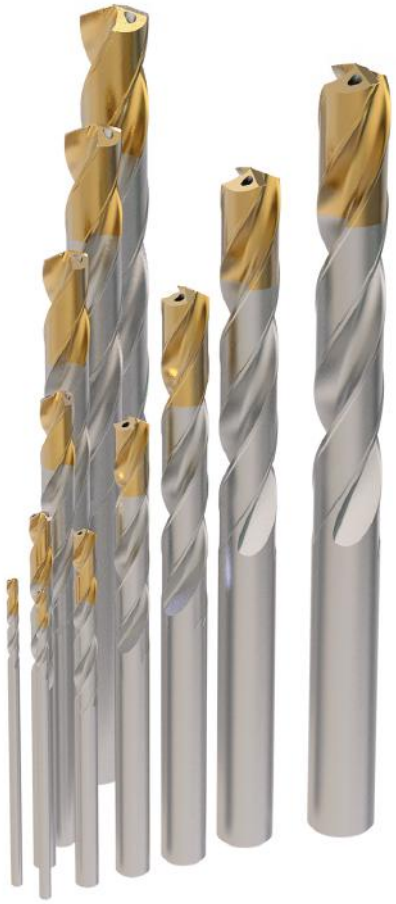
MITSUBISHI MATERIALS

DVAS

SOLID CARBIDE
TRISTAR DRILL SERIES





TOOL NEWS **B267A-B**

New Drills from Mitsubishi Materials

TRISTAR Drill Series

High Precision - Process Saving - Long Tool Life

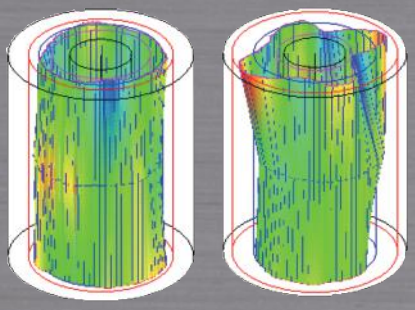
TRISTAR, a new generation drill series from Mitsubishi Materials provides 3 strong advantages.

The second of the Tristar series is a medium diameter drill with 5 technological features for High Precision, Process Saving and Long Tool Life drilling.

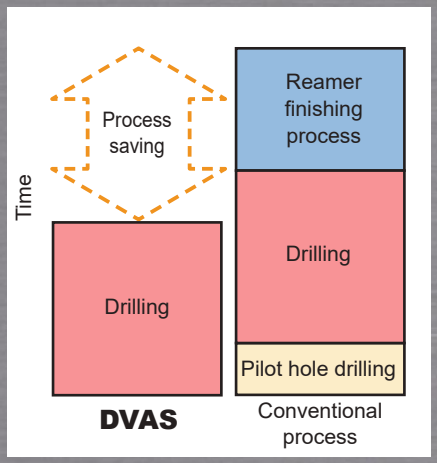
High Precision

Process Saving

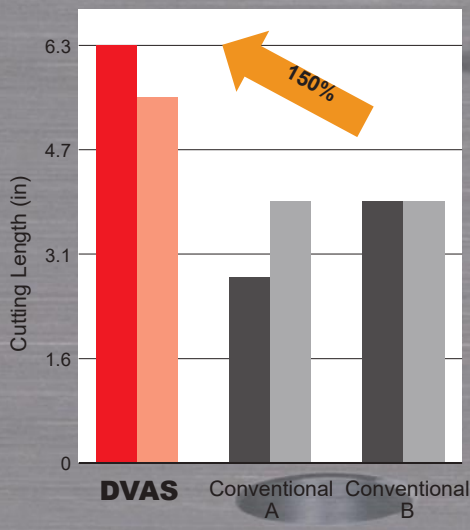
Long Tool Life



DVAS 3-flute drill



Process reduction image



Hole quality is comparable to 3-flute drills	Centripetal properties and h7 standard shorten the pilot hole and reaming process	Maintains excellent hole quality and has longer tool life than conventional drills

* Depending on the standards and conditions set, you may not get the results you expect.

Solid Carbide Drill
TRISTAR Drill Series

DVAS

Setting New Standards for 2-flute Drilling Accuracy

New XR Point Thinning

New point thinning geometry uses centripetal force to maintain positional accuracy and displays high edge strength.



Straight Cutting Edges Reduce Damage

The newly designed straight cutting edge reduces localized damage.

Improved Unique Coolant Hole Shape

TRI-Cooling Technology is applied to all diameters.

Specially Designed Flute Margins Produce High Accuracy

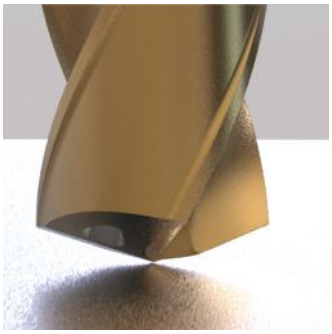
4 margins optimized for high-precision machining.

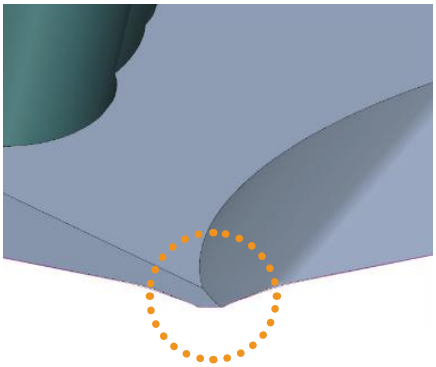
New Grade DP1120

A new grade that combines wear and chipping resistance.

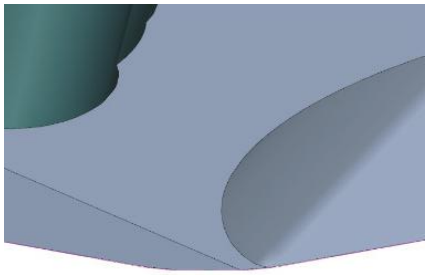
New XR Thinning

The self-centering function provides excellent centripetal motion and ensures stable and accurate initial penetration when drilling flat surfaces.





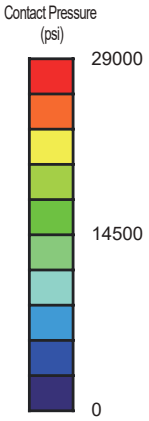
DVAS

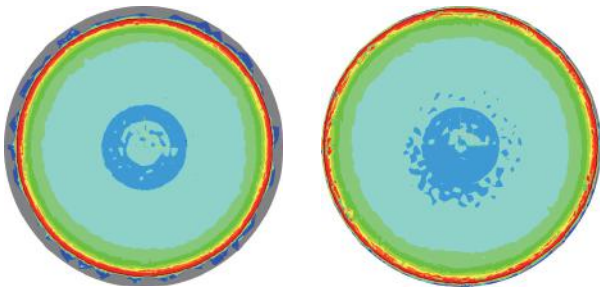


Conventional

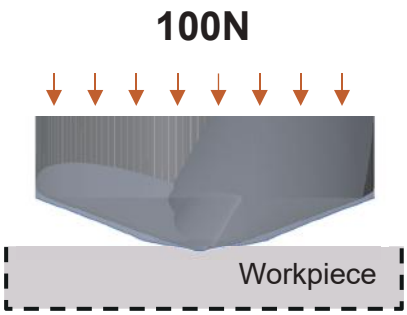
Contact Pressure Comparison (simulation analysis)

DVAS provides stable contact pressure in a concentric pattern, thereby providing accurate positioning and minimizes wandering during initial penetration.





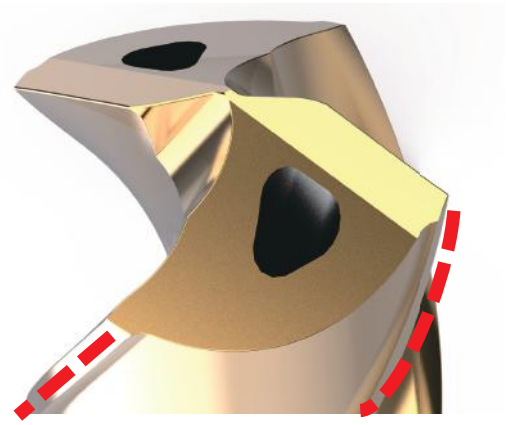
DVAS Conventional



<Comparison condition>
Tool : DVAS0500X05S050
Depth of cut : .005 in / hole
(PL=.005 in)
Load : F=100 N

Double Margin Design for Excellent Guiding Performance

The 4 flute margin specification provides excellent machined hole wall surface and accurate hole diameters.

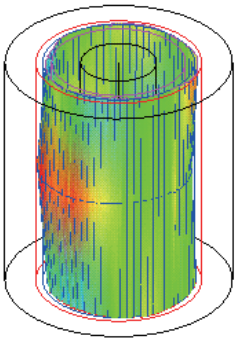


Cylindricity Comparison

Its unique design allows for more precise hole processing than conventional two and three flute drills.

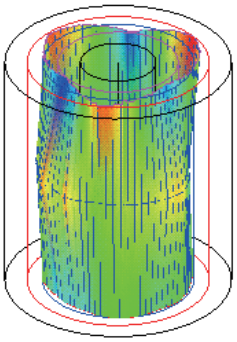
DVAS

Cylindricity 610 µin



Conventional 2-flute drill

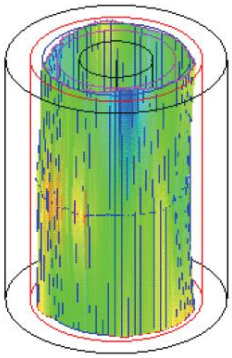
Cylindricity 1193 µin



<Cutting Conditions>
Material : AISI 1045 Carbon Steel
Tool : DC=.4528 in (L/D=8)
Cutting Speed : vc= 360 SFM
Feed per Rev. : fr= .0118 IPR
Hole depth : 3.78 in Penetration
Cutting Mode : Wet Cutting
145 PSI (1 MPa)

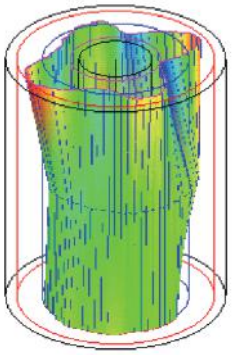
DVAS

Cylindricity 425 µin



Conventional 3-flute drill

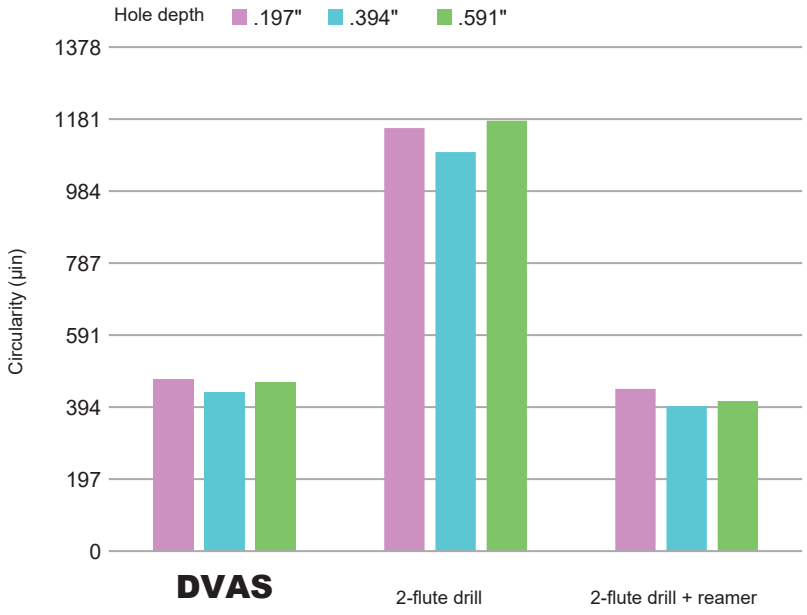
Cylindricity 858 µin



<Cutting Conditions>
Material : AISI 1045 Carbon Steel
Tool : DC=.4724 in (L/D=3)
Cutting Speed : vc= 360 SFM
Feed per Rev. : fr= .0118 IPR
Hole depth : 1.417 in Penetration
Cutting Mode : Wet Cutting
145 PSI (1 MPa)

Circularity Comparison

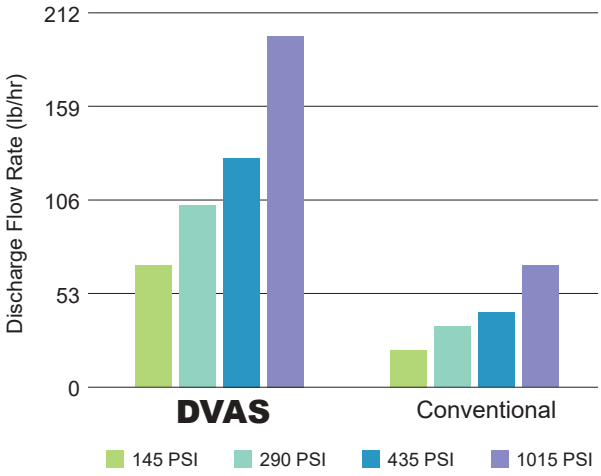
Our unique design allows for highly accurate hole machining with the same circularity as a reamed hole.

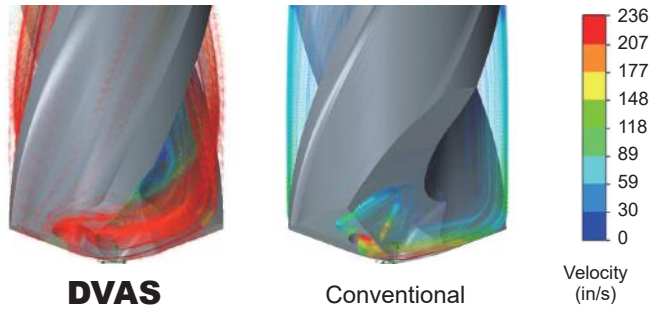


<Cutting Conditions>
Material : AISI 1045 Carbon Steel
Tool : DC=.4724 in (L/D=3)
Cutting Speed : vc= 360 SFM
Feed per Rev. : fr= .0118 IPR
Hole depth : 1.417 in Penetration
Cutting Mode : Wet Cutting
145 PSI (1 MPa)

Continuously Evolving Coolant Hole Geometry

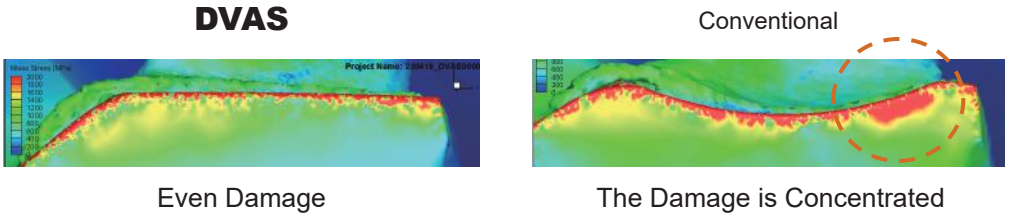
TRI-Cooling Technology is applied to all sizes.
Chip removal and heat dissipation are improved, enabling stable and long tool life.





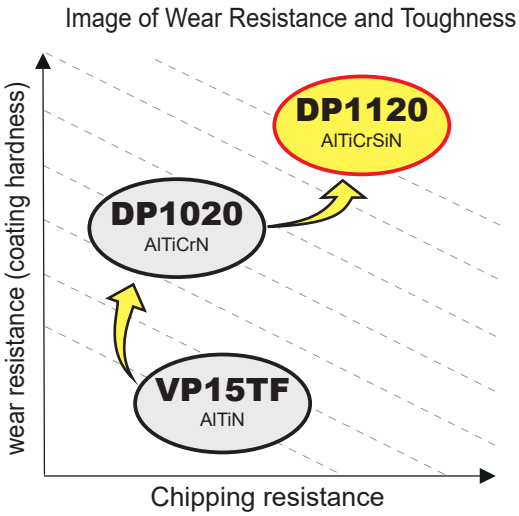
Straight Cutting Edge Reduces Damage

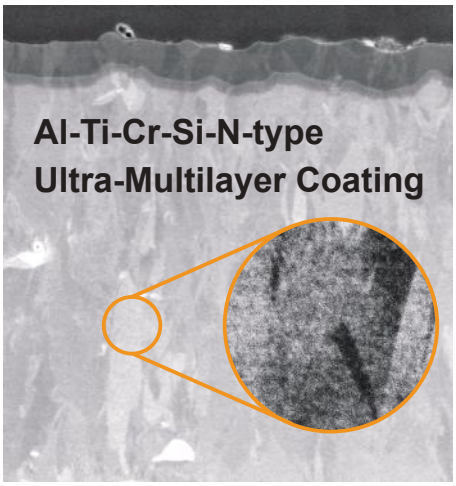
The straight main cutting edge and point thinning geometry are smoothly connected and therefore reduce the risk of abnormal damage.



New Grade DP1120

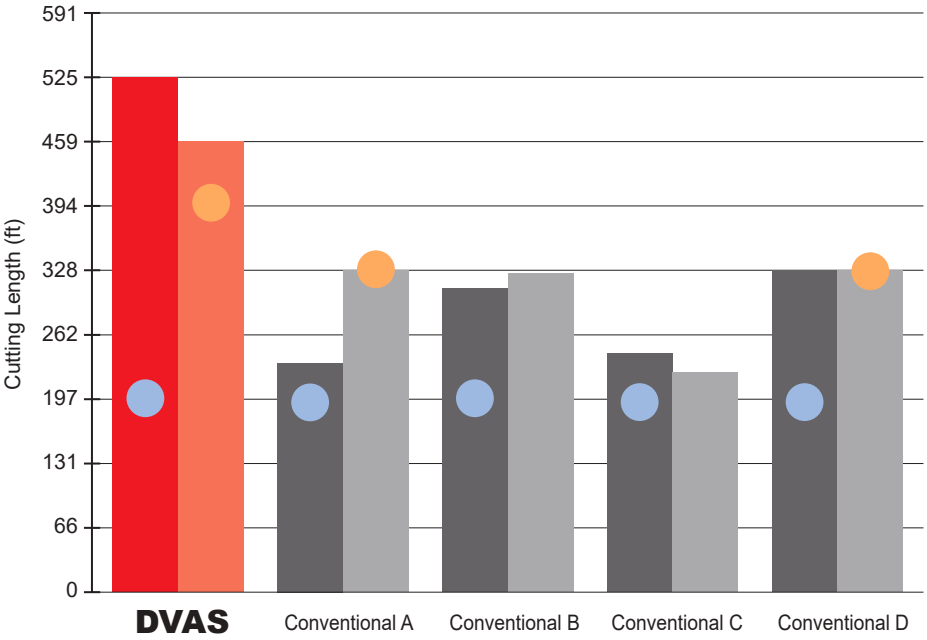
It combines excellent wear and chipping resistance to achieve stable, long tool life.





1050 Carbon Steel: Comparison Tool Life

The combination of a hard grade substrate, optimum edge geometry and high precision, tool life has been extended by 150%.

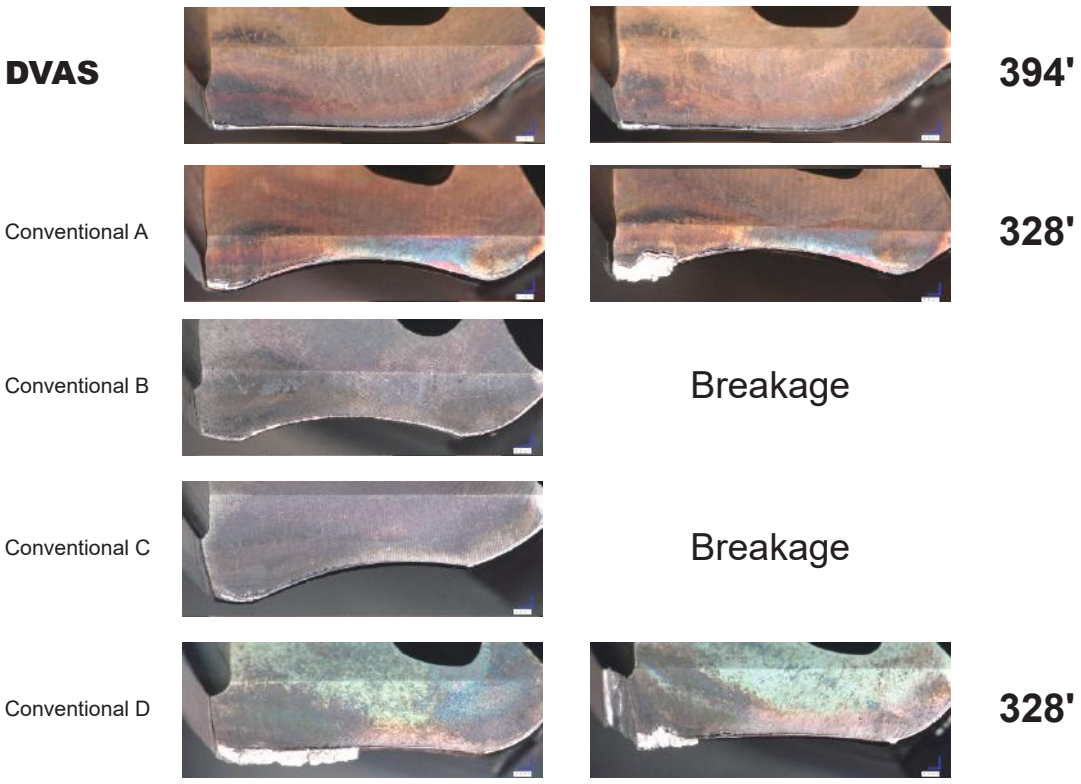


Tool Life 150%

<Cutting Conditions>
Material : AISI 1050 Carbon Steel
Tool : DC=.2362 in 5D
Cutting Speed : vc= 328 SFM
Feed per Rev. : fr= .008 IPR
Hole Depth : 1.181 in Through Hole
Cutting Mode : Wet Cutting
Water-soluble Coolant
145 PSI (1 MPa)

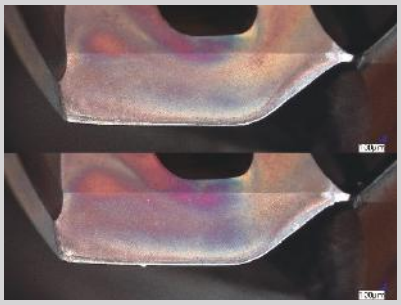
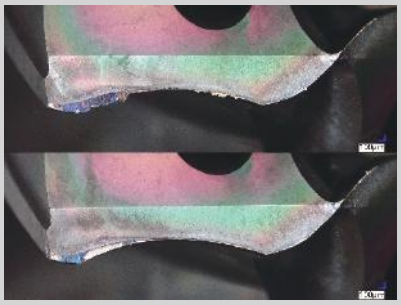
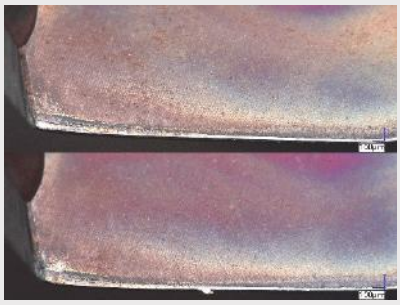
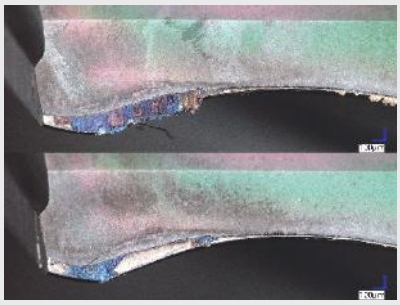
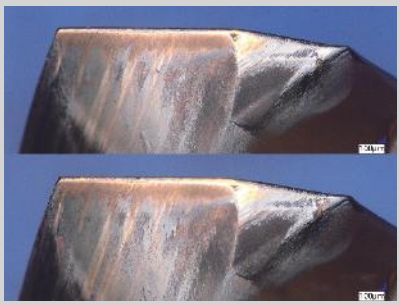
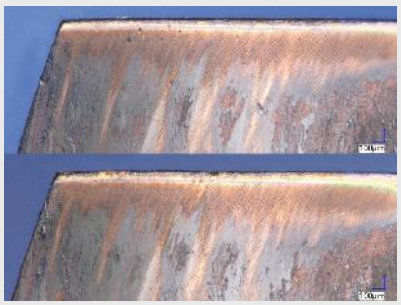
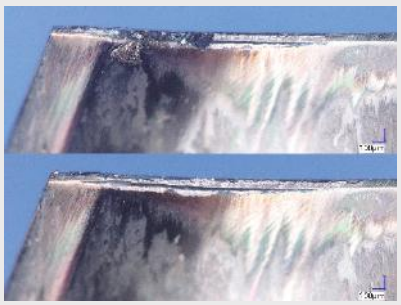
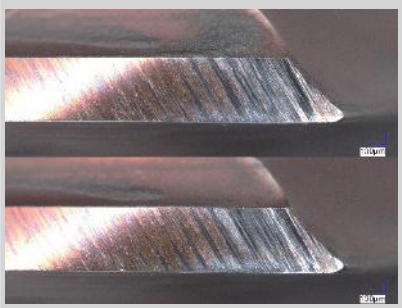
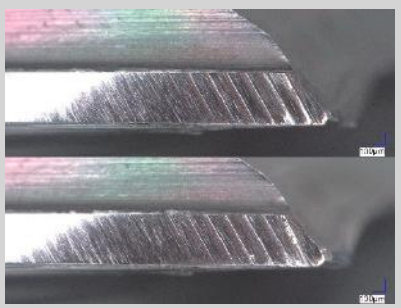
● Cutting length 197'

● Photo showing wear at the edge of the drills marked with an orange dot in the chart above.



