

DrillLine

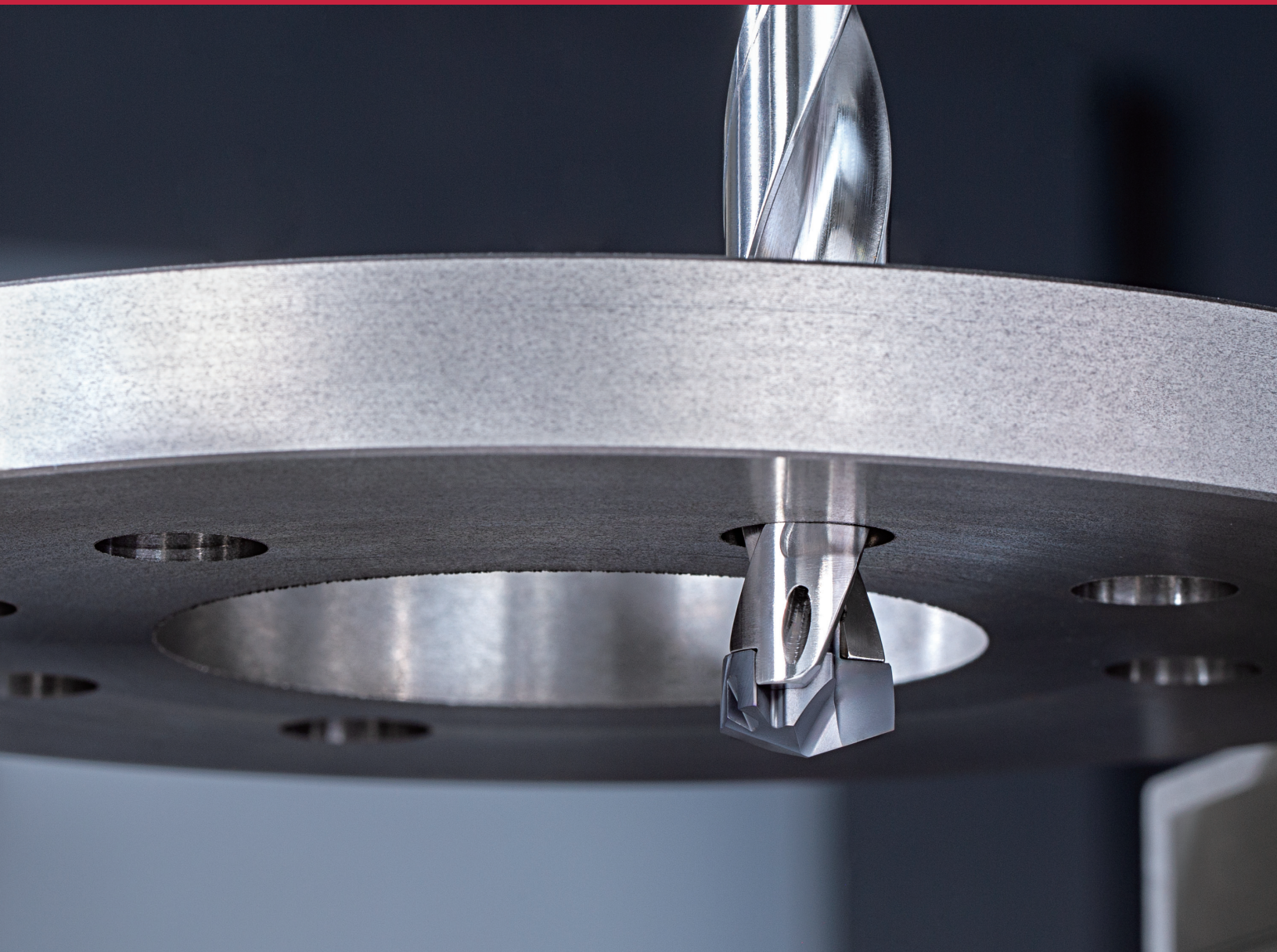
DRILLMEISTER

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Tungaloy Report No. 412S3-US



New DMH geometry with excellent fracture resistant design



INDUSTRY 4.0
FEED the SPEED!



