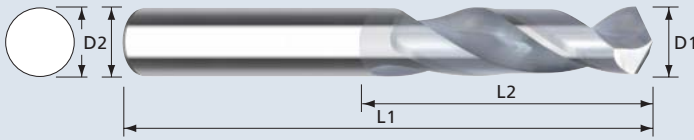


WDN 油穴なし超硬ソリッドドリル ノンコーティング

ウォーターミルズ外部給油式のノンコーティング超硬ソリッドドリルは、優れた切りくず処理と排出を可能にしたコストパフォーマンスの高いドリルです。



WDN 超硬ソリッドドリル 推奨切削条件表

被削材	刃径		0.5 mm		1 mm		3 mm		6 mm		8 mm		10 mm		12 mm		
	vc	f	vc	f	vc	f	vc	f	vc	f	vc	f	vc	f	vc	f	
一般鋼	<150 HB	65	0.015	65	0.040	65	0.080	80	0.09	80	0.12	80	0.14	80	0.17		
	<205 HB	60	0.015	60	0.040	60	0.080	75	0.09	75	0.12	75	0.14	75	0.17		
焼戻鋼	<25 HRC	55	0.010	55	0.030	55	0.080	70	0.07	70	0.08	70	0.11	70	0.14		
	<32 HRC	50	0.010	50	0.030	50	0.080	60	0.07	60	0.08	60	0.11	60	0.14		
	<44 HRC	25	0.010	25	0.030	25	0.075	30	0.07	30	0.08	30	0.11	30	0.14		
鋳物	<180 HB	70	0.015	70	0.040	70	0.080	90	0.09	90	0.12	90	0.14	90	0.17		
アルミニウム	>8% S	90	0.015	90	0.040	90	0.080	120	0.09	120	0.12	120	0.14	120	0.17		
銅・真鍮・ブロンズ		80	0.015	80	0.040	80	0.080	110	0.09	110	0.12	120	0.14	120	0.17		



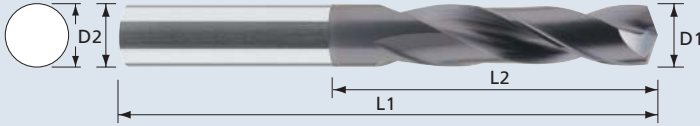
D1 h7	D2 h6	L2	L1	型番	価格
0.50	0.50	3	20	WDN0050L3X20	¥ 1,220
0.60	0.60	5.5	21	WDN0060L5.5X21	¥ 1,220
0.70	0.70	6	23	WDN0070L6X23	¥ 1,220
0.80	0.80	5	24	WDN0080L5X24	¥ 1,220
0.90	0.90	5.5	25	WDN0090L5.5X25	¥ 1,220
1.00	1.00	6	26	WDN0100L6X26	¥ 1,220
1.10	1.10	7	28	WDN0110L7X28	¥ 1,220
1.20	1.20	8	30	WDN0120L8X30	¥ 1,220
1.30	1.30	8	30	WDN0130L8X30	¥ 1,220
1.40	1.40	9	32	WDN0140L9X32	¥ 1,220
1.50	1.50	9	32	WDN0150L9X32	¥ 1,220
1.60	1.60	10	34	WDN0160L10X34	¥ 1,220
1.70	1.70	10	34	WDN0170L10X34	¥ 1,220
1.80	1.80	11	36	WDN0180L11X36	¥ 1,220
1.90	1.90	11	36	WDN0190L11X36	¥ 1,220
2.00	2.00	12	38	WDN0200L12X38	¥ 1,370
2.10	2.10	12	38	WDN0210L12X38	¥ 1,370
2.20	2.20	13	40	WDN0220L13X40	¥ 1,370
2.30	2.30	13	40	WDN0230L13X40	¥ 1,370
2.40	2.40	14	43	WDN0240L14X43	¥ 1,370
2.50	2.50	14	43	WDN0250L14X43	¥ 1,370
2.60	2.60	14	43	WDN0260L14X43	¥ 1,370
2.70	2.70	16	46	WDN0270L16X46	¥ 1,880
2.80	2.80	16	46	WDN0280L16X46	¥ 1,880
2.90	2.90	16	46	WDN0290L16X46	¥ 1,880
3.00	3.00	16	46	WDN0300L16X46	¥ 1,880
3.10	3.10	18	49	WDN0310L18X49	¥ 1,950
3.20	3.20	18	49	WDN0320L18X49	¥ 1,950
3.30	3.30	18	49	WDN0330L18X49	¥ 1,950
3.40	3.40	20	52	WDN0340L20X52	¥ 2,080
3.50	3.50	20	52	WDN0350L20X52	¥ 2,080
3.60	3.60	20	52	WDN0360L20X52	¥ 2,250
3.70	3.70	20	52	WDN0370L20X52	¥ 2,250
3.80	3.80	22	55	WDN0380L22X55	¥ 2,400
3.90	3.90	22	55	WDN0390L22X55	¥ 2,400
4.00	4.00	22	55	WDN0400L22X55	¥ 2,400
4.10	4.10	22	55	WDN0410L22X55	¥ 2,550
4.20	4.20	22	55	WDN0420L22X55	¥ 2,550
4.30	4.30	24	58	WDN0430L24X58	¥ 2,690
4.40	4.40	24	58	WDN0440L24X58	¥ 2,690
4.50	4.50	24	58	WDN0450L24X58	¥ 2,690
4.60	4.60	24	58	WDN0460L24X58	¥ 2,690
4.70	4.70	24	58	WDN0470L24X58	¥ 2,890
4.80	4.80	26	62	WDN0480L26X62	¥ 2,890
4.90	4.90	26	62	WDN0490L26X62	¥ 2,890
5.00	5.00	26	62	WDN0500L26X62	¥ 2,890
5.10	5.10	26	62	WDN0510L26X62	¥ 2,890
5.20	5.20	26	62	WDN0520L26X62	¥ 3,780
5.30	5.30	26	62	WDN0530L26X62	¥ 3,780
5.40	5.40	28	66	WDN0540L28X66	¥ 3,780
5.50	5.50	28	66	WDN0550L28X66	¥ 3,780

