



































DRILLS

	SERIES	PAGE	COATING	DESCRIPTION
1180		12	ALUMASTAR	Jobber length, 3 flute, High performance
1520		42	BRIGHT	Stub length, 2 flute, General purpose
1520H		45	HARDLUBE	Stub length, 2 flute, General purpose
1205		48	BRIGHT	Jobber length, 2 flute, General purpose
1205H		51	HARDLUBE	Jobber length, 2 flute, General purpose
1800H		74	HARDLUBE	Taper length, 2 flute, Parabolic

END MILLS

	SERIES	PAGE	COATING	DESCRIPTION
143M		82	ALUMASTAR	High velocity, 3 flute, High metal removal rate, Square end
143R		84	ALUMASTAR	High velocity, 3 flute, High metal removal rate, Corner radius
142M		80	ALUMASTAR	High velocity, 2 flute, High metal removal rate, Square end
142B		81	ALUMASTAR	High velocity, 2 flute, High metal removal rate, Ball end
242M / 842M		86	BRIGHT	High performance, 2 flute, For 4000-8000 RPM, Square end
253M / 853M		89	BRIGHT	High performance, 3 flute, Profiling and finishing, Square end
253MC		91	TiCN	High performance, 3 flute, Profiling and finishing, Square end
160M / 860M		118	BRIGHT	Stub length, 2 flute, General purpose, Square end
180M / 980M		121	BRIGHT	Stub length, 2 flute, General purpose, Ball end
220M / 820M		127	BRIGHT	Standard length, 2 flute, General purpose, Square end
220MC		130	TiCN	Standard length, 2 flute, General purpose, Square end
320M / 920M		138	BRIGHT	Standard length, 2 flute, General purpose, Ball end
320MC		141	TiCN	Standard length, 2 flute, General purpose, Ball end
620M / 640M		153	BRIGHT	Extra length, 2 flute, General purpose, Square end
620MC		155	TiCN	Extra length, 2 flute, General purpose, Square end
720M / 740M		164	BRIGHT	Extra length, 2 flute, General purpose, Ball end
720MC		166	TiCN	Extra length, 2 flute, General purpose, Ball end












DRILLS

SERIES		PAGE	COATING	DESCRIPTION
1580HD		17	HELICA	Stub length, 2 flute, High performance, Common shank
1580H		14	HARDLUBE	Stub length, 2 flute, High performance
1280H		25	HARDLUBE	Jobber length, 2 flute, High performance
1580KD		20	HELICA	Stub length, 2 flute, High performance, Coolant fed, Common shank
1280KD		30	HELICA	Jobber length, 2 flute, High performance, Coolant fed, Common shank
1580KH		23	HELICA	Stub length, 2 flute, High performance, Coolant fed
1280KH		28	HELICA	Jobber length, 2 flute, High performance, Coolant fed
1880KH		33	HELICA	Taper length, 2 flute, High performance, Coolant fed
1520H		45	HARDLUBE	Stub length, 2 flute, General purpose
1205H		51	HARDLUBE	Jobber length, 2 flute, General Purpose
1180		12	ALUMASTAR	Jobber length, 3 flute, High performance






