

DSA Series

FOR LONG TOOL LIFE
WHEN MACHINING HEAT
RESISTANT SUPER ALLOYS

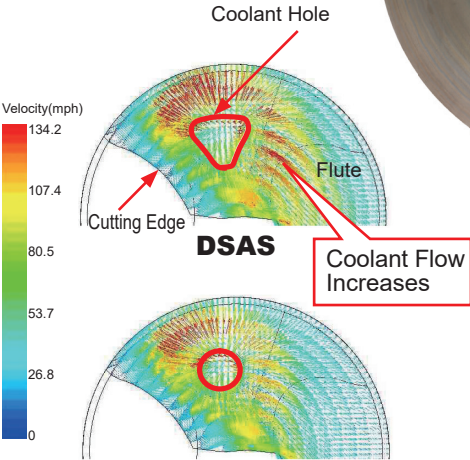


Solid Carbide Drill for Machining Heat Resistant Alloys

DSA Series

TRI-Cooling Technology

The unique hole geometry increases the coolant flow rate, resulting in high lubricity and cooling effect.
(available in sizes over : ø.1969 inch or ø 5 mm)



Comparison of Coolant Flow Rate
(Spindle Speed 4700 min⁻¹)

New Grade for Machining of Heat Resistant Alloys
DP9020

New hard grade provides both high wear and fracture resistance, leading to longer tool life.

Straight Cutting Edge with Single-Pass Honing

The tough straight cutting edge with single-pass honing enables stable chip formation as well as preventing the cutting edge from chipping.

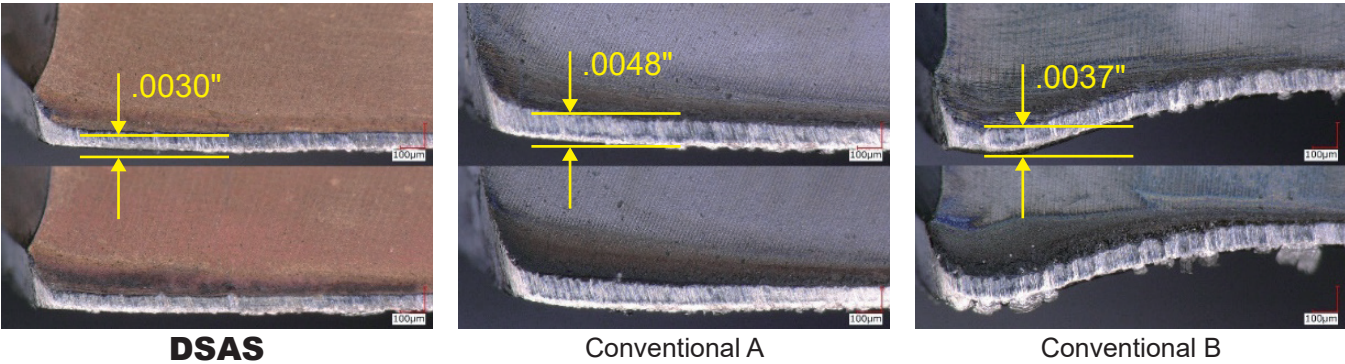
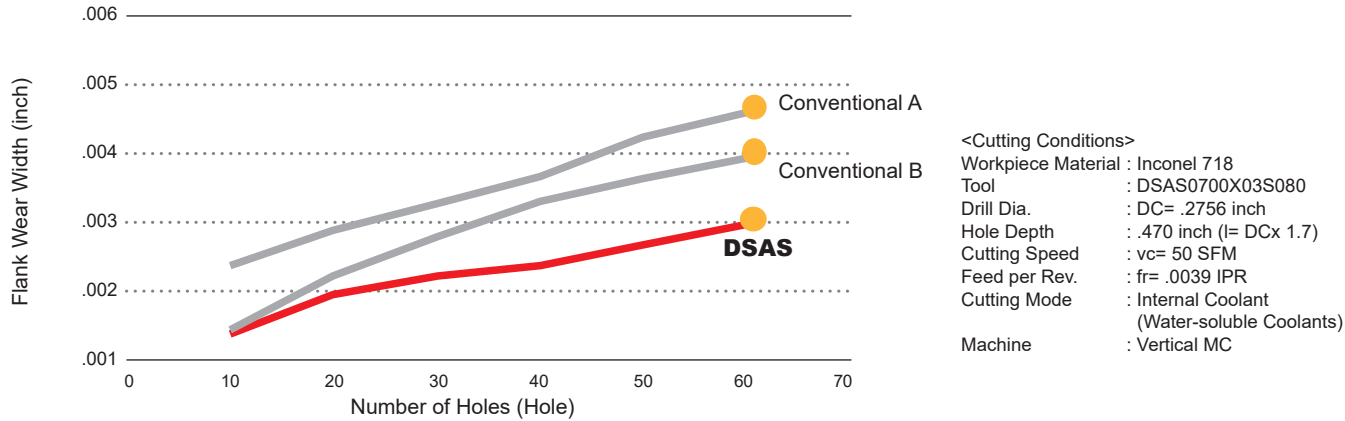


Special Margin

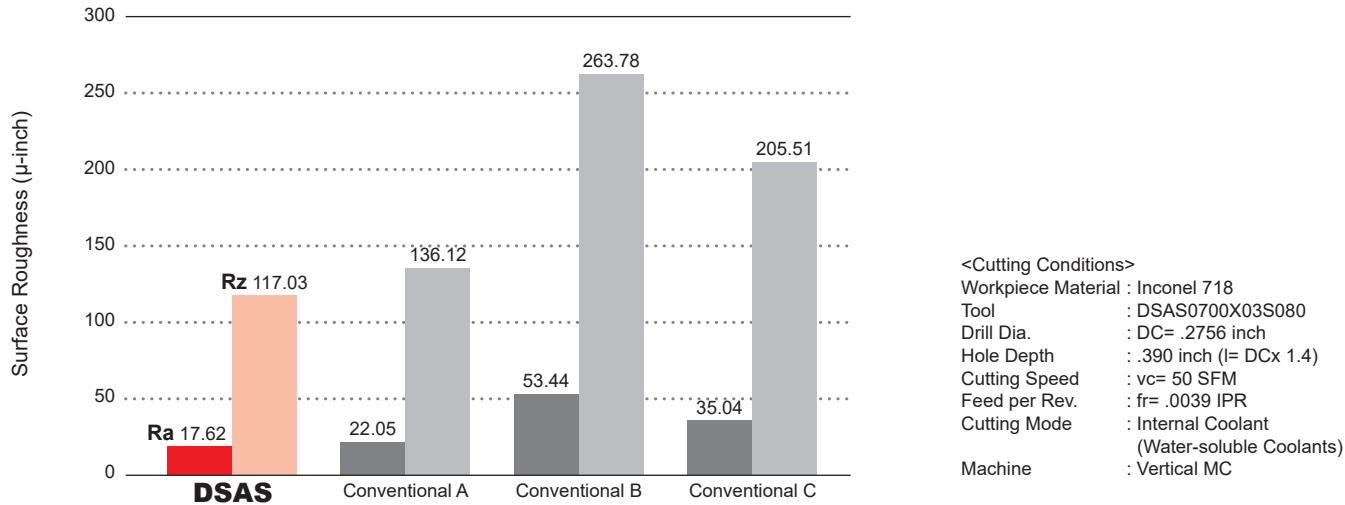
The specially designed thin margin minimizes contact area with hole surface and workpiece materials in combination with tri-cooling technology to reduce cutting heat and prevent the generation of work-hardening making it especially suited for the machining of heat resistant alloys.