D1 h7	D2 h6	L2	L1	型番	価格
5.60	5.60	28	66	WDN0560L28X66	¥ 3,980
5.70	5.70	28	66	WDN0570L28X66	¥ 3,980
5.80	5.80	28	66	WDN0580L28X66	¥ 3,980
5.90	5.90	28	66	WDN0590L28X66	¥ 3,980
6.00	6.00	28	66	WDN0600L28X66	¥ 3,980
6.10	6.10	31	70	WDN0610L31X70	¥ 4,990
6.20	6.20	31	70	WDN0620L31X70	¥ 4,990
6.30	6.30	31	70	WDN0630L31X70	¥ 4,990
6.40	6.40	31	70	WDN0640L31X70	¥ 4,990
6.50	6.50	31	70	WDN0650L31X70	¥ 4,990
6.60	6.60	31	70	WDN0660L31X70	¥ 5,820
6.70	6.70	31	70	WDN0670L31X70	¥ 5,820
6.80	6.80	34	74	WDN0680L34X74	¥ 5,820
6.90	6.90	34	74	WDN0690L34X74	¥ 5,820
7.00	7.00	34	74	WDN0700L34X74	¥ 5,820
7.10	7.10	34	74	WDN0710L34X74	¥ 7,080
7.20	7.20	34	74	WDN0720L34X74	¥ 7,080
7.30	7.30	34	74	WDN0730L34X74	¥ 7,080
7.40	7.40	34	74	WDN0740L34X74	¥ 7,080
7.50	7.50	34	74	WDN0750L34X74	¥ 7,080
7.60	7.60	37	79	WDN0760L37X79	¥ 7,990
7.70	7.70	37	79	WDN0770L37X79	¥ 7,990
7.80	7.80	37	79	WDN0780L37X79	¥ 7,990
7.90	7.90	37	79	WDN0790L37X79	¥ 7,990
8.00	8.00	37	79	WDN0800L37X79	¥ 7,990
8.10	8.10	37	79	WDN0810L37X79	¥ 9,890
8.20	8.20	37	79	WDN0820L37X79	¥ 9,890
8.30	8.30	37	79	WDN0830L37X79	¥ 9,890
8.40	8.40	37	79	WDN0840L37X79	¥ 9,890
8.50	8.50	37	79	WDN0850L37X79	¥ 9,890
8.60	8.60	40	84	WDN0860L40X84	¥ 10,500
8.70	8.70	40	84	WDN0870L40X84	¥ 10,500
8.80	8.80	40	84	WDN0880L40X84	¥ 10,500
8.90	8.90	40	84	WDN0890L40X84	¥ 10,500
9.00	9.00	40	84	WDN0900L40X84	¥ 10,500
9.10	9.10	40	84	WDN0910L40X84	¥ 11,500
9.20	9.20	40	84	WDN0920L40X84	¥ 11,500
9.30	9.30	40	84	WDN0930L40X84	¥ 11,500
9.40	9.40	40	84	WDN0940L40X84	¥ 11,500
9.50	9.50	40	84	WDN0950L40X84	¥ 11,500
9.60	9.60	40	89	WDN0960L40X89	¥ 12,500
9.70	9.70	43	89	WDN0970L43X89	¥ 12,500
9.80	9.80	43	89	WDN0980L43X89	¥ 12,500
9.90	9.90	43	89	WDN0990L43X89	¥ 12,500
10.00	10.00	43	89	WDN1000L43X89	¥ 12,500
10.20	10.20	43	89	WDN1020L43X89	¥ 15,700
10.30	10.30	43	89	WDN1030L43X89	¥ 15,700
10.50	10.50	43	89	WDN1050L43X89	¥ 15,700
11.00	11.00	47	95	WDN1100L47X95	¥ 15,700
11.50	11.50	47	95	WDN1150L47X95	¥ 18,300
12.00	12.00	51	102	WDN1200L51X102	¥ 18,300

※ ピンク色の型番表示は、ノガ・ウォーターズ在庫です。

ノガ・ウォーターズ株式会社では、この度、ウォーターミルズ® 超硬ソリッドドリルを発売致しました。このドリルは、適正な切削刃の前加工、特殊な溝設計により、安全に切粉を粉砕・排出する上に最新のドリル先端形状により最大の工具寿命と、スムーズな切削力をお約束します。

