



2017 Master Catalog

WIDIA  TM

Multiple-Material Drilling •

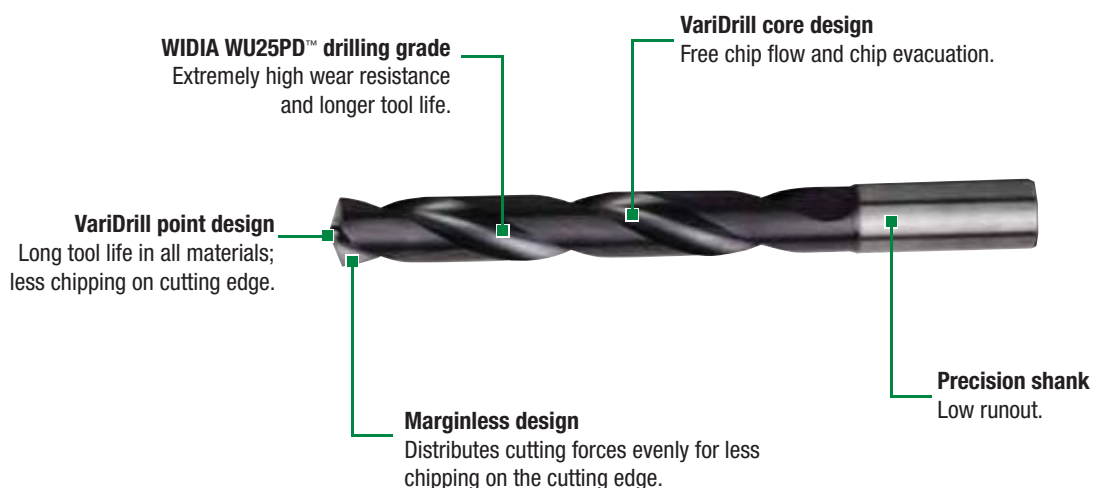
WIDIA™ VariDrill™

VariDrill



The VariDrill advanced-point geometry design offers the ultimate solution for multipurpose drilling operations. It offers dependable tool life in all materials due to less chipping on the cutting edge.

- Reduced chipping on cutting edge means longer tool life.
- Geometry design offers strength and versatility.
- Delivers proper surface finish across multiple materials: steel, stainless steel, cast iron, aluminum, and high-temp alloys.



Innovative Technology

VariDrill™ is a technologically advanced holemaking solution. These high-performance solid carbide drills were designed in Germany to provide the transportation, aerospace, general engineering, and energy industries with a tool that performs on multiple materials.

Elegance, Strength, and Versatility

The engineers at WIDIA™ developed an innovative new design to deliver drilling performance. These solid carbide drills have a distinctive geometry and marginless design. The VariDrill point is versatile enough to work through steel, stainless steel, cast iron, aluminum, and a range of high-temp alloys.

Optimum Hole Quality

The unique marginless design reduces chipping on the tool's edge and stabilizes cutting forces. This unique tool geometry enables chips to roll smoothly and evacuate easily, resulting in noticeably less friction, heat, jamming, and scratching. By minimizing these drilling issues, VariDrill delivers an optimum surface finish with every hole — no matter the material.

More Options and Longer Tool Life

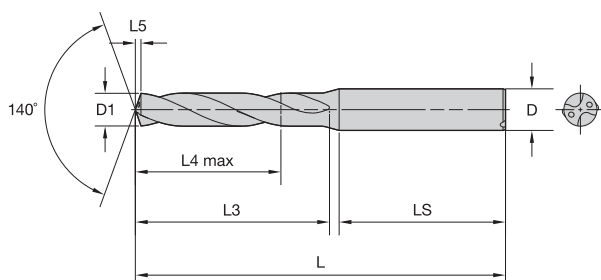
Aside from its uniquely engineered design, VariDrill also offers a broad portfolio of drilling options. With more than 2,200 items, VariDrill offers more choices than any other drill for general engineering operations. And because most drills can be reconditioned, your tools will gain extended life.

*VariDrill — Innovatively designed and technologically advanced.
Make VariDrill your go-to drill for hole after hole...after hole.*



Solid Carbide Drills

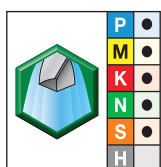
VariDrill™ • Steel, Stainless Steel, Cast Iron, Aluminum, and High-Temp Alloys • 3 x D



For information on L, L3, and L4 max, see page R133.



■ VDS201A • VDS401A • 3 x D



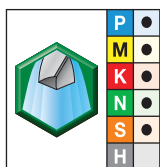
● first choice
○ alternate choice

D1 diameter

grade WU25PD TiAlN		grade WU25PD TiAlN		D1 diameter				L4 max	L3	L5	L	LS	D
order #	catalog #	order #	catalog #	mm	in	fraction	wire size						
4144195	VDS201A01000	—	—	1,000	.0394	—	—	5	7	0,1	58	28	4
4144196	VDS201A01016	—	—	1,016	.0400	—	—	5	7	0,1	58	28	4
4144197	VDS201A01041	—	—	1,041	.0410	—	—	5	7	0,2	58	28	4
4144198	VDS201A01067	—	—	1,067	.0420	—	—	5	7	0,2	58	28	4
4144199	VDS201A01092	—	—	1,092	.0430	—	—	5	7	0,2	58	28	4
4144200	VDS201A01100	—	—	1,100	.0433	—	—	5	7	0,2	58	28	4
4144201	VDS201A01181	—	—	1,181	.0465	—	—	5	7	0,2	58	28	4
4144202	VDS201A01191	—	—	1,191	.0469	—	—	5	7	0,2	58	28	4
4144523	VDS201A01200	—	—	1,200	.0472	—	—	5	7	0,2	58	28	4
4144524	VDS201A01300	—	—	1,300	.0512	—	—	5	7	0,2	58	28	4
4144525	VDS201A01321	—	—	1,321	.0520	—	—	5	7	0,2	58	28	4
4144526	VDS201A01397	—	—	1,397	.0550	—	—	5	7	0,2	58	28	4
4144527	VDS201A01400	—	—	1,400	.0551	—	—	5	7	0,2	58	28	4
4144528	VDS201A01500	4140270	VDS401A01500	1,500	.0591	—	—	6	9	0,2	58	28	4
4144529	VDS201A01600	4140271	VDS401A01600	1,600	.0630	—	—	6	9	0,2	58	28	4
4144530	VDS201A01700	4140272	VDS401A01700	1,700	.0669	—	—	6	9	0,3	58	28	4
4144531	VDS201A01800	4140423	VDS401A01800	1,800	.0709	—	—	6	9	0,3	58	28	4
4144532	VDS201A01900	4140424	VDS401A01900	1,900	.0748	—	—	6	9	0,3	58	28	4
4144533	VDS201A01984	4140425	VDS401A01984	1,984	.0781	—	—	10	13	0,3	58	28	4
4144534	VDS201A02000	4140426	VDS401A02000	2,000	.0787	—	—	10	13	0,3	58	28	4
4144535	VDS201A02100	4140427	VDS401A02100	2,100	.0827	—	—	10	13	0,3	58	28	4
4144536	VDS201A02200	4140428	VDS401A02200	2,200	.0866	—	—	10	13	0,3	58	28	4
4144537	VDS201A02300	4140429	VDS401A02300	2,300	.0906	—	—	10	13	0,4	58	28	4
4144538	VDS201A02383	4140430	VDS401A02383	2,383	.0938	3/32	—	12	17	0,4	58	28	4

(continued)

(VDS201A • VDS401A • 3 x D — continued)



● first choice

○ alternate choice

D1 diameter

grade WU25PD TiAlN		grade WU25PD TiAlN		D1 diameter									
order #	catalog #	order #	catalog #	mm	in	fraction	wire size	L4 max	L3	L5	L	LS	D
4144539	VDS201A02400	4140431	VDS401A02400	2,400	.0945	—	—	12	17	0,4	58	28	4
4144540	VDS201A02439	4140432	VDS401A02439	2,439	.0960	—	41	12	17	0,4	58	28	4
4144541	VDS201A02489	4140433	VDS401A02489	2,489	.0980	—	40	12	17	0,4	58	28	4
4144542	VDS201A02500	4140434	VDS401A02500	2,500	.0984	—	—	12	17	0,4	58	28	4
4144543	VDS201A02578	4140435	VDS401A02578	2,578	.1015	—	38	12	17	0,4	58	28	4
4144544	VDS201A02600	4140436	VDS401A02600	2,600	.1024	—	—	12	17	0,4	58	28	4
4144545	VDS201A02642	4140437	VDS401A02642	2,642	.1040	—	37	12	17	0,4	58	28	4
4144546	VDS201A02700	4140438	VDS401A02700	2,700	.1063	—	—	12	17	0,4	58	28	4
4144547	VDS201A02705	4140439	VDS401A02705	2,705	.1065	—	36	12	17	0,4	58	28	4
4144548	VDS201A02779	4140440	VDS401A02779	2,779	.1094	7/64	—	12	17	0,4	58	28	4
4144549	VDS201A02800	4140441	VDS401A02800	2,800	.1102	—	—	12	17	0,5	58	28	4
4144550	VDS201A02820	4140442	VDS401A02820	2,820	.1110	—	34	12	17	0,5	58	28	4
4144551	VDS201A02870	4140443	VDS401A02870	2,870	.1130	—	33	12	17	0,5	58	28	4
4144552	VDS201A02900	4140444	VDS401A02900	2,900	.1142	—	—	12	17	0,5	58	28	4
4144553	VDS201A02947	4140445	VDS401A02947	2,947	.1160	—	32	12	17	0,5	58	28	4
4143907	VDS201A03000	4140299	VDS401A03000	3,000	.1181	—	—	14	20	0,5	62	36	6
4143908	VDS201A03048	4140300	VDS401A03048	3,048	.1200	—	31	14	20	0,5	62	36	6
4143909	VDS201A03100	4140301	VDS401A03100	3,100	.1220	—	—	14	20	0,5	62	36	6
4143910	VDS201A03175	4140302	VDS401A03175	3,175	.1250	1/8	—	14	20	0,5	62	36	6
4143911	VDS201A03200	4140303	VDS401A03200	3,200	.1260	—	—	14	20	0,5	62	36	6
4143912	VDS201A03264	4140304	VDS401A03264	3,264	.1285	—	30	14	20	0,5	62	36	6
4143913	VDS201A03300	4140305	VDS401A03300	3,300	.1299	—	—	14	20	0,5	62	36	6
4143914	VDS201A03400	4140306	VDS401A03400	3,400	.1339	—	—	14	20	0,6	62	36	6
4143915	VDS201A03455	4140307	VDS401A03455	3,455	.1360	—	29	14	20	0,6	62	36	6
4143916	VDS201A03500	4140308	VDS401A03500	3,500	.1378	—	—	14	20	0,6	62	36	6
4143917	VDS201A03571	4140309	VDS401A03571	3,571	.1406	9/64	—	14	20	0,6	62	36	6
4143918	VDS201A03600	4140310	VDS401A03600	3,600	.1417	—	—	14	20	0,6	62	36	6
4143919	VDS201A03658	4140311	VDS401A03658	3,658	.1440	—	27	14	20	0,6	62	36	6
4143920	VDS201A03700	4140312	VDS401A03700	3,700	.1457	—	—	14	20	0,6	62	36	6
4143921	VDS201A03734	4140313	VDS401A03734	3,734	.1470	—	26	14	20	0,6	62	36	6
4143922	VDS201A03800	4140314	VDS401A03800	3,800	.1496	—	—	17	24	0,6	66	36	6
4143923	VDS201A03900	4140315	VDS401A03900	3,900	.1535	—	—	17	24	0,6	66	36	6
4143924	VDS201A03970	4140316	VDS401A03970	3,970	.1563	5/32	—	17	24	0,7	66	36	6
4143925	VDS201A04000	4140317	VDS401A04000	4,000	.1575	—	—	17	24	0,7	66	36	6
4143926	VDS201A04039	4140318	VDS401A04039	4,039	.1590	—	21	17	24	0,7	66	36	6
4143927	VDS201A04090	4140319	VDS401A04090	4,090	.1610	—	20	17	24	0,7	66	36	6
4143928	VDS201A04100	4140320	VDS401A04100	4,100	.1614	—	—	17	24	0,7	66	36	6
4143929	VDS201A04200	4140321	VDS401A04200	4,200	.1654	—	—	17	24	0,7	66	36	6
4143930	VDS201A04217	4140322	VDS401A04217	4,217	.1660	—	19	17	24	0,7	66	36	6
4143931	VDS201A04300	4140323	VDS401A04300	4,300	.1693	—	—	17	24	0,7	66	36	6

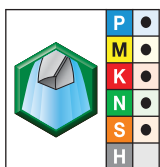
(continued)

Solid Carbide Drills

VariDrill™ • Steel, Stainless Steel, Cast Iron, Aluminum, and High-Temp Alloys • 3 x D



(VDS201A • VDS401A • 3 x D — continued)



● first choice
○ alternate choice

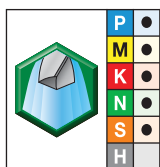
D1 diameter

grade WU25PD TiAlN		grade WU25PD TiAlN		D1 diameter				L4 max	L3	L5	L	LS	D
order #	catalog #	order #	catalog #	mm	in	fraction	wire size						
4143932	VDS201A04366	4140324	VDS401A04366	4,366	.1719	11/64	—	17	24	0,7	66	36	6
4143933	VDS201A04400	4140325	VDS401A04400	4,400	.1732	—	—	17	24	0,7	66	36	6
4143934	VDS201A04500	4140326	VDS401A04500	4,500	.1772	—	—	17	24	0,7	66	36	6
4143935	VDS201A04600	4140328	VDS401A04600	4,600	.1811	—	—	17	24	0,8	66	36	6
4143936	VDS201A04623	4140329	VDS401A04623	4,623	.1820	—	14	17	24	0,8	66	36	6
4143937	VDS201A04700	4140330	VDS401A04700	4,700	.1850	—	13	17	24	0,8	66	36	6
4143938	VDS201A04763	4140331	VDS401A04763	4,763	.1875	3/16	—	20	28	0,8	66	36	6
4143939	VDS201A04800	4140332	VDS401A04800	4,800	.1890	—	12	20	28	0,8	66	36	6
4143940	VDS201A04852	4140333	VDS401A04852	4,852	.1910	—	11	20	28	0,8	66	36	6
4143941	VDS201A04900	4140334	VDS401A04900	4,900	.1929	—	—	20	28	0,8	66	36	6
4143942	VDS201A05000	4140335	VDS401A05000	5,000	.1969	—	—	20	28	0,8	66	36	6
4143943	VDS201A05100	4140336	VDS401A05100	5,100	.2008	—	—	20	28	0,8	66	36	6
4143944	VDS201A05106	4140337	VDS401A05106	5,106	.2010	—	7	20	28	0,8	66	36	6
4143945	VDS201A05159	4140338	VDS401A05159	5,159	.2031	13/64	—	20	28	0,9	66	36	6
4143946	VDS201A05200	4140339	VDS401A05200	5,200	.2047	—	—	20	28	0,9	66	36	6
4143947	VDS201A05300	4140340	VDS401A05300	5,300	.2087	—	—	20	28	0,9	66	36	6
4143948	VDS201A05400	4140341	VDS401A05400	5,400	.2126	—	—	20	28	0,9	66	36	6
4143949	VDS201A05410	4140342	VDS401A05410	5,410	.2130	—	3	20	28	0,9	66	36	6
4143950	VDS201A05500	4140343	VDS401A05500	5,500	.2165	—	—	20	28	0,9	66	36	6
4143951	VDS201A05558	4140344	VDS401A05558	5,558	.2188	7/32	—	20	28	0,9	66	36	6
4143952	VDS201A05600	4140345	VDS401A05600	5,600	.2205	—	—	20	28	0,9	66	36	6
4143953	VDS201A05616	4140346	VDS401A05616	5,616	.2211	—	2	20	28	0,9	66	36	6
4143954	VDS201A05700	4140347	VDS401A05700	5,700	.2244	—	—	20	28	1,0	66	36	6
4143955	VDS201A05800	4140348	VDS401A05800	5,800	.2283	—	—	20	28	1,0	66	36	6
4143956	VDS201A05900	4140349	VDS401A05900	5,900	.2323	—	—	20	28	1,0	66	36	6
4143957	VDS201A05954	4140350	VDS401A05954	5,954	.2344	15/64	—	20	28	1,0	66	36	6
4143958	VDS201A06000	4140351	VDS401A06000	6,000	.2362	—	—	20	28	1,0	66	36	6
4143959	VDS201A06100	4140352	VDS401A06100	6,100	.2402	—	—	24	34	1,0	79	36	8
4143960	VDS201A06200	4140353	VDS401A06200	6,200	.2441	—	—	24	34	1,0	79	36	8
4143961	VDS201A06300	4140354	VDS401A06300	6,300	.2480	—	—	24	34	1,1	79	36	8
4143962	VDS201A06350	4140355	VDS401A06350	6,350	.2500	1/4	E	24	34	1,1	79	36	8
4143963	VDS201A06400	4140356	VDS401A06400	6,400	.2520	—	—	24	34	1,1	79	36	8
4143964	VDS201A06500	4140357	VDS401A06500	6,500	.2559	—	—	24	34	1,1	79	36	8
4143965	VDS201A06528	4140358	VDS401A06528	6,528	.2570	—	F	24	34	1,1	79	36	8
4143966	VDS201A06600	4140359	VDS401A06600	6,600	.2598	—	—	24	34	1,1	79	36	8
4143967	VDS201A06630	4140360	VDS401A06630	6,630	.2610	—	G	24	34	1,1	79	36	8
4143968	VDS201A06700	4140361	VDS401A06700	6,700	.2638	—	—	24	34	1,1	79	36	8
4143969	VDS201A06746	4140362	VDS401A06746	6,746	.2656	17/64	—	24	34	1,1	79	36	8
4143970	VDS201A06800	4140363	VDS401A06800	6,800	.2677	—	—	24	34	1,1	79	36	8
4143971	VDS201A06900	4140364	VDS401A06900	6,900	.2717	—	—	24	34	1,2	79	36	8

