



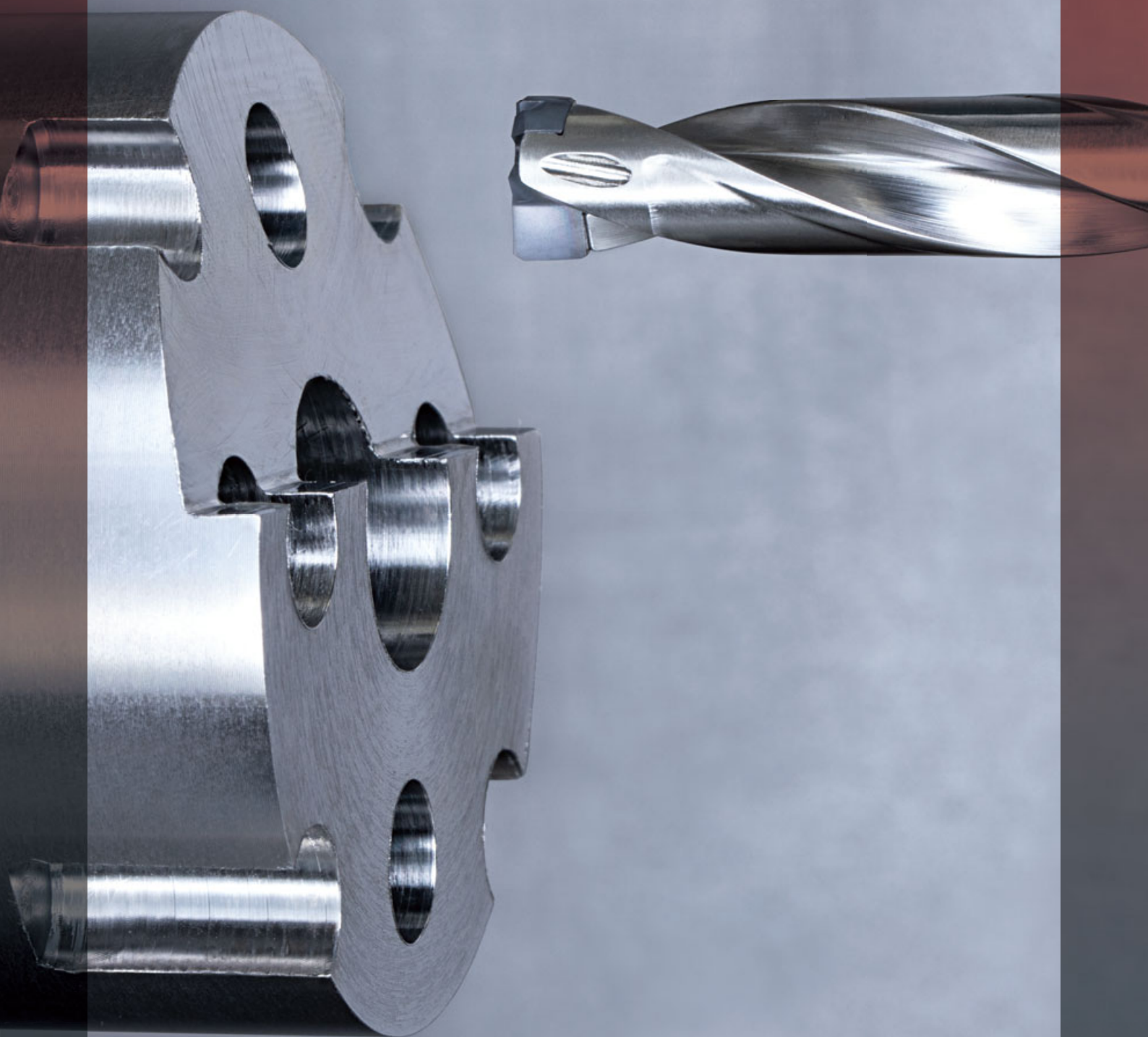
Exchangeable head drill

DRILLMEISTER/ADD M^{EISTER} DRILL

Tungaloy Report No. 412-US

Exchangeable head drill system for
superior drilling performance and long
tool life







DRILLMEISTER/ADDMEISTER DRILL

04 General Features

07 New **AddMeisterDrill**

08 Selection Guide

08 Drill Bodies

09 Drill Heads

12 Drill Head Geometries

19 Line Up

19 Drill Bodies

38 Drill Heads

48 Technical Guide

51 Practical Examples

Exchangeable head drills for unparalleled tool life and machining performance

- Helical margin to prevent chip adhesion between the body and the hole during machining
- Tool body made from highest grade of steel with superior hardness for high wear resistance
- Wide variety of geometries for every drilling application
- Advanced grade options ensure stable, long tool life
- Internal coolant channels supply efficient cooling and lubrication during the drilling process



■ A single drill body can hold a range of drill heads with various geometries and sizes. Drill heads are available in 0.004" (0.1 mm) increments.

DMP



General use for any type of material. Low cutting force.

DMC



High accuracy drilling by quick self centering design.

DMF



Flat edge design with self centering edge. Flat bottom.

DMH



Reinforced edge design to prevent corner fracture.

DMN



Non-coated sharp edge design for non-ferrous metals.

50

drilling possibilities per drill body



5 different geometries are available, and each drill body can fit 10 different drill head sizes

TID-F type

Flange type
1.5xD, 3xD, 5xD, 8xD



TID-R type

Round shank type
2xD, 3xD, 3.5xD, 5xD, 6xD, 8xD, 12xD



TIDC / TIDCF type

Straight flute type
3xD, 5xD can be mounted in chamfer holder TIDCF



■ Tool body variations

TID-F... type

- Constant tool length due to flange support
- Flat for side-lock clamping



TID-R... type

- Tool overhang to be adjusted more freely within shank length
- Perfectly suitable for hydro holders



TID-R..E type

- Economical option for external coolant environment
- Tool overhang to be adjusted more freely within shank length



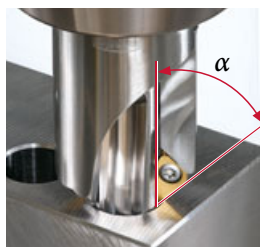
TIDC type

- Tools have peripheral flats for correct clamping of the chamfering inserts when assembled with TIDCF holder
- Flat for side-lock clamping



■ Drilling and chamfering in one shot

Three different chamfering angles are available on the same holder.



$\alpha = 60^\circ$



$\alpha = 45^\circ$



$\alpha = 30^\circ$



Adjustable

TIDCF

World's smallest exchangeable drill head series

■ Now available in **ø0.157" (ø4 mm) to ø0.232" (ø5.9 mm)** diameters with 0.004" (0.1 mm) increments



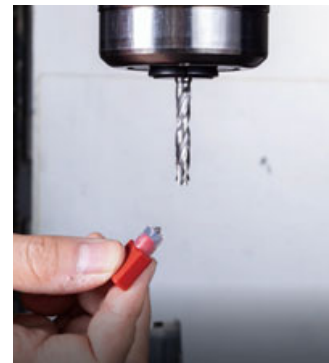
- Smallest exchangeable head diameter down to 0.157" (4 mm)
- Minimize tool set up time with a dedicated key (attached to every head)
- Efficient coolant supply - excellent chip evacuation + long & stable tool life
- Every tool can be mounted on 0.002" (0.5 mm) range of heads



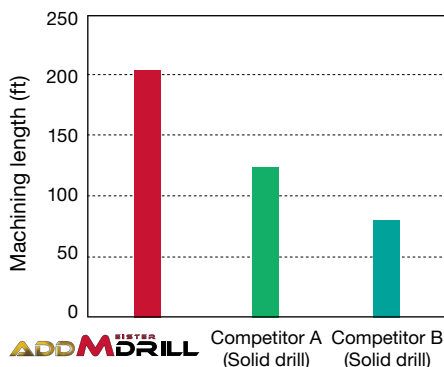
■ Quick and easy clamping with unique key supplied with each head



Assembled drill head within key



■ Twisted internal coolant holes promote efficient chip evacuation and longer tool life



P

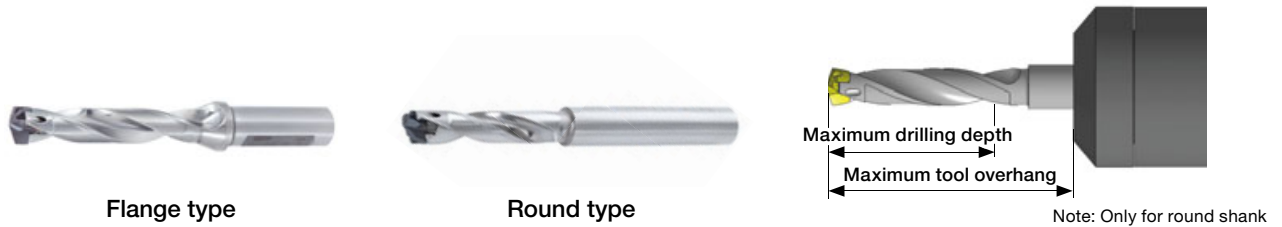
Tool : ø0.197", L/D = 5
 Drill head : DMP050
 Grade : AH725
 Workpiece material : 4140 (270HB)
 Cutting speed : $V_c = 328$ sfm
 Feed : $f = 0.004$ ipr
 Hole depth : $H = 0.787$ "
 Coolant : Wet

Unique coolant outlet



DRILL BODY SELECTION GUIDE

● TID type



Maximum drilling depth	Maximum tool overhang	Shank type	Drill diameter range	Tool holder					Page
				Hydro chuck	Collet chuck	Power chuck	Side lock	Side lock sleeve	
1.5xD	-	Flange	ø0.394" (ø6 mm) - ø1.020" (ø25.9 mm)		○	○	○	○	20
2xD	4xD	Round	ø0.394" (ø6 mm) - 0.665" (ø16.9 mm)	○	○	○			28
3xD	-	Flange	ø0.394" (ø6 mm) - ø1.020" (ø25.9 mm)		○	○	○	○	22
	4xD	Round	New ø0.157" (ø4 mm) - ø0.232" (ø5.9 mm)	○	○	○			19
3.5xD	6xD	Round	ø0.394" (ø6 mm) - ø0.783" (ø19.9 mm)	○	○	○			29
5xD	-	Flange	ø0.394" (ø6 mm) - ø1.020" (ø25.9 mm)		○	○	○	○	24
	6xD	Round	New ø0.157" (ø4 mm) - ø0.232" (ø5.9 mm)	○	○	○			19
6xD	9xD	Round	ø0.394" (ø6 mm) - ø0.783" (ø19.9 mm)	○	○	○			30
8xD	-	Flange	ø0.276" (ø7 mm) - ø1.020" (ø25.9 mm)		○	○	○	○	26
	11xD	Round	ø0.394" (ø6 mm) - 0.783" (ø19.9 mm)	○	○	○			31
12xD	-	Round	ø0.315" (ø8 mm) - ø1.020" (ø25.9 mm)	○	○	○			32

● TIDC type



Maximum drilling depth	Maximum tool overhang	Shank type	Drill diameter range	Tool holder					Page
				Hydro chuck	Collet chuck	Power chuck	Side lock	Side lock sleeve	
3xD	-	Round	ø0.295" (ø7.5 mm) - ø0.783" (ø19.9 mm)		○	○	○	○	33
5xD	-	Round	ø0.295" (ø7.5 mm) - ø0.783" (ø19.9 mm)		○	○	○	○	34

DRILL HEAD SELECTION GUIDE

● : Possible to drill without pre-hole
○ : Pre-hole operation is recommended

★ : First choice
☆ : Second choice

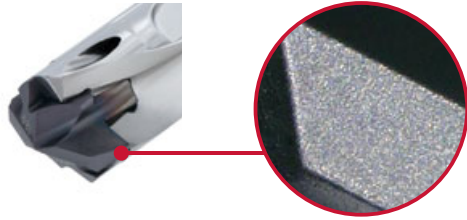
		General	High accuracy drilling Deep drilling	Flat drill with pilot edge	Reinforced design	Non-ferrous metal
Head						
		DMP	DMC	DMF	DMH	DMN
Drill diameter range		0.157" - 1.020" (4 - 25.9 mm)	0.157" - 1.020" (4 - 25.9 mm)	0.236" - 1.020" (6 - 25.9 mm)	0.236" - 1.004" (6 - 25.5 mm)	0.394" - 0.768" (10 - 19.9 mm)
Workpiece material	P Steel	★	★	★	★	
	M Stainless	★	☆	☆	☆	
	K Cast iron	★	★	★	★	
	N Non-ferrous	☆	☆	☆		★
	S Superalloys	★	★	☆	☆	
	H Hard materials	☆	☆	☆	★	
Drilling depth	1.5xD	●	●	●	●	●
	3xD	●	●	●	●	●
	5xD	●	●	●	●	●
	6xD	○	●	●	○	●
	8xD	○	●	●	○	●
	12xD	○	●	○	○	○
	IT8 - 9	☆	★			
	IT9 - 10	★	★	★	★	★
	Hole position	☆	★	☆		
	High hole straightness		★	☆		
Curvature surface			★	☆		
Flat bottom hole				★		
Uneven surface Entry / Exit		☆	☆	★		☆
Narrow depth through hole		☆	☆		★	☆
External coolant		★	☆	☆	☆	
Edge fracture					★	

● IT (International Tolerance) Grades

Basic size (mm)		International tolerance grade			
		IT7	IT8	IT9	IT10
>	≤	(μm)			
3	6	12	18	30	48
6	10	15	22	36	58
10	18	18	27	43	70
18	30	21	33	52	84

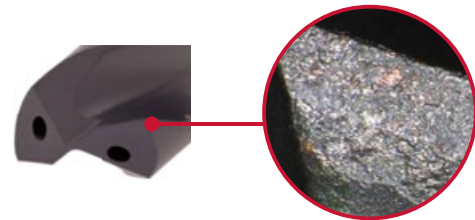
■ Ensures long tool life and wear predictability

Margin of DrillMeister head



- Cutting head is always new and reliable
- Optimized coating thickness provides long tool life
- Constant coating quality provides superior tool life predictability

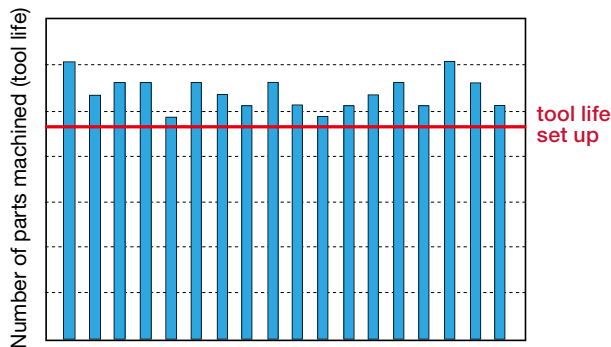
Margin of solid carbide drill (after reconditioning)



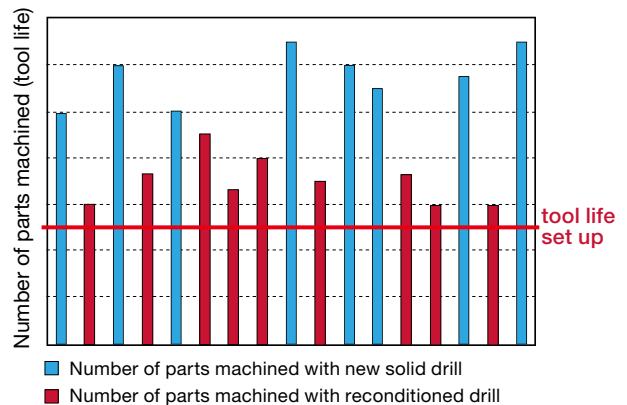
- Excess coating thickness due to multiple re-coating processes
- Fragile coating layer due to excess re-coating
- Result: unpredictable tool life

Stable tool life

■ Tool life fluctuations of DrillMeister



■ Tool life fluctuations of solid carbide drills



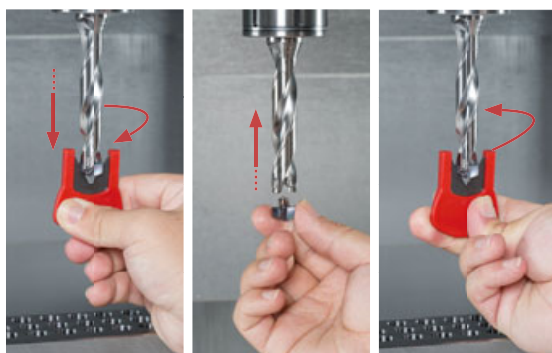
■ Minimizes machine downtime due to quick head exchange system

DrillMeister allows quick exchange of drill heads, while the drill body is in the machine. This eliminates the needs for tool offset after replacement, while ensuring cutting point repeatability.

DRILLMEISTER

VS

Solid drill



< 15 sec.

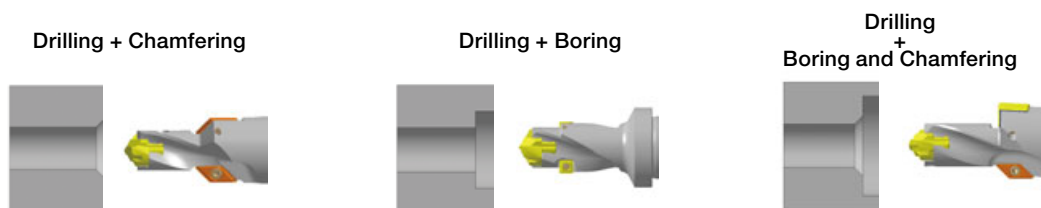


COMPARISON AGAINST OTHER TYPES OF HOLE MAKING TOOLS

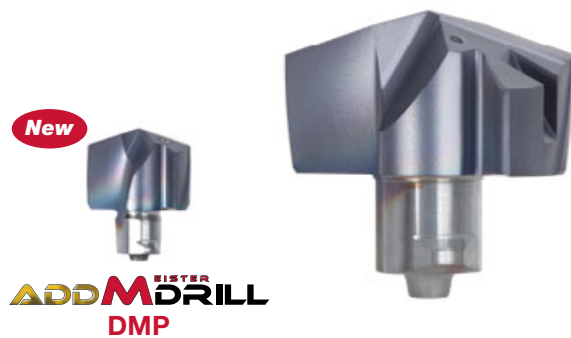
	ADD M^{MASTER} DRILL DRILL MEISTER	Screw lock type Exchangeable drill	Solid carbide drill	Indexable insert type drill
Number of effective edge	2	2	2	1
Productivity	Excellent	High	High	Low
Hole diameter accuracy	IT8 - 10	IT8 - 10	IT8 - 10	IT11 - 12
Diameter variation	0.004" (0.1 mm) increment	0.004" (0.1 mm) increment	0.004" (0.1 mm) increment	0.020" (0.5 mm) increment
Over 8xD drilling	Possible (with DMC head)	Pre-hole operation required	Pre-hole operation required	Special tool body required
Chip control	Excellent	Good chip control	Good chip control	Optimized by cutting condition and breaker
Hole straightness	Excellent (with DMC head)	Good	Excellent	Not good
Accessory of tool set up	Key only	Wrench and screw	-	Wrench and screw
Tool set up	15 sec.	1 min.	10 min.	5 min.
Tool position after set up	Constant	Constant	Always different	Constant
Tool life	Long and stable	Stable	After reconditioning tool life decreased by around 30%	Stable
Tool cost	Medium	Medium	High	Low
Reconditioning	None	None	Necessary	None
Inventory Management	Easy	Easy	Complex	Easy
Special diameter	Only need special drill head	Only need special drill head	Special drill body required	Special tool body required
Lathe machine	Stable	Stable	Misalignment will cause breakage	Stable

● Tailor made drill body

Special drill bodies featuring chamfering or counter boring capabilities with indexable insert and head. Reduce down time and tool management compared to solid drill.

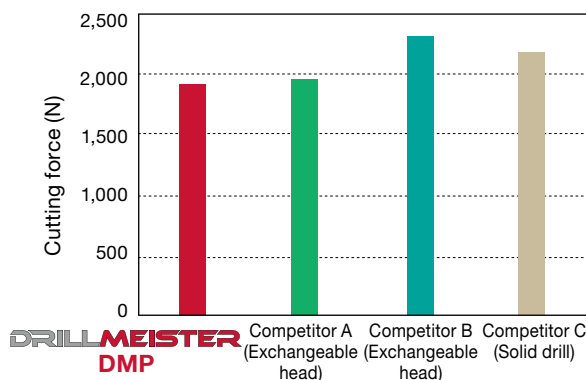


DMP - General purpose



- General drill head with 140° point angle for any type of materials
- Smooth radius edge honing provides low cutting force and long tool life

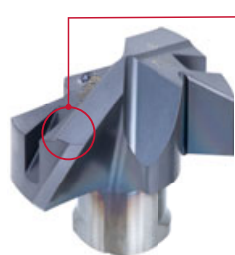
Low cutting force ensure stable drilling



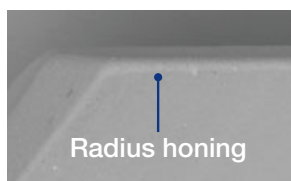
P	Tool	: $\phi 0.472"$, L/D = 3
	Drill head	: DMP120
	Grade	: AH9130
	Workpiece material	: 1055
	Cutting speed	: $V_c = 394$ sfm
	Feed	: $f = 0.008$ ipr
	Hole depth	: $H = 1.181"$
	Coolant	: Wet

Long tool life in any type of material

Close-up of edges



No peeling-off

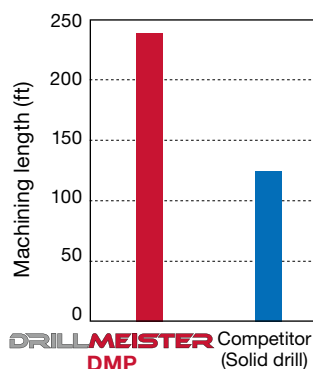


DRILLMEISTER DMP

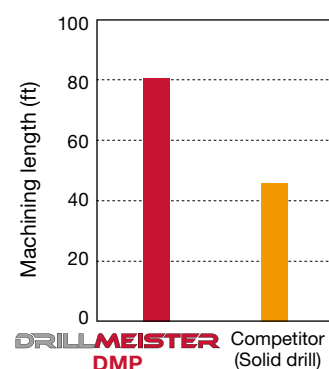
Effectively improves adhesion strength



Competitor

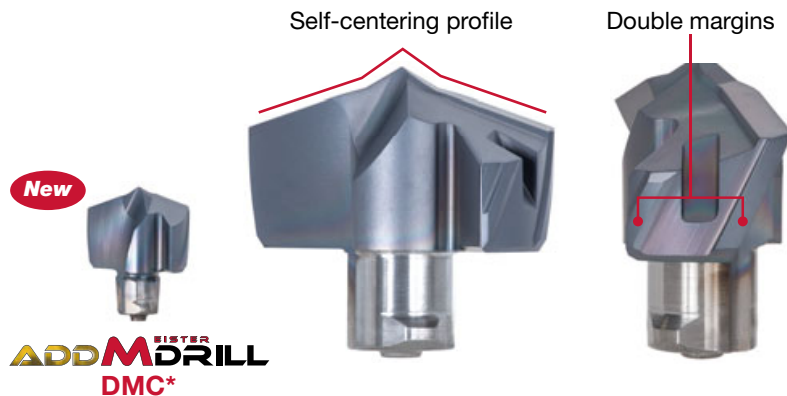


P	Tool	: TID160F20-3
	Drill head	: DMP167
	Grade	: AH9130
	Workpiece material	: 1020
	Cutting speed	: $V_c = 361$ sfm
	Feed	: $f = 0.014$ ipr
	Hole depth	: $H = 0.787"$
	Coolant	: Wet



M	Tool	: TID115F16-3
	Drill head	: DMP115
	Grade	: AH9130
	Workpiece material	: 304
	Cutting speed	: $V_c = 164$ sfm
	Feed	: $f = 0.008$ ipr
	Hole depth	: $H = 1.575"$
	Coolant	: Wet

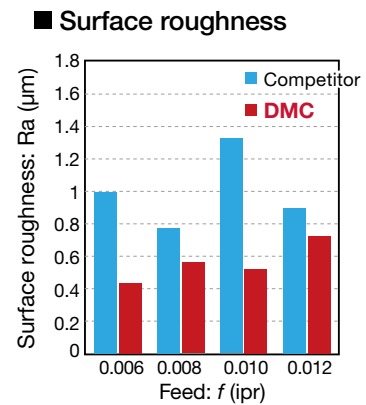
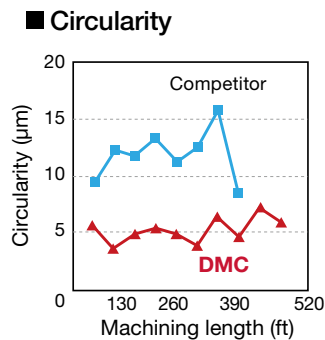
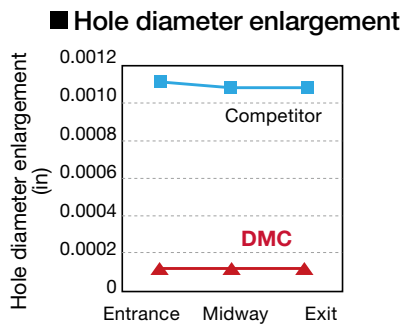
DMC - High accuracy drilling



- Innovative self-centering geometry for smooth drilling and accurate hole tolerance
- No pre-drilling required in 12xD drilling operation
- Double margins provides superior surface finish and hole drilling straightness

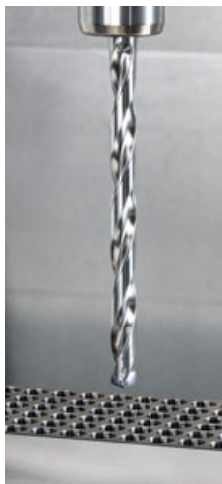
*DMC040 - 059 is single margin

Improve hole accuracy without changing cutting condition

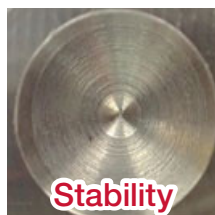


P Tool : $\phi 0.551"$, L/D = 5
 Workpiece material: S1055
 Cutting speed : $V_c = 328$ ipr
 Feed : $f = 0.010$ ipr
 Measured at : 31.181"

Stable long drilling without pilot hole operation



DRILLMEISTER
DMC



Competitor



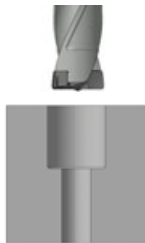
P Tool : $\phi 0.512"$, L/D = 12 (No pilot hole)
 Workpiece material : 1055
 Cutting speed : $V_c = 328$ sfm
 Feed : $f = 0.012$ ipr

DMF - Flat edge design with pilot edge

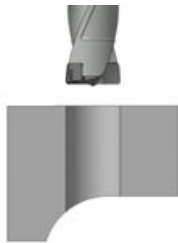


- Ideal solution for counterboring, bolt heads and pre-hole of internal turning operation
- Significantly reduced radial forces ensure stable drilling for complex surfaces at drill entry and exit
- Stable drilling with long overhang up to 8xD without pre-hole

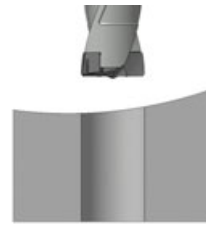
■ Solution for complex hole making processes



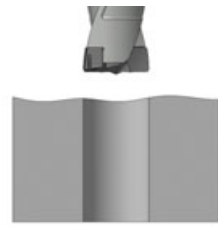
Counterboring for bolt holes



Uneven exit

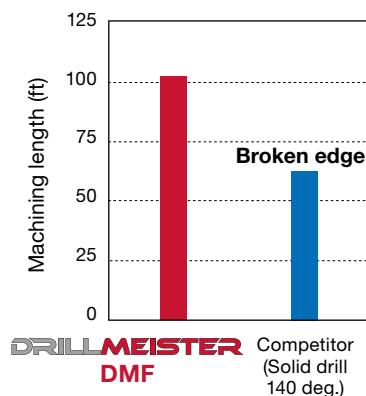


Uneven drill entry



Rough surface

■ Stable tool life in uneven surface entry and exit

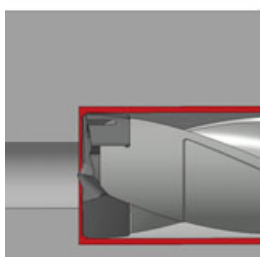


Tool : $\varnothing 0.496"$, L/D = 3.5
 Drill head : DMF126
 Grade : AH9130
 Workpiece material : 65-45-12
 Cutting speed : $V_c = 197$ sfm
 Feed : $f = 0.012$ ipr / Exit: 0.002 ipr
 Hole depth : $H = 1.811"$
 Coolant : Wet

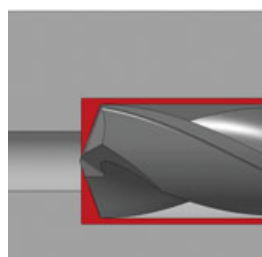


■ Ideal option for pre-hole for internal turning

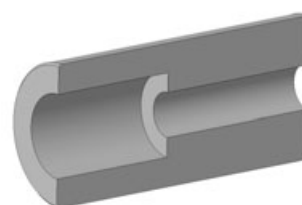
Use a DMF drill head to create a starter hole for internal turning. Its flat edges leave consistent and minimum stock to remove, compared with solid carbide drills with an angled tip, for the following finishing process.