Cutting Performance

Comparison of Flank Wear Width by Inconel 718

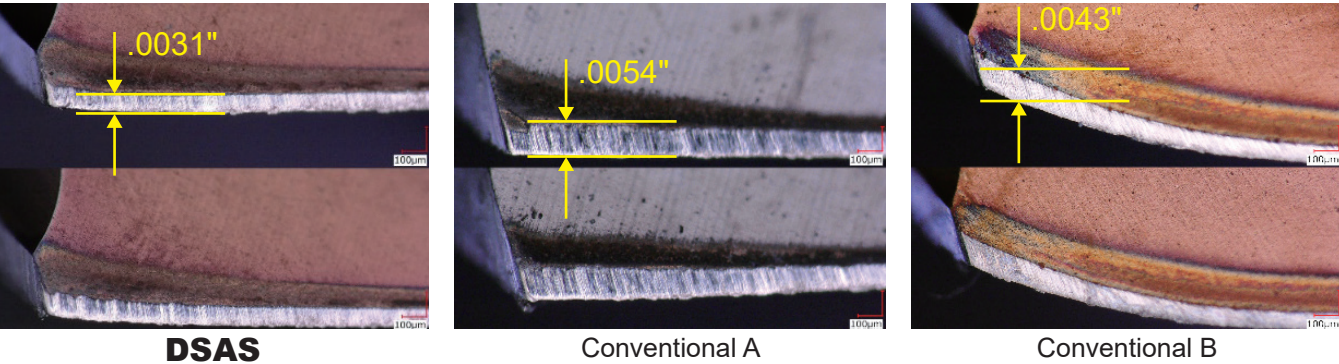
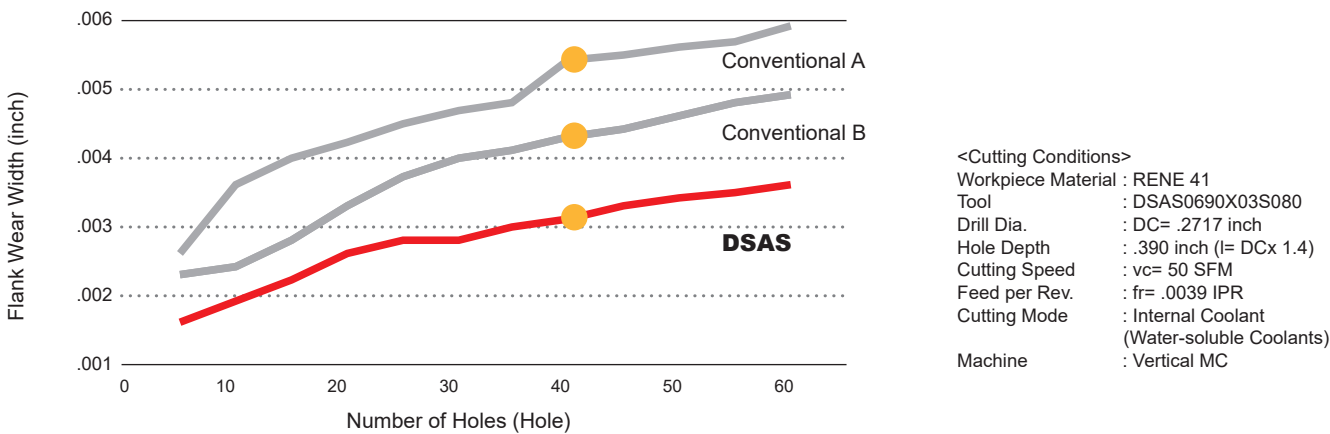