(continued)

Solid Carbide Drills

(VDS201A • VDS401A • 3 x D — continued)



● first choice

○ alternate choice

D1 diameter

grade WU25PD TiAlN		grade WU25PD TiAlN		D1 diameter									
order #	catalog #	order #	catalog #	mm	in	fraction	wire size	L4 max	L3	L5	L	LS	D
4143972	VDS201A07000	4140365	VDS401A07000	7,000	.2756	—	—	24	34	1,2	79	36	8
4143973	VDS201A07100	4140366	VDS401A07100	7,100	.2795	—	—	29	41	1,2	79	36	8
4143974	VDS201A07145	4140367	VDS401A07145	7,145	.2813	9/32	—	29	41	1,2	79	36	8
4143975	VDS201A07200	4140368	VDS401A07200	7,200	.2835	—	—	29	41	1,2	79	36	8
4143976	VDS201A07300	4140369	VDS401A07300	7,300	.2874	—	—	29	41	1,2	79	36	8
4143977	VDS201A07400	4140370	VDS401A07400	7,400	.2913	—	—	29	41	1,3	79	36	8
4143978	VDS201A07500	4140371	VDS401A07500	7,500	.2953	—	—	29	41	1,3	79	36	8
4143979	VDS201A07541	4140372	VDS401A07541	7,541	.2969	19/64	—	29	41	1,3	79	36	8
4143980	VDS201A07600	4140373	VDS401A07600	7,600	.2992	—	—	29	41	1,3	79	36	8
4143981	VDS201A07700	4140374	VDS401A07700	7,700	.3031	—	—	29	41	1,3	79	36	8
4143982	VDS201A07800	4140375	VDS401A07800	7,800	.3071	—	—	29	41	1,3	79	36	8
4143983	VDS201A07900	4140376	VDS401A07900	7,900	.3110	—	—	29	41	1,3	79	36	8
4143984	VDS201A07938	4140377	VDS401A07938	7,938	.3125	5/16	—	29	41	1,3	79	36	8
4143985	VDS201A08000	4140378	VDS401A08000	8,000	.3150	—	—	29	41	1,4	79	36	8
4143986	VDS201A08100	4140379	VDS401A08100	8,100	.3189	—	—	35	47	1,4	89	40	10
4143987	VDS201A08200	4140380	VDS401A08200	8,200	.3228	—	—	35	47	1,4	89	40	10
4143988	VDS201A08300	4140381	VDS401A08300	8,300	.3268	—	—	35	47	1,4	89	40	10
4143989	VDS201A08334	4140382	VDS401A08334	8,334	.3281	21/64	—	35	47	1,4	89	40	10
4143990	VDS201A08400	4140383	VDS401A08400	8,400	.3307	—	—	35	47	1,4	89	40	10
4143991	VDS201A08433	4140384	VDS401A08433	8,433	.3320	—	Q	35	47	1,4	89	40	10
4143992	VDS201A08500	4140385	VDS401A08500	8,500	.3346	—	—	35	47	1,4	89	40	10
4143993	VDS201A08600	4140386	VDS401A08600	8,600	.3386	—	—	35	47	1,5	89	40	10
4143994	VDS201A08700	4140387	VDS401A08700	8,700	.3425	—	—	35	47	1,5	89	40	10
4143995	VDS201A08733	4140388	VDS401A08733	8,733	.3438	11/32	—	35	47	1,5	89	40	10
4143996	VDS201A08800	4140389	VDS401A08800	8,800	.3465	—	—	35	47	1,5	89	40	10
4143997	VDS201A08900	4140390	VDS401A08900	8,900	.3504	—	—	35	47	1,5	89	40	10
4143998	VDS201A09000	4140391	VDS401A09000	9,000	.3543	—	—	35	47	1,5	89	40	10
4143999	VDS201A09100	4140392	VDS401A09100	9,100	.3583	—	—	35	47	1,5	89	40	10
4144000	VDS201A09129	4140393	VDS401A09129	9,129	.3594	23/64	—	35	47	1,6	89	40	10
4144001	VDS201A09200	4140394	VDS401A09200	9,200	.3622	—	—	35	47	1,6	89	40	10
4144002	VDS201A09300	4140395	VDS401A09300	9,300	.3661	—	—	35	47	1,6	89	40	10
4144003	VDS201A09347	4140396	VDS401A09347	9,347	.3680	—	U	35	47	1,6	89	40	10
4144004	VDS201A09400	4140397	VDS401A09400	9,400	.3701	—	—	35	47	1,6	89	40	10
4144005	VDS201A09500	4140398	VDS401A09500	9,500	.3740	—	—	35	47	1,6	89	40	10
4144006	VDS201A09525	4140399	VDS401A09525	9,525	.3750	3/8	—	35	47	1,6	89	40	10
4144007	VDS201A09600	4140400	VDS401A09600	9,600	.3780	—	—	35	47	1,6	89	40	10
4144008	VDS201A09700	4140401	VDS401A09700	9,700	.3819	—	—	35	47	1,7	89	40	10
4144009	VDS201A09800	4140402	VDS401A09800	9,800	.3858	—	—	35	47	1,7	89	40	10
4144010	VDS201A09900	4140403	VDS401A09900	9,900	.3898	—	—	35	47	1,7	89	40	10
4144011	VDS201A09921	4140404	VDS401A09921	9,921	.3906	25/64	—	35	47	1,7	89	40	10

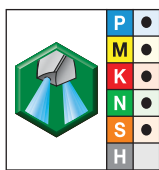
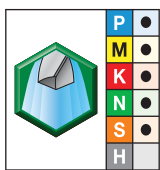
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Solid Carbide Drills

VariDrill™ • Steel, Stainless Steel, Cast Iron, Aluminum, and High-Temp Alloys • 3 x D



(VDS201A • VDS401A • 3 x D — continued)



● first choice
○ alternate choice

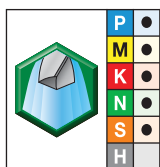
D1 diameter

grade WU25PD TiAlN		grade WU25PD TiAlN		D1 diameter				L4 max	L3	L5	L	LS	D
order #	catalog #	order #	catalog #	mm	in	fraction	wire size						
4144172	VDS201A10000	4140001	VDS401A10000	10,000	.3937	—	—	35	47	1,7	89	40	10
4144423	VDS201A10100	4140002	VDS401A10100	10,100	.3976	—	—	40	55	1,7	102	45	12
4144424	VDS201A10200	4140163	VDS401A10200	10,200	.4016	—	—	40	55	1,7	102	45	12
4144425	VDS201A10300	4140164	VDS401A10300	10,300	.4055	—	—	40	55	1,8	102	45	12
4144426	VDS201A10320	4140165	VDS401A10320	10,320	.4063	13/32	—	40	55	1,8	102	45	12
4144427	VDS201A10400	4140166	VDS401A10400	10,400	.4094	—	—	40	55	1,8	102	45	12
4144428	VDS201A10500	4140167	VDS401A10500	10,500	.4134	—	—	40	55	1,8	102	45	12
4144429	VDS201A10600	4140168	VDS401A10600	10,600	.4173	—	—	40	55	1,8	102	45	12
4144430	VDS201A10700	4140169	VDS401A10700	10,700	.4213	—	—	40	55	1,8	102	45	12
4144431	VDS201A10716	4140170	VDS401A10716	10,716	.4219	27/64	—	40	55	1,8	102	45	12
4144432	VDS201A10800	4140171	VDS401A10800	10,800	.4252	—	—	40	55	1,8	102	45	12
4144433	VDS201A10900	4140172	VDS401A10900	10,900	.4291	—	—	40	55	1,9	102	45	12
4144434	VDS201A11000	4140173	VDS401A11000	11,000	.4331	—	—	40	55	1,9	102	45	12
4144435	VDS201A11100	4140174	VDS401A11100	11,100	.4370	—	—	40	55	1,9	102	45	12
4144436	VDS201A11113	4140175	VDS401A11113	11,113	.4375	7/16	—	40	55	1,9	102	45	12
4144437	VDS201A11200	4140176	VDS401A11200	11,200	.4409	—	—	40	55	1,9	102	45	12
4144438	VDS201A11300	4140177	VDS401A11300	11,300	.4449	—	—	40	55	1,9	102	45	12
4144439	VDS201A11400	4140178	VDS401A11400	11,400	.4488	—	—	40	55	2,0	102	45	12
4144440	VDS201A11500	4140179	VDS401A11500	11,500	.4528	—	—	40	55	2,0	102	45	12
4144441	VDS201A11509	4140180	VDS401A11509	11,509	.4531	29/64	—	40	55	2,0	102	45	12
4144442	VDS201A11600	4140181	VDS401A11600	11,600	.4567	—	—	40	55	2,0	102	45	12
4144443	VDS201A11700	4140182	VDS401A11700	11,700	.4606	—	—	40	55	2,0	102	45	12
4144444	VDS201A11800	4140183	VDS401A11800	11,800	.4646	—	—	40	55	2,0	102	45	12
4144445	VDS201A11900	4140184	VDS401A11900	11,900	.4685	—	—	40	55	2,0	102	45	12
4144446	VDS201A11908	4140185	VDS401A11908	11,908	.4688	15/32	—	40	55	2,0	102	45	12
4144447	VDS201A12000	4140186	VDS401A12000	12,000	.4724	—	—	40	55	2,1	102	45	12
4144448	VDS201A12100	4140187	VDS401A12100	12,100	.4764	—	—	43	60	2,1	107	45	14
4144449	VDS201A12200	4140188	VDS401A12200	12,200	.4803	—	—	43	60	2,1	107	45	14
4144450	VDS201A12300	4140189	VDS401A12300	12,300	.4843	—	—	43	60	2,1	107	45	14
4144451	VDS201A12304	4140190	VDS401A12304	12,304	.4844	31/64	—	43	60	2,1	107	45	14
4144452	VDS201A12400	4140191	VDS401A12400	12,400	.4882	—	—	43	60	2,1	107	45	14
4144453	VDS201A12500	4140192	VDS401A12500	12,500	.4921	—	—	43	60	2,1	107	45	14
4144454	VDS201A12600	4140194	VDS401A12600	12,600	.4961	—	—	43	60	2,2	107	45	14
4144455	VDS201A12700	4140195	VDS401A12700	12,700	.5000	1/2	—	43	60	2,2	107	45	14
4144456	VDS201A12800	4140196	VDS401A12800	12,800	.5039	—	—	43	60	2,2	107	45	14
4144457	VDS201A12900	4140197	VDS401A12900	12,900	.5079	—	—	43	60	2,2	107	45	14
4144458	VDS201A13000	4140198	VDS401A13000	13,000	.5118	—	—	43	60	2,2	107	45	14
4144459	VDS201A13096	4140199	VDS401A13096	13,096	.5156	33/64	—	43	60	2,3	107	45	14
4144460	VDS201A13100	4140200	VDS401A13100	13,100	.5157	—	—	43	60	2,3	107	45	14
4144461	VDS201A13200	4140201	VDS401A13200	13,200	.5197	—	—	43	60	2,3	107	45	14

(continued)

Solid Carbide Drills

(VDS201A • VDS401A • 3 x D — continued)