DRILLMEISTER
DMF



Solid drill
140 deg.



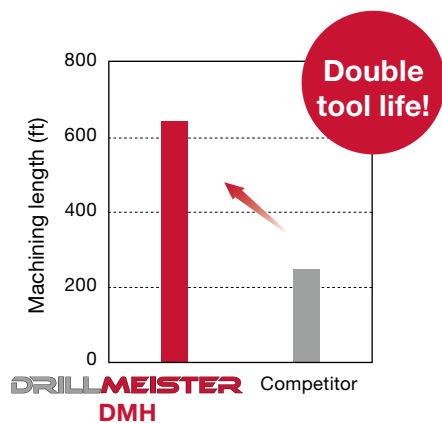
■ Removal stock of finishing by internal turning tool

DMH - Fracture resistance head

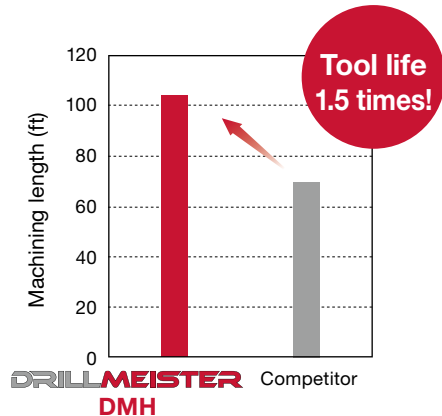


- Solution for corner edge fracture
- Reinforced drill edge design protects head's corners from both the damaging impact of the recoiling wall and weak fixture
- Ideal option for low rigidity workpiece or machine

Longer tool life without edge fracture



P	Tool	: $\varnothing 0.539"$, L/D = 3
	Drill head	: DMH137
	Grade	: AH9130
	Workpiece material	: High carbon steel
	Cutting speed	: $V_c = 295$ sfm
	Feed	: $f = 0.012$ ipr
	Hole depth	: $H = 0.787"$
	Coolant	: Wet (External)



H	Tool	: $\varnothing 0.402"$, L/D = 3
	Drill head	: DMH102
	Grade	: AH9130
	Workpiece material	: Tool steel (40HRC)
	Cutting speed	: $V_c = 179$ sfm
	Feed	: $f = 0.007$ ipr
	Hole depth	: $H = 0.906"$
	Coolant	: Wet (Internal)

Solution for improved tool life, especially for shallow through-holes



Hub



Knuckle



Diff. case



Brake disc

DMN - Sharp edge design for non-ferrous metals



Sharp and uncoated cutting edge design prevents built-up edge and provides good chip evacuation during drilling of non-ferrous metal.

CHIP CONTROL



Aluminum alloy
(Cast)



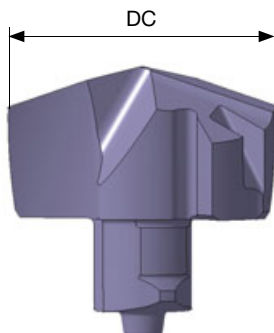
Aluminum alloy
(Die cast)

N

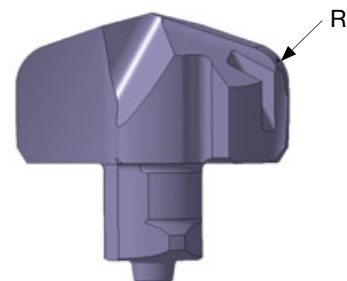
Tool : $\varnothing 0.539"$, L/D = 5
 Drill head : DMN137
 Grade : KS15F
 Cutting speed : $V_c = 656$ sfm
 Feed : $f = 0.016$ ipr
 Hole depth : $H = 1.575"$
 Coolant : Wet

Tailor made drill head

- Special drill diameter size 0.0004" increments can be produced upon request by each type of head
- Special edge design can be produced upon request



Ex. DMP1902 AH9130 ($\varnothing 0.749" + 0.001" / 0$)
 DMC1332 AH9130 ($\varnothing 0.524" + 0.001" / 0$)
 DMF0928 AH9130 ($\varnothing 0.365" + 0.001" / 0$)



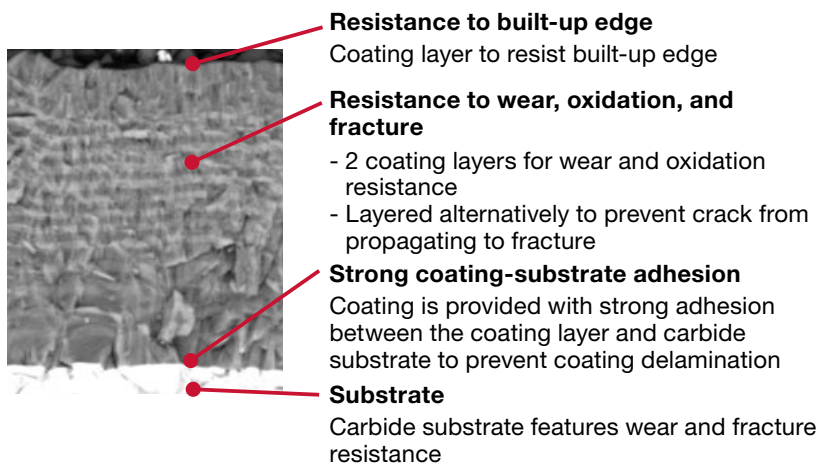
Ex. Radius shoulder design

GRADES

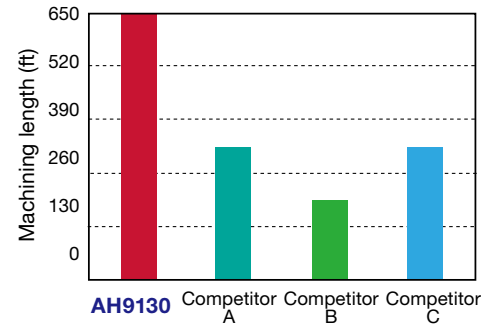
Latest coating optimized for extended tool life

AH9130

- Unique nano-multilayered coating is made possible by Tungaloy's latest coating technology, providing 3 principal features
- This coating achieves highly-balanced wear resistance and chipping resistance, also has acid resistance, resistance to dissolution, and high adhesion strength



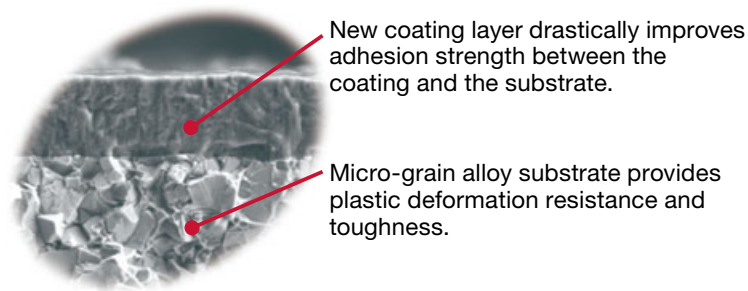
Tool life machining carbon steel (1055)



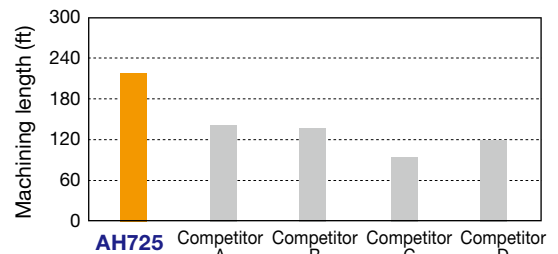
P Tool : $\phi 0.551"$, L/D = 5
Cutting speed : $V_c = 328$ sfm
Feed : $f = 0.010$ ipr
Hole depth : $H = 2.362"$ (Blind hole)

AH725 PREMIUMTEC

Reliable PVD grade is suitable for various materials



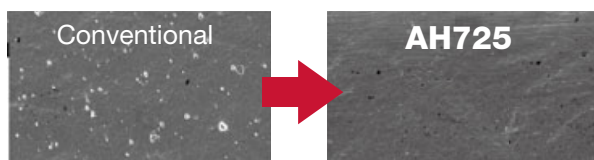
Tool life machining carbon steel (1055)



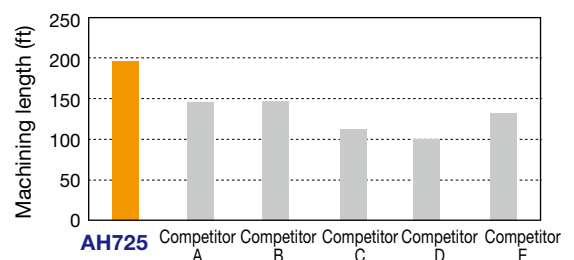
P Tool : $\phi 0.472"$, L/D = 3
Cutting speed : $V_c = 328$ sfm
Feed : $f = 0.010$ ipr
Hole depth : $H = 1.417"$ (Blind hole)

Super flash coating

"Premiumtec" improves overall coating surface quality



Tool life machining ductile cast iron (80-55-06)

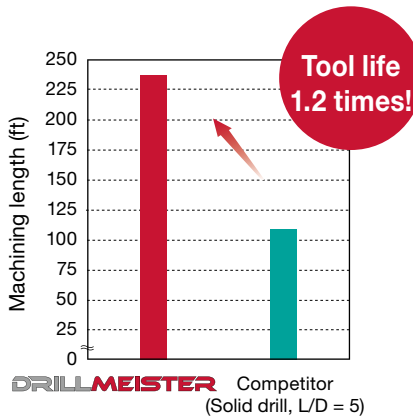
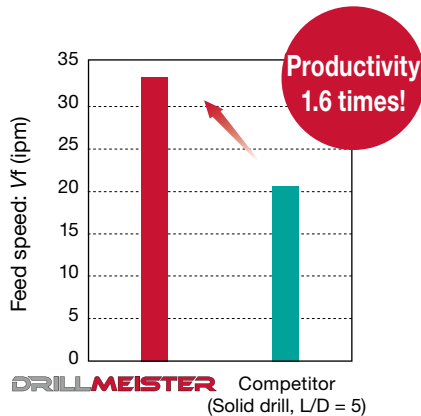


K Tool : $\phi 0.472"$, L/D = 3
Cutting speed : $V_c = 492$ sfm
Feed : $f = 0.010$ ipr
Hole depth : $H = 1.417"$ (Blind hole)

DrillMeister ensures perfect drilling for improved productivity

Case 1 Switch from solid drill

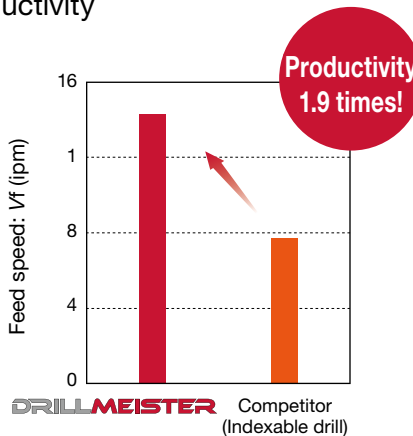
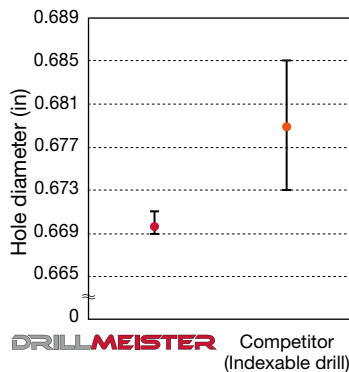
- Low cutting force drill head and optimal tool length ensures higher productivity
- Stable long tool life without expensive reconditioning cost



P	Tool	: TID090R10-3.5
	Drill head	: DMP090
	Grade	: AH9130
	Workpiece material	: Low carbon steel
	Cutting speed	: $V_c = 394$ sfm
	Feed	: $f = 0.008$ ipr
	Hole depth	: $H = 0.906$ "
	Hole type	: Through
	Coolant	: Wet

Case 2 Switch from indexable drill

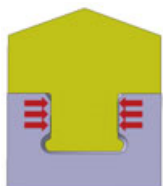
- Better hole diameter accuracy
- High feed drilling improves productivity



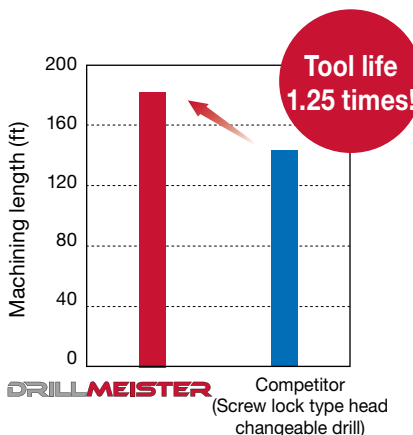
P	Tool	: TID170F20-5
	Drill head	: DMF170
	Grade	: AH9130
	Workpiece material	: 1045
	Cutting speed	: $V_c = 262$ sfm
	Feed	: $f = 0.009$ ipr
	Hole depth	: $H = 3.228$ "
	Hole type	: Through
	Coolant	: Wet

Case 3 Switch from screw lock type head changeable drill

- Simple self clamping system improves your workability
- Accurate clamping system improves tool life due to good run-out
- Combination with variety of head improves hole quality and stability



- Balanced clamping force
- Better run-out
- Wide contact area



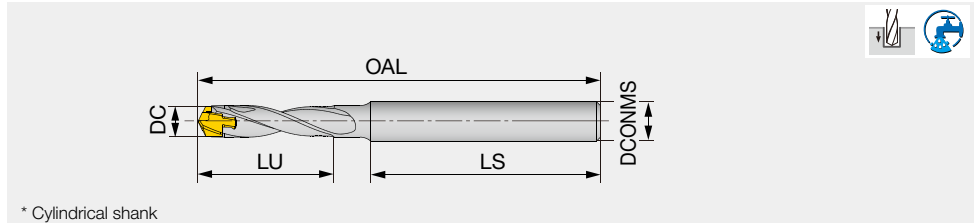
P	Tool	: TID130F20-5
	Drill head	: DMC130
	Grade	: AH9130
	Workpiece material	: 1048
	Cutting speed	: $V_c = 246$ sfm
	Feed	: $f = 0.011$ ipr
	Hole depth	: $H = 1.654$ "
	Hole type	: Through
	Coolant	: Wet

DRILL BODY

New

TID-R L/D=3

Exchangeable head drill



* Cylindrical shank

Inch	DC	DCONMS	LU	LS	OAL		Pocket size	Head
TID040R06-3	0.157 - 0.173	0.236	0.497	1.378	DMP	DMC	4	DM*040 - DM*044
TID045R06-3	0.177 - 0.193	0.236	0.557	1.378	2.272	2.288	4.5	DM*045 - DM*049
TID050R06-3	0.197 - 0.213	0.236	0.619	1.378	2.348	2.359	5	DM*050 - DM*054
TID055R06-3	0.217 - 0.232	0.236	0.681	1.378	2.415	2.433	5.5	DM*055 - DM*059
					2.520	2.532		

Tool diameter (inch)	Hole diameter tolerance*
ø0.157" - ø0.232"	+0.002" / 0

*Just for reference

- The overall length (OAL) differs based on each head geometry.
- When using the drill at a higher feed rate, make sure to provide an axial support by placing the overhang adjusting screw at the drill shank end in the tool holder. This will prevent high thrust force from pushing the drill back into the holder during drilling.
- When axially adjusting the shank inside the holder to obtain a required drill overhang, make sure the shank length remaining inside the holder does not come short of the minimum clamping length (LSCN) specified by the holder supplier.

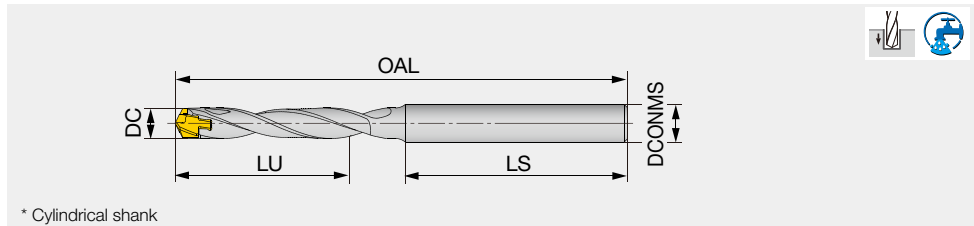
SPARE PARTS

Designation	Clamping key
TID040-045	K-TID4-4.99
TID050-055	K-TID5-5.99

New

TID-R L/D=5

Exchangeable head drill



* Cylindrical shank

Inch	DC	DCONMS	LU	LS	OAL		Pocket size	Head
TID040R06-5	0.157 - 0.173	0.236	0.812	1.378	DMP	DMC	4	DM*040 - DM*044
TID045R06-5	0.177 - 0.193	0.236	0.912	1.378	2.587	2.603	4.5	DM*045 - DM*049
TID050R06-5	0.197 - 0.213	0.236	1.013	1.378	2.703	2.713	5	DM*050 - DM*054
TID055R06-5	0.217 - 0.232	0.236	1.115	1.378	2.807	2.820	5.5	DM*055 - DM*059
					2.919	2.932		

Tool diameter (inch)	Hole diameter tolerance*
ø0.157" - ø0.232"	+0.002" / 0

*Just for reference

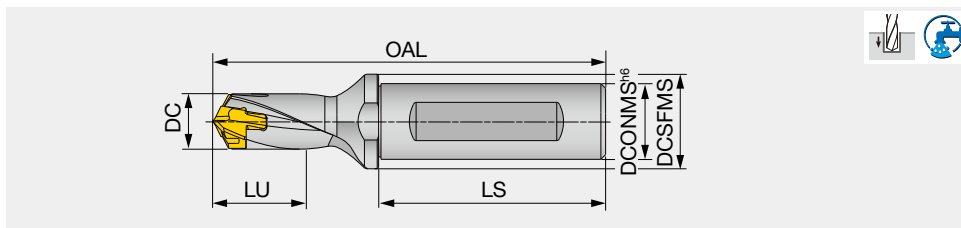
- The overall length (OAL) differs based on each head geometry.
- When using the drill at a higher feed rate, make sure to provide an axial support by placing the overhang adjusting screw at the drill shank end in the tool holder. This will prevent high thrust force from pushing the drill back into the holder during drilling.
- When axially adjusting the shank inside the holder to obtain a required drill overhang, make sure the shank length remaining inside the holder does not come short of the minimum clamping length (LSCN) specified by the holder supplier.

SPARE PARTS

Designation	Clamping key
TID040-045	K-TID4-4.99
TID050-055	K-TID5-5.99

TIDU-F L/D=1.5

Head changeable drill



Inch	DC	DCONMS	DCSFMS	LU	LS	OAL			Pocket size	Head
						DMP/H/N	DMC	DMF		
TIDU0394F0625-1.5	0.394 - 0.429	0.625	0.787	0.591	1.890	3.118	3.142	2.638	10	DM*100 - DM*109
TIDU0433F0625-1.5	0.433 - 0.468	0.625	0.787	0.669	1.890	3.193	3.217	2.678	11	DM*110 - DM*119
TIDU0472F0625-1.5	0.472 - 0.508	0.625	0.787	0.709	1.890	3.268	3.292	2.720	12	DM*120 - DM*129
TIDU0512F0625-1.5	0.512 - 0.547	0.625	0.787	0.787	1.890	3.350	3.381	2.749	13	DM*130 - DM*139
TIDU0551F0625-1.5	0.551 - 0.587	0.625	0.787	0.827	1.890	3.508	3.539	2.811	14	DM*140 - DM*149
TIDU0591F0750-1.5	0.591 - 0.625	0.750	0.984	0.906	1.969	3.787	3.822	2.878	15	DM*150 - DM*159
TIDU0630F0750-1.5	0.630 - 0.665	0.750	0.984	0.945	1.969	3.909	3.948	3.060	16	DM*160 - DM*169
TIDU0669F0750-1.5	0.669 - 0.705	0.750	0.984	1.024	1.969	4.031	4.07	3.126	17	DM*170 - DM*179
TIDU0709F1000-1.5	0.709 - 0.744	1.000	1.260	1.063	2.205	4.390	4.433	3.197	18	DM*180 - DM*189
TIDU0748F1000-1.5	0.748 - 0.783	1.000	1.260	1.142	2.205	4.508	4.551	3.269	19	DM*190 - DM*199
TIDU0787F1000-1.5	0.787 - 0.823	1.000	1.260	1.181	2.205	4.630	4.677	3.424	20	DMP200 - DMP209
TIDU0827F1000-1.5	0.827 - 0.862	1.000	1.260	1.240	2.205	4.752	4.800	3.698	21	DMP210 - DMP219
TIDU0866F1000-1.5	0.866 - 0.902	1.000	1.260	1.299	2.205	4.874	4.924	3.813	22	DMP220 - DMP229
TIDU0906F1250-1.5	0.906 - 0.941	1.250	1.654	1.358	2.362	5.150	5.204	3.923	23	DMP230 - DMP239
TIDU0945F1250-1.5	0.945 - 0.980	1.250	1.654	1.417	2.362	5.272	5.327	4.270	24	DMP240 - DMP249
TIDU0984F1250-1.5	0.984 - 1.020	1.250	1.654	1.476	2.362	5.394	5.453	4.381	25	DMP250 - DMP259

Tool diameter (in)	Hole diameter tolerance*
ø0.394" - ø0.705"	+0.0012" / 0
ø0.709" - ø1.020"	+0.0014" / 0

*Just for reference

- An overall length (OAL) differs for when the DMP insert is mounted and when the DMC is mounted. (No difference for the drill shoulder)
 - For drill diameters from ø0.315" - ø0.390", the drill shoulder to shank bottom distance when a DMC drill head is mounted is 0.012" shorter when compared with a DMP head of the equivalent sizes. The distances are the same for the DMC and DMP drill heads in other diameters than the above.