Comparison of Wall Surface Roughness by Inconel 718

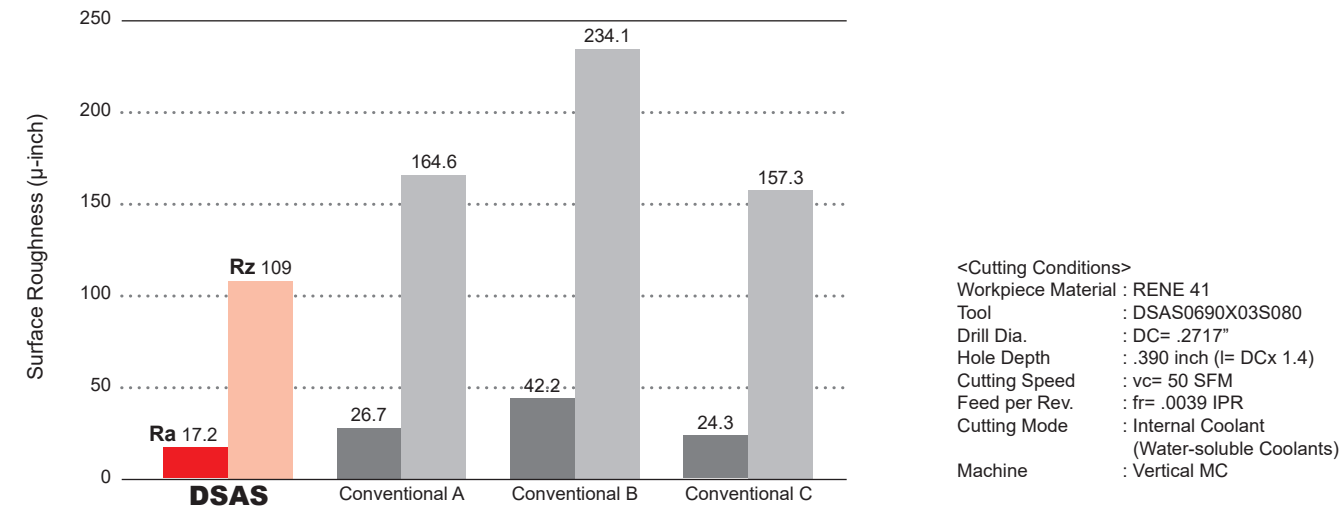


Cutting Performance

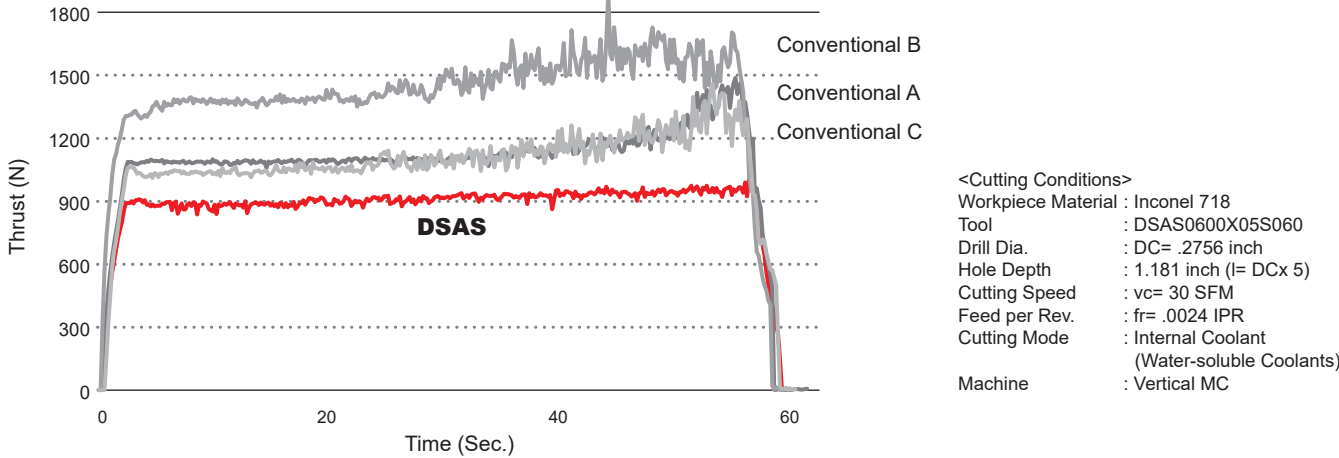
Comparison of Flank Wear Width by RENE 41



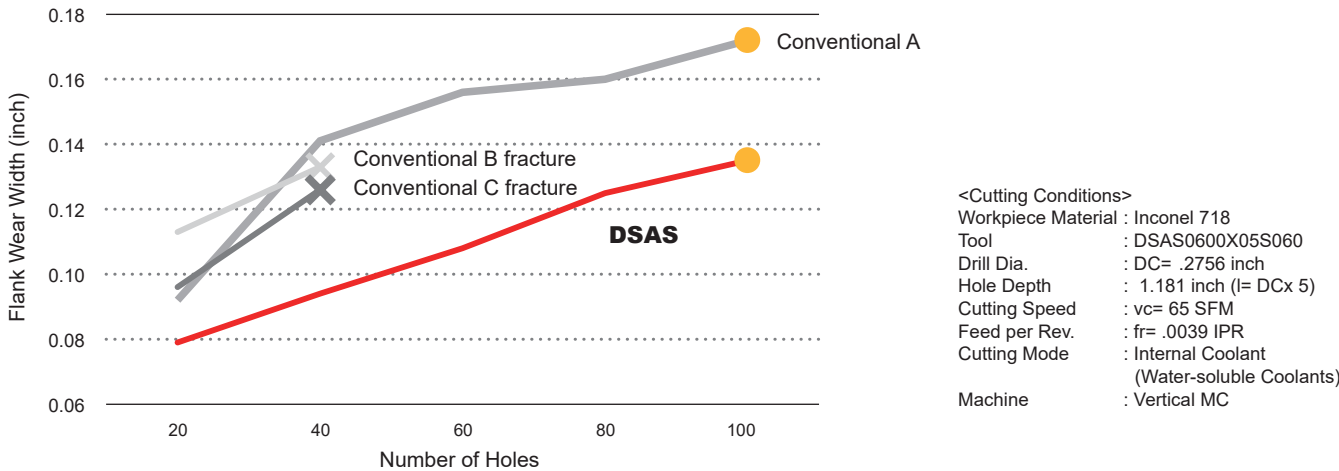
Comparison of Wall Surface Roughness by RENE 41



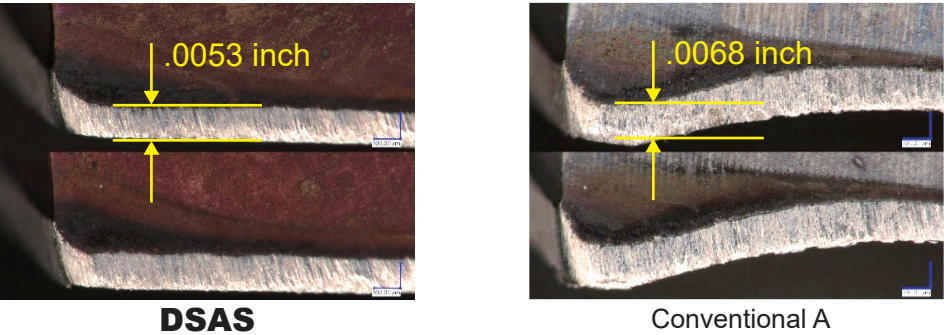
Comparison of Cutting Resistance by Inconel 718 : L/D = 5



Comparison of Flank Wear Width by Inconel 718 : L/D = 5



After 100 Hole



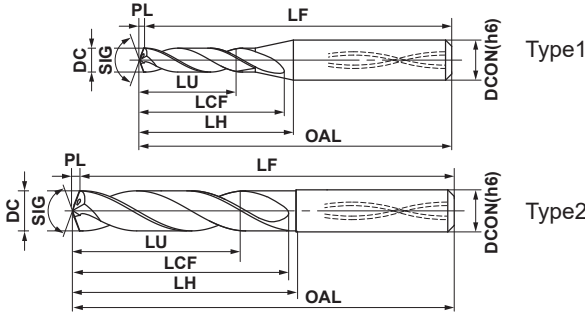
Solid Carbide Drill for Machining Heat Resistant Alloys

DSA

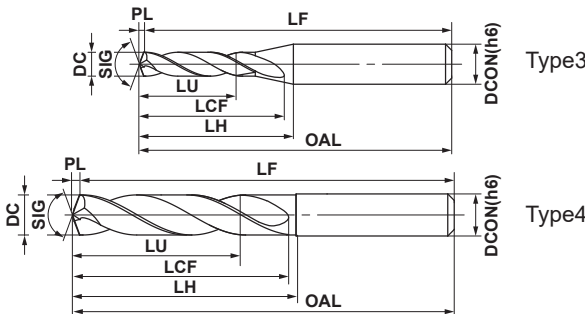


- P
- M
- K
- N
- S
- H

DSAS



DSAE



* When looking at coating the color can vary depending on the direction of viewing. This does not have any effect on the performance of the drill.