1050 Carbon Steel: Comparative Tool Life in MQL Machining

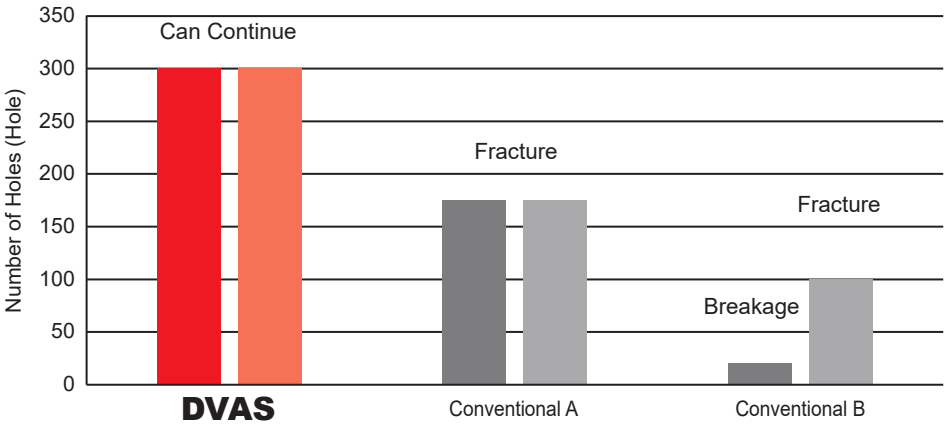
Exhibits excellent wear resistance, even during MQL machining, where the cutting edge is prone to being subjected to high temperatures.

	DVAS	Conventional
Flank Face		
Flank Face Near the Outer Periphery		
Rake Face		
Rake Face Near the Outer Periphery		
Margin		

<Cutting Conditions>
Material : AISI1050 Carbon Steel
Tool : DC=.3543 in (L/D=5)
Cutting Speed : vc= 328 SFM
Feed per Rev. : fr= .011 IPR
Hole Depth : 1.26 in Through Hole
Cutting Mode : MQL

Pre-Hardened Steel: Comparison Tool Life

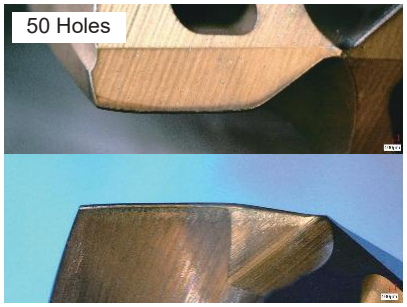
Even in high-hardness steels of approximately 45 HRC, the DVAS suppresses cutting edge chipping and achieves a more stable tool life compared with conventional tools.

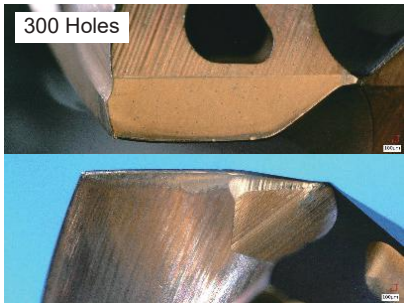


Tool Life 170%

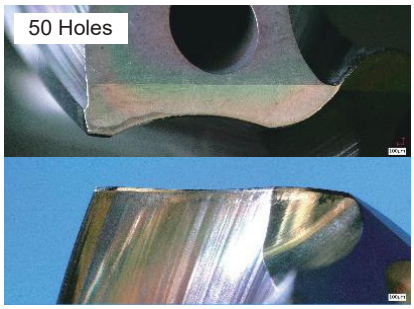
<Cutting Conditions>
Material : AISI H13 Hot-Work Tool Steel (45HRC)
Tool : DC=.335 in (L/D=3)
Cutting Speed : vc=70 SFM
Feed per Rev. : fr=.0039 IPR
Hole Depth : 1.024 in Through Hole
Cutting Mode : Wet Cutting
Water-soluble Coolants
290 PSI

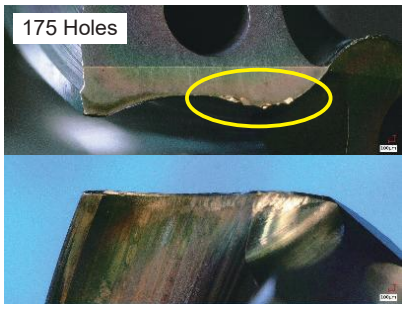
DVAS



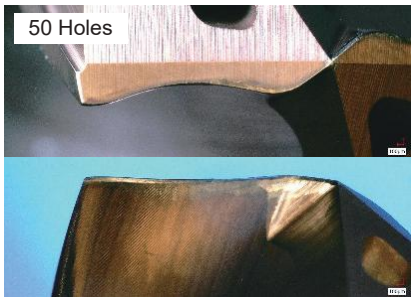


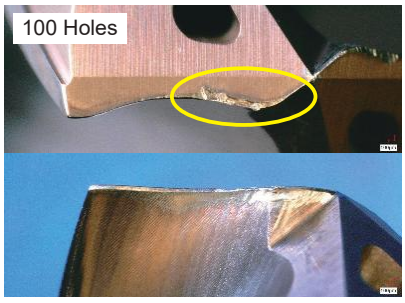
Conventional A





Conventional B





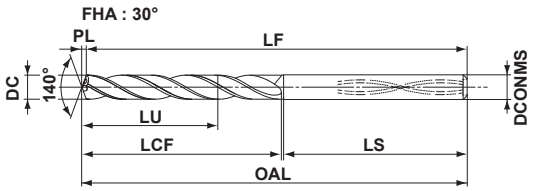
DVAS NEW

TRISTAR Drills

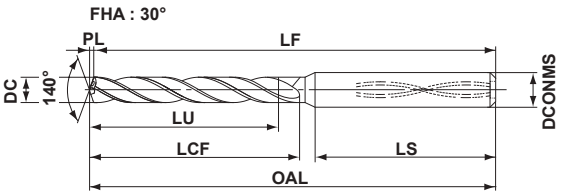
UWC DP1 XR h7 DC>3.0

P	M	K	N	S	H
Steel	Stainless Steel	Cast Iron	Non-ferrous Metal	Heat Resistant Alloys	Hardened Steel





Type1



Type2

DC=.118"–.236"	.240"–.394"	.398"–.709"	.713"–.787"
0 −.00047	0 −.00059	0 −.00071	0 −.00083
DCONMS=.157"–.236"	**.276"–.394"**	**.433"–.709"**	**.748", .787"**
0 −.00031	0 −.00035	0 −.00043	0 −.00051

DC Metric (mm)	DC Decimal (in)	DC Fraction (in)	DC Wire / Letter	DC Thread Size	DC Tap Pilot Hole	L/D	Order Number	Stock DP1120	LU mm	LU in	LCF mm	LCF in	LS mm	LS in	OAL mm	OAL in	LF mm	LF in	PL mm	PL in	DCONMS mm	DCONMS in	Type
3.000	.1181					3	DVAS0300X03S040	★	9.5	.374	21.5	.846	52	2.047	76.5	3.012	76	2.992	0.5	.020	4	.157	1
						3	DVAS0300X03S060	●	9.5	.374	21.5	.846	49	1.929	76.5	3.012	76	2.992	0.5	.020	6	.236	2
						5	DVAS0300X05S040	★	15.5	.610	28.5	1.122	56	2.205	87.5	3.445	87	3.425	0.5	.020	4	.157	1
						5	DVAS0300X05S060	●	15.5	.610	28.5	1.122	53	2.087	87.5	3.445	87	3.425	0.5	.020	6	.236	2
						8	DVAS0300X08S040	★	24.5	.965	35.5	1.398	49	1.929	87.5	3.445	87	3.425	0.5	.020	4	.157	1
						8	DVAS0300X08S060	●	24.5	.965	35.5	1.398	46	1.811	87.5	3.445	87	3.425	0.5	.020	6	.236	2
3.048	.1200		31			3	DVAS0305X03S060	●	9.7	.382	21.6	.850	49	1.929	76.6	3.016	76	2.992	0.6	.024	6	.236	2
						5	DVAS0305X05S060	●	15.8	.622	32.6	1.283	49	1.929	87.6	3.449	87	3.425	0.6	.024	6	.236	2
						8	DVAS0305X08S060	●	25.0	.984	41.6	1.638	40	1.575	87.6	3.449	87	3.425	0.6	.024	6	.236	2
3.100	.1220					3	DVAS0310X03S040	★	9.9	.390	21.6	.850	52	2.047	76.6	3.016	76	2.992	0.6	.024	4	.157	1
						3	DVAS0310X03S060	●	9.9	.390	21.6	.850	49	1.929	76.6	3.016	76	2.992	0.6	.024	6	.236	2
						5	DVAS0310X05S040	★	16.1	.634	32.6	1.283	52	2.047	87.6	3.449	87	3.425	0.6	.024	4	.157	1
						5	DVAS0310X05S060	●	16.1	.634	32.6	1.283	49	1.929	87.6	3.449	87	3.425	0.6	.024	6	.236	2
						8	DVAS0310X08S040	★	25.4	1.000	41.6	1.638	43	1.693	87.6	3.449	87	3.425	0.6	.024	4	.157	1
						8	DVAS0310X08S060	●	25.4	1.000	41.6	1.638	40	1.575	87.6	3.449	87	3.425	0.6	.024	6	.236	2
3.175	.1250	1/8				3	DVAS0318X03S060	●	10.1	.398	21.6	.850	49	1.929	76.6	3.016	76	2.992	0.6	.024	6	.236	2
						5	DVAS0318X05S060	●	16.5	.650	32.6	1.283	49	1.929	87.6	3.449	87	3.425	0.6	.024	6	.236	2
						8	DVAS0318X08S060	●	26.0	1.024	41.6	1.638	40	1.575	87.6	3.449	87	3.425	0.6	.024	6	.236	2
3.200	.1260					3	DVAS0320X03S040	★	10.2	.402	21.6	.850	52	2.047	76.6	3.016	76	2.992	0.6	.024	4	.157	1
						3	DVAS0320X03S060	●	10.2	.402	21.6	.850	49	1.929	76.6	3.016	76	2.992	0.6	.024	6	.236	2
						5	DVAS0320X05S040	★	16.6	.654	32.6	1.283	52	2.047	87.6	3.449	87	3.425	0.6	.024	4	.157	1
						5	DVAS0320X05S060	●	16.6	.654	32.6	1.283	49	1.929	87.6	3.449	87	3.425	0.6	.024	6	.236	2
						8	DVAS0320X08S040	★	26.2	1.031	41.6	1.638	43	1.693	87.6	3.449	87	3.425	0.6	.024	4	.157	1
						8	DVAS0320X08S060	●	26.2	1.031	41.6	1.638	40	1.575	87.6	3.449	87	3.425	0.6	.024	6	.236	2
3.300	.1299			M4x.7		3	DVAS0330X03S040	★	10.5	.413	21.6	.850	52	2.047	76.6	3.016	76	2.992	0.6	.024	4	.157	1
						3	DVAS0330X03S060	●	10.5	.413	21.6	.850	49	1.929	76.6	3.016	76	2.992	0.6	.024	6	.236	2
						5	DVAS0330X05S040	★	17.1	.673	32.6	1.283	52	2.047	87.6	3.449	87	3.425	0.6	.024	4	.157	1
						5	DVAS0330X05S060	●	17.1	.673	32.6	1.283	49	1.929	87.6	3.449	87	3.425	0.6	.024	6	.236	2
						8	DVAS0330X08S040	★	27.0	1.063	41.6	1.638	43	1.693	87.6	3.449	87	3.425	0.6	.024	4	.157	1
						8	DVAS0330X08S060	●	27.0	1.063	41.6	1.638	40	1.575	87.6	3.449	87	3.425	0.6	.024	6	.236	2
3.400	.1339					3	DVAS0340X03S040	★	10.8	.425	21.6	.850	52	2.047	76.6	3.016	76	2.992	0.6	.024	4	.157	1
						3	DVAS0340X03S060	●	10.8	.425	21.6	.850	49	1.929	76.6	3.016	76	2.992	0.6	.024	6	.236	2
						5	DVAS0340X05S040	★	17.6	.693	32.6	1.283	52	2.047	87.6	3.449	87	3.425	0.6	.024	4	.157	1
						5	DVAS0340X05S060	●	17.6	.693	32.6	1.283	49	1.929	87.6	3.449	87	3.425	0.6	.024	6	.236	2
						8	DVAS0340X08S040	★	27.8	1.094	41.6	1.638	43	1.693	87.6	3.449	87	3.425	0.6	.024	4	.157	1
						8	DVAS0340X08S060	●	27.8	1.094	41.6	1.638	40	1.575	87.6	3.449	87	3.425	0.6	.024	6	.236	2

● : USA Stock ★ : Stocked in Japan

DC						L/D	Order Number	Stock	LU		LCF		LS		OAL		LF		PL		DCONMS		Type
Metric (mm)	Decimal (in)	Fraction (in)	Wire / Letter	Thread Size	Tap Pilot Hole			DP1120	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	
3.500	.1378					3	DVAS0350X03S040	★	11.1	.437	21.6	.850	52	2.047	76.6	3.016	76	2.992	0.6	.024	4	.157	1
						3	DVAS0350X03S060	●	11.1	.437	21.6	.850	49	1.929	76.6	3.016	76	2.992	0.6	.024	6	.236	2
						5	DVAS0350X05S040	★	18.1	.713	32.6	1.283	52	2.047	87.6	3.449	87	3.425	0.6	.024	4	.157	1
						5	DVAS0350X05S060	●	18.1	.713	32.6	1.283	49	1.929	87.6	3.449	87	3.425	0.6	.024	6	.236	2
						8	DVAS0350X08S040	★	28.6	1.126	41.6	1.638	43	1.693	87.6	3.449	87	3.425	0.6	.024	4	.157	1
						8	DVAS0350X08S060	●	28.6	1.126	41.6	1.638	40	1.575	87.6	3.449	87	3.425	0.6	.024	6	.236	2
3.572	.1407	9/64				3	DVAS0357X03S060	●	11.4	.449	23.7	.933	51	2.008	80.7	3.177	80	3.150	0.7	.028	6	.236	2
						5	DVAS0357X05S060	●	18.6	.732	36.7	1.445	50	1.969	92.7	3.650	92	3.622	0.7	.028	6	.236	2
						8	DVAS0357X08S060	●	29.3	1.154	46.7	1.839	40	1.575	92.7	3.650	92	3.622	0.7	.028	6	.236	2
3.600	.1417					3	DVAS0360X03S040	★	11.5	.453	23.7	.933	54	2.126	80.7	3.177	80	3.150	0.7	.028	4	.157	1
						3	DVAS0360X03S060	●	11.5	.453	23.7	.933	51	2.008	80.7	3.177	80	3.150	0.7	.028	6	.236	2
						5	DVAS0360X05S040	★	18.7	.736	36.7	1.445	53	2.087	92.7	3.650	92	3.622	0.7	.028	4	.157	1
						5	DVAS0360X05S060	●	18.7	.736	36.7	1.445	50	1.969	92.7	3.650	92	3.622	0.7	.028	6	.236	2
						8	DVAS0360X08S040	★	29.5	1.161	46.7	1.839	43	1.693	92.7	3.650	92	3.622	0.7	.028	4	.157	1
						8	DVAS0360X08S060	●	29.5	1.161	46.7	1.839	40	1.575	92.7	3.650	92	3.622	0.7	.028	6	.236	2
3.660	.1441				*	5	DVAS0366X05S040	★	19.0	.748	36.7	1.445	53	2.087	92.7	3.650	92	3.622	0.7	.028	4	.157	1
						5	DVAS0366X05S060	●	19.0	.748	36.7	1.445	50	1.969	92.7	3.650	92	3.622	0.7	.028	6	.236	2
3.680	.1449				*	5	DVAS0368X05S040	★	19.1	.752	36.7	1.445	53	2.087	92.7	3.650	92	3.622	0.7	.028	4	.157	1
						5	DVAS0368X05S060	●	19.1	.752	36.7	1.445	51	2.008	92.7	3.650	92	3.622	0.7	.028	6	.236	2
3.700	.1457			M4.5x.75		3	DVAS0370X03S040	★	11.8	.465	23.7	.933	54	2.126	80.7	3.177	80	3.150	0.7	.028	4	.157	1
						3	DVAS0370X03S060	●	11.8	.465	23.7	.933	52	2.047	80.7	3.177	80	3.150	0.7	.028	6	.236	2
						5	DVAS0370X05S040	★	19.2	.756	36.7	1.445	53	2.087	92.7	3.650	92	3.622	0.7	.028	4	.157	1
						5	DVAS0370X05S060	●	19.2	.756	36.7	1.445	51	2.008	92.7	3.650	92	3.622	0.7	.028	6	.236	2
						8	DVAS0370X08S040	★	30.3	1.193	46.7	1.839	43	1.693	92.7	3.650	92	3.622	0.7	.028	4	.157	1
						8	DVAS0370X08S060	●	30.3	1.193	46.7	1.839	41	1.614	92.7	3.650	92	3.622	0.7	.028	6	.236	2
3.800	.1496		25	#10-24		3	DVAS0380X03S040	★	12.1	.476	23.7	.933	54	2.126	80.7	3.177	80	3.150	0.7	.028	4	.157	1
						3	DVAS0380X03S060	●	12.1	.476	23.7	.933	52	2.047	80.7	3.177	80	3.150	0.7	.028	6	.236	2
						5	DVAS0380X05S040	★	19.7	.776	36.7	1.445	53	2.087	92.7	3.650	92	3.622	0.7	.028	4	.157	1
						5	DVAS0380X05S060	●	19.7	.776	36.7	1.445	51	2.008	92.7	3.650	92	3.622	0.7	.028	6	.236	2
						8	DVAS0380X08S040	★	31.1	1.224	46.7	1.839	43	1.693	92.7	3.650	92	3.622	0.7	.028	4	.157	1
						8	DVAS0380X08S060	●	31.1	1.224	46.7	1.839	41	1.614	92.7	3.650	92	3.622	0.7	.028	6	.236	2
3.900	.1535					3	DVAS0390X03S040	★	12.4	.488	23.7	.933	54	2.126	80.7	3.177	80	3.150	0.7	.028	4	.157	1
						3	DVAS0390X03S060	●	12.4	.488	23.7	.933	52	2.047	80.7	3.177	80	3.150	0.7	.028	6	.236	2
						5	DVAS0390X05S040	★	20.2	.795	36.7	1.445	53	2.087	92.7	3.650	92	3.622	0.7	.028	4	.157	1
						5	DVAS0390X05S060	●	20.2	.795	36.7	1.445	51	2.008	92.7	3.650	92	3.622	0.7	.028	6	.236	2
						8	DVAS0390X08S040	★	31.9	1.256	46.7	1.839	43	1.693	92.7	3.650	92	3.622	0.7	.028	4	.157	1
						8	DVAS0390X08S060	●	31.9	1.256	46.7	1.839	41	1.614	92.7	3.650	92	3.622	0.7	.028	6	.236	2
3.969	.1563	5/32				3	DVAS0397X03S060	●	12.6	.496	23.7	.933	52	2.047	80.7	3.177	80	3.150	0.7	.028	6	.236	2
						5	DVAS0397X05S060	●	20.5	.807	36.7	1.445	51	2.008	92.7	3.650	92	3.622	0.7	.028	6	.236	2
						8	DVAS0397X08S060	●	32.5	1.280	46.7	1.839	41	1.614	92.7	3.650	92	3.622	0.7	.028	6	.236	2
4.000	.1575					3	DVAS0400X03S040	★	12.7	.500	23.7	.933	54	2.126	80.7	3.177	80	3.150	0.7	.028	4	.157	1
						3	DVAS0400X03S060	●	12.7	.500	23.7	.933	52	2.047	80.7	3.177	80	3.150	0.7	.028	6	.236	2
						5	DVAS0400X05S040	★	20.7	.815	36.7	1.445	53	2.087	92.7	3.650	92	3.622	0.7	.028	4	.157	1
						5	DVAS0400X05S060	●	20.7	.815	36.7	1.445	51	2.008	92.7	3.650	92	3.622	0.7	.028	6	.236	2
						8	DVAS0400X08S040	★	32.7	1.287	46.7	1.839	43	1.693	92.7	3.650	92	3.622	0.7	.028	4	.157	1
						8	DVAS0400X08S060	●	32.7	1.287	46.7	1.839	41	1.614	92.7	3.650	92	3.622	0.7	.028	6	.236	2

* Mark signifies the pilot hole of the metric roll tap.

