

Drill Selection Guide



High-Performance Products

	diameter range	length / diameter ratio	hole quality	low-carbon steels (see page H538)	free-machining steels (see page H540)	medium & high plain-carbon, alloy, & tool steels (<330 HB) (see page H542)	medium & high plain-carbon, alloy, & tool steels (>330 HB) (see page H544)	ferritic, martensitic, & PH stainless steels (see page H546)
solid carbide	.113 - .810 (3,0 - 21,0 mm)	regular	▼▼▼					
	.125 - .750 (3,0 - 20,0 mm)	regular	▼▼▼					
	.250 - .625 (6,0 - 14,0 mm)	regular	▼▼▼					
	.125 - .750 (3,2 - 25,0 mm)	regular	▼▼▼▼					
	.156 - 1.010 (5,0 - 20,0 mm)	short / regular / long	▼▼▼	★	★	★	★	★
	(3,0 - 21,0 mm)	short	▼▼▼	★	★	★	★	
	.125 - .750	regular	▼▼▼	★	★	★	★	
	.125 - .875 (4,0 - 20,0 mm)	short / regular / long	▼▼▼		●	●	●	
	(5,0 - 20,0 mm)	short	▼▼▼	★	★	★	★	
	.125 - 1.250 (3,0 - 35,0 mm)	various	▼▼▼▼					
modular	.3125 - .625 (8,0 - 16,0 mm)	1 - 5	▼▼▼	★	★	★	★	
	.500 - 1.575 (12,5 - 40,0 mm)	1 - 10	▼▼	★	★	●	●	
	.500 - 1.575 (12,5 - 40,0 mm)	1 - 10	▼▼			★	★	★
	.500 - 1.575 (12,5 - 40,0 mm)	1 - 10	▼▼					
	.500 - 1.575 (12,5 - 40,0 mm)	1 - 10	▼▼					
	.500 - 1.575 (12,5 - 40,0 mm) precentering only	1 - 10	▼▼	●	●	●	●	●
indexable	.500 - 1.000 (12,5 - 24,0 mm)	2 - 3	▼	★	★	★	★	★
	.625 - 3.250 (16,0 - 82,0 mm)	2.5 - 4	▼	★	★	★	★	★
	.750 - 1.750 (20 - 45 mm)	5 - 8	▼	●	●	●	●	●
	1.570 - 10.630 (40 - 270 mm)	1 - 12	▼▼	★	★	★	★	★
boring	.384 - 22.850 (9,75 - 580 mm)	1 - 4	▼▼▼	★	★	★	★	★
	.157 - 8.386 (4 - 213 mm)	1 - 4	▼▼▼▼	★	★	★	★	★

- ★ = first choice
- = alternate choice

Hole Quality: (Diameter, Surface Finish, Roundness, Straightness)

- ▼ = average
- ▼▼ = good
- ▼▼▼ = very good
- ▼▼▼▼ = excellent
- * = special order

Drill Selection Guide

High-Performance Products



austenitic stainless steels (see page H548)	ductile (nodular) and malleable cast irons (see page H550)	gray cast iron (see page H552)	free-machining & low-silicon aluminum alloys (see page H554)	miscellaneous non-ferrous materials (see page H556)	iron base, heat-resistant materials (see page H559)	cobalt-base, heat-resistant materials (see page H560)	nickel-base, heat-resistant alloys (see page H562)	titanium & titanium alloys (see page H564)	drill or boring tool type	through coolant	catalog page
		★	★	★				●	TF105	no	page H14
		★							TF105/KC7210	no	page H14
								●	TF125	yes	page H20
		★	★	★					TX411	yes	page H23
★					★	★	★	★	SE210HP SE211HP SE212HP	yes	page H28
	●	●							SE221	no	page H41
	●	●							SE222	no	page H41
	★	★							SE254HPC SE255HPC SE256HPC	yes	page H56
									SE261	no	page H72
		★	★	●					special TXD drill	yes	by request
									Ken-Tip HP KC7315	yes	page H112
									KSEM-HP KC7235	yes	page H122
★									KSEM-HP KC7315	yes	page H122
	★	★							KSEM-LD KC7215	yes	page H131
			★	★					KSEM-MD KC7030	yes	page H130
●	●	●	●	●					KSEM-PCM KC7030	yes	page H128
★	★	★	★	★	★	★	★	★	DRILL-FIX DFR	yes	page H173
★	★	★	★	★	★	★	★	★	DRILL-FIX DFT	yes	page H178
●	●	●	●	●	●	●	●	●	HTS-C	yes	page H226
★	★	★	★	★	●	●	★	★	HTS	yes	page H234
★	★	★	★	★	★	★	★	★	ModBORE	yes	page H486
★	★	★	★	★	★	★	★	★	Romicron	yes	page H452