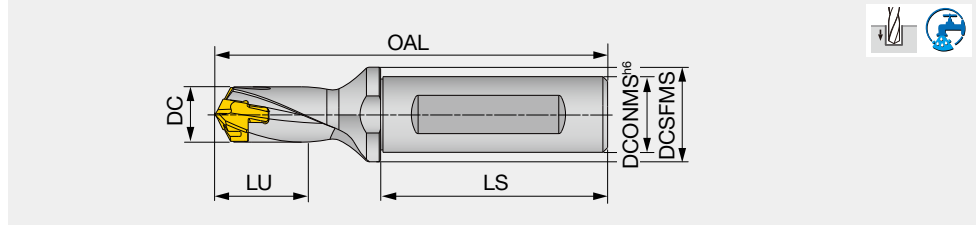
SPARE PARTS



Designation	Clamping key
TIDU0394 - TIDU0748	K-TID10-19.99
TIDU0787 - TIDU0984	K-TID20-26.99

TID-F L/D=1.5

Exchangeable head drill



Metric	DC	DCONMS	DCSFMS	LU	LS	OAL			Pocket size	Head
						DMP/H/N	DMC	DMF		
TID060F12-1.5	6 - 6.4	12	16	10	45	67.9	68	67	6	DM*060 - DM*064
TID065F12-1.5	6.5 - 6.9	12	16	11	45	68.9	69.1	68	6.5	DM*065 - DM*069
TID070F12-1.5	7 - 7.4	12	16	12	45	70	70.4	69.1	7	DM*070 - DM*074
TID075F12-1.5	7.5 - 7.9	12	16	13	45	70.7	71.2	69.8	7	DM*075 - DM*079
TID080F12-1.5	8 - 8.9	12	16	14	45	72.3	72.4	71.4	8	DM*080 - DM*089
TID090F12-1.5	9 - 9.9	12	16	16	45	74.2	74.3	73.1	9	DM*090 - DM*099
TID100F16-1.5	10 - 10.9	16	20	17	48	79.1	79.7	77.7	10	DM*100 - DM*109
TID110F16-1.5	11 - 11.9	16	20	19	48	81	81.6	79.4	11	DM*110 - DM*119
TID120F16-1.5	12 - 12.9	16	20	20	48	82.8	83.4	81.2	12	DM*120 - DM*129
TID130F16-1.5	13 - 13.9	16	20	22	48	84.9	85.7	83	13	DM*130 - DM*139
TID140F16-1.5	14 - 14.9	16	20	24	48	89	89.8	87	14	DM*140 - DM*149
TID150F20-1.5	15 - 15.9	20	25	26	50	96	96.9	93.9	15	DM*150 - DM*159
TID160F20-1.5	16 - 16.9	20	25	27	50	99.1	100.1	96.8	16	DM*160 - DM*169
TID170F20-1.5	17 - 17.9	20	25	29	50	102.2	103.2	99.7	17	DM*170 - DM*179
TID180F25-1.5	18 - 18.9	25	32	30	56	111.3	112.4	108.5	18	DM*180 - DM*189
TID190F25-1.5	19 - 19.9	25	32	33	56	114.3	115.4	111.3	19	DM*190 - DM*199
TID200F25-1.5	20 - 20.9	25	32	34	56	117.4	118.6	115.1	20	DM*200 - DM*209
TID210F25-1.5	21 - 21.9	25	32	36	56	120.5	121.7	118	21	DM*210 - DM*219
TID220F25-1.5	22 - 22.9	25	32	37	56	123.6	124.8	120.9	22	DM*220 - DM*229
TID230F32-1.5	23 - 23.9	32	42	39	60	130.6	132	127.8	23	DM*230 - DM*239
TID240F32-1.5	24 - 24.9	32	42	40	60	133.7	135.1	130.7	24	DM*240 - DM*249
TID250F32-1.5	25 - 25.9	32	42	43	60	136.8	138.3	133.7	25	DM*250 - DM*259

Tool diameter	Hole diameter tolerance*
ø6 - ø17.9	+0.03 / 0
ø18 - ø25.9	+0.035 / 0

*Just for reference

- An overall length (OAL) differs based on each head geometry.
 - For drill diameters from ø8 - ø9.9 mm, the drill shoulder to shank bottom distance when a DMC drill head is mounted is 0.3 mm shorter when compared with a DMP head of the equivalent sizes. The distances are the same for the DMC and DMP drill heads in other diameters than the above.

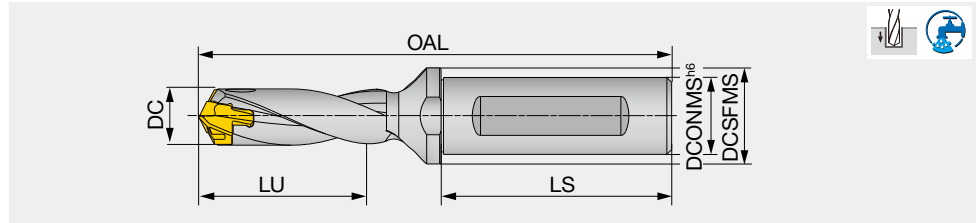
SPARE PARTS



Designation	Clamping key
TID060-090	K-TID6-9.99
TID100-190	K-TID10-19.99
TID200-250	K-TID20-26.99

TIDU-F L/D=3

Head changeable drill



Inch	DC	DCONMS	DCSFMS	LU	LS	OAL			Pocket size	Head
						DMP/H/N	DMC	DMF		
TIDU0394F0625-3	0.394 - 0.409	0.625	0.787	1.181	1.890	3.709	3.733	2.993	10	DM*100 - DM*104
TIDU0413F0625-3	0.413 - 0.429	0.625	0.787	1.260	1.890	3.768	3.792	3.062	10	DM*105 - DM*109
TIDU0433F0625-3	0.433 - 0.449	0.625	0.787	1.299	1.890	3.843	3.867	3.133	11	DM*110 - DM*114
TIDU0453F0625-3	0.453 - 0.469	0.625	0.787	1.378	1.890	3.902	3.926	3.192	11	DM*115 - DM*119
TIDU0472F0625-3	0.472 - 0.488	0.625	0.787	1.417	1.890	3.976	4.000	3.283	12	DM*120 - DM*124
TIDU0492F0625-3	0.492 - 0.508	0.625	0.787	1.457	1.890	4.035	4.059	3.342	12	DM*125 - DM*129
TIDU0512F0625-3	0.512 - 0.528	0.625	0.787	1.535	1.890	4.118	4.149	3.410	13	DM*130 - DM*134
TIDU0532F0625-3	0.532 - 0.547	0.625	0.787	1.614	1.890	4.177	4.208	3.469	13	DM*135 - DM*139
TIDU0551F0625-3	0.551 - 0.567	0.625	0.787	1.654	1.890	4.335	4.366	3.650	14	DM*140 - DM*144
TIDU0571F0625-3	0.571 - 0.587	0.625	0.787	1.732	1.890	4.394	4.425	3.709	14	DM*145 - DM*149
TIDU0591F0750-3	0.591 - 0.626	0.750	0.984	1.772	1.969	4.673	4.708	3.776	15	DM*150 - DM*159
TIDU0630F0750-3	0.630 - 0.665	0.750	0.984	1.890	1.969	4.854	4.893	3.835	16	DM*160 - DM*169
TIDU0669F0750-3	0.669 - 0.705	0.750	0.984	2.008	1.969	5.035	5.074	3.906	17	DM*170 - DM*179
TIDU0709F1000-3	0.709 - 0.744	1.000	1.260	2.126	2.205	5.453	5.496	3.965	18	DM*180 - DM*189
TIDU0748F1000-3	0.748 - 0.783	1.000	1.260	2.244	2.205	5.630	5.673	4.037	19	DM*190 - DM*199
TIDU0787F1000-3	0.787 - 0.823	1.000	1.260	2.362	2.205	5.811	5.838	4.096	20	DMP200 - DMP209
TIDU0827F1000-3	0.827 - 0.862	1.000	1.260	2.480	2.205	5.992	6.040	4.250	21	DMP210 - DMP219
TIDU0866F1000-3	0.866 - 0.902	1.000	1.260	2.598	2.205	6.173	6.223	4.309	22	DMP220 - DMP229
TIDU0906F1250-3	0.906 - 0.941	1.250	1.654	2.718	2.362	6.508	6.562	4.584	23	DMP230 - DMP239
TIDU0945F1250-3	0.945 - 0.980	1.250	1.654	2.835	2.362	6.689	6.744	4.757	24	DMP240 - DMP249
TIDU0984F1250-3	0.984 - 1.020	1.250	1.654	2.953	2.362	6.870	6.939	4.927	25	DMP250 - DMP259

Tool diameter (in)	Hole diameter tolerance*
ø0.394" - ø0.705"	+0.0015" / 0
ø0.709" - ø1.020"	+0.0018" / 0

- An overall length (OAL) differs for when the DMP insert is mounted and when the DMC is mounted. (No difference for the drill shoulder)
 - For drill diameters from ø0.315" - ø0.390", the drill shoulder to shank bottom distance when a DMC drill head is mounted is 0.012" shorter when compared with a DMP head of the equivalent sizes. The distances are the same for the DMC and DMP drill heads in other diameters than the above.

*Just for reference

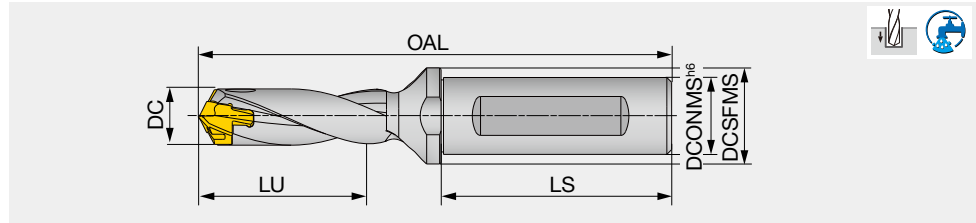
SPARE PARTS



Designation	Clamping key
TIDU0394 - TIDU0748	K-TID10-19.99
TIDU0787 - TIDU0984	K-TID20-26.99

TID-F L/D=3

Exchangeable head drill



Metric	DC	DCONMS	DCSFMS	LU	LS	OAL			Pocket size	Head
						DMP/H/N	DMC	DMF		
TID060F12-3	6 - 6.4	12	16	19	45	76.9	77	76	6	DM*060 - DM*064
TID065F12-3	6.5 - 6.9	12	16	21	45	78.7	78.8	77.8	6.5	DM*065 - DM*069
TID070F12-3	7 - 7.4	12	16	22	45	80.5	80.9	79.6	7	DM*070 - DM*074
TID075F12-3	7.5 - 7.9	12	16	24	45	82	82.4	81.1	7	DM*075 - DM*079
TID080F12-3	8 - 8.4	12	16	26	45	84.3	84.4	83.4	8	DM*080 - DM*084
TID085F12-3	8.5 - 8.9	12	16	28	45	85.8	85.9	84.9	8	DM*085 - DM*089
TID090F12-3	9 - 9.4	12	16	29	45	87.7	87.8	86.6	9	DM*090 - DM*094
TID095F12-3	9.5 - 9.9	12	16	31	45	89.2	89.3	88.1	9	DM*095 - DM*099
TID100F16-3	10 - 10.4	16	20	32	48	94.1	94.7	92.7	10	DM*100 - DM*104
TID105F16-3	10.5 - 10.9	16	20	34	48	95.6	96.2	94.2	10	DM*105 - DM*109
TID110F16-3	11 - 11.4	16	20	35	48	97.5	98.1	95.9	11	DM*110 - DM*114
TID115F16-3	11.5 - 11.9	16	20	37	48	99	99.6	97.4	11	DM*115 - DM*119
TID120F16-3	12 - 12.4	16	20	38	48	100.8	101.4	99.2	12	DM*120 - DM*124
TID125F16-3	12.5 - 12.9	16	20	39	48	102.3	102.9	100.7	12	DM*125 - DM*129
TID130F16-3	13 - 13.4	16	20	41	48	104.4	105.2	102.5	13	DM*130 - DM*134
TID135F16-3	13.5 - 13.9	16	20	44	48	105.9	106.7	104	13	DM*135 - DM*139
TID140F16-3	14 - 14.4	16	20	45	48	110	110.8	108	14	DM*140 - DM*144
TID145F16-3	14.5 - 14.9	16	20	47	48	111.5	112.3	109.5	14	DM*145 - DM*149
TID150F20-3	15 - 15.9	20	25	48	50	118.5	119.4	116.4	15	DM*150 - DM*159
TID160F20-3	16 - 16.9	20	25	51	50	123.1	124.1	120.8	16	DM*160 - DM*169
TID170F20-3	17 - 17.9	20	25	54	50	127.7	128.7	125.2	17	DM*170 - DM*179
TID180F25-3	18 - 18.9	25	32	57	56	138.3	139.4	135.5	18	DM*180 - DM*189
TID190F25-3	19 - 19.9	25	32	61	56	142.8	143.9	139.8	19	DM*190 - DM*199
TID200F25-3	20 - 20.9	25	32	64	56	147.4	148.6	145.1	20	DM*200 - DM*209
TID210F25-3	21 - 21.9	25	32	67	56	152	153.2	149.5	21	DM*210 - DM*219
TID220F25-3	22 - 22.9	25	32	70	56	156.6	157.8	153.9	22	DM*220 - DM*229
TID230F32-3	23 - 23.9	32	42	73	60	165.1	166.5	162.3	23	DM*230 - DM*239
TID240F32-3	24 - 24.9	32	42	76	60	169.7	171.1	166.7	24	DM*240 - DM*249
TID250F32-3	25 - 25.9	32	42	80	60	174.3	175.8	171.2	25	DM*250 - DM*259

Tool diameter	Hole diameter tolerance*
ø6 - ø17.9	+0.04 / 0
ø18 - ø25.9	+0.045 / 0

*Just for reference

- An overall length (OAL) differs based on each head geometry.
- For drill diameters from ø8 - ø9.9 mm, the drill shoulder to shank bottom distance when a DMC drill head is mounted is 0.3 mm shorter when compared with a DMP head of the equivalent sizes. The distances are the same for the DMC and DMP drill heads in other diameters than the above.

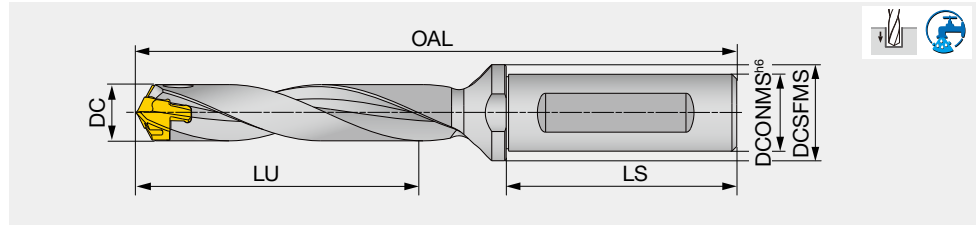
SPARE PARTS



Designation	Clamping key
TID060-095	K-TID6-9.99
TID100-190	K-TID10-19.99
TID200-250	K-TID20-26.99

TIDU-F L/D=5

Head changeable drill



Inch	DC	DCONMS	DCSFMS	LU	LS	OAL			Pocket size	Head
						DMP/H/N	DMC	DMF		
TIDU0394F0625-5	0.394 - 0.409	0.625	0.787	1.969	1.890	4.496	4.514	3.465	10	DM*100 - DM*104
TIDU0413F0625-5	0.413 - 0.429	0.625	0.787	2.087	1.890	4.594	4.618	3.574	10	DM*105 - DM*109
TIDU0433F0625-5	0.433 - 0.449	0.625	0.787	2.165	1.890	4.709	4.733	3.684	11	DM*110 - DM*114
TIDU0453F0625-5	0.453 - 0.469	0.625	0.787	2.283	1.890	4.807	4.831	3.783	11	DM*115 - DM*119
TIDU0472F0625-5	0.472 - 0.488	0.625	0.787	2.362	1.890	4.921	4.945	3.913	12	DM*120 - DM*124
TIDU0492F0625-5	0.492 - 0.508	0.625	0.787	2.441	1.890	5.020	5.044	4.011	12	DM*125 - DM*129
TIDU0512F0625-5	0.512 - 0.528	0.625	0.787	2.559	1.890	5.142	5.173	4.119	13	DM*130 - DM*134
TIDU0532F0625-5	0.532 - 0.547	0.625	0.787	2.677	1.890	5.240	5.271	4.217	13	DM*135 - DM*139
TIDU0551F0625-5	0.551 - 0.567	0.625	0.787	2.756	1.890	5.440	5.471	4.438	14	DM*140 - DM*144
TIDU0571F0625-5	0.571 - 0.587	0.625	0.787	2.874	1.890	5.539	5.570	4.536	14	DM*145 - DM*149
TIDU0591F0750-5	0.591 - 0.626	0.750	0.984	2.953	1.969	5.854	5.889	4.642	15	DM*150 - DM*159
TIDU0630F0750-5	0.630 - 0.665	0.750	0.984	3.150	1.969	6.114	6.153	4.740	16	DM*160 - DM*169
TIDU0669F0750-5	0.669 - 0.705	0.750	0.984	3.346	1.969	6.374	6.413	4.851	17	DM*170 - DM*179
TIDU0709F1000-5	0.709 - 0.744	1.000	1.260	3.543	2.205	6.870	6.913	4.949	18	DM*180 - DM*189
TIDU0748F1000-5	0.748 - 0.783	1.000	1.260	3.740	2.205	7.126	7.169	5.060	19	DM*190 - DM*199
TIDU0787F1000-5	0.787 - 0.823	1.000	1.260	3.937	2.205	7.386	7.432	5.159	20	DMP200 - DMP209
TIDU0827F1000-5	0.827 - 0.862	1.000	1.260	4.134	2.205	7.646	7.694	5.353	21	DMP210 - DMP219
TIDU0866F1000-5	0.866 - 0.902	1.000	1.260	4.331	2.205	7.906	7.956	5.451	22	DMP220 - DMP229
TIDU0906F1250-5	0.906 - 0.941	1.250	1.654	4.528	2.362	8.319	8.373	5.765	23	DMP230 - DMP239
TIDU0945F1250-5	0.945 - 0.980	1.250	1.654	4.724	2.362	8.579	8.634	6.017	24	DMP240 - DMP249
TIDU0984F1250-5	0.984 - 1.020	1.250	1.654	4.921	2.362	8.839	8.898	6.266	25	DMP250 - DMP259

Tool diameter (in)	Hole diameter tolerance*
ø0.394" - ø1.020"	+0.0020" / 0

*Just for reference

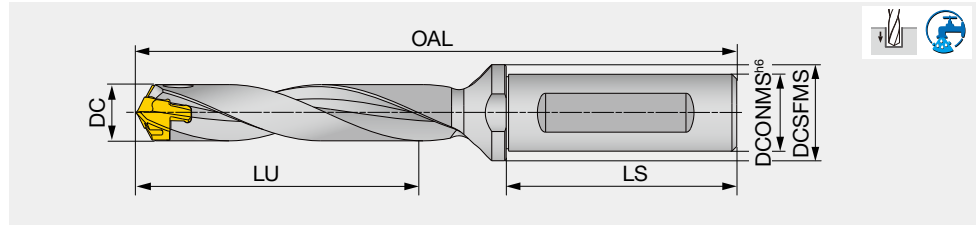
- An overall length (OAL) differs for when the DMP insert is mounted and when the DMC is mounted. (No difference for the drill shoulder)
- For drill diameters from ø0.315" - ø0.390", the drill shoulder to shank bottom distance when a DMC drill head is mounted is 0.012" shorter when compared with a DMP head of the equivalent sizes. The distances are the same for the DMC and DMP drill heads in other diameters than the above.

SPARE PARTS

Designation	Clamping key
TIDU0394 - TIDU0748	K-TID10-19.99
TIDU0787 - TIDU0984	K-TID20-26.99

TID-F L/D=5

Exchangeable head drill



Designation	DC	DCONMS	DCSFMS	LU	LS	OAL			Pocket size	Head
						DMP/H/N	DMC	DMF		
TID060F12-5	6 - 6.4	12	16	31	45	88.9	89	88	6	DM*060 - DM*064
TID065F12-5	6.5 - 6.9	12	16	34	45	91.7	91.8	90.8	6.5	DM*065 - DM*069
TID070F12-5	7 - 7.4	12	16	36	45	94.5	94.9	93.6	7	DM*070 - DM*074
TID075F12-5	7.5 - 7.9	12	16	39	45	97	97.4	96.1	7	DM*075 - DM*079
TID080F12-5	8 - 8.4	12	16	42	45	100.3	100.4	99.4	8	DM*080 - DM*084
TID085F12-5	8.5 - 8.9	12	16	45	45	102.8	102.9	101.9	8	DM*085 - DM*089
TID090F12-5	9 - 9.4	12	16	47	45	105.7	105.8	104.6	9	DM*090 - DM*094
TID095F12-5	9.5 - 9.9	12	16	50	45	108.2	108.3	107.1	9	DM*095 - DM*099
TID100F16-5	10 - 10.4	16	20	52	48	114.1	114.7	112.7	10	DM*100 - DM*104
TID105F16-5	10.5 - 10.9	16	20	55	48	116.6	117.2	115.2	10	DM*105 - DM*109
TID110F16-5	11 - 11.4	16	20	57	48	119.5	120.1	117.9	11	DM*110 - DM*114
TID115F16-5	11.5 - 11.9	16	20	60	48	122	122.6	120.4	11	DM*115 - DM*119
TID120F16-5	12 - 12.4	16	20	62	48	124.8	125.4	123.2	12	DM*120 - DM*124
TID125F16-5	12.5 - 12.9	16	20	64	48	127.3	127.9	125.7	12	DM*125 - DM*129
TID130F16-5	13 - 13.4	16	20	67	48	130.4	131.2	128.5	13	DM*130 - DM*134
TID135F16-5	13.5 - 13.9	16	20	71	48	132.9	133.7	131	13	DM*135 - DM*139
TID140F16-5	14 - 14.4	16	20	73	48	138	138.8	136	14	DM*140 - DM*144
TID145F16-5	14.5 - 14.9	16	20	76	48	140.5	141.3	138.5	14	DM*145 - DM*149
TID150F20-5	15 - 15.9	20	25	78	50	148.5	149.4	146.4	15	DM*150 - DM*159
TID160F20-5	16 - 16.9	20	25	83	50	155.1	156.1	152.8	16	DM*160 - DM*169
TID170F20-5	17 - 17.9	20	25	88	50	161.7	162.7	159.2	17	DM*170 - DM*179
TID180F25-5	18 - 18.9	25	32	93	56	174.3	175.4	171.5	18	DM*180 - DM*189
TID190F25-5	19 - 19.9	25	32	99	56	180.8	181.9	177.8	19	DM*190 - DM*199
TID200F25-5	20 - 20.9	25	32	104	56	187.6	188.8	185.3	20	DM*200 - DM*209
TID210F25-5	21 - 21.9	25	32	109	56	194.2	195.4	191.8	21	DM*210 - DM*219
TID220F25-5	22 - 22.9	25	32	114	56	200.8	202.1	198.1	22	DM*220 - DM*229
TID230F32-5	23 - 23.9	32	42	119	60	211.3	212.7	208.5	23	DM*230 - DM*239
TID240F32-5	24 - 24.9	32	42	124	60	217.9	219.3	214.9	24	DM*240 - DM*249
TID250F32-5	25 - 25.9	32	42	130	60	224.5	226	221.4	25	DM*250 - DM*259

Tool diameter	Hole diameter tolerance*
ø6 - ø25.9	+0.05 / 0

*Just for reference

- An overall length (OAL) differs based on each head geometry.
- For drill diameters from ø8 - ø9.9 mm, the drill shoulder to shank bottom distance when a DMC drill head is mounted is 0.3 mm shorter when compared with a DMP head of the equivalent sizes. The distances are the same for the DMC and DMP drill heads in other diameters than the above.

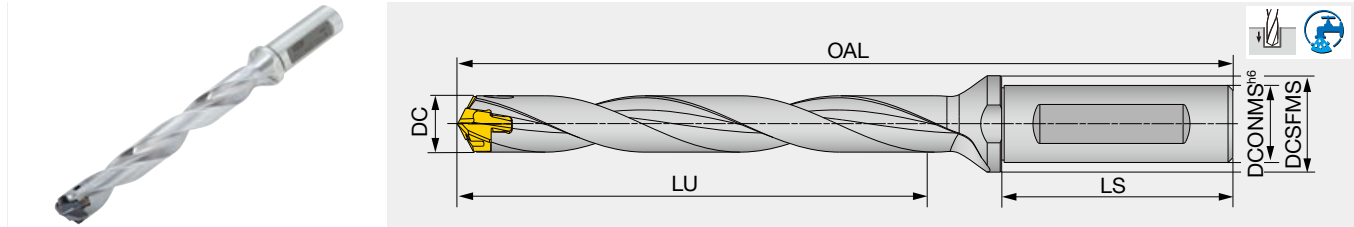
SPARE PARTS



Designation	Clamping key
TID060-095	K-TID6-9.99
TID100-190	K-TID10-19.99
TID200-250	K-TID20-26.99

TIDU-F L/D=8

Head changeable drill



Inch	DC	OAL		LU	LS	DMP/H/N	DMC	DMF	Pocket size	Head
		DCONMS	DCSFMS							
TIDU0394F0625-8	0.394 - 0.409	0.625	0.787	3.150	1.890	5.677	5.701	4.511	10	DM*100 - DM*104
TIDU0413F0625-8	0.413 - 0.429	0.625	0.787	3.307	1.890	5.835	5.859	4.669	10	DM*105 - DM*109
TIDU0433F0625-8	0.433 - 0.449	0.625	0.787	3.465	1.890	6.008	6.032	4.858	11	DM*110 - DM*114
TIDU0453F0625-8	0.453 - 0.469	0.625	0.787	3.622	1.890	6.165	6.189	5.015	11	DM*115 - DM*119
TIDU0472F0625-8	0.472 - 0.488	0.625	0.787	3.780	1.890	6.339	6.363	5.181	12	DM*120 - DM*124
TIDU0492F0625-8	0.492 - 0.508	0.625	0.787	3.937	1.890	6.496	6.52	5.339	12	DM*125 - DM*129
TIDU0512F0625-8	0.512 - 0.528	0.625	0.787	4.094	1.890	6.677	6.708	5.619	13	DM*130 - DM*134
TIDU0532F0625-8	0.532 - 0.547	0.625	0.787	4.252	1.890	6.835	6.866	5.776	13	DM*135 - DM*139
TIDU0551F0625-8	0.551 - 0.567	0.625	0.787	4.409	1.890	7.091	7.122	5.941	14	DM*140 - DM*144
TIDU0571F0625-8	0.571 - 0.587	0.625	0.787	4.567	1.890	7.252	7.283	6.098	14	DM*145 - DM*149
TIDU0591F0750-8	0.591 - 0.626	0.750	0.984	4.724	1.969	7.626	7.661	6.268	15	DM*150 - DM*159
TIDU0630F0750-8	0.630 - 0.665	0.750	0.984	5.039	1.969	8.004	8.043	6.426	16	DM*160 - DM*169
TIDU0669F0750-8	0.669 - 0.705	0.750	0.984	5.354	1.969	8.382	8.421	6.596	17	DM*170 - DM*179
TIDU0709F1000-8	0.709 - 0.744	1.000	1.260	5.669	2.205	8.996	9.039	6.753	18	DM*180 - DM*189
TIDU0748F1000-8	0.748 - 0.783	1.000	1.260	5.984	2.205	9.370	9.413	7.006	19	DM*190 - DM*199
TIDU0787F1000-8	0.787 - 0.823	1.000	1.260	6.299	2.205	9.748	9.795	7.164	20	DMP200 - DMP209
TIDU0827F1000-8	0.827 - 0.862	1.000	1.260	6.614	2.205	10.126	10.174	7.537	21	DMP210 - DMP219
TIDU0866F1000-8	0.866 - 0.902	1.000	1.260	6.929	2.205	10.504	10.554	7.907	22	DMP220 - DMP229
TIDU0906F1250-8	0.906 - 0.941	1.250	1.654	7.244	2.362	11.035	11.089	8.274	23	DMP230 - DMP239
TIDU0945F1250-8	0.945 - 0.980	1.250	1.654	7.559	2.362	11.413	11.468	8.876	24	DMP240 - DMP249
TIDU0984F1250-8	0.984 - 1.020	1.250	1.654	7.874	2.362	11.791	11.850	9.244	25	DMP250 - DMP259

Tool diameter (in)	Hole diameter tolerance*
ø0.394" - ø0.705"	+0.0020" / 0
ø0.709" - ø1.020"	+0.0022" / 0

- An overall length (OAL) differs for when the DMP insert is mounted and when the DMC is mounted. (No difference for the drill shoulder)
 - For drill diameters from ø0.315" - ø0.390", the drill shoulder to shank bottom distance when a DMC drill head is mounted is 0.012" shorter when compared with a DMP head of the equivalent sizes. The distances are the same for the DMC and DMP drill heads in other diameters than the above.