DC = Cutting Diameter
LU = Usable Length
LCF = Length Chip Flute
LS = Shank Length
OAL = Overall Length
LF = Functional Length
PL = Point Length
DCONMS = Connection Diameter

DVAS NEW

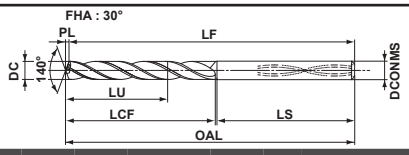
TRISTAR Drills

DC						L/D	Order Number	Stock	LU		LCF		LS		OAL		LF		PL		DCONMS		Type
Metric (mm)	Decimal (in)	Fraction (in)	Wire / Letter	Thread Size	Tap Pilot Hole			DP1120	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	
4.039	.1590		21	#10-32		3	DVAS0404X03S060	●	12.8	.504	25.7	1.012	56	2.205	86.7	3.413	86	3.386	0.7	.028	6	.236	2
						5	DVAS0404X05S060	●	20.9	.823	40.7	1.602	55	2.165	100.7	3.965	100	3.937	0.7	.028	6	.236	2
						8	DVAS0404X08S060	●	33.0	1.299	52.7	2.075	43	1.693	100.7	3.965	100	3.937	0.7	.028	6	.236	2
4.100	.1614					3	DVAS0410X03S050	★	13.0	.512	25.7	1.012	58	2.283	86.7	3.413	86	3.386	0.7	.028	5	.197	1
						3	DVAS0410X03S060	●	13.0	.512	25.7	1.012	56	2.205	86.7	3.413	86	3.386	0.7	.028	6	.236	2
						5	DVAS0410X05S050	★	21.2	.835	40.7	1.602	57	2.244	100.7	3.965	100	3.937	0.7	.028	5	.197	1
						5	DVAS0410X05S060	●	21.2	.835	40.7	1.602	55	2.165	100.7	3.965	100	3.937	0.7	.028	6	.236	2
						8	DVAS0410X08S050	★	33.5	1.319	52.7	2.075	45	1.772	100.7	3.965	100	3.937	0.7	.028	5	.197	1
						8	DVAS0410X08S060	●	33.5	1.319	52.7	2.075	43	1.693	100.7	3.965	100	3.937	0.7	.028	6	.236	2
4.200	.1654			M5x.8		3	DVAS0420X03S050	★	13.4	.528	25.8	1.016	58	2.283	86.8	3.417	86	3.386	0.8	.031	5	.197	1
						3	DVAS0420X03S060	●	13.4	.528	25.8	1.016	56	2.205	86.8	3.417	86	3.386	0.8	.031	6	.236	2
						5	DVAS0420X05S050	★	21.8	.858	40.8	1.606	57	2.244	100.8	3.969	100	3.937	0.8	.031	5	.197	1
						5	DVAS0420X05S060	●	21.8	.858	40.8	1.606	55	2.165	100.8	3.969	100	3.937	0.8	.031	6	.236	2
						8	DVAS0420X08S050	★	34.4	1.354	52.8	2.079	45	1.772	100.8	3.969	100	3.937	0.8	.031	5	.197	1
						8	DVAS0420X08S060	●	34.4	1.354	52.8	2.079	43	1.693	100.8	3.969	100	3.937	0.8	.031	6	.236	2
4.300	.1693					3	DVAS0430X03S050	★	13.7	.539	25.8	1.016	58	2.283	86.8	3.417	86	3.386	0.8	.031	5	.197	1
						3	DVAS0430X03S060	●	13.7	.539	25.8	1.016	56	2.205	86.8	3.417	86	3.386	0.8	.031	6	.236	2
						5	DVAS0430X05S050	★	22.3	.878	40.8	1.606	57	2.244	100.8	3.969	100	3.937	0.8	.031	5	.197	1
						5	DVAS0430X05S060	●	22.3	.878	40.8	1.606	55	2.165	100.8	3.969	100	3.937	0.8	.031	6	.236	2
						8	DVAS0430X08S050	★	35.2	1.386	52.8	2.079	45	1.772	100.8	3.969	100	3.937	0.8	.031	5	.197	1
						8	DVAS0430X08S060	●	35.2	1.386	52.8	2.079	43	1.693	100.8	3.969	100	3.937	0.8	.031	6	.236	2
4.366	.1719	11/64				3	DVAS0437X03S060	●	13.9	.547	25.8	1.016	55	2.165	86.8	3.417	86	3.386	0.8	.031	6	.236	2
						5	DVAS0437X05S060	●	22.6	.890	40.8	1.606	55	2.165	100.8	3.969	100	3.937	0.8	.031	6	.236	2
						8	DVAS0437X08S060	●	35.7	1.406	52.8	2.079	43	1.693	100.8	3.969	100	3.937	0.8	.031	6	.236	2
4.400	.1732		17			3	DVAS0440X03S050	★	14.0	.551	25.8	1.016	58	2.283	86.8	3.417	86	3.386	0.8	.031	5	.197	1
						3	DVAS0440X03S060	●	14.0	.551	25.8	1.016	56	2.205	86.8	3.417	86	3.386	0.8	.031	6	.236	2
						5	DVAS0440X05S050	★	22.8	.898	40.8	1.606	57	2.244	100.8	3.969	100	3.937	0.8	.031	5	.197	1
						5	DVAS0440X05S060	●	22.8	.898	40.8	1.606	55	2.165	100.8	3.969	100	3.937	0.8	.031	6	.236	2
						8	DVAS0440X08S050	★	36.0	1.417	52.8	2.079	45	1.772	100.8	3.969	100	3.937	0.8	.031	5	.197	1
						8	DVAS0440X08S060	●	36.0	1.417	52.8	2.079	43	1.693	100.8	3.969	100	3.937	0.8	.031	6	.236	2
4.500	.1772		16	#12-24		3	DVAS0450X03S050	★	14.3	.563	25.8	1.016	58	2.283	86.8	3.417	86	3.386	0.8	.031	5	.197	1
						3	DVAS0450X03S060	●	14.3	.563	25.8	1.016	56	2.205	86.8	3.417	86	3.386	0.8	.031	6	.236	2
						5	DVAS0450X05S050	★	23.3	.917	40.8	1.606	57	2.244	100.8	3.969	100	3.937	0.8	.031	5	.197	1
						5	DVAS0450X05S060	●	23.3	.917	40.8	1.606	55	2.165	100.8	3.969	100	3.937	0.8	.031	6	.236	2
						8	DVAS0450X08S050	★	36.8	1.449	52.8	2.079	45	1.772	100.8	3.969	100	3.937	0.8	.031	5	.197	1
						8	DVAS0450X08S060	●	36.8	1.449	52.8	2.079	43	1.693	100.8	3.969	100	3.937	0.8	.031	6	.236	2
4.600	.1811					3	DVAS0460X03S050	★	14.6	.575	28.8	1.134	59	2.323	90.8	3.575	90	3.543	0.8	.031	5	.197	1
						3	DVAS0460X03S060	●	14.6	.575	28.8	1.134	58	2.283	90.8	3.575	90	3.543	0.8	.031	6	.236	1
						5	DVAS0460X05S050	★	23.8	.937	44.8	1.764	58	2.283	105.8	4.165	105	4.134	0.8	.031	5	.197	1
						5	DVAS0460X05S060	●	23.8	.937	44.8	1.764	57	2.244	105.8	4.165	105	4.134	0.8	.031	6	.236	1
						8	DVAS0460X08S050	★	37.6	1.480	57.8	2.276	45	1.772	105.8	4.165	105	4.134	0.8	.031	5	.197	1
						8	DVAS0460X08S060	●	37.6	1.480	57.8	2.276	44	1.732	105.8	4.165	105	4.134	0.8	.031	6	.236	1
4.620	.1819				*	5	DVAS0462X05S050	★	23.9	.941	44.8	1.764	58	2.283	105.8	4.165	105	4.134	0.8	.031	5	.197	1
						5	DVAS0462X05S060	●	23.9	.941	44.8	1.764	57	2.244	105.8	4.165	105	4.134	0.8	.031	6	.236	1
4.640	.1827				*	5	DVAS0464X05S050	★	24.0	.945	44.8	1.764	58	2.283	105.8	4.165	105	4.134	0.8	.031	5	.197	1
						5	DVAS0464X05S060	●	24.0	.945	44.8	1.764	57	2.244	105.8	4.165	105	4.134	0.8	.031	6	.236	1

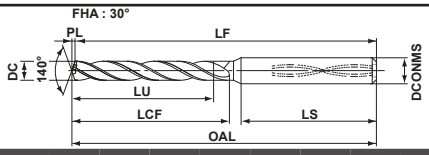
* Mark signifies the pilot hole of the metric roll tap.

● : USA Stock ★ : Stocked in Japan

Type1



Type2



DC						L/D	Order Number	Stock	LU		LCF		LS		OAL		LF		PL		DCONMS		Type
Metric (mm)	Decimal (in)	Fraction (in)	Wire / Letter	Thread Size	Tap Pilot Hole			DP1120	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	
4.700	.1850		13			3	DVAS0470X03S050	★	15.0	.591	28.9	1.138	59	2.323	90.9	3.579	90	3.543	0.9	.035	5	.197	1
						3	DVAS0470X03S060	●	15.0	.591	28.9	1.138	58	2.283	90.9	3.579	90	3.543	0.9	.035	6	.236	1
						5	DVAS0470X05S050	★	24.4	.961	44.9	1.768	58	2.283	105.9	4.169	105	4.134	0.9	.035	5	.197	1
						5	DVAS0470X05S060	●	24.4	.961	44.9	1.768	57	2.244	105.9	4.169	105	4.134	0.9	.035	6	.236	1
						8	DVAS0470X08S050	★	38.5	1.516	57.9	2.280	45	1.772	105.9	4.169	105	4.134	0.9	.035	5	.197	1
						8	DVAS0470X08S060	●	38.5	1.516	57.9	2.280	44	1.732	105.9	4.169	105	4.134	0.9	.035	6	.236	1
4.763	.1875	3/16				3	DVAS0476X03S060	●	15.2	.598	28.9	1.138	58	2.283	90.9	3.579	90	3.543	0.9	.035	6	.236	1
						5	DVAS0476X05S060	●	24.7	.972	44.9	1.768	57	2.244	105.9	4.169	105	4.134	0.9	.035	6	.236	1
						8	DVAS0476X08S060	●	39.0	1.535	57.9	2.280	44	1.732	105.9	4.169	105	4.134	0.9	.035	6	.236	1
4.800	.1890		12			3	DVAS0480X03S050	★	15.3	.602	28.9	1.138	59	2.323	90.9	3.579	90	3.543	0.9	.035	5	.197	1
						3	DVAS0480X03S060	●	15.3	.602	28.9	1.138	58	2.283	90.9	3.579	90	3.543	0.9	.035	6	.236	1
						5	DVAS0480X05S050	★	24.9	.980	44.9	1.768	58	2.283	105.9	4.169	105	4.134	0.9	.035	5	.197	1
						5	DVAS0480X05S060	●	24.9	.980	44.9	1.768	57	2.244	105.9	4.169	105	4.134	0.9	.035	6	.236	1
						8	DVAS0480X08S050	★	39.3	1.547	57.9	2.280	45	1.772	105.9	4.169	105	4.134	0.9	.035	5	.197	1
						8	DVAS0480X08S060	●	39.3	1.547	57.9	2.280	44	1.732	105.9	4.169	105	4.134	0.9	.035	6	.236	1
4.900	.1929					3	DVAS0490X03S050	★	15.6	.614	28.9	1.138	59	2.323	90.9	3.579	90	3.543	0.9	.035	5	.197	1
						3	DVAS0490X03S060	●	15.6	.614	28.9	1.138	58	2.283	90.9	3.579	90	3.543	0.9	.035	6	.236	1
						5	DVAS0490X05S050	★	25.4	1.000	44.9	1.768	58	2.283	105.9	4.169	105	4.134	0.9	.035	5	.197	1
						5	DVAS0490X05S060	●	25.4	1.000	44.9	1.768	57	2.244	105.9	4.169	105	4.134	0.9	.035	6	.236	1
						8	DVAS0490X08S050	★	40.1	1.579	57.9	2.280	45	1.772	105.9	4.169	105	4.134	0.9	.035	5	.197	1
						8	DVAS0490X08S060	●	40.1	1.579	57.9	2.280	44	1.732	105.9	4.169	105	4.134	0.9	.035	6	.236	1
5.000	.1969			M6x1.0		3	DVAS0500X03S050	★	15.9	.626	28.9	1.138	59	2.323	90.9	3.579	90	3.543	0.9	.035	5	.197	1
						3	DVAS0500X03S060	●	15.9	.626	28.9	1.138	59	2.323	90.9	3.579	90	3.543	0.9	.035	6	.236	1
						5	DVAS0500X05S050	★	25.9	1.020	44.9	1.768	58	2.283	105.9	4.169	105	4.134	0.9	.035	5	.197	1
						5	DVAS0500X05S060	●	25.9	1.020	44.9	1.768	58	2.283	105.9	4.169	105	4.134	0.9	.035	6	.236	1
						8	DVAS0500X08S050	★	40.9	1.610	57.9	2.280	45	1.772	105.9	4.169	105	4.134	0.9	.035	5	.197	1
						8	DVAS0500X08S060	●	40.9	1.610	57.9	2.280	45	1.772	105.9	4.169	105	4.134	0.9	.035	6	.236	1
5.100	.2008		7	1/4-20		3	DVAS0510X03S060	●	16.2	.638	28.9	1.138	51	2.008	82.9	3.264	82	3.228	0.9	.035	6	.236	1
						5	DVAS0510X05S060	●	26.4	1.039	44.9	1.768	53	2.087	100.9	3.972	100	3.937	0.9	.035	6	.236	1
						8	DVAS0510X08S060	●	41.7	1.642	61.9	2.437	54	2.126	118.9	4.681	118	4.646	0.9	.035	6	.236	1
5.160	.2032	13/64				3	DVAS0516X03S060	●	16.4	.646	28.9	1.138	51	2.008	82.9	3.264	82	3.228	0.9	.035	6	.236	1
						5	DVAS0516X05S060	●	26.7	1.051	44.9	1.768	53	2.087	100.9	3.972	100	3.937	0.9	.035	6	.236	1
						8	DVAS0516X08S060	●	42.2	1.661	61.9	2.437	54	2.126	118.9	4.681	118	4.646	0.9	.035	6	.236	1
5.200	.2047					3	DVAS0520X03S060	●	16.5	.650	28.9	1.138	51	2.008	82.9	3.264	82	3.228	0.9	.035	6	.236	1
						5	DVAS0520X05S060	●	26.9	1.059	44.9	1.768	53	2.087	100.9	3.972	100	3.937	0.9	.035	6	.236	1
						8	DVAS0520X08S060	●	42.5	1.673	61.9	2.437	54	2.126	118.9	4.681	118	4.646	0.9	.035	6	.236	1
5.300	.2087		4			3	DVAS0530X03S060	●	16.9	.665	29.0	1.142	51	2.008	83.0	3.268	82	3.228	1.0	.039	6	.236	1
						5	DVAS0530X05S060	●	27.5	1.083	45.0	1.772	53	2.087	101.0	3.976	100	3.937	1.0	.039	6	.236	1
						8	DVAS0530X08S060	●	43.4	1.709	62.0	2.441	54	2.126	119.0	4.685	118	4.646	1.0	.039	6	.236	1
5.400	.2126		3	1/4-28		3	DVAS0540X03S060	●	17.2	.677	29.0	1.142	51	2.008	83.0	3.268	82	3.228	1.0	.039	6	.236	1
						5	DVAS0540X05S060	●	28.0	1.102	45.0	1.772	53	2.087	101.0	3.976	100	3.937	1.0	.039	6	.236	1
						8	DVAS0540X08S060	●	44.2	1.740	62.0	2.441	54	2.126	119.0	4.685	118	4.646	1.0	.039	6	.236	1
5.500	.2165					3	DVAS0550X03S060	●	17.5	.689	29.0	1.142	51	2.008	83.0	3.268	82	3.228	1.0	.039	6	.236	1
						5	DVAS0550X05S060	●	28.5	1.122	45.0	1.772	53	2.087	101.0	3.976	100	3.937	1.0	.039	6	.236	1
						8	DVAS0550X08S060	●	45.0	1.772	62.0	2.441	54	2.126	119.0	4.685	118	4.646	1.0	.039	6	.236	1
5.520	.2174				*	5	DVAS0552X05S060	★	28.6	1.126	49.0	1.929	49	1.929	101.0	3.976	100	3.937	1.0	.039	6	.236	1
5.540	.2182				*	5	DVAS0554X05S060	★	28.7	1.130	49.0	1.929	49	1.929	101.0	3.976	100	3.937	1.0	.039	6	.236	1
5.557	.2188	7/32				3	DVAS0556X03S060	●	17.7	.697	31.0	1.220	49	1.929	83.0	3.268	82	3.228	1.0	.039	6	.236	1
						5	DVAS0556X05S060	●	28.8	1.134	49.0	1.929	49	1.929	101.0	3.976	100	3.937	1.0	.039	6	.236	1
						8	DVAS0556X08S060	●	45.4	1.787	67.0	2.638	49	1.929	119.0	4.685	118	4.646	1.0	.039	6	.236	1

* Mark signifies the pilot hole of the metric roll tap.

DC = Cutting Diameter
LU = Usable Length
LCF = Length Chip Flute
LS = Shank Length
OAL = Overall Length
LF = Functional Length
PL = Point Length
DCONMS = Connection Diameter