Solid Carbide Drills

Combination Tools

Modular Drills

Indexable Drills

QPV Drills

Twist Drills/
Taps & Dies

Counterboring Tools

Rotating Boring Tools

Holemaking Tech Data

Special Tooling/
Adapters

Toolholding Systems

Index

Drill Selection Guide



General Purpose Products

	diameter range	length / diameter ratio	hole quality	low-carbon steels	free-machining steels	medium & high plain-carbon, alloy, & tool steels (≤ 330 HB)	medium & high plain-carbon, alloy, & tool steels (> 330 HB)	ferritic, martensitic, & PH stainless steels	
Solid Carbide Drills	general purpose solid carbide	.040-.500 (1,02 - 12,7 mm)	1-6	▼▼	★	★	★	★	
		.040-.500 (1,02 - 12,7 mm)	1-6	▼▼					
		.040-.500 (1,02 - 12,7 mm)	1-3	▼▼▼				★	
Combination Tools	modular	.374-4.500 (9,5 - 114,3 mm)	1-14	▼	★	★	●	●	
		.374-4.500 (9,5 - 114,3 mm)	1-14	▼		★	★	★	
Modular Drills	HSS – Jobber length	.0059-.6875 (0,15 - 17,46 mm)	1-8	▼	●	●	●	●	
		.1250-.6250 (3,18 - 15,88 mm)	1-8	▼	●	●	●	●	
Indexable Drills	HSS – Jobber length	.0635-.500 (1,62 - 12,7 mm)	1-8	▼		●	●	●	
		.0135-.6875 (0,34 - 17,46 mm)	1-8	▼				★	
QPV Drills	HSS – Jobber length	.0625-.5000 (1,59 - 12,7 mm)	1-4	▼		★	★	★	
		.0135-.5000 (0,34 - 12,7 mm)	1-8	▼					
QPV Drills	HSS – Jobber length	.0625-.5000 (1,59 - 12,7 mm)	1-8	▼	●	●	●	●	
		.0591-.5000 (1,5 - 12,7 mm)	1-8	▼▼			★	★	★
QPV Drills	HSS – Jobber length	.0625-.5000 (1,59 - 12,7 mm)	1-15	▼▼	●	●	●	●	
		HSS – screw machine	.0400-2.0000 (1,02 - 50,8 mm)	1-4	▼	●	●	●	●
.0400-.5000 (1,02 - 12,7 mm)	1-4		▼	●	●	●	●	●	
.0394-.7500 (1,0 - 19,05 mm)	1-4		▼			★	★	★	
.0625-.5000 (1,59 - 12,7 mm)	1-4		▼▼	●	●	●	●	●	
.0625-.5000 (1,59 - 12,7 mm)	1-4		▼▼			★	★	★	
Twist Drills/ Taps & Dies	HSS – screw machine	.0625-.5000 (1,59 - 12,7 mm)	1-4	▼▼			★	★	★
		HSS – taper length	.0400-1.0000 (1,02 - 25,4 mm)	1-15	▼	●	●	●	●
.1250-.6875 (3,18 - 17,5 mm)	1-15		▼	●	●	●	●	●	
.0938-.5000 (2,38 - 12,7 mm)	1-15		▼			★	★	★	
.0400-.3438 (1,02 - 8,73 mm)	1-15		▼						
.0625-.5000 (1,59 - 12,7 mm)	1-15		▼	●	●	●	●	●	
.0625-.5000 (1,59 - 12,7 mm)	1-15		▼▼			★	★	★	
.3750-.9688 (9,53 - 24,6 mm)	1-15		▼	●	●	●	●	●	
Rotating Boring Tools	HSS – taper length	.3750-1.0000 (9,53 - 25,4 mm)	1-15	▼	●	●	●	●	
		HSS – taper shank	.1875-2.500 (4,76 - 63,5 mm)	1-8	▼	●	●	●	●
Holemaking Tech Data	HSS – taper shank		.500-1.2500 (12,7 - 31,75 mm)	1-8	▼		★	★	★
		HSS – extra length	.0469-.5000 (1,19 - 12,7 mm)	1-8	▼	●	●	●	●
Holemaking Tech Data	HSS – extra length		.1250-.7500 (3,18 - 19,05 mm)	1-8	▼	●	●	●	●
		boring	1.375-6.500 (34,95 - 165,1 mm)	1-4	▼▼	★	★	★	★
Special Tooling/ Adapters	boring		.500-7.906 (12,7 - 200,8 mm)	1-4	▼▼▼	★	★	★	★