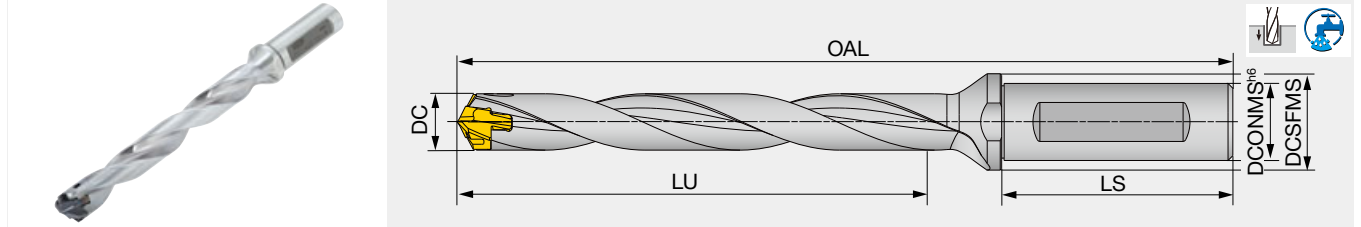
*Just for reference

SPARE PARTS

Designation	Clamping key
TIDU0394 - TIDU0748	K-TID10-19.99
TIDU0787 - TIDU0984	K-TID20-26.99

TID-F L/D=8

Exchangeable head drill



Metric	DC	DCONMS	DCSFMS	LU	LS	OAL			Pocket size	Head
						DMP/H/N	DMC	DMF		
TID070F12-8	7 - 7.4	12	16	57	45	115.5	115.9	114.6	7	DM*070 - DM*074
TID075F12-8	7.5 - 7.9	12	16	61	45	119.5	119.9	118.6	7	DM*075 - DM*079
TID080F12-8	8 - 8.4	12	16	66	45	124.3	124.4	123.4	8	DM*080 - DM*084
TID085F12-8	8.5 - 8.9	12	16	70	45	128.3	128.4	127.4	8	DM*085 - DM*089
TID090F12-8	9 - 9.4	12	16	74	45	132.7	132.8	131.6	9	DM*090 - DM*094
TID095F12-8	9.5 - 9.9	12	16	78	45	136.7	136.8	135.6	9	DM*095 - DM*099
TID100F16-8	10 - 10.4	16	20	82	48	144.1	144.7	142.7	10	DM*100 - DM*104
TID105F16-8	10.5 - 10.9	16	20	86	48	148.1	148.7	146.7	10	DM*105 - DM*109
TID110F16-8	11 - 11.4	16	20	90	48	152.5	153.1	150.9	11	DM*110 - DM*114
TID115F16-8	11.5 - 11.9	16	20	94	48	156.5	157.1	154.9	11	DM*115 - DM*119
TID120F16-8	12 - 12.4	16	20	98	48	160.8	161.4	159.2	12	DM*120 - DM*124
TID125F16-8	12.5 - 12.9	16	20	102	48	164.8	165.4	163.2	12	DM*125 - DM*129
TID130F16-8	13 - 13.4	16	20	106	48	169.4	170.2	167.5	13	DM*130 - DM*134
TID135F16-8	13.5 - 13.9	16	20	111	48	173.4	174.2	171.5	13	DM*135 - DM*139
TID140F16-8	14 - 14.4	16	20	115	48	180	180.8	178	14	DM*140 - DM*144
TID145F16-8	14.5 - 14.9	16	20	119	48	184	184.8	182	14	DM*145 - DM*149
TID150F20-8	15 - 15.9	20	25	123	50	193.5	194.4	191.4	15	DM*150 - DM*159
TID160F20-8	16 - 16.9	20	25	131	50	203.1	204.1	200.8	16	DM*160 - DM*169
TID170F20-8	17 - 17.9	20	25	139	50	212.7	213.7	210.2	17	DM*170 - DM*179
TID180F25-8	18 - 18.9	25	32	147	56	228.3	229.4	225.5	18	DM*180 - DM*189
TID190F25-8	19 - 19.9	25	32	156	56	237.8	238.9	234.8	19	DM*190 - DM*199
TID200F25-8	20 - 20.9	25	32	164	56	247.4	248.6	245.1	20	DM*200 - DM*209
TID210F25-8	21 - 21.9	25	32	172	56	257	258.2	254.5	21	DM*210 - DM*219
TID220F25-8	22 - 22.9	25	32	180	56	266.6	267.8	263.9	22	DM*220 - DM*229
TID230F32-8	23 - 23.9	32	42	188	60	280.1	281.5	277.3	23	DM*230 - DM*239
TID240F32-8	24 - 24.9	32	42	196	60	289.7	291.1	286.7	24	DM*240 - DM*249
TID250F32-8	25 - 25.9	32	42	205	60	299.3	300.8	296.2	25	DM*250 - DM*259

Tool diameter	Hole diameter tolerance*
ø7 - ø17.9	+0.05 / 0
ø18 - ø25.9	+0.055 / 0

*Just for reference

- An overall length (OAL) differs based on each head geometry.
- For drill diameters from ø8 - ø9.9 mm, the drill shoulder to shank bottom distance when a DMC drill head is mounted is 0.3 mm shorter when compared with a DMP head of the equivalent sizes. The distances are the same for the DMC and DMP drill heads in other diameters than the above.

SPARE PARTS

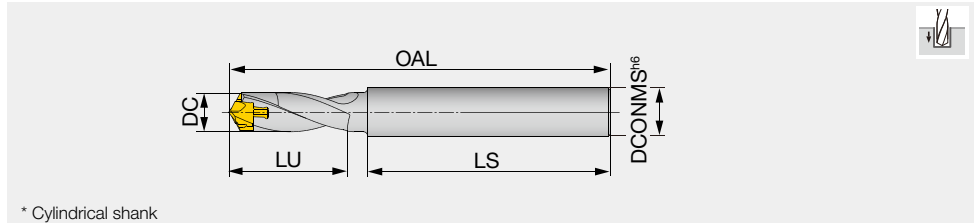


Designation	Clamping key
TID070-095	K-TID6-9.99
TID100-190	K-TID10-19.99
TID200-250	K-TID20-26.99

New

TID-R-2E L/D=2

Exchangeable head drill (For external coolant supply)



Metric	DC	DCONMS	LU	LS	OAL			Pocket size	Head
					DMP/H/N	DMC	DMF		
TID060R8-2E	6 - 6.4	8	12	45	66.1	66.2	65.2	6	DM*060 - DM*064
TID065R8-2E	6.5 - 6.9	8	13	45	67.2	67.3	66.3	6.5	DM*065 - DM*069
TID070R8-2E	7 - 7.4	8	13	45	68	68.4	67.1	7	DM*070 - DM*074
TID075R8-2E	7.5 - 7.9	8	14	45	69	69.4	68.1	7	DM*075 - DM*079
TID080R10-2E	8 - 8.9	10	15	50	75.2	75.3	74.3	8	DM*080 - DM*089
TID090R10-2E	9 - 9.9	10	17	50	77.4	77.5	76.3	9	DM*090 - DM*099
TID100R12-2E	10 - 10.9	12	22	60	94.3	94.9	92.9	10	DM*100 - DM*109
TID110R12-2E	11 - 11.9	12	24	60	96.5	97.1	94.9	11	DM*110 - DM*119
TID120R14-2E	12 - 12.9	14	26	65	103.6	104.2	102	12	DM*120 - DM*129
TID130R14-2E	13 - 13.9	14	27	65	108.8	109.6	106.9	13	DM*130 - DM*139
TID140R16-2E	14 - 14.9	16	29	70	115	115.8	113	14	DM*140 - DM*149
TID150R16-2E	15 - 15.9	16	32	70	118	118.9	115.9	15	DM*150 - DM*159
TID160R18-2E	16 - 16.9	18	33	70	122.2	123.2	119.9	16	DM*160 - DM*169

Tool diameter	Hole diameter tolerance*
ø6 - ø16.9	+0.04 / 0

*Just for reference

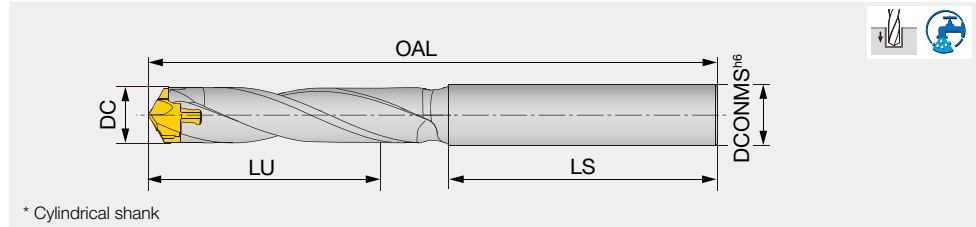
- An overall length (OAL) differs based on each head geometry.
- When using the drill at a higher feed rate, make sure to provide an axial support by placing the overhang adjusting screw at the drill shank end in the tool holder. This will prevent high thrust force from pushing the drill back into the holder during drilling.
- When axially adjusting the shank inside the holder to obtain a required drill overhang, make sure the shank length remaining inside the holder does not come short of the minimum clamping length (LSCN) specified by the holder supplier.
- For drill diameters from ø8 - ø9.9 mm, the drill shoulder to shank bottom distance when a DMC drill head is mounted is 0.3 mm shorter when compared with a DMP head of the equivalent sizes. The distances are the same for the DMC and DMP drill heads in other diameters than the above.

SPARE PARTS

Designation	Clamping key
TID060-095	K-TID6-9.99
TID100-160	K-TID10-19.99

TID-R L/D=3.5

Exchangeable head drill



Metric	DC	DCONMS	LU	LS	OAL			Pocket size	Head
					DMP/H/N	DMC	DMF		
TID060R8-3.5	6 - 6.4	8	21	45	75.6	75.8	74.8	6	DM*060 - DM*064
TID065R8-3.5	6.5 - 6.9	8	23	45	77.5	77.6	76.6	6.5	DM*065 - DM*069
TID070R8-3.5	7 - 7.4	8	25	45	79.1	79.5	78.2	7	DM*070 - DM*074
TID075R8-3.5	7.5 - 7.9	8	26	45	80.8	81.3	80	7	DM*075 - DM*079
TID080R10-3.5	8 - 8.4	10	28	50	87.8	87.9	86.9	8	DM*080 - DM*084
TID085R10-3.5	8.5 - 8.9	10	30	50	89.5	89.7	88.6	8	DM*085 - DM*089
TID090R10-3.5	9 - 9.4	10	32	50	91.4	91.6	90.4	9	DM*090 - DM*094
TID095R10-3.5	9.5 - 9.9	10	33	50	93.2	93.3	92.1	9	DM*095 - DM*099
TID100R12-3.5	10 - 10.4	12	42	60	114	114.7	112.7	10	DM*100 - DM*104
TID105R12-3.5	10.5 - 10.9	12	44	60	115.7	116.3	114.4	10	DM*105 - DM*109
TID110R12-3.5	11 - 11.4	12	46	65	123.1	123.8	121.6	11	DM*110 - DM*114
TID115R12-3.5	11.5 - 11.9	12	48	65	124.8	125.4	123.2	11	DM*115 - DM*119
TID120R14-3.5	12 - 12.4	14	50	65	127.2	127.8	125.6	12	DM*120 - DM*124
TID125R14-3.5	12.5 - 12.9	14	52	65	128.8	129.5	127.3	12	DM*125 - DM*129
TID130R14-3.5	13 - 13.4	14	54	65	132.7	133.5	130.9	13	DM*130 - DM*134
TID135R14-3.5	13.5 - 13.9	14	56	65	134.4	135.2	132.5	13	DM*135 - DM*139
TID140R16-3.5	14 - 14.4	16	58	70	142.2	143	140.2	14	DM*140 - DM*144
TID145R16-3.5	14.5 - 14.9	16	60	70	143.8	144.7	141.9	14	DM*145 - DM*149
TID150R16-3.5	15 - 15.9	16	64	70	148.4	149.4	146.3	15	DM*150 - DM*159
TID160R18-3.5	16 - 16.9	18	68	70	153.9	154.9	151.7	16	DM*160 - DM*169
TID170R18-3.5	17 - 17.9	18	72	70	158.5	159.4	155.9	17	DM*170 - DM*179
TID180R20-3.5	18 - 18.9	20	76	70	164	165.1	161.2	18	DM*180 - DM*189
TID190R20-3.5	19 - 19.9	20	80	70	168.4	169.5	165.4	19	DM*190 - DM*199

Tool diameter	Hole diameter tolerance*
ø6 - ø19.9	+0.04 / 0

*Just for reference

- An overall length (OAL) differs based on each head geometry.
- When using the drill at a higher feed rate, make sure to provide an axial support by placing the overhang adjusting screw at the drill shank end in the tool holder. This will prevent high thrust force from pushing the drill back into the holder during drilling.
- When axially adjusting the shank inside the holder to obtain a required drill overhang, make sure the shank length remaining inside the holder does not come short of the minimum clamping length (LSCN) specified by the holder supplier.
- For drill diameters from ø8 - ø9.9 mm, the drill shoulder to shank bottom distance when a DMC drill head is mounted is 0.3 mm shorter when compared with a DMP head of the equivalent sizes. The distances are the same for the DMC and DMP drill heads in other diameters than the above.

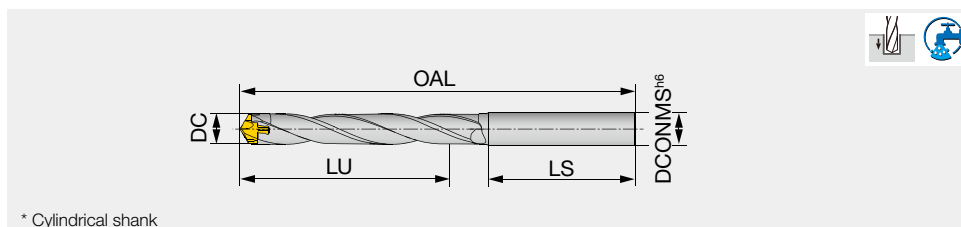
SPARE PARTS

Designation	Clamping key
TID060-095	K-TID6-9.99
TID100-190	K-TID10-19.99



TID-R L/D=6

Exchangeable head drill



Metric	DC	DCONMS	LU	LS	OAL			Pocket size	Head
					DMP/H/N	DMC	DMF		
TID060R8-6	6 - 6.4	8	36	45	91.6	91.8	90.8	6	DM*060 - DM*064
TID065R8-6	6.5 - 6.9	8	39	45	94.7	94.9	93.9	6.5	DM*065 - DM*069
TID070R8-6	7 - 7.4	8	42	45	97.6	98	96.7	7	DM*070 - DM*074
TID075R8-6	7.5 - 7.9	8	45	45	100.6	101	99.7	7	DM*075 - DM*079
TID080R10-6	8 - 8.4	10	48	50	108.8	108.9	107.9	8	DM*080 - DM*084
TID085R10-6	8.5 - 8.9	10	51	50	111.8	111.9	110.9	8	DM*085 - DM*089
TID090R10-6	9 - 9.4	10	54	50	114.9	115.1	113.9	9	DM*090 - DM*094
TID095R10-6	9.5 - 9.9	10	57	50	117.9	118.1	116.9	9	DM*095 - DM*099
TID100R12-6	10 - 10.4	12	68	60	140	140.7	138.7	10	DM*100 - DM*104
TID105R12-6	10.5 - 10.9	12	71	60	142.9	143.6	141.6	10	DM*105 - DM*109
TID110R12-6	11 - 11.4	12	75	65	151.6	152.3	150.1	11	DM*110 - DM*114
TID115R12-6	11.5 - 11.9	12	78	65	154.5	155.2	153	11	DM*115 - DM*119
TID120R14-6	12 - 12.4	14	81	65	158.2	158.8	156.6	12	DM*120 - DM*124
TID125R14-6	12.5 - 12.9	14	84	65	161.1	161.7	159.5	12	DM*125 - DM*129
TID130R14-6	13 - 13.4	14	88	65	166.2	167	164.4	13	DM*130 - DM*134
TID135R14-6	13.5 - 13.9	14	91	65	169.2	169.9	167.3	13	DM*135 - DM*139
TID140R16-6	14 - 14.4	16	94	70	178.2	179	176.2	14	DM*140 - DM*144
TID145R16-6	14.5 - 14.9	16	97	70	181.1	181.9	179.1	14	DM*145 - DM*149
TID150R16-6	15 - 15.9	16	104	70	188.2	189.1	186.1	15	DM*150 - DM*159
TID160R18-6	16 - 16.9	18	110	70	196.2	197.2	193.9	16	DM*160 - DM*169
TID170R18-6	17 - 17.9	18	117	70	203.2	204.2	200.7	17	DM*170 - DM*179
TID180R20-6	18 - 18.9	20	124	70	211.3	212.3	208.4	18	DM*180 - DM*189
TID190R20-6	19 - 19.9	20	130	70	218.1	219.2	215.1	19	DM*190 - DM*199

Tool diameter	Hole diameter tolerance*
ø6 - ø17.9	+0.05 / 0
ø18 - ø19.9	+0.055 / 0

*Just for reference

- An overall length (OAL) differs based on each head geometry.
- When using the drill at a higher feed rate, make sure to provide an axial support by placing the overhang adjusting screw at the drill shank end in the tool holder. This will prevent high thrust force from pushing the drill back into the holder during drilling.
- When axially adjusting the shank inside the holder to obtain a required drill overhang, make sure the shank length remaining inside the holder does not come short of the minimum clamping length (LSCN) specified by the holder supplier.
- For drill diameters from ø8 - ø9.9 mm, the drill shoulder to shank bottom distance when a DMC drill head is mounted is 0.3 mm shorter when compared with a DMP head of the equivalent sizes. The distances are the same for the DMC and DMP drill heads in other diameters than the above.

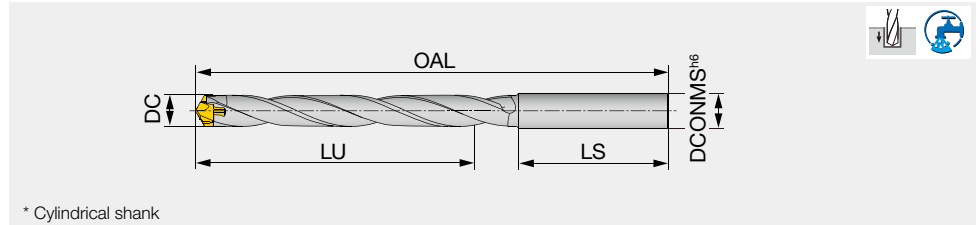
SPARE PARTS



Designation	Clamping key
TID060-095	K-TID6-9.99
TID100-190	K-TID10-19.99

TID-R L/D=8

Exchangeable head drill



Metric	DC	DCONMS	LU	LS	OAL			Pocket size	Head
					DMP/H/N	DMC	DMF		
TID060R8-8	6 - 6.4	8	48	45	104.4	104.6	103.6	6	DM*060 - DM*064
TID065R8-8	6.5 - 6.9	8	52	45	108.5	108.7	107.7	6.5	DM*065 - DM*069
TID070R8-8	7 - 7.4	8	56	45	112.4	112.8	111.5	7	DM*070 - DM*074
TID075R8-8	7.5 - 7.9	8	60	45	116.4	116.8	115.5	7	DM*075 - DM*079
TID080R10-8	8 - 8.4	10	64	50	125.6	125.7	124.7	8	DM*080 - DM*084
TID085R10-8	8.5 - 8.9	10	68	50	129.6	129.7	128.7	8	DM*085 - DM*089
TID090R10-8	9 - 9.4	10	72	50	133.7	133.9	132.7	9	DM*090 - DM*094
TID095R10-8	9.5 - 9.9	10	76	50	137.7	137.9	136.7	9	DM*095 - DM*099
TID100R12-8	10 - 10.4	12	89	60	160.8	161.5	159.5	10	DM*100 - DM*104
TID105R12-8	10.5 - 10.9	12	93	60	164.7	165.4	163.4	10	DM*105 - DM*109
TID110R12-8	11 - 11.4	12	98	65	174.4	175.1	172.9	11	DM*110 - DM*114
TID115R12-8	11.5 - 11.9	12	102	65	178.3	179	176.8	11	DM*115 - DM*119
TID120R14-8	12 - 12.4	14	106	65	183	183.6	181.4	12	DM*120 - DM*124
TID125R14-8	12.5 - 12.9	14	110	65	186.9	187.5	185.3	12	DM*125 - DM*129
TID130R14-8	13 - 13.4	14	115	65	193	193.8	191.2	13	DM*130 - DM*134
TID135R14-8	13.5 - 13.9	14	119	65	196.9	197.7	195	13	DM*135 - DM*139
TID140R16-8	14 - 14.4	16	123	70	207	207.8	205	14	DM*140 - DM*144
TID145R16-8	14.5 - 14.9	16	127	70	210.9	211.7	208.9	14	DM*145 - DM*149
TID150R16-8	15 - 15.9	16	136	70	220	220.9	217.9	15	DM*150 - DM*159
TID160R18-8	16 - 16.9	18	144	70	230	231	227.7	16	DM*160 - DM*169
TID170R18-8	17 - 17.9	18	153	70	239	240	236.5	17	DM*170 - DM*179
TID180R20-8	18 - 18.9	20	162	70	249.1	250.1	246.2	18	DM*180 - DM*189
TID190R20-8	19 - 19.9	20	170	70	257.9	259	254.9	19	DM*190 - DM*199

Tool diameter	Hole diameter tolerance*
ø6 - ø17.9	+0.05 / 0
ø18 - ø19.9	+0.055 / 0

*Just for reference

- An overall length (OAL) differs based on each head geometry.
- When using the drill at a higher feed rate, make sure to provide an axial support by placing the overhang adjusting screw at the drill shank end in the tool holder. This will prevent high thrust force from pushing the drill back into the holder during drilling.
- When axially adjusting the shank inside the holder to obtain a required drill overhang, make sure the shank length remaining inside the holder does not come short of the minimum clamping length (LSCN) specified by the holder supplier.
- For drill diameters from ø8 - ø9.9 mm, the drill shoulder to shank bottom distance when a DMC drill head is mounted is 0.3 mm shorter when compared with a DMP head of the equivalent sizes. The distances are the same for the DMC and DMP drill heads in other diameters than the above.