WDT 油穴なし 超硬ソリッドドリル
エキストラショート TiAlNコート



D1 h6	D2 h6	L2	L1	型番	価格
3.00	3.00	16	46	WDT0300L16X46	¥ 2,960
3.10	3.10	18	49	WDT0310L18X49	¥ 2,960
3.20	3.20	18	49	WDT0320L18X49	¥ 2,960
3.30	3.30	18	49	WDT0330L18X49	¥ 2,960
3.40	3.40	20	52	WDT0340L20X52	¥ 3,230
3.50	3.50	20	52	WDT0350L20X52	¥ 3,230
3.60	3.60	20	52	WDT0360L20X52	¥ 3,780
3.70	3.70	20	52	WDT0370L20X52	¥ 3,780
3.80	3.80	22	55	WDT0380L22X55	¥ 3,780
3.90	3.90	22	55	WDT0390L22X55	¥ 3,780
4.00	4.00	22	55	WDT0400L22X55	¥ 3,780
4.10	4.10	22	55	WDT0410L22X55	¥ 3,780
4.20	4.20	22	55	WDT0420L22X55	¥ 3,780
4.30	4.30	24	58	WDT0430L24X58	¥ 4,030
4.40	4.40	24	58	WDT0440L24X58	¥ 4,030
4.50	4.50	24	58	WDT0450L24X58	¥ 4,030
4.60	4.60	24	58	WDT0460L24X58	¥ 4,030
4.70	4.70	24	58	WDT0470L24X58	¥ 4,030
4.80	4.80	26	62	WDT0480L26X62	¥ 4,030
4.90	4.90	26	62	WDT0490L26X62	¥ 4,030
5.00	5.00	26	62	WDT0500L26X62	¥ 4,300
5.10	5.10	26	62	WDT0510L26X62	¥ 5,650
5.20	5.20	26	62	WDT0520L26X62	¥ 5,650
5.30	5.30	26	62	WDT0530L26X62	¥ 5,650
5.40	5.40	28	66	WDT0540L28X66	¥ 5,650
5.50	5.50	28	66	WDT0550L28X66	¥ 5,650
5.60	5.60	28	66	WDT0560L28X66	¥ 5,650
5.70	5.70	28	66	WDT0570L28X66	¥ 5,650
5.80	5.80	28	66	WDT0580L28X66	¥ 5,650
5.90	5.90	28	66	WDT0590L28X66	¥ 5,650
6.00	6.00	28	66	WDT0600L28X66	¥ 5,650
6.10	6.10	31	70	WDT0610L31X70	¥ 7,530
6.20	6.20	31	70	WDT0620L31X70	¥ 7,530
6.30	6.30	31	70	WDT0630L31X70	¥ 7,530
6.40	6.40	31	70	WDT0640L31X70	¥ 7,530
6.50	6.50	31	70	WDT0650L31X70	¥ 7,530
6.60	6.60	31	70	WDT0660L31X70	¥ 7,530
6.70	6.70	31	70	WDT0670L31X70	¥ 8,070
6.80	6.80	34	74	WDT0680L34X74	¥ 8,070
6.90	6.90	34	74	WDT0690L34X74	¥ 8,070
7.00	7.00	34	74	WDT0700L34X74	¥ 8,070
7.10	7.10	34	74	WDT0710L34X74	¥ 8,070
7.20	7.20	34	74	WDT0720L34X74	¥ 8,070
7.30	7.30	34	74	WDT0730L34X74	¥ 8,070
7.40	7.40	34	74	WDT0740L34X74	¥ 8,070
7.50	7.50	34	74	WDT0750L34X74	¥ 8,070

※ ピンク色の型番表示は、ノガ・ウォーターズ在庫です。

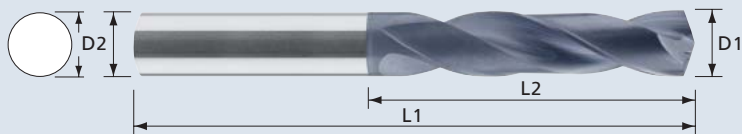
WDT 超硬ソリッドドリル 推奨切削条件表

被削材	刃径		3 mm		4 mm		6 mm		8 mm		12 mm		16 mm		20 mm		
	vc	f	vc	f	vc	f	vc	f	vc	f	vc	f	vc	f	vc	f	
一般鋼	<150 HB	75	0.085	75	0.16	98	0.19	98	0.22	120	0.35	120	0.35	120	0.40	120	0.40
	<205 HB	70	0.085	70	0.16	91	0.19	91	0.22	112	0.35	112	0.35	112	0.40	112	0.40
焼戻鋼	<25 HRC	65	0.080	65	0.13	85	0.15	85	0.18	104	0.30	104	0.30	104	0.38	104	0.38
	<32 HRC	60	0.080	60	0.13	78	0.15	78	0.18	96	0.30	96	0.30	96	0.38	96	0.38
	<44 HRC	50	0.075	50	0.11	65	0.14	65	0.16	80	0.25	80	0.25	80	0.33	80	0.33
焼入鋼	45-55 HRC	25	0.032	25	0.05	33	0.05	33	0.063	40	0.10	40	0.10	40	0.16	40	0.16
鋳物	<180 HB	80	0.085	80	0.16	104	0.19	104	0.22	128	0.35	128	0.35	128	0.40	128	0.40
ステンレス鋼	オーステナイト系	35	0.065	35	0.08	45	0.11	45	0.13	56	0.20	56	0.20	56	0.32	56	0.32
アルミニウム	>8% S	100	0.140	100	0.20	130	0.25	130	0.28	160	0.40	160	0.40	160	0.60	160	0.60
銅・真鍮・ブロンズ	90	0.085	90	0.16	117	0.19	117	0.22	144	0.35	144	0.35	144	0.40	144	0.40	
チタニウム	25	0.050	25	0.07	33	0.08	33	0.10	40	0.16	40	0.16	40	0.25	40	0.25	
インコネル・ハステロイ	20	0.050	20	0.07	26	0.08	26	0.10	32	0.16	32	0.16	32	0.25	32	0.25	



D1 h6	D2 h6	L2	L1	型番	価格
7.60	7.60	37	79	WDT0760L37X79	¥ 9,420
7.70	7.70	37	79	WDT0770L37X79	¥ 9,420
7.80	7.80	37	79	WDT0780L37X79	¥ 9,420
7.90	7.90	37	79	WDT0790L37X79	¥ 9,420
8.00	8.00	37	79	WDT0800L37X79	¥ 9,420
8.10	8.10	37	79	WDT0810L37X79	¥10,500
8.20	8.20	37	79	WDT0820L37X79	¥10,500
8.30	8.30	37	79	WDT0830L37X79	¥10,500
8.40	8.40	37	79	WDT0840L37X79	¥10,500
8.50	8.50	37	79	WDT0850L37X79	¥10,500
8.60	8.60	40	84	WDT0860L40X84	¥10,500
8.70	8.70	40	84	WDT0870L40X84	¥11,300
8.80	8.80	40	84	WDT0880L40X84	¥11,300
8.90	8.90	40	84	WDT0890L40X84	¥11,300
9.00	9.00	40	84	WDT0900L40X84	¥11,600
9.10	9.10	40	84	WDT0910L40X84	¥11,600
9.20	9.20	40	84	WDT0920L40X84	¥11,600
9.30	9.30	40	84	WDT0930L40X84	¥11,600
9.40	9.40	40	84	WDT0940L40X84	¥11,600
9.50	9.50	40	84	WDT0950L40X84	¥12,900
9.60	9.60	43	89	WDT0960L43X89	¥12,900
9.70	9.70	43	89	WDT0970L43X89	¥12,900
9.80	9.80	43	89	WDT0980L43X89	¥12,900
9.90	9.90	43	89	WDT0990L43X89	¥12,900
10.00	10.00	43	89	WDT1000L43X89	¥13,500
10.20	10.20	43	89	WDT1020L43X89	¥14,800
10.30	10.30	43	89	WDT1030L43X89	¥14,800
10.50	10.50	43	89	WDT1050L43X89	¥16,900
11.00	11.00	47	95	WDT1100L47X95	¥17,500
11.50	11.50	47	95	WDT1150L47X95	¥19,400
11.80	11.80	47	95	WDT1180L47X95	¥19,400
12.00	12.00	51	102	WDT1200L51X102	¥19,400
13.00	13.00	51	102	WDT1300L51X102	¥23,700
13.50	13.50	54	107	WDT1350L54X107	¥25,500
14.00	14.00	54	107	WDT1400L54X107	¥26,900
14.50	14.50	56	111	WDT1450L56X111	¥26,900
15.00	15.00	56	111	WDT1500L56X111	¥26,900
15.50	15.50	58	115	WDT1550L58X115	¥26,900
16.00	16.00	58	115	WDT1600L58X115	¥29,600
16.50	16.50	60	119	WDT1650L60X119	¥34,900
17.00	17.00	60	119	WDT1700L60X119	¥34,900
17.50	17.50	62	123	WDT1750L62X123	¥34,900
18.00	18.00	62	123	WDT1800L62X123	¥34,900
18.50	18.50	64	127	WDT1850L64X127	¥34,900
19.00	19.00	64	127	WDT1900L64X127	¥35,800
19.50	19.50	66	131	WDT1950L66X131	¥37,400
20.00	20.00	66	131	WDT2000L66X131	¥38,400