● first choice

○ alternate choice

D1 diameter

grade WU25PD TiAlN		grade WU25PD TiAlN		D1 diameter									
order #	catalog #	order #	catalog #	mm	in	fraction	wire size	L4 max	L3	L5	L	LS	D
4144462	VDS201A13300	4140202	VDS401A13300	13,300	.5236	—	—	43	60	2,3	107	45	14
4144463	VDS201A13400	4140203	VDS401A13400	13,400	.5276	—	—	43	60	2,3	107	45	14
4144464	VDS201A13500	4140204	VDS401A13500	13,500	.5315	—	—	43	60	2,3	107	45	14
4144465	VDS201A13600	4140205	VDS401A13600	13,600	.5354	—	—	43	60	2,3	107	45	14
4144466	VDS201A13700	4140206	VDS401A13700	13,700	.5394	—	—	43	60	2,4	107	45	14
4144467	VDS201A13800	4140207	VDS401A13800	13,800	.5433	—	—	43	60	2,4	107	45	14
4144468	VDS201A13891	4140208	VDS401A13891	13,891	.5469	35/64	—	43	60	2,4	107	45	14
4144469	VDS201A13900	4140209	VDS401A13900	13,900	.5472	—	—	43	60	2,4	107	45	14
4144470	VDS201A14000	4140210	VDS401A14000	14,000	.5512	—	—	43	60	2,4	107	45	14
4144471	VDS201A14100	4140211	VDS401A14100	14,100	.5551	—	—	45	65	2,4	115	48	16
4144472	VDS201A14200	4140212	VDS401A14200	14,200	.5591	—	—	45	65	2,5	115	48	16
4144473	VDS201A14288	4140213	VDS401A14288	14,288	.5625	9/16	—	45	65	2,5	115	48	16
4144474	VDS201A14300	4140214	VDS401A14300	14,300	.5630	—	—	45	65	2,5	115	48	16
4144475	VDS201A14400	4140215	VDS401A14400	14,400	.5669	—	—	45	65	2,5	115	48	16
4144476	VDS201A14500	4140216	VDS401A14500	14,500	.5709	—	—	45	65	2,5	115	48	16
4144477	VDS201A14600	4140217	VDS401A14600	14,600	.5748	—	—	45	65	2,5	115	48	16
4144478	VDS201A14684	4140218	VDS401A14684	14,684	.5781	37/64	—	45	65	2,5	115	48	16
4144479	VDS201A14700	4140219	VDS401A14700	14,700	.5787	—	—	45	65	2,5	115	48	16
4144480	VDS201A14800	4140220	VDS401A14800	14,800	.5827	—	—	45	65	2,6	115	48	16
4144481	VDS201A14900	4140221	VDS401A14900	14,900	.5866	—	—	45	65	2,6	115	48	16
4144482	VDS201A15000	4140222	VDS401A15000	15,000	.5906	—	—	45	65	2,6	115	48	16
4144483	VDS201A15083	4140223	VDS401A15083	15,083	.5938	19/32	—	45	65	2,6	115	48	16
4144484	VDS201A15100	4140224	VDS401A15100	15,100	.5945	—	—	45	65	2,6	115	48	16
4144485	VDS201A15200	4140225	VDS401A15200	15,200	.5984	—	—	45	65	2,6	115	48	16
4144486	VDS201A15300	4140226	VDS401A15300	15,300	.6024	—	—	45	65	2,6	115	48	16
4144487	VDS201A15400	4140227	VDS401A15400	15,400	.6063	—	—	45	65	2,7	115	48	16
4144488	VDS201A15479	4140228	VDS401A15479	15,479	.6094	39/64	—	45	65	2,7	115	48	16
4144489	VDS201A15500	4140229	VDS401A15500	15,500	.6102	—	—	45	65	2,7	115	48	16
4144490	VDS201A15600	4140230	VDS401A15600	15,600	.6142	—	—	45	65	2,7	115	48	16
4144491	VDS201A15700	4140231	VDS401A15700	15,700	.6181	—	—	45	65	2,7	115	48	16
4144492	VDS201A15800	4140232	VDS401A15800	15,800	.6220	—	—	45	65	2,7	115	48	16
4144493	VDS201A15875	4140233	VDS401A15875	15,875	.6250	5/8	—	45	65	2,7	115	48	16
4144494	VDS201A15900	4140234	VDS401A15900	15,900	.6260	—	—	45	65	2,8	115	48	16
4144495	VDS201A16000	4140235	VDS401A16000	16,000	.6299	—	—	45	65	2,8	115	48	16
4144496	VDS201A16100	4140236	VDS401A16100	16,100	.6339	—	—	51	73	2,8	123	48	18
4144497	VDS201A16200	4140237	VDS401A16200	16,200	.6378	—	—	51	73	2,8	123	48	18
4144498	VDS201A16271	4140238	VDS401A16271	16,271	.6406	41/64	—	51	73	2,8	123	48	18
4144499	VDS201A16300	4140239	VDS401A16300	16,300	.6417	—	—	51	73	2,8	123	48	18
4144500	VDS201A16400	4140241	VDS401A16400	16,400	.6457	—	—	51	73	2,8	123	48	18
4144501	VDS201A16500	4140242	VDS401A16500	16,500	.6496	—	—	51	73	2,9	123	48	18

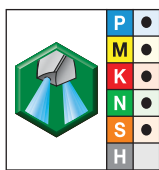
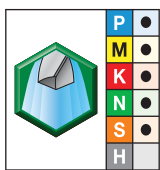
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Solid Carbide Drills

VariDrill™ • Steel, Stainless Steel, Cast Iron, Aluminum, and High-Temp Alloys • 3 x D



(VDS201A • VDS401A • 3 x D — continued)

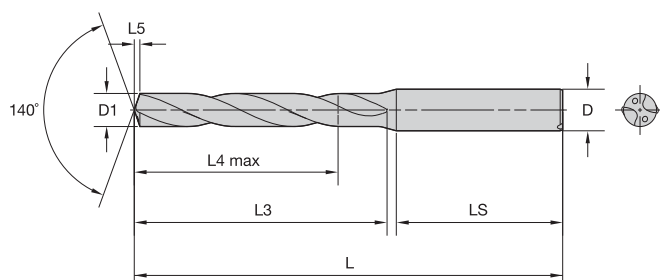


● first choice
○ alternate choice

D1 diameter

grade WU25PD TiAlN		grade WU25PD TiAlN		D1 diameter				L4 max	L3	L5	L	LS	D
order #	catalog #	order #	catalog #	mm	in	fraction	wire size						
4144503	VDS201A16600	4140243	VDS401A16600	16,600	.6535	—	—	51	73	2,9	123	48	18
4144504	VDS201A16670	4140244	VDS401A16670	16,670	.6563	21/32	—	51	73	2,9	123	48	18
4144505	VDS201A16700	4140245	VDS401A16700	16,700	.6575	—	—	51	73	2,9	123	48	18
4144506	VDS201A16800	4140246	VDS401A16800	16,800	.6614	—	—	51	73	2,9	123	48	18
4144507	VDS201A16900	4140247	VDS401A16900	16,900	.6654	—	—	51	73	2,9	123	48	18
4144508	VDS201A17000	4140248	VDS401A17000	17,000	.6693	—	—	51	73	2,9	123	48	18
4144509	VDS201A17100	4140249	VDS401A17100	17,100	.6732	—	—	51	73	3,0	123	48	18
4144510	VDS201A17200	4140250	VDS401A17200	17,200	.6772	—	—	51	73	3,0	123	48	18
4144511	VDS201A17300	4140251	VDS401A17300	17,300	.6811	—	—	51	73	3,0	123	48	18
4144512	VDS201A17400	4140252	VDS401A17400	17,400	.6850	—	—	51	73	3,0	123	48	18
4144513	VDS201A17463	4140253	VDS401A17463	17,463	.6875	11/16	—	51	73	3,0	123	48	18
4144514	VDS201A17500	4140254	VDS401A17500	17,500	.6890	—	—	51	73	3,0	123	48	18
4144515	VDS201A17600	4140255	VDS401A17600	17,600	.6929	—	—	51	73	3,1	123	48	18
4144516	VDS201A17700	4140256	VDS401A17700	17,700	.6969	—	—	51	73	3,1	123	48	18
4144517	VDS201A17800	4140257	VDS401A17800	17,800	.7008	—	—	51	73	3,1	123	48	18
4144518	VDS201A17859	4140258	VDS401A17859	17,859	.7031	45/64	—	51	73	3,1	123	48	18
4144519	VDS201A17900	4140259	VDS401A17900	17,900	.7047	—	—	51	73	3,1	123	48	18
4144590	VDS201A18000	4140449	VDS401A18000	18,000	.7087	—	—	51	73	3,1	123	48	18
4144591	VDS201A18100	4140450	VDS401A18100	18,100	.7126	—	—	55	79	3,1	131	50	20
4144592	VDS201A18200	4140451	VDS401A18200	18,200	.7165	—	—	55	79	3,2	131	50	20
4144593	VDS201A18258	4140452	VDS401A18258	18,258	.7188	23/32	—	55	79	3,2	131	50	20
4144594	VDS201A18300	4140463	VDS401A18300	18,300	.7205	—	—	55	79	3,2	131	50	20
4144595	VDS201A18400	4140464	VDS401A18400	18,400	.7244	—	—	55	79	3,2	131	50	20
4144596	VDS201A18500	4140465	VDS401A18500	18,500	.7283	—	—	55	79	3,2	131	50	20
4144597	VDS201A18600	4140466	VDS401A18600	18,600	.7323	—	—	55	79	3,2	131	50	20
4144598	VDS201A18654	4140467	VDS401A18654	18,654	.7344	47/64	—	55	79	3,2	131	50	20
4144599	VDS201A18700	4140468	VDS401A18700	18,700	.7362	—	—	55	79	3,2	131	50	20
4144600	VDS201A18800	4140469	VDS401A18800	18,800	.7402	—	—	55	79	3,3	131	50	20
4144601	VDS201A18900	4140470	VDS401A18900	18,900	.7441	—	—	55	79	3,3	131	50	20
4144602	VDS201A19000	4140471	VDS401A19000	19,000	.7480	—	—	55	79	3,3	131	50	20
4144603	VDS201A19050	4140472	VDS401A19050	19,050	.7500	3/4	—	55	79	3,3	131	50	20
4144604	VDS201A19100	4140473	VDS401A19100	19,100	.7520	—	—	55	79	3,3	131	50	20
4144605	VDS201A19200	4140474	VDS401A19200	19,200	.7559	—	—	55	79	3,3	131	50	20
4144606	VDS201A19300	4140475	VDS401A19300	19,300	.7598	—	—	55	79	3,4	131	50	20
4144607	VDS201A19400	4140476	VDS401A19400	19,400	.7638	—	—	55	79	3,4	131	50	20
4144608	VDS201A19500	4140477	VDS401A19500	19,500	.7677	—	—	55	79	3,4	131	50	20
4144609	VDS201A19600	4140478	VDS401A19600	19,600	.7717	—	—	55	79	3,4	131	50	20
4144610	VDS201A19700	4140479	VDS401A19700	19,700	.7756	—	—	55	79	3,4	131	50	20
4144611	VDS201A19800	4140480	VDS401A19800	19,800	.7795	—	—	55	79	3,4	131	50	20
4144612	VDS201A19900	4140481	VDS401A19900	19,900	.7835	—	—	55	79	3,5	131	50	20
4144613	VDS201A20000	4140482	VDS401A20000	20,000	.7874	—	—	55	79	3,5	131	50	20

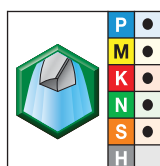
Solid Carbide Drills



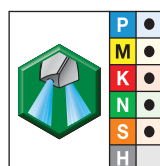
For information on L, L3, and L4 max, see page R133.



■ VDS202A • VDS402A • 5 x D



grade WU25PD
TiAlN



grade WU25PD
TiAlN

D1 diameter

● first choice

○ alternate choice

order #	catalog #	order #	catalog #	mm	in	fraction	wire size	L4 max	L3	L5	L	LS	D
4148000	VDS202A01000	—	—	1,000	.0394	—	—	6	9	0,1	58	28	4
4148001	VDS202A01016	—	—	1,016	.0400	—	—	6	9	0,1	58	28	4
4148002	VDS202A01041	—	—	1,041	.0410	—	—	6	9	0,2	58	28	4
4148003	VDS202A01067	—	—	1,067	.0420	—	—	6	9	0,2	58	28	4
4148004	VDS202A01092	—	—	1,092	.0430	—	—	6	9	0,2	58	28	4
4148005	VDS202A01100	—	—	1,100	.0433	—	—	6	9	0,2	58	28	4
4148006	VDS202A01181	—	—	1,181	.0465	—	—	6	9	0,2	58	28	4
4148007	VDS202A01191	—	—	1,191	.0469	—	—	6	9	0,2	58	28	4
4148008	VDS202A01200	—	—	1,200	.0472	—	—	6	9	0,2	58	28	4
4148009	VDS202A01300	—	—	1,300	.0512	—	—	6	9	0,2	58	28	4
4148010	VDS202A01321	—	—	1,321	.0520	—	—	6	9	0,2	58	28	4
4148011	VDS202A01397	—	—	1,397	.0550	—	—	6	9	0,2	58	28	4
4148012	VDS202A01400	—	—	1,400	.0551	—	—	6	9	0,2	58	28	4
4148013	VDS202A01500	4142871	VDS402A01500	1,500	.0591	—	—	9	12	0,2	58	40	4
4148014	VDS202A01600	4142884	VDS402A01600	1,600	.0630	—	—	9	12	0,2	58	28	4
4148015	VDS202A01700	4142887	VDS402A01700	1,700	.0669	—	—	9	12	0,3	58	28	4
4148016	VDS202A01800	4142890	VDS402A01800	1,800	.0709	—	—	9	12	0,3	58	28	4
4148017	VDS202A01900	4142893	VDS402A01900	1,900	.0748	—	—	9	12	0,3	58	28	4
4148018	VDS202A01984	4142896	VDS402A01984	1,984	.0781	—	—	14	18	0,3	58	28	4
4148019	VDS202A02000	4142899	VDS402A02000	2,000	.0787	—	—	14	18	0,3	58	28	4
4148020	VDS202A02100	4142902	VDS402A02100	2,100	.0827	—	—	14	18	0,3	58	28	4
4148021	VDS202A02200	4142905	VDS402A02200	2,200	.0866	—	—	14	18	0,3	58	28	4
4148022	VDS202A02300	4142908	VDS402A02300	2,300	.0906	—	—	14	18	0,4	58	28	4
4148023	VDS202A02383	4142911	VDS402A02383	2,383	.0938	3/32	—	17	22	0,4	58	28	4

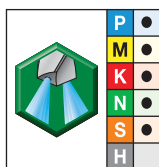
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Solid Carbide Drills

VariDrill™ • Steel, Stainless Steel, Cast Iron, Aluminum, and High-Temp Alloys • 5 x D



(VDS202A • VDS402A • 5 x D — continued)



● first choice
○ alternate choice

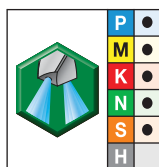
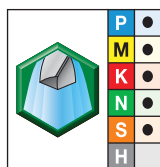
D1 diameter

grade WU25PD TiAlN		grade WU25PD TiAlN		D1 diameter				L4 max	L3	L5	L	LS	D
order #	catalog #	order #	catalog #	mm	in	fraction	wire size						
4148024	VDS202A02400	4142924	VDS402A02400	2,400	.0945	—	—	17	22	0,4	58	28	4
4148025	VDS202A02439	4142927	VDS402A02439	2,439	.0960	—	41	17	22	0,4	58	28	4
4148026	VDS202A02489	4142930	VDS402A02489	2,489	.0980	—	40	17	22	0,4	58	28	4
4148027	VDS202A02500	4142933	VDS402A02500	2,500	.0984	—	—	17	22	0,4	58	28	4
4148028	VDS202A02578	4142936	VDS402A02578	2,578	.1015	—	38	17	22	0,4	58	28	4
4148029	VDS202A02600	4142939	VDS402A02600	2,600	.1024	—	—	17	22	0,4	58	28	4
4148030	VDS202A02642	4142942	VDS402A02642	2,642	.1040	—	37	17	22	0,4	58	28	4
4148031	VDS202A02700	4142945	VDS402A02700	2,700	.1063	—	—	17	22	0,4	58	28	4
4148032	VDS202A02705	4142948	VDS402A02705	2,705	.1065	—	36	17	22	0,4	58	28	4
4148033	VDS202A02779	4142951	VDS402A02779	2,779	.1094	7/64	—	17	22	0,4	58	28	4
4148034	VDS202A02800	4142964	VDS402A02800	2,800	.1102	—	—	17	22	0,5	58	28	4
4148035	VDS202A02820	4142967	VDS402A02820	2,820	.1110	—	34	17	22	0,5	58	28	4
4148036	VDS202A02870	4142970	VDS402A02870	2,870	.1130	—	33	17	22	0,5	58	28	4
4148037	VDS202A02900	4142973	VDS402A02900	2,900	.1142	—	—	17	22	0,5	58	28	4
4148038	VDS202A02947	4142976	VDS402A02947	2,947	.1160	—	32	17	22	0,5	58	28	4
4148142	VDS202A03000	4142844	VDS402A03000	3,000	.1181	—	—	23	28	0,5	66	36	6
4148143	VDS202A03048	4142846	VDS402A03048	3,048	.1200	—	31	23	28	0,5	66	36	6
4148144	VDS202A03100	4142847	VDS402A03100	3,100	.1220	—	—	23	28	0,5	66	36	6
4148145	VDS202A03175	4142849	VDS402A03175	3,175	.1250	1/8	—	23	28	0,5	66	36	6
4148146	VDS202A03200	4142851	VDS402A03200	3,200	.1260	—	—	23	28	0,5	66	36	6
4148147	VDS202A03264	4142864	VDS402A03264	3,264	.1285	—	30	23	28	0,5	66	36	6
4148148	VDS202A03300	4142865	VDS402A03300	3,300	.1299	—	—	23	28	0,5	66	36	6
4148149	VDS202A03400	4142867	VDS402A03400	3,400	.1339	—	—	23	28	0,6	66	36	6
4148150	VDS202A03455	4142869	VDS402A03455	3,455	.1360	—	29	23	28	0,6	66	36	6
4148151	VDS202A03500	4142872	VDS402A03500	3,500	.1378	—	—	23	28	0,6	66	36	6
4148152	VDS202A03571	4142885	VDS402A03571	3,571	.1406	9/64	—	23	28	0,6	66	36	6
4148153	VDS202A03600	4142888	VDS402A03600	3,600	.1417	—	—	23	28	0,6	66	36	6
4148154	VDS202A03658	4142891	VDS402A03658	3,658	.1440	—	27	23	28	0,6	66	36	6
4148155	VDS202A03700	4142894	VDS402A03700	3,700	.1457	—	—	23	28	0,6	66	36	6
4148156	VDS202A03734	4142897	VDS402A03734	3,734	.1470	—	26	23	28	0,6	66	36	6
4148157	VDS202A03800	4142900	VDS402A03800	3,800	.1496	—	—	29	36	0,6	74	36	6
4148158	VDS202A03900	4142903	VDS402A03900	3,900	.1535	—	—	29	36	0,6	74	36	6
4148159	VDS202A03970	4142906	VDS402A03970	3,970	.1563	5/32	—	29	36	0,7	74	36	6
4148160	VDS202A04000	4142909	VDS402A04000	4,000	.1575	—	—	29	36	0,7	74	36	6
4148161	VDS202A04039	4142912	VDS402A04039	4,039	.1590	—	21	29	36	0,7	74	36	6
4148162	VDS202A04090	4142925	VDS402A04090	4,090	.1610	—	20	29	36	0,7	74	36	6
4148163	VDS202A04100	4142928	VDS402A04100	4,100	.1614	—	—	29	36	0,7	74	36	6
4148164	VDS202A04200	4142931	VDS402A04200	4,200	.1654	—	—	29	36	0,7	74	36	6
4148165	VDS202A04217	4142934	VDS402A04217	4,217	.1660	—	19	29	36	0,7	74	36	6
4148166	VDS202A04300	4142937	VDS402A04300	4,300	.1693	—	—	29	36	0,7	74	36	6