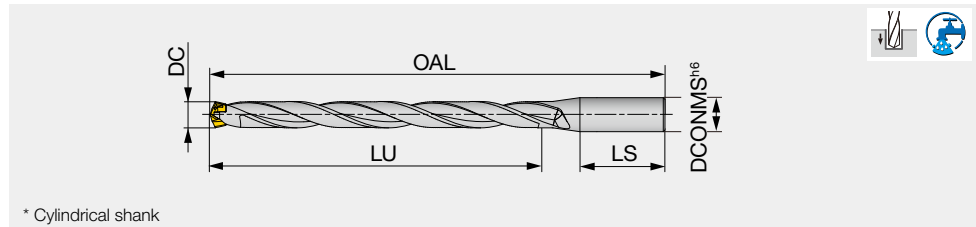
SPARE PARTS



Designation	Clamping key
TID060-095	K-TID6-9.99
TID100-190	K-TID10-19.99

TID-R L/D=12

Exchangeable head drill



Metric	DC	DCONMS	LU	LS	OAL			Pocket size	Head
					DMP/H/N	DMC	DMF		
TID080R12-12	8 - 8.4	12	98	45	156.3	156.4	155.4	8	DM*080 - DM*084
TID085R12-12	8.5 - 8.9	12	104	45	162.3	162.4	161.4	8	DM*085 - DM*089
TID090R12-12	9 - 9.4	12	110	45	168.7	168.8	167.6	9	DM*090 - DM*094
TID095R12-12	9.5 - 9.9	12	116	45	174.7	174.8	173.6	9	DM*095 - DM*099
TID100R16-12	10 - 10.4	16	122	48	184.1	184.7	182.7	10	DM*100 - DM*104
TID105R16-12	10.5 - 10.9	16	128	48	190.1	190.7	188.7	10	DM*105 - DM*109
TID110R16-12	11 - 11.4	16	134	48	196.5	197.1	194.9	11	DM*110 - DM*114
TID115R16-12	11.5 - 11.9	16	140	48	202.5	203.1	200.9	11	DM*115 - DM*119
TID120R16-12	12 - 12.4	16	146	48	208.8	209.4	207.2	12	DM*120 - DM*124
TID125R16-12	12.5 - 12.9	16	152	48	214.8	215.4	213.2	12	DM*125 - DM*129
TID130R16-12	13 - 13.4	16	158	48	221.4	222.2	219.5	13	DM*130 - DM*134
TID135R16-12	13.5 - 13.9	16	165	48	227.4	228.2	225.5	13	DM*135 - DM*139
TID140R16-12	14 - 14.4	16	171	48	236	236.8	234	14	DM*140 - DM*144
TID145R16-12	14.5 - 14.9	16	177	48	242	242.8	240	14	DM*145 - DM*149
TID150R20-12	15 - 15.9	20	183	50	253.5	254.4	251.4	15	DM*150 - DM*159
TID160R20-12	16 - 16.9	20	195	50	267.1	268.1	264.8	16	DM*160 - DM*169
TID170R20-12	17 - 17.9	20	207	50	280.7	281.7	278.2	17	DM*170 - DM*179
TID180R25-12	18 - 18.9	25	219	56	300.3	301.4	297.5	18	DM*180 - DM*189
TID190R25-12	19 - 19.9	25	232	56	313.8	314.9	310.8	19	DM*190 - DM*199
TID200R25-12	20 - 20.9	25	244	56	327.4	328.6	325.1	20	DM*200 - DM*209
TID210R25-12	21 - 21.9	25	256	56	341	342.2	338.5	21	DM*210 - DM*219
TID220R25-12	22 - 22.9	25	267	56	354.6	355.8	351.9	22	DM*220 - DM*229
TID230R32-12	23 - 23.9	32	276	60	372.1	373.5	369.3	23	DM*230 - DM*239
TID240R32-12	24 - 24.9	32	288	60	385.7	387.1	382.7	24	DM*240 - DM*249
TID250R32-12	25 - 25.9	32	300	60	399.3	400.8	396.2	25	DM*250 - DM*259

Tool diameter	Hole diameter tolerance*
ø8 - ø17.9	+0.05 / 0
ø18 - ø25.9	+0.055 / 0

*Just for reference

- An overall length (OAL) differs based on each head geometry.
- When using the drill at a higher feed rate, make sure to provide an axial support by placing the overhang adjusting screw at the drill shank end in the tool holder. This will prevent high thrust force from pushing the drill back into the holder during drilling.
- For drill diameters from ø8 - ø9.9 mm, the drill shoulder to shank bottom distance when a DMC drill head is mounted is 0.3 mm shorter when compared with a DMP head of the equivalent sizes. The distances are the same for the DMC and DMP drill heads in other diameters than the above.

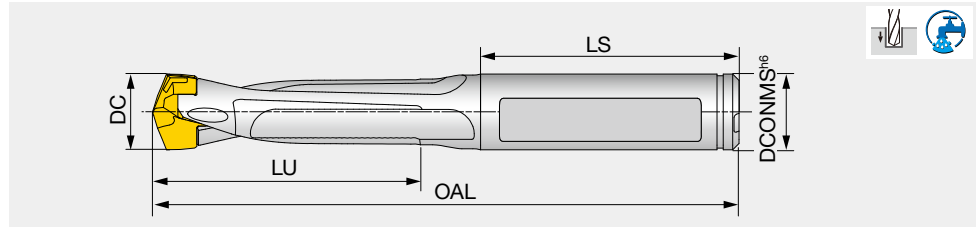
SPARE PARTS



Designation	Clamping key
TID080-095	K-TID6-9.99
TID100-190	K-TID10-19.99
TID200-250	K-TID20-26.99

TIDC L/D=3

Exchangeable head drill



Metric	DC	DCONMS	LU	LS	OAL			Pocket size	Head
					DMP/H/N	DMC	DMF		
TIDC075C8-3	7.5 - 7.9	8	23	36	70.1	70.6	69.2	7	DM*075 - DM*079
TIDC080C8-3	8 - 8.4	8	24	36	70.6	70.8	69.7	8	DM*080 - DM*084
TIDC085C9-3	8.5 - 8.9	9	26	36	72.8	73	71.9	8	DM*085 - DM*089
TIDC090C9-3	9 - 9.4	9	27	36	74.7	74.9	73.7	9	DM*090 - DM*094
TIDC095C10-3	9.5 - 9.9	10	29	36	76.2	76.4	75.2	9	DM*095 - DM*099
TIDC100C10-3	10 - 10.4	10	32	41	86.1	86.7	84.8	10	DM*100 - DM*104
TIDC105C11-3	10.5 - 10.9	11	33	41	87.6	88.2	86.3	10	DM*105 - DM*109
TIDC110C11-3	11 - 11.4	11	35	41	89.5	90.2	88	11	DM*110 - DM*114
TIDC115C12-3	11.5 - 11.9	12	37	41	91	91.7	89.5	11	DM*115 - DM*119
TIDC120C12-3	12 - 12.4	12	38	41	92.8	93.4	91.2	12	DM*120 - DM*124
TIDC125C13-3	12.5 - 12.9	13	40	46	98.3	98.9	96.7	12	DM*125 - DM*129
TIDC130C13-3	13 - 13.4	13	41	47	102.4	103.2	100.5	13	DM*130 - DM*134
TIDC135C14-3	13.5 - 13.9	14	43	43	99.9	100.7	98	13	DM*135 - DM*139
TIDC140C14-3	14 - 14.4	14	45	44	103	103.8	101	14	DM*140 - DM*144
TIDC145C15-3	14.5 - 14.9	15	46	45	105.5	106.3	103.5	14	DM*145 - DM*149
TIDC150C15-3	15 - 15.9	15	48	45	107.5	108.4	105.4	15	DM*150 - DM*159
TIDC160C16-3	16 - 16.9	16	51	48	117.5	118.5	115.2	16	DM*160 - DM*169
TIDC170C17-3	17 - 17.9	17	54	48	119.7	120.7	117.2	17	DM*170 - DM*179
TIDC180C18-3	18 - 18.9	18	57	48	123.3	124.4	120.5	18	DM*180 - DM*189
TIDC190C19-3	19 - 19.9	19	61	54	132.4	133.5	129.4	19	DM*190 - DM*199

Tool diameter	Hole diameter tolerance*
ø7.5 - ø17.9	+0.04 / 0
ø18 - ø19.9	+0.045 / 0

*Just for reference

- An overall length (OAL) differs based on each head geometry.
- When using the drill at a higher feed rate, make sure to provide an axial support by placing the overhang adjusting screw at the drill shank end in the tool holder. This will prevent high thrust force from pushing the drill back into the holder during drilling.
- For drill diameters from ø8 - ø9.9 mm, the drill shoulder to shank bottom distance when a DMC drill head is mounted is 0.3 mm shorter when compared with a DMP head of the equivalent sizes. The distances are the same for the DMC and DMP drill heads in other diameters than the above.
- When axially adjusting the shank inside the holder to obtain a required drill overhang, make sure the shank length remaining inside the holder does not come short of the minimum clamping length (LSCN) specified by the holder supplier.

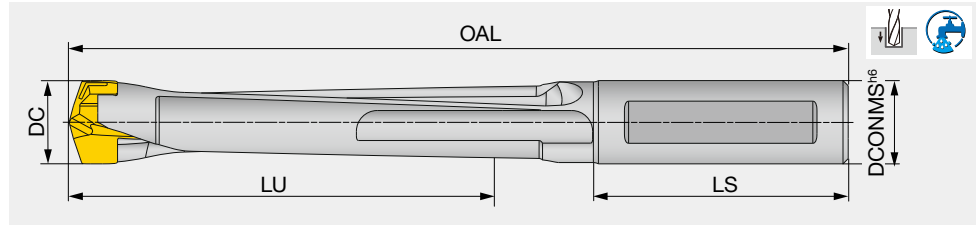
SPARE PARTS



Designation	Clamping key
TIDC075-099	K-TID6-9.99
TIDC100-190	K-TID10-19.99

TIDC L/D=5

Exchangeable head drill



Metric	DC	DCONMS	LU	LS	OAL			Pocket size	Head
					DMP/H/N	DMC	DMF		
TIDC075C8-5	7.5 - 7.9	8	38	36	85.1	85.6	84.2	7	DM*075 - DM*079
TIDC080C8-5	8 - 8.4	8	40	36	92.3	92.5	91.4	8	DM*080 - DM*084
TIDC085C9-5	8.5 - 8.9	9	43	36	89.8	90	88.9	8	DM*085 - DM*089
TIDC090C9-5	9 - 9.4	9	45	36	92.7	92.9	91.7	9	DM*090 - DM*094
TIDC095C10-5	9.5 - 9.9	10	48	36	95.2	95.4	94.2	9	DM*095 - DM*099
TIDC100C10-5	10 - 10.4	10	52	41	106.1	106.7	104.8	10	DM*100 - DM*104
TIDC105C11-5	10.5 - 10.9	11	54	41	108.6	109.2	107.3	10	DM*105 - DM*109
TIDC110C11-5	11 - 11.4	11	57	41	111.5	112.2	110	11	DM*110 - DM*114
TIDC115C12-5	11.5 - 11.9	12	60	41	114	114.7	112.5	11	DM*115 - DM*119
TIDC120C12-5	12 - 12.4	12	62	41	116.8	117.4	115.2	12	DM*120 - DM*124
TIDC125C13-5	12.5 - 12.9	13	65	46	124.3	124.9	122.7	12	DM*125 - DM*129
TIDC130C13-5	13 - 13.4	13	67	47	128.4	129.2	126.5	13	DM*130 - DM*134
TIDC135C14-5	13.5 - 13.9	14	70	43	126.9	127.7	125	13	DM*135 - DM*139
TIDC140C14-5	14 - 14.4	14	73	44	131	131.8	129	14	DM*140 - DM*144
TIDC145C15-5	14.5 - 14.9	15	75	45	134.5	135.3	132.5	14	DM*145 - DM*149
TIDC150C15-5	15 - 15.9	15	78	45	137.5	138.4	135.4	15	DM*150 - DM*159
TIDC160C16-5	16 - 16.9	16	83	48	149.5	150.5	147.2	16	DM*160 - DM*169
TIDC170C17-5	17 - 17.9	17	88	48	153.7	154.7	151.2	17	DM*170 - DM*179
TIDC180C18-5	18 - 18.9	18	93	48	159.3	160.4	156.5	18	DM*180 - DM*189
TIDC190C19-5	19 - 19.9	19	99	54	170.4	171.5	167.4	19	DM*190 - DM*199

Tool diameter	Hole diameter tolerance*
ø7.5 - ø19.9	+0.05 / 0

*Just for reference

- An overall length (OAL) differs based on each head geometry.
- When using the drill at a higher feed rate, make sure to provide an axial support by placing the overhang adjusting screw at the drill shank end in the tool holder. This will prevent high thrust force from pushing the drill back into the holder during drilling.
- For drill diameters from ø8 - ø9.9 mm, the drill shoulder to shank bottom distance when a DMC drill head is mounted is 0.3 mm shorter when compared with a DMP head of the equivalent sizes. The distances are the same for the DMC and DMP drill heads in other diameters than the above.
- When axially adjusting the shank inside the holder to obtain a required drill overhang, make sure the shank length remaining inside the holder does not come short of the minimum clamping length (LSCN) specified by the holder supplier.

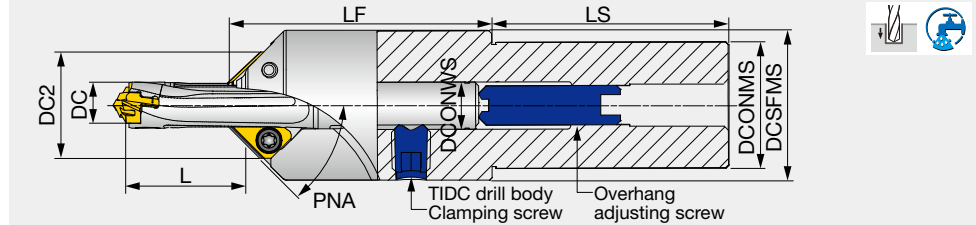
SPARE PARTS



Designation	Clamping key
TIDC075-099	K-TID6-9.99
TIDC100-190	K-TID10-19.99

TIDCF

Chamfering adapter



Inch	DC	DCONMS	DCSFMS	DC2	LF	LS	L* L/D = 3	L* L/D = 5	Drill body	DCONWS
TIDCF100-WU1.00-.394-.409	0.374 - 0.409	1.000	1.496	0.981	2.650	2.205	0.571 - 1.252	1.248 - 2.039	TIDC100C10-...	0.394
TIDCF110-WU1.00-.413-.449	0.413 - 0.449	1.000	1.496	1.019	2.654	2.205	0.618 - 1.311	1.228 - 2.134	TIDC105C11-..., TIDC110C11-...	0.433
TIDCF120-WU1.00-.453-.488	0.453 - 0.488	1.000	1.496	1.060	2.646	2.205	0.638 - 1.390	1.343 - 2.256	TIDC115C12-..., TIDC120C12-...	0.472
TIDCF130-WU1.00-.492-.528	0.492 - 0.528	1.000	1.496	1.098	2.646	2.205	0.594 - 1.447	1.331 - 2.339	TIDC125C13-..., TIDC130C13-...	0.512
TIDCF140-WU1.25-.531-.567	0.531 - 0.567	1.250	1.496	1.119	2.646	2.362	0.650 - 1.484	1.441 - 2.425	TIDC135C14-..., TIDC140C14-...	0.551
TIDCF150-WU1.25-.571-.626	0.571 - 0.626	1.250	1.496	1.159	2.646	2.362	0.634 - 1.559	1.563 - 2.551	TIDC145C15-..., TIDC150C15-...	0.591
TIDCF160-WU1.25-.630-.665	0.630 - 0.665	1.250	1.496	1.197	2.646	2.362	0.689 - 1.634	1.681 - 2.677	TIDC160C16-...	0.630
TIDCF170-WU1.25-.669-.705	0.669 - 0.705	1.250	1.496	1.240	2.654	2.362	0.697 - 1.689	1.630 - 2.768	TIDC170C17-...	0.669
TIDCF180-WU1.25-.709-.744	0.709 - 0.744	1.250	1.496	1.274	2.654	2.362	0.713 - 1.772	1.764 - 2.878	TIDC180C18-...	0.709
TIDCF190-WU1.25-.748-.783	0.748 - 0.783	1.250	1.496	1.313	2.953	2.362	0.756 - 1.756	1.732 - 2.909	TIDC190C19-...	0.748

L* is the dimension when using 45° chamfering insert.

Shank: Flat cotter

Metric	DC	DCONMS	DCSFMS	DC2	LF	LS	L* L/D = 3	L* L/D = 5	Drill body	DCONWS	Insert
TIDCF080-W20	7.5 - 7.9	20	25	18.8	47.4	50	12.6 - 24	17.3 - 38	TIDC075C8-...	8	XCGT06...
TIDCF080-W20	8.0 - 8.4	20	25	18.8	47.4	50	13.5 - 24.6	24.7 - 45	TIDC080C8-...	8	XCGT06...
TIDCF090-W20	8.5 - 8.9	20	25	19.8	47.4	50	12.6 - 26.2	18.5 - 43	TIDC085C9-...	9	XCGT06...
TIDCF090-W20	9.0 - 9.4	20	25	19.8	47.4	50	13 - 29.2	22.9 - 46.8	TIDC090C9-...	9	XCGT06...
TIDCF100-W32	9.5 - 9.9	32	38	24.9	67.3	60	12.9 - 27.8	26 - 47	TIDC095C10-...	10	XHG*09...
TIDCF100-W32	10 - 10.4	32	38	24.9	67.3	60	14.5 - 31.8	31.7 - 51.8	TIDC100C10-...	10	XHG*09...
TIDCF110-W32	10.5 - 10.9	32	38	25.9	67.3	60	15.7 - 33.3	31.2 - 54.2	TIDC105C11-...	11	XHG*09...
TIDCF110-W32	11 - 11.4	32	38	25.9	67.3	60	16.2 - 35.3	34.1 - 57.3	TIDC110C11-...	11	XHG*09...
TIDCF120-W32	11.5 - 11.9	32	38	26.9	67.3	60	15.1 - 36.7	33.8 - 59.4	TIDC115C12-...	12	XHG*09...
TIDCF120-W32	12 - 12.4	32	38	26.9	67.3	60	16.5 - 37.7	36.6 - 61.6	TIDC120C12-...	12	XHG*09...
TIDCF130-W32	12.5 - 12.9	32	38	27.9	67.3	60	16.1 - 39.6	39.7 - 64.8	TIDC125C13-...	13	XHG*09...
TIDCF130-W32	13 - 13.4	32	38	27.9	67.3	60	17.5 - 41.5	42.7 - 68	TIDC130C13-...	13	XHG*09...
TIDCF140-W32	13.5 - 13.9	32	38	28.4	67.3	60	17.7 - 42.9	41.4 - 70.3	TIDC135C14-...	14	XHG*09...
TIDCF140-W32	14 - 14.4	32	38	28.4	67.3	60	18.1 - 45	44.8 - 73.1	TIDC140C14-...	14	XHG*09...
TIDCF150-W32	14.5 - 14.9	32	38	29.4	67.3	60	19.2 - 44.6	44 - 73.9	TIDC145C15-...	15	XHG*09...
TIDCF150-W32	15 - 15.9	32	38	29.4	67.3	60	19.7 - 47.4	47.6 - 80.7	TIDC150C15-...	15	XHG*09...
TIDCF160-W32	16 - 16.9	32	38	30.4	67.3	60	19.5 - 55.3	57 - 87.5	TIDC160C16-...	16	XHG*09...
TIDCF170-W32	17 - 17.9	32	38	31.4	67.3	60	21.4 - 54.9	55.9 - 88.5	TIDC170C17-...	17	XHG*09...
TIDCF180-W32	18 - 18.9	32	38	32.4	67.3	60	24.2 - 65.2	60 - 93	TIDC180C18-...	18	XHG*09...
TIDCF190-W32	19 - 19.9	32	38	33.4	75	60	28.5 - 62.3	67 - 100	TIDC190C19-...	19	XHG*09...

L* is the dimension when using 45° chamfering insert.

Shank: Whistle notch

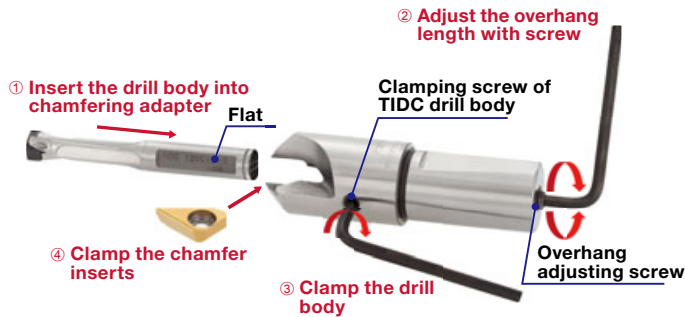
SPARE PARTS

Designation	Insert screw	Grip	Clamping screw of TIDC drill body	Overhang adjusting screw	Torx bit	Wrench	Wrench
TIDCF080-090	SR14-560	-	SRM6X6DIN916	SRM6X1S	-	HW3.0	T-8D
TIDCF100-190	SR14-544/S	SW6-SD	SRM10X10DIN916	SRM10X1.5S	BT15S	HW5.0	-

Recommended clamping torque (N·m) : SR14-544/S = 4.8

● How to mount the chamfering adapter on the TIDC drill body

The overhang length of the drill can be changed by the adjusting screw at the bottom of the adapter. The rear end of the drill body must be in contact with the adjusting screw as the screw supports the drill against thrust force when drilling.



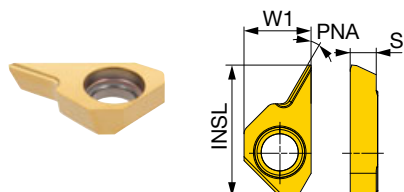
Procedures

- ① Place the TIDC drill body into the chamfering adapter without chamfer inserts.
- ② Adjust the overhang length of the drill body with the adjusting screw at the bottom of the adapter.
- ③ Adjust the position of the drill body so that the drill body is fixed at the flat and tighten the clamping screw of the drill body. This aligns the flutes of the TIDC drill body with the chamfer inserts.
- ④ To clamp the chamfer inserts, tighten the clamping screw of the insert while pushing the insert into the insert pocket.

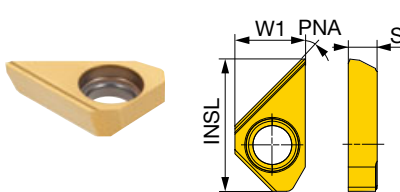
Notice: Before removing the drill body from the adapter, chamfer inserts must be unclamped. The overhang adjusting screw can be handled from the top of the adapter with a flat-blade screwdriver. The overhang length of the drill body can be adjusted after the adapter is positioned on the drill shank.

CHAMFERING INSERT

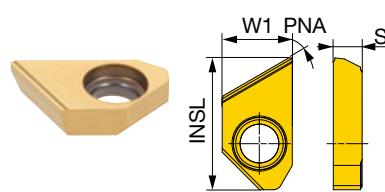
XCGT-30DT/XHGT-30A



XCGT-45DT/XHGR-45A



XCGT-60DT/XHGR-60A



P	Steel	★			
M	Stainless	★			
K	Cast iron	★			
N	Non-ferrous	☆			
S	Superalloys	★			
H	Hard materials	★			

★ : First choice
☆ : Second choice

Designation	Chamfering angle PNA	Maximum width of chamfer*	Coated						W1 (mm)	INSL (mm)	S (mm)
			GHT30								
XCGT060300-30DT	30°	2	●						6.18	12.3	2.8
XCGT060300-45DT	45°	4	●						6.18	12.3	2.8
XCGT060300-60DT	60°	4	●						6.18	12.3	2.8
XHGT090300-30A	30°	3	●						8.5	16	3.3
XHGR090300-45A	45°	6	●						8.5	16	3.3
XHGR090300-60A	60°	6	●						8.5	16	3.3

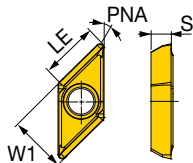
*Please reduce the feed rate to half when chamfering over 60% of maximum width of chamfer.

● : Line up
2 pieces per package

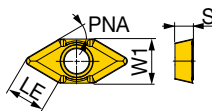
■ INSERT FOR SPECIAL CHAMFERING ADAPTERS

AOMT...

AOMT06-C45



AOMT03-N-**DT



P	Steel	★			
M	Stainless	★			
K	Cast iron	★			
N	Non-ferrous	☆			
S	Superalloys	★			
H	Hard materials	★			

★ : First choice
☆ : Second choice

Designation	LE (in)	Chamfering angle PNA	Coated						W1 (in)	S (in)
			GH730							
AOMT060204-C45	0.177	45°	●						0.223	0.077
AOMT030204-N-30DT	0.157	30°	●						0.157	0.063
AOMT030204-N-45DT	0.157	45°	●						0.110	0.063

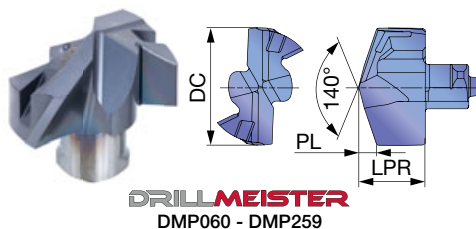
● : Line up

DRILL HEAD

DMP General purpose



DMP040 - DMP059



DMP060 - DMP259

Tool diameter (inch)	Head diameter tolerance
ø0.157" - ø0.705"	+0.0007" / 0
ø0.709" - ø1.020"	+0.0008" / 0

Tool diameter (mm)	Head diameter tolerance
ø4 - ø17.9	+0.018 / 0
ø18 - ø25.9	+0.021 / 0

P	Steel	★	☆
M	Stainless	★	☆
K	Cast iron	★	☆
N	Non-ferrous	☆	☆
S	Superalloys	★	☆
H	Hard materials	★	☆

P	Steel	★	☆
M	Stainless	★	☆
K	Cast iron	★	☆
N	Non-ferrous	☆	☆
S	Superalloys	★	☆
H	Hard materials	★	☆

★ : First choice
☆ : Second choice

Designation	DC (in)	DC (mm)	LPR (mm)	Coated		PL (mm)	Body
				AH725	AH9130		
New DMP040	0.157	4	3.1	●		0.62	TID*040...
New DMP041	0.161	4.1	3.1	●		0.64	TID*040...
New DMP042	0.165	4.2	3.1	●		0.66	TID*040...
New DMP043	0.169	4.3	3.1	●		0.67	TID*040...
New DMP044	0.173	4.4	3.1	●		0.69	TID*040...
New DMP045	0.177	4.5	3.55	●		0.66	TID*045...
New DMP046	0.181	4.6	3.55	●		0.68	TID*045...
New DMP047	0.185	4.7	3.55	●		0.70	TID*045...
New DMP048	0.189	4.8	3.55	●		0.71	TID*045...
New DMP049	0.193	4.9	3.55	●		0.73	TID*045...
New DMP050	0.197	5	3.7	●		0.73	TID*050...
New DMP051	0.201	5.1	3.7	●		0.75	TID*050...
New DMP052	0.205	5.2	3.7	●		0.77	TID*050...
New DMP053	0.209	5.3	3.7	●		0.78	TID*050...
New DMP054	0.213	5.4	3.7	●		0.8	TID*050...
New DMP055	0.217	5.5	3.85	●		0.81	TID*055...
New DMP056	0.220	5.6	3.85	●		0.83	TID*055...
New DMP057	0.224	5.7	3.85	●		0.85	TID*055...
New DMP058	0.228	5.8	3.85	●		0.86	TID*055...
New DMP059	0.232	5.9	3.85	●		0.88	TID*055...
DMP060	0.236	6	3.85	●		1.09	TID*060...
DMP061	0.240	6.1	3.85	●		1.11	TID*060...
DMP062	0.244	6.2	3.85	●		1.13	TID*060...
DMP063	0.248	6.3	3.85	●		1.14	TID*060...
DMP064	0.252	6.4	3.85	●		1.16	TID*060...
DMP065	0.256	6.5	4.15	●		1.27	TID*065...
DMP066	0.260	6.6	4.15	●		1.29	TID*065...
DMP067	0.264	6.7	4.15	●		1.31	TID*065...
DMP068	0.268	6.8	4.15	●	●	1.33	TID*065...
DMP069	0.272	6.9	4.15	●		1.34	TID*065...
DMP070	0.276	7	4.45	●		1.03	TID*070...
DMP071	0.280	7.1	4.45	●		1.05	TID*070...
DMP072	0.283	7.2	4.45	●		1.07	TID*070...
DMP073	0.287	7.3	4.45	●		1.08	TID*070...
DMP074	0.291	7.4	4.45	●		1.1	TID*070...
DMP075	0.295	7.5	4.45	●	●	1.12	TID*075...
DMP076	0.299	7.6	4.45	●		1.14	TID*075...