W3H 3×D 油穴付 TiAlNコート
超硬ソリッドドリル

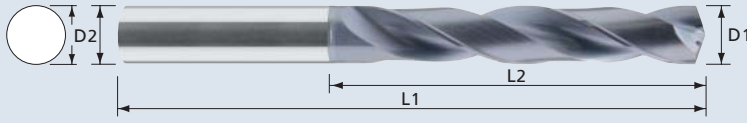


D1 m7	D2 h6	L2	L1	型番	価格
3.00	6.00	20	62	W3H0300L20X62	¥ 9,050
3.10	6.00	20	62	W3H0310L20X62	¥ 9,050
3.20	6.00	20	62	W3H0320L20X62	¥ 9,050
3.30	6.00	20	62	W3H0330L20X62	¥ 9,050
3.40	6.00	20	62	W3H0340L20X62	¥ 9,050
3.50	6.00	20	62	W3H0350L20X62	¥ 9,050
3.60	6.00	20	62	W3H0360L20X62	¥ 9,050
3.70	6.00	20	62	W3H0370L20X62	¥ 9,050
3.80	6.00	24	66	W3H0380L24X66	¥ 9,050
3.90	6.00	24	66	W3H0390L24X66	¥ 9,050
4.00	6.00	24	66	W3H0400L24X66	¥ 9,050
4.10	6.00	24	66	W3H0410L24X66	¥ 9,050
4.20	6.00	24	66	W3H0420L24X66	¥ 9,050
4.30	6.00	24	66	W3H0430L24X66	¥ 9,050
4.40	6.00	24	66	W3H0440L24X66	¥ 9,050
4.50	6.00	24	66	W3H0450L24X66	¥ 9,050
4.60	6.00	24	66	W3H0460L24X66	¥ 9,050
4.65	6.00	24	66	W3H0465L24X66	¥ 9,050
4.70	6.00	24	66	W3H0470L24X66	¥ 9,050
4.80	6.00	28	66	W3H0480L28X66	¥ 9,050
4.90	6.00	28	66	W3H0490L28X66	¥ 9,050
5.00	6.00	28	66	W3H0500L28X66	¥ 9,050
5.10	6.00	28	66	W3H0510L28X66	¥ 9,050
5.20	6.00	28	66	W3H0520L28X66	¥ 9,050
5.30	6.00	28	66	W3H0530L28X66	¥ 9,050
5.40	6.00	28	66	W3H0540L28X66	¥ 9,050
5.50	6.00	28	66	W3H0550L28X66	¥ 9,050
5.55	6.00	28	66	W3H0555L28X66	¥ 9,050
5.60	6.00	28	66	W3H0560L28X66	¥ 9,050
5.70	6.00	28	66	W3H0570L28X66	¥ 9,050
5.80	6.00	28	66	W3H0580L28X66	¥ 9,050
5.90	6.00	28	66	W3H0590L28X66	¥ 9,050
6.00	6.00	28	66	W3H0600L28X66	¥ 9,050
6.10	8.00	34	79	W3H0610L34X79	¥ 11,800
6.20	8.00	34	79	W3H0620L34X79	¥ 11,800
6.30	8.00	34	79	W3H0630L34X79	¥ 11,800
6.40	8.00	34	79	W3H0640L34X79	¥ 11,800
6.50	8.00	34	79	W3H0650L34X79	¥ 11,800
6.60	8.00	34	79	W3H0660L34X79	¥ 11,800
6.70	8.00	34	79	W3H0670L34X79	¥ 11,800
6.80	8.00	34	79	W3H0680L34X79	¥ 11,800
6.90	8.00	34	79	W3H0690L34X79	¥ 11,800
7.00	8.00	34	79	W3H0700L34X79	¥ 11,800
7.10	8.00	41	79	W3H0710L41X79	¥ 11,800
7.20	8.00	41	79	W3H0720L41X79	¥ 11,800
7.30	8.00	41	79	W3H0730L41X79	¥ 11,800
7.40	8.00	41	79	W3H0740L41X79	¥ 11,800
7.50	8.00	41	79	W3H0750L41X79	¥ 11,800
7.60	8.00	41	79	W3H0760L41X79	¥ 11,800
7.70	8.00	41	79	W3H0770L41X79	¥ 11,800
7.80	8.00	41	79	W3H0780L41X79	¥ 11,800
7.90	8.00	41	79	W3H0790L41X79	¥ 11,800
8.00	8.00	41	79	W3H0800L41X79	¥ 11,800
8.10	10.00	47	89	W3H0810L47X89	¥ 15,000