(continued)

Solid Carbide Drills

(VDS202A • VDS402A • 5 x D — continued)



● first choice
○ alternate choice

D1 diameter

grade WU25PD TiAlN		grade WU25PD TiAlN		D1 diameter				L4 max	L3	L5	L	LS	D
order #	catalog #	order #	catalog #	mm	in	fraction	wire size						
4148167	VDS202A04366	4142940	VDS402A04366	4,366	.1719	11/64	—	29	36	0,7	74	36	6
4148168	VDS202A04400	4142943	VDS402A04400	4,400	.1732	—	—	29	36	0,7	74	36	6
4148169	VDS202A04500	4142946	VDS402A04500	4,500	.1772	—	—	29	36	0,7	74	36	6
4148170	VDS202A04600	4142949	VDS402A04600	4,600	.1811	—	—	29	36	0,8	74	36	6
4148171	VDS202A04623	4142952	VDS402A04623	4,623	.1820	—	14	29	36	0,8	74	36	6
4148172	VDS202A04700	4142965	VDS402A04700	4,700	.1850	—	13	29	36	0,8	74	36	6
4148173	VDS202A04763	4142968	VDS402A04763	4,763	.1875	3/16	—	35	44	0,8	82	36	6
4148174	VDS202A04800	4142971	VDS402A04800	4,800	.1890	—	12	35	44	0,8	82	36	6
4148175	VDS202A04852	4142974	VDS402A04852	4,852	.1910	—	11	35	44	0,8	82	36	6
4148176	VDS202A04900	4142977	VDS402A04900	4,900	.1929	—	—	35	44	0,8	82	36	6
4148177	VDS202A05000	4142979	VDS402A05000	5,000	.1969	—	—	35	44	0,8	82	36	6
4148178	VDS202A05100	4142981	VDS402A05100	5,100	.2008	—	—	35	44	0,8	82	36	6
4148179	VDS202A05106	4142994	VDS402A05106	5,106	.2010	—	7	35	44	0,8	82	36	6
4148180	VDS202A05159	4142996	VDS402A05159	5,159	.2031	13/64	—	35	44	0,9	82	36	6
4148181	VDS202A05200	4142997	VDS402A05200	5,200	.2047	—	—	35	44	0,9	82	36	6
4148182	VDS202A05300	4142999	VDS402A05300	5,300	.2087	—	—	35	44	0,9	82	36	6
4148183	VDS202A05400	4143000	VDS402A05400	5,400	.2126	—	—	35	44	0,9	82	36	6
4148184	VDS202A05410	4143001	VDS402A05410	5,410	.2130	—	3	35	44	0,9	82	36	6
4148185	VDS202A05500	4143002	VDS402A05500	5,500	.2165	—	—	35	44	0,9	82	36	6
4148186	VDS202A05558	4143003	VDS402A05558	5,558	.2188	7/32	—	35	44	0,9	82	36	6
4148187	VDS202A05600	4143004	VDS402A05600	5,600	.2205	—	—	35	44	0,9	82	36	6
4148188	VDS202A05616	4143005	VDS402A05616	5,616	.2211	—	2	35	44	0,9	82	36	6
4148189	VDS202A05700	4143006	VDS402A05700	5,700	.2244	—	—	35	44	1,0	82	36	6
4148190	VDS202A05800	4143007	VDS402A05800	5,800	.2283	—	—	35	44	1,0	82	36	6
4148191	VDS202A05900	4143008	VDS402A05900	5,900	.2323	—	—	35	44	1,0	82	36	6
4148192	VDS202A05954	4143009	VDS402A05954	5,954	.2344	15/64	—	35	44	1,0	82	36	6
4148193	VDS202A06000	4143010	VDS402A06000	6,000	.2362	—	—	35	44	1,0	82	36	6
4148194	VDS202A06100	4143011	VDS402A06100	6,100	.2402	—	—	43	53	1,0	91	36	8
4148195	VDS202A06200	4143012	VDS402A06200	6,200	.2441	—	—	43	53	1,0	91	36	8
4148196	VDS202A06300	4143023	VDS402A06300	6,300	.2480	—	—	43	53	1,1	91	36	8
4148197	VDS202A06350	4143024	VDS402A06350	6,350	.2500	1/4	E	43	53	1,1	91	36	8
4148198	VDS202A06400	4143025	VDS402A06400	6,400	.2520	—	—	43	53	1,1	91	36	8
4148199	VDS202A06500	4143026	VDS402A06500	6,500	.2559	—	—	43	53	1,1	91	36	8
4148200	VDS202A06528	4143027	VDS402A06528	6,528	.2570	—	F	43	53	1,1	91	36	8
4148201	VDS202A06600	4143028	VDS402A06600	6,600	.2598	—	—	43	53	1,1	91	36	8
4148202	VDS202A06630	4143029	VDS402A06630	6,630	.2610	—	G	43	53	1,1	91	36	8
4148203	VDS202A06700	4143030	VDS402A06700	6,700	.2638	—	—	43	53	1,1	91	36	8
4148204	VDS202A06746	4143031	VDS402A06746	6,746	.2656	17/64	—	43	53	1,1	91	36	8
4148205	VDS202A06800	4143032	VDS402A06800	6,800	.2677	—	—	43	53	1,1	91	36	8
4148206	VDS202A06900	4143043	VDS402A06900	6,900	.2717	—	—	43	53	1,2	91	36	8

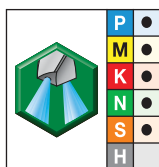
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Solid Carbide Drills

VariDrill™ • Steel, Stainless Steel, Cast Iron, Aluminum, and High-Temp Alloys • 5 x D



(VDS202A • VDS402A • 5 x D — continued)



● first choice
○ alternate choice

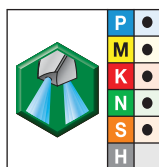
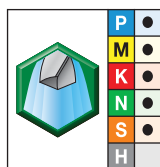
D1 diameter

grade WU25PD TiAlN		grade WU25PD TiAlN		D1 diameter				L4 max	L3	L5	L	LS	D
order #	catalog #	order #	catalog #	mm	in	fraction	wire size						
4148207	VDS202A07000	4143044	VDS402A07000	7,000	.2756	—	—	43	53	1,2	91	36	8
4148208	VDS202A07100	4143045	VDS402A07100	7,100	.2795	—	—	43	53	1,2	91	36	8
4148209	VDS202A07145	4143046	VDS402A07145	7,145	.2813	9/32	—	43	53	1,2	91	36	8
4148210	VDS202A07200	4143047	VDS402A07200	7,200	.2835	—	—	43	53	1,2	91	36	8
4148211	VDS202A07300	4143048	VDS402A07300	7,300	.2874	—	—	43	53	1,2	91	36	8
4148212	VDS202A07400	4143049	VDS402A07400	7,400	.2913	—	—	43	53	1,3	91	36	8
4148213	VDS202A07500	4143050	VDS402A07500	7,500	.2953	—	—	43	53	1,3	91	36	8
4148214	VDS202A07541	4143051	VDS402A07541	7,541	.2969	19/64	—	43	53	1,3	91	36	8
4148215	VDS202A07600	4143052	VDS402A07600	7,600	.2992	—	—	43	53	1,3	91	36	8
4148216	VDS202A07700	4143063	VDS402A07700	7,700	.3031	—	—	43	53	1,3	91	36	8
4148217	VDS202A07800	4143064	VDS402A07800	7,800	.3071	—	—	43	53	1,3	91	36	8
4148218	VDS202A07900	4143065	VDS402A07900	7,900	.3110	—	—	43	53	1,3	91	36	8
4148219	VDS202A07938	4143066	VDS402A07938	7,938	.3125	5/16	—	43	53	1,3	91	36	8
4148220	VDS202A08000	4143067	VDS402A08000	8,000	.3150	—	—	43	53	1,4	91	36	8
4148221	VDS202A08100	4143068	VDS402A08100	8,100	.3189	—	—	49	61	1,4	103	40	10
4148222	VDS202A08200	4143069	VDS402A08200	8,200	.3228	—	—	49	61	1,4	103	40	10
4148223	VDS202A08300	4143070	VDS402A08300	8,300	.3268	—	—	49	61	1,4	103	40	10
4148224	VDS202A08334	4143071	VDS402A08334	8,334	.3281	21/64	—	49	61	1,4	103	40	10
4148225	VDS202A08400	4143072	VDS402A08400	8,400	.3307	—	—	49	61	1,4	103	40	10
4148226	VDS202A08433	4143083	VDS402A08433	8,433	.3320	—	Q	49	61	1,4	103	40	10
4148227	VDS202A08500	4143084	VDS402A08500	8,500	.3346	—	—	49	61	1,4	103	40	10
4148228	VDS202A08600	4143085	VDS402A08600	8,600	.3386	—	—	49	61	1,5	103	40	10
4148229	VDS202A08700	4143086	VDS402A08700	8,700	.3425	—	—	49	61	1,5	103	40	10
4148230	VDS202A08733	4143087	VDS402A08733	8,733	.3438	11/32	—	49	61	1,5	103	40	10
4148231	VDS202A08800	4143088	VDS402A08800	8,800	.3465	—	—	49	61	1,5	103	40	10
4148232	VDS202A08900	4143089	VDS402A08900	8,900	.3504	—	—	49	61	1,5	103	40	10
4148233	VDS202A09000	4143090	VDS402A09000	9,000	.3543	—	—	49	61	1,5	103	40	10
4148234	VDS202A09100	4143091	VDS402A09100	9,100	.3583	—	—	49	61	1,5	103	40	10
4148235	VDS202A09129	4143092	VDS402A09129	9,129	.3594	23/64	—	49	61	1,6	103	40	10
4148236	VDS202A09200	4143103	VDS402A09200	9,200	.3622	—	—	49	61	1,6	103	40	10
4148237	VDS202A09300	4143104	VDS402A09300	9,300	.3661	—	—	49	61	1,6	103	40	10
4148238	VDS202A09347	4143105	VDS402A09347	9,347	.3680	—	U	49	61	1,6	103	40	10
4148239	VDS202A09400	4143106	VDS402A09400	9,400	.3701	—	—	49	61	1,6	103	40	10
4148240	VDS202A09500	4143107	VDS402A09500	9,500	.3740	—	—	49	61	1,6	103	40	10
4148241	VDS202A09525	4143108	VDS402A09525	9,525	.3750	3/8	—	49	61	1,6	103	40	10
4148242	VDS202A09600	4143109	VDS402A09600	9,600	.3780	—	—	49	61	1,6	103	40	10
4148243	VDS202A09700	4143110	VDS402A09700	9,700	.3819	—	—	49	61	1,7	103	40	10
4148244	VDS202A09800	4143111	VDS402A09800	9,800	.3858	—	—	49	61	1,7	103	40	10
4148245	VDS202A09900	4143112	VDS402A09900	9,900	.3898	—	—	49	61	1,7	103	40	10
4148246	VDS202A09921	4143113	VDS402A09921	9,921	.3906	25/64	—	49	61	1,7	103	40	10

(continued)

Solid Carbide Drills

(VDS202A • VDS402A • 5 x D — continued)