(inch)					
Type	Tolerance	DC=.1181	.1181<DC≤.2362	.2362<DC≤.3937	.3937<DC≤.5906
Type1,2,3,4	DC	$0_{-0.00071}$	$0_{-0.00071}$	$0_{-0.00087}$	$0_{-0.00106}$
	DCON	$0_{-0.00031}$	$0_{-0.00031}$	$0_{-0.00035}$	$0_{-0.00043}$

(mm)					
Type	Tolerance	DC=3	3<DC≤6	6<DC≤10	10<DC≤15
Type1,2,3,4	DC	$0_{-0.018}$	$0_{-0.018}$	$0_{-0.022}$	$0_{-0.027}$
	DCON	$0_{-0.008}$	$0_{-0.008}$	$0_{-0.009}$	$0_{-0.011}$

DC					L/D	Coolant (Int./Ext.)	Order Number	Stock	LU		LCF		LH		OAL		LF		PL		DCON		Type
Metric (mm)	Decimal	Fraction	Wire / Letter	Thread Size				DP9020															
	(inch)							mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch		
3.000	.1181				3	Ext.	DSAE0300X03S060	★	9.5	.374	21.5	.846	23.5	.925	70.5	2.776	70	2.756	0.5	.020	6	.236	3
					3	Int.	DSAS0300X03S060	●	9.5	.374	21.5	.846	23.5	.925	70.5	2.776	70	2.756	0.5	.020	6	.236	1
					5	Int.	DSAS0300X05S060	●	15.5	.610	28.5	1.122	31.5	1.240	78.5	3.091	78	3.071	0.5	.020	6	.236	1
3.100	.1220				3	Int.	DSAS0310X03S060	●	9.9	.390	21.6	.850	23.6	.929	70.6	2.780	70	2.756	0.6	.024	6	.236	1
					5	Int.	DSAS0310X05S060	●	16.1	.634	28.6	1.126	31.6	1.244	78.6	3.094	78	3.071	0.6	.024	6	.236	1
3.175	.1250	1/8			3	Int.	DSAS0318X03S060	●	10.1	.398	21.6	.850	23.6	.929	70.6	2.780	70	2.756	0.6	.024	6	.236	1
					5	Int.	DSAS0318X05S060	●	16.5	.650	28.6	1.126	31.6	1.244	78.6	3.094	78	3.071	0.6	.024	6	.236	1
3.200	.1260				3	Int.	DSAS0320X03S060	●	10.2	.402	21.6	.850	23.6	.929	70.6	2.780	70	2.756	0.6	.024	6	.236	1
					5	Int.	DSAS0320X05S060	●	16.6	.654	28.6	1.126	31.6	1.244	78.6	3.094	78	3.071	0.6	.024	6	.236	1
3.260	.1283				3	Int.	DSAS0326X03S060	●	10.4	.409	21.6	.850	23.6	.929	70.6	2.780	70	2.756	0.6	.024	6	.236	1
					5	Int.	DSAS0326X05S060	★	16.9	.665	28.6	1.126	31.6	1.244	78.6	3.094	78	3.071	0.6	.024	6	.236	1
3.300	.1299			M4x.7	3	Int.	DSAS0330X03S060	●	10.5	.413	21.6	.850	23.6	.929	70.6	2.780	70	2.756	0.6	.024	6	.236	1
					5	Int.	DSAS0330X05S060	●	17.1	.673	28.6	1.126	31.6	1.244	78.6	3.094	78	3.071	0.6	.024	6	.236	1
3.400	.1339				3	Ext.	DSAE0340X03S060	★	10.8	.425	21.6	.850	23.6	.929	70.6	2.780	70	2.756	0.6	.024	6	.236	3
					3	Int.	DSAS0340X03S060	●	10.8	.425	21.6	.850	23.6	.929	70.6	2.780	70	2.756	0.6	.024	6	.236	1
					5	Int.	DSAS0340X05S060	●	17.6	.693	28.6	1.126	31.6	1.244	78.6	3.094	78	3.071	0.6	.024	6	.236	1
3.500	.1378				3	Int.	DSAS0350X03S060	●	11.1	.437	21.6	.850	23.6	.929	70.6	2.780	70	2.756	0.6	.024	6	.236	1
					5	Int.	DSAS0350X05S060	●	18.1	.713	28.6	1.126	31.6	1.244	78.6	3.094	78	3.071	0.6	.024	6	.236	1

Note 1) The coolant hole of ø.1875" (ø4.763mm) or less will be round shape.