D1 m7	D2 h6	L2	L1	型番	価格
8.20	10.00	47	89	W3H0820L47X89	¥ 15,000
8.30	10.00	47	89	W3H0830L47X89	¥ 15,000
8.40	10.00	47	89	W3H0840L47X89	¥ 15,000
8.50	10.00	47	89	W3H0850L47X89	¥ 15,000
8.60	10.00	47	89	W3H0860L47X89	¥ 15,000
8.70	10.00	47	89	W3H0870L47X89	¥ 15,000
8.80	10.00	47	89	W3H0880L47X89	¥ 15,000
8.90	10.00	47	89	W3H0890L47X89	¥ 15,000
9.00	10.00	47	89	W3H0900L47X89	¥ 15,000
9.10	10.00	47	89	W3H0910L47X89	¥ 15,000
9.20	10.00	47	89	W3H0920L47X89	¥ 15,000
9.30	10.00	47	89	W3H0930L47X89	¥ 15,000
9.40	10.00	47	89	W3H0940L47X89	¥ 15,000
9.50	10.00	47	89	W3H0950L47X89	¥ 15,000
9.60	10.00	47	89	W3H0960L47X89	¥ 15,000
9.70	10.00	47	89	W3H0970L47X89	¥ 15,000
9.80	10.00	47	89	W3H0980L47X89	¥ 15,000
9.90	10.00	47	89	W3H0990L47X89	¥ 15,000
10.00	10.00	47	89	W3H1000L47X89	¥ 15,000
10.10	12.00	55	102	W3H1010L55X102	¥ 21,000
10.20	12.00	55	102	W3H1020L55X102	¥ 21,000
10.30	12.00	55	102	W3H1030L55X102	¥ 21,000
10.40	12.00	55	102	W3H1040L55X102	¥ 21,000
10.50	12.00	55	102	W3H1050L55X102	¥ 21,000
10.60	12.00	55	102	W3H1060L55X102	¥ 21,000
10.70	12.00	55	102	W3H1070L55X102	¥ 21,000
10.80	12.00	55	102	W3H1080L55X102	¥ 21,000
10.90	12.00	55	102	W3H1090L55X102	¥ 21,000
11.00	12.00	55	102	W3H1100L55X102	¥ 21,000
11.10	12.00	55	102	W3H1110L55X102	¥ 21,000
11.20	12.00	55	102	W3H1120L55X102	¥ 21,000
11.30	12.00	55	102	W3H1130L55X102	¥ 21,000
11.40	12.00	55	102	W3H1140L55X102	¥ 21,000
11.50	12.00	55	102	W3H1150L55X102	¥ 21,000
11.60	12.00	55	102	W3H1160L55X102	¥ 21,000
11.70	12.00	55	102	W3H1170L55X102	¥ 21,000
11.80	12.00	55	102	W3H1180L55X102	¥ 21,000
11.90	12.00	55	102	W3H1190L55X102	¥ 21,000
12.00	12.00	55	102	W3H1200L55X102	¥ 21,000
12.20	14.00	60	107	W3H1220L60X107	¥ 21,000
12.30	14.00	60	107	W3H1230L60X107	¥ 27,300
12.50	14.00	60	107	W3H1250L60X107	¥ 27,300
12.80	14.00	60	107	W3H1280L60X107	¥ 27,300
13.00	14.00	60	107	W3H1300L60X107	¥ 27,300
13.50	14.00	60	107	W3H1350L60X107	¥ 27,300
13.80	14.00	60	107	W3H1380L60X107	¥ 27,300
14.00	14.00	60	107	W3H1400L60X107	¥ 27,300
14.50	16.00	65	115	W3H1450L65X115	¥ 32,500
14.80	16.00	65	115	W3H1480L65X115	¥ 32,500
15.00	16.00	65	115	W3H1500L65X115	¥ 32,500
15.50	16.00	65	115	W3H1550L65X115	¥ 32,500
15.80	16.00	65	115	W3H1580L65X115	¥ 32,500
16.00	16.00	65	115	W3H1600L65X115	¥ 32,500
16.50	18.00	73	123	W3H1650L73X123	¥ 49,900
16.80	18.00	73	123	W3H1680L73X123	¥ 49,900
17.00	18.00	73	123	W3H1700L73X123	¥ 49,900
17.50	18.00	73	123	W3H1750L73X123	¥ 49,900
17.80	18.00	73	123	W3H1780L73X123	¥ 49,900
18.00	18.00	73	123	W3H1800L73X123	¥ 49,900
18.50	20.00	79	131	W3H1850L79X131	¥ 56,400
19.00	20.00	79	131	W3H1900L79X131	¥ 56,400
19.50	20.00	79	131	W3H1950L79X131	¥ 56,400
19.80	20.00	79	131	W3H1980L79X131	¥ 56,400
20.00	20.00	79	131	W3H2000L79X131	¥ 56,400