● first choice
○ alternate choice

D1 diameter

grade WU25PD TiAlN		grade WU25PD TiAlN		D1 diameter				L4 max	L3	L5	L	LS	D
order #	catalog #	order #	catalog #	mm	in	fraction	wire size						
4148258	VDS202A10000	4142823	VDS402A10000	10,000	.3937	—	—	49	61	1,7	103	40	10
4148259	VDS202A10100	4142825	VDS402A10100	10,100	.3976	—	—	56	71	1,7	118	45	12
4148260	VDS202A10200	4142827	VDS402A10200	10,200	.4016	—	—	56	71	1,7	118	45	12
4148261	VDS202A10300	4142829	VDS402A10300	10,300	.4055	—	—	56	71	1,8	118	45	12
4148262	VDS202A10320	4142831	VDS402A10320	10,320	.4063	13/32	—	56	71	1,8	118	45	12
4148283	VDS202A10400	4142832	VDS402A10400	10,400	.4094	—	—	56	71	1,8	118	45	12
4148284	VDS202A10500	4142834	VDS402A10500	10,500	.4134	—	—	56	71	1,8	118	45	12
4148285	VDS202A10600	4142836	VDS402A10600	10,600	.4173	—	—	56	71	1,8	118	45	12
4148286	VDS202A10700	4142838	VDS402A10700	10,700	.4213	—	—	56	71	1,8	118	45	12
4148287	VDS202A10716	4142840	VDS402A10716	10,716	.4219	27/64	—	56	71	1,8	118	45	12
4148288	VDS202A10800	4142842	VDS402A10800	10,800	.4252	—	—	56	71	1,8	118	45	12
4148289	VDS202A10900	4142855	VDS402A10900	10,900	.4291	—	—	56	71	1,9	118	45	12
4148290	VDS202A11000	4142857	VDS402A11000	11,000	.4331	—	—	56	71	1,9	118	45	12
4148291	VDS202A11100	4142858	VDS402A11100	11,100	.4370	—	—	56	71	1,9	118	45	12
4148292	VDS202A11113	4142861	VDS402A11113	11,113	.4375	7/16	—	56	71	1,9	118	45	12
4148293	VDS202A11200	4142862	VDS402A11200	11,200	.4409	—	—	56	71	1,9	118	45	12
4148294	VDS202A11300	4142873	VDS402A11300	11,300	.4449	—	—	56	71	1,9	118	45	12
4148295	VDS202A11400	4142874	VDS402A11400	11,400	.4488	—	—	56	71	2,0	118	45	12
4148296	VDS202A11500	4142875	VDS402A11500	11,500	.4528	—	—	56	71	2,0	118	45	12
4148297	VDS202A11509	4142876	VDS402A11509	11,509	.4531	29/64	—	56	71	2,0	118	45	12
4148298	VDS202A11600	4142877	VDS402A11600	11,600	.4567	—	—	56	71	2,0	118	45	12
4148299	VDS202A11700	4142878	VDS402A11700	11,700	.4606	—	—	56	71	2,0	118	45	12
4148300	VDS202A11800	4142879	VDS402A11800	11,800	.4646	—	—	56	71	2,0	118	45	12
4148301	VDS202A11900	4142880	VDS402A11900	11,900	.4685	—	—	56	71	2,0	118	45	12
4148302	VDS202A11908	4142881	VDS402A11908	11,908	.4688	15/32	—	56	71	2,0	118	45	12
4148313	VDS202A12000	4142882	VDS402A12000	12,000	.4724	—	—	56	71	2,1	118	45	12
4148314	VDS202A12100	4142913	VDS402A12100	12,100	.4764	—	—	60	77	2,1	124	45	14
4148315	VDS202A12200	4142914	VDS402A12200	12,200	.4803	—	—	60	77	2,1	124	45	14
4148316	VDS202A12300	4142915	VDS402A12300	12,300	.4843	—	—	60	77	2,1	124	45	14
4148317	VDS202A12304	4142916	VDS402A12304	12,304	.4844	31/64	—	60	77	2,1	124	45	14
4148318	VDS202A12400	4142917	VDS402A12400	12,400	.4882	—	—	60	77	2,1	124	45	14
4148319	VDS202A12500	4142918	VDS402A12500	12,500	.4921	—	—	60	77	2,1	124	45	14
4148320	VDS202A12600	4142919	VDS402A12600	12,600	.4961	—	—	60	77	2,2	124	45	14
4148321	VDS202A12700	4142920	VDS402A12700	12,700	.5000	1/2	—	60	77	2,2	124	45	14
4148322	VDS202A12800	4142921	VDS402A12800	12,800	.5039	—	—	60	77	2,2	124	45	14
4148343	VDS202A12900	4142922	VDS402A12900	12,900	.5079	—	—	60	77	2,2	124	45	14
4148344	VDS202A13000	4142953	VDS402A13000	13,000	.5118	—	—	60	77	2,2	124	45	14
4148345	VDS202A13096	4142954	VDS402A13096	13,096	.5156	33/64	—	60	77	2,3	124	45	14
4148346	VDS202A13100	4142955	VDS402A13100	13,100	.5157	—	—	60	77	2,3	124	45	14
4148347	VDS202A13200	4142956	VDS402A13200	13,200	.5197	—	—	60	77	2,3	124	45	14

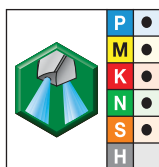
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Solid Carbide Drills

VariDrill™ • Steel, Stainless Steel, Cast Iron, Aluminum, and High-Temp Alloys • 5 x D



(VDS202A • VDS402A • 5 x D — continued)



● first choice
○ alternate choice

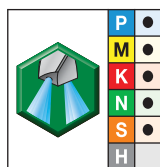
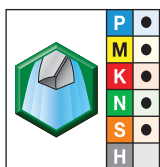
D1 diameter

grade WU25PD TiAlN		grade WU25PD TiAlN		D1 diameter				L4 max	L3	L5	L	LS	D
order #	catalog #	order #	catalog #	mm	in	fraction	wire size						
4148348	VDS202A13300	4142957	VDS402A13300	13,300	.5236	—	—	60	77	2,3	124	45	14
4148349	VDS202A13400	4142958	VDS402A13400	13,400	.5276	—	—	60	77	2,3	124	45	14
4148350	VDS202A13500	4142959	VDS402A13500	13,500	.5315	—	—	60	77	2,3	124	45	14
4148351	VDS202A13600	4142960	VDS402A13600	13,600	.5354	—	—	60	77	2,3	124	45	14
4148352	VDS202A13700	4142961	VDS402A13700	13,700	.5394	—	—	60	77	2,4	124	45	14
4148353	VDS202A13800	4142962	VDS402A13800	13,800	.5433	—	—	60	77	2,4	124	45	14
4148354	VDS202A13891	4142983	VDS402A13891	13,891	.5469	35/64	—	60	77	2,4	124	45	14
4148355	VDS202A13900	4142984	VDS402A13900	13,900	.5472	—	—	60	77	2,4	124	45	14
4148356	VDS202A14000	4142985	VDS402A14000	14,000	.5512	—	—	60	77	2,4	124	45	14
4148357	VDS202A14100	4142986	VDS402A14100	14,100	.5551	—	—	63	83	2,4	133	48	16
4148358	VDS202A14200	4142987	VDS402A14200	14,200	.5591	—	—	63	83	2,5	133	48	16
4148359	VDS202A14288	4142988	VDS402A14288	14,288	.5625	9/16	—	63	83	2,5	133	48	16
4148360	VDS202A14300	4142989	VDS402A14300	14,300	.5630	—	—	63	83	2,5	133	48	16
4148361	VDS202A14400	4142990	VDS402A14400	14,400	.5669	—	—	63	83	2,5	133	48	16
4148362	VDS202A14500	4142991	VDS402A14500	14,500	.5709	—	—	63	83	2,5	133	48	16
4148363	VDS202A14600	4142992	VDS402A14600	14,600	.5748	—	—	63	83	2,5	133	48	16
4148364	VDS202A14684	4143013	VDS402A14684	14,684	.5781	37/64	—	63	83	2,5	133	48	16
4148365	VDS202A14700	4143014	VDS402A14700	14,700	.5787	—	—	63	83	2,5	133	48	16
4148366	VDS202A14800	4143015	VDS402A14800	14,800	.5827	—	—	63	83	2,6	133	48	16
4148367	VDS202A14900	4143016	VDS402A14900	14,900	.5866	—	—	63	83	2,6	133	48	16
4148368	VDS202A15000	4143017	VDS402A15000	15,000	.5906	—	—	63	83	2,6	133	48	16
4148369	VDS202A15083	4143018	VDS402A15083	15,083	.5938	19/32	—	63	83	2,6	133	48	16
4148370	VDS202A15100	4143019	VDS402A15100	15,100	.5945	—	—	63	83	2,6	133	48	16
4148371	VDS202A15200	4143020	VDS402A15200	15,200	.5984	—	—	63	83	2,6	133	48	16
4148372	VDS202A15300	4143021	VDS402A15300	15,300	.6024	—	—	63	83	2,6	133	48	16
4148373	VDS202A15400	4143022	VDS402A15400	15,400	.6063	—	—	63	83	2,7	133	48	16
4148374	VDS202A15479	4143033	VDS402A15479	15,479	.6094	39/64	—	63	83	2,7	133	48	16
4148375	VDS202A15500	4143034	VDS402A15500	15,500	.6102	—	—	63	83	2,7	133	48	16
4148376	VDS202A15600	4143035	VDS402A15600	15,600	.6142	—	—	63	83	2,7	133	48	16
4148377	VDS202A15700	4143036	VDS402A15700	15,700	.6181	—	—	63	83	2,7	133	48	16
4148378	VDS202A15800	4143037	VDS402A15800	15,800	.6220	—	—	63	83	2,7	133	48	16
4148379	VDS202A15875	4143038	VDS402A15875	15,875	.6250	5/8	—	63	83	2,7	133	48	16
4148380	VDS202A15900	4143039	VDS402A15900	15,900	.6260	—	—	63	83	2,8	133	48	16
4148381	VDS202A16000	4143040	VDS402A16000	16,000	.6299	—	—	63	83	2,8	133	48	16
4148382	VDS202A16100	4143041	VDS402A16100	16,100	.6339	—	—	71	93	2,8	143	48	18
4148383	VDS202A16200	4143042	VDS402A16200	16,200	.6378	—	—	71	93	2,8	143	48	18
4148384	VDS202A16271	4143053	VDS402A16271	16,271	.6406	41/64	—	71	93	2,8	143	48	18
4148385	VDS202A16300	4143054	VDS402A16300	16,300	.6417	—	—	71	93	2,8	143	48	18
4148386	VDS202A16400	4143055	VDS402A16400	16,400	.6457	—	—	71	93	2,8	143	48	18
4148387	VDS202A16500	4143056	VDS402A16500	16,500	.6496	—	—	71	93	2,9	143	48	18

(continued)

Solid Carbide Drills

(VDS202A • VDS402A • 5 x D — continued)



● first choice

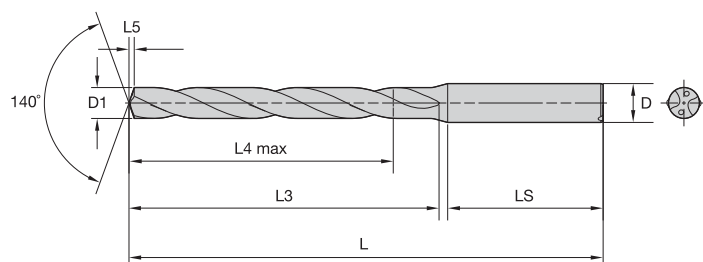
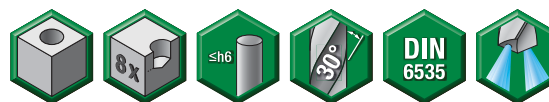
○ alternate choice

D1 diameter

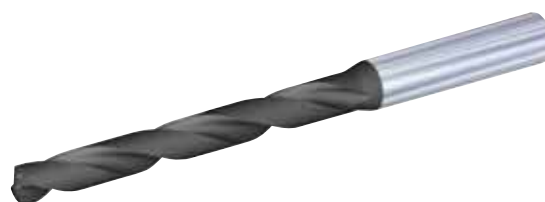
grade WU25PD TiAlN		grade WU25PD TiAlN		D1 diameter				L4 max	L3	L5	L	LS	D
order #	catalog #	order #	catalog #	mm	in	fraction	wire size						
4148388	VDS202A16600	4143057	VDS402A16600	16,600	.6535	—	—	71	93	2,9	143	48	18
4148389	VDS202A16670	4143058	VDS402A16670	16,670	.6563	21/32	—	71	93	2,9	143	48	18
4148390	VDS202A16700	4143059	VDS402A16700	16,700	.6575	—	—	71	93	2,9	143	48	18
4148391	VDS202A16800	4143060	VDS402A16800	16,800	.6614	—	—	71	93	2,9	143	48	18
4148392	VDS202A16900	4143061	VDS402A16900	16,900	.6654	—	—	71	93	2,9	143	48	18
4148393	VDS202A17000	4143062	VDS402A17000	17,000	.6693	—	—	71	93	2,9	143	48	18
4148394	VDS202A17100	4143073	VDS402A17100	17,100	.6732	—	—	71	93	3,0	143	48	18
4148395	VDS202A17200	4143074	VDS402A17200	17,200	.6772	—	—	71	93	3,0	143	48	18
4148396	VDS202A17300	4143075	VDS402A17300	17,300	.6811	—	—	71	93	3,0	143	48	18
4148397	VDS202A17400	4143076	VDS402A17400	17,400	.6850	—	—	71	93	3,0	143	48	18
4148398	VDS202A17463	4143077	VDS402A17463	17,463	.6875	11/16	—	71	93	3,0	143	48	18
4148399	VDS202A17500	4143078	VDS402A17500	17,500	.6890	—	—	71	93	3,0	143	48	18
4148400	VDS202A17600	4143079	VDS402A17600	17,600	.6929	—	—	71	93	3,1	143	48	18
4148401	VDS202A17700	4143080	VDS402A17700	17,700	.6969	—	—	71	93	3,1	143	48	18
4148402	VDS202A17800	4143081	VDS402A17800	17,800	.7008	—	—	71	93	3,1	143	48	18
4148403	VDS202A17859	4143082	VDS402A17859	17,859	.7031	45/64	—	71	93	3,1	143	48	18
4148404	VDS202A17900	4143093	VDS402A17900	17,900	.7047	—	—	71	93	3,1	143	48	18
4147921	VDS202A18000	4142803	VDS402A18000	18,000	.7087	—	—	71	93	3,1	143	48	18
4147922	VDS202A18100	4142804	VDS402A18100	18,100	.7126	—	—	77	101	3,1	153	50	20
4148303	VDS202A18200	4142805	VDS402A18200	18,200	.7165	—	—	77	101	3,2	153	50	20
4148304	VDS202A18258	4142806	VDS402A18258	18,258	.7188	23/32	—	77	101	3,2	153	50	20
4148305	VDS202A18300	4142807	VDS402A18300	18,300	.7205	—	—	77	101	3,2	153	50	20
4148306	VDS202A18400	4142808	VDS402A18400	18,400	.7244	—	—	77	101	3,2	153	50	20
4148307	VDS202A18500	4142809	VDS402A18500	18,500	.7283	—	—	77	101	3,2	153	50	20
4148308	VDS202A18600	4142810	VDS402A18600	18,600	.7323	—	—	77	101	3,2	153	50	20
4148309	VDS202A18654	4142811	VDS402A18654	18,654	.7344	47/64	—	77	101	3,2	153	50	20
4148310	VDS202A18700	4142812	VDS402A18700	18,700	.7362	—	—	77	101	3,2	153	50	20
4148311	VDS202A18800	4142824	VDS402A18800	18,800	.7402	—	—	77	101	3,3	153	50	20
4148312	VDS202A18900	4142826	VDS402A18900	18,900	.7441	—	—	77	101	3,3	153	50	20
4148323	VDS202A19000	4142828	VDS402A19000	19,000	.7480	—	—	77	101	3,3	153	50	20
4148324	VDS202A19050	4142830	VDS402A19050	19,050	.7500	3/4	—	77	101	3,3	153	50	20
4148325	VDS202A19100	4142833	VDS402A19100	19,100	.7520	—	—	77	101	3,3	153	50	20
4148326	VDS202A19200	4142835	VDS402A19200	19,200	.7559	—	—	77	101	3,3	153	50	20
4148327	VDS202A19300	4142837	VDS402A19300	19,300	.7598	—	—	77	101	3,4	153	50	20
4148328	VDS202A19400	4142839	VDS402A19400	19,400	.7638	—	—	77	101	3,4	153	50	20
4148329	VDS202A19500	4142841	VDS402A19500	19,500	.7677	—	—	77	101	3,4	153	50	20
4148330	VDS202A19600	4142853	VDS402A19600	19,600	.7717	—	—	77	101	3,4	153	50	20
4148331	VDS202A19700	4142854	VDS402A19700	19,700	.7756	—	—	77	101	3,4	153	50	20
4148332	VDS202A19800	4142856	VDS402A19800	19,800	.7795	—	—	77	101	3,4	153	50	20
4148333	VDS202A19900	4142859	VDS402A19900	19,900	.7835	—	—	77	101	3,5	153	50	20
4148334	VDS202A20000	4142860	VDS402A20000	20,000	.7874	—	—	77	101	3,5	153	50	20

Solid Carbide Drills

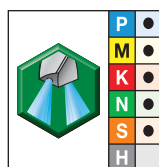
VariDrill™ • Steel, Stainless Steel, Cast Iron, Aluminum, and High-Temp Alloys • 8 x D



For information on L, L3, and L4 max, see page R133.