● : USA Stock ★ : Stocked in Japan

DC					L/D	Coolant (Int./Ext.)	Order Number	Stock		LU		LCF		LH		OAL		LF		PL		DCON		Type
Metric (mm)	Decimal	Fraction	Wire / Letter	Thread Size				DP9020		mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	
	(inch)																							
3.572	.1407	9/64			3	Int.	DSAS0357X03S060	●	11.4	.449	22.7	.894	23.7	.933	70.7	2.783	70	2.756	0.7	.028	6	.236	1	
					5	Int.	DSAS0357X05S060	●	18.6	.732	30.7	1.209	31.7	1.248	78.7	3.098	78	3.071	0.7	.028	6	.236	1	
3.600	.1417				3	Int.	DSAS0360X03S060	●	11.5	.453	22.7	.894	23.7	.933	70.7	2.783	70	2.756	0.7	.028	6	.236	1	
					5	Int.	DSAS0360X05S060	★	18.7	.736	30.7	1.209	31.7	1.248	78.7	3.098	78	3.071	0.7	.028	6	.236	1	
3.700	.1457			M4.5x.75	3	Int.	DSAS0370X03S060	●	11.8	.465	22.7	.894	23.7	.933	70.7	2.783	70	2.756	0.7	.028	6	.236	1	
					5	Int.	DSAS0370X05S060	●	19.2	.756	30.7	1.209	31.7	1.248	78.7	3.098	78	3.071	0.7	.028	6	.236	1	
3.800	.1496		25	#10-24	3	Int.	DSAS0380X03S060	●	12.1	.476	22.7	.894	23.7	.933	70.7	2.783	70	2.756	0.7	.028	6	.236	1	
					5	Int.	DSAS0380X05S060	●	19.7	.776	30.7	1.209	31.7	1.248	78.7	3.098	78	3.071	0.7	.028	6	.236	1	
3.900	.1535				3	Int.	DSAS0390X03S060	●	12.4	.488	22.7	.894	23.7	.933	70.7	2.783	70	2.756	0.7	.028	6	.236	1	
					5	Int.	DSAS0390X05S060	●	20.2	.795	30.7	1.209	31.7	1.248	78.7	3.098	78	3.071	0.7	.028	6	.236	1	
3.969	.1563	5/32			3	Int.	DSAS0397X03S060	●	12.6	.496	22.7	.894	23.7	.933	70.7	2.783	70	2.756	0.7	.028	6	.236	1	
					5	Int.	DSAS0397X05S060	●	20.5	.807	30.7	1.209	31.7	1.248	78.7	3.098	78	3.071	0.7	.028	6	.236	1	
4.000	.1575				3	Ext.	DSAE0400X03S060	★	12.7	.500	22.7	.894	23.7	.933	70.7	2.783	70	2.756	0.7	.028	6	.236	3	
					3	Int.	DSAS0400X03S060	●	12.7	.500	22.7	.894	23.7	.933	70.7	2.783	70	2.756	0.7	.028	6	.236	1	
					5	Int.	DSAS0400X05S060	●	20.7	.815	30.7	1.209	31.7	1.248	78.7	3.098	78	3.071	0.7	.028	6	.236	1	
4.100	.1614				3	Int.	DSAS0410X03S060	●	13.0	.512	24.7	.972	26.7	1.051	73.7	2.902	73	2.874	0.7	.028	6	.236	1	
					5	Int.	DSAS0410X05S060	●	21.2	.835	33.7	1.327	35.7	1.406	82.7	3.256	82	3.228	0.7	.028	6	.236	1	
4.200	.1654			M5x.8	3	Int.	DSAS0420X03S060	●	13.4	.528	24.8	.976	26.8	1.055	73.8	2.906	73	2.874	0.8	.031	6	.236	1	
					5	Int.	DSAS0420X05S060	●	21.8	.858	33.8	1.331	35.8	1.409	82.8	3.260	82	3.228	0.8	.031	6	.236	1	
4.300	.1693				3	Ext.	DSAE0430X03S060	★	13.7	.539	24.8	.976	26.8	1.055	73.8	2.906	73	2.874	0.8	.031	6	.236	3	
					3	Int.	DSAS0430X03S060	●	13.7	.539	24.8	.976	26.8	1.055	73.8	2.906	73	2.874	0.8	.031	6	.236	1	
					5	Int.	DSAS0430X05S060	●	22.3	.878	33.8	1.331	35.8	1.409	82.8	3.260	82	3.228	0.8	.031	6	.236	1	
4.366	.1719	11/64			3	Int.	DSAS0437X03S060	●	13.9	.547	24.8	.976	26.8	1.055	73.8	2.906	73	2.874	0.8	.031	6	.236	1	
					5	Int.	DSAS0437X05S060	●	22.6	.890	33.8	1.331	35.8	1.409	82.8	3.260	82	3.228	0.8	.031	6	.236	1	
4.400	.1732		17		3	Int.	DSAS0440X03S060	●	14.0	.551	24.8	.976	26.8	1.055	73.8	2.906	73	2.874	0.8	.031	6	.236	1	
					5	Int.	DSAS0440X05S060	●	22.8	.898	33.8	1.331	35.8	1.409	82.8	3.260	82	3.228	0.8	.031	6	.236	1	
4.500	.1772		16	#12-24	3	Ext.	DSAE0450X03S060	★	14.3	.563	24.8	.976	26.8	1.055	73.8	2.906	73	2.874	0.8	.031	6	.236	3	
					3	Int.	DSAS0450X03S060	●	14.3	.563	24.8	.976	26.8	1.055	73.8	2.906	73	2.874	0.8	.031	6	.236	1	
					5	Int.	DSAS0450X05S060	●	23.3	.917	33.8	1.331	35.8	1.409	82.8	3.260	82	3.228	0.8	.031	6	.236	1	
4.600	.1811				3	Int.	DSAS0460X03S060	●	14.6	.575	25.8	1.016	28.8	1.134	75.8	2.984	75	2.953	0.8	.031	6	.236	1	
					5	Int.	DSAS0460X05S060	●	23.8	.937	35.8	1.409	38.8	1.528	85.8	3.378	85	3.346	0.8	.031	6	.236	1	
4.700	.1850		13		3	Int.	DSAS0470X03S060	●	15.0	.591	25.9	1.020	28.9	1.138	75.9	2.988	75	2.953	0.9	.035	6	.236	1	
					5	Int.	DSAS0470X05S060	●	24.4	.961	35.9	1.413	38.9	1.531	85.9	3.382	85	3.346	0.9	.035	6	.236	1	
4.763	.1875	3/16			3	Int.	DSAS0476X03S060	●	15.2	.598	25.9	1.020	28.9	1.138	75.9	2.988	75	2.953	0.9	.035	6	.236	1	
					5	Int.	DSAS0476X05S060	●	24.7	.972	35.9	1.413	38.9	1.531	85.9	3.382	85	3.346	0.9	.035	6	.236	1	
4.800	.1890		12		3	Int.	DSAS0480X03S060	●	15.3	.602	25.9	1.020	28.9	1.138	75.9	2.988	75	2.953	0.9	.035	6	.236	1	
					5	Int.	DSAS0480X05S060	●	24.9	.980	35.9	1.413	38.9	1.531	85.9	3.382	85	3.346	0.9	.035	6	.236	1	
4.865	.1915				3	Int.	DSAS0486X03S060	●	15.5	.610	25.9	1.020	28.9	1.138	75.9	2.988	75	2.953	0.9	.035	6	.236	1	
					5	Int.	DSAS0486X05S060	★	25.2	.992	35.9	1.413	38.9	1.531	85.9	3.382	85	3.346	0.9	.035	6	.236	1	
4.900	.1929				3	Int.	DSAS0490X03S060	●	15.6	.614	25.9	1.020	28.9	1.138	75.9	2.988	75	2.953	0.9	.035	6	.236	1	
					5	Int.	DSAS0490X05S060	★	25.4	1.000	35.9	1.413	38.9	1.531	85.9	3.382	85	3.346	0.9	.035	6	.236	1	
5.000	.1969			M6x1.0	3	Ext.	DSAE0500X03S060	★	15.9	.626	28.9	1.138	29.9	1.177	81.9	3.224	81	3.189	0.9	.035	6	.236	4	
					3	Int.	DSAS0500X03S060	●	15.9	.626	28.9	1.138	29.9	1.177	81.9	3.224	81	3.189	0.9	.035	6	.236	2	
					5	Int.	DSAS0500X05S060	●	25.9	1.020	39.9	1.571	42.9	1.689	89.9	3.539	89	3.504	0.9	.035	6	.236	2	
5.100	.2008		7	1/4-20	3	Ext.	DSAE0510X03S060	★	16.2	.638	28.9	1.138	29.9	1.177	81.9	3.224	81	3.189	0.9	.035	6	.236	4	
					3	Int.	DSAS0510X03S060	●	16.2	.638	28.9	1.138	29.9	1.177	81.9	3.224	81	3.189	0.9	.035	6	.236	2	
					5	Int.	DSAS0510X05S060	●	26.4	1.039	39.9	1.571	42.9	1.689	89.9	3.539	89	3.504	0.9	.035	6	.236	2	
5.160	.2032	13/64			3	Int.	DSAS0516X03S060	●	16.5	.650	29.0	1.142	30.0	1.181	82.0	3.228	81	3.189	1.0	.039	6	.236	2	
					5	Int.	DSAS0516X05S060	●	26.8	1.055	40.0	1.575	43.0	1.693	90.0	3.543	89	3.504	1.0	.039	6	.236	2	
5.200	.2047				3	Int.	DSAS0520X03S060	●	16.6	.654	29.0	1.142	30.0	1.181	82.0	3.228	81	3.189	1.0	.039	6	.236	2	
					5	Int.	DSAS0520X05S060	●	27.0	1.063	40.0	1.575	43.0	1.693	90.0	3.543	89	3.504	1.0	.039	6	.236	2	
5.300	.2087		4		3	Int.	DSAS0530X03S060	●	16.9	.665	29.0	1.142	30.0	1.181	82.0	3.228	81	3.189	1.0	.039	6	.236	2	
					5	Int.	DSAS0530X05S060	●	27.5	1.083	40.0	1.575	43.0	1.693	90.0	3.543	89	3.504	1.0	.039	6	.236	2	