※ ピンク色の型番表示は、ノガ・ウォーターズ在庫です。

**W5H 5×D 油穴付 TiAlNコート
超硬ソリッドドリル**

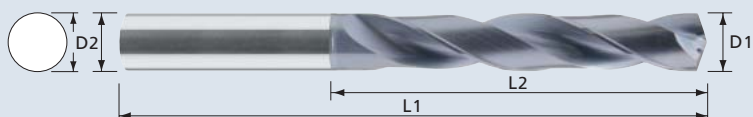


D1 m7	D2 h6	L2	L1	型番	価格
1.00	3.00	10	55	W5H0100L10X55	¥11,200
1.10	3.00	12	55	W5H0110L12X55	¥11,200
1.20	3.00	12	55	W5H0120L12X55	¥11,200
1.30	3.00	12	55	W5H0130L12X55	¥11,200
1.40	3.00	12	55	W5H0140L12X55	¥11,200
1.50	3.00	12	55	W5H0150L12X55	¥11,200
1.60	3.00	16	55	W5H0160L16X55	¥11,200
1.70	3.00	16	55	W5H0170L16X55	¥11,200
1.80	3.00	16	55	W5H0180L16X55	¥11,200
1.90	3.00	16	55	W5H0190L16X55	¥11,200
2.00	3.00	21	57	W5H0200L21X57	¥11,200
2.02	3.00	16	57	W5H0202L16X57	¥11,200
2.10	3.00	21	57	W5H0210L21X57	¥11,200
2.20	3.00	21	57	W5H0220L21X57	¥11,200
2.22	3.00	21	57	W5H0222L21X57	¥11,200
2.30	3.00	21	57	W5H0230L21X57	¥11,200
2.32	3.00	21	57	W5H0232L21X57	¥11,200
2.40	3.00	21	57	W5H0240L21X57	¥11,200
2.42	3.00	21	57	W5H0242L21X57	¥11,200
2.50	3.00	21	57	W5H0250L21X57	¥11,200
2.52	3.00	21	57	W5H0252L21X57	¥11,200
2.60	3.00	21	57	W5H0260L21X57	¥11,200
2.70	3.00	21	57	W5H0270L21X57	¥11,200
2.72	3.00	21	57	W5H0272L21X57	¥11,200
2.75	3.00	21	57	W5H0275L21X57	¥11,200
2.80	3.00	21	57	W5H0280L21X57	¥11,200
2.82	3.00	21	57	W5H0282L21X57	¥11,200
2.90	3.00	21	57	W5H0290L21X57	¥11,200
3.00	6.00	28	66	W5H0300L28X66	¥11,200
3.02	6.00	28	66	W5H0302L28X66	¥11,200
3.10	6.00	28	66	W5H0310L28X66	¥11,200
3.20	6.00	28	66	W5H0320L28X66	¥11,200
3.22	6.00	28	66	W5H0322L28X66	¥11,200
3.25	6.00	28	66	W5H0325L28X66	¥11,200
3.30	6.00	28	66	W5H0330L28X66	¥11,200
3.32	6.00	28	66	W5H0332L28X66	¥11,200
3.40	6.00	28	66	W5H0340L28X66	¥11,200
3.50	6.00	28	66	W5H0350L28X66	¥11,200
3.52	6.00	28	66	W5H0352L28X66	¥11,200
3.60	6.00	28	66	W5H0360L28X66	¥11,200
3.65	6.00	28	66	W5H0365L28X66	¥11,200
3.70	6.00	28	66	W5H0370L28X66	¥11,200
3.80	6.00	36	74	W5H0380L36X74	¥11,200
3.82	6.00	36	74	W5H0382L36X74	¥11,200
3.90	6.00	36	74	W5H0390L36X74	¥11,200
4.00	6.00	36	74	W5H0400L36X74	¥11,200
4.02	6.00	36	74	W5H0402L36X74	¥11,200
4.10	6.00	36	74	W5H0410L36X74	¥11,200
4.20	6.00	36	74	W5H0420L36X74	¥11,200
4.22	6.00	36	74	W5H0422L36X74	¥11,200
4.30	6.00	36	74	W5H0430L36X74	¥11,200
4.40	6.00	36	74	W5H0440L36X74	¥11,200
4.50	6.00	36	74	W5H0450L36X74	¥11,200
4.52	6.00	36	74	W5H0452L36X74	¥11,200

D1 m7	D2 h6	L2	L1	型番	価格
4.60	6.00	36	74	W5H0460L36X74	¥11,200
4.65	6.00	36	74	W5H0465L36X74	¥11,200
4.70	6.00	36	74	W5H0470L36X74	¥11,200
4.80	6.00	44	82	W5H0480L44X82	¥11,200
4.82	6.00	44	82	W5H0482L44X82	¥11,200
4.90	6.00	44	82	W5H0490L44X82	¥11,200
5.00	6.00	44	82	W5H0500L44X82	¥11,200
5.02	6.00	44	82	W5H0502L44X82	¥11,200
5.10	6.00	44	82	W5H0510L44X82	¥11,200
5.20	6.00	44	82	W5H0520L44X82	¥11,200
5.30	6.00	44	82	W5H0530L44X82	¥11,200
5.40	6.00	44	82	W5H0540L44X82	¥11,200
5.50	6.00	44	82	W5H0550L44X82	¥11,200
5.52	6.00	44	82	W5H0552L44X82	¥11,200
5.55	6.00	44	82	W5H0555L44X82	¥11,200
5.60	6.00	44	82	W5H0560L44X82	¥11,200
5.65	6.00	44	82	W5H0565L44X82	¥11,200
5.70	6.00	44	82	W5H0570L44X82	¥11,200
5.80	6.00	44	82	W5H0580L44X82	¥11,200
5.82	6.00	44	82	W5H0582L44X82	¥11,200
5.90	6.00	44	82	W5H0590L44X82	¥11,200
6.00	6.00	44	82	W5H0600L44X82	¥11,200
6.02	6.00	44	82	W5H0602L44X82	¥13,200
6.10	8.00	53	91	W5H0610L53X91	¥13,200
6.20	8.00	53	92	W5H0620L53X91	¥13,200
6.30	8.00	53	91	W5H0630L53X91	¥13,200
6.40	8.00	53	91	W5H0640L53X91	¥13,200
6.50	8.00	53	91	W5H0650L53X91	¥13,200
6.52	8.00	53	91	W5H0652L53X91	¥13,200
6.60	8.00	53	91	W5H0660L53X91	¥13,200
6.70	8.00	53	91	W5H0670L53X91	¥13,200
6.80	8.00	53	91	W5H0680L53X91	¥13,200
6.82	8.00	53	91	W5H0682L53X91	¥13,200
6.90	8.00	53	91	W5H0690L53X91	¥13,200
7.00	8.00	53	91	W5H0700L53X91	¥13,200
7.02	8.00	53	91	W5H0702L53X91	¥13,200
7.10	8.00	53	91	W5H0710L53X91	¥13,200
7.20	8.00	53	91	W5H0720L53X91	¥13,200
7.30	8.00	53	91	W5H0730L53X91	¥13,200
7.40	8.00	53	91	W5H0740L53X91	¥13,200
7.50	8.00	53	91	W5H0750L53X91	¥13,200
7.52	8.00	53	91	W5H0752L53X91	¥13,200
7.60	8.00	53	91	W5H0760L53X91	¥13,200
7.65	8.00	53	91	W5H0765L53X91	¥13,200
7.70	8.00	53	91	W5H0770L53X91	¥13,200
7.80	8.00	53	91	W5H0780L53X91	¥13,200
7.82	8.00	53	91	W5H0782L53X91	¥13,200
7.90	8.00	53	91	W5H0790L53X91	¥13,200
8.00	8.00	53	91	W5H0800L53X91	¥13,200
8.02	8.00	53	91	W5H0802L53X91	¥13,200
8.10	10.00	61	103	W5H0810L61X103	¥14,900
8.20	10.00	61	103	W5H0820L61X103	¥14,900
8.30	10.00	61	103	W5H0830L61X103	¥14,900
8.40	10.00	61	103	W5H0840L61X103	¥14,900
8.50	10.00	61	103	W5H0850L61X103	¥14,900
8.52	10.00	61	103	W5H0852L61X103	¥14,900
8.60	10.00	61	103	W5H0860L61X103	¥14,900
8.70	10.00	61	103	W5H0870L61X103	¥14,900
8.80	10.00	61	103	W5H0880L61X103	¥14,900
8.82	10.00	61	103	W5H0882L61X103	¥14,900
8.90	10.00	61	103	W5H0890L61X103	¥14,900
9.00	10.00	61	103	W5H0900L61X103	¥14,900
9.02	10.00	61	103	W5H0902L61X103	¥14,900
9.10	10.00	61	103	W5H0910L61X103	¥14,900