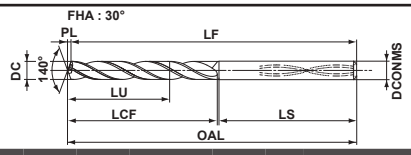
DVAS NEW

TRISTAR Drills

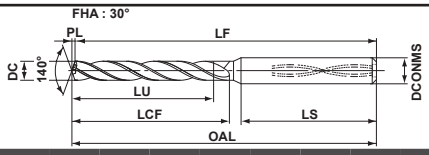
DC						L/D	Order Number	Stock	LU		LCF		LS		OAL		LF		PL		DCONMS		Type
Metric (mm)	Decimal (in)	Fraction (in)	Wire / Letter	Thread Size	Tap Pilot Hole			DP1120	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	
5.600	.2205		2			3	DVAS0560X03S060	●	17.8	.701	31.0	1.220	49	1.929	83.0	3.268	82	3.228	1.0	.039	6	.236	1
						5	DVAS0560X05S060	●	29.0	1.142	49.0	1.929	49	1.929	101.0	3.976	100	3.937	1.0	.039	6	.236	1
						8	DVAS0560X08S060	●	45.8	1.803	67.0	2.638	49	1.929	119.0	4.685	118	4.646	1.0	.039	6	.236	1
5.700	.2244					3	DVAS0570X03S060	●	18.1	.713	31.0	1.220	49	1.929	83.0	3.268	82	3.228	1.0	.039	6	.236	1
						5	DVAS0570X05S060	●	29.5	1.161	49.0	1.929	49	1.929	101.0	3.976	100	3.937	1.0	.039	6	.236	1
						8	DVAS0570X08S060	●	46.6	1.835	67.0	2.638	49	1.929	119.0	4.685	118	4.646	1.0	.039	6	.236	1
5.800	.2283		1			3	DVAS0580X03S060	●	18.5	.728	31.1	1.224	49	1.929	83.1	3.272	82	3.228	1.1	.043	6	.236	1
						5	DVAS0580X05S060	●	30.1	1.185	49.1	1.933	49	1.929	101.1	3.980	100	3.937	1.1	.043	6	.236	1
						8	DVAS0580X08S060	●	47.5	1.870	67.1	2.642	49	1.929	119.1	4.689	118	4.646	1.1	.043	6	.236	1
5.900	.2323					3	DVAS0590X03S060	●	18.8	.740	31.1	1.224	49	1.929	83.1	3.272	82	3.228	1.1	.043	6	.236	1
						5	DVAS0590X05S060	●	30.6	1.205	49.1	1.933	49	1.929	101.1	3.980	100	3.937	1.1	.043	6	.236	1
						8	DVAS0590X08S060	●	48.3	1.902	67.1	2.642	49	1.929	119.1	4.689	118	4.646	1.1	.043	6	.236	1
5.954	.2344	15/64	A			3	DVAS0595X03S060	●	19.0	.748	31.1	1.224	49	1.929	83.1	3.272	82	3.228	1.1	.043	6	.236	1
						5	DVAS0595X05S060	●	30.9	1.217	49.1	1.933	49	1.929	101.1	3.980	100	3.937	1.1	.043	6	.236	1
						8	DVAS0595X08S060	●	48.7	1.917	67.1	2.642	49	1.929	119.1	4.689	118	4.646	1.1	.043	6	.236	1
6.000	.2362			M7x1.0		3	DVAS0600X03S060	●	19.1	.752	31.1	1.224	49	1.929	83.1	3.272	82	3.228	1.1	.043	6	.236	1
						5	DVAS0600X05S060	●	31.1	1.224	49.1	1.933	49	1.929	101.1	3.980	100	3.937	1.1	.043	6	.236	1
						8	DVAS0600X08S060	●	49.1	1.933	67.1	2.642	49	1.929	119.1	4.689	118	4.646	1.1	.043	6	.236	1
6.100	.2402					3	DVAS0610X03S070	★	19.4	.764	34.1	1.343	52	2.047	89.1	3.508	88	3.465	1.1	.043	7	.276	1
						3	DVAS0610X03S080	●	19.4	.764	34.1	1.343	51	2.008	89.1	3.508	88	3.465	1.1	.043	8	.315	1
						5	DVAS0610X05S070	★	31.6	1.244	53.1	2.091	54	2.126	110.1	4.335	109	4.291	1.1	.043	7	.276	1
						5	DVAS0610X05S080	●	31.6	1.244	53.1	2.091	53	2.087	110.1	4.335	109	4.291	1.1	.043	8	.315	1
						8	DVAS0610X08S070	★	49.9	1.965	73.1	2.878	55	2.165	131.1	5.161	130	5.118	1.1	.043	7	.276	1
						8	DVAS0610X08S080	●	49.9	1.965	73.1	2.878	54	2.126	131.1	5.161	130	5.118	1.1	.043	8	.315	1
6.200	.2441					3	DVAS0620X03S070	★	19.7	.776	34.1	1.343	52	2.047	89.1	3.508	88	3.465	1.1	.043	7	.276	1
						3	DVAS0620X03S080	●	19.7	.776	34.1	1.343	51	2.008	89.1	3.508	88	3.465	1.1	.043	8	.315	1
						5	DVAS0620X05S070	★	32.1	1.264	53.1	2.091	54	2.126	110.1	4.335	109	4.291	1.1	.043	7	.276	1
						5	DVAS0620X05S080	●	32.1	1.264	53.1	2.091	53	2.087	110.1	4.335	109	4.291	1.1	.043	8	.315	1
						8	DVAS0620X08S070	★	50.7	1.996	73.1	2.878	55	2.165	131.1	5.161	130	5.118	1.1	.043	7	.276	1
						8	DVAS0620X08S080	●	50.7	1.996	73.1	2.878	54	2.126	131.1	5.161	130	5.118	1.1	.043	8	.315	1
6.300	.2480					3	DVAS0630X03S070	★	20.0	.787	34.1	1.343	52	2.047	89.1	3.508	88	3.465	1.1	.043	7	.276	1
						3	DVAS0630X03S080	●	20.0	.787	34.1	1.343	51	2.008	89.1	3.508	88	3.465	1.1	.043	8	.315	1
						5	DVAS0630X05S070	★	32.6	1.283	53.1	2.091	54	2.126	110.1	4.335	109	4.291	1.1	.043	7	.276	1
						5	DVAS0630X05S080	●	32.6	1.283	53.1	2.091	53	2.087	110.1	4.335	109	4.291	1.1	.043	8	.315	1
						8	DVAS0630X08S070	★	51.5	2.028	73.1	2.878	55	2.165	131.1	5.161	130	5.118	1.1	.043	7	.276	1
						8	DVAS0630X08S080	●	51.5	2.028	73.1	2.878	54	2.126	131.1	5.161	130	5.118	1.1	.043	8	.315	1
6.350	.2500	1/4	E			3	DVAS0635X03S080	●	20.3	.799	34.2	1.346	51	2.008	89.2	3.512	88	3.465	1.2	.047	8	.315	1
						5	DVAS0635X05S080	●	33.0	1.299	53.2	2.094	53	2.087	110.2	4.339	109	4.291	1.2	.047	8	.315	1
						8	DVAS0635X08S080	●	52.0	2.047	73.2	2.882	54	2.126	131.2	5.165	130	5.118	1.2	.047	8	.315	1
6.400	.2520					3	DVAS0640X03S070	★	20.4	.803	34.2	1.346	52	2.047	89.2	3.512	88	3.465	1.2	.047	7	.276	1
						3	DVAS0640X03S080	●	20.4	.803	34.2	1.346	51	2.008	89.2	3.512	88	3.465	1.2	.047	8	.315	1
						5	DVAS0640X05S070	★	33.2	1.307	53.2	2.094	54	2.126	110.2	4.339	109	4.291	1.2	.047	7	.276	1
						5	DVAS0640X05S080	●	33.2	1.307	53.2	2.094	53	2.087	110.2	4.339	109	4.291	1.2	.047	8	.315	1
						8	DVAS0640X08S070	★	52.4	2.063	73.2	2.882	55	2.165	131.2	5.165	130	5.118	1.2	.047	7	.276	1
						8	DVAS0640X08S080	●	52.4	2.063	73.2	2.882	54	2.126	131.2	5.165	130	5.118	1.2	.047	8	.315	1
6.500	.2559					3	DVAS0650X03S070	★	20.7	.815	34.2	1.346	52	2.047	89.2	3.512	88	3.465	1.2	.047	7	.276	1
						3	DVAS0650X03S080	●	20.7	.815	34.2	1.346	51	2.008	89.2	3.512	88	3.465	1.2	.047	8	.315	1
						5	DVAS0650X05S070	★	33.7	1.327	53.2	2.094	54	2.126	110.2	4.339	109	4.291	1.2	.047	7	.276	1
						5	DVAS0650X05S080	●	33.7	1.327	53.2	2.094	53	2.087	110.2	4.339	109	4.291	1.2	.047	8	.315	1
						8	DVAS0650X08S070	★	53.2	2.094	73.2	2.882	55	2.165	131.2	5.165	130	5.118	1.2	.047	7	.276	1
						8	DVAS0650X08S080	●	53.2	2.094	73.2	2.882	54	2.126	131.2	5.165	130	5.118	1.2	.047	8	.315	1

● : USA Stock ★ : Stocked in Japan

Type1



Type2



DC						L/D	Order Number	Stock	LU		LCF		LS		OAL		LF		PL		DCONMS		Type
Metric (mm)	Decimal (in)	Fraction (in)	Wire / Letter	Thread Size	Tap Pilot Hole			DP1120	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	
6.528	.2570		F	5/16-18		3	DVAS0653X03S080	●	20.8	.819	36.2	1.425	49	1.929	89.2	3.512	88	3.465	1.2	.047	8	.315	1
						5	DVAS0653X05S080	●	33.8	1.331	57.2	2.252	49	1.929	110.2	4.339	109	4.291	1.2	.047	8	.315	1
						8	DVAS0653X08S080	●	53.4	2.102	78.2	3.079	49	1.929	131.2	5.165	130	5.118	1.2	.047	8	.315	1
6.600	.2598					3	DVAS0660X03S070	★	21.0	.827	36.2	1.425	50	1.969	89.2	3.512	88	3.465	1.2	.047	7	.276	1
						3	DVAS0660X03S080	●	21.0	.827	36.2	1.425	49	1.929	89.2	3.512	88	3.465	1.2	.047	8	.315	1
						5	DVAS0660X05S070	★	34.2	1.346	57.2	2.252	50	1.969	110.2	4.339	109	4.291	1.2	.047	7	.276	1
						5	DVAS0660X05S080	●	34.2	1.346	57.2	2.252	49	1.929	110.2	4.339	109	4.291	1.2	.047	8	.315	1
						8	DVAS0660X08S070	★	54.0	2.126	78.2	3.079	50	1.969	131.2	5.165	130	5.118	1.2	.047	7	.276	1
						8	DVAS0660X08S080	●	54.0	2.126	78.2	3.079	49	1.929	131.2	5.165	130	5.118	1.2	.047	8	.315	1
6.700	.2638			M8x1.25		3	DVAS0670X03S070	★	21.3	.839	36.2	1.425	50	1.969	89.2	3.512	88	3.465	1.2	.047	7	.276	1
						3	DVAS0670X03S080	●	21.3	.839	36.2	1.425	49	1.929	89.2	3.512	88	3.465	1.2	.047	8	.315	1
						5	DVAS0670X05S070	★	34.7	1.366	57.2	2.252	50	1.969	110.2	4.339	109	4.291	1.2	.047	7	.276	1
						5	DVAS0670X05S080	●	34.7	1.366	57.2	2.252	49	1.929	110.2	4.339	109	4.291	1.2	.047	8	.315	1
						8	DVAS0670X08S070	★	54.8	2.157	78.2	3.079	50	1.969	131.2	5.165	130	5.118	1.2	.047	7	.276	1
						8	DVAS0670X08S080	●	54.8	2.157	78.2	3.079	49	1.929	131.2	5.165	130	5.118	1.2	.047	8	.315	1
6.747	.2657	17/64				3	DVAS0675X03S080	●	21.4	.843	36.2	1.425	49	1.929	89.2	3.512	88	3.465	1.2	.047	8	.315	1
						5	DVAS0675X05S080	●	34.9	1.374	57.2	2.252	49	1.929	110.2	4.339	109	4.291	1.2	.047	8	.315	1
						8	DVAS0675X08S080	●	55.2	2.173	78.2	3.079	49	1.929	131.2	5.165	130	5.118	1.2	.047	8	.315	1
6.800	.2677					3	DVAS0680X03S070	★	21.6	.850	36.2	1.425	50	1.969	89.2	3.512	88	3.465	1.2	.047	7	.276	1
						3	DVAS0680X03S080	●	21.6	.850	36.2	1.425	49	1.929	89.2	3.512	88	3.465	1.2	.047	8	.315	1
						5	DVAS0680X05S070	★	35.2	1.386	57.2	2.252	50	1.969	110.2	4.339	109	4.291	1.2	.047	7	.276	1
						5	DVAS0680X05S080	●	35.2	1.386	57.2	2.252	49	1.929	110.2	4.339	109	4.291	1.2	.047	8	.315	1
						8	DVAS0680X08S070	★	55.6	2.189	78.2	3.079	50	1.969	131.2	5.165	130	5.118	1.2	.047	7	.276	1
						8	DVAS0680X08S080	●	55.6	2.189	78.2	3.079	49	1.929	131.2	5.165	130	5.118	1.2	.047	8	.315	1
6.900	.2717		I	5/16-24		3	DVAS0690X03S070	★	22.0	.866	36.3	1.429	50	1.969	89.3	3.516	88	3.465	1.3	.051	7	.276	1
						3	DVAS0690X03S080	●	22.0	.866	36.3	1.429	49	1.929	89.3	3.516	88	3.465	1.3	.051	8	.315	1
						5	DVAS0690X05S070	★	35.8	1.409	57.3	2.256	50	1.969	110.3	4.343	109	4.291	1.3	.051	7	.276	1
						5	DVAS0690X05S080	●	35.8	1.409	57.3	2.256	49	1.929	110.3	4.343	109	4.291	1.3	.051	8	.315	1
						8	DVAS0690X08S070	★	56.5	2.224	78.3	3.083	50	1.969	131.3	5.169	130	5.118	1.3	.051	7	.276	1
						8	DVAS0690X08S080	●	56.5	2.224	78.3	3.083	49	1.929	131.3	5.169	130	5.118	1.3	.051	8	.315	1
7.000	.2756			M8x1.0		3	DVAS0700X03S070	★	22.3	.878	36.3	1.429	50	1.969	89.3	3.516	88	3.465	1.3	.051	7	.276	1
						3	DVAS0700X03S080	●	22.3	.878	36.3	1.429	50	1.969	89.3	3.516	88	3.465	1.3	.051	8	.315	1
						5	DVAS0700X05S070	★	36.3	1.429	57.3	2.256	50	1.969	110.3	4.343	109	4.291	1.3	.051	7	.276	1
						5	DVAS0700X05S080	●	36.3	1.429	57.3	2.256	50	1.969	110.3	4.343	109	4.291	1.3	.051	8	.315	1
						8	DVAS0700X08S070	★	57.3	2.256	78.3	3.083	50	1.969	131.3	5.169	130	5.118	1.3	.051	7	.276	1
						8	DVAS0700X08S080	●	57.3	2.256	78.3	3.083	50	1.969	131.3	5.169	130	5.118	1.3	.051	8	.315	1
7.100	.2795					3	DVAS0710X03S080	●	22.6	.890	39.3	1.547	53	2.087	95.3	3.752	94	3.701	1.3	.051	8	.315	1
						5	DVAS0710X05S080	●	36.8	1.449	61.3	2.413	55	2.165	119.3	4.697	118	4.646	1.3	.051	8	.315	1
						8	DVAS0710X08S080	●	58.1	2.287	84.3	3.319	56	2.205	143.3	5.642	142	5.591	1.3	.051	8	.315	1
7.144	.2813	9/32	K			3	DVAS0714X03S080	●	22.7	.894	39.3	1.547	53	2.087	95.3	3.752	94	3.701	1.3	.051	8	.315	1
						5	DVAS0714X05S080	●	37.0	1.457	61.3	2.413	55	2.165	119.3	4.697	118	4.646	1.3	.051	8	.315	1
						8	DVAS0714X08S080	●	58.5	2.303	84.3	3.319	56	2.205	143.3	5.642	142	5.591	1.3	.051	8	.315	1
7.200	.2835					3	DVAS0720X03S080	●	22.9	.902	39.3	1.547	53	2.087	95.3	3.752	94	3.701	1.3	.051	8	.315	1
						5	DVAS0720X05S080	●	37.3	1.469	61.3	2.413	55	2.165	119.3	4.697	118	4.646	1.3	.051	8	.315	1
						8	DVAS0720X08S080	●	58.9	2.319	84.3	3.319	56	2.205	143.3	5.642	142	5.591	1.3	.051	8	.315	1
7.300	.2874					3	DVAS0730X03S080	●	23.2	.913	39.3	1.547	53	2.087	95.3	3.752	94	3.701	1.3	.051	8	.315	1
						5	DVAS0730X05S080	●	37.8	1.488	61.3	2.413	55	2.165	119.3	4.697	118	4.646	1.3	.051	8	.315	1
						8	DVAS0730X08S080	●	59.7	2.350	84.3	3.319	56	2.205	143.3	5.642	142	5.591	1.3	.051	8	.315	1
7.360	.2898				*	5	DVAS0736X05S080	★	38.1	1.500	61.3	2.413	55	2.165	119.3	4.697	118	4.646	1.3	.051	8	.315	1
7.380	.2906				*	5	DVAS0738X05S080	★	38.2	1.504	61.3	2.413	55	2.165	119.3	4.697	118	4.646	1.3	.051	8	.315	1

* Mark signifies the pilot hole of the metric roll tap.

DC = Cutting Diameter
LU = Usable Length
LCF = Length Chip Flute
LS = Shank Length
OAL = Overall Length
LF = Functional Length
PL = Point Length
DCONMS = Connection Diameter

DVAS NEW

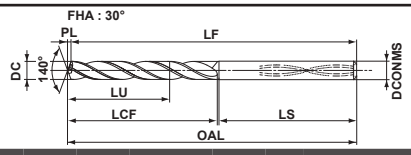
TRISTAR Drills

DC						L/D	Order Number	Stock	LU		LCF		LS		OAL		LF		PL		DCONMS		Type
Metric (mm)	Decimal (in)	Fraction (in)	Wire / Letter	Thread Size	Tap Pilot Hole			DP1120	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	
7.400	.2913					3	DVAS0740X03S080	●	23.5	.925	39.3	1.547	53	2.087	95.3	3.752	94	3.701	1.3	.051	8	.315	1
						5	DVAS0740X05S080	●	38.3	1.508	61.3	2.413	55	2.165	119.3	4.697	118	4.646	1.3	.051	8	.315	1
						8	DVAS0740X08S080	●	60.5	2.382	84.3	3.319	56	2.205	143.3	5.642	142	5.591	1.3	.051	8	.315	1
7.500	.2953		M			3	DVAS0750X03S080	●	23.9	.941	39.4	1.551	53	2.087	95.4	3.756	94	3.701	1.4	.055	8	.315	1
						5	DVAS0750X05S080	●	38.9	1.531	61.4	2.417	55	2.165	119.4	4.701	118	4.646	1.4	.055	8	.315	1
						8	DVAS0750X08S080	●	61.4	2.417	84.4	3.323	56	2.205	143.4	5.646	142	5.591	1.4	.055	8	.315	1
7.520	.2961				*	5	DVAS0752X05S080	★	39.0	1.535	65.4	2.575	51	2.008	119.4	4.701	118	4.646	1.4	.055	8	.315	1
7.541	.2969	19/64			*	3	DVAS0754X03S080	●	24.0	.945	41.4	1.630	51	2.008	95.4	3.756	94	3.701	1.4	.055	8	.315	1
						5	DVAS0754X05S080	●	39.1	1.539	65.4	2.575	51	2.008	119.4	4.701	118	4.646	1.4	.055	8	.315	1
						8	DVAS0754X08S080	●	61.7	2.429	89.4	3.520	51	2.008	143.4	5.646	142	5.591	1.4	.055	8	.315	1
7.600	.2992					3	DVAS0760X03S080	●	24.2	.953	41.4	1.630	51	2.008	95.4	3.756	94	3.701	1.4	.055	8	.315	1
						5	DVAS0760X05S080	●	39.4	1.551	65.4	2.575	51	2.008	119.4	4.701	118	4.646	1.4	.055	8	.315	1
						8	DVAS0760X08S080	●	62.2	2.449	89.4	3.520	51	2.008	143.4	5.646	142	5.591	1.4	.055	8	.315	1
7.700	.3031					3	DVAS0770X03S080	●	24.5	.965	41.4	1.630	51	2.008	95.4	3.756	94	3.701	1.4	.055	8	.315	1
						5	DVAS0770X05S080	●	39.9	1.571	65.4	2.575	51	2.008	119.4	4.701	118	4.646	1.4	.055	8	.315	1
						8	DVAS0770X08S080	●	63.0	2.480	89.4	3.520	51	2.008	143.4	5.646	142	5.591	1.4	.055	8	.315	1
7.800	.3071					3	DVAS0780X03S080	●	24.8	.976	41.4	1.630	51	2.008	95.4	3.756	94	3.701	1.4	.055	8	.315	1
						5	DVAS0780X05S080	●	40.4	1.591	65.4	2.575	51	2.008	119.4	4.701	118	4.646	1.4	.055	8	.315	1
						8	DVAS0780X08S080	●	63.8	2.512	89.4	3.520	51	2.008	143.4	5.646	142	5.591	1.4	.055	8	.315	1
7.900	.3110					3	DVAS0790X03S080	●	25.1	.988	41.4	1.630	51	2.008	95.4	3.756	94	3.701	1.4	.055	8	.315	1
						5	DVAS0790X05S080	●	40.9	1.610	65.4	2.575	51	2.008	119.4	4.701	118	4.646	1.4	.055	8	.315	1
						8	DVAS0790X08S080	●	64.6	2.543	89.4	3.520	51	2.008	143.4	5.646	142	5.591	1.4	.055	8	.315	1
7.938	.3125	5/16		3/8-16		3	DVAS0794X03S080	●	25.2	.992	41.4	1.630	51	2.008	95.4	3.756	94	3.701	1.4	.055	8	.315	1
						5	DVAS0794X05S080	●	41.1	1.618	65.4	2.575	51	2.008	119.4	4.701	118	4.646	1.4	.055	8	.315	1
						8	DVAS0794X08S080	●	64.9	2.555	89.4	3.520	51	2.008	143.4	5.646	142	5.591	1.4	.055	8	.315	1
8.000	.3150					3	DVAS0800X03S080	●	25.5	1.004	41.5	1.634	51	2.008	95.5	3.760	94	3.701	1.5	.059	8	.315	1
						5	DVAS0800X05S080	●	41.5	1.634	65.5	2.579	51	2.008	119.5	4.705	118	4.646	1.5	.059	8	.315	1
						8	DVAS0800X08S080	●	65.5	2.579	89.5	3.524	51	2.008	143.5	5.650	142	5.591	1.5	.059	8	.315	1
8.100	.3189					3	DVAS0810X03S090	★	25.8	1.016	44.5	1.752	54	2.126	101.5	3.996	100	3.937	1.5	.059	9	.354	1
						3	DVAS0810X03S100	●	25.8	1.016	44.5	1.752	53	2.087	101.5	3.996	100	3.937	1.5	.059	10	.394	1
						5	DVAS0810X05S090	★	42.0	1.654	69.5	2.736	56	2.205	128.5	5.059	127	5.000	1.5	.059	9	.354	1
						5	DVAS0810X05S100	●	42.0	1.654	69.5	2.736	55	2.165	128.5	5.059	127	5.000	1.5	.059	10	.394	1
						8	DVAS0810X08S090	★	66.3	2.610	95.5	3.760	57	2.244	155.5	6.122	154	6.063	1.5	.059	9	.354	1
						8	DVAS0810X08S100	●	66.3	2.610	95.5	3.760	56	2.205	155.5	6.122	154	6.063	1.5	.059	10	.394	1
8.200	.3228		P			3	DVAS0820X03S090	★	26.1	1.028	44.5	1.752	54	2.126	101.5	3.996	100	3.937	1.5	.059	9	.354	1
						3	DVAS0820X03S100	●	26.1	1.028	44.5	1.752	53	2.087	101.5	3.996	100	3.937	1.5	.059	10	.394	1
						5	DVAS0820X05S090	★	42.5	1.673	69.5	2.736	56	2.205	128.5	5.059	127	5.000	1.5	.059	9	.354	1
						5	DVAS0820X05S100	●	42.5	1.673	69.5	2.736	55	2.165	128.5	5.059	127	5.000	1.5	.059	10	.394	1
						8	DVAS0820X08S090	★	67.1	2.642	95.5	3.760	57	2.244	155.5	6.122	154	6.063	1.5	.059	9	.354	1
						8	DVAS0820X08S100	●	67.1	2.642	95.5	3.760	56	2.205	155.5	6.122	154	6.063	1.5	.059	10	.394	1
8.300	.3268					3	DVAS0830X03S090	★	26.4	1.039	44.5	1.752	54	2.126	101.5	3.996	100	3.937	1.5	.059	9	.354	1
						3	DVAS0830X03S100	●	26.4	1.039	44.5	1.752	53	2.087	101.5	3.996	100	3.937	1.5	.059	10	.394	1
						5	DVAS0830X05S090	★	43.0	1.693	69.5	2.736	56	2.205	128.5	5.059	127	5.000	1.5	.059	9	.354	1
						5	DVAS0830X05S100	●	43.0	1.693	69.5	2.736	55	2.165	128.5	5.059	127	5.000	1.5	.059	10	.394	1
						8	DVAS0830X08S090	★	67.9	2.673	95.5	3.760	57	2.244	155.5	6.122	154	6.063	1.5	.059	9	.354	1
						8	DVAS0830X08S100	●	67.9	2.673	95.5	3.760	56	2.205	155.5	6.122	154	6.063	1.5	.059	10	.394	1
8.335	.3282	21/64				3	DVAS0833X03S100	●	26.5	1.043	44.5	1.752	53	2.087	101.5	3.996	100	3.937	1.5	.059	10	.394	1
						5	DVAS0833X05S100	●	43.2	1.701	69.5	2.736	55	2.165	128.5	5.059	127	5.000	1.5	.059	10	.394	1
						8	DVAS0833X08S100	●	68.2	2.685	95.5	3.760	56	2.205	155.5	6.122	154	6.063	1.5	.059	10	.394	1

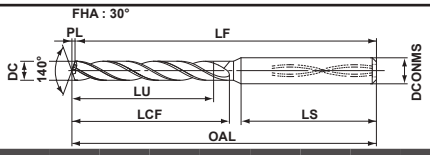
* Mark signifies the pilot hole of the metric roll tap.