END MILLS

SERIES		PAGE	COATING	DESCRIPTION
VRX		102 - 107	X.CEED	High performance, 4 flute, Variable flute rougher/finisher,
253MA / 853MA		87	X.CEED	High performance, 3 flute, Profiling and finishing, Square end
255MA / 855MA		92	X.CEED	High performance, 5 flute, Square end
255RA / 855RA		97	X.CEED	High performance, 5 flute, Corner radius
143M		82	ALUMASTAR	High velocity, 3 flute, High metal removal rate, Square end
143R		84	ALUMASTAR	High velocity, 3 flute, High metal removal rate, Corner radius
142M		80	ALUMASTAR	High velocity, 2 flute, High metal removal rate, Square end
142B		81	ALUMASTAR	High velocity, 2 flute, High metal removal rate, Ball end
242M / 842M		86	BRIGHT	High performance, 2 flute, For 4000-8000 RPM, Square end
170MA / 870MA		120	FUTURA	Stub length, 4 flute, General purpose, Square end
190MA / 990MA		122	FUTURA	Stub length, 4 flute, General purpose, Ball end
223MA / 823MA		131	FUTURA	Standard length, 3 flute, General purpose, Square end
230MA / 830MA		131	FUTURA	Standard length, 4 flute, General purpose, Square end
230RA / 830RA		135	FUTURA	Standard length, 4 flute, General purpose, Corner radius
323MA / 923MA		142	FUTURA	Standard length, 3 flute, General purpose, Ball end
330MA / 930MA		142	FUTURA	Standard length, 4 flute, General purpose, Ball end
623MA / 643MA		156	FUTURA	Extra length, 3 flute, General purpose, Square end
630MA / 650MA		156	FUTURA	Extra length, 4 flute, General purpose, Square end
630RA		161	FUTURA	Extra length, 4 flute, General purpose, Corner radius
723MA / 743MA		167	FUTURA	Extra length, 3 flute, General purpose, Ball end
730MA / 750MA		167	FUTURA	Extra length, 4 flute, General purpose, Ball end


DRILLS

SERIES		PAGE	COATING	DESCRIPTION
1580HD		17	HELICA	Stub length, 2 flute, High performance, Common shank
1580H		14	HARDLUBE	Stub length, 2 flute, High performance
1280H		25	HARDLUBE	Jobber length, 2 flute, High performance
1580KD		20	HELICA	Stub length, 2 flute, High performance, Coolant fed, Common shank
1280KD		30	HELICA	Jobber length, 2 flute, High performance, Coolant fed, Common shank
1580KH		23	HELICA	Stub length, 2 flute, High performance, Coolant fed
1280KH		28	HELICA	Jobber length, 2 flute, High performance, Coolant fed
1880KH		33	HELICA	Taper length, 2 flute, High performance, Coolant fed
1510H		39	HARDLUBE	Stub length, 2 flute, 15° helix, General purpose
1520H		45	HARDLUBE	Stub length, 2 flute, General purpose
1205H		51	HARDLUBE	Jobber length, 2 flute, General Purpose
















END MILLS

SERIES		PAGE	COATING	DESCRIPTION
VRX		102 - 107	X.CEED	High performance, 4 flute, Variable flute rougher/finisher
VHM		101	X.CEED	High performance, 4 flute, Variable flute hog mill rougher
253MA / 853MA		87	X.CEED	High performance, 3 flute, Profiling and finishing, Square end
253MC		91	TiCN	High performance, 3 flute, Profiling and finishing, Square end
255MA / 855MA		92	X.CEED	High performance, 5 flute, Square end
255RA / 855RA		97	X.CEED	High performance, 5 flute, Corner radius
170MA / 870MA		120	FUTURA	Stub length, 4 flute, General purpose, Square end
190MA / 990MA		122	FUTURA	Stub length, 4 flute, General purpose, Ball end
223MA / 823MA		131	FUTURA	Standard length, 3 flute, General purpose, Square end
230MA / 830MA		131	FUTURA	Standard length, 4 flute, General purpose, Square end
230RA / 830RA		135	FUTURA	Standard length, 4 flute, General purpose, Corner radius
323MA / 923MA		142	FUTURA	Standard length, 3 flute, General purpose, Ball end
330MA / 930MA		142	FUTURA	Standard length, 4 flute, General purpose, Ball end
623MA / 643MA		156	FUTURA	Extra length, 3 flute, General purpose, Square end
630MA / 650MA		156	FUTURA	Extra length, 4 flute, General purpose, Square end
630RA		161	FUTURA	Extra length, 4 flute, General purpose, Corner radius
723MA / 743MA		167	FUTURA	Extra length, 3 flute, General purpose, Ball end
730MA / 750MA		167	FUTURA	Extra length, 4 flute, General purpose, Ball end