※ ピンク色の型番表示は、ノガ・ウォーターズ在庫です。

W5H 5×D 油穴付 TiAlNコート 超硬ソリッドドリル



D1 m7	D2 h6	L2	L1	型番	価格
9.20	10.00	61	103	W5H0920L61X103	¥ 14,900
9.30	10.00	61	103	W5H0930L61X103	¥ 14,900
9.40	10.00	61	103	W5H0940L61X103	¥ 14,900
9.50	10.00	61	103	W5H0950L61X103	¥ 14,900
9.55	10.00	61	103	W5H0955L61X103	¥ 14,900
9.60	10.00	61	103	W5H0960L61X103	¥ 14,900
9.70	10.00	61	103	W5H0970L61X103	¥ 14,900
9.80	10.00	61	103	W5H0980L61X103	¥ 14,900
9.82	10.00	61	103	W5H0982L61X103	¥ 14,900
9.90	10.00	61	103	W5H0990L61X103	¥ 14,900
10.00	10.00	61	103	W5H1000L61X103	¥ 14,900
10.02	10.00	61	103	W5H1002L61X103	¥ 14,900
10.10	12.00	71	118	W5H1010L71X118	¥ 21,400
10.20	12.00	71	118	W5H1020L71X118	¥ 21,400
10.22	12.00	71	118	W5H1022L71X118	¥ 21,400
10.30	12.00	71	118	W5H1030L71X118	¥ 21,400
10.40	12.00	71	118	W5H1040L71X118	¥ 21,400
10.50	12.00	71	118	W5H1050L71X118	¥ 21,400
10.60	12.00	71	118	W5H1060L71X118	¥ 21,400
10.70	12.00	71	118	W5H1070L71X118	¥ 21,400
10.80	12.00	71	118	W5H1080L71X118	¥ 21,400
10.82	12.00	71	118	W5H1082L71X118	¥ 21,400
10.90	12.00	71	118	W5H1090L71X118	¥ 21,400
11.00	12.00	71	118	W5H1100L71X118	¥ 21,400
11.10	12.00	71	118	W5H1110L71X118	¥ 21,400
11.20	12.00	71	118	W5H1120L71X118	¥ 21,400
11.30	12.00	71	118	W5H1130L71X118	¥ 21,400
11.40	12.00	71	118	W5H1140L71X118	¥ 21,400
11.50	12.00	71	118	W5H1150L71X118	¥ 21,400

D1 m7	D2 h6	L2	L1	型番	価格
11.55	12.00	71	118	W5H1155L71X118	¥ 21,400
11.60	12.00	71	118	W5H1160L71X118	¥ 21,400
11.70	12.00	71	118	W5H1170L71X118	¥ 21,400
11.80	12.00	71	118	W5H1180L71X118	¥ 21,400
11.82	12.00	71	118	W5H1182L71X118	¥ 21,400
11.90	12.00	71	118	W5H1190L71X118	¥ 21,400
12.00	12.00	71	118	W5H1200L71X118	¥ 21,400
12.02	12.00	71	118	W5H1202L71X118	¥ 21,400
12.20	14.00	77	124	W5H1220L77X124	¥ 27,300
12.30	14.00	77	124	W5H1230L77X124	¥ 27,300
12.50	14.00	77	124	W5H1250L77X124	¥ 27,300
12.80	14.00	77	124	W5H1280L77X124	¥ 27,300
13.00	14.00	77	124	W5H1300L77X124	¥ 27,300
13.20	14.00	77	124	W5H1320L77X124	¥ 27,300
13.50	14.00	77	124	W5H1350L77X124	¥ 27,300
13.70	14.00	77	124	W5H1370L77X124	¥ 27,300
13.80	14.00	77	124	W5H1380L77X124	¥ 27,300
14.00	14.00	77	124	W5H1400L77X124	¥ 27,300
14.20	16.00	83	133	W5H1420L83X133	¥ 33,700
14.50	16.00	83	133	W5H1450L83X133	¥ 33,700
14.80	16.00	83	133	W5H1480L83X133	¥ 33,700
15.00	16.00	83	133	W5H1500L83X133	¥ 33,700
15.10	16.00	83	133	W5H1510L83X133	¥ 33,700
15.20	16.00	83	133	W5H1520L83X133	¥ 33,700
15.50	16.00	83	133	W5H1550L83X133	¥ 33,700
15.80	16.00	83	133	W5H1580L83X133	¥ 33,700
16.00	16.00	83	133	W5H1600L83X133	¥ 33,700
16.50	18.00	93	143	W5H1650L93X143	¥ 52,700
16.80	18.00	93	143	W5H1680L93X143	¥ 52,700
17.00	18.00	93	143	W5H1700L93X143	¥ 52,700
17.50	18.00	93	143	W5H1750L93X143	¥ 52,700
17.80	18.00	93	143	W5H1780L93X143	¥ 52,700
18.00	18.00	93	143	W5H1800L93X143	¥ 52,700
18.50	20.00	101	153	W5H1850L101X153	¥ 56,300
19.00	20.00	101	153	W5H1900L101X153	¥ 56,300
19.50	20.00	101	153	W5H1950L101X153	¥ 56,300
20.00	20.00	101	153	W5H2000L101X153	¥ 56,300