● : USA Stock ★ : Stocked in Japan

Type1



Type2



DC						L/D	Order Number	Stock	LU		LCF		LS		OAL		LF		PL		DCONMS		Type
Metric (mm)	Decimal (in)	Fraction (in)	Wire / Letter	Thread Size	Tap Pilot Hole			DP1120	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	
8.400	.3307					3	DVAS0840X03S090	★	26.7	1.051	44.5	1.752	54	2.126	101.5	3.996	100	3.937	1.5	.059	9	.354	1
						3	DVAS0840X03S100	●	26.7	1.051	44.5	1.752	53	2.087	101.5	3.996	100	3.937	1.5	.059	10	.394	1
						5	DVAS0840X05S090	★	43.5	1.713	69.5	2.736	56	2.205	128.5	5.059	127	5.000	1.5	.059	9	.354	1
						5	DVAS0840X05S100	●	43.5	1.713	69.5	2.736	55	2.165	128.5	5.059	127	5.000	1.5	.059	10	.394	1
						8	DVAS0840X08S090	★	68.7	2.705	95.5	3.760	57	2.244	155.5	6.122	154	6.063	1.5	.059	9	.354	1
						8	DVAS0840X08S100	●	68.7	2.705	95.5	3.760	56	2.205	155.5	6.122	154	6.063	1.5	.059	10	.394	1
8.433	.3320		Q	3/8-24		3	DVAS0843X03S100	●	26.8	1.055	44.5	1.752	53	2.087	101.5	3.996	100	3.937	1.5	.059	10	.394	1
						5	DVAS0843X05S100	●	43.7	1.720	69.5	2.736	55	2.165	128.5	5.059	127	5.000	1.5	.059	10	.394	1
						8	DVAS0843X08S100	●	69.0	2.717	95.5	3.760	56	2.205	155.5	6.122	154	6.063	1.5	.059	10	.394	1
8.500	.3346			M10x1.5		3	DVAS0850X03S090	★	27.0	1.063	44.5	1.752	54	2.126	101.5	3.996	100	3.937	1.5	.059	9	.354	1
						3	DVAS0850X03S100	●	27.0	1.063	44.5	1.752	53	2.087	101.5	3.996	100	3.937	1.5	.059	10	.394	1
						5	DVAS0850X05S090	★	44.0	1.732	69.5	2.736	56	2.205	128.5	5.059	127	5.000	1.5	.059	9	.354	1
						5	DVAS0850X05S100	●	44.0	1.732	69.5	2.736	55	2.165	128.5	5.059	127	5.000	1.5	.059	10	.394	1
						8	DVAS0850X08S090	★	69.5	2.736	95.5	3.760	57	2.244	155.5	6.122	154	6.063	1.5	.059	9	.354	1
						8	DVAS0850X08S100	●	69.5	2.736	95.5	3.760	56	2.205	155.5	6.122	154	6.063	1.5	.059	10	.394	1
8.600	.3386		R			3	DVAS0860X03S090	★	27.4	1.079	46.6	1.835	52	2.047	101.6	4.000	100	3.937	1.6	.063	9	.354	1
						3	DVAS0860X03S100	●	27.4	1.079	46.6	1.835	51	2.008	101.6	4.000	100	3.937	1.6	.063	10	.394	1
						5	DVAS0860X05S090	★	44.6	1.756	73.6	2.898	52	2.047	128.6	5.063	127	5.000	1.6	.063	9	.354	1
						5	DVAS0860X05S100	●	44.6	1.756	73.6	2.898	51	2.008	128.6	5.063	127	5.000	1.6	.063	10	.394	1
						8	DVAS0860X08S090	★	70.4	2.772	100.6	3.961	52	2.047	155.6	6.126	154	6.063	1.6	.063	9	.354	1
						8	DVAS0860X08S100	●	70.4	2.772	100.6	3.961	51	2.008	155.6	6.126	154	6.063	1.6	.063	10	.394	1
8.700	.3425			M10x1.25		3	DVAS0870X03S090	★	27.7	1.091	46.6	1.835	52	2.047	101.6	4.000	100	3.937	1.6	.063	9	.354	1
						3	DVAS0870X03S100	●	27.7	1.091	46.6	1.835	51	2.008	101.6	4.000	100	3.937	1.6	.063	10	.394	1
						5	DVAS0870X05S090	★	45.1	1.776	73.6	2.898	52	2.047	128.6	5.063	127	5.000	1.6	.063	9	.354	1
						5	DVAS0870X05S100	●	45.1	1.776	73.6	2.898	51	2.008	128.6	5.063	127	5.000	1.6	.063	10	.394	1
						8	DVAS0870X08S090	★	71.2	2.803	100.6	3.961	52	2.047	155.6	6.126	154	6.063	1.6	.063	9	.354	1
						8	DVAS0870X08S100	●	71.2	2.803	100.6	3.961	51	2.008	155.6	6.126	154	6.063	1.6	.063	10	.394	1
8.732	.3438	11/32				3	DVAS0873X03S100	●	27.8	1.094	46.6	1.835	51	2.008	101.6	4.000	100	3.937	1.6	.063	10	.394	1
						5	DVAS0873X05S100	●	45.3	1.783	73.6	2.898	51	2.008	128.6	5.063	127	5.000	1.6	.063	10	.394	1
						8	DVAS0873X08S100	●	71.4	2.811	100.6	3.961	51	2.008	155.6	6.126	154	6.063	1.6	.063	10	.394	1
8.800	.3465					3	DVAS0880X03S090	★	28.0	1.102	46.6	1.835	52	2.047	101.6	4.000	100	3.937	1.6	.063	9	.354	1
						3	DVAS0880X03S100	●	28.0	1.102	46.6	1.835	51	2.008	101.6	4.000	100	3.937	1.6	.063	10	.394	1
						5	DVAS0880X05S090	★	45.6	1.795	73.6	2.898	52	2.047	128.6	5.063	127	5.000	1.6	.063	9	.354	1
						5	DVAS0880X05S100	●	45.6	1.795	73.6	2.898	51	2.008	128.6	5.063	127	5.000	1.6	.063	10	.394	1
						8	DVAS0880X08S090	★	72.0	2.835	100.6	3.961	52	2.047	155.6	6.126	154	6.063	1.6	.063	9	.354	1
						8	DVAS0880X08S100	●	72.0	2.835	100.6	3.961	51	2.008	155.6	6.126	154	6.063	1.6	.063	10	.394	1
8.900	.3504					3	DVAS0890X03S090	★	28.3	1.114	46.6	1.835	52	2.047	101.6	4.000	100	3.937	1.6	.063	9	.354	1
						3	DVAS0890X03S100	●	28.3	1.114	46.6	1.835	51	2.008	101.6	4.000	100	3.937	1.6	.063	10	.394	1
						5	DVAS0890X05S090	★	46.1	1.815	73.6	2.898	52	2.047	128.6	5.063	127	5.000	1.6	.063	9	.354	1
						5	DVAS0890X05S100	●	46.1	1.815	73.6	2.898	51	2.008	128.6	5.063	127	5.000	1.6	.063	10	.394	1
						8	DVAS0890X08S090	★	72.8	2.866	100.6	3.961	52	2.047	155.6	6.126	154	6.063	1.6	.063	9	.354	1
						8	DVAS0890X08S100	●	72.8	2.866	100.6	3.961	51	2.008	155.6	6.126	154	6.063	1.6	.063	10	.394	1
9.000	.3543					3	DVAS0900X03S090	★	28.6	1.126	46.6	1.835	52	2.047	101.6	4.000	100	3.937	1.6	.063	9	.354	1
						3	DVAS0900X03S100	●	28.6	1.126	46.6	1.835	52	2.047	101.6	4.000	100	3.937	1.6	.063	10	.394	1
						5	DVAS0900X05S090	★	46.6	1.835	73.6	2.898	52	2.047	128.6	5.063	127	5.000	1.6	.063	9	.354	1
						5	DVAS0900X05S100	●	46.6	1.835	73.6	2.898	52	2.047	128.6	5.063	127	5.000	1.6	.063	10	.394	1
						8	DVAS0900X08S090	★	73.6	2.898	100.6	3.961	52	2.047	155.6	6.126	154	6.063	1.6	.063	9	.354	1
						8	DVAS0900X08S100	●	73.6	2.898	100.6	3.961	52	2.047	155.6	6.126	154	6.063	1.6	.063	10	.394	1

DC = Cutting Diameter
LU = Usable Length
LCF = Length Chip Flute
LS = Shank Length
OAL = Overall Length
LF = Functional Length
PL = Point Length
DCONMS = Connection Diameter

DVAS NEW

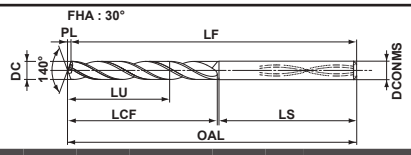
TRISTAR Drills

DC						L/D	Order Number	Stock	LU		LCF		LS		OAL		LF		PL		DCONMS		Type
Metric (mm)	Decimal (in)	Fraction (in)	Wire / Letter	Thread Size	Tap Pilot Hole			DP1120	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	
9.100	.3583		T			3	DVAS0910X03S100	●	29.0	1.142	49.7	1.957	55	2.165	107.7	4.240	106	4.173	1.7	.067	10	.394	1
						5	DVAS0910X05S100	●	47.2	1.858	77.7	3.059	57	2.244	137.7	5.421	136	5.354	1.7	.067	10	.394	1
						8	DVAS0910X08S100	●	74.5	2.933	106.7	4.201	58	2.283	167.7	6.602	166	6.535	1.7	.067	10	.394	1
9.129	.3594	23/64				3	DVAS0913X03S100	●	29.1	1.146	49.7	1.957	55	2.165	107.7	4.240	106	4.173	1.7	.067	10	.394	1
						5	DVAS0913X05S100	●	47.3	1.862	77.7	3.059	57	2.244	137.7	5.421	136	5.354	1.7	.067	10	.394	1
						8	DVAS0913X08S100	●	74.7	2.941	106.7	4.201	58	2.283	167.7	6.602	166	6.535	1.7	.067	10	.394	1
9.200	.3622					3	DVAS0920X03S100	●	29.3	1.154	49.7	1.957	55	2.165	107.7	4.240	106	4.173	1.7	.067	10	.394	1
						5	DVAS0920X05S100	●	47.7	1.878	77.7	3.059	57	2.244	137.7	5.421	136	5.354	1.7	.067	10	.394	1
						8	DVAS0920X08S100	●	75.3	2.965	106.7	4.201	58	2.283	167.7	6.602	166	6.535	1.7	.067	10	.394	1
9.240	.3638				*	5	DVAS0924X05S100	★	47.9	1.886	77.7	3.059	57	2.244	137.7	5.421	136	5.354	1.7	.067	10	.394	1
9.260	.3646				*	5	DVAS0926X05S100	★	48.0	1.890	77.7	3.059	57	2.244	137.7	5.421	136	5.354	1.7	.067	10	.394	1
9.300	.3661					3	DVAS0930X03S100	●	29.6	1.165	49.7	1.957	55	2.165	107.7	4.240	106	4.173	1.7	.067	10	.394	1
						5	DVAS0930X05S100	●	48.2	1.898	77.7	3.059	57	2.244	137.7	5.421	136	5.354	1.7	.067	10	.394	1
						8	DVAS0930X08S100	●	76.1	2.996	106.7	4.201	58	2.283	167.7	6.602	166	6.535	1.7	.067	10	.394	1
9.348	.3680		U	7/16-14		3	DVAS0935X03S100	●	29.7	1.169	49.7	1.957	55	2.165	107.7	4.240	106	4.173	1.7	.067	10	.394	1
						5	DVAS0935X05S100	●	48.4	1.906	77.7	3.059	57	2.244	137.7	5.421	136	5.354	1.7	.067	10	.394	1
						8	DVAS0935X08S100	●	76.5	3.012	106.7	4.201	58	2.283	167.7	6.602	166	6.535	1.7	.067	10	.394	1
9.360	.3685				*	5	DVAS0936X05S100	★	48.5	1.909	77.7	3.059	57	2.244	137.7	5.421	136	5.354	1.7	.067	10	.394	1
9.380	.3693				*	5	DVAS0938X05S100	★	48.6	1.913	77.7	3.059	57	2.244	137.7	5.421	136	5.354	1.7	.067	10	.394	1
9.400	.3701					3	DVAS0940X03S100	●	29.9	1.177	49.7	1.957	55	2.165	107.7	4.240	106	4.173	1.7	.067	10	.394	1
						5	DVAS0940X05S100	●	48.7	1.917	77.7	3.059	57	2.244	137.7	5.421	136	5.354	1.7	.067	10	.394	1
						8	DVAS0940X08S100	●	76.9	3.028	106.7	4.201	58	2.283	167.7	6.602	166	6.535	1.7	.067	10	.394	1
9.500	.3740					3	DVAS0950X03S100	●	30.2	1.189	49.7	1.957	55	2.165	107.7	4.240	106	4.173	1.7	.067	10	.394	1
						5	DVAS0950X05S100	●	49.2	1.937	77.7	3.059	57	2.244	137.7	5.421	136	5.354	1.7	.067	10	.394	1
						8	DVAS0950X08S100	●	77.7	3.059	106.7	4.201	58	2.283	167.7	6.602	166	6.535	1.7	.067	10	.394	1
9.520	.3748				*	5	DVAS0952X05S100	★	49.3	1.941	81.7	3.217	53	2.087	137.7	5.421	136	5.354	1.7	.067	10	.394	1
9.525	.3750	3/8				3	DVAS0953X03S100	●	30.3	1.193	51.7	2.035	53	2.087	107.7	4.240	106	4.173	1.7	.067	10	.394	1
						5	DVAS0953X05S100	●	49.3	1.941	81.7	3.217	53	2.087	137.7	5.421	136	5.354	1.7	.067	10	.394	1
						8	DVAS0953X08S100	●	77.9	3.067	111.7	4.398	53	2.087	167.7	6.602	166	6.535	1.7	.067	10	.394	1
9.540	.3756				*	5	DVAS0954X05S100	★	49.4	1.945	81.7	3.217	53	2.087	137.7	5.421	136	5.354	1.7	.067	10	.394	1
9.600	.3780					3	DVAS0960X03S100	●	30.5	1.201	51.7	2.035	53	2.087	107.7	4.240	106	4.173	1.7	.067	10	.394	1
						5	DVAS0960X05S100	●	49.7	1.957	81.7	3.217	53	2.087	137.7	5.421	136	5.354	1.7	.067	10	.394	1
						8	DVAS0960X08S100	●	78.5	3.091	111.7	4.398	53	2.087	167.7	6.602	166	6.535	1.7	.067	10	.394	1
9.700	.3819		Tube Sheet			3	DVAS0970X03S100	●	30.9	1.217	51.8	2.039	53	2.087	107.8	4.244	106	4.173	1.8	.071	10	.394	1
						5	DVAS0970X05S100	●	50.3	1.980	81.8	3.220	53	2.087	137.8	5.425	136	5.354	1.8	.071	10	.394	1
						8	DVAS0970X08S100	●	79.4	3.126	111.8	4.402	53	2.087	167.8	6.606	166	6.535	1.8	.071	10	.394	1
9.800	.3858		W			3	DVAS0980X03S100	●	31.2	1.228	51.8	2.039	53	2.087	107.8	4.244	106	4.173	1.8	.071	10	.394	1
						5	DVAS0980X05S100	●	50.8	2.000	81.8	3.220	53	2.087	137.8	5.425	136	5.354	1.8	.071	10	.394	1
						8	DVAS0980X08S100	●	80.2	3.157	111.8	4.402	53	2.087	167.8	6.606	166	6.535	1.8	.071	10	.394	1
9.900	.3898					3	DVAS0990X03S100	●	31.5	1.240	51.8	2.039	53	2.087	107.8	4.244	106	4.173	1.8	.071	10	.394	1
						5	DVAS0990X05S100	●	51.3	2.020	81.8	3.220	53	2.087	137.8	5.425	136	5.354	1.8	.071	10	.394	1
						8	DVAS0990X08S100	●	81.0	3.189	111.8	4.402	53	2.087	167.8	6.606	166	6.535	1.8	.071	10	.394	1
9.922	.3907	25/64		7/16-20		3	DVAS0992X03S100	●	31.6	1.244	51.8	2.039	53	2.087	107.8	4.244	106	4.173	1.8	.071	10	.394	1
						5	DVAS0992X05S100	●	51.4	2.024	81.8	3.220	53	2.087	137.8	5.425	136	5.354	1.8	.071	10	.394	1
						8	DVAS0992X08S100	●	81.2	3.197	111.8	4.402	53	2.087	167.8	6.606	166	6.535	1.8	.071	10	.394	1
10.000	.3937					3	DVAS1000X03S100	●	31.8	1.252	51.8	2.039	53	2.087	107.8	4.244	106	4.173	1.8	.071	10	.394	1
						5	DVAS1000X05S100	●	51.8	2.039	81.8	3.220	53	2.087	137.8	5.425	136	5.354	1.8	.071	10	.394	1
						8	DVAS1000X08S100	●	81.8	3.220	111.8	4.402	53	2.087	167.8	6.606	166	6.535	1.8	.071	10	.394	1

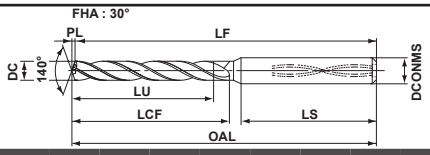
* Mark signifies the pilot hole of the metric roll tap.

● : USA Stock ★ : Stocked in Japan

Type1



Type2



DC						L/D	Order Number	Stock	LU		LCF		LS		OAL		LF		PL		DCONMS		Type
Metric (mm)	Decimal (in)	Fraction (in)	Wire / Letter	Thread Size	Tap Pilot Hole			DP1120	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	
10.100	.3976					3	DVAS1010X03S110	★	32.1	1.264	54.8	2.157	60	2.362	117.8	4.638	116	4.567	1.8	.071	11	.433	1
						3	DVAS1010X03S120	●	32.1	1.264	54.8	2.157	59	2.323	117.8	4.638	116	4.567	1.8	.071	12	.472	1
						5	DVAS1010X05S110	★	52.3	2.059	85.8	3.378	62	2.441	150.8	5.937	149	5.866	1.8	.071	11	.433	1
						5	DVAS1010X05S120	●	52.3	2.059	85.8	3.378	61	2.402	150.8	5.937	149	5.866	1.8	.071	12	.472	1
						8	DVAS1010X08S110	★	82.6	3.252	117.8	4.638	63	2.480	183.8	7.236	182	7.165	1.8	.071	11	.433	1
						8	DVAS1010X08S120	●	82.6	3.252	117.8	4.638	62	2.441	183.8	7.236	182	7.165	1.8	.071	12	.472	1
10.200	.4016			M12x1.75		3	DVAS1020X03S110	★	32.5	1.280	54.9	2.161	60	2.362	117.9	4.642	116	4.567	1.9	.075	11	.433	1
						3	DVAS1020X03S120	●	32.5	1.280	54.9	2.161	59	2.323	117.9	4.642	116	4.567	1.9	.075	12	.472	1
						5	DVAS1020X05S110	★	52.9	2.083	85.9	3.382	62	2.441	150.9	5.941	149	5.866	1.9	.075	11	.433	1
						5	DVAS1020X05S120	●	52.9	2.083	85.9	3.382	61	2.402	150.9	5.941	149	5.866	1.9	.075	12	.472	1
						8	DVAS1020X08S110	★	83.5	3.287	117.9	4.642	63	2.480	183.9	7.240	182	7.165	1.9	.075	11	.433	1
						8	DVAS1020X08S120	●	83.5	3.287	117.9	4.642	62	2.441	183.9	7.240	182	7.165	1.9	.075	12	.472	1
10.300	.4055					3	DVAS1030X03S110	★	32.8	1.291	54.9	2.161	60	2.362	117.9	4.642	116	4.567	1.9	.075	11	.433	1
						3	DVAS1030X03S120	●	32.8	1.291	54.9	2.161	59	2.323	117.9	4.642	116	4.567	1.9	.075	12	.472	1
						5	DVAS1030X05S110	★	53.4	2.102	85.9	3.382	62	2.441	150.9	5.941	149	5.866	1.9	.075	11	.433	1
						5	DVAS1030X05S120	●	53.4	2.102	85.9	3.382	61	2.402	150.9	5.941	149	5.866	1.9	.075	12	.472	1
						8	DVAS1030X08S110	★	84.3	3.319	117.9	4.642	63	2.480	183.9	7.240	182	7.165	1.9	.075	11	.433	1
						8	DVAS1030X08S120	●	84.3	3.319	117.9	4.642	62	2.441	183.9	7.240	182	7.165	1.9	.075	12	.472	1
10.319	.4063	13/32				3	DVAS1032X03S120	●	32.9	1.295	54.9	2.161	59	2.323	117.9	4.642	116	4.567	1.9	.075	12	.472	1
						5	DVAS1032X05S120	●	53.5	2.106	85.9	3.382	61	2.402	150.9	5.941	149	5.866	1.9	.075	12	.472	1
						8	DVAS1032X08S120	●	84.5	3.327	117.9	4.642	62	2.441	183.9	7.240	182	7.165	1.9	.075	12	.472	1
10.400	.4094					3	DVAS1040X03S110	★	33.1	1.303	54.9	2.161	60	2.362	117.9	4.642	116	4.567	1.9	.075	11	.433	1
						3	DVAS1040X03S120	●	33.1	1.303	54.9	2.161	59	2.323	117.9	4.642	116	4.567	1.9	.075	12	.472	1
						5	DVAS1040X05S110	★	53.9	2.122	85.9	3.382	62	2.441	150.9	5.941	149	5.866	1.9	.075	11	.433	1
						5	DVAS1040X05S120	●	53.9	2.122	85.9	3.382	61	2.402	150.9	5.941	149	5.866	1.9	.075	12	.472	1
						8	DVAS1040X08S110	★	85.1	3.350	117.9	4.642	63	2.480	183.9	7.240	182	7.165	1.9	.075	11	.433	1
						8	DVAS1040X08S120	●	85.1	3.350	117.9	4.642	62	2.441	183.9	7.240	182	7.165	1.9	.075	12	.472	1
10.500	.4134		Z			3	DVAS1050X03S110	★	33.4	1.315	54.9	2.161	60	2.362	117.9	4.642	116	4.567	1.9	.075	11	.433	1
						3	DVAS1050X03S120	●	33.4	1.315	54.9	2.161	59	2.323	117.9	4.642	116	4.567	1.9	.075	12	.472	1
						5	DVAS1050X05S110	★	54.4	2.142	85.9	3.382	62	2.441	150.9	5.941	149	5.866	1.9	.075	11	.433	1
						5	DVAS1050X05S120	●	54.4	2.142	85.9	3.382	61	2.402	150.9	5.941	149	5.866	1.9	.075	12	.472	1
						8	DVAS1050X08S110	★	85.9	3.382	117.9	4.642	63	2.480	183.9	7.240	182	7.165	1.9	.075	11	.433	1
						8	DVAS1050X08S120	●	85.9	3.382	117.9	4.642	62	2.441	183.9	7.240	182	7.165	1.9	.075	12	.472	1
10.600	.4173					3	DVAS1060X03S110	★	33.7	1.327	56.9	2.240	58	2.283	117.9	4.642	116	4.567	1.9	.075	11	.433	1
						3	DVAS1060X03S120	●	33.7	1.327	56.9	2.240	57	2.244	117.9	4.642	116	4.567	1.9	.075	12	.472	1
						5	DVAS1060X05S110	★	54.9	2.161	89.9	3.539	58	2.283	150.9	5.941	149	5.866	1.9	.075	11	.433	1
						5	DVAS1060X05S120	●	54.9	2.161	89.9	3.539	57	2.244	150.9	5.941	149	5.866	1.9	.075	12	.472	1
						8	DVAS1060X08S110	★	86.7	3.413	122.9	4.839	58	2.283	183.9	7.240	182	7.165	1.9	.075	11	.433	1
						8	DVAS1060X08S120	●	86.7	3.413	122.9	4.839	57	2.244	183.9	7.240	182	7.165	1.9	.075	12	.472	1
10.700	.4213					3	DVAS1070X03S110	★	34.0	1.339	56.9	2.240	58	2.283	117.9	4.642	116	4.567	1.9	.075	11	.433	1
						3	DVAS1070X03S120	●	34.0	1.339	56.9	2.240	57	2.244	117.9	4.642	116	4.567	1.9	.075	12	.472	1
						5	DVAS1070X05S110	★	55.4	2.181	89.9	3.539	58	2.283	150.9	5.941	149	5.866	1.9	.075	11	.433	1
						5	DVAS1070X05S120	●	55.4	2.181	89.9	3.539	57	2.244	150.9	5.941	149	5.866	1.9	.075	12	.472	1
						8	DVAS1070X08S110	★	87.5	3.445	122.9	4.839	58	2.283	183.9	7.240	182	7.165	1.9	.075	11	.433	1
						8	DVAS1070X08S120	●	87.5	3.445	122.9	4.839	57	2.244	183.9	7.240	182	7.165	1.9	.075	12	.472	1
10.716	.4219	27/64		1/2-13		3	DVAS1072X03S120	●	34.1	1.343	57.0	2.244	57	2.244	118.0	4.646	116	4.567	2.0	.079	12	.472	1
						5	DVAS1072X05S120	●	55.6	2.189	90.0	3.543	57	2.244	151.0	5.945	149	5.866	2.0	.079	12	.472	1
						8	DVAS1072X08S120	●	87.7	3.453	123.0	4.843	57	2.244	184.0	7.244	182	7.165	2.0	.079	12	.472	1

