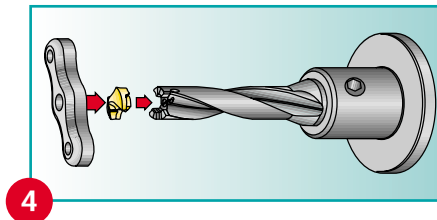
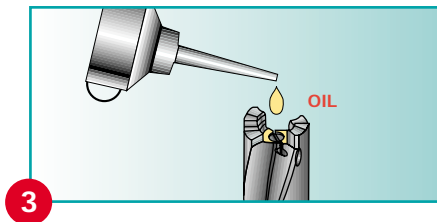
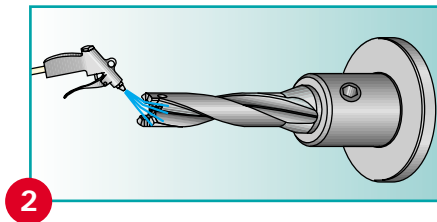
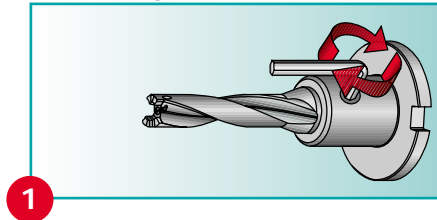
Coolant



In stationary drill applications both through tool and external coolant supply is recommended.



Drilling Heads Mounting Procedure



Machining Data

Following is machining data for the DCM drills.

ISO	Material	Condition	Hardness HB	Cutting Speed Vc sfm	Feed vs. Drill Diameter inch/rev						
					D=.315-.394	D=.433-.472	D=.512-.551	D=.591-.630	D=.669-.787	D=.827-.984	
P	Non-alloy steel and cast steel, free cutting steel	<0.25% Annealed	125	160-430	.005-.008	.006-.010	.008-.012	.010-.014	.010-.018	.010-.018	
		>=0.25% Annealed	190	330-400							
		< 0.55% Quenched and tempered	250	290-360							
		>=0.55% Annealed	220	290-400							
		Quenched and tempered	300	230-290							
	Low alloy steel and cast steel (less than 5% alloying elements)	Annealed	200	260-430	.005-.008	.006-.010	.008-.012	.010-.014	.012-.016	.012-.018	
			275	230-360							
		Quenched and tempered	300	190-290							
			350	130-230							
	High alloyed steel, cast steel, and tool steel	Annealed	200	160-260	.005-.008	.005-.009	.006-.010	.008-.011	.010-.013	.010-.014	
Quenched and tempered		325	130-230								
M	Stainless steel and cast steel	Ferritic/martensitic	200	60-170	.003-.006	.004-.006	.005-.007	.006-.008	.006-.009	.006-.011	
		Martensitic	240	60-170							
		Austenitic	180	60-170							
K	Cast iron nodular (GGG)	Ferritic/pearlitic	180	290-460	.005-.012	.010-.014	.012-.016	.014-.018	.016-.020	.016-.024	
		Pearlitic	260	260-430							
	Grey cast iron (GG)	Ferritic	160	330-590							
		Pearlitic	250								
	Malleable cast iron	Ferritic	130								
		Pearlitic	230								
N	Aluminum-wrought alloy <=12% Si	Not cureable	60	290-530	.005-.014	.010-.016	.012-.018	.014-.020	.016-.024	.016-.026	
		Cured	100								
		Not cureable	75								
	Aluminum-cast, alloyed >12% Si	Cured	90	260-400							
		High temperature	130								
	Copper alloys >1% Pb	Free cutting	110	290-530							
		Brass	90								
		Electrolytic copper	100								
Non metallic	Duroplastics, fiber plastics										
	Hard rubber										
S	High temp. alloys Fe based	Annealed	200	100-170	.002-.004	.003-.005	.004-.006	.005-.007	.005-.008	.005-.009	
		Cured	280	60-130							
		Super alloys Ni or Co based	Annealed								250
			Cured								350
	Titanium Ti alloys	Cast	320								60-170
		Alpha+beta alloys cured									
H	Hardened steel	Hardened	55 HRC	60-170	.002-.005	.004-.006	.005-.007	.006-.008	.006-.009	.006-.010	
		Hardened	60 HRC								
	Chilled cast iron	Cast	400								
	Cast iron	Hardened	55 HRC								

* Grades: first choice IC908.

* For material group number please refer to our general catalog instructions.

* This table refers to 3/5xD drills ratio usage, for 8xD ratio decrease cutting data by 20%.

* Chipformer should be selected based on our geometry range recommendations.

* When using external coolant supply only, reduce cutting speed by 10%.

* Use internal coolant supply when machining austenitic stainless steel.