

General Application Drills Taper Shank

Styles 2410, 2411, 2412 • Standard Taper Shank, Undersized Shank, and Oversized Shank

FEATURES

ANSI SIZES **HSS SUBSTRATE**

GENERAL PURPOSE **STEAM OXIDE**

SHANK **135° MOD**

30°

APPLICATIONS

ALLOY-TOOL STEEL

CARBON STEEL

CAST IRON



Style 2410 Standard Shank



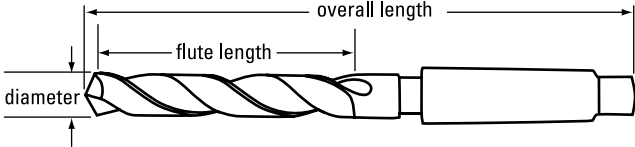
Style 2411 Undersized Shank



Style 2412 Oversized Shank

Operating parameters on page 23.
Morse taper shank specifications on page 81.

Undersize and oversize shank drills available from stock in popular sizes. See table below.



Drill Diameter Fractional	Decimal Equiv.	Metric Equiv.	Flute Length in	Flute Length mm	Overall Length in	Overall Length mm	Morse Taper	Order Number
1/8	.1250	3.18	1.875	47.63	5.125	130.18	1	C12040
5/32	.1562	3.97	2.125	53.98	5.375	136.53	1	C12052
3/16	.1875	4.76	2.500	63.50	5.750	146.05	1	C12064
13/64	.2031	5.16	2.750	69.85	6.000	152.40	1	C12069
7/32	.2188	5.56	2.750	69.85	6.000	152.40	1	C12075
15/64	.2344	5.95	2.875	73.03	6.125	155.58	1	C12082
1/4-E	.2500	6.35	2.875	73.03	6.125	155.58	1	C12091
17/64	.2656	6.75	3.000	76.20	6.250	158.75	1	C12099
9/32	.2812	7.14	3.000	76.20	6.250	158.75	1	C12113
19/64	.2969	7.54	3.125	79.38	6.375	161.93	1	C12117
5/16	.3125	7.94	3.125	79.38	6.375	161.93	1	C12124
21/64	.3281	8.33	3.250	82.55	6.500	165.10	1	C12132
11/32	.3438	8.73	3.250	82.55	6.500	165.10	1	C12139
23/64	.3594	9.13	3.500	88.90	6.750	171.45	1	C12147
3/8	.3750	9.53	3.500	88.90	6.750	171.45	1	C12154
25/64	.3906	9.92	3.625	92.08	7.000	177.80	1	C12162
13/32	.4062	10.32	3.625	92.08	7.000	177.80	1	C12167
27/64	.4219	10.72	3.875	98.43	7.250	184.15	1	C12170
7/16	.4375	11.11	3.875	98.43	7.250	184.15	1	C12173
29/64	.4531	11.51	4.125	104.78	7.500	190.50	1	C12176
15/32	.4688	11.91	4.125	104.78	7.500	190.50	1	C12178
31/64	.4844	12.30	4.375	111.13	8.250	209.55	2	C12181
1/2	.5000	12.70	4.375	111.13	8.250	209.55	2	C12183
1/2 *	.5000	12.70	4.375	111.13	7.750	196.85	1	C12483*
33/64	.5156	13.10	4.625	117.48	8.500	215.90	2	C12186
17/32	.5312	13.49	4.625	117.48	8.500	215.90	2	C12188

* Style 2411 undersize shank.
** Style 2412 oversize shank.

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DRILLING
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General Application Drills