W3H 超硬ソリッドドリル 推奨切削条件表

被削材	刃径	3 mm		4 mm		5 mm		6 mm		8 mm		10 mm		12 mm		14 mm		17 mm		20 mm	
		vc	f	vc	f	vc	f	vc	f	vc	f	vc	f	vc	f	vc	f	vc	f	vc	f
一般鋼	<150 HB	105	0.085	105	0.12	105	0.16	128	0.19	128	0.22	150	0.28	150	0.35	150	0.35	150	0.37	150	0.40
	<250 HB	98	0.085	98	0.12	98	0.16	119	0.19	119	0.22	140	0.28	140	0.35	140	0.35	140	0.37	140	0.40
	<25 HRC	91	0.08	91	0.10	91	0.13	111	0.15	111	0.18	130	0.23	130	0.30	130	0.30	130	0.35	130	0.38
焼戻鋼	<32 HRC	84	0.08	84	0.10	84	0.13	102	0.15	102	0.18	120	0.23	120	0.30	120	0.30	120	0.35	120	0.38
	<44 HRC	70	0.075	70	0.09	70	0.11	85	0.14	85	0.16	100	0.20	100	0.25	100	0.25	100	0.30	100	0.33
焼入鋼	45-55 HRC	35	0.032	35	0.04	35	0.05	43	0.05	43	0.063	50	0.08	50	0.10	50	0.10	50	0.125	50	0.16
鋳物	<180 HB	112	0.085	112	0.12	112	0.16	136	0.19	136	0.22	160	0.28	160	0.35	160	0.35	160	0.37	160	0.40
ステンレス鋼 オーステナイト系		49	0.065	49	0.08	49	0.10	60	0.11	60	0.13	70	0.16	70	0.20	70	0.20	70	0.25	70	0.32
アルミニウム >8% S		140	0.14	140	0.16	140	0.20	170	0.25	170	0.28	200	0.32	200	0.40	200	0.40	200	0.50	200	0.60
銅・真鍮・ブロンズ		126	0.085	126	0.12	126	0.16	153	0.19	153	0.22	180	0.28	180	0.35	180	0.35	180	0.37	180	0.40
チタニウム		35	0.05	35	0.065	35	0.07	43	0.08	43	0.10	50	0.13	50	0.16	50	0.16	50	0.20	50	0.25
インコネル・ハステロイ		28	0.05	28	0.065	28	0.07	34	0.08	34	0.10	40	0.13	40	0.16	40	0.16	40	0.20	40	0.25

W5H 超硬ソリッドドリル 推奨切削条件表

被削材	刃径	1 mm		2 mm		3 mm		4 mm		5 mm		6 mm		8 mm		10 mm		12 mm		14 mm		16 mm		18 mm		20 mm	
		vc	f	vc	f	vc	f	vc	f	vc	f	vc	f	vc	f	vc	f	vc	f	vc	f	vc	f	vc	f	vc	f
一般鋼	<150 HB	105	0.018	105	0.065	105	0.085	105	0.12	105	0.16	128	0.19	128	0.22	150	0.28	150	0.35	150	0.35	150	0.35	150	0.37	150	0.40
	<250 HB	98	0.018	98	0.065	98	0.085	98	0.12	98	0.16	119	0.19	119	0.22	140	0.28	140	0.35	140	0.35	140	0.35	140	0.37	140	0.40
	<25 HRC	91	0.016	91	0.06	91	0.08	91	0.10	91	0.13	111	0.15	111	0.18	130	0.23	130	0.30	130	0.30	130	0.30	130	0.35	130	0.38
焼戻鋼	<32 HRC	84	0.016	84	0.06	84	0.08	84	0.10	84	0.13	102	0.15	102	0.18	120	0.23	120	0.30	120	0.30	120	0.30	120	0.35	120	0.38
	<44 HRC	70	0.014	70	0.05	70	0.075	70	0.09	70	0.11	85	0.14	85	0.16	100	0.20	100	0.25	100	0.25	100	0.25	100	0.30	100	0.33
焼入鋼	45-55 HRC	35	0.006	35	0.025	35	0.032	35	0.04	35	0.05	43	0.05	43	0.063	50	0.08	50	0.10	50	0.10	50	0.125	50	0.16		
鋳物	<180 HB	112	0.018	112	0.065	112	0.085	112	0.12	112	0.16	136	0.19	136	0.22	160	0.28	160	0.35	160	0.35	160	0.35	160	0.37	160	0.40
ステンレス鋼 オーステナイト系		49	0.010	49	0.050	49	0.065	49	0.080	49	0.10	60	0.10	60	0.13	70	0.16	70	0.20	70	0.20	70	0.25	70	0.32		
アルミニウム >8% S		140	0.018	140	0.10	140	0.04	140	0.16	140	0.20	170	0.25	170	0.28	200	0.32	200	0.40	200	0.40	200	0.40	200	0.50	200	0.60
銅・真鍮・ブロンズ		126	0.018	126	0.065	126	0.085	126	0.12	126	0.16	153	0.19	153	0.22	180	0.28	180	0.35	180	0.35	180	0.35	180	0.37	180	0.40
チタニウム		35	0.007	35	0.04	35	0.05	35	0.065	35	0.07	43	0.08	43	0.10	50	0.13	50	0.16	50	0.16	50	0.16	50	0.20	50	0.25
インコネル・ハステロイ		28	0.007	28	0.04	28	0.05	28	0.065	28	0.07	34	0.08	34	0.10	40	0.13	40	0.16	40	0.16	40	0.16	40	0.20	40	0.25

※ ピンク色の型番表示は、ノガ・ウォーターズ在庫です。