■ VDS403A • 8 x D



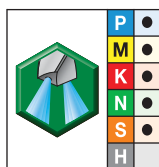
- first choice
- alternate choice

grade WU25PD TiAlN		D1 diameter									
order #	catalog #	mm	in	fraction	wire size	L4 max	L3	L5	L	LS	D
6023126	VDS403A01000	1,000	.0394	—	—	10	12	0,1	58	28	4
6023127	VDS403A01016	1,016	.0400	—	60	10	12	0,1	58	28	4
6023128	VDS403A01067	1,067	.0420	—	58	10	12	0,2	58	28	4
6023129	VDS403A01100	1,100	.0433	—	—	10	12	0,2	58	28	4
6023130	VDS403A01181	1,181	.0465	—	56	10	12	0,2	58	28	4
6023131	VDS403A01191	1,191	.0469	3/64	—	10	12	0,2	58	28	4
6023132	VDS403A01200	1,200	.0472	—	—	10	12	0,2	58	28	4
6023133	VDS403A01300	1,300	.0512	—	—	10	12	0,2	58	28	4
6023134	VDS403A01321	1,321	.0520	—	55	10	12	0,2	58	28	4
6023135	VDS403A01397	1,397	.0550	—	54	10	12	0,2	58	28	4
6023136	VDS403A01400	1,400	.0551	—	—	10	12	0,2	58	28	4
4143700	VDS403A01500	1,500	.0591	—	—	15	18	0,2	58	28	4
4143701	VDS403A01600	1,600	.0630	—	—	15	18	0,2	58	28	4
4143702	VDS403A01700	1,700	.0669	—	—	15	18	0,3	58	28	4
4143723	VDS403A01800	1,800	.0709	—	—	15	18	0,3	58	28	4
4143724	VDS403A01900	1,900	.0748	—	—	15	18	0,3	58	28	4
4143725	VDS403A01984	1,984	.0781	—	—	22	26	0,3	66	28	4
4143726	VDS403A02000	2,000	.0787	—	—	22	26	0,3	66	28	4
4143727	VDS403A02100	2,100	.0827	—	—	22	26	0,3	66	28	4
4143728	VDS403A02200	2,200	.0866	—	—	22	26	0,3	66	28	4
4143729	VDS403A02300	2,300	.0906	—	—	22	26	0,4	66	28	4
4143730	VDS403A02383	2,383	.0938	3/32	—	25	30	0,4	66	28	4
4143731	VDS403A02400	2,400	.0945	—	—	25	30	0,4	66	28	4
4143732	VDS403A02439	2,439	.0960	—	41	25	30	0,4	66	28	4
4143733	VDS403A02489	2,489	.0980	—	40	25	30	0,4	66	28	4
4143734	VDS403A02500	2,500	.0984	—	—	25	30	0,4	66	28	4
4143735	VDS403A02578	2,578	.1015	—	38	25	30	0,4	66	28	4
4143736	VDS403A02600	2,600	.1024	—	—	25	30	0,4	66	28	4

(continued)



(VDS403A • 8 x D — continued)



● first choice
○ alternate choice

grade WU25PD TiAlN		D1 diameter										
order #	catalog #	mm	in	fraction	wire size	L4 max	L3	L5	L	LS	D	
4143737	VDS403A02642	2,642	.1040	—	37	25	30	0,4	66	28	4	
4143738	VDS403A02700	2,700	.1063	—	—	25	30	0,4	66	28	4	
4143739	VDS403A02705	2,705	.1065	—	36	25	30	0,4	66	28	4	
4143740	VDS403A02779	2,779	.1094	7/64	—	25	30	0,4	66	28	4	
4143741	VDS403A02800	2,800	.1102	—	—	25	30	0,5	66	28	4	
4143742	VDS403A02820	2,820	.1110	—	34	25	30	0,5	66	28	4	
4143743	VDS403A02870	2,870	.1130	—	33	25	30	0,5	66	28	4	
4143744	VDS403A02900	2,900	.1142	—	—	25	30	0,5	66	28	4	
4143745	VDS403A02947	2,947	.1160	—	32	25	30	0,5	66	28	4	
4143746	VDS403A03000	3,000	.1181	—	—	33	40	0,5	78	36	6	
4143747	VDS403A03048	3,048	.1200	—	31	33	40	0,5	78	36	6	
4143748	VDS403A03100	3,100	.1220	—	—	33	40	0,5	78	36	6	
4143749	VDS403A03175	3,175	.1250	1/8	—	33	40	0,5	78	36	6	
4143750	VDS403A03200	3,200	.1260	—	—	33	40	0,5	78	36	6	
4143751	VDS403A03264	3,264	.1285	—	30	33	40	0,5	78	36	6	
4143752	VDS403A03300	3,300	.1299	—	30	33	40	0,5	78	36	6	
4143753	VDS403A03400	3,400	.1339	—	—	33	40	0,6	78	36	6	
4143754	VDS403A03455	3,455	.1360	—	29	33	49	0,6	78	36	6	
4143755	VDS403A03500	3,500	.1378	—	21	33	49	0,6	78	36	6	
4143756	VDS403A03571	3,571	.1406	9/64	—	33	49	0,6	78	36	6	
4143757	VDS403A03600	3,600	.1417	—	—	33	40	0,6	78	36	6	
4143758	VDS403A03658	3,658	.1440	—	27	33	49	0,6	78	36	6	
4143759	VDS403A03700	3,700	.1457	—	—	33	40	0,6	78	36	6	
4143760	VDS403A03734	3,734	.1470	—	26	33	40	0,6	78	36	6	
4143761	VDS403A03800	3,800	.1496	—	—	41	49	0,6	87	36	6	
4143762	VDS403A03900	3,900	.1535	—	—	41	40	0,6	87	36	6	
4143763	VDS403A03970	3,970	.1563	5/32	—	41	49	0,7	87	36	6	
4143764	VDS403A04000	4,000	.1575	—	—	41	40	0,7	87	36	6	
4143765	VDS403A04039	4,039	.1590	—	21	41	40	0,7	87	36	6	
4143766	VDS403A04090	4,090	.1610	—	20	41	40	0,7	87	36	6	
4143767	VDS403A04100	4,100	.1614	—	—	41	49	0,7	87	36	6	
4143768	VDS403A04200	4,200	.1654	—	—	41	49	0,7	87	36	6	
4143769	VDS403A04217	4,217	.1660	—	19	41	49	0,7	87	36	6	
4143770	VDS403A04300	4,300	.1693	—	14	41	49	0,7	87	36	6	
4143771	VDS403A04366	4,366	.1719	11/64	—	41	49	0,7	87	36	6	
4143772	VDS403A04400	4,400	.1732	—	—	41	49	0,7	87	36	6	
4143773	VDS403A04500	4,500	.1772	—	—	41	49	0,7	87	36	6	
4143774	VDS403A04600	4,600	.1811	—	19	41	49	0,8	87	36	6	
4143775	VDS403A04623	4,623	.1820	—	14	41	49	0,8	87	36	6	
4143776	VDS403A04700	4,700	.1850	—	13	41	56	0,8	87	36	6	

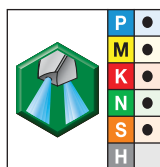
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Solid Carbide Drills

VariDrill™ • Steel, Stainless Steel, Cast Iron, Aluminum, and High-Temp Alloys • 8 x D



(VDS403A • 8 x D — continued)

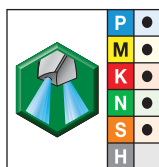


- first choice
- alternate choice

grade WU25PD TiAlN		D1 diameter									
order #	catalog #	mm	in	fraction	wire size	L4 max	L3	L5	L	LS	D
4143777	VDS403A04763	4,763	.1875	3/16	13	48	49	0,8	94	36	6
4143778	VDS403A04800	4,800	.1890	—	12	48	56	0,8	94	36	6
4143779	VDS403A04852	4,852	.1910	—	11	48	56	0,8	94	36	6
4143780	VDS403A04900	4,900	.1929	—	—	48	56	0,8	94	36	6
4143781	VDS403A05000	5,000	.1969	—	—	48	56	0,8	94	36	6
4143782	VDS403A05100	5,100	.2008	—	—	48	56	0,8	94	36	6
4143783	VDS403A05106	5,106	.2010	—	7	48	56	0,8	94	36	6
4143784	VDS403A05159	5,159	.2031	13/64	—	48	56	0,9	94	36	6
4143785	VDS403A05200	5,200	.2047	—	—	48	56	0,9	94	36	6
4143786	VDS403A05300	5,300	.2087	—	12	48	56	0,9	94	36	6
4143787	VDS403A05400	5,400	.2126	—	7	48	56	0,9	94	36	6
4143788	VDS403A05410	5,410	.2130	—	3	48	56	0,9	94	36	6
4143789	VDS403A05500	5,500	.2165	—	3	48	56	0,9	94	36	6
4143790	VDS403A05558	5,558	.2188	7/32	2	48	56	0,9	94	36	6
4143791	VDS403A05600	5,600	.2205	—	—	48	56	0,9	94	36	6
4143792	VDS403A05616	5,616	.2211	—	2	48	56	0,9	94	36	6
4143793	VDS403A05700	5,700	.2244	—	—	48	56	1,0	94	36	6
4143794	VDS403A05800	5,800	.2283	—	—	48	67	1,0	94	36	6
4143795	VDS403A05900	5,900	.2323	—	—	48	67	1,0	94	36	6
4143796	VDS403A05954	5,954	.2344	15/64	—	48	56	1,0	94	36	6
4143797	VDS403A06000	6,000	.2362	—	—	48	67	1,0	94	36	6
4143798	VDS403A06100	6,100	.2402	—	—	57	67	1,0	105	36	8
4143799	VDS403A06200	6,200	.2441	—	F	57	67	1,0	105	36	8
4143800	VDS403A06300	6,300	.2480	—	—	57	56	1,1	105	36	8
4143801	VDS403A06350	6,350	.2500	1/4	E	57	67	1,1	105	36	8
4143802	VDS403A06400	6,400	.2520	—	—	57	67	1,1	105	36	8
4143803	VDS403A06500	6,500	.2559	—	—	57	67	1,1	105	36	8
4143804	VDS403A06528	6,528	.2570	—	F	57	67	1,1	105	36	8
4143805	VDS403A06600	6,600	.2598	—	E	57	67	1,1	105	36	8
4143806	VDS403A06630	6,630	.2610	—	G	57	56	1,1	105	36	8
4143807	VDS403A06700	6,700	.2638	—	—	57	67	1,1	105	36	8
4143808	VDS403A06746	6,746	.2656	17/64	—	57	56	1,1	105	36	8
4143809	VDS403A06800	6,800	.2677	—	—	57	67	1,1	105	36	8
4143810	VDS403A06900	6,900	.2717	—	—	57	67	1,2	105	36	8
4143811	VDS403A07000	7,000	.2756	—	—	57	72	1,2	105	36	8
4143812	VDS403A07100	7,100	.2795	—	—	61	72	1,2	110	36	8
4143813	VDS403A07145	7,145	.2813	9/32	—	61	67	1,2	110	36	8
4143814	VDS403A07200	7,200	.2835	—	—	61	72	1,2	110	36	8
4143815	VDS403A07300	7,300	.2874	—	—	61	72	1,2	110	36	8
4143816	VDS403A07400	7,400	.2913	—	—	61	72	1,3	110	36	8

(continued)

(VDS403A • 8 x D — continued)



● first choice
○ alternate choice

grade WU25PD TiAlN		D1 diameter									
order #	catalog #	mm	in	fraction	wire size	L4 max	L3	L5	L	LS	D
4143817	VDS403A07500	7,500	.2953	—	—	61	72	1,3	110	36	8
4143818	VDS403A07541	7,541	.2969	19/64	—	61	72	1,3	110	36	8
4143819	VDS403A07600	7,600	.2992	—	—	61	80	1,3	110	36	8
4143820	VDS403A07700	7,700	.3031	—	—	61	80	1,3	110	36	8
4143821	VDS403A07800	7,800	.3071	—	—	61	80	1,3	110	36	8
4143822	VDS403A07900	7,900	.3110	—	—	61	80	1,3	110	36	8
4143823	VDS403A07938	7,938	.3125	5/16	Q	61	80	1,3	110	36	8
4143824	VDS403A08000	8,000	.3150	—	—	61	80	1,4	110	36	8
4143825	VDS403A08100	8,100	.3189	—	—	68	80	1,4	122	40	10
4143826	VDS403A08200	8,200	.3228	—	—	68	80	1,4	122	40	10
4143827	VDS403A08300	8,300	.3268	—	—	68	80	1,4	122	40	10
4143828	VDS403A08334	8,334	.3281	21/64	—	68	80	1,4	122	40	10
4143829	VDS403A08400	8,400	.3307	—	—	68	72	1,4	122	40	10
4143830	VDS403A08433	8,433	.3320	—	Q	68	80	1,4	122	40	10
4143831	VDS403A08500	8,500	.3346	—	—	68	80	1,4	122	40	10
4143832	VDS403A08600	8,600	.3386	—	—	68	80	1,5	122	40	10
4143833	VDS403A08700	8,700	.3425	—	—	68	72	1,5	122	40	10
4143834	VDS403A08733	8,733	.3438	11/32	—	68	72	1,5	122	40	10
4143835	VDS403A08800	8,800	.3465	—	—	68	72	1,5	122	40	10
4143836	VDS403A08900	8,900	.3504	—	—	68	72	1,5	122	40	10
4143837	VDS403A09000	9,000	.3543	—	—	68	72	1,5	122	40	10
4143838	VDS403A09100	9,100	.3583	—	—	68	80	1,5	122	40	10
4143839	VDS403A09129	9,129	.3594	23/64	—	68	80	1,6	122	40	10
4143840	VDS403A09200	9,200	.3622	—	—	68	80	1,6	122	40	10
4143841	VDS403A09300	9,300	.3661	—	—	68	80	1,6	122	40	10
4143842	VDS403A09347	9,347	.3680	—	U	68	80	1,6	122	40	10
4143843	VDS403A09400	9,400	.3701	—	—	68	80	1,6	122	40	10
4143844	VDS403A09500	9,500	.3740	—	—	68	80	1,6	122	40	10
4143845	VDS403A09525	9,525	.3750	3/8	—	68	80	1,6	122	40	10
4143846	VDS403A09600	9,600	.3780	—	U	68	80	1,6	122	40	10
4143847	VDS403A09700	9,700	.3819	—	—	68	80	1,7	122	40	10
4143848	VDS403A09800	9,800	.3858	—	—	68	80	1,7	122	40	10
4143849	VDS403A09900	9,900	.3898	—	—	68	80	1,7	122	40	10
4143850	VDS403A09921	9,921	.3906	25/64	—	68	80	1,7	122	40	10
4143421	VDS403A10000	10,000	.3937	—	—	68	80	1,7	122	40	10
4143422	VDS403A10100	10,100	.3976	—	—	79	94	1,7	141	45	12
4143473	VDS403A10200	10,200	.4016	—	—	79	94	1,7	141	45	12
4143474	VDS403A10300	10,300	.4055	—	—	79	94	1,8	141	45	12
4143475	VDS403A10320	10,320	.4063	13/32	—	79	94	1,8	141	45	12
4143476	VDS403A10400	10,400	.4094	—	—	79	94	1,8	141	45	12

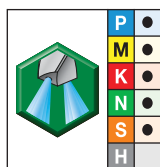
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Solid Carbide Drills

VariDrill™ • Steel, Stainless Steel, Cast Iron, Aluminum, and High-Temp Alloys • 8 x D



(VDS403A • 8 x D — continued)