Designation	DC (in)	DC (mm)	LPR (mm)	Coated		PL (mm)	Body
				AH725	AH9130		
DMP077	0.303	7.7	4.45	●		1.16	TID*075...
DMP078	0.307	7.8	4.45	●		1.18	TID*075...
DMP079	0.311	7.9	4.45	●		1.19	TID*075...
DMP080	0.315	8	5.25	●	●	1.2	TID*080...
DMP081	0.319	8.1	5.25	●		1.22	TID*080...
DMP082	0.323	8.2	5.25	●		1.24	TID*080...
DMP083	0.327	8.3	5.25	●		1.25	TID*080...
DMP084	0.331	8.4	5.25	●		1.27	TID*080...
DMP085	0.335	8.5	5.25	●	●	1.29	TID*085...
DMP086	0.339	8.6	5.25	●		1.31	TID*085...
DMP087	0.343	8.7	5.25	●		1.33	TID*085...
DMP088	0.346	8.8	5.25	●		1.35	TID*085...
DMP089	0.350	8.9	5.25	●		1.36	TID*085...
DMP090	0.354	9	5.65	●	●	1.37	TID*090...
DMP091	0.358	9.1	5.65	●		1.39	TID*090...
DMP092	0.362	9.2	5.65	●		1.41	TID*090...
DMP093	0.366	9.3	5.65	●		1.42	TID*090...
DMP094	0.370	9.4	5.65	●		1.44	TID*090...
DMP095	0.374	9.5	5.65	●	●	1.46	TID*095...
DMP096	0.378	9.6	5.65	●		1.48	TID*095...
DMP097	0.382	9.7	5.65	●		1.5	TID*095...
DMP098	0.386	9.8	5.65	●		1.52	TID*095...
DMP099	0.390	9.9	5.65	●		1.53	TID*095...
DMP100	0.394	10	6.05	●	●	1.47	TID*100...
DMP101	0.398	10.1	6.05	●	○	1.49	TID*100...
DMP102	0.402	10.2	6.05	●	○	1.51	TID*100...
DMP103	0.406	10.3	6.05	●	●	1.52	TID*100...
DMP104	0.409	10.4	6.05	●	●	1.54	TID*100...
DMP105	0.413	10.5	6.05	●	●	1.56	TID*105...
DMP106	0.417	10.6	6.05	●	●	1.58	TID*105...
DMP107	0.421	10.7	6.05	●	○	1.6	TID*105...
DMP108	0.425	10.8	6.05	●	●	1.62	TID*105...
DMP109	0.429	10.9	6.05	●	○	1.63	TID*105...
DMP110	0.433	11	6.45	●	●	1.67	TID*110...
DMP111	0.437	11.1	6.45	●	●	1.69	TID*110...
DMP112	0.441	11.2	6.45	●	●	1.71	TID*110...
DMP113	0.445	11.3	6.45	●	●	1.72	TID*110...

Package Quantity: 0.157" - 0.783" = 2 pcs.
0.787" - 1.020" = 1 pc.

● : New product
○ : Will be released in March 2022
● : Line up

P	Steel	★	☆
M	Stainless	★	☆
K	Cast iron	★	☆
N	Non-ferrous	☆	☆
S	Superalloys	★	☆
H	Hard materials	★	☆

Designation	DC (in)	DC (mm)	LPR (mm)	Coated		PL (mm)	Body
				AH725	AH9130		
DMP114	0.449	11.4	6.45	●	○	1.74	TID*110...
DMP115	0.453	11.5	6.45	●	●	1.76	TID*115...
DMP116	0.457	11.6	6.45	●	○	1.78	TID*115...
DMP117	0.461	11.7	6.45	●	●	1.8	TID*115...
DMP118	0.465	11.8	6.45	●	○	1.82	TID*115...
DMP119	0.469	11.9	6.45	●	○	1.83	TID*115...
DMP120	0.472	12	6.8	●	●	1.82	TID*120...
DMP121	0.476	12.1	6.8	●	●	1.84	TID*120...
DMP122	0.480	12.2	6.8	●	●	1.86	TID*120...
DMP123	0.484	12.3	6.8	●	●	1.87	TID*120...
DMP124	0.488	12.4	6.8	●	●	1.89	TID*120...
DMP125	0.492	12.5	6.8	●	●	1.91	TID*125...
DMP126	0.496	12.6	6.8	●	●	1.93	TID*125...
DMP127	0.500	12.7	6.8	●	●	1.95	TID*125...
DMP128	0.504	12.8	6.8	●	●	1.97	TID*125...
DMP129	0.508	12.9	6.8	●	○	1.98	TID*125...
DMP130	0.512	13	7.4	●	●	1.96	TID*130...
DMP131	0.516	13.1	7.4	●	○	1.98	TID*130...
DMP132	0.520	13.2	7.4	●	○	2	TID*130...
DMP133	0.524	13.3	7.4	●	●	2.01	TID*130...
DMP134	0.528	13.4	7.4	●	○	2.03	TID*130...
DMP135	0.531	13.5	7.4	●	●	2.05	TID*135...
DMP136	0.535	13.6	7.4	●	○	2.07	TID*135...
DMP137	0.539	13.7	7.4	●	●	2.09	TID*135...
DMP138	0.543	13.8	7.4	●	●	2.11	TID*135...
DMP139	0.547	13.9	7.4	●	●	2.12	TID*135...
DMP140	0.551	14	7.95	●	●	2.12	TID*140...
DMP141	0.555	14.1	7.95	●	●	2.14	TID*140...
DMP142	0.559	14.2	7.95	●	●	2.16	TID*140...
DMP143	0.563	14.3	7.95	●	●	2.17	TID*140...
DMP144	0.567	14.4	7.95	●	○	2.19	TID*140...
DMP145	0.571	14.5	7.95	●	●	2.21	TID*145...
DMP146	0.575	14.6	7.95	●	●	2.23	TID*145...
DMP147	0.579	14.7	7.95	●	○	2.25	TID*145...
DMP148	0.583	14.8	7.95	●	○	2.27	TID*145...
DMP149	0.587	14.9	7.95	●	○	2.28	TID*145...
DMP150	0.591	15	8.53	●	●	2.27	TID*150...
DMP151	0.594	15.1	8.53	●	●	2.29	TID*150...
DMP152	0.598	15.2	8.53	●	●	2.31	TID*150...

Package Quantity: 0.157" - 0.783" = 2 pcs.
0.787" - 1.020" = 1 pc.

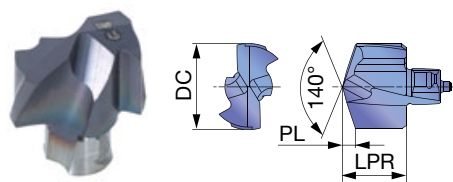
P	Steel	★	☆
M	Stainless	★	☆
K	Cast iron	★	☆
N	Non-ferrous	☆	☆
S	Superalloys	★	☆
H	Hard materials	★	☆

★ : First choice
☆ : Second choice

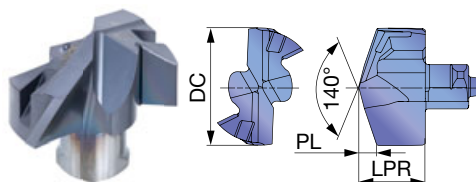
Designation	DC (in)	DC (mm)	LPR (mm)	Coated		PL (mm)	Body
				AH725	AH9130		
DMP153	0.602	15.3	8.53	●	●	2.32	TID*150...
DMP154	0.606	15.4	8.53	●	○	2.34	TID*150...
DMP155	0.610	15.5	8.53	●	●	2.36	TID*150...
DMP156	0.614	15.6	8.53	●	●	2.38	TID*150...
DMP157	0.618	15.7	8.53	●	●	2.4	TID*150...
DMP158	0.622	15.8	8.53	●	●	2.42	TID*150...
DMP159	0.626	15.9	8.53	●	○	2.43	TID*150...
DMP160	0.630	16	9.1	●	●	2.42	TID*160...
DMP161	0.634	16.1	9.1	●	●	2.44	TID*160...
DMP162	0.638	16.2	9.1	●	○	2.46	TID*160...
DMP163	0.642	16.3	9.1	●	●	2.47	TID*160...
DMP164	0.646	16.4	9.1	●	○	2.49	TID*160...
DMP165	0.650	16.5	9.1	●	●	2.51	TID*160...
DMP166	0.654	16.6	9.1	●	●	2.53	TID*160...
DMP167	0.657	16.7	9.1	●	●	2.55	TID*160...
DMP168	0.661	16.8	9.1	●	○	2.57	TID*160...
DMP169	0.665	16.9	9.1	●	○	2.58	TID*160...
DMP170	0.669	17	9.7	●	●	2.59	TID*170...
DMP171	0.673	17.1	9.7	●	○	2.61	TID*170...
DMP172	0.677	17.2	9.7	●	○	2.63	TID*170...
DMP173	0.681	17.3	9.7	●	○	2.64	TID*170...
DMP174	0.685	17.4	9.7	●	○	2.66	TID*170...
DMP175	0.689	17.5	9.7	●	●	2.68	TID*170...
DMP176	0.693	17.6	9.7	●	●	2.7	TID*170...
DMP177	0.697	17.7	9.7	●	○	2.72	TID*170...
DMP178	0.701	17.8	9.7	●	●	2.74	TID*170...
DMP179	0.705	17.9	9.7	●	●	2.75	TID*170...
DMP180	0.709	18	10.3	●	●	2.73	TID*180...
DMP181	0.713	18.1	10.3	●	○	2.75	TID*180...
DMP182	0.717	18.2	10.3	●	○	2.77	TID*180...
DMP183	0.720	18.3	10.3	●	●	2.78	TID*180...
DMP184	0.724	18.4	10.3	●	○	2.8	TID*180...
DMP185	0.728	18.5	10.3	●	●	2.82	TID*180...
DMP186	0.732	18.6	10.3	●	○	2.84	TID*180...
DMP187	0.736	18.7	10.3	●	○	2.86	TID*180...
DMP188	0.740	18.8	10.3	●	○	2.88	TID*180...
DMP189	0.744	18.9	10.3	●	○	2.89	TID*180...
DMP190	0.748	19	10.8	●	●	2.88	TID*190...
DMP1905	0.750	19.05	10.8	●	○	2.89	TID*190...

○ : Will be released in March 2022
● : Line up

DMP General purpose



ADDMEISTERDRILL
DMP040 - DMP059



DRILLMEISTER
DMP060 - DMP259

Tool diameter (inch)	Head diameter tolerance
ø0.157" - ø0.705"	+0.0007" / 0
ø0.709" - ø1.020"	+0.0008" / 0

Tool diameter (mm)	Head diameter tolerance
ø4 - ø17.9	+0.018 / 0
ø18 - ø25.9	+0.021 / 0

P	Steel	★	☆
M	Stainless	★	☆
K	Cast iron	★	☆
N	Non-ferrous	☆	☆
S	Superalloys	★	☆
H	Hard materials	★	☆

P	Steel	★	☆
M	Stainless	★	☆
K	Cast iron	★	☆
N	Non-ferrous	☆	☆
S	Superalloys	★	☆
H	Hard materials	★	☆

★ : First choice
☆ : Second choice

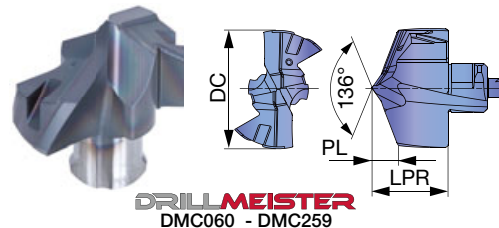
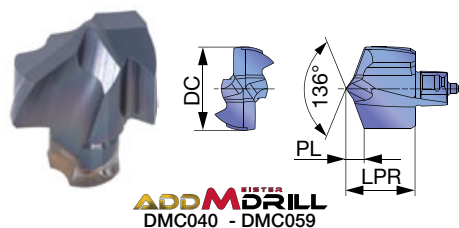
Designation	DC (in)	DC (mm)	LPR (mm)	Coated		PL (mm)	Body
				AH725	AH9130		
DMP191	0.752	19.1	10.8	●	○	2.9	TID*190...
DMP192	0.756	19.2	10.8	●	○	2.92	TID*190...
DMP1927	0.759	19.27	10.8	●	○	2.93	TID*190...
DMP193	0.760	19.3	10.8	●	●	2.93	TID*190...
DMP194	0.764	19.4	10.8	●	●	2.95	TID*190...
DMP195	0.768	19.5	10.8	●	●	2.97	TID*190...
DMP196	0.772	19.6	10.8	●	○	2.99	TID*190...
DMP197	0.776	19.7	10.8	●	○	3.01	TID*190...
DMP198	0.780	19.8	10.8	●	●	3.03	TID*190...
DMP199	0.783	19.9	10.8	●	○	3.04	TID*190...
DMP200	0.787	20	11.4	●	●	3.02	TID*200...
DMP201	0.791	20.1	11.4	●	●	3.04	TID*200...
DMP202	0.795	20.2	11.4	●	○	3.06	TID*200...
DMP203	0.799	20.3	11.4	●	○	3.07	TID*200...
DMP204	0.803	20.4	11.4	●	○	3.09	TID*200...
DMP205	0.807	20.5	11.4	●	●	3.11	TID*200...
DMP206	0.811	20.6	11.4	●	○	3.13	TID*200...
DMP207	0.815	20.7	11.4	●	○	3.15	TID*200...
DMP208	0.819	20.8	11.4	●	○	3.17	TID*200...
DMP209	0.823	20.9	11.4	●	○	3.18	TID*200...
DMP210	0.827	21	11.98	●	●	3.18	TID*210...
DMP211	0.831	21.1	11.98	●	○	3.2	TID*210...
DMP212	0.835	21.2	11.98	●	○	3.22	TID*210...
DMP213	0.839	21.3	11.98	●	○	3.23	TID*210...
DMP214	0.843	21.4	11.98	●	○	3.25	TID*210...
DMP215	0.846	21.5	11.98	●	○	3.27	TID*210...
DMP216	0.850	21.6	11.98	●	○	3.29	TID*210...
DMP217	0.854	21.7	11.98	●	○	3.31	TID*210...
DMP218	0.858	21.8	11.98	●	○	3.33	TID*210...
DMP219	0.862	21.9	11.98	●	○	3.34	TID*210...
DMP220	0.866	22	12.56	●	●	3.32	TID*220...
DMP221	0.870	22.1	12.56	●	○	3.34	TID*220...
DMP222	0.874	22.2	12.56	●	○	3.36	TID*220...
DMP223	0.878	22.3	12.56	●	●	3.37	TID*220...
DMP224	0.882	22.4	12.56	●	○	3.39	TID*220...
DMP225	0.886	22.5	12.56	●	○	3.41	TID*220...
DMP226	0.890	22.6	12.56	●	○	3.43	TID*220...
DMP227	0.894	22.7	12.56	●	○	3.45	TID*220...

Designation	DC (in)	DC (mm)	LPR (mm)	Coated		PL (mm)	Body
				AH725	AH9130		
DMP228	0.898	22.8	12.56	●	○	3.47	TID*220...
DMP229	0.902	22.9	12.56	●	○	3.48	TID*220...
DMP230	0.906	23	13.13	●	○	3.46	TID*230...
DMP231	0.909	23.1	13.13	●	○	3.48	TID*230...
DMP232	0.913	23.2	13.13	●	○	3.5	TID*230...
DMP233	0.917	23.3	13.13	●	○	3.51	TID*230...
DMP234	0.921	23.4	13.13	●	○	3.53	TID*230...
DMP235	0.925	23.5	13.13	●	○	3.55	TID*230...
DMP236	0.929	23.6	13.13	●	○	3.57	TID*230...
DMP237	0.933	23.7	13.13	●	○	3.59	TID*230...
DMP238	0.937	23.8	13.13	●	○	3.61	TID*230...
DMP239	0.941	23.9	13.13	●	○	3.62	TID*230...
DMP240	0.945	24	13.7	●	●	3.62	TID*240...
DMP241	0.949	24.1	13.7	●	○	3.64	TID*240...
DMP242	0.953	24.2	13.7	●	○	3.66	TID*240...
DMP243	0.957	24.3	13.7	●	○	3.67	TID*240...
DMP244	0.961	24.4	13.7	●	○	3.69	TID*240...
DMP245	0.965	24.5	13.7	●	○	3.71	TID*240...
DMP246	0.969	24.6	13.7	●	○	3.73	TID*240...
DMP247	0.972	24.7	13.7	●	○	3.75	TID*240...
DMP248	0.976	24.8	13.7	●	○	3.77	TID*240...
DMP249	0.980	24.9	13.7	●	○	3.78	TID*240...
DMP250	0.984	25	14.3	●	●	3.8	TID*250...
DMP251	0.988	25.1	14.3	●	○	3.82	TID*250...
DMP252	0.992	25.2	14.3	●	○	3.84	TID*250...
DMP253	0.996	25.3	14.3	●	○	3.85	TID*250...
DMP254	1.000	25.4	14.3	●	○	3.87	TID*250...
DMP255	1.004	25.5	14.3	●	○	3.89	TID*250...
DMP256	1.008	25.6	14.3	●	○	3.91	TID*250...
DMP2567	1.011	25.67	14.3	●	○	3.92	TID*250...
DMP257	1.012	25.7	14.3	●	○	3.93	TID*250...
DMP258	1.016	25.8	14.3	●	○	3.95	TID*250...
DMP259	1.020	25.9	14.3	●	●	3.96	TID*250...

○ : Will be released in March 2022
● : Line up

Package Quantity: 0.157" - 0.783" = 2 pcs.
0.787" - 1.020" = 1 pc.

DMC High precision machining



Tool diameter (inch)	Head diameter tolerance
ø0.157" - ø0.705"	+0.0007" / 0
ø0.709" - ø1.020"	+0.0008" / 0
Tool diameter (mm)	Head diameter tolerance
ø4 - ø17.9	+0.018 / 0
ø18 - ø25.9	+0.021 / 0

P	Steel	★		
M	Stainless	★		
K	Cast iron	★		
N	Non-ferrous	☆		
S	Superalloys	★		
H	Hard materials	★		

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K	Cast iron	★		
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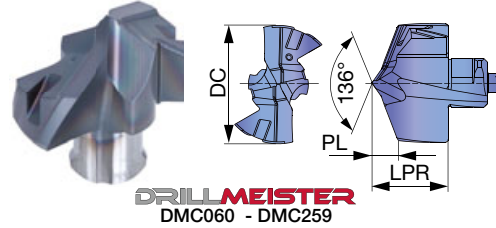
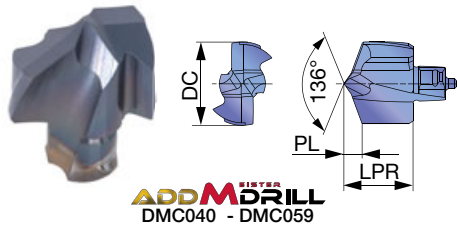
Designation	DC (in)	DC (mm)	LPR (mm)	Coated	PL (mm)	Body
				AH9130		
DMC040	0.157	4	3.51	○	0.86	TID*040...
DMC041	0.161	4.1	3.51	○	0.88	TID*040...
DMC042	0.165	4.2	3.51	○	0.9	TID*040...
DMC043	0.169	4.3	3.51	○	0.92	TID*040...
DMC044	0.173	4.4	3.51	○	0.94	TID*040...
DMC045	0.177	4.5	3.81	○	0.97	TID*045...
DMC046	0.181	4.6	3.81	○	0.99	TID*045...
DMC047	0.185	4.7	3.81	○	1.01	TID*045...
DMC048	0.189	4.8	3.81	○	1.03	TID*045...
DMC049	0.193	4.9	3.81	○	1.05	TID*045...
New DMC050	0.197	5	4.14	●	1.09	TID*050...
New DMC051	0.201	5.1	4.14	●	1.11	TID*050...
New DMC052	0.205	5.2	4.14	●	1.13	TID*050...
New DMC053	0.209	5.3	4.14	●	1.15	TID*050...
New DMC054	0.213	5.4	4.14	●	1.17	TID*050...
New DMC055	0.217	5.5	4.17	●	1.22	TID*055...
New DMC056	0.220	5.6	4.17	●	1.24	TID*055...
New DMC057	0.224	5.7	4.17	●	1.26	TID*055...
New DMC058	0.228	5.8	4.17	●	1.28	TID*055...
New DMC059	0.232	5.9	4.17	●	1.3	TID*055...
DMC060	0.236	6	4	●	1.24	TID*060...
DMC061	0.240	6.1	4	●	1.26	TID*060...
DMC062	0.244	6.2	4	●	1.28	TID*060...
DMC063	0.248	6.3	4	●	1.3	TID*060...
DMC064	0.252	6.4	4	●	1.32	TID*060...
DMC065	0.256	6.5	4.3	●	1.33	TID*065...
DMC066	0.260	6.6	4.3	●	1.35	TID*065...
DMC067	0.264	6.7	4.3	●	1.37	TID*065...
DMC068	0.268	6.8	4.3	●	1.39	TID*065...
DMC069	0.272	6.9	4.3	●	1.41	TID*065...
DMC070	0.276	7	4.9	●	1.48	TID*070...
DMC071	0.280	7.1	4.9	●	1.5	TID*070...
DMC072	0.283	7.2	4.9	●	1.52	TID*070...
DMC073	0.287	7.3	4.9	●	1.54	TID*070...
DMC074	0.291	7.4	4.9	●	1.56	TID*070...
DMC075	0.295	7.5	4.9	●	1.58	TID*075...
DMC076	0.299	7.6	4.9	●	1.6	TID*075...
DMC077	0.303	7.7	4.9	●	1.62	TID*075...

Designation	DC (in)	DC (mm)	LPR (mm)	Coated	PL (mm)	Body
				AH9130		
DMC078	0.307	7.8	4.9	●	1.64	TID*075...
DMC079	0.311	7.9	4.9	●	1.66	TID*075...
DMC080	0.315	8	5.4	●	1.62	TID*080...
DMC081	0.319	8.1	5.4	●	1.64	TID*080...
DMC082	0.323	8.2	5.4	●	1.66	TID*080...
DMC083	0.327	8.3	5.4	●	1.68	TID*080...
DMC084	0.331	8.4	5.4	●	1.7	TID*080...
DMC085	0.335	8.5	5.4	●	1.72	TID*085...
DMC086	0.339	8.6	5.4	●	1.74	TID*085...
DMC087	0.343	8.7	5.4	●	1.76	TID*085...
DMC088	0.346	8.8	5.4	●	1.78	TID*085...
DMC089	0.350	8.9	5.4	●	1.8	TID*085...
DMC090	0.354	9	5.8	●	1.91	TID*090...
DMC091	0.358	9.1	5.8	●	1.93	TID*090...
DMC092	0.362	9.2	5.8	●	1.95	TID*090...
DMC093	0.366	9.3	5.8	●	1.97	TID*090...
DMC094	0.370	9.4	5.8	●	1.99	TID*090...
DMC095	0.374	9.5	5.8	●	2.01	TID*095...
DMC096	0.378	9.6	5.8	●	2.03	TID*095...
DMC097	0.382	9.7	5.8	●	2.05	TID*095...
DMC098	0.386	9.8	5.8	●	2.07	TID*095...
DMC099	0.390	9.9	5.8	●	2.09	TID*095...
DMC100	0.394	10	6.67	●	2.09	TID*100...
DMC101	0.398	10.1	6.67	●	2.11	TID*100...
DMC102	0.402	10.2	6.67	●	2.13	TID*100...
DMC103	0.406	10.3	6.67	●	2.15	TID*100...
DMC104	0.409	10.4	6.67	●	2.17	TID*100...
DMC105	0.413	10.5	6.67	●	2.19	TID*105...
DMC106	0.417	10.6	6.67	●	2.21	TID*105...
DMC107	0.421	10.7	6.67	●	2.23	TID*105...
DMC108	0.425	10.8	6.67	●	2.25	TID*105...
DMC109	0.429	10.9	6.67	●	2.27	TID*105...
DMC110	0.433	11	7.1	●	2.32	TID*110...
DMC111	0.437	11.1	7.1	●	2.34	TID*110...
DMC112	0.441	11.2	7.1	●	2.36	TID*110...
DMC113	0.445	11.3	7.1	●	2.38	TID*110...
DMC114	0.449	11.4	7.1	●	2.4	TID*110...
DMC115	0.453	11.5	7.1	●	2.42	TID*115...

Package Quantity: 0.157" - 0.783" = 2 pcs.
0.787" - 1.020" = 1 pc.