DRILLS

SERIES		PAGE	COATING	DESCRIPTION
1580HD		17	HELICA	Stub length, 2 flute, High performance, Common shank
1580H		14	HARDLUBE	Stub length, 2 flute, High performance
1280H		25	HARDLUBE	Jobber length, 2 flute, High performance
1580KD		20	HELICA	Stub length, 2 flute, High performance, Coolant fed, Common shank
1280KD		30	HELICA	Jobber length, 2 flute, High performance, Coolant fed, Common shank
1580KH		23	HELICA	Stub length, 2 flute, High performance, Coolant fed
1280KH		28	HELICA	Jobber length, 2 flute, High performance, Coolant fed
1880KH		33	HELICA	Taper length, 2 flute, High performance, Coolant fed
1510H		39	HARDLUBE	Stub length, 2 flute, Slow helix, General purpose
1520H		45	HARDLUBE	Stub length, 2 flute, General purpose
1205H		51	HARDLUBE	Jobber length, 2 flute, General Purpose
1120H		62	HARDLUBE	Stub length, 3 flute, General purpose
1100H		66	HARDLUBE	Jobber length, 3 flute, General Purpose


















END MILLS

SERIES		PAGE	COATING	DESCRIPTION
VRX		102 - 107	X.CEED	High performance, 4 flute, Variable flute rougher/finisher
VHM		101	X.CEED	High performance, 4 flute, Variable flute hog mill rougher
255MA / 855MA		92	X.CEED	High performance, 5 flute, Square end
255RA / 855RA		97	X.CEED	High performance, 5 flute, Corner radius
545MA		108	X.CEED	High performance, High Rc finisher, Square end
545RA		109	X.CEED	High performance, High Rc finisher, Corner radius
545BA		110	X.CEED	High performance, High Rc finisher, Ball end
170MA / 870MA		120	FUTURA	Stub length, 4 flute, General purpose, Square end
190MA / 990MA		122	FUTURA	Stub length, 4 flute, General purpose, Ball end
230MA / 830MA		131	FUTURA	Standard length, 4 flute, General purpose, Square end
230RA / 830RA		135	FUTURA	Standard length, 4 flute, General purpose, Corner radius
330MA / 930MA		142	FUTURA	Standard length, 4 flute, General purpose, Ball end
630MA / 650MA		156	FUTURA	Extra length, 4 flute, General purpose, Square end
630RA		161	FUTURA	Extra length, 4 flute, General purpose, Corner radius
730MA / 750MA		167	FUTURA	Extra length, 4 flute, General purpose, Ball end

DRILLS

SERIES	PAGE	COATING	DESCRIPTION
1180 	12	ALUMASTAR	Jobber length, 3 flute, High performance
1520 	42	BRIGHT	Stub length, 2 flute, General purpose
1520H 	45	HARDLUBE	Stub length, 2 flute, General purpose
1205 	48	BRIGHT	Jobber length, 2 flute, General purpose
1205H 	51	HARDLUBE	Jobber length, 2 flute, General purpose
1800H 	74	HARDLUBE	Taper length, 2 flute, Parabolic