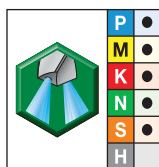


- first choice
- alternate choice

grade WU25PD TiAlN		D1 diameter									
order #	catalog #	mm	in	fraction	wire size	L4 max	L3	L5	L	LS	D
4143477	VDS403A10500	10,500	.4134	—	—	79	94	1,8	141	45	12
4143478	VDS403A10600	10,600	.4173	—	—	79	94	1,8	141	45	12
4143479	VDS403A10700	10,700	.4213	—	—	79	94	1,8	141	45	12
4143480	VDS403A10716	10,716	.4219	27/64	—	79	94	1,8	141	45	12
4143481	VDS403A10800	10,800	.4252	—	—	79	94	1,8	141	45	12
4143482	VDS403A10900	10,900	.4291	—	—	79	94	1,9	141	45	12
4143483	VDS403A11000	11,000	.4331	—	—	79	94	1,9	141	45	12
4143484	VDS403A11100	11,100	.4370	—	—	79	94	1,9	141	45	12
4143485	VDS403A11113	11,113	.4375	7/16	—	79	94	1,9	141	45	12
4143486	VDS403A11200	11,200	.4409	—	—	79	94	1,9	141	45	12
4143487	VDS403A11300	11,300	.4449	—	—	79	94	1,9	141	45	12
4143488	VDS403A11400	11,400	.4488	—	—	79	94	2,0	141	45	12
4143489	VDS403A11500	11,500	.4528	—	—	79	94	2,0	141	45	12
4143490	VDS403A11509	11,509	.4531	29/64	—	79	94	2,0	141	45	12
4143491	VDS403A11600	11,600	.4567	—	—	79	94	2,0	141	45	12
4143492	VDS403A11700	11,700	.4606	—	—	79	94	2,0	141	45	12
4143493	VDS403A11800	11,800	.4646	—	—	79	94	2,0	141	45	12
4143494	VDS403A11900	11,900	.4685	—	—	79	94	2,0	141	45	12
4143495	VDS403A11908	11,908	.4688	15/32	—	79	94	2,0	141	45	12
4143496	VDS403A12000	12,000	.4724	—	—	79	94	2,1	141	45	12
4143497	VDS403A12100	12,100	.4764	—	—	91	108	2,1	155	45	14
4143498	VDS403A12200	12,200	.4803	—	—	91	108	2,1	155	45	14
4143499	VDS403A12300	12,300	.4843	—	—	91	108	2,1	155	45	14
4143500	VDS403A12304	12,304	.4844	31/64	—	91	108	2,1	155	45	14
4143501	VDS403A12400	12,400	.4882	—	—	91	108	2,1	155	45	14
4143502	VDS403A12500	12,500	.4921	—	—	91	108	2,1	155	45	14
4143503	VDS403A12600	12,600	.4961	—	—	91	108	2,2	155	45	14
4143504	VDS403A12700	12,700	.5000	1/2	—	91	108	2,2	155	45	14
4143505	VDS403A12800	12,800	.5039	—	—	91	108	2,2	155	45	14
4143506	VDS403A12900	12,900	.5079	—	—	91	108	2,2	155	45	14
4143507	VDS403A13000	13,000	.5118	—	—	91	108	2,2	155	45	14
4143508	VDS403A13096	13,096	.5156	33/64	—	91	108	2,3	155	45	14
4143509	VDS403A13100	13,100	.5157	—	—	91	108	2,3	155	45	14
4143510	VDS403A13200	13,200	.5197	—	—	91	108	2,3	155	45	14
4143511	VDS403A13300	13,300	.5236	—	—	91	108	2,3	155	45	14
4143512	VDS403A13400	13,400	.5276	—	—	91	108	2,3	155	45	14
4143513	VDS403A13500	13,500	.5315	—	—	91	108	2,3	155	45	14
4143514	VDS403A13600	13,600	.5354	—	—	91	108	2,3	155	45	14
4143515	VDS403A13700	13,700	.5394	—	—	91	108	2,4	155	45	14
4143516	VDS403A13800	13,800	.5433	—	—	91	108	2,4	155	45	14

(continued)

(VDS403A • 8 x D — continued)



● first choice

○ alternate choice

grade WU25PD TiAlN		D1 diameter									
order #	catalog #	mm	in	fraction	wire size	L4 max	L3	L5	L	LS	D
4143517	VDS403A13891	13,891	.5469	35/64	—	91	108	2,4	155	45	14
4143518	VDS403A13900	13,900	.5472	—	—	91	108	2,4	155	45	14
4143519	VDS403A14000	14,000	.5512	—	—	91	108	2,4	155	45	14
4143520	VDS403A14100	14,100	.5551	—	—	101	121	2,4	171	48	16
4143521	VDS403A14200	14,200	.5591	—	—	101	121	2,5	171	48	16
4143522	VDS403A14288	14,288	.5625	9/16	—	101	121	2,5	171	48	16
4143523	VDS403A14300	14,300	.5630	—	—	101	121	2,5	171	48	16
4143524	VDS403A14400	14,400	.5669	—	—	101	121	2,5	171	48	16
4143525	VDS403A14500	14,500	.5709	—	—	101	121	2,5	171	48	16
4143526	VDS403A14600	14,600	.5748	—	—	101	121	2,5	171	48	16
4143527	VDS403A14684	14,684	.5781	37/64	—	101	121	2,5	171	48	16
4143528	VDS403A14700	14,700	.5787	—	—	101	121	2,5	171	48	16
4143529	VDS403A14800	14,800	.5827	—	—	101	121	2,6	171	48	16
4143530	VDS403A14900	14,900	.5866	—	—	101	121	2,6	171	48	16
4143531	VDS403A15000	15,000	.5906	—	—	101	121	2,6	171	48	16
4143532	VDS403A15083	15,083	.5938	19/32	—	101	121	2,6	171	48	16
4143533	VDS403A15100	15,100	.5945	—	—	101	121	2,6	171	48	16
4143534	VDS403A15200	15,200	.5984	—	—	101	121	2,6	171	48	16
4143535	VDS403A15300	15,300	.6024	—	—	101	121	2,6	171	48	16
4143536	VDS403A15400	15,400	.6063	—	—	101	121	2,7	171	48	16
4143537	VDS403A15479	15,479	.6094	39/64	—	101	121	2,7	171	48	16
4143538	VDS403A15500	15,500	.6102	—	—	101	121	2,7	171	48	16
4143539	VDS403A15600	15,600	.6142	—	—	101	121	2,7	171	48	16
4143540	VDS403A15700	15,700	.6181	—	—	101	121	2,7	171	48	16
4143541	VDS403A15800	15,800	.6220	—	—	101	121	2,7	171	48	16
4143542	VDS403A15875	15,875	.6250	5/8	—	101	121	2,7	171	48	16
4143543	VDS403A15900	15,900	.6260	—	—	101	121	2,8	171	48	16
4143544	VDS403A16000	16,000	.6299	—	—	101	121	2,8	171	48	16
4143545	VDS403A16100	16,100	.6339	—	—	113	135	2,8	185	48	18
4143546	VDS403A16200	16,200	.6378	—	—	113	135	2,8	185	48	18
4143547	VDS403A16271	16,271	.6406	41/64	—	113	135	2,8	185	48	18
4143548	VDS403A16300	16,300	.6417	—	—	113	135	2,8	185	48	18
4143549	VDS403A16400	16,400	.6457	—	—	113	135	2,8	185	48	18
4143550	VDS403A16500	16,500	.6496	—	—	113	135	2,9	185	48	18
4143551	VDS403A16600	16,600	.6535	—	—	113	135	2,9	185	48	18
4143552	VDS403A16670	16,670	.6563	21/32	—	113	135	2,9	185	48	18
4143553	VDS403A16700	16,700	.6575	—	—	113	135	2,9	185	48	18
4143554	VDS403A16800	16,800	.6614	—	—	113	135	2,9	185	48	18
4143555	VDS403A16900	16,900	.6654	—	—	113	135	2,9	185	48	18
4143556	VDS403A17000	17,000	.6693	—	—	113	135	2,9	185	48	18

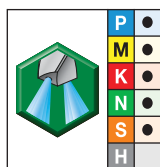
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Solid Carbide Drills

VariDrill™ • Steel, Stainless Steel, Cast Iron, Aluminum, and High-Temp Alloys • 8 x D



(VDS403A • 8 x D — continued)



- first choice
- alternate choice

grade WU25PD TiAlN		D1 diameter									
order #	catalog #	mm	in	fraction	wire size	L4 max	L3	L5	L	LS	D
4143557	VDS403A17100	17,100	.6732	—	—	113	135	3,0	185	48	18
4143558	VDS403A17200	17,200	.6772	—	—	113	135	3,0	185	48	18
4143559	VDS403A17300	17,300	.6811	—	—	113	135	3,0	185	48	18
4143560	VDS403A17400	17,400	.6850	—	—	113	135	3,0	185	48	18
4143561	VDS403A17463	17,463	.6875	11/16	—	113	135	3,0	185	48	18
4143562	VDS403A17500	17,500	.6890	—	—	113	135	3,0	185	48	18
4143563	VDS403A17600	17,600	.6929	—	—	113	135	3,1	185	48	18
4143564	VDS403A17700	17,700	.6969	—	—	113	135	3,1	185	48	18
4143565	VDS403A17800	17,800	.7008	—	—	113	135	3,1	185	48	18
4143566	VDS403A17859	17,859	.7031	45/64	—	113	135	3,1	185	48	18
4143567	VDS403A17900	17,900	.7047	—	—	113	135	3,1	185	48	18
4144209	VDS403A18000	18,000	.7087	—	—	113	135	3,1	185	48	18
4144211	VDS403A18100	18,100	.7126	—	—	124	148	3,1	200	50	20
4144212	VDS403A18200	18,200	.7165	—	—	124	148	3,2	200	50	20
4144244	VDS403A18258	18,258	.7188	23/32	—	124	148	3,2	200	50	20
4144246	VDS403A18300	18,300	.7205	—	—	124	148	3,2	200	50	20
4144248	VDS403A18400	18,400	.7244	—	—	124	148	3,2	200	50	20
4144250	VDS403A18500	18,500	.7283	—	—	124	148	3,2	200	50	20
4144252	VDS403A18600	18,600	.7323	—	—	124	148	3,2	200	50	20
4144254	VDS403A18654	18,654	.7344	47/64	—	124	148	3,2	200	50	20
4144256	VDS403A18700	18,700	.7362	—	—	124	148	3,2	200	50	20
4144258	VDS403A18800	18,800	.7402	—	—	124	148	3,3	200	50	20
4144260	VDS403A18900	18,900	.7441	—	—	124	148	3,3	200	50	20
4144262	VDS403A19000	19,000	.7480	—	—	124	148	3,3	200	50	20
4144275	VDS403A19050	19,050	.7500	3/4	—	124	148	3,3	200	50	20
4144277	VDS403A19100	19,100	.7520	—	—	124	148	3,3	200	50	20
4144279	VDS403A19200	19,200	.7559	—	—	124	148	3,3	200	50	20
4144281	VDS403A19300	19,300	.7598	—	—	124	148	3,4	200	50	20
4144283	VDS403A19400	19,400	.7638	—	—	124	148	3,4	200	50	20
4144285	VDS403A19500	19,500	.7677	—	—	124	148	3,4	200	50	20
4144287	VDS403A19600	19,600	.7717	—	—	124	148	3,4	200	50	20
4144289	VDS403A19700	19,700	.7756	—	—	124	148	3,4	200	50	20
4144291	VDS403A19800	19,800	.7795	—	—	124	148	3,4	200	50	20
4144303	VDS403A19900	19,900	.7835	—	—	124	148	3,5	200	50	20
4144305	VDS403A20000	20,000	.7874	—	—	124	148	3,5	200	50	20

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Material Group															
		Cutting Speed — vc			Recommended Feed Rate (f) by Diameter										
		Range — SFM			Tool Diameter (inch)	.0469– 3/64	.0781– 5/64	.125– 1/8	.188– 3/16	.250– 1/4	.313– 5/16	.375– 3/8	.500– 1/2	.625– 5/8	.750– 3/4
		min	–	max											
P	1	200	–	330	IPR	.002– .004	.002– .005	.003– .006	.003– .006	.004– .009	.005– .010	.006– .012	.007– .014	.009– .017	.011– .021
	2, 3, 4, 6, 7	160	–	300	IPR	.002– .004	.002– .005	.003– .006	.004– .007	.005– .009	.006– .011	.007– .013	.009– .015	.010– .018	.013– .023
	5, 9, 10, 11	160	–	330	IPR	.002– .004	.002– .005	.003– .006	.003– .007	.005– .009	.006– .011	.007– .013	.007– .015	.009– .018	.011– .023
	12, 13	100	–	200	IPR	.001– .002	.001– .002	.002– .003	.002– .004	.003– .006	.004– .007	.005– .009	.005– .010	.007– .012	.009– .016
M	14.1	100	–	160	IPR	.001– .002	.001– .002	.002– .003	.002– .004	.003– .004	.004– .005	.004– .006	.005– .006	.006– .007	.006– .008
	14.3	130	–	200	IPR	.001– .002	.001– .003	.002– .003	.002– .004	.003– .005	.004– .006	.004– .006	.005– .007	.006– .008	.006– .009
	14.2, 14.4	100	–	160	IPR	.001– .002	.001– .002	.002– .003	.002– .004	.003– .004	.004– .005	.004– .006	.005– .006	.006– .007	.006– .008
K	15, 16	230	–	490	IPR	.003– .005	.003– .005	.003– .007	.004– .008	.005– .010	.006– .012	.007– .014	.008– .015	.010– .019	.012– .023
	17, 18, 19	300	–	390	IPR	.003– .004	.003– .005	.004– .005	.004– .006	.005– .008	.006– .010	.007– .011	.008– .013	.010– .015	.012– .019
	20	260	–	390	IPR	.002– .004	.002– .005	.003– .005	.003– .006	.004– .008	.004– .009	.005– .011	.006– .013	.008– .015	.009– .019
N	21	300	–	890	IPR	.002– .005	.003– .005	.003– .006	.004– .006	.005– .008	.006– .009	.008– .011	.009– .013	.011– .016	.013– .019
	22, 23, 24	300	–	890	IPR	.002– .003	.003– .005	.003– .006	.004– .008	.005– .009	.006– .011	.008– .013	.009– .014	.011– .017	.013– .020
	25	300	–	740	IPR	.004– .005	.004– .005	.005– .006	.005– .006	.006– .008	.006– .009	.008– .011	.009– .013	.011– .016	.013– .017
	26, 27, 28	300	–	890	IPR	.002– .003	.003– .005	.003– .006	.004– .008	.005– .009	.006– .011	.008– .013	.009– .014	.011– .016	.013– .019
S	31, 32	70	–	100	IPR	.001– .002	.001– .002	.001– .002	.002– .003	.002– .004	.003– .005	.004– .005	.004– .006	.005– .006	.006– .007
	33, 34, 35	30	–	100	IPR	.001	.001	.001– .002	.001– .002	.002– .003	.003– .004	.003– .004	.004– .005	.004– .006	.004– .006
	36	70	–	130	IPR	.001	.001	.001– .002	.001– .002	.002– .003	.002– .004	.003– .004	.003– .004	.004– .005	.004– .006
	37	70	–	160	IPR	.001	.001	.001– .002	.001– .002	.002– .003	.003– .004	.003– .004	.004– .005	.004– .006	.004– .006

Inch tolerance		
nominal size range	D1 tolerance	D tolerance h6
.0394–.1181	.0000/-.0006 (h8)	.0000/-.0002
>.1181–.2362	.0000/-.0005 (h7)	.0000/-.0003
>.2362–.3937	.0000/-.0006 (h7)	.0000/-.0004
>.3937–.7087	.0000/-.0007 (h7)	.0000/-.0004
>.7087–.7874	.0000/-.0008 (h7)	.0000/-.0005