● : New product
○ : Will be released in April 2022
● : Line up

DMC High precision machining



Tool diameter (inch)	Head diameter tolerance
ø0.157" - ø0.705"	+0.0007" / 0
ø0.709" - ø1.020"	+0.0008" / 0
Tool diameter (mm)	Head diameter tolerance
ø4 - ø17.9	+0.018 / 0
ø18 - ø25.9	+0.021 / 0

P	Steel	★		
M	Stainless	★		
K	Cast iron	★		
N	Non-ferrous	☆		
S	Superalloys	★		
H	Hard materials	★		

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K	Cast iron	★		
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★ : First choice
☆ : Second choice

Designation	DC (in)	DC (mm)	LPR (mm)	Coated		PL (mm)	Body
				AH9130			
DMC116	0.457	11.6	7.1	●		2.44	TID*115...
DMC117	0.461	11.7	7.1	●		2.46	TID*115...
DMC118	0.465	11.8	7.1	●		2.48	TID*115...
DMC119	0.469	11.9	7.1	●		2.5	TID*115...
DMC120	0.472	12	7.43	●		2.45	TID*120...
DMC121	0.476	12.1	7.43	●		2.47	TID*120...
DMC122	0.480	12.2	7.43	●		2.49	TID*120...
DMC123	0.484	12.3	7.43	●		2.51	TID*120...
DMC124	0.488	12.4	7.43	●		2.53	TID*120...
DMC125	0.492	12.5	7.43	●		2.55	TID*125...
DMC126	0.496	12.6	7.43	●		2.57	TID*125...
DMC127	0.500	12.7	7.43	●		2.59	TID*125...
DMC128	0.504	12.8	7.43	●		2.61	TID*125...
DMC129	0.508	12.9	7.43	●		2.63	TID*125...
DMC130	0.512	13	8.15	●		2.71	TID*130...
DMC131	0.516	13.1	8.15	●		2.73	TID*130...
DMC132	0.520	13.2	8.15	●		2.75	TID*130...
DMC133	0.524	13.3	8.15	●		2.77	TID*130...
DMC134	0.528	13.4	8.15	●		2.79	TID*130...
DMC135	0.531	13.5	8.15	●		2.81	TID*135...
DMC136	0.535	13.6	8.15	●		2.83	TID*135...
DMC137	0.539	13.7	8.15	●		2.85	TID*135...
DMC138	0.543	13.8	8.15	●		2.87	TID*135...
DMC139	0.547	13.9	8.15	●		2.89	TID*135...
DMC140	0.551	14	8.76	●		2.93	TID*140...
DMC141	0.555	14.1	8.76	●		2.95	TID*140...
DMC142	0.559	14.2	8.76	●		2.97	TID*140...
DMC143	0.563	14.3	8.76	●		2.99	TID*140...
DMC144	0.567	14.4	8.76	●		3.01	TID*140...
DMC145	0.571	14.5	8.76	●		3.03	TID*145...
DMC146	0.575	14.6	8.76	●		3.05	TID*145...
DMC147	0.579	14.7	8.76	●		3.07	TID*145...
DMC148	0.583	14.8	8.76	●		3.09	TID*145...
DMC149	0.587	14.9	8.76	●		3.11	TID*145...
DMC150	0.591	15	9.44	●		3.18	TID*150...
DMC151	0.594	15.1	9.44	●		3.2	TID*150...
DMC152	0.598	15.2	9.44	●		3.22	TID*150...
DMC153	0.602	15.3	9.44	●		3.24	TID*150...

Designation	DC (in)	DC (mm)	LPR (mm)	Coated		PL (mm)	Body
				AH9130			
DMC154	0.606	15.4	9.44	●		3.26	TID*150...
DMC155	0.610	15.5	9.44	●		3.28	TID*150...
DMC156	0.614	15.6	9.44	●		3.3	TID*150...
DMC157	0.618	15.7	9.44	●		3.32	TID*150...
DMC158	0.622	15.8	9.44	●		3.34	TID*150...
DMC159	0.626	15.9	9.44	●		3.36	TID*150...
DMC160	0.630	16	10.07	●		3.39	TID*160...
DMC161	0.634	16.1	10.07	●		3.41	TID*160...
DMC162	0.638	16.2	10.07	●		3.43	TID*160...
DMC163	0.642	16.3	10.07	●		3.45	TID*160...
DMC164	0.646	16.4	10.07	●		3.47	TID*160...
DMC165	0.650	16.5	10.07	●		3.49	TID*160...
DMC166	0.654	16.6	10.07	●		3.51	TID*160...
DMC167	0.657	16.7	10.07	●		3.53	TID*160...
DMC168	0.661	16.8	10.07	●		3.55	TID*160...
DMC169	0.665	16.9	10.07	●		3.57	TID*160...
DMC170	0.669	17	10.68	●		3.57	TID*170...
DMC171	0.673	17.1	10.68	●		3.59	TID*170...
DMC172	0.677	17.2	10.68	●		3.61	TID*170...
DMC173	0.681	17.3	10.68	●		3.63	TID*170...
DMC174	0.685	17.4	10.68	●		3.65	TID*170...
DMC175	0.689	17.5	10.68	●		3.67	TID*170...
DMC176	0.693	17.6	10.68	●		3.69	TID*170...
DMC177	0.697	17.7	10.68	●		3.71	TID*170...
DMC178	0.701	17.8	10.68	●		3.73	TID*170...
DMC179	0.705	17.9	10.68	●		3.75	TID*170...
DMC180	0.709	18	11.35	●		3.78	TID*180...
DMC181	0.713	18.1	11.35	●		3.8	TID*180...
DMC182	0.717	18.2	11.35	●		3.82	TID*180...
DMC183	0.720	18.3	11.35	●		3.84	TID*180...
DMC184	0.724	18.4	11.35	●		3.86	TID*180...
DMC185	0.728	18.5	11.35	●		3.88	TID*180...
DMC186	0.732	18.6	11.35	●		3.9	TID*180...
DMC187	0.736	18.7	11.35	●		3.92	TID*180...
DMC188	0.740	18.8	11.35	●		3.94	TID*180...
DMC189	0.744	18.9	11.35	●		3.96	TID*180...
DMC190	0.748	19	11.91	●		3.99	TID*190...
DMC191	0.752	19.1	11.91	●		4.01	TID*190...

Package Quantity: 0.157" - 0.783" = 2 pcs.
0.787" - 1.020" = 1 pc.

● : Line up

P	Steel	★		
M	Stainless	★		
K	Cast iron	★		
N	Non-ferrous	☆		
S	Superalloys	★		
H	Hard materials	★		

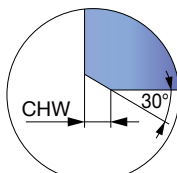
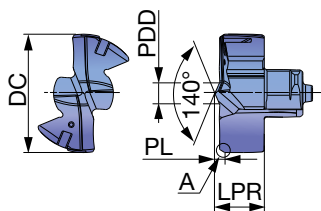
★ : First choice
☆ : Second choice

Designation	DC (in)	DC (mm)	LPR (mm)	Coated		PL (mm)	Body
				AH9130			
DMC192	0.756	19.2	11.91	●		4.03	TID*190...
DMC1927	0.759	19.27	11.91	●		4.04	TID*190...
DMC193	0.760	19.3	11.91	●		4.05	TID*190...
DMC194	0.764	19.4	11.91	●		4.07	TID*190...
DMC195	0.768	19.5	11.91	●		4.09	TID*190...
DMC196	0.772	19.6	11.91	●		4.11	TID*190...
DMC197	0.776	19.7	11.91	●		4.13	TID*190...
DMC198	0.780	19.8	11.91	●		4.15	TID*190...
DMC199	0.783	19.9	11.91	●		4.17	TID*190...
DMC200	0.787	20	12.62	●		4.24	TID*200...
DMC201	0.791	20.1	12.62	●		4.26	TID*200...
DMC205	0.807	20.5	12.62	●		4.34	TID*200...
DMC206	0.811	20.6	12.62	●		4.36	TID*200...
DMC210	0.827	21	13.2	●		4.4	TID*210...
DMC211	0.831	21.1	13.2	●		4.42	TID*210...
DMC215	0.846	21.5	13.2	●		4.5	TID*210...
DMC217	0.854	21.7	13.2	●		4.54	TID*210...
DMC218	0.858	21.8	13.2	●		4.56	TID*210...
DMC220	0.866	22	13.84	●		4.6	TID*220...
DMC221	0.870	22.1	13.84	●		4.62	TID*220...
DMC222	0.874	22.2	13.84	●		4.64	TID*220...
DMC223	0.878	22.3	13.84	●		4.66	TID*220...
DMC225	0.886	22.5	13.84	●		4.7	TID*220...
DMC230	0.906	23	14.51	●		4.84	TID*230...
DMC235	0.925	23.5	14.51	●		4.94	TID*230...
DMC240	0.945	24	15.11	●		5.03	TID*240...
DMC245	0.965	24.5	15.11	●		5.13	TID*240...
DMC250	0.984	25	15.78	●		5.28	TID*250...
DMC253	0.996	25.3	15.78	●		5.34	TID*250...
DMC255	1.004	25.5	15.78	●		5.38	TID*250...
DMC2567	1.011	25.67	15.78	●		5.42	TID*250...
DMC259	1.020	25.9	15.78	●		5.46	TID*250...

Package Quantity: 0.157" - 0.783" = 2 pcs.
0.787" - 1.020" = 1 pc.

● : Line up

DMF Flat geometry head



Detail in A

Tool diameter (inch)	Head diameter tolerance
ø0.236" - ø0.705"	+0.0007" / 0
ø0.709" - ø1.020"	+0.0008" / 0
Tool diameter (mm)	Head diameter tolerance
ø6 - ø17.9	+0.018 / 0
ø18 - ø25.9	+0.021 / 0

P	Steel	★		
M	Stainless	★		
K	Cast iron	★		
N	Non-ferrous	☆		
S	Superalloys	★		
H	Hard materials	★		

P	Steel	★		
M	Stainless	★		
K	Cast iron	★		
N	Non-ferrous	☆		
S	Superalloys	★		
H	Hard materials	★		

★ : First choice
☆ : Second choice

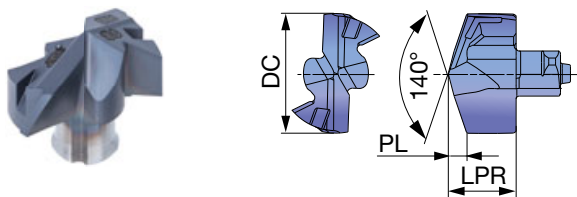
Designation	DC (in)	DC (mm)	LPR	Coated		CHW (mm)	PL (mm)	PDD (mm)	Body
				AH9130					
DMF060	0.236	6	3.01	●		0.4	0.61	1.15	TID*060...
DMF065	0.256	6.5	3.28	●		0.4	0.68	1.54	TID*065...
DMF068	0.268	6.8	3.28	●		0.4	0.68	1.54	TID*065...
DMF070	0.276	7	3.58	●		0.4	0.68	1.54	TID*070...
DMF075	0.295	7.5	3.58	●		0.4	0.68	1.54	TID*075...
DMF080	0.315	8	4.39	●		0.7	1.09	2.44	TID*080...
DMF081	0.319	8.1	4.39	●		0.7	1.09	2.44	TID*080...
DMF085	0.335	8.5	4.39	●		0.7	1.09	2.44	TID*085...
DMF086	0.339	8.6	4.39	●		0.7	1.09	2.44	TID*085...
DMF087	0.343	8.7	4.39	●		0.7	1.09	2.44	TID*085...
DMF088	0.346	8.8	4.39	●		0.7	1.09	2.44	TID*085...
DMF090	0.354	9	4.61	●		0.7	1.11	2.55	TID*090...
DMF095	0.374	9.5	4.61	●		0.7	1.11	2.55	TID*095...
DMF100	0.394	10	4.72	●		0.7	1.17	2.89	TID*100...
DMF101	0.398	10.1	4.72	●		0.7	1.17	2.89	TID*100...
DMF103	0.406	10.3	4.72	●		0.7	1.17	2.89	TID*100...
DMF104	0.409	10.4	4.72	●		0.7	1.17	2.89	TID*100...
DMF105	0.413	10.5	4.72	●		0.7	1.17	2.89	TID*105...
DMF106	0.417	10.6	4.72	●		0.7	1.17	2.89	TID*105...
DMF107	0.421	10.7	4.72	●		0.7	1.17	2.89	TID*105...
DMF108	0.425	10.8	4.72	●		0.7	1.17	2.89	TID*105...
DMF110	0.433	11	4.9	●		0.7	1.25	2.98	TID*110...
DMF115	0.453	11.5	4.9	●		0.7	1.25	2.98	TID*115...
DMF117	0.461	11.7	4.9	●		0.7	1.25	2.98	TID*115...
DMF120	0.472	12	5.21	●		0.7	1.26	3.13	TID*120...
DMF121	0.476	12.1	5.21	●		0.7	1.26	3.13	TID*120...
DMF122	0.480	12.2	5.21	●		0.7	1.26	3.13	TID*120...
DMF123	0.484	12.3	5.21	●		0.7	1.26	3.13	TID*120...
DMF124	0.488	12.4	5.21	●		0.7	1.26	3.13	TID*120...
DMF125	0.492	12.5	5.21	●		0.7	1.26	3.13	TID*125...
DMF126	0.496	12.6	5.21	●		0.7	1.26	3.13	TID*125...
DMF127	0.500	12.7	5.21	●		0.7	1.26	3.13	TID*125...
DMF130	0.512	13	5.53	●		0.7	1.28	3.52	TID*130...
DMF131	0.516	13.1	5.53	●		0.7	1.28	3.52	TID*130...
DMF133	0.524	13.3	5.53	●		0.7	1.28	3.52	TID*130...
DMF135	0.531	13.5	5.53	●		0.7	1.28	3.52	TID*135...
DMF137	0.539	13.7	5.53	●		0.7	1.28	3.52	TID*135...
DMF138	0.543	13.8	5.53	●		0.7	1.28	3.52	TID*135...
DMF139	0.547	13.9	5.53	●		0.7	1.28	3.52	TID*135...

Designation	DC (in)	DC (mm)	LPR	Coated		CHW (mm)	PL (mm)	PDD (mm)	Body
				AH9130					
DMF140	0.551	14	5.96	●		0.7	1.31	3.81	TID*140...
DMF141	0.555	14.1	5.96	●		0.7	1.31	3.81	TID*140...
DMF142	0.559	14.2	5.96	●		0.7	1.31	3.81	TID*140...
DMF143	0.563	14.3	5.96	●		0.7	1.31	3.81	TID*140...
DMF144	0.567	14.4	5.96	●		0.7	1.31	3.81	TID*140...
DMF145	0.571	14.5	5.96	●		0.7	1.31	3.81	TID*145...
DMF150	0.591	15	6.43	●		0.7	1.35	4.24	TID*150...
DMF152	0.598	15.2	6.43	●		0.7	1.35	4.24	TID*150...
DMF155	0.610	15.5	6.43	●		0.7	1.35	4.24	TID*150...
DMF157	0.618	15.7	6.43	●		0.7	1.35	4.24	TID*150...
DMF158	0.622	15.8	6.43	●		0.7	1.35	4.24	TID*150...
DMF160	0.630	16	6.84	●		0.7	1.39	4.06	TID*160...
DMF161	0.634	16.1	6.84	●		0.7	1.39	4.06	TID*160...
DMF165	0.650	16.5	6.84	●		0.7	1.39	4.06	TID*160...
DMF167	0.657	16.7	6.84	●		0.7	1.39	4.06	TID*160...
DMF170	0.669	17	7.15	●		0.7	1.4	4.14	TID*170...
DMF175	0.689	17.5	7.15	●		0.7	1.4	4.14	TID*170...
DMF179	0.705	17.9	7.15	●		0.7	1.4	4.14	TID*170...
DMF180	0.709	18	7.45	●		0.7	1.42	4.16	TID*180...
DMF185	0.728	18.5	7.45	●		0.7	1.42	4.16	TID*180...
DMF190	0.748	19	7.79	●		0.7	1.44	4.25	TID*190...
DMF195	0.768	19.5	7.79	●		0.7	1.44	4.25	TID*190...
DMF198	0.780	19.8	7.79	●		0.7	1.44	4.25	TID*190...
DMF200	0.787	20	9.12	●		0.7	1.77	6.56	TID*200...
DMF205	0.807	20.5	9.12	●		0.7	1.77	6.56	TID*200...
DMF210	0.827	21	9.54	●		0.7	1.79	6.92	TID*210...
DMF215	0.846	21.5	9.54	●		0.7	1.79	6.92	TID*210...
DMF218	0.858	21.8	9.54	●		0.7	1.79	6.92	TID*210...
DMF220	0.866	22	9.86	●		0.7	1.81	7.13	TID*220...
DMF225	0.886	22.5	9.86	●		0.7	1.81	7.13	TID*220...
DMF230	0.906	23	10.28	●		0.7	1.83	7.42	TID*230...
DMF235	0.925	23.5	10.28	●		0.7	1.83	7.42	TID*230...
DMF240	0.945	24	10.71	●		0.7	1.86	7.45	TID*240...
DMF245	0.965	24.5	10.71	●		0.7	1.86	7.45	TID*240...
DMF250	0.984	25	11.15	●		0.7	1.9	7.54	TID*250...
DMF254	1.000	25.4	11.15	●		0.7	1.9	7.54	TID*250...
DMF255	1.004	25.5	11.15	●		0.7	1.9	7.54	TID*250...
DMF259	1.020	25.9	11.15	●		0.7	1.9	7.54	TID*250...

● : New product
● : Line up

Package Quantity: 0.236" - 0.780" = 2 pcs.
0.787" - 1.020" = 1 pc.

DMH High strength cutting edge



Tool diameter (inch)	Head diameter tolerance
ø0.236" - ø0.705"	+0.0007" / -0.0002"
ø0.709" - ø1.004"	+0.0008" / -0.0002"

Tool diameter (mm)	Head diameter tolerance
ø6 - ø17.9	+0.018 / -0.005
ø18 - ø25.5	+0.021 / -0.005

P	Steel	★	
M	Stainless	★	
K	Cast iron	★	
N	Non-ferrous		
S	Superalloys	★	
H	Hard materials	★	

P	Steel	★	
M	Stainless	★	
K	Cast iron	★	
N	Non-ferrous		
S	Superalloys	★	
H	Hard materials	★	

★ : First choice
☆ : Second choice

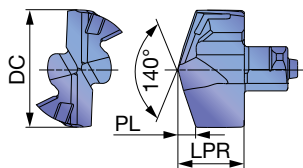
Designation	DC (in)	DC (mm)	LPR	Coated AH9130	PL (mm)	Body
New DMH060	0.236	6	3.85	●	1.09	TID*060...
New DMH068	0.268	6.8	4.15	●	1.33	TID*065...
New DMH070	0.276	7	4.45	●	1.03	TID*070...
New DMH075	0.295	7.5	4.45	●	1.12	TID*075...
New DMH080	0.315	8	5.25	●	1.2	TID*080...
New DMH085	0.335	8.5	5.25	●	1.29	TID*085...
New DMH086	0.339	8.6	5.25	●	1.31	TID*085...
New DMH087	0.343	8.7	5.25	●	1.33	TID*085...
New DMH088	0.346	8.8	5.25	●	1.35	TID*085...
New DMH090	0.354	9	5.65	●	1.37	TID*090...
New DMH095	0.374	9.5	5.65	●	1.46	TID*095...
New DMH097	0.382	9.7	5.65	●	1.5	TID*095...
DMH100	0.394	10	6.05	●	1.47	TID*100...
DMH103	0.406	10.3	6.05	●	1.52	TID*100...
DMH105	0.413	10.5	6.05	●	1.56	TID*105...
DMH108	0.425	10.8	6.05	●	1.62	TID*105...
DMH110	0.433	11	6.45	●	1.67	TID*110...
DMH115	0.453	11.5	6.45	●	1.76	TID*115...
DMH120	0.472	12	6.8	●	1.82	TID*120...
DMH125	0.492	12.5	6.8	●	1.91	TID*125...
DMH126	0.496	12.6	6.8	●	1.93	TID*125...
DMH130	0.512	13	7.4	●	1.96	TID*130...
DMH133	0.524	13.3	7.4	●	2.01	TID*130...
DMH135	0.531	13.5	7.4	●	2.05	TID*135...
DMH137	0.539	13.7	7.4	●	2.09	TID*135...
DMH138	0.543	13.8	7.4	●	2.11	TID*135...
DMH139	0.547	13.9	7.4	●	2.12	TID*135...
DMH140	0.551	14	7.95	●	2.12	TID*140...
DMH142	0.559	14.2	7.95	●	2.16	TID*140...
DMH145	0.571	14.5	7.95	●	2.21	TID*145...
DMH150	0.591	15	8.53	●	2.27	TID*150...
DMH152	0.598	15.2	8.53	●	2.31	TID*150...
DMH155	0.610	15.5	8.53	●	2.36	TID*150...
DMH160	0.630	16	9.1	●	2.42	TID*160...
DMH165	0.650	16.5	9.1	●	2.51	TID*160...
DMH170	0.669	17	9.7	●	2.59	TID*170...
DMH175	0.689	17.5	9.7	●	2.68	TID*170...
DMH180	0.709	18	10.3	●	2.73	TID*180...
DMH185	0.728	18.5	10.3	●	2.82	TID*180...

Package Quantity: 0.236" - 0.780" = 2 pcs.
0.787" - 1.020" = 1 pc.

Designation	DC (in)	DC (mm)	LPR	Coated AH9130	PL (mm)	Body
DMH190	0.748	19	10.8	●	2.88	TID*190...
DMH194	0.764	19.4	10.8	●	2.95	TID*190...
DMH195	0.768	19.5	10.8	●	2.97	TID*190...
New DMH200	0.787	20	11.4	●	3.02	TID*200...
New DMH205	0.807	20.5	11.4	●	3.11	TID*200...
New DMH210	0.827	21	11.98	●	3.18	TID*210...
New DMH215	0.846	21.5	11.98	●	3.27	TID*210...
New DMH220	0.866	22	12.56	●	3.32	TID*220...
New DMH225	0.886	22.5	12.56	●	3.41	TID*220...
New DMH230	0.906	23	13.13	●	3.46	TID*230...
New DMH235	0.925	23.5	13.13	●	3.55	TID*230...
New DMH240	0.945	24	13.7	●	3.62	TID*240...
New DMH245	0.965	24.5	13.7	●	3.71	TID*240...
New DMH250	0.984	25	14.3	●	3.8	TID*250...
New DMH255	1.004	25.5	14.3	●	3.89	TID*250...

● : New product
● : Line up

DMN Non-ferrous metals drilling



Tool diameter (inch)	Head diameter tolerance
ø0.394" - ø0.689"	+0.0004" / 0
ø0.709" - ø0.768"	+0.0005" / 0
Tool diameter (mm)	Head diameter tolerance
ø10 - ø17.5	+0.01 / 0
ø18 - ø19.9	+0.012 / 0

P	Steel			
M	Stainless			
K	Cast iron			
N	Non-ferrous	★		
S	Superalloys			
H	Hard materials			

★ : First choice
☆ : Second choice

Designation	DC (in)	DC (mm)	LPR	Coated		PL	Body
				KS15F			
DMN100	0.394	10	6.05	●		1.47	TID*100...
DMN102	0.402	10.2	6.05	●		1.51	TID*100...
DMN105	0.413	10.5	6.05	●		1.56	TID*105...
DMN108	0.425	10.8	6.05	●		1.62	TID*105...
DMN110	0.433	11	6.45	●		1.67	TID*110...
DMN115	0.453	11.5	6.45	●		1.76	TID*115...
DMN120	0.472	12	6.8	●		1.82	TID*120...
DMN123	0.484	12.3	6.8	●		1.87	TID*120...
DMN125	0.492	12.5	6.8	●		1.91	TID*125...
DMN126	0.496	12.6	6.8	●		1.93	TID*125...
DMN127	0.500	12.7	6.8	●		1.95	TID*125...
DMN130	0.512	13	7.4	●		1.96	TID*130...
DMN135	0.531	13.5	7.4	●		2.05	TID*135...
DMN138	0.543	13.8	7.4	●		2.11	TID*135...
DMN140	0.551	14	7.95	●		2.12	TID*140...
DMN142	0.559	14.2	7.95	●		2.16	TID*140...
DMN145	0.571	14.5	7.95	●		2.21	TID*145...
DMN150	0.591	15	8.53	●		2.27	TID*150...
DMN152	0.598	15.2	8.53	●		2.31	TID*150...
DMN155	0.610	15.5	8.53	●		2.36	TID*150...
DMN158	0.622	15.8	8.53	●		2.42	TID*150...
DMN159	0.626	15.9	8.53	●		2.43	TID*150...
DMN160	0.630	16	9.1	●		2.42	TID*160...
DMN163	0.642	16.3	9.1	●		2.47	TID*160...
DMN165	0.650	16.5	9.1	●		2.51	TID*160...
DMN170	0.669	17	9.7	●		2.59	TID*170...
DMN175	0.689	17.5	9.7	●		2.68	TID*170...
DMN180	0.709	18	10.3	●		2.73	TID*180...
DMN185	0.728	18.5	10.3	●		2.82	TID*180...
DMN190	0.748	19	10.8	●		2.88	TID*190...
DMN195	0.768	19.5	10.8	●		2.97	TID*190...