DC = Cutting Diameter
LU = Usable Length
LCF = Length Chip Flute
LS = Shank Length
OAL = Overall Length
LF = Functional Length
PL = Point Length
DCONMS = Connection Diameter

DVAS NEW

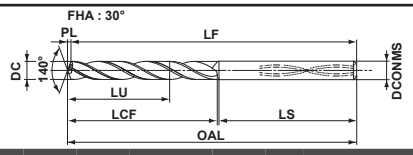
TRISTAR Drills

DC						L/D	Order Number	Stock	LU		LCF		LS		OAL		LF		PL		DCONMS		Type
Metric (mm)	Decimal (in)	Fraction (in)	Wire / Letter	Thread Size	Tap Pilot Hole			DP1120	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	
10.800	.4252			M12x1.25		3	DVAS1080X03S110	★	34.4	1.354	57.0	2.244	58	2.283	118.0	4.646	116	4.567	2.0	.079	11	.433	1
						3	DVAS1080X03S120	●	34.4	1.354	57.0	2.244	57	2.244	118.0	4.646	116	4.567	2.0	.079	12	.472	1
						5	DVAS1080X05S110	★	56.0	2.205	90.0	3.543	58	2.283	151.0	5.945	149	5.866	2.0	.079	11	.433	1
						5	DVAS1080X05S120	●	56.0	2.205	90.0	3.543	57	2.244	151.0	5.945	149	5.866	2.0	.079	12	.472	1
						8	DVAS1080X08S110	★	88.4	3.480	123.0	4.843	58	2.283	184.0	7.244	182	7.165	2.0	.079	11	.433	1
						8	DVAS1080X08S120	●	88.4	3.480	123.0	4.843	57	2.244	184.0	7.244	182	7.165	2.0	.079	12	.472	1
10.900	.4291					3	DVAS1090X03S110	★	34.7	1.366	57.0	2.244	58	2.283	118.0	4.646	116	4.567	2.0	.079	11	.433	1
						3	DVAS1090X03S120	●	34.7	1.366	57.0	2.244	57	2.244	118.0	4.646	116	4.567	2.0	.079	12	.472	1
						5	DVAS1090X05S110	★	56.5	2.224	90.0	3.543	58	2.283	151.0	5.945	149	5.866	2.0	.079	11	.433	1
						5	DVAS1090X05S120	●	56.5	2.224	90.0	3.543	57	2.244	151.0	5.945	149	5.866	2.0	.079	12	.472	1
						8	DVAS1090X08S110	★	89.2	3.512	123.0	4.843	58	2.283	184.0	7.244	182	7.165	2.0	.079	11	.433	1
						8	DVAS1090X08S120	●	89.2	3.512	123.0	4.843	57	2.244	184.0	7.244	182	7.165	2.0	.079	12	.472	1
11.000	.4331					3	DVAS1100X03S110	★	35.0	1.378	57.0	2.244	58	2.283	118.0	4.646	116	4.567	2.0	.079	11	.433	1
						3	DVAS1100X03S120	●	35.0	1.378	57.0	2.244	58	2.283	118.0	4.646	116	4.567	2.0	.079	12	.472	1
						5	DVAS1100X05S110	★	57.0	2.244	90.0	3.543	58	2.283	151.0	5.945	149	5.866	2.0	.079	11	.433	1
						5	DVAS1100X05S120	●	57.0	2.244	90.0	3.543	58	2.283	151.0	5.945	149	5.866	2.0	.079	12	.472	1
						8	DVAS1100X08S110	★	90.0	3.543	123.0	4.843	58	2.283	184.0	7.244	182	7.165	2.0	.079	11	.433	1
						8	DVAS1100X08S120	●	90.0	3.543	123.0	4.843	58	2.283	184.0	7.244	182	7.165	2.0	.079	12	.472	1
11.100	.4370					3	DVAS1110X03S120	●	35.3	1.390	60.0	2.362	61	2.402	124.0	4.882	122	4.803	2.0	.079	12	.472	1
						5	DVAS1110X05S120	●	57.5	2.264	94.0	3.701	63	2.480	160.0	6.299	158	6.220	2.0	.079	12	.472	1
						8	DVAS1110X08S120	●	90.8	3.575	129.0	5.079	64	2.520	196.0	7.717	194	7.638	2.0	.079	12	.472	1
11.113	.4375	7/16				3	DVAS1111X03S120	●	35.3	1.390	60.0	2.362	61	2.402	124.0	4.882	122	4.803	2.0	.079	12	.472	1
						5	DVAS1111X05S120	●	57.6	2.268	94.0	3.701	63	2.480	160.0	6.299	158	6.220	2.0	.079	12	.472	1
						8	DVAS1111X08S120	●	90.9	3.579	129.0	5.079	64	2.520	196.0	7.717	194	7.638	2.0	.079	12	.472	1
11.200	.4409					3	DVAS1120X03S120	●	35.6	1.402	60.0	2.362	61	2.402	124.0	4.882	122	4.803	2.0	.079	12	.472	1
						5	DVAS1120X05S120	●	58.0	2.283	94.0	3.701	63	2.480	160.0	6.299	158	6.220	2.0	.079	12	.472	1
						8	DVAS1120X08S120	●	91.6	3.606	129.0	5.079	64	2.520	196.0	7.717	194	7.638	2.0	.079	12	.472	1
11.220	.4418				*	5	DVAS1122X05S120	★	58.1	2.287	94.0	3.701	63	2.480	160.0	6.299	158	6.220	2.0	.079	12	.472	1
11.240	.4426				*	5	DVAS1124X05S120	★	58.2	2.291	94.0	3.701	63	2.480	160.0	6.299	158	6.220	2.0	.079	12	.472	1
11.300	.4449					3	DVAS1130X03S120	●	36.0	1.417	60.1	2.366	61	2.402	124.1	4.886	122	4.803	2.1	.083	12	.472	1
						5	DVAS1130X05S120	●	58.6	2.307	94.1	3.705	63	2.480	160.1	6.303	158	6.220	2.1	.083	12	.472	1
						8	DVAS1130X08S120	●	92.5	3.642	129.1	5.083	64	2.520	196.1	7.720	194	7.638	2.1	.083	12	.472	1
11.360	.4473				*	5	DVAS1136X05S120	★	59.1	2.327	94.1	3.705	63	2.480	160.1	6.303	158	6.220	2.1	.083	12	.472	1
11.380	.4481				*	5	DVAS1138X05S120	★	58.9	2.319	94.1	3.705	63	2.480	160.1	6.303	158	6.220	2.1	.083	12	.472	1
11.400	.4488					3	DVAS1140X03S120	●	36.3	1.429	60.1	2.366	61	2.402	124.1	4.886	122	4.803	2.1	.083	12	.472	1
						5	DVAS1140X05S120	●	59.0	2.323	94.1	3.705	63	2.480	160.1	6.303	158	6.220	2.1	.083	12	.472	1
						8	DVAS1140X08S120	●	93.3	3.673	129.1	5.083	64	2.520	196.1	7.720	194	7.638	2.1	.083	12	.472	1
11.500	.4528					3	DVAS1150X03S120	●	36.6	1.441	60.1	2.366	61	2.402	124.1	4.886	122	4.803	2.1	.083	12	.472	1
						5	DVAS1150X05S120	●	59.6	2.346	94.1	3.705	63	2.480	160.1	6.303	158	6.220	2.1	.083	12	.472	1
						8	DVAS1150X08S120	●	94.1	3.705	129.1	5.083	64	2.520	196.1	7.720	194	7.638	2.1	.083	12	.472	1
11.510	.4532	29/64		1/2-20		3	DVAS1151X03S120	●	36.6	1.441	62.1	2.445	59	2.323	124.1	4.886	122	4.803	2.1	.083	12	.472	1
						5	DVAS1151X05S120	●	59.6	2.346	98.1	3.862	59	2.323	160.1	6.303	158	6.220	2.1	.083	12	.472	1
						8	DVAS1151X08S120	●	94.2	3.709	134.1	5.280	59	2.323	196.1	7.720	194	7.638	2.1	.083	12	.472	1
11.600	.4567					3	DVAS1160X03S120	●	36.9	1.453	62.1	2.445	59	2.323	124.1	4.886	122	4.803	2.1	.083	12	.472	1
						5	DVAS1160X05S120	●	60.1	2.366	98.1	3.862	59	2.323	160.1	6.303	158	6.220	2.1	.083	12	.472	1
						8	DVAS1160X08S120	●	94.9	3.736	134.1	5.280	59	2.323	196.1	7.720	194	7.638	2.1	.083	12	.472	1
11.700	.4606					3	DVAS1170X03S120	●	37.2	1.465	62.1	2.445	59	2.323	124.1	4.886	122	4.803	2.1	.083	12	.472	1
						5	DVAS1170X05S120	●	60.6	2.386	98.1	3.862	59	2.323	160.1	6.303	158	6.220	2.1	.083	12	.472	1
						8	DVAS1170X08S120	●	95.7	3.768	134.1	5.280	59	2.323	196.1	7.720	194	7.638	2.1	.083	12	.472	1

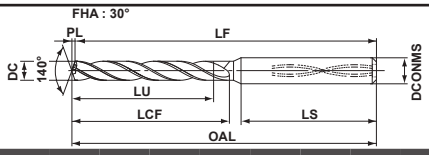
* Mark signifies the pilot hole of the metric roll tap.

● : USA Stock ★ : Stocked in Japan

Type1



Type2



DC						L/D	Order Number	Stock	LU		LCF		LS		OAL		LF		PL		DCONMS		Type
Metric (mm)	Decimal (in)	Fraction (in)	Wire / Letter	Thread Size	Tap Pilot Hole			DP1120	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	
11.800	.4646					3	DVAS1180X03S120	●	37.5	1.476	62.1	2.445	59	2.323	124.1	4.886	122	4.803	2.1	.083	12	.472	1
						5	DVAS1180X05S120	●	61.1	2.406	98.1	3.862	59	2.323	160.1	6.303	158	6.220	2.1	.083	12	.472	1
						8	DVAS1180X08S120	●	96.5	3.799	134.1	5.280	59	2.323	196.1	7.720	194	7.638	2.1	.083	12	.472	1
11.900	.4685					3	DVAS1190X03S120	●	37.9	1.492	62.2	2.449	59	2.323	124.2	4.890	122	4.803	2.2	.087	12	.472	1
						5	DVAS1190X05S120	●	61.7	2.429	98.2	3.866	59	2.323	160.2	6.307	158	6.220	2.2	.087	12	.472	1
						8	DVAS1190X08S120	●	97.4	3.835	134.2	5.283	59	2.323	196.2	7.724	194	7.638	2.2	.087	12	.472	1
12.000	.4724			M14x2.0		3	DVAS1200X03S120	●	38.2	1.504	62.2	2.449	59	2.323	124.2	4.890	122	4.803	2.2	.087	12	.472	1
						5	DVAS1200X05S120	●	62.2	2.449	98.2	3.866	59	2.323	160.2	6.307	158	6.220	2.2	.087	12	.472	1
						8	DVAS1200X08S120	●	98.2	3.866	134.2	5.283	59	2.323	196.2	7.724	194	7.638	2.2	.087	12	.472	1
12.100	.4764					3	DVAS1210X03S130	★	38.5	1.516	65.2	2.567	62	2.441	130.2	5.126	128	5.039	2.2	.087	13	.512	1
						3	DVAS1210X03S140	●	38.5	1.516	65.2	2.567	61	2.402	130.2	5.126	128	5.039	2.2	.087	14	.551	1
						5	DVAS1210X05S130	★	62.7	2.469	102.2	4.024	64	2.520	169.2	6.661	167	6.575	2.2	.087	13	.512	1
						5	DVAS1210X05S140	●	62.7	2.469	102.2	4.024	63	2.480	169.2	6.661	167	6.575	2.2	.087	14	.551	1
12.200	.4803					3	DVAS1220X03S130	★	38.8	1.528	65.2	2.567	62	2.441	130.2	5.126	128	5.039	2.2	.087	13	.512	1
						3	DVAS1220X03S140	●	38.8	1.528	65.2	2.567	61	2.402	130.2	5.126	128	5.039	2.2	.087	14	.551	1
						5	DVAS1220X05S130	★	63.2	2.488	102.2	4.024	64	2.520	169.2	6.661	167	6.575	2.2	.087	13	.512	1
						5	DVAS1220X05S140	●	63.2	2.488	102.2	4.024	63	2.480	169.2	6.661	167	6.575	2.2	.087	14	.551	1
12.300	.4843			9/16-12		3	DVAS1230X03S130	★	39.1	1.539	65.2	2.567	62	2.441	130.2	5.126	128	5.039	2.2	.087	13	.512	1
						3	DVAS1230X03S140	●	39.1	1.539	65.2	2.567	61	2.402	130.2	5.126	128	5.039	2.2	.087	14	.551	1
						5	DVAS1230X05S130	★	63.7	2.508	102.2	4.024	64	2.520	169.2	6.661	167	6.575	2.2	.087	13	.512	1
						5	DVAS1230X05S140	●	63.7	2.508	102.2	4.024	63	2.480	169.2	6.661	167	6.575	2.2	.087	14	.551	1
12.400	.4882					3	DVAS1240X03S130	★	39.5	1.555	65.3	2.571	62	2.441	130.3	5.130	128	5.039	2.3	.091	13	.512	1
						3	DVAS1240X03S140	●	39.5	1.555	65.3	2.571	61	2.402	130.3	5.130	128	5.039	2.3	.091	14	.551	1
						5	DVAS1240X05S130	★	64.3	2.531	102.3	4.028	64	2.520	169.3	6.665	167	6.575	2.3	.091	13	.512	1
						5	DVAS1240X05S140	●	64.3	2.531	102.3	4.028	63	2.480	169.3	6.665	167	6.575	2.3	.091	14	.551	1
12.500	.4921			M14x1.5		3	DVAS1250X03S130	★	39.8	1.567	65.3	2.571	62	2.441	130.3	5.130	128	5.039	2.3	.091	13	.512	1
						3	DVAS1250X03S140	●	39.8	1.567	65.3	2.571	61	2.402	130.3	5.130	128	5.039	2.3	.091	14	.551	1
						5	DVAS1250X05S130	★	64.8	2.551	102.3	4.028	64	2.520	169.3	6.665	167	6.575	2.3	.091	13	.512	1
						5	DVAS1250X05S140	●	64.8	2.551	102.3	4.028	63	2.480	169.3	6.665	167	6.575	2.3	.091	14	.551	1
						8	DVAS1250X08S130	★	102.3	4.028	140.3	5.524	65	2.559	208.3	8.201	206	8.110	2.3	.091	13	.512	1
						8	DVAS1250X08S140	●	102.3	4.028	140.3	5.524	64	2.520	208.3	8.201	206	8.110	2.3	.091	14	.551	1
12.600	.4961					3	DVAS1260X03S130	★	40.1	1.579	67.3	2.650	60	2.362	130.3	5.130	128	5.039	2.3	.091	13	.512	1
						3	DVAS1260X03S140	●	40.1	1.579	67.3	2.650	59	2.323	130.3	5.130	128	5.039	2.3	.091	14	.551	1
						5	DVAS1260X05S130	★	65.3	2.571	106.3	4.185	60	2.362	169.3	6.665	167	6.575	2.3	.091	13	.512	1
						5	DVAS1260X05S140	●	65.3	2.571	106.3	4.185	59	2.323	169.3	6.665	167	6.575	2.3	.091	14	.551	1
12.700	.5000	1/2				3	DVAS1270X03S130	★	40.4	1.591	67.3	2.650	60	2.362	130.3	5.130	128	5.039	2.3	.091	13	.512	1
						3	DVAS1270X03S140	●	40.4	1.591	67.3	2.650	59	2.323	130.3	5.130	128	5.039	2.3	.091	14	.551	1
						5	DVAS1270X05S130	★	65.8	2.591	106.3	4.185	60	2.362	169.3	6.665	167	6.575	2.3	.091	13	.512	1
						5	DVAS1270X05S140	●	65.8	2.591	106.3	4.185	59	2.323	169.3	6.665	167	6.575	2.3	.091	14	.551	1
12.800	.5039					3	DVAS1280X03S130	★	40.7	1.602	67.3	2.650	60	2.362	130.3	5.130	128	5.039	2.3	.091	13	.512	1
						3	DVAS1280X03S140	●	40.7	1.602	67.3	2.650	59	2.323	130.3	5.130	128	5.039	2.3	.091	14	.551	1
						5	DVAS1280X05S130	★	66.3	2.610	106.3	4.185	60	2.362	169.3	6.665	167	6.575	2.3	.091	13	.512	1
						5	DVAS1280X05S140	●	66.3	2.610	106.3	4.185	59	2.323	169.3	6.665	167	6.575	2.3	.091	14	.551	1
12.900	.5079					3	DVAS1290X03S130	★	41.0	1.614	67.3	2.650	60	2.362	130.3	5.130	128	5.039	2.3	.091	13	.512	1
						3	DVAS1290X03S140	●	41.0	1.614	67.3	2.650	59	2.323	130.3	5.130	128	5.039	2.3	.091	14	.551	1
						5	DVAS1290X05S130	★	66.8	2.630	106.3	4.185	60	2.362	169.3	6.665	167	6.575	2.3	.091	13	.512	1
						5	DVAS1290X05S140	●	66.8	2.630	106.3	4.185	59	2.323	169.3	6.665	167	6.575	2.3	.091	14	.551	1

DC = Cutting Diameter
LU = Usable Length
LCF = Length Chip Flute
LS = Shank Length
OAL = Overall Length
LF = Functional Length
PL = Point Length
DCONMS = Connection Diameter