Solid Carbide Drills

Application Data • VariDrill™ • Steel, Stainless Steel, Cast Iron, Aluminum, and High-Temp Alloys



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Material Group															
		Cutting Speed — vc		Recommended Feed Rate (f) by Diameter											
		Range — SFM		Tool Diameter (inch)	.0469– 3/64	.0781– 5/64	.125– 1/8	.188– 3/16	.250– 1/4	.313– 5/16	.375– 3/8	.500– 1/2	.625– 5/8	.750– 3/4	
		min	–	max											
P	1	230	–	460	IPR	.002– .004	.002– .005	.003– .006	.003– .006	.004– .009	.005– .010	.006– .012	.007– .014	.009– .017	.011– .021
	2, 3, 4, 6, 7	200	–	330	IPR	.002– .004	.002– .005	.003– .006	.004– .007	.005– .009	.006– .011	.007– .013	.009– .015	.010– .018	.013– .023
	5, 9, 10, 11	160	–	330	IPR	.002– .004	.002– .005	.003– .006	.003– .007	.005– .009	.006– .011	.007– .013	.007– .015	.009– .018	.011– .023
	12, 13	130	–	230	IPR	.001– .002	.001– .002	.002– .003	.002– .004	.003– .006	.004– .007	.005– .009	.005– .010	.007– .012	.009– .016
M	14.1	100	–	160	IPR	.001– .002	.001– .002	.002– .003	.002– .004	.003– .004	.004– .005	.004– .006	.005– .006	.006– .007	.006– .008
	14.3	130	–	200	IPR	.001– .002	.001– .003	.002– .003	.002– .004	.003– .005	.004– .006	.004– .006	.005– .007	.006– .008	.006– .009
	14.2, 14.4	100	–	160	IPR	.001– .002	.001– .002	.002– .003	.002– .004	.003– .004	.004– .005	.004– .006	.005– .006	.006– .007	.006– .008
K	15, 16	260	–	520	IPR	.003– .006	.003– .006	.004– .008	.004– .009	.006– .011	.007– .013	.008– .016	.009– .017	.011– .021	.013– .026
	17, 18, 19	290	–	460	IPR	.004– .005	.004– .005	.004– .006	.005– .007	.006– .009	.007– .011	.008– .013	.009– .014	.011– .017	.013– .021
	20	260	–	430	IPR	.002– .005	.002– .005	.003– .006	.003– .007	.004– .009	.005– .011	.006– .012	.007– .014	.009– .017	.011– .021
N	21	290	–	1030	IPR	.002– .005	.003– .005	.003– .006	.004– .006	.005– .008	.006– .009	.008– .011	.009– .013	.011– .016	.013– .019
	22, 23, 24	290	–	890	IPR	.002– .003	.003– .005	.003– .006	.004– .008	.005– .009	.006– .011	.008– .013	.009– .014	.011– .017	.013– .020
	25	290	–	890	IPR	.004– .005	.004– .005	.005– .006	.005– .006	.006– .008	.006– .009	.008– .011	.009– .013	.011– .016	.013– .017
	26, 27, 28	290	–	890	IPR	.002– .003	.003– .005	.003– .006	.004– .008	.005– .009	.006– .011	.008– .013	.009– .014	.011– .016	.013– .019
S	31, 32	70	–	100	IPR	.001– .002	.001– .002	.001– .002	.002– .003	.002– .004	.003– .005	.004– .005	.004– .006	.005– .006	.006– .007
	33, 34, 35	30	–	100	IPR	.001	.001	.001– .002	.001– .002	.002– .003	.003– .004	.003– .004	.004– .005	.004– .006	.004– .006
	36	30	–	130	IPR	.001	.001	.001– .002	.001– .002	.002– .003	.002– .004	.003– .004	.003– .004	.004– .005	.004– .006
	37	30	–	130	IPR	.001	.001	.001– .002	.001– .002	.002– .003	.003– .004	.003– .004	.004– .005	.004– .006	.004– .006

Inch

tolerance

nominal size range	D1 tolerance	D tolerance h6
.0394–.1181	.0000/-.0006 (h8)	.0000/-.0002
>.1181–.2362	.0000/-.0005 (h7)	.0000/-.0003
>.2362–.3937	.0000/-.0006 (h7)	.0000/-.0004
>.3937–.7087	.0000/-.0007 (h7)	.0000/-.0004
>.7087–.7874	.0000/-.0008 (h7)	.0000/-.0005



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Material Group														
		Cutting Speed — vc Range — m/min		Recommended Feed Rate (f) by Diameter										
		min	– max	Tool Diameter (mm)	1,0	2,0	3,0	4,0	6,0	8,0	10,0	12,0	16,0	20,0
P	1	60	– 100	mm/r	0,04–0,09	0,05–0,12	0,07–0,14	0,08–0,16	0,11–0,22	0,13–0,26	0,15–0,31	0,18–0,35	0,22–0,42	0,28–0,54
	2, 3, 4, 6, 7	50	– 90	mm/r	0,05–0,10	0,06–0,13	0,08–0,15	0,09–0,17	0,13–0,23	0,15–0,28	0,19–0,33	0,22–0,38	0,26–0,47	0,34–0,59
	5, 9, 10, 11	50	– 100	mm/r	0,05–0,10	0,06–0,13	0,07–0,15	0,08–0,17	0,12–0,23	0,14–0,28	0,17–0,33	0,19–0,38	0,23–0,47	0,29–0,59
	12, 13	30	– 60	mm/r	0,03–0,05	0,04–0,06	0,05–0,08	0,06–0,10	0,08–0,14	0,10–0,18	0,13–0,22	0,14–0,24	0,18–0,32	0,23–0,41
M	14.1	30	– 50	mm/r	0,02–0,05	0,03–0,06	0,04–0,07	0,05–0,09	0,08–0,11	0,09–0,12	0,10–0,14	0,12–0,16	0,14–0,18	0,16–0,20
	14.3	40	– 60	mm/r	0,02–0,06	0,03–0,07	0,04–0,08	0,06–0,10	0,08–0,12	0,09–0,14	0,10–0,16	0,12–0,18	0,14–0,20	0,16–0,22
	14.2, 14.4	30	– 50	mm/r	0,02–0,05	0,03–0,06	0,04–0,07	0,06–0,09	0,08–0,11	0,09–0,12	0,10–0,14	0,12–0,16	0,14–0,18	0,16–0,20
K	15, 16	70	– 150	mm/r	0,06–0,13	0,07–0,14	0,09–0,18	0,10–0,19	0,13–0,25	0,16–0,30	0,18–0,35	0,20–0,39	0,25–0,48	0,30–0,59
	17, 18, 19	90	– 120	mm/r	0,08–0,11	0,09–0,12	0,10–0,13	0,10–0,15	0,13–0,20	0,16–0,25	0,18–0,29	0,20–0,32	0,25–0,38	0,30–0,48
	20	80	– 120	mm/r	0,04–0,10	0,06–0,12	0,06–0,14	0,07–0,15	0,10–0,20	0,11–0,24	0,14–0,28	0,15–0,32	0,19–0,38	0,24–0,48
N	21	90	– 270	mm/r	0,05–0,12	0,06–0,13	0,08–0,14	0,10–0,16	0,12–0,20	0,16–0,24	0,20–0,28	0,24–0,32	0,28–0,40	0,32–0,48
	22, 23, 24	90	– 270	mm/r	0,04–0,08	0,06–0,12	0,08–0,16	0,10–0,20	0,12–0,24	0,16–0,28	0,20–0,32	0,24–0,36	0,28–0,44	0,32–0,52
	25	90	– 225	mm/r	0,10–0,13	0,11–0,14	0,12–0,14	0,13–0,16	0,14–0,20	0,16–0,24	0,20–0,28	0,24–0,32	0,28–0,40	0,32–0,44
	26, 27, 28	90	– 270	mm/r	0,04–0,08	0,06–0,12	0,08–0,16	0,10–0,20	0,12–0,24	0,16–0,28	0,20–0,32	0,24–0,36	0,28–0,40	0,32–0,48
S	31, 32	20	– 30	mm/r	0,01–0,04	0,02–0,05	0,03–0,06	0,04–0,08	0,06–0,10	0,08–0,12	0,09–0,13	0,10–0,14	0,12–0,16	0,14–0,18
	33, 34, 35	10	– 30	mm/r	0,01–0,03	0,02–0,03	0,02–0,04	0,03–0,06	0,05–0,08	0,07–0,10	0,08–0,11	0,09–0,12	0,10–0,14	0,11–0,16
	36	20	– 40	mm/r	0,01–0,03	0,02–0,03	0,02–0,04	0,02–0,05	0,04–0,07	0,06–0,09	0,07–0,10	0,08–0,11	0,09–0,13	0,10–0,15
	37	20	– 50	mm/r	0,01–0,03	0,02–0,03	0,02–0,04	0,03–0,06	0,05–0,08	0,07–0,10	0,08–0,11	0,09–0,12	0,10–0,14	0,11–0,16

Metric

tolerance

nominal size range	D1 tolerance	D tolerance h6
1-3	0,000/-0,014 (h8)	0,000/-0,006
>3-6	0,000/-0,012 (h7)	0,000/-0,008
>6-10	0,000/-0,015 (h7)	0,000/-0,009
>10-18	0,000/-0,018 (h7)	0,000/-0,011
>18-20	0,000/-0,021 (h7)	0,000/-0,013

Solid Carbide Drills

Application Data • VariDrill™ • Steel, Stainless Steel, Cast Iron, Aluminum, and High-Temp Alloys



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Material Group		Cutting Speed — vc Range — m/min	Recommended Feed Rate (f) by Diameter										
			Tool Diameter (mm)	1,0	2,0	3,0	4,0	6,0	8,0	10,0	12,0	16,0	20,0
				min	—	max							
P	1	70 — 140	mm/r	0,04–0,09	0,05–0,12	0,07–0,14	0,08–0,16	0,11–0,22	0,13–0,26	0,15–0,31	0,18–0,35	0,22–0,42	0,28–0,54
	2, 3, 4, 6, 7	60 — 100	mm/r	0,05–0,10	0,06–0,13	0,08–0,15	0,09–0,17	0,13–0,23	0,15–0,28	0,19–0,33	0,22–0,38	0,26–0,47	0,34–0,59
	5, 9, 10, 11	50 — 100	mm/r	0,05–0,10	0,06–0,13	0,07–0,15	0,08–0,17	0,12–0,23	0,14–0,28	0,17–0,33	0,19–0,38	0,23–0,47	0,29–0,59
	12, 13	40 — 70	mm/r	0,03–0,05	0,04–0,06	0,05–0,08	0,06–0,10	0,08–0,14	0,10–0,18	0,13–0,22	0,14–0,24	0,18–0,32	0,23–0,41
M	14.1	30 — 50	mm/r	0,02–0,05	0,03–0,06	0,04–0,07	0,05–0,09	0,08–0,11	0,09–0,12	0,10–0,14	0,12–0,16	0,14–0,18	0,16–0,20
	14.3	40 — 60	mm/r	0,02–0,06	0,03–0,07	0,04–0,08	0,06–0,10	0,08–0,12	0,09–0,14	0,10–0,16	0,12–0,18	0,14–0,20	0,16–0,22
	14.2, 14.4	30 — 50	mm/r	0,02–0,05	0,03–0,06	0,04–0,07	0,06–0,09	0,08–0,11	0,09–0,12	0,10–0,14	0,12–0,16	0,14–0,18	0,16–0,20
K	15, 16	80 — 160	mm/r	0,07–0,14	0,08–0,15	0,10–0,20	0,11–0,22	0,14–0,28	0,18–0,34	0,21–0,40	0,23–0,44	0,28–0,54	0,34–0,67
	17, 18, 19	90 — 140	mm/r	0,09–0,13	0,10–0,14	0,11–0,14	0,12–0,17	0,14–0,23	0,18–0,28	0,21–0,32	0,23–0,36	0,28–0,43	0,34–0,54
	20	80 — 130	mm/r	0,05–0,12	0,06–0,14	0,07–0,15	0,08–0,17	0,11–0,23	0,13–0,27	0,15–0,32	0,17–0,36	0,22–0,43	0,27–0,54
N	21	90 — 315	mm/r	0,05–0,12	0,06–0,13	0,08–0,14	0,10–0,16	0,12–0,20	0,16–0,24	0,20–0,28	0,24–0,32	0,28–0,40	0,32–0,48
	22, 23, 24	90 — 270	mm/r	0,04–0,08	0,06–0,12	0,08–0,16	0,10–0,20	0,12–0,24	0,16–0,28	0,20–0,32	0,24–0,36	0,28–0,44	0,32–0,52
	25	90 — 270	mm/r	0,10–0,13	0,11–0,14	0,12–0,14	0,13–0,16	0,14–0,20	0,16–0,24	0,20–0,28	0,24–0,32	0,28–0,40	0,32–0,44
	26, 27, 28	90 — 270	mm/r	0,04–0,08	0,06–0,12	0,08–0,16	0,10–0,20	0,12–0,24	0,16–0,28	0,20–0,32	0,24–0,36	0,28–0,40	0,32–0,48
S	31, 32	20 — 30	mm/r	0,01–0,04	0,02–0,05	0,03–0,06	0,04–0,08	0,06–0,10	0,08–0,12	0,09–0,13	0,10–0,14	0,12–0,16	0,14–0,18
	33, 34, 35	10 — 30	mm/r	0,01–0,03	0,02–0,03	0,02–0,04	0,03–0,06	0,05–0,08	0,07–0,10	0,08–0,11	0,09–0,12	0,10–0,14	0,11–0,16
	36	10 — 40	mm/r	0,01–0,03	0,02–0,03	0,02–0,04	0,02–0,05	0,04–0,07	0,06–0,09	0,07–0,10	0,08–0,11	0,09–0,13	0,10–0,15
	37	10 — 40	mm/r	0,01–0,03	0,02–0,03	0,02–0,04	0,03–0,06	0,05–0,08	0,07–0,10	0,08–0,11	0,09–0,12	0,10–0,14	0,11–0,16

Metric

tolerance

nominal size range	D1 tolerance	D tolerance h6
1–3	0,000/-0,014 (h8)	0,000/-0,006
>3–6	0,000/-0,012 (h7)	0,000/-0,008
>6–10	0,000/-0,015 (h7)	0,000/-0,009
>10–18	0,000/-0,018 (h7)	0,000/-0,011
>18–20	0,000/-0,021 (h7)	0,000/-0,013





EXTREME CHALLENGES. EXTREME RESULTS.

TDF Drills for Flat-Bottom Applications (Available as Semi-Standards)

Primary Application

Engineered specifically to eliminate the need for a two-part operation when drilling flat-bottom holes or on an inclined surface:

- Drill flat-bottom holes in one step.
- Eliminate the need to use both an end mill and a drill to machine a flat on an inclined surface.
- After full cylindrical engagement, the drills run at normal solid carbide drilling parameters.

Features and Benefits

- Four-Margin Design
 - Increases contact with material at full diameter.
 - Improves hold quality and drill stability in the cut.
 - Enables interrupted cuts and inclined exits.
- Special Point-Thinning
 - Increases centering capability.
 - Improves chip formation and flow.
 - Reduces cutting forces.

Product Portfolio

- The Flat-Bottom Drill product series TDF51* is pre-designed in four lengths and available in two grades, WN15HD for non-ferrous materials, and WU20PD™ for steel, iron, and stainless steel.

– TDF510*	1,5 x D
– TDF511*	3 x D
– TDF512*	5 x D
– TDF513*	8 x D
- Length variations and step drills available as engineered solutions.

Ordering Process

- Please contact your local Authorized Distributor for a quote.