★ = first choice

● = alternate choice

Hole Quality: (Diameter, Surface Finish, Roundness, Straightness)

▼ = average

▼▼ = good

▼▼▼ = very good

▼▼▼▼ = excellent

* = special order

Drill Selection Guide

General Purpose Products



austenitic stainless steels	ductile (nodular) and malleable cast irons	gray cast iron	free-machining & low-silicon aluminum alloys	high-silicon aluminum alloys	miscellaneous non-ferrous materials	iron base, heat-resistant materials	cobalt-base, heat-resistant materials	nickel-base, heat-resistant alloys	titanium & titanium alloys	drill or boring tool type	through coolant	catalog page
★	★	★	★	★	★	●	●	●	●	CR100	no	page H283
			★		★					CH110	no	page H286
★	★	★		★		●	●	●	●	CS120	no	page H289
●	●	●	★	★	★					QPV - KC100	yes	page H270
★	★	★				●	●	●	●	QPV - KC300	yes	page H270
●	●	●								HSS-GP 118° pt.	no	page H294
●	●	●								auto, tanged shank 118° pt.	no	page H298
●						●	●	●	●	HSS heavy duty 135° pt.	no	page H301
						★	★	★	★	cobalt, type J, 135° pt.	no	page H303
★						★	★	★	★	cobalt, aircraft maint . 135° pt.	no	page H305
			★	★	★					HSS H-helix, 118° pt.	no	page H307
	●	●	●	●	●	●	●	●	●	HSS parabolic 135° pt.	no	page H309
★						★	★	★	★	cobalt, wide-land parabolic 135° pt.	no	page H311
●	●	●	●	●	●	●	●	●	●	HSS, deep-hole parabolic 135° pt.	no	page H310
●	●	●	●	●	●	●	●	●	●	HSS-GP 118° pt.	no	page H314
●	●	●								HSS type-C, hvy dty 135° pt.	no	page H317
★										cobalt 135° pt.	no	page H319
●	●	●	●	●	●	●	●	●	●	HSS parabolic 135° pt.	no	page H319
★						★	★	★	★	cobalt, wide-land parabolic 135° pt.	no	page H322
●	●	●								HSS-GP 118° pt.	no	page H324
●	●	●								auto, tanged shank 118° pt.	no	page H326
★										cobalt 135° pt.	no	page H327
			★	★	★					HSS H-helix 118° pt.	no	page H328
●	●	●	●	●	●	●	●	●	●	HSS parabolic 135° pt.	no	page H329
★						★	★	★	★	cobalt, wide-land parabolic 135° pt.	no	page H329
●	●	●	●	●	●	●	●	●	●	HSS, coolant hole, 14° helix, 118° pt.	yes	page H331
●	●	●	●	●	●	●	●	●	●	HSS, coolant hole, 34° helix, 118° pt.	yes	page H331
●	●	●								HSS-GP 118° pt.	no	page H334
★										cobalt 135° pt.	no	page H335
										HSS, aircraft ext, type B, 118° pt.	no	page H338
●	●	●								HSS-GP 118° pt.	no	page H339
★	★	★	★	★	★	★	★	★	★	Dial Set	yes	page H502
★	★	★	★	★	★	★	★	★	★	Tenthset	no	page H508

Solid Carbide Drills

Combination Tools

Modular Drills

Indexable Drills

QPV Drills

Twist Drills/ Taps & Dies

Counterboring Tools

Rotating Boring Tools

Holemaking Tech Data

Special Tooling/ Adapters

Toolholding Systems

Index