Taper Shank

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Drill Diameter Fractional	Decimal Equiv.	Metric Equiv.	Flute Length		Overall Length		Morse Taper	Order Number
			in	mm	in	mm		
35/64	.5469	13.89	4.875	123.83	8.750	222.25	2	C12191
9/16	.5625	14.29	4.875	123.83	8.750	222.25	2	C12194
37/64	.5781	14.68	4.875	123.83	8.750	222.25	2	C12196
19/32	.5938	15.08	4.875	123.83	8.750	222.25	2	C12199
39/64	.6094	15.48	4.875	123.83	8.750	222.25	2	C12201
5/8	.6250	15.88	4.875	123.83	8.750	222.25	2	C12204
41/64	.6406	16.27	5.125	130.18	9.000	228.60	2	C12207
21/32	.6562	16.67	5.125	130.18	9.000	228.60	2	C12209
43/64	.6719	17.07	5.375	136.53	9.250	234.95	2	C12212
11/16	.6875	17.46	5.375	136.53	9.250	234.95	2	C12214
11/16	**	.6875	5.375	136.53	10.000	254.00	3	C12670**
45/64	.7031	17.86	5.625	142.88	9.500	241.30	2	C12216
23/32	.7188	18.26	5.625	142.88	9.500	241.30	2	C12218
47/64	.7344	18.65	5.875	149.23	9.750	247.65	2	C12220
3/4	.7500	19.05	5.875	149.23	9.750	247.65	2	C12222
3/4	**	.7500	5.875	149.23	10.500	266.70	3	C12678**
49/64	.7656	19.45	6.000	152.40	9.875	250.83	2	C12223
25/32	.7812	19.84	6.000	152.40	9.875	250.83	2	C12225
51/64	.7969	20.24	6.125	155.58	10.750	273.05	3	C12227
13/16	.8125	20.64	6.125	155.58	10.750	273.05	3	C12229
53/64	.8281	21.03	6.125	155.58	10.750	273.05	3	C12231
27/32	.8438	21.43	6.125	155.58	10.750	273.05	3	C12232
55/64	.8594	21.83	6.125	155.58	10.750	273.05	3	C12234
7/8	.8750	22.23	6.125	155.58	10.750	273.05	3	C12236
7/8	*	.8750	6.125	155.58	10.000	254.00	2	C12505*
57/64	.8906	22.62	6.125	155.58	10.750	273.05	3	C12238
29/32	.9062	23.02	6.125	155.58	10.750	273.05	3	C12240
59/64	.9219	23.42	6.125	155.58	10.750	273.05	3	C12241
15/16	.9375	23.81	6.125	155.58	10.750	273.05	3	C12243
31/32	.9688	24.61	6.375	161.93	11.000	279.40	3	C12247
63/64	.9844	25.00	6.375	161.93	11.000	279.40	3	C12249
1	1.0000	25.40	6.375	161.93	11.000	279.40	3	C12250
1	**	1.0000	6.375	161.93	12.000	304.80	4	C12684**
1-1/64	1.0156	25.80	6.500	165.10	11.125	282.58	3	C12252
1-1/32	1.0312	26.19	6.500	165.10	11.125	282.58	3	C12254
1-1/16	1.0625	26.99	6.625	168.28	11.250	285.75	3	C12257
1-1/16	**	1.0625	6.625	168.28	12.250	311.15	4	C12691**
1-1/8	1.1250	28.58	7.125	180.98	12.750	323.85	4	C12265
1-1/8	*	1.1250	7.125	180.98	11.750	298.45	3	C12518*
1-3/16	1.1875	30.16	7.375	187.33	13.000	330.20	4	C12272
1-1/4	1.2500	31.75	7.875	200.03	13.500	342.90	4	C12279
1-1/4	*	1.2500	7.875	200.03	12.500	317.50	3	C12532*
1-5/16	1.3125	33.34	8.625	219.08	14.250	361.95	4	C12286
1-11/32	1.3438	34.13	8.750	222.25	14.375	365.13	4	C12290
1-3/8	1.3750	34.93	8.875	225.43	14.500	368.30	4	C12293
1-7/16	1.4375	36.51	9.125	231.78	14.750	374.65	4	C12301
1-15/32	1.4688	37.31	9.250	234.95	14.875	377.83	4	C12304
1-1/2	1.5000	38.10	9.375	238.13	15.000	381.00	4	C12308

* Style 2411 undersize shank.

** Style 2412 oversize shank.

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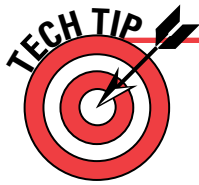


Styles 2410, 2411, 2412 • Standard Taper Shank, Undersized Shank, and Oversized Shank (continued)

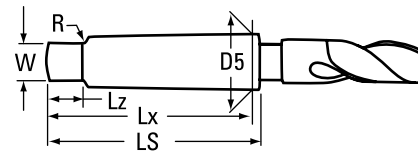
Drill Diameter Fractional		Decimal Equiv.	Metric Equiv.	Flute Length		Overall Length		Morse Taper	Order Number
				in	mm	in	mm		
1-17/32	*	1.5312	38.89	9.375	238.13	15.000	381.00	4	C12541*
1-9/16		1.5625	39.69	9.625	244.48	16.625	422.28	5	C12315
1-5/8		1.6250	41.28	10.000	254.00	17.000	431.80	5	C12322
1-3/4		1.7500	44.45	10.125	257.18	17.125	434.98	5	C12336
1-3/4	*	1.7500	44.45	10.375	263.53	16.250	412.75	4	C12566*
1-7/8		1.8750	47.63	10.375	263.53	17.375	441.33	5	C12351
2		2.0000	50.80	10.375	263.53	17.375	441.33	5	C12365

* Style 2411 undersize shank.

** Style 2412 oversize shank.



Morse Taper Shank Specifications



Morse Taper Shank Number	Taper per Foot	Taper per Inch	D5 Maximum Shank Diameter	LS Length of Shank	Lx Length of Shank to Gage Line	Lz Length of Tang	W Thickness of Tang	R Radius
1	.5985	.0498	.475	2.56	2.44	.37	.20	.19
2	.5994	.0499	.700	3.12	2.94	.44	.25	.25
3	.6023	.0501	.938	3.87	3.69	.56	.31	.28
4	.6232	.0519	1.231	4.87	4.62	.62	.47	.31
5	.6315	.0526	1.749	6.12	5.87	.75	.62	.37
6	.6256	.0521	2.494	8.56	8.25	1.12	.75	.50

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