Solid Carbide Drill for Machining Heat Resistant Alloys

DSA

DC					L/D	Coolant (Int./Ext.)	Order Number	Stock		LU		LCF		LH		OAL		LF		PL		DCON		Type	
Metric (mm)	Decimal	Fraction	Wire / Letter	Thread Size				DP9020	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm		inch
	(inch)																								
5.400	.2126		3	1/4-28	3	Ext.	DSAE0540X03S060	★	17.2	.677	29.0	1.142	30.0	1.181	82.0	3.228	81	3.189	1.0	.039	6	.236	4		
					3	Int.	DSAS0540X03S060	●	17.2	.677	29.0	1.142	30.0	1.181	82.0	3.228	81	3.189	1.0	.039	6	.236	2		
					5	Int.	DSAS0540X05S060	●	28.0	1.102	40.0	1.575	43.0	1.693	90.0	3.543	89	3.504	1.0	.039	6	.236	2		
5.500	.2165				3	Ext.	DSAE0550X03S060	★	17.5	.689	29.0	1.142	30.0	1.181	82.0	3.228	81	3.189	1.0	.039	6	.236	4		
					3	Int.	DSAS0550X03S060	●	17.5	.689	29.0	1.142	30.0	1.181	82.0	3.228	81	3.189	1.0	.039	6	.236	2		
					5	Int.	DSAS0550X05S060	●	28.5	1.122	40.0	1.575	43.0	1.693	90.0	3.543	89	3.504	1.0	.039	6	.236	2		
5.557	.2188	7/32			3	Int.	DSAS0556X03S060	●	17.8	.701	31.1	1.224	31.1	1.224	82.1	3.232	81	3.189	1.1	.043	6	.236	2		
					5	Int.	DSAS0556X05S060	●	28.9	1.138	43.1	1.697	43.1	1.697	90.1	3.547	89	3.504	1.1	.043	6	.236	2		
5.600	.2205		2		3	Ext.	DSAE0560X03S060	★	17.9	.705	31.1	1.224	31.1	1.224	82.1	3.232	81	3.189	1.1	.043	6	.236	4		
					3	Int.	DSAS0560X03S060	●	17.9	.705	31.1	1.224	31.1	1.224	82.1	3.232	81	3.189	1.1	.043	6	.236	2		
					5	Int.	DSAS0560X05S060	●	29.1	1.146	43.1	1.697	43.1	1.697	90.1	3.547	89	3.504	1.1	.043	6	.236	2		
5.700	.2244				3	Int.	DSAS0570X03S060	●	18.2	.717	31.1	1.224	31.1	1.224	82.1	3.232	81	3.189	1.1	.043	6	.236	2		
					5	Int.	DSAS0570X05S060	●	29.6	1.165	43.1	1.697	43.1	1.697	90.1	3.547	89	3.504	1.1	.043	6	.236	2		
5.800	.2283		1		3	Int.	DSAS0580X03S060	●	18.5	.728	31.1	1.224	31.1	1.224	82.1	3.232	81	3.189	1.1	.043	6	.236	2		
					5	Int.	DSAS0580X05S060	●	30.1	1.185	43.1	1.697	43.1	1.697	90.1	3.547	89	3.504	1.1	.043	6	.236	2		
5.900	.2323				3	Ext.	DSAE0590X03S060	★	18.8	.740	31.1	1.224	31.1	1.224	82.1	3.232	81	3.189	1.1	.043	6	.236	4		
					3	Int.	DSAS0590X03S060	●	18.8	.740	31.1	1.224	31.1	1.224	82.1	3.232	81	3.189	1.1	.043	6	.236	2		
					5	Int.	DSAS0590X05S060	●	30.6	1.205	43.1	1.697	43.1	1.697	90.1	3.547	89	3.504	1.1	.043	6	.236	2		
5.954	.2344	15/64	A		3	Int.	DSAS0595X03S060	●	19.0	.748	31.1	1.224	31.1	1.224	82.1	3.232	81	3.189	1.1	.043	6	.236	2		
					5	Int.	DSAS0595X05S060	●	30.9	1.217	43.1	1.697	43.1	1.697	90.1	3.547	89	3.504	1.1	.043	6	.236	2		
6.000	.2362			M7x1.0	3	Ext.	DSAE0600X03S060	★	19.1	.752	31.1	1.224	31.1	1.224	82.1	3.232	81	3.189	1.1	.043	6	.236	4		
					3	Int.	DSAS0600X03S060	●	19.1	.752	31.1	1.224	31.1	1.224	82.1	3.232	81	3.189	1.1	.043	6	.236	2		
					5	Int.	DSAS0600X05S060	●	31.1	1.224	43.1	1.697	43.1	1.697	90.1	3.547	89	3.504	1.1	.043	6	.236	2		
6.100	.2402				3	Ext.	DSAE0610X03S080	★	19.5	.768	34.2	1.346	37.2	1.465	87.2	3.433	86	3.386	1.2	.047	8	.315	4		
					3	Int.	DSAS0610X03S080	●	19.5	.768	34.2	1.346	37.2	1.465	87.2	3.433	86	3.386	1.2	.047	8	.315	2		
					5	Int.	DSAS0610X05S080	●	31.7	1.248	47.2	1.858	49.2	1.937	96.2	3.787	95	3.740	1.2	.047	8	.315	2		
6.200	.2441				3	Ext.	DSAE0620X03S080	★	19.8	.780	34.2	1.346	37.2	1.465	87.2	3.433	86	3.386	1.2	.047	8	.315	4		
					3	Int.	DSAS0620X03S080	●	19.8	.780	34.2	1.346	37.2	1.465	87.2	3.433	86	3.386	1.2	.047	8	.315	2		
					5	Int.	DSAS0620X05S080	●	32.2	1.268	47.2	1.858	49.2	1.937	96.2	3.787	95	3.740	1.2	.047	8	.315	2		
6.300	.2480				3	Int.	DSAS0630X03S080	●	20.1	.791	34.2	1.346	37.2	1.465	87.2	3.433	86	3.386	1.2	.047	8	.315	2		
					5	Int.	DSAS0630X05S080	★	32.7	1.287	47.2	1.858	49.2	1.937	96.2	3.787	95	3.740	1.2	.047	8	.315	2		
6.350	.2500	1/4	E		3	Int.	DSAS0635X03S080	●	20.3	.799	34.2	1.346	37.2	1.465	87.2	3.433	86	3.386	1.2	.047	8	.315	2		
					5	Int.	DSAS0635X05S080	●	33.0	1.299	47.2	1.858	49.2	1.937	96.2	3.787	95	3.740	1.2	.047	8	.315	2		
6.400	.2520				3	Ext.	DSAE0640X03S080	★	20.4	.803	34.2	1.346	37.2	1.465	87.2	3.433	86	3.386	1.2	.047	8	.315	4		
					3	Int.	DSAS0640X03S080	●	20.4	.803	34.2	1.346	37.2	1.465	87.2	3.433	86	3.386	1.2	.047	8	.315	2		
					5	Int.	DSAS0640X05S080	●	33.2	1.307	47.2	1.858	49.2	1.937	96.2	3.787	95	3.740	1.2	.047	8	.315	2		
6.500	.2559				3	Int.	DSAS0650X03S080	●	20.7	.815	34.2	1.346	37.2	1.465	87.2	3.433	86	3.386	1.2	.047	8	.315	2		
					5	Int.	DSAS0650X05S080	●	33.7	1.327	47.2	1.858	49.2	1.937	96.2	3.787	95	3.740	1.2	.047	8	.315	2		
6.600	.2598				3	Int.	DSAS0660X03S080	●	21.1	.831	36.3	1.429	38.3	1.508	91.3	3.594	90	3.543	1.3	.051	8	.315	2		
					5	Int.	DSAS0660X05S080	●	34.3	1.350	50.3	1.980	52.3	2.059	99.3	3.909	98	3.858	1.3	.051	8	.315	2		
6.700	.2638			M8x1.25	3	Int.	DSAS0670X03S080	●	21.4	.843	36.3	1.429	38.3	1.508	91.3	3.594	90	3.543	1.3	.051	8	.315	2		
					5	Int.	DSAS0670X05S080	★	34.8	1.370	50.3	1.980	52.3	2.059	99.3	3.909	98	3.858	1.3	.051	8	.315	2		
6.747	.2657	17/64			3	Int.	DSAS0675X03S080	●	21.5	.846	36.3	1.429	38.3	1.508	91.3	3.594	90	3.543	1.3	.051	8	.315	2		
					5	Int.	DSAS0675X05S080	●	35.0	1.378	50.3	1.980	52.3	2.059	99.3	3.909	98	3.858	1.3	.051	8	.315	2		
6.800	.2677				3	Ext.	DSAE0680X03S080	★	21.7	.854	36.3	1.429	38.3	1.508	91.3	3.594	90	3.543	1.3	.051	8	.315	4		
					3	Int.	DSAS0680X03S080	●	21.7	.854	36.3	1.429	38.3	1.508	91.3	3.594	90	3.543	1.3	.051	8	.315	2		
					5	Int.	DSAS0680X05S080	●	35.3	1.390	50.3	1.980	52.3	2.059	99.3	3.909	98	3.858	1.3	.051	8	.315	2		
6.900	.2717		I	5/16-24	3	Ext.	DSAE0690X03S080	★	22.0	.866	36.3	1.429	38.3	1.508	91.3	3.594	90	3.543	1.3	.051	8	.315	4		
					3	Int.	DSAS0690X03S080	●	22.0	.866	36.3	1.429	38.3	1.508	91.3	3.594	90	3.543	1.3	.051	8	.315	2		
					5	Int.	DSAS0690X05S080	●	35.8	1.409	50.3	1.980	52.3	2.059	99.3	3.909	98	3.858	1.3	.051	8	.315	2		
6.950	.2736				3	Int.	DSAS0695X03S080	●	22.2	.874	36.3	1.429	38.3	1.508	91.3	3.594	90	3.543	1.3	.051	8	.315	2		
					5	Int.	DSAS0695X05S080	★	36.1	1.421	50.3	1.980	52.3	2.059	99.3	3.909	98	3.858	1.3	.051	8	.315	2		