END MILLS

SERIES	PAGE	COATING	DESCRIPTION
143M 	82	ALUMASTAR	High velocity, 3 flute, High metal removal rate, Square end
143R 	84	ALUMASTAR	High velocity, 3 flute, High metal removal rate, Corner radius
142M 	80	ALUMASTAR	High velocity, 2 flute, High metal removal rate, Square end
142B 	81	ALUMASTAR	High velocity, 2 flute, High metal removal rate, Ball end
242M / 842M 	86	BRIGHT	High performance, 2 flute, For 4000-8000 RPM, Square end
253M / 853M 	89	BRIGHT	High performance, 3 flute, Profiling and finishing, Square end
253MC 	91	TiCN	High performance, 3 flute, Profiling and finishing, Square end
160M / 860M 	118	BRIGHT	Stub length, 2 flute, General purpose, Square end
180M / 980M 	121	BRIGHT	Stub length, 2 flute, General purpose, Ball end
220M / 820M 	127	BRIGHT	Standard length, 2 flute, General purpose, Square end
220MC 	130	TiCN	Standard length, 2 flute, General purpose, Square end
320M / 920M 	138	BRIGHT	Standard length, 2 flute, General purpose, Ball end
320MC 	141	TiCN	Standard length, 2 flute, General purpose, Ball end
620M / 640M 	153	BRIGHT	Extra length, 2 flute, General purpose, Square end
620MC 	155	TiCN	Extra length, 2 flute, General purpose, Square end
720M / 740M 	164	BRIGHT	Extra length, 2 flute, General purpose, Ball end
720MC 	166	TiCN	Extra length, 2 flute, General purpose, Ball end







DRILLS

SERIES		PAGE	COATING	DESCRIPTION
1580HD		17	HELICA	Stub length, 2 flute, High performance, Common shank
1580H		14	HARDLUBE	Stub length, 2 flute, High performance
1280H		25	HARDLUBE	Jobber length, 2 flute, High performance
1580KD		20	HELICA	Stub length, 2 flute, High performance, Coolant fed, Common shank
1280KD		30	HELICA	Jobber length, 2 flute, High performance, Coolant fed, Common shank
1580KH		23	HELICA	Stub length, 2 flute, High performance, Coolant fed
1280KH		28	HELICA	Jobber length, 2 flute, High performance, Coolant fed
1880KH		33	HELICA	Taper length, 2 flute, High performance, Coolant fed
1500H		70	HARDLUBE	Stub length, 2 flute, straight flute hard metal
1510H		39	HARDLUBE	Stub length, 2 flute, 15° helix, General purpose
1520H		45	HARDLUBE	Jobber length, 2 flute, General purpose
1205H		51	HARDLUBE	Jobber length, 2 flute, High performance

















END MILLS

SERIES		PAGE	COATING	DESCRIPTION
545MA		108	X.CEED	High performance, High Rc finisher, Square end
545RA		109	X.CEED	High performance, High Rc finisher, Corner radius
545BA		110	X.CEED	High performance, High Rc finisher, Ball end
VRX		102 - 107	X.CEED	High performance, 4 flute, Variable flute rougher/finisher
350MX / 950MX		111	X.CEED	High performance, High Rc finisher, Ball end
170MA / 870MA		120	FUTURA	Stub length, 4 flute, General purpose, Square end
190MA / 990MA		122	FUTURA	Stub length, 4 flute, General purpose, Ball end
230MA / 830MA		131	FUTURA	Standard length, 4 flute, General purpose, Square end
230RA / 830RA		135	FUTURA	Standard length, 4 flute, General purpose, Corner radius
330MA / 930MA		142	FUTURA	Standard length, 4 flute, General purpose, Ball end
630MA / 650MA		156	FUTURA	Extra length, 4 flute, General purpose, Square end
630RA		161	FUTURA	Extra length, 4 flute, General purpose, Corner radius
730MA / 750MA		167	FUTURA	Extra length, 4 flute, General purpose, Ball end












DRILLS

SERIES	PAGE	COATING	DESCRIPTION
1180 	12	ALUMASTAR	Jobber length, 3 flute, High performance
1520H 	45	HARDLUBE	Stub length, 2 flute, General purpose
1205H 	51	HARDLUBE	Jobber length, 2 flute, General purpose
1120H 	62	HARDLUBE	Stub length, 3 flute, General purpose
1100H 	66	HARDLUBE	Jobber length, 3 flute, General purpose
1800H 	74	HARDLUBE	Taper length, 2 flute, Parabolic