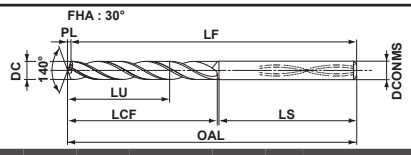
DVAS NEW

TRISTAR Drills

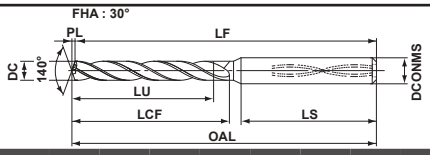
DC						L/D	Order Number	Stock	LU		LCF		LS		OAL		LF		PL		DCONMS		Type
Metric (mm)	Decimal (in)	Fraction (in)	Wire / Letter	Thread Size	Tap Pilot Hole			DP1120	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	
13.000	.5118					3	DVAS1300X03S130	★	41.4	1.630	67.4	2.654	60	2.362	130.4	5.134	128	5.039	2.4	.094	13	.512	1
						3	DVAS1300X03S140	●	41.4	1.630	67.4	2.654	60	2.362	130.4	5.134	128	5.039	2.4	.094	14	.551	1
						5	DVAS1300X05S130	★	67.4	2.654	106.4	4.189	60	2.362	169.4	6.669	167	6.575	2.4	.094	13	.512	1
						5	DVAS1300X05S140	●	67.4	2.654	106.4	4.189	60	2.362	169.4	6.669	167	6.575	2.4	.094	14	.551	1
						8	DVAS1300X08S130	★	106.4	4.189	145.4	5.724	60	2.362	208.4	8.205	206	8.110	2.4	.094	13	.512	1
						8	DVAS1300X08S140	●	106.4	4.189	145.4	5.724	60	2.362	208.4	8.205	206	8.110	2.4	.094	14	.551	1
13.100	.5157			9/16-18		3	DVAS1310X03S140	●	41.7	1.642	70.4	2.772	63	2.480	136.4	5.370	134	5.276	2.4	.094	14	.551	1
						5	DVAS1310X05S140	●	67.9	2.673	110.4	4.346	65	2.559	178.4	7.024	176	6.929	2.4	.094	14	.551	1
13.200	.5197					3	DVAS1320X03S140	●	42.0	1.654	70.4	2.772	63	2.480	136.4	5.370	134	5.276	2.4	.094	14	.551	1
						5	DVAS1320X05S140	●	68.4	2.693	110.4	4.346	65	2.559	178.4	7.024	176	6.929	2.4	.094	14	.551	1
13.300	.5236					3	DVAS1330X03S140	●	42.3	1.665	70.4	2.772	63	2.480	136.4	5.370	134	5.276	2.4	.094	14	.551	1
						5	DVAS1330X05S140	●	68.9	2.713	110.4	4.346	65	2.559	178.4	7.024	176	6.929	2.4	.094	14	.551	1
13.400	.5276					3	DVAS1340X03S140	●	42.6	1.677	70.4	2.772	63	2.480	136.4	5.370	134	5.276	2.4	.094	14	.551	1
						5	DVAS1340X05S140	●	69.4	2.732	110.4	4.346	65	2.559	178.4	7.024	176	6.929	2.4	.094	14	.551	1
13.500	.5315			5/8-11		3	DVAS1350X03S140	●	43.0	1.693	70.5	2.776	63	2.480	136.5	5.374	134	5.276	2.5	.098	14	.551	1
						5	DVAS1350X05S140	●	70.0	2.756	110.5	4.350	65	2.559	178.5	7.028	176	6.929	2.5	.098	14	.551	1
						8	DVAS1350X08S140	●	110.5	4.350	151.5	5.965	66	2.598	220.5	8.681	218	8.583	2.5	.098	14	.551	1
13.600	.5354					3	DVAS1360X03S140	●	43.3	1.705	72.5	2.854	61	2.402	136.5	5.374	134	5.276	2.5	.098	14	.551	1
						5	DVAS1360X05S140	●	70.5	2.776	114.5	4.508	61	2.402	178.5	7.028	176	6.929	2.5	.098	14	.551	1
13.700	.5394					3	DVAS1370X03S140	●	43.6	1.717	72.5	2.854	61	2.402	136.5	5.374	134	5.276	2.5	.098	14	.551	1
						5	DVAS1370X05S140	●	71.0	2.795	114.5	4.508	61	2.402	178.5	7.028	176	6.929	2.5	.098	14	.551	1
13.800	.5433					3	DVAS1380X03S140	●	43.9	1.728	72.5	2.854	61	2.402	136.5	5.374	134	5.276	2.5	.098	14	.551	1
						5	DVAS1380X05S140	●	71.5	2.815	114.5	4.508	61	2.402	178.5	7.028	176	6.929	2.5	.098	14	.551	1
13.891	.5469	35/64				3	DVAS1389X03S140	●	44.2	1.740	72.5	2.854	61	2.402	136.5	5.374	134	5.276	2.5	.098	14	.551	1
						5	DVAS1389X05S140	●	72.0	2.835	114.5	4.508	61	2.402	178.5	7.028	176	6.929	2.5	.098	14	.551	1
						8	DVAS1389X08S140	●	113.6	4.472	156.5	6.161	61	2.402	220.5	8.681	218	8.583	2.5	.098	14	.551	1
13.900	.5472					3	DVAS1390X03S140	●	44.2	1.740	72.5	2.854	61	2.402	136.5	5.374	134	5.276	2.5	.098	14	.551	1
						5	DVAS1390X05S140	●	72.0	2.835	114.5	4.508	61	2.402	178.5	7.028	176	6.929	2.5	.098	14	.551	1
14.000	.5512			M16x2.0		3	DVAS1400X03S140	●	44.5	1.752	72.5	2.854	61	2.402	136.5	5.374	134	5.276	2.5	.098	14	.551	1
						5	DVAS1400X05S140	●	72.5	2.854	114.5	4.508	61	2.402	178.5	7.028	176	6.929	2.5	.098	14	.551	1
						8	DVAS1400X08S140	●	114.5	4.508	156.5	6.161	61	2.402	220.5	8.681	218	8.583	2.5	.098	14	.551	1
14.100	.5551					3	DVAS1410X03S150	★	44.9	1.768	75.6	2.976	64	2.520	142.6	5.614	140	5.512	2.6	.102	15	.591	1
						3	DVAS1410X03S160	●	44.9	1.768	75.6	2.976	63	2.480	142.6	5.614	140	5.512	2.6	.102	16	.630	1
						5	DVAS1410X05S150	★	73.1	2.878	118.6	4.669	66	2.598	187.6	7.386	185	7.283	2.6	.102	15	.591	1
						5	DVAS1410X05S160	●	73.1	2.878	118.6	4.669	65	2.559	187.6	7.386	185	7.283	2.6	.102	16	.630	1
14.200	.5591					3	DVAS1420X03S150	★	45.2	1.780	75.6	2.976	64	2.520	142.6	5.614	140	5.512	2.6	.102	15	.591	1
						3	DVAS1420X03S160	●	45.2	1.780	75.6	2.976	63	2.480	142.6	5.614	140	5.512	2.6	.102	16	.630	1
						5	DVAS1420X05S150	★	73.6	2.898	118.6	4.669	66	2.598	187.6	7.386	185	7.283	2.6	.102	15	.591	1
						5	DVAS1420X05S160	●	73.6	2.898	118.6	4.669	65	2.559	187.6	7.386	185	7.283	2.6	.102	16	.630	1
14.288	.5625	9/16				3	DVAS1429X03S160	●	45.5	1.791	75.6	2.976	63	2.480	142.6	5.614	140	5.512	2.6	.102	16	.630	1
						5	DVAS1429X05S160	●	74.0	2.913	118.6	4.669	65	2.559	187.6	7.386	185	7.283	2.6	.102	16	.630	1
						8	DVAS1429X08S160	●	116.9	4.602	162.6	6.402	61	2.402	227.6	8.961	225	8.858	2.6	.102	16	.630	1
14.300	.5630					3	DVAS1430X03S150	★	45.5	1.791	75.6	2.976	64	2.520	142.6	5.614	140	5.512	2.6	.102	15	.591	1
						3	DVAS1430X03S160	●	45.5	1.791	75.6	2.976	63	2.480	142.6	5.614	140	5.512	2.6	.102	16	.630	1
						5	DVAS1430X05S150	★	74.1	2.917	118.6	4.669	66	2.598	187.6	7.386	185	7.283	2.6	.102	15	.591	1
						5	DVAS1430X05S160	●	74.1	2.917	118.6	4.669	65	2.559	187.6	7.386	185	7.283	2.6	.102	16	.630	1
14.400	.5669					3	DVAS1440X03S150	★	45.8	1.803	75.6	2.976	64	2.520	142.6	5.614	140	5.512	2.6	.102	15	.591	1
						3	DVAS1440X03S160	●	45.8	1.803	75.6	2.976	63	2.480	142.6	5.614	140	5.512	2.6	.102	16	.630	1
						5	DVAS1440X05S150	★	74.6	2.937	118.6	4.669	66	2.598	187.6	7.386	185	7.283	2.6	.102	15	.591	1
						5	DVAS1440X05S160	●	74.6	2.937	118.6	4.669	65	2.559	187.6	7.386	185	7.283	2.6	.102	16	.630	1

● : USA Stock ★ : Stocked in Japan

Type1



Type2



DC						L/D	Order Number	Stock	LU		LCF		LS		OAL		LF		PL		DCONMS		Type
Metric (mm)	Decimal (in)	Fraction	Wire / Letter	Thread Size	Tap Pilot Hole			DP1120	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	
14.500	.5709			M16x1.5		3	DVAS1450X03S150	★	46.1	1.815	75.6	2.976	64	2.520	142.6	5.614	140	5.512	2.6	.102	15	.591	1
						3	DVAS1450X03S160	●	46.1	1.815	75.6	2.976	63	2.480	142.6	5.614	140	5.512	2.6	.102	16	.630	1
						5	DVAS1450X05S150	★	75.1	2.957	118.6	4.669	66	2.598	187.6	7.386	185	7.283	2.6	.102	15	.591	1
						5	DVAS1450X05S160	●	75.1	2.957	118.6	4.669	65	2.559	187.6	7.386	185	7.283	2.6	.102	16	.630	1
						8	DVAS1450X08S150	★	118.6	4.669	162.6	6.402	62	2.441	227.6	8.961	225	8.858	2.6	.102	15	.591	1
						8	DVAS1450X08S160	●	118.6	4.669	162.6	6.402	61	2.402	227.6	8.961	225	8.858	2.6	.102	16	.630	1
14.600	.5748					3	DVAS1460X03S150	★	46.5	1.831	77.7	3.059	62	2.441	142.7	5.618	140	5.512	2.7	.106	15	.591	1
						3	DVAS1460X03S160	●	46.5	1.831	77.7	3.059	61	2.402	142.7	5.618	140	5.512	2.7	.106	16	.630	1
						5	DVAS1460X05S150	★	75.7	2.980	122.7	4.831	62	2.441	187.7	7.390	185	7.283	2.7	.106	15	.591	1
						5	DVAS1460X05S160	●	75.7	2.980	122.7	4.831	61	2.402	187.7	7.390	185	7.283	2.7	.106	16	.630	1
14.685	.5782	37/64		5/8-18		3	DVAS1468X03S160	●	46.8	1.843	77.7	3.059	61	2.402	142.7	5.618	140	5.512	2.7	.106	16	.630	1
						5	DVAS1468X05S160	●	76.1	2.996	122.7	4.831	61	2.402	187.7	7.390	185	7.283	2.7	.106	16	.630	1
						8	DVAS1468X08S160	●	120.2	4.732	167.7	6.602	56	2.205	227.7	8.965	225	8.858	2.7	.106	16	.630	1
14.700	.5787					3	DVAS1470X03S150	★	46.8	1.843	77.7	3.059	62	2.441	142.7	5.618	140	5.512	2.7	.106	15	.591	1
						3	DVAS1470X03S160	●	46.8	1.843	77.7	3.059	61	2.402	142.7	5.618	140	5.512	2.7	.106	16	.630	1
						5	DVAS1470X05S150	★	76.2	3.000	122.7	4.831	62	2.441	187.7	7.390	185	7.283	2.7	.106	15	.591	1
						5	DVAS1470X05S160	●	76.2	3.000	122.7	4.831	61	2.402	187.7	7.390	185	7.283	2.7	.106	16	.630	1
14.800	.5827					3	DVAS1480X03S150	★	47.1	1.854	77.7	3.059	62	2.441	142.7	5.618	140	5.512	2.7	.106	15	.591	1
						3	DVAS1480X03S160	●	47.1	1.854	77.7	3.059	61	2.402	142.7	5.618	140	5.512	2.7	.106	16	.630	1
						5	DVAS1480X05S150	★	76.7	3.020	122.7	4.831	62	2.441	187.7	7.390	185	7.283	2.7	.106	15	.591	1
						5	DVAS1480X05S160	●	76.7	3.020	122.7	4.831	61	2.402	187.7	7.390	185	7.283	2.7	.106	16	.630	1
14.900	.5866					3	DVAS1490X03S150	★	47.4	1.866	77.7	3.059	62	2.441	142.7	5.618	140	5.512	2.7	.106	15	.591	1
						3	DVAS1490X03S160	●	47.4	1.866	77.7	3.059	61	2.402	142.7	5.618	140	5.512	2.7	.106	16	.630	1
						5	DVAS1490X05S150	★	77.2	3.039	122.7	4.831	62	2.441	187.7	7.390	185	7.283	2.7	.106	15	.591	1
						5	DVAS1490X05S160	●	77.2	3.039	122.7	4.831	61	2.402	187.7	7.390	185	7.283	2.7	.106	16	.630	1
15.000	.5906					3	DVAS1500X03S150	★	47.7	1.878	77.7	3.059	62	2.441	142.7	5.618	140	5.512	2.7	.106	15	.591	1
						3	DVAS1500X03S160	●	47.7	1.878	77.7	3.059	62	2.441	142.7	5.618	140	5.512	2.7	.106	16	.630	1
						5	DVAS1500X05S150	★	77.7	3.059	122.7	4.831	62	2.441	187.7	7.390	185	7.283	2.7	.106	15	.591	1
						5	DVAS1500X05S160	●	77.7	3.059	122.7	4.831	62	2.441	187.7	7.390	185	7.283	2.7	.106	16	.630	1
						8	DVAS1500X08S150	★	122.7	4.831	167.7	6.602	57	2.244	227.7	8.965	225	8.858	2.7	.106	15	.591	1
						8	DVAS1500X08S160	●	122.7	4.831	167.7	6.602	57	2.244	227.7	8.965	225	8.858	2.7	.106	16	.630	1
15.082	.5938	19/32				3	DVAS1508X03S160	●	47.9	1.886	80.7	3.177	64	2.520	147.7	5.815	145	5.709	2.7	.106	16	.630	1
						5	DVAS1508X05S160	●	78.1	3.075	126.7	4.988	66	2.598	195.7	7.705	193	7.598	2.7	.106	16	.630	1
						8	DVAS1508X08S160	●	123.3	4.854	173.7	6.839	67	2.638	243.7	9.594	241	9.488	2.7	.106	16	.630	1
15.100	.5945					3	DVAS1510X03S160	●	48.0	1.890	80.7	3.177	64	2.520	147.7	5.815	145	5.709	2.7	.106	16	.630	1
						5	DVAS1510X05S160	●	78.2	3.079	126.7	4.988	66	2.598	195.7	7.705	193	7.598	2.7	.106	16	.630	1
15.200	.5984					3	DVAS1520X03S160	●	48.4	1.906	80.8	3.181	64	2.520	147.8	5.819	145	5.709	2.8	.110	16	.630	1
						5	DVAS1520X05S160	●	78.8	3.102	126.8	4.992	66	2.598	195.8	7.709	193	7.598	2.8	.110	16	.630	1
15.300	.6024					3	DVAS1530X03S160	●	48.7	1.917	80.8	3.181	64	2.520	147.8	5.819	145	5.709	2.8	.110	16	.630	1
						5	DVAS1530X05S160	●	79.3	3.122	126.8	4.992	66	2.598	195.8	7.709	193	7.598	2.8	.110	16	.630	1
15.400	.6063					3	DVAS1540X03S160	●	49.0	1.929	80.8	3.181	64	2.520	147.8	5.819	145	5.709	2.8	.110	16	.630	1
						5	DVAS1540X05S160	●	79.8	3.142	126.8	4.992	66	2.598	195.8	7.709	193	7.598	2.8	.110	16	.630	1
15.479	.6094	39/64				3	DVAS1548X03S160	●	49.2	1.937	80.8	3.181	64	2.520	147.8	5.819	145	5.709	2.8	.110	16	.630	1
						5	DVAS1548X05S160	●	80.2	3.157	126.8	4.992	66	2.598	195.8	7.709	193	7.598	2.8	.110	16	.630	1
						8	DVAS1548X08S160	●	126.6	4.984	173.8	6.843	67	2.638	243.8	9.598	241	9.488	2.8	.110	16	.630	1
15.500	.6102			M18x2.5		3	DVAS1550X03S160	●	49.3	1.941	80.8	3.181	64	2.520	147.8	5.819	145	5.709	2.8	.110	16	.630	1
						5	DVAS1550X05S160	●	80.3	3.161	126.8	4.992	66	2.598	195.8	7.709	193	7.598	2.8	.110	16	.630	1
						8	DVAS1550X08S160	●	126.8	4.992	173.8	6.843	67	2.638	243.8	9.598	241	9.488	2.8	.110	16	.630	1

DC = Cutting Diameter
LU = Usable Length
LCF = Length Chip Flute
LS = Shank Length
OAL = Overall Length
LF = Functional Length
PL = Point Length
DCONMS = Connection Diameter

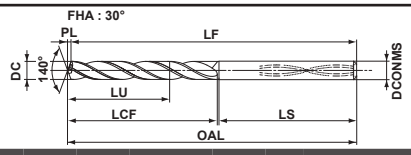
DVAS NEW

TRISTAR Drills

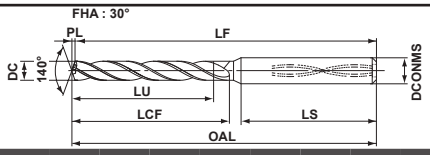
DC						L/D	Order Number	Stock	LU		LCF		LS		OAL		LF		PL		DCONMS		Type
Metric (mm)	Decimal (in)	Fraction	Wire / Letter	Thread Size	Tap Pilot Hole			DP1120	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	
15.600	.6142					3	DVAS1560X03S160	●	49.6	1.953	82.8	3.260	62	2.441	147.8	5.819	145	5.709	2.8	.110	16	.630	1
						5	DVAS1560X05S160	●	80.8	3.181	130.8	5.150	62	2.441	195.8	7.709	193	7.598	2.8	.110	16	.630	1
15.700	.6181					3	DVAS1570X03S160	●	50.0	1.969	82.9	3.264	62	2.441	147.9	5.823	145	5.709	2.9	.114	16	.630	1
						5	DVAS1570X05S160	●	81.4	3.205	130.9	5.154	62	2.441	195.9	7.713	193	7.598	2.9	.114	16	.630	1
15.800	.6220					3	DVAS1580X03S160	●	50.3	1.980	82.9	3.264	62	2.441	147.9	5.823	145	5.709	2.9	.114	16	.630	1
						5	DVAS1580X05S160	●	81.9	3.224	130.9	5.154	62	2.441	195.9	7.713	193	7.598	2.9	.114	16	.630	1
15.875	.6250	5/8				3	DVAS1588X03S160	●	50.5	1.988	82.9	3.264	62	2.441	147.9	5.823	145	5.709	2.9	.114	16	.630	1
						5	DVAS1588X05S160	●	82.3	3.240	130.9	5.154	62	2.441	195.9	7.713	193	7.598	2.9	.114	16	.630	1
						8	DVAS1588X08S160	●	129.9	5.114	178.9	7.043	62	2.441	243.9	9.602	241	9.488	2.9	.114	16	.630	1
15.900	.6260					3	DVAS1590X03S160	●	50.6	1.992	82.9	3.264	62	2.441	147.9	5.823	145	5.709	2.9	.114	16	.630	1
						5	DVAS1590X05S160	●	82.4	3.244	130.9	5.154	62	2.441	195.9	7.713	193	7.598	2.9	.114	16	.630	1
16.000	.6299					3	DVAS1600X03S160	●	50.9	2.004	82.9	3.264	62	2.441	147.9	5.823	145	5.709	2.9	.114	16	.630	1
						5	DVAS1600X05S160	●	82.9	3.264	130.9	5.154	62	2.441	195.9	7.713	193	7.598	2.9	.114	16	.630	1
						8	DVAS1600X08S160	●	130.9	5.154	178.9	7.043	62	2.441	243.9	9.602	241	9.488	2.9	.114	16	.630	1
16.272	.6407	41/64				3	DVAS1627X03S180	●	51.8	2.039	86.0	3.386	63	2.480	153.0	6.024	150	5.906	3.0	.118	18	.709	1
						5	DVAS1627X05S180	●	84.4	3.323	135.0	5.315	65	2.559	204.0	8.031	201	7.913	3.0	.118	18	.709	1
16.500	.6496			M18x1.5		3	DVAS1650X03S170	★	52.5	2.067	86.0	3.386	64	2.520	153.0	6.024	150	5.906	3.0	.118	17	.669	1
						3	DVAS1650X03S180	●	52.5	2.067	86.0	3.386	63	2.480	153.0	6.024	150	5.906	3.0	.118	18	.709	1
						5	DVAS1650X05S170	★	85.5	3.366	135.0	5.315	66	2.598	204.0	8.031	201	7.913	3.0	.118	17	.669	1
						5	DVAS1650X05S180	●	85.5	3.366	135.0	5.315	65	2.559	204.0	8.031	201	7.913	3.0	.118	18	.709	1
16.669	.6563	21/32		3/4-10		3	DVAS1667X03S180	●	53.0	2.087	88.0	3.465	61	2.402	153.0	6.024	150	5.906	3.0	.118	18	.709	1
						5	DVAS1667X05S180	●	86.3	3.398	139.0	5.472	61	2.402	204.0	8.031	201	7.913	3.0	.118	18	.709	1
17.000	.6693		Tube Sheet			3	DVAS1700X03S170	★	54.1	2.130	88.1	3.469	62	2.441	153.1	6.028	150	5.906	3.1	.122	17	.669	1
						3	DVAS1700X03S180	●	54.1	2.130	88.1	3.469	62	2.441	153.1	6.028	150	5.906	3.1	.122	18	.709	1
						5	DVAS1700X05S170	★	88.1	3.469	139.1	5.476	62	2.441	204.1	8.035	201	7.913	3.1	.122	17	.669	1
						5	DVAS1700X05S180	●	88.1	3.469	139.1	5.476	62	2.441	204.1	8.035	201	7.913	3.1	.122	18	.709	1
17.066	.6719	43/64				3	DVAS1707X03S180	●	54.3	2.138	91.1	3.587	64	2.520	158.1	6.224	155	6.102	3.1	.122	18	.709	1
						5	DVAS1707X05S180	●	88.4	3.480	143.1	5.634	66	2.598	212.1	8.350	209	8.228	3.1	.122	18	.709	1
17.463	.6875	11/16		3/4-16		3	DVAS1746X03S180	●	55.6	2.189	91.2	3.591	64	2.520	158.2	6.228	155	6.102	3.2	.126	18	.709	1
						5	DVAS1746X05S180	●	90.5	3.563	143.2	5.638	66	2.598	212.2	8.354	209	8.228	3.2	.126	18	.709	1
17.500	.6890			M20x2.5		3	DVAS1750X03S180	●	55.7	2.193	91.2	3.591	64	2.520	158.2	6.228	155	6.102	3.2	.126	18	.709	1
						5	DVAS1750X05S180	●	90.7	3.571	143.2	5.638	66	2.598	212.2	8.354	209	8.228	3.2	.126	18	.709	1
17.860	.7032	45/64				3	DVAS1786X03S180	●	56.9	2.240	93.3	3.673	62	2.441	158.3	6.232	155	6.102	3.3	.130	18	.709	1
						5	DVAS1786X05S180	●	92.6	3.646	147.3	5.799	62	2.441	212.3	8.358	209	8.228	3.3	.130	18	.709	1
18.000	.7087					3	DVAS1800X03S180	●	57.3	2.256	93.3	3.673	62	2.441	158.3	6.232	155	6.102	3.3	.130	18	.709	1
						5	DVAS1800X05S180	●	93.3	3.673	147.3	5.799	62	2.441	212.3	8.358	209	8.228	3.3	.130	18	.709	1
18.257	.7188	23/32				3	DVAS1826X03S200	●	58.1	2.287	96.3	3.791	63	2.480	163.3	6.429	160	6.299	3.3	.130	20	.787	1
						5	DVAS1826X05S200	●	94.6	3.724	151.3	5.957	65	2.559	220.3	8.673	217	8.543	3.3	.130	20	.787	1
18.500	.7283			M20x1.5		3	DVAS1850X03S190	★	58.9	2.319	96.4	3.795	64	2.520	163.4	6.433	160	6.299	3.4	.134	19	.748	1
						3	DVAS1850X03S200	●	58.9	2.319	96.4	3.795	63	2.480	163.4	6.433	160	6.299	3.4	.134	20	.787	1
						5	DVAS1850X05S190	★	95.9	3.776	151.4	5.961	66	2.598	220.4	8.677	217	8.543	3.4	.134	19	.748	1
						5	DVAS1850X05S200	●	95.9	3.776	151.4	5.961	65	2.559	220.4	8.677	217	8.543	3.4	.134	20	.787	1
18.654	.7344	47/64				3	DVAS1865X03S200	●	59.4	2.339	98.4	3.874	61	2.402	163.4	6.433	160	6.299	3.4	.134	20	.787	1
						5	DVAS1865X05S200	●	96.7	3.807	155.4	6.118	61	2.402	220.4	8.677	217	8.543	3.4	.134	20	.787	1
19.000	.7480					3	DVAS1900X03S190	★	60.5	2.382	98.5	3.878	62	2.441	163.5	6.437	160	6.299	3.5	.138	19	.748	1
						3	DVAS1900X03S200	●	60.5	2.382	98.5	3.878	62	2.441	163.5	6.437	160	6.299	3.5	.138	20	.787	1
						5	DVAS1900X05S190	★	98.5	3.878	155.5	6.122	62	2.441	220.5	8.681	217	8.543	3.5	.138	19	.748	1
						5	DVAS1900X05S200	●	98.5	3.878	155.5	6.122	62	2.441	220.5	8.681	217	8.543	3.5	.138	20	.787	1
19.050	.7500	3/4				3	DVAS1905X03S200	●	60.7	2.390	101.5	3.996	64	2.520	168.5	6.634	165	6.496	3.5	.138	20	.787	1
						5	DVAS1905X05S200	●	98.8	3.890	159.5	6.280	66	2.598	228.5	8.996	225	8.858	3.5	.138	20	.787	1