DC					L/D	Coolant (Int./Ext.)	Order Number	Stock	LU		LCF		LH		OAL		LF		PL		DCON		Type
Metric (mm)	Decimal	Fraction	Wire / Letter	Thread Size				DP9020	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	
	(inch)																						
8.732	.3438	11/32			3	Int.	DSAS0873X03S100	●	27.8	1.094	46.6	1.835	48.6	1.913	102.6	4.039	101	3.976	1.6	.063	10	.394	2
					5	Int.	DSAS0873X05S100	●	45.3	1.783	64.6	2.543	66.6	2.622	117.6	4.630	116	4.567	1.6	.063	10	.394	2
8.800	.3465				3	Int.	DSAS0880X03S100	●	28.0	1.102	46.6	1.835	48.6	1.913	102.6	4.039	101	3.976	1.6	.063	10	.394	2
					5	Int.	DSAS0880X05S100	●	45.6	1.795	64.6	2.543	66.6	2.622	117.6	4.630	116	4.567	1.6	.063	10	.394	2
8.900	.3504				3	Int.	DSAS0890X03S100	●	28.3	1.114	46.6	1.835	48.6	1.913	102.6	4.039	101	3.976	1.6	.063	10	.394	2
					5	Int.	DSAS0890X05S100	●	46.1	1.815	64.6	2.543	66.6	2.622	117.6	4.630	116	4.567	1.6	.063	10	.394	2
9.000	.3543				3	Ext.	DSAE0900X03S100	★	28.6	1.126	46.6	1.835	48.6	1.913	102.6	4.039	101	3.976	1.6	.063	10	.394	4
					3	Int.	DSAS0900X03S100	●	28.6	1.126	46.6	1.835	48.6	1.913	102.6	4.039	101	3.976	1.6	.063	10	.394	2
					5	Int.	DSAS0900X05S100	●	46.6	1.835	64.6	2.543	66.6	2.622	117.6	4.630	116	4.567	1.6	.063	10	.394	2
9.100	.3583		T		3	Int.	DSAS0910X03S100	●	29.1	1.146	49.8	1.961	50.8	2.000	102.8	4.047	101	3.976	1.8	.071	10	.394	2
					5	Int.	DSAS0910X05S100	★	47.3	1.862	68.8	2.709	71.8	2.827	122.8	4.835	121	4.764	1.8	.071	10	.394	2
9.200	.3622				3	Int.	DSAS0920X03S100	●	29.4	1.157	49.8	1.961	50.8	2.000	102.8	4.047	101	3.976	1.8	.071	10	.394	2
					5	Int.	DSAS0920X05S100	★	47.8	1.882	68.8	2.709	71.8	2.827	122.8	4.835	121	4.764	1.8	.071	10	.394	2
9.300	.3661				3	Int.	DSAS0930X03S100	●	29.7	1.169	49.8	1.961	50.8	2.000	102.8	4.047	101	3.976	1.8	.071	10	.394	2
					5	Int.	DSAS0930X05S100	★	48.3	1.902	68.8	2.709	71.8	2.827	122.8	4.835	121	4.764	1.8	.071	10	.394	2
9.400	.3701				3	Int.	DSAS0940X03S100	●	30.0	1.181	49.8	1.961	50.8	2.000	102.8	4.047	101	3.976	1.8	.071	10	.394	2
					5	Int.	DSAS0940X05S100	★	48.8	1.921	68.8	2.709	71.8	2.827	122.8	4.835	121	4.764	1.8	.071	10	.394	2
9.500	.3740				3	Int.	DSAS0950X03S100	●	30.3	1.193	49.8	1.961	50.8	2.000	102.8	4.047	101	3.976	1.8	.071	10	.394	2
					5	Int.	DSAS0950X05S100	●	49.3	1.941	68.8	2.709	71.8	2.827	122.8	4.835	121	4.764	1.8	.071	10	.394	2
9.525	.3750	3/8			3	Int.	DSAS0953X03S100	●	30.4	1.197	49.8	1.961	50.8	2.000	102.8	4.047	101	3.976	1.8	.071	10	.394	2
					5	Int.	DSAS0953X05S100	●	49.4	1.945	68.8	2.709	71.8	2.827	122.8	4.835	121	4.764	1.8	.071	10	.394	2
9.600	.3780				3	Int.	DSAS0960X03S100	●	30.6	1.205	49.8	1.961	50.8	2.000	102.8	4.047	101	3.976	1.8	.071	10	.394	2
					5	Int.	DSAS0960X05S100	★	49.8	1.961	68.8	2.709	71.8	2.827	122.8	4.835	121	4.764	1.8	.071	10	.394	2
9.700	.3819		Tube Sheet		3	Int.	DSAS0970X03S100	●	30.9	1.217	49.8	1.961	50.8	2.000	102.8	4.047	101	3.976	1.8	.071	10	.394	2
					5	Int.	DSAS0970X05S100	★	50.3	1.980	68.8	2.709	71.8	2.827	122.8	4.835	121	4.764	1.8	.071	10	.394	2
9.800	.3858		W		3	Int.	DSAS0980X03S100	●	31.2	1.228	51.8	2.039	51.8	2.039	102.8	4.047	101	3.976	1.8	.071	10	.394	2
					5	Int.	DSAS0980X05S100	●	50.8	2.000	71.8	2.827	71.8	2.827	122.8	4.835	121	4.764	1.8	.071	10	.394	2
9.900	.3898				3	Int.	DSAS0990X03S100	●	31.5	1.240	51.8	2.039	51.8	2.039	102.8	4.047	101	3.976	1.8	.071	10	.394	2
					5	Int.	DSAS0990X05S100	★	51.3	2.020	71.8	2.827	71.8	2.827	122.8	4.835	121	4.764	1.8	.071	10	.394	2
9.922	.3907	25/64		7/16-20	3	Int.	DSAS0992X03S100	●	31.6	1.244	51.8	2.039	51.8	2.039	102.8	4.047	101	3.976	1.8	.071	10	.394	2
					5	Int.	DSAS0992X05S100	●	51.4	2.024	71.8	2.827	71.8	2.827	122.8	4.835	121	4.764	1.8	.071	10	.394	2
10.000	.3937				3	Ext.	DSAE1000X03S100	★	31.8	1.252	51.8	2.039	51.8	2.039	102.8	4.047	101	3.976	1.8	.071	10	.394	4
					3	Int.	DSAS1000X03S100	●	31.8	1.252	51.8	2.039	51.8	2.039	102.8	4.047	101	3.976	1.8	.071	10	.394	2
					5	Int.	DSAS1000X05S100	●	51.8	2.039	71.8	2.827	71.8	2.827	122.8	4.835	121	4.764	1.8	.071	10	.394	2
10.100	.3976				3	Int.	DSAS1010X03S120	●	32.2	1.268	54.9	2.161	57.9	2.280	112.9	4.445	111	4.370	1.9	.075	12	.472	2
					5	Int.	DSAS1010X05S120	★	52.4	2.063	75.9	2.988	79.9	3.146	135.9	5.350	134	5.276	1.9	.075	12	.472	2
10.200	.4016			M12x1.75	3	Int.	DSAS1020X03S120	●	32.5	1.280	54.9	2.161	57.9	2.280	112.9	4.445	111	4.370	1.9	.075	12	.472	2
					5	Int.	DSAS1020X05S120	●	52.9	2.083	75.9	2.988	79.9	3.146	135.9	5.350	134	5.276	1.9	.075	12	.472	2
10.300	.4055				3	Int.	DSAS1030X03S120	●	32.8	1.291	54.9	2.161	57.9	2.280	112.9	4.445	111	4.370	1.9	.075	12	.472	2
					5	Int.	DSAS1030X05S120	★	53.4	2.102	75.9	2.988	79.9	3.146	135.9	5.350	134	5.276	1.9	.075	12	.472	2
10.319	.4063	13/32			3	Int.	DSAS1032X03S120	●	32.9	1.295	54.9	2.161	57.9	2.280	112.9	4.445	111	4.370	1.9	.075	12	.472	2
					5	Int.	DSAS1032X05S120	●	53.5	2.106	75.9	2.988	79.9	3.146	135.9	5.350	134	5.276	1.9	.075	12	.472	2
10.400	.4094				3	Int.	DSAS1040X03S120	●	33.1	1.303	54.9	2.161	57.9	2.280	112.9	4.445	111	4.370	1.9	.075	12	.472	2
					5	Int.	DSAS1040X05S120	★	53.9	2.122	75.9	2.988	79.9	3.146	135.9	5.350	134	5.276	1.9	.075	12	.472	2
10.500	.4134		Z		3	Ext.	DSAE1050X03S120	★	33.4	1.315	54.9	2.161	57.9	2.280	112.9	4.445	111	4.370	1.9	.075	12	.472	4
					3	Int.	DSAS1050X03S120	●	33.4	1.315	54.9	2.161	57.9	2.280	112.9	4.445	111	4.370	1.9	.075	12	.472	2
					5	Int.	DSAS1050X05S120	●	54.4	2.142	75.9	2.988	79.9	3.146	135.9	5.350	134	5.276	1.9	.075	12	.472	2
10.600	.4173				3	Int.	DSAS1060X03S120	●	33.7	1.327	54.9	2.161	57.9	2.280	112.9	4.445	111	4.370	1.9	.075	12	.472	2
					5	Int.	DSAS1060X05S120	★	54.9	2.161	75.9	2.988	79.9	3.146	135.9	5.350	134	5.276	1.9	.075	12	.472	2
10.700	.4213				3	Ext.	DSAE1070X03S120	★	34.0	1.339	54.9	2.161	57.9	2.280	112.9	4.445	111	4.370	1.9	.075	12	.472	4
					3	Int.	DSAS1070X03S120	●	34.0	1.339	54.9	2.161	57.9	2.280	112.9	4.445	111	4.370	1.9	.075	12	.472	2
					5	Int.	DSAS1070X05S120	★	55.4	2.181	75.9	2.988	79.9	3.146	135.9	5.350	134	5.276	1.9	.075	12	.472	2