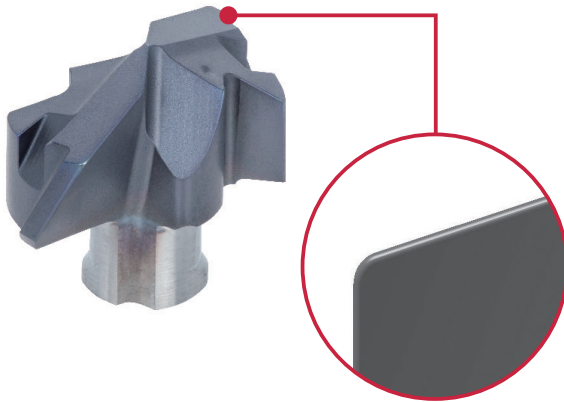
For more information

Provides long tool life in challenging hole-making operations

New

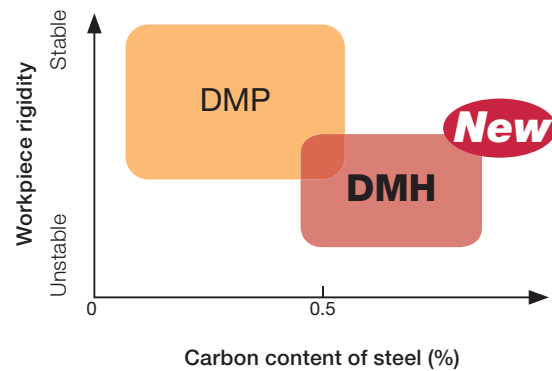
DMH with optimized edge preparation for edge toughness

- Strong cutting edge design prevents the drill edge from fracturing during demanding processes
- Versatile and wear-resistant AH9130 grade provides extended tool life

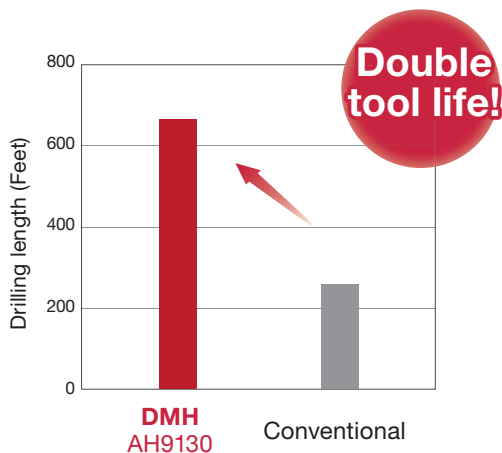


Strong cutting edge design

Application range of DMH



Longer tool life with no edge fracture



DMH AH9130

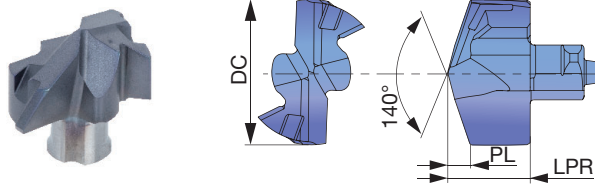


Conventional



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

DMH



Tool diameter (Inch)	ø0.394" - ø0.768"
Head diameter tolerance	±0.0004
Tool diameter (mm)	ø10 - ø19.5
Head diameter tolerance	±0.01

Designation	DC (in)	DC (mm)	Grade AH9130	LPR (mm)	PL (mm)	Pocket size	Body
DMH100	0.394	10	●	6.1	1.47	10	TID*100*
DMH103	0.406	10.3	●	6.1	1.52	10	TID*100*
DMH105	0.413	10.5	●	6.1	1.56	10	TID*105*
DMH108	0.425	10.8	●	6.1	1.62	10	TID*105*
DMH110	0.433	11	●	6.5	1.67	11	TID*110*
DMH115	0.453	11.5	●	6.5	1.76	11	TID*115*
DMH120	0.472	12	●	6.8	1.82	12	TID*120*
DMH125	0.492	12.5	●	6.8	1.91	12	TID*125*
DMH126	0.496	12.6	●	6.8	1.93	12	TID*125*
DMH130	0.512	13	●	7.4	1.96	13	TID*130*
DMH133	0.524	13.3	●	7.4	2.01	13	TID*130*
DMH135	0.532	13.5	●	7.4	2.05	13	TID*135*
DMH137	0.539	13.7	●	7.4	2.09	13	TID*135*
DMH138	0.543	13.8	●	7.4	2.11	13	TID*135*
DMH139	0.547	13.9	●	7.4	2.12	13	TID*135*