ø0.394" - ø0.768" = 2 pieces per package

● : Line up

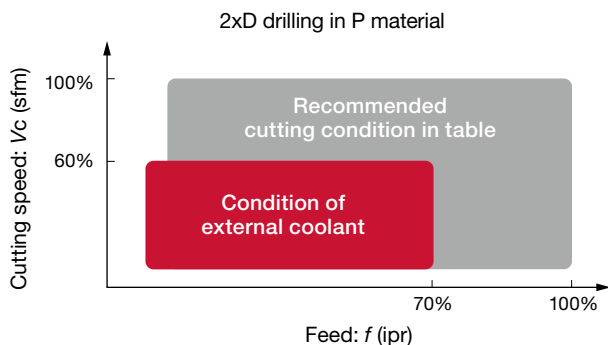
STANDARD CUTTING CONDITIONS

ISO	Workpiece material	Cutting speed Vc (sfm)	Feed: f (ipr)									
			Tool diameter: DC (in)									
			ø0.157" - ø0.173"	ø0.177" - ø0.193"	ø0.197" - ø0.232"	ø0.236" - ø0.311"	ø0.315" - ø0.390"	ø0.394" - ø0.469"	ø0.472" - ø0.547"	ø0.551" - ø0.626"	ø0.630" - ø0.783"	ø0.787" - ø1.020"
P	Low carbon steels (C < 0.3) 1018, 1020, 1026, etc.	262 - 459	0.002 - 0.003	0.002 - 0.003	0.003 - 0.005	0.004 - 0.005	0.005 - 0.010	0.006 - 0.011	0.007 - 0.012	0.008 - 0.014	0.010 - 0.018	0.010 - 0.018
	High carbon steels (C > 0.3) 1045, 1055, etc.	230 - 394	0.002 - 0.003	0.002 - 0.003	0.003 - 0.005	0.004 - 0.005	0.005 - 0.010	0.006 - 0.011	0.007 - 0.012	0.008 - 0.014	0.010 - 0.018	0.010 - 0.018
	Low alloy steels 4140, etc.	230 - 394	0.002 - 0.002	0.002 - 0.003	0.003 - 0.005	0.003 - 0.005	0.004 - 0.010	0.006 - 0.011	0.006 - 0.013	0.007 - 0.014	0.009 - 0.016	0.010 - 0.018
	Alloy steels 8620, etc.	131 - 295	0.002 - 0.003	0.002 - 0.003	0.003 - 0.005	0.003 - 0.005	0.004 - 0.010	0.006 - 0.011	0.006 - 0.013	0.007 - 0.014	0.009 - 0.016	0.010 - 0.018
M	Stainless steels 304SS, 316SS, etc.	98 - 230	-	-	0.002 - 0.003	0.003 - 0.004	0.004 - 0.006	0.005 - 0.007	0.006 - 0.008	0.006 - 0.009	0.006 - 0.010	0.007 - 0.012
K	Gray cast irons Class 25, etc.	262 - 591	0.002 - 0.003	0.002 - 0.003	0.004 - 0.006	0.005 - 0.007	0.006 - 0.012	0.008 - 0.014	0.010 - 0.016	0.012 - 0.018	0.014 - 0.022	0.014 - 0.024
	Ductile cast irons 100-70-03, etc.	262 - 459	0.002 - 0.003	0.002 - 0.003	0.004 - 0.006	0.005 - 0.007	0.006 - 0.012	0.008 - 0.014	0.010 - 0.016	0.012 - 0.018	0.014 - 0.022	0.014 - 0.024
N	Aluminum alloys	262 - 722	-	-	-	0.004 - 0.008	0.008 - 0.014	0.010 - 0.016	0.012 - 0.018	0.014 - 0.02	0.016 - 0.024	0.020 - 0.030
S	Titanium alloys Ti-6Al-4V, etc.	66 - 164	-	-	-	0.002 - 0.003	0.002 - 0.005	0.003 - 0.006	0.004 - 0.011	0.005 - 0.008	0.006 - 0.009	0.007 - 0.011
	Nickel-based alloys	66 - 164	-	-	-	0.002 - 0.003	0.002 - 0.004	0.003 - 0.005	0.004 - 0.006	0.005 - 0.007	0.005 - 0.009	0.006 - 0.009
H	Hardened steel	66 - 164	-	-	-	0.002 - 0.003	0.002 - 0.005	0.003 - 0.006	0.004 - 0.007	0.005 - 0.008	0.006 - 0.009	0.006 - 0.010

- Cutting conditions in the above table show standard cutting conditions
- Cutting conditions may change due to the rigidity and power of the machine and the workpiece material
- Machined hole diameter may change depending upon the rigidity of the machine tool or cutting conditions

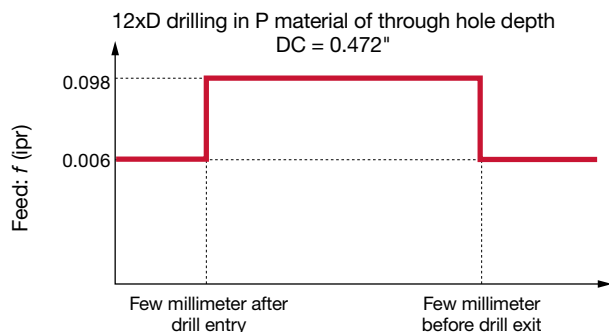
Over 2xD drilling without internal coolant

In an environment without internal coolant, external coolant supply is required. It is recommended to reduce the cutting condition depending on the material and hole depth. Over 2xD drill, step or pecking cycle operation is recommended in order to cool the cutting edge and for appropriate chip evacuation.



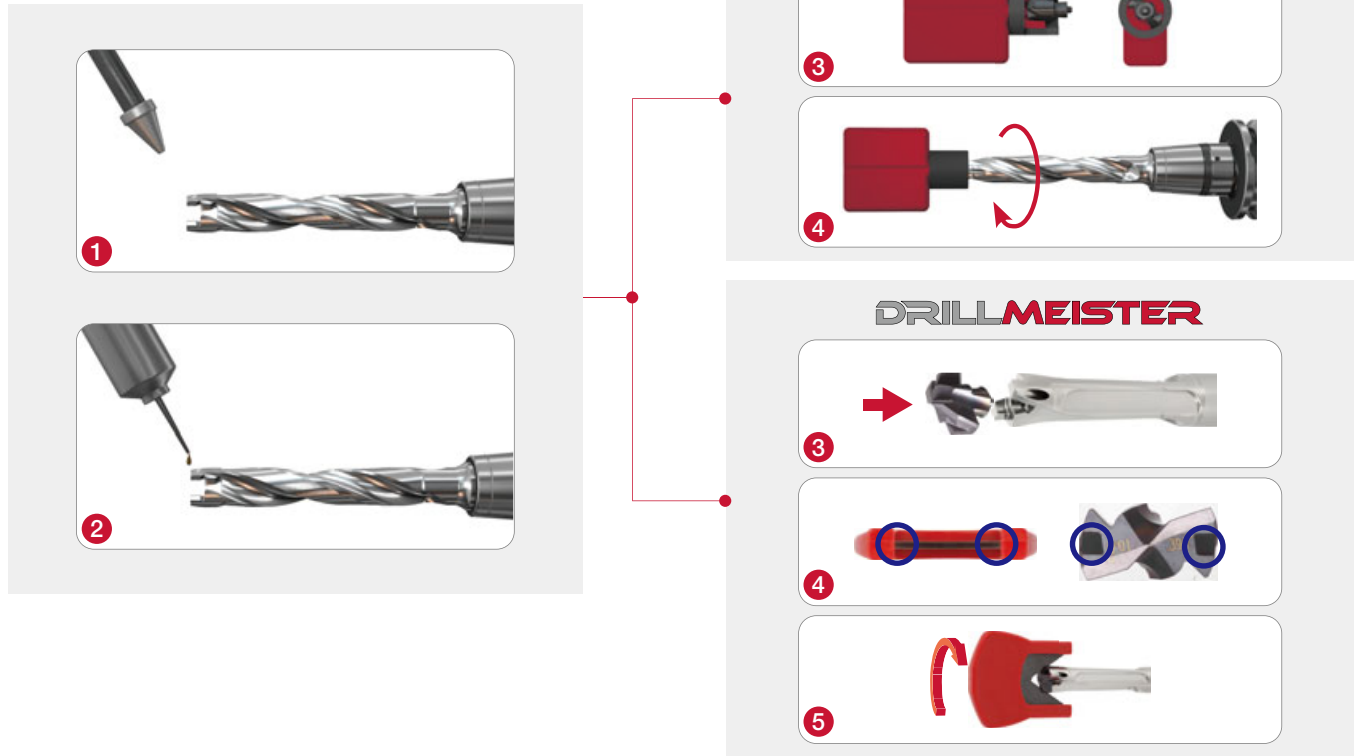
Drilling 8xD depth, or deeper

When drilling 8xD depth or deeper, DMC head is recommended for stable machining. Also, when drilling a through hole with 8xD to 12xD depth, the feed rate at the beginning and close to the bottom should be 40 - 50% lower than the regular condition (feed rate). And, the length of machining with the lower feed should be similar to LPR length of each head. After drill entry, it is possible to increase the feed depending on target productivity.

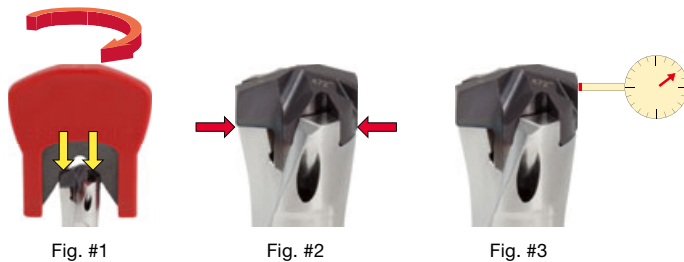


TECHNICAL GUIDE

● Drilling head mounting procedure



● Instruction for proper head mounting



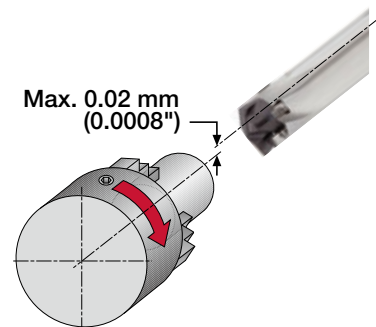
Procedures

- ① Thoroughly clean the contacting areas on the drill body and the head with compressed air, lubricate them, and put the drill head in the pocket.
- ② Place the clamping key in the grooves on the drill head. Push the head in the pocket with equal torque on the right and the left sides. Rotate the clamping key to lock the head in the pocket completely. (Fig. #1).
- ③ Be sure that there is no gap in the contact surfaces between the head and the drill body. Use a 0.0004" shim to check for the gap. (Fig. #2)
- ④ If there is a gap thicker than 0.0004", unclamp the head and return to procedure No. ①.
- ⑤ Measure the run-out at the margin of the drill head. Run-out must be 0.002" or smaller. (Fig. #3) (Recommended value: 0.0008" or smaller)
If the run-out exceeds 0.0008", unclamp the head and return to procedure No. ①.

Note: #1: If the clamping torque is not equally applied on the right and the left sides of the drill head, there may be a gap between the head and the body, which increases the run-out of the head.

Note: #2: Low accuracy in holding the drill body may affect the run-out. If the run-out is large, check the accuracy in holding the drill body.

● Alignment recommendation



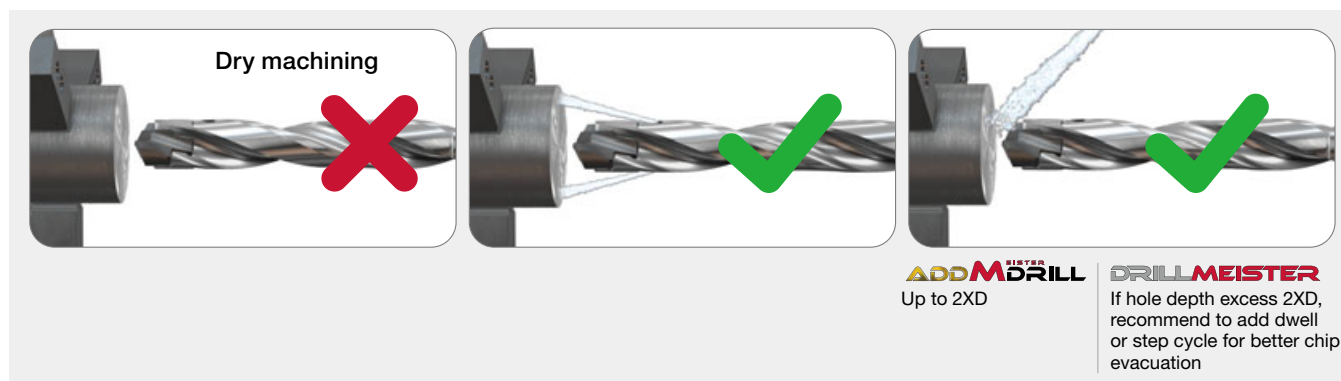
● Runout recommendation



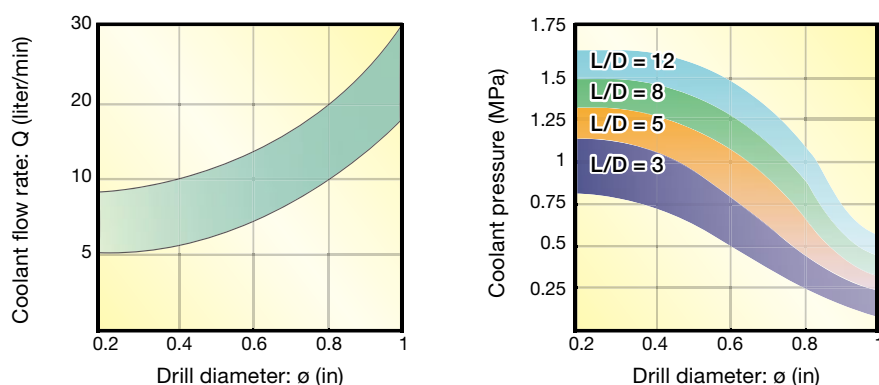
ADDMEISTERDRILL
Max. 0.0008"

DRILLMEISTER
Ideal : ≤ 0.0008"
Acceptable : ≤ 0.002"
Not acceptable : > 0.002"

● Coolant recommendation



● Recommended coolant flow rate and pressures

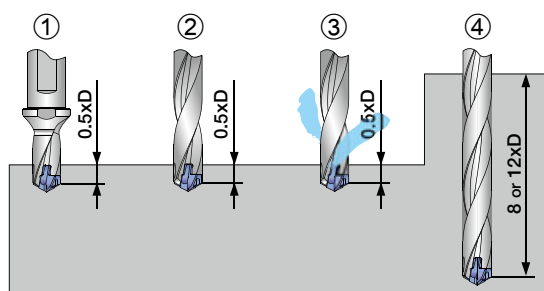


● Application range and recommended tool lengths for application irregularities

Please use the shortest tool length possible

Application	Stacked plate	Complex exit	Rough / cast surface	Inclined surface	OK / Not possible
ADDM DRILL	X	X	X	X	X
DRILLMEISTER	✓	✓ Up to 8xD	✓ Up to 5xD	✓ Up to 3xD	OK
Application	Curved surface	Hole expansion	Plunging	Counter boring	OK / Not possible
ADDM DRILL	X	X	X	X	X
DRILLMEISTER	✓ Up to 3xD	✓ Up to 3xD	✓ Up to 3xD	X	Not possible

● Tips when using 8xD and 12xD drills



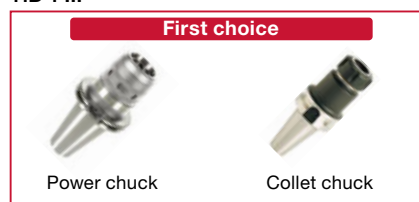
- Note:** Use DMC-style drill head for deep holes from 8xD up to 12xD depths without a pilot hole.

● Head combinations of pre-hole to main hole

		Pre-hole		
		DMP	DMC	DMF
Hole	DMP	Good 	Not good 	Not good
	DMC	Good 	Good 	Good
	DMF	Not good 	Not good 	Good

● Holders recommended for M/C

TID-F...



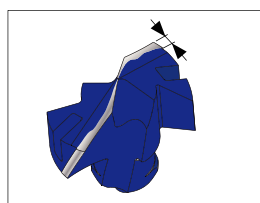
TID-R...



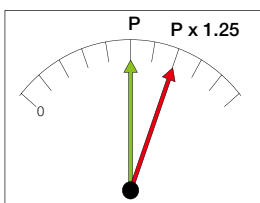
Note: If you need to use a 12xD body with a side-lock holder, the shank will need to have a flat area which may be placed additionally.

● When to change drill heads (Criteria for the end of tool life)

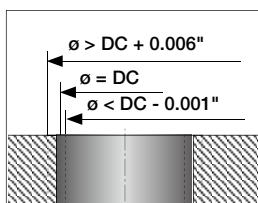
Replace the drill head when the following phenomena occurs during the machining:



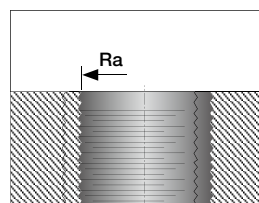
Width of corner wear reaches



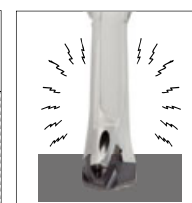
Spindle load exceeds 125% of the normal value



Hole diameter is 0.006" larger or 0.001" smaller than the drill diameter



Surface roughness deterioration



Vibration or unusual noise

DRILLMEISTER : 0.008" - 0.012"
ADDMEISTERDRILL : 0.004" - 0.008"

● When to change drill heads (Criteria for the end of tool life)

For your safety, it is recommended to replace drill bodies that reach fatigue life with new drill bodies. To determine the fatigue life, Measure the torque value required to unlock the drill head with a torque driver. When the torque value required is equal to or smaller than the values listed below for respective head sizes, replace the drill body with a new one.

Clamping key for measuring un-clamping torque:

KHS-TID10-19.99

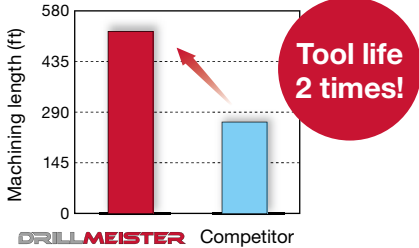
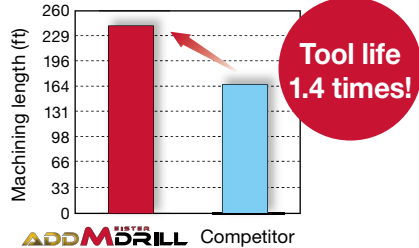
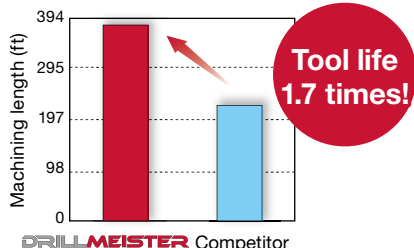
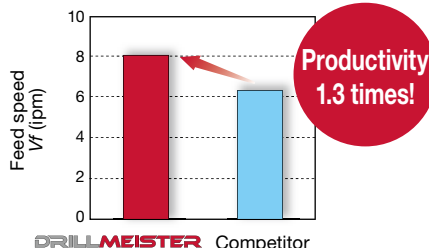


* The clamping key can be connected with general torque drivers.

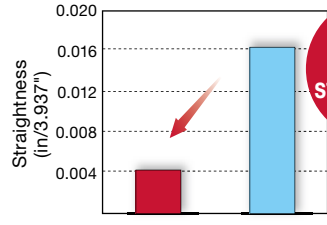
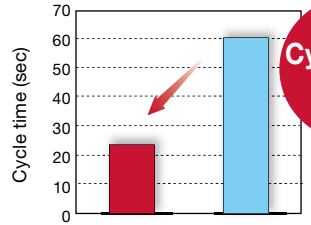
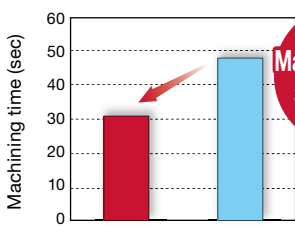
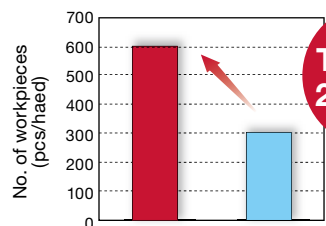


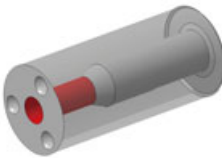
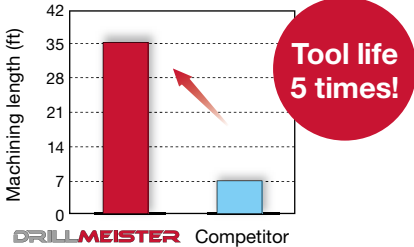
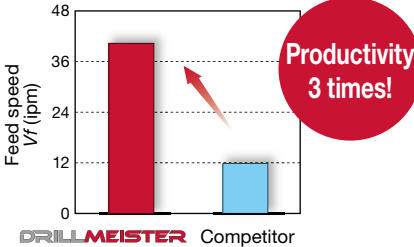
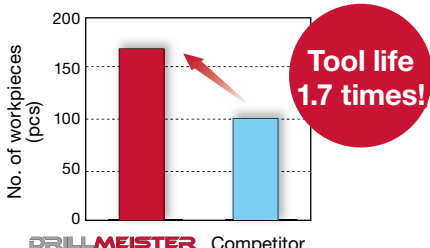
Head Designation	Recommended value of un-clamping torque that means usable limit of a drill body (lbf · ft)
DM*100-109	0.15
DM*110-119	0.15
DM*120-129	0.18
DM*130-139	0.18
DM*140-149	0.22
DM*150-159	0.22
DM*160-169	0.26
DM*170-179	0.26
DM*180-189	0.3
DM*190-199	0.3

PRACTICAL EXAMPLES

Workpiece type		Cylinder block	Flange part
Drill body		TID115F16-8	TID050R06-5
Head		DMC115	DMP050
Grade		AH9130	AH725
Workpiece material		No.250B	1045
		 K	 P
Cutting conditions	Cutting speed : Vc (sfm)	328	328
	Feed : f (ipr)	0.008	0.004
	Feed speed : Vf (ipm)	21.811	25.075
	Drill diameter: DC (in)	0.453	0.197
	Hole depth : H (in)	3.150	0.787
	Coolant	Wet (Internal coolant)	Wet (Internal and external coolant)
	Machine	Horizontal M/C	Vertical M/C
Results		 DRILLMEISTER Competitor Competitor's tool broke due to bending holes. DMC heads provides the machining stability by self centering geometry and double margins. AH9130 grade achieved 2 times longer tool life than competitor even in higher cutting speed.	 ADDMEISTER Competitor Combination of sharp cutting edge and efficient coolant supply produced 1.4 times better tool life than solid drill.
Workpiece type		Out put shaft	Flange part
Drill body		TIDC160C16-5	TIDC100C10-3
Head		DMP165	DMP105
Grade		AH9130	AH725
Workpiece material		4142	304
		 P	 M
Cutting conditions	Cutting speed : Vc (sfm)	262	148
	Feed : f (ipr)	0.012	0.006
	Feed speed : Vf (ipm)	18.236	8.071
	Drill diameter: DC (in)	0.650	0.413
	Hole depth : H (in)	1.969	0.906
	Coolant	Wet (Internal coolant)	Wet (Internal coolant)
	Machine	Vertical M/C	Horizontal M/C
Results		 DRILLMEISTER Competitor Compared to the competitor's similar product, DrillMeister extends tool life by 1.7 times.	 DRILLMEISTER Competitor DrillMeister allows high-feed machining and increases productivity by 1.3 times. AH725 with good chipping resistance extends tool life by 30%.

PRACTICAL EXAMPLES

Workpiece type		Out put shaft	Mold base
Drill body		TID140F16-8	TID180R25-12
Head		DMC140	DMC180
Grade		AH9130	AH9130
Workpiece material		Low carbon alloy steel	1055
		 P	 P
Cutting conditions	Cutting speed : Vc (sfm)	394	394
	Feed : f (ipr)	0.012	0.010
	Feed speed : Vf (ipm)	23.622	20.906
	Drill diameter: DC (in)	0.551	0.709
	Hole depth : H (in)	3.150	7.874
	Coolant	Wet (Internal coolant)	Wet (Internal coolant)
	Machine	Horizontal M/C	Horizontal M/C
Results		 Improved straightness With the competitor's drill, the hole quality could not satisfy the straightness required. DrillMeister's DMC drill head improved the hole straightness to 1/4 of the competitor's.	 Cycle time 1/3! DMC does not need a guide hole. DMC achieved 3 times higher productivity than current process by eliminating a guide hole process and increasing cutting speed and feed rate.
Workpiece type		Deff case	Wheel hub
Drill body		TID145F16-5	TID135R14-3.5
Head		DMF145	DMH137
Grade		AH9130	AH9130
Workpiece material		80-55-06	1040
		 K	 P
Cutting conditions	Cutting speed : Vc (sfm)	328	492
	Feed : f (ipr)	0.010	0.013
	Feed speed : Vf (ipm)	23.386	4.559
	Drill diameter: DC (in)	0.571	0.539
	Hole depth : H (in)	0.787	0.591
	Coolant	Wet (Internal coolant)	Wet (Internal coolant)
	Machine	Vertical M/C	Vertical M/C
Results		 Machining time 30% down! DMF head help to consolidates spot facing and drilling operations to casted uneven surface in order to improve machining time.	 Tool life 2 times! The combination of reinforce geometry DMH and advanced wear resistant grade AH9130 show double tool life.

Workpiece type		Mold	Electric part
Drill body		TID170F20-5	TID140F15-3
Head		DMC170	DMN142
Grade		AH9130	KS15F
Workpiece material		D2 (50HRC)	Aluminum alloy (cast)
		 H	 N
Cutting conditions	Cutting speed : V_c (sfm)	98	443
	Feed : f (ipr)	0.008	0.013
	Feed speed : V_f (ipm)	4.409	39.370
	Drill diameter: DC (in)	0.669	0.559
	Hole depth : H (in)	3.150	0.591
	Coolant	Wet (Internal coolant)	Wet (Internal coolant)
	Machine	Swiss lathe	Vertical M/C
Results		 Compared against indexable drill, DMC produced 5 times better tool life due to high wear resistant grade AH9130.	 3 times better productivity achieved due to dedicated head that can be applied to the same tool body.
Workpiece type		Manufacturing machine part	
Drill body		TID065F12-1.5	
Head		DMP069	
Grade		AH725	
Workpiece material		Ni alloy	
		 S	
Cutting conditions	Cutting speed : V_c (sfm)	177	
	Feed : f (ipr)	0.003	
	Feed speed : V_f (ipm)	7.850	
	Drill diameter: DC (in)	0.272	
	Hole depth : H (in)	0.201	
	Coolant	Wet (Internal coolant)	
	Machine	Horizontal M/C	
Results		 1.7 times better tool life achieved than competitor head exchangeable drill due to low cutting force and good chip evacuation.	

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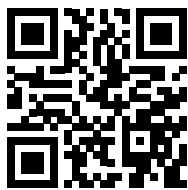
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