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Main: 847.252.6300
Fax: 847.519.1732

MMC Metal de Mexico, S.A. DE C.V.

Av. La Cañada No.16,
Parque Industrial Bernardo
Quintana, El Marques,
Queretaro C.P. 76246 MEXICO
Main: +52.442.221.61.36
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North Carolina-MTEC (Marketing & Technical Center)

105 Corporate Center Drive, Suite A
Mooresville, NC 28117
Main: 980.312.3100
Fax: 704.746.9292

Toronto Office (Canada Branch)

600 Matheson Blvd. Unit 5 (Office)
Mississauga, ON L5R 4C1
Main: 905.814.0240
Fax: 905.814.0245

Detroit Office (Moldino CS)

41700 Gardenbrook Road, Suite 120
Novi, MI 48375
Main: 248.308.2620
Fax: 248.308.2627

FOR YOUR SAFETY

- Don't handle inserts and chips without gloves.
- Please machine within the recommended application range and exchange expired tools with new ones in advance of breakage.
- Please use safety covers and wear safety glasses.
- When using compounded cutting oils, please take fire precautions.
- When attaching inserts or spare parts, please use only the correct wrench or driver.
- When using rotating tools, please make a trial run to check run-out, vibration and abnormal sounds etc.

www.mmc-carbide.com/us

Tools specifications subject to change without notice.

B256A-US-2023.10