● : USA Stock ★ : Stocked in Japan

Type1



Type2



DC						L/D	Order Number	Stock	LU		LCF		LS		OAL		LF		PL		DCONMS		Type
Metric (mm)	Decimal (in)	Fraction	Wire / Letter	Thread Size	Tap Pilot Hole			DP1120	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	
19.254	**.7580**		**Tube Sheet**			3	**DVAS1925X03S200**	●	61.3	2.413	101.5	3.996	64	2.520	168.5	6.634	165	6.496	3.5	.138	20	.787	1
						5	**DVAS1925X05S200**	●	99.8	3.929	159.5	6.280	66	2.598	228.5	8.996	225	8.858	3.5	.138	20	.787	1
19.447	**.7657**	**49/64**		**7/8-9**		3	**DVAS1945X03S200**	●	61.8	2.433	101.5	3.996	64	2.520	168.5	6.634	165	6.496	3.5	.138	20	.787	1
						5	**DVAS1945X05S200**	●	100.7	3.965	159.5	6.280	66	2.598	228.5	8.996	225	8.858	3.5	.138	20	.787	1
19.500	**.7677**			**M22x2.5**		3	**DVAS1950X03S200**	●	62.0	2.441	101.5	3.996	64	2.520	168.5	6.634	165	6.496	3.5	.138	20	.787	1
						5	**DVAS1950X05S200**	●	101.0	3.976	159.5	6.280	66	2.598	228.5	8.996	225	8.858	3.5	.138	20	.787	1
19.844	**.7813**	**25/32**				3	**DVAS1984X03S200**	●	63.1	2.484	103.6	4.079	62	2.441	168.6	6.638	165	6.496	3.6	.142	20	.787	1
						5	**DVAS1984X05S200**	●	102.8	4.047	163.6	6.441	62	2.441	228.6	9.000	225	8.858	3.6	.142	20	.787	1
20.000	**.7874**					3	**DVAS2000X03S200**	●	63.6	2.504	103.6	4.079	62	2.441	168.6	6.638	165	6.496	3.6	.142	20	.787	1
						5	**DVAS2000X05S200**	●	103.6	4.079	163.6	6.441	62	2.441	228.6	9.000	225	8.858	3.6	.142	20	.787	1

DC = Cutting Diameter
LU = Usable Length
LCF = Length Chip Flute
LS = Shank Length
OAL = Overall Length
LF = Functional Length
PL = Point Length
DCONMS = Connection Diameter

Recommended Cutting Conditions

(in)

Material			Mild Steel (<180HB) Carbon Steel, Alloy Steel (180—280HB)			Carbon Steel, Alloy Steel (280—350HB)		
DC		Hole Depth L/D	Cutting Speed **vc** (Min.—Max.) (SFM)	Revolution **n** (min^{-1})	Feed **fr** (Min.—Max.) (IPR)	Cutting Speed **vc** (Min.—Max.) (SFM)	Revolution **n** (min^{-1})	Feed **fr** (Min.—Max.) (IPR)
in	mm							
.1181	**3.0**	**3, 5, 8**	230 (165 — 295)	7400	.0043 (.0024 — .0059)	195 (130 — 260)	6400	.0043 (.0024 — .0059)
.1575	**4.0**	**3, 5, 8**	260 (195 — 330)	6400	.0055 (.0031 — .0079)	230 (165 — 295)	5600	.0055 (.0031 — .0079)
.1969	**5.0**	**3, 5, 8**	295 (230 — 360)	5700	.0071 (.0039 — .0098)	230 (165 — 295)	4500	.0071 (.0039 — .0098)
.2362	**6.0**	**3, 5, 8**	330 (260 — 395)	5300	.0083 (.0047 — .0118)	260 (195 — 330)	4200	.0083 (.0047 — .0118)
.2756	**7.0**	**3, 5, 8**	330 (295 — 425)	4500	.0094 (.0055 — .0130)	295 (230 — 360)	4100	.0094 (.0055 — .0130)
.3150	**8.0**	**3, 5, 8**	330 (330 — 460)	4000	.0102 (.0063 — .0138)	295 (230 — 360)	3600	.0102 (.0063 — .0138)
.3543	**9.0**	**3, 5, 8**	330 (330 — 460)	3500	.0106 (.0071 — .0142)	330 (260 — 395)	3500	.0106 (.0071 — .0142)
.3937	**10.0**	**3, 5, 8**	330 (330 — 460)	3200	.0114 (.0079 — .0146)	330 (260 — 395)	3200	.0114 (.0079 — .0146)
.4331	**11.0**	**3, 5, 8**	330 (330 — 460)	2900	.0114 (.0079 — .0146)	330 (260 — 395)	2900	.0114 (.0079 — .0146)
.4724	**12.0**	**3, 5, 8**	330 (330 — 460)	2700	.0118 (.0083 — .0150)	330 (260 — 395)	2700	.0118 (.0083 — .0150)
.5512	**14.0**	**3, 5, 8**	330 (330 — 460)	2300	.0122 (.0087 — .0154)	330 (260 — 395)	2300	.0122 (.0087 — .0154)
.6299	**16.0**	**3, 5, 8**	330 (330 — 460)	2000	.0134 (.0098 — .0165)	330 (260 — 395)	2000	.0134 (.0098 — .0165)
.7087	**18.0**	**3, 5**	330 (330 — 460)	1800	.0142 (.0110 — .0173)	330 (260 — 395)	1800	.0142 (.0110 — .0173)
.7874	**20.0**	**3, 5**	330 (330 — 460)	1600	.0150 (.0118 — .0177)	330 (260 — 395)	1600	.0150 (.0118 — .0177)

Material			Precipitation Hardenin g Stainless Steel Ferritic Stainless Steel Martensitic Stainless Steel			Cast Iron Ductile Cast Iron		
DC		Hole Depth L/D	Cutting Speed **vc** (Min.—Max.) (SFM)	Revolution **n** (min^{-1})	Feed **fr** (Min.—Max.) (IPR)	Cutting Speed **vc** (Min.—Max.) (SFM)	Revolution **n** (min^{-1})	Feed **fr** (Min.—Max.) (IPR)
in	mm							
.1181	**3.0**	**3, 5, 8**	165 (100 — 230)	5300	.0035 (.0024 — .0047)	230 (165 — 295)	7400	.0043 (.0024 — .0059)
.1575	**4.0**	**3, 5, 8**	165 (100 — 230)	4000	.0047 (.0031 — .0063)	260 (195 — 330)	6400	.0055 (.0031 — .0079)
.1969	**5.0**	**3, 5, 8**	165 (100 — 230)	3200	.0059 (.0039 — .0079)	295 (230 — 360)	5700	.0071 (.0039 — .0098)
.2362	**6.0**	**3, 5, 8**	165 (100 — 230)	2700	.0071 (.0047 — .0094)	330 (260 — 395)	5300	.0083 (.0047 — .0118)
.2756	**7.0**	**3, 5, 8**	165 (100 — 230)	2300	.0079 (.0055 — .0102)	360 (295 — 425)	5000	.0094 (.0055 — .0130)
.3150	**8.0**	**3, 5, 8**	165 (100 — 230)	2000	.0087 (.0063 — .0110)	395 (330 — 460)	4800	.0102 (.0063 — .0138)
.3543	**9.0**	**3, 5, 8**	165 (100 — 230)	1800	.0094 (.0071 — .0118)	395 (330 — 460)	4200	.0106 (.0071 — .0142)
.3937	**10.0**	**3, 5, 8**	165 (100 — 230)	1600	.0098 (.0079 — .0118)	395 (330 — 460)	3800	.0114 (.0079 — .0146)
.4331	**11.0**	**3, 5, 8**	165 (100 — 230)	1400	.0098 (.0079 — .0118)	395 (330 — 460)	3500	.0114 (.0079 — .0146)
.4724	**12.0**	**3, 5, 8**	165 (100 — 230)	1300	.0102 (.0083 — .0118)	395 (330 — 460)	3200	.0118 (.0083 — .0150)
.5512	**14.0**	**3, 5, 8**	165 (100 — 230)	1100	.0114 (.0087 — .0138)	395 (330 — 460)	2700	.0122 (.0087 — .0154)
.6299	**16.0**	**3, 5, 8**	165 (100 — 230)	1000	.0122 (.0098 — .0142)	395 (330 — 460)	2400	.0134 (.0098 — .0165)
.7087	**18.0**	**3, 5**	165 (100 — 230)	900	.0130 (.0110 — .0150)	395 (330 — 460)	2100	.0142 (.0110 — .0173)
.7874	**20.0**	**3, 5**	165 (100 — 230)	800	.0138 (.0118 — .0157)	395 (330 — 460)	1900	.0150 (.0118 — .0177)

Note 1) Refer to the table above for more details on how to set the cutting conditions according the usage.
Note 2) When using non-water-soluble cutting fluid, reduce the cutting speed to 80% to 90%.

(in)

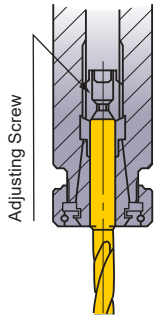
Material			Pre-hardened Steel (—45HRC)			Heat Resistant Alloys		
DC		Hole Depth L/D	Cutting Speed **vc** (Min.—Max.) (SFM)	Revolution **n** (min^{-1})	Feed **fr** (Min.—Max.) (IPR)	Cutting Speed **vc** (Min.—Max.) (SFM)	Revolution **n** (min^{-1})	Feed **fr** (Min.—Max.) (IPR)
in	mm							
.1181	**3.0**	**3, 5, 8**	65 (50 —100)	2100	.0039 (.0028 — .0051)	50 (35 — 65)	1590	.0028 (.0020 — .0035)
.1575	**4.0**	**3, 5, 8**	65 (50 —100)	1600	.0039 (.0028 — .0051)	50 (35 — 65)	1190	.0035 (.0024 — .0043)
.1969	**5.0**	**3, 5, 8**	65 (50 —100)	1300	.0039 (.0028 — .0051)	50 (35 — 65)	950	.0043 (.0031 — .0055)
.2362	**6.0**	**3, 5, 8**	65 (50 —100)	1100	.0039 (.0028 — .0051)	50 (35 — 65)	800	.0051 (.0035 — .0063)
.2756	**7.0**	**3, 5, 8**	65 (50 —100)	900	.0039 (.0028 — .0051)	50 (35 — 65)	680	.0051 (.0035 — .0063)
.3150	**8.0**	**3, 5, 8**	65 (50 —100)	800	.0039 (.0028 — .0051)	50 (35 — 65)	600	.0055 (.0043 — .0067)
.3543	**9.0**	**3, 5, 8**	65 (50 —100)	700	.0051 (.0039 — .0059)	50 (35 — 65)	530	.0055 (.0043 — .0067)
.3937	**10.0**	**3, 5, 8**	65 (50 —100)	600	.0051 (.0039 — .0059)	50 (35 — 65)	480	.0059 (.0047 — .0067)
.4331	**11.0**	**3, 5, 8**	65 (50 —100)	600	.0051 (.0039 — .0059)	50 (35 — 65)	430	.0059 (.0047 — .0067)
.4724	**12.0**	**3, 5, 8**	65 (50 —100)	500	.0051 (.0039 — .0059)	50 (35 — 65)	400	.0063 (.0051 — .0071)
.5512	**14.0**	**3, 5, 8**	65 (50 —100)	500	.0059 (.0047 — .0067)	50 (35 — 65)	340	.0063 (.0051 — .0071)
.6299	**16.0**	**3, 5, 8**	65 (50 —100)	400	.0059 (.0047 — .0067)	50 (35 — 65)	300	.0067 (.0051 — .0083)
.7087	**18.0**	**3, 5**	65 (50 —100)	400	.0059 (.0047 — .0067)	50 (35 — 65)	270	.0067 (.0051 — .0083)
.7874	**20.0**	**3, 5**	65 (50 —100)	300	.0059 (.0047 — .0067)	50 (35 — 65)	240	.0071 (.0051 — .0087)

Material			Aluminum Alloys (Si>10%)		
DC		Hole Depth L/D	Cutting Speed **vc** (Min.—Max.) (SFM)	Revolution **n** (min^{-1})	Feed **fr** (Min.—Max.) (IPR)
in	mm				
.1181	**3.0**	**3, 5, 8**	490 (330 — 655)	15900	.0091 (.0039 — .0138)
.1575	**4.0**	**3, 5, 8**	490 (330 — 655)	11900	.0094 (.0047 — .0138)
.1969	**5.0**	**3, 5, 8**	490 (330 — 655)	9500	.0098 (.0059 — .0138)
.2362	**6.0**	**3, 5, 8**	490 (330 — 655)	8000	.0138 (.0079 — .0197)
.2756	**7.0**	**3, 5, 8**	490 (330 — 655)	6800	.0138 (.0079 — .0197)
.3150	**8.0**	**3, 5, 8**	490 (330 — 655)	6000	.0138 (.0079 — .0197)
.3543	**9.0**	**3, 5, 8**	490 (330 — 655)	5300	.0138 (.0079 — .0197)
.3937	**10.0**	**3, 5, 8**	490 (330 — 655)	4800	.0197 (.0079 — .0315)
.4331	**11.0**	**3, 5, 8**	490 (330 — 655)	4300	.0197 (.0079 — .0315)
.4724	**12.0**	**3, 5, 8**	490 (330 — 655)	4000	.0197 (.0079 — .0315)
.5512	**14.0**	**3, 5, 8**	490 (330 — 655)	3400	.0197 (.0079 — .0315)
.6299	**16.0**	**3, 5, 8**	490 (330 — 655)	3000	.0236 (.0079 — .0394)
.7087	**18.0**	**3, 5**	490 (330 — 655)	2700	.0236 (.0079 — .0394)
.7874	**20.0**	**3, 5**	490 (330 — 655)	2400	.0236 (.0079 — .0394)

Note 1) Refer to the table above for more details on how to set the cutting conditions according the usage.
Note 2) When using non-water-soluble cutting fluid, reduce the cutting speed to 80% to 90%.

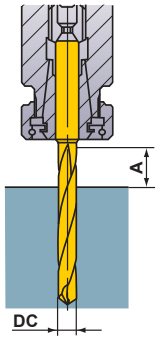
OPERATIONAL GUIDANCE

Securing the Drill



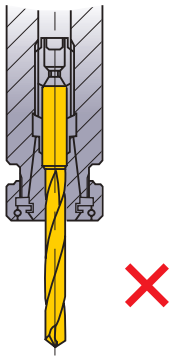
Thrust bearing type collet chuck holds the drill securely.

Drill Length



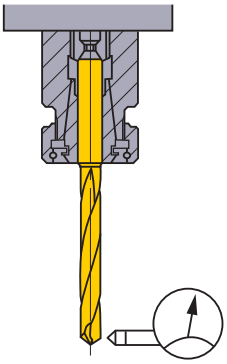
Ensure that the Dimension A is DC x 1.5 or more.

Drill Installation



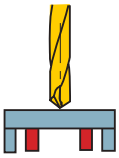
Do not clamp on the flutes.

Installation Tolerance

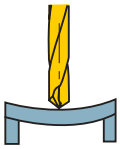


Run-out ≤ .0012"

Thin Workpiece

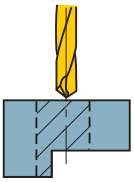


✓ Support if bending occurs



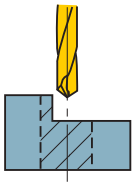
✗ Bending occurs

Interrupted Cutting



Machining is Possible ✓

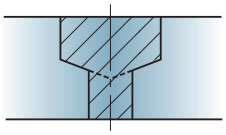
①Lower the feed when drilling the interrupted part.



Requires Prior Machining

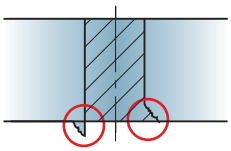
①Counter boring with an end mill prior to drilling required.

Stepped Holes



①Divide the two processes.
②Drill the thicker part first.
*Tools for counter boring and chamfering can be produced to order.

Burring and Workpiece Chipping

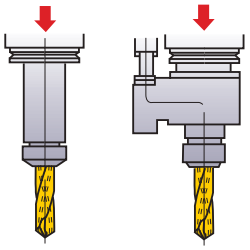


Decrease the feed rate at the end of through cutting.

Through Coolant Type (Internal)

Spindles Through Coolant Type

Revolving Coolant Machine Type



Less than ø.118" : 217.5 PSI-1015 PSI
More than ø.118" : 72.5 PSI-1015 PSI
More than 435 PSI is recommended.

Coolant Handling

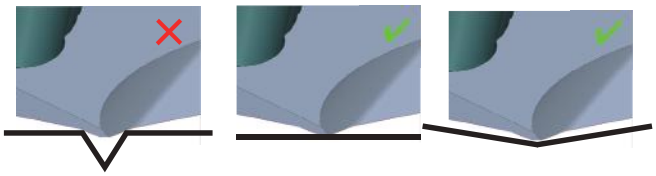
<When using internal coolant>

1) Small particles of swarf will jam in the coolant hole of small diameter drills. Always use a fine mesh filter as a preventative measure.

2) Dirt and dust particles adhere to the oil in old coolant and prevent an efficient flow. Exchanging the coolant regularly is recommended.

Shape of Workpiece During Initial Penetration

High-quality hole processing is possible even without pilot holes.
If a countersink is required, the countersink angle should be 145° or greater.



Memo

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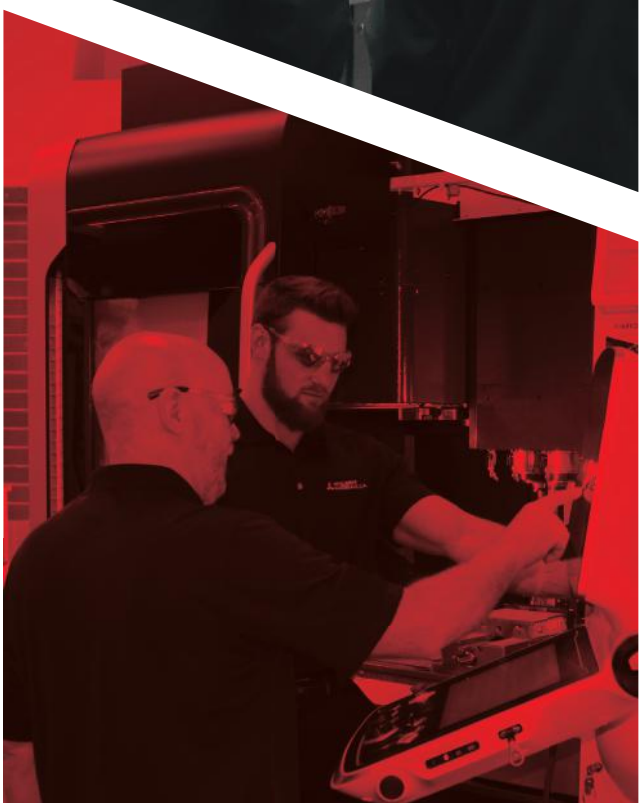
We are excited to offer several levels of training with goals to reach our highest level--Craftsman Machining Technology. At MTEC NC, we will train using a combination of classroom and hands-on machine time to develop skills and real-world understanding of materials, tools and applications. In addition to multi-day courses, we will have Machining Technology skills seminars, as well as seminars from our partners to complement our apprentice level courses, our journeyman courses, and up to our craftsman level courses.

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- Advanced End Milling
- Advanced Turning
- Basic Threading
- Advanced Face Milling
- Basic Workpiece Materials
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Programs are designed for several levels of skill development – from basic understanding to advance manufacturing with digital solutions, complementing to your valued experience in CNC machining environment. Participate in machining demonstrations with Mitsubishi Materials' skilled engineers. Discover methods to reduce setup and cycle time, optimize programs and enhance your knowledge base.

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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.

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Tools specifications subject to change without notice.

B267A-B-US-2026.6