END MILLS

SERIES	PAGE	COATING	DESCRIPTION
210D 	112	DIAMOND	Standard length, 4 flute, Square end
310D 	114	DIAMOND	Standard length, 4 flute, Ball end
210RD 	113	DIAMOND	Standard length, 4 flute, Corner radius
610D 	115	DIAMOND	Extra length, 4 flute, Square end
710D 	116	DIAMOND	Extra length, 4 flute, Ball end
143M 	82	ALUMASTAR	High velocity, 3 flute, High metal removal rate, Square end
143R 	84	ALUMASTAR	High velocity, 3 flute, High metal removal rate, Corner radius
142M 	80	ALUMASTAR	High velocity, 2 flute, High metal removal rate, Square end
142B 	81	ALUMASTAR	High velocity, 2 flute, High metal removal rate, Ball end
253M / 853M 	89	BRIGHT	High performance, 3 flute, Profiling and finishing, Square end
253MC 	91	TiCN	High performance, 3 flute, Profiling and finishing, Square end
255MC 	96	TiCN	High performance, 5 flute, Profiling and finishing, Square end
220MC 	130	TiCN	Standard length, 2 flute, General purpose, Square end
320MC 	141	TiCN	Standard length, 2 flute, General purpose, Ball end
620MC 	155	TiCN	Extra length, 2 flute, General purpose, Square end
720MC 	166	TiCN	Extra length, 2 flute, General purpose, Ball end

DRILLS

SERIES	PAGE	COATING	DESCRIPTION
1580HD 	17	HELICA	Stub length, 2 flute, High performance, Common shank
1580H 	14	HARDLUBE	Stub length, 2 flute, High performance
1280H 	25	HARDLUBE	Jobber length, 2 flute, High performance
1580KD 	20	HELICA	Stub length, 2 flute, High performance, Coolant fed, Common shank
1280KD 	30	HELICA	Jobber length, 2 flute, High performance, Coolant fed, Common shank
1580KH 	23	HELICA	Stub length, 2 flute, High performance, Coolant fed
1280KH 	28	HELICA	Jobber length, 2 flute, High performance, Coolant fed
1880KH 	33	HELICA	Taper length, 2 flute, High performance, Coolant fed
1510H 	39	HARDLUBE	Stub length, 2 flute, 15° helix, General purpose
1520H 	45	HARDLUBE	Stub length, 2 flute, General purpose
1205H 	51	HARDLUBE	Jobber length, 2 flute, General Purpose

END MILLS

SERIES	PAGE	COATING	DESCRIPTION
VRX 	102 - 107	X.CEED	High performance, 4 flute, Variable flute rougher/finisher
VHM 	101	X.CEED	High performance, 4 flute, Variable flute hog mill rougher
253MA / 853MA 	87	X.CEED	High performance, 3 flute, Profiling and finishing, Square end
255MA / 855MA 	92	X.CEED	High performance, 5 flute, Square end
255RA / 855RA 	97	X.CEED	High performance, 5 flute, Corner radius
170MA / 870MA 	120	FUTURA	Stub length, 4 flute, General purpose, Square end
190MA / 990MA 	122	FUTURA	Stub length, 4 flute, General purpose, Ball end
223MA / 823MA 	131	FUTURA	Standard length, 3 flute, General purpose, Square end
230MA / 830MA 	131	FUTURA	Standard length, 4 flute, General purpose, Square end
230RA / 830RA 	135	FUTURA	Standard length, 4 flute, General purpose, Corner radius
323MA / 923MA 	142	FUTURA	Standard length, 3 flute, General purpose, Ball end
330MA / 930MA 	142	FUTURA	Standard length, 4 flute, General purpose, Ball end
623MA / 643MA 	156	FUTURA	Extra length, 3 flute, General purpose, Square end
630MA / 650MA 	156	FUTURA	Extra length, 4 flute, General purpose, Square end
630RA 	161	FUTURA	Extra length, 4 flute, General purpose, Corner radius
723MA / 743MA 	167	FUTURA	Extra length, 3 flute, General purpose, Ball end
730MA / 750MA 	167	FUTURA	Extra length, 4 flute, General purpose, Ball end