Designation	DC (in)	DC (mm)	Grade AH9130	LPR (mm)	PL (mm)	Pocket size	Body
DMH140	0.551	14	●	8	2.12	14	TID*140*
DMH142	0.559	14.2	●	8	2.16	14	TID*142*
DMH145	0.571	14.5	●	8	2.21	14	TID*145*
DMH150	0.591	15	●	8.5	2.27	15	TID*150*
DMH152	0.598	15.2	●	8.5	2.31	15	TID*150*
DMH155	0.610	15.5	●	8.5	2.36	15	TID*150*
DMH160	0.630	16	●	9.1	2.42	16	TID*160*
DMH165	0.650	16.5	●	9.1	2.51	16	TID*160*
DMH170	0.669	17	●	9.7	2.59	17	TID*170*
DMH175	0.689	17.5	●	9.7	2.68	17	TID*170*
DMH180	0.709	18	●	10.3	2.73	18	TID*180*
DMH185	0.728	18.5	●	10.3	2.82	18	TID*180*
DMH190	0.748	19	●	10.8	2.88	19	TID*190*
DMH194	0.764	19.4	●	10.8	2.95	19	TID*190*
DMH195	0.768	19.5	●	10.8	2.97	19	TID*190*

●: Line up

STANDARD CUTTING CONDITIONS

ISO	Workpiece materials	Cutting speed Vc (sfm)	Feed: f (ipr)			
			DC (in)			
			ø0.394 - ø0.469	ø0.472 - ø0.547	ø0.551 - ø0.626	ø0.630 - ø0.780
P	Low carbon steel (C < 0.3) 1018, 1020, 1026, etc.	262 - 459	0.006 - 0.011	0.007 - 0.012	0.008 - 0.014	0.010 - 0.018
	High carbon steel (C > 0.3) 1045, 1055, etc.	230 - 394	0.006 - 0.011	0.007 - 0.012	0.008 - 0.014	0.010 - 0.018
	Low alloy steel 5120, etc.	230 - 394	0.006 - 0.011	0.006 - 0.013	0.007 - 0.014	0.009 - 0.016
	Alloy steel 4140, 8620, etc.	131 - 295	0.006 - 0.011	0.006 - 0.013	0.007 - 0.014	0.009 - 0.016
M	Stainless steel 304SS, 316SS, 17-4PH, etc.	98 - 230	0.005 - 0.007	0.006 - 0.008	0.006 - 0.009	0.006 - 0.010
K	Gray cast iron Class 25, Class 30, etc.	262 - 591	0.008 - 0.014	0.010 - 0.016	0.012 - 0.018	0.014 - 0.022
	Ductile cast iron 60-40-18, 60-55-06, etc.	262 - 459	0.008 - 0.014	0.010 - 0.016	0.012 - 0.018	0.014 - 0.022
N	Aluminum alloys 6061, 7075, etc.	262 - 722	0.010 - 0.016	0.012 - 0.018	0.014 - 0.020	0.016 - 0.024
S	Titanium alloys Ti-6Al-4V, etc.	66 - 164	0.003 - 0.006	0.004 - 0.007	0.005 - 0.008	0.006 - 0.009
	Nickel-based alloys	66 - 164	0.003 - 0.005	0.004 - 0.006	0.005 - 0.007	0.005 - 0.009
H	Hardened steel	66 - 164	0.003 - 0.006	0.004 - 0.007	0.005 - 0.008	0.006 - 0.009

- 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.
- In case of L/D = 8 & 12 drill, the recommended range of cutting speeds and feeds is between the minimum and median values listed above.

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