Sumitomo Turning Grade and Chipbreaker Selection Guide

Step 1: Choose workpiece material
Step 2: Choose a grade based on machining conditions (good, average, or difficult conditions)
Step 3: Choose a chipbreaker based on operation (finishing/light, medium, or roughing/heavy)

First choice grades and chipbreakers are starting points for most machining applications and mixed production.

Grade Designations
AC=Coated carbide
BN=Uncoated CBN
BNC=Coated CBN

ISO P Steel | ISO M Stainless Steel | ISO K Cast Iron | ISO N Non-Ferrous | ISO S Super Alloys | ISO H Hardened Steel

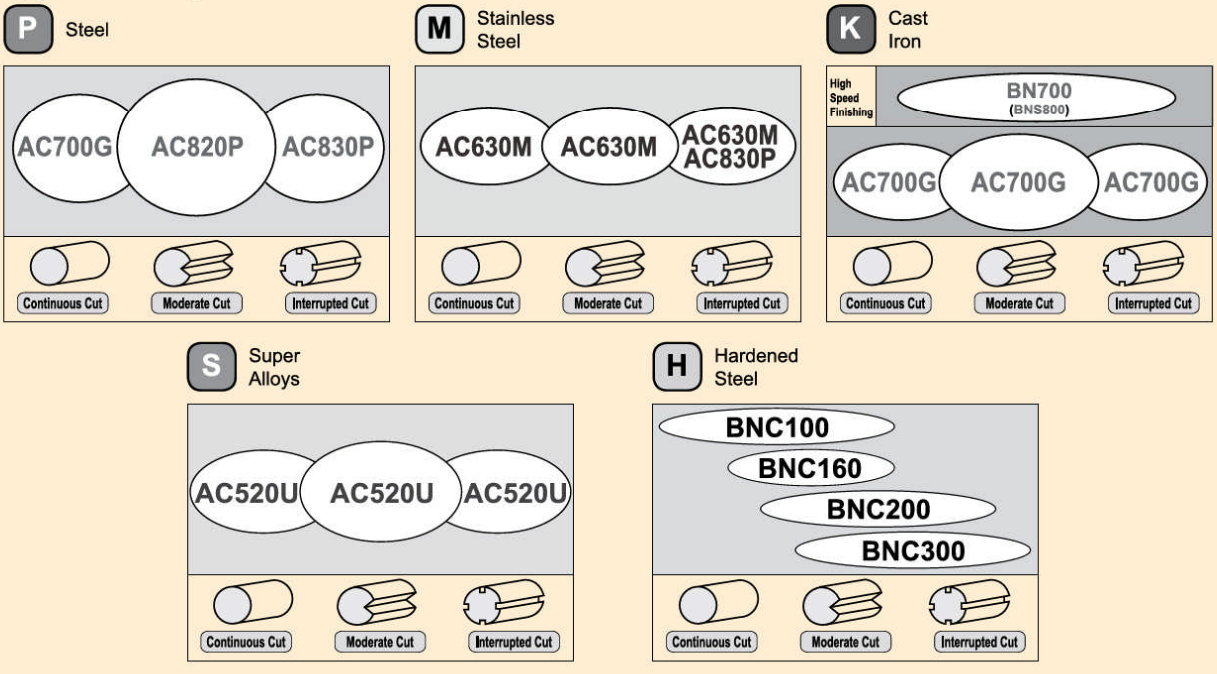
Turning Grades

	ISO P	ISO M	ISO K	ISO N	ISO S	ISO H
Good conditions (wear resistance)	AC700G	AC630M	BN700 BNS800	-	AC520U	BNC100 BNC160
Average conditions (first choice)	**AC820P**	**AC630M**	**AC700G**	**-**	**AC520U**	**BNC200**
Difficult conditions (toughness)	AC830P	AC630M AC830P	AC700G	-	AC520U	BNC300

Chipbreakers

	ISO P	ISO M	ISO K	ISO N	ISO S	ISO H
Finishing	*ELUW* / ESU ENF	*ELUW* / ESU ENF	EUX ENF	-	ESU	*-W*
Medium (first choice)	**EGE / EGU *EGUW* / EUX**	**EEX / EGE *EGUW***	**ENZ / EUX EMU**	**-**	**EEX / EUP**	***-W***
Roughing (toughness)	EMU	EMU	EMU	-	EMU	-
Complementary	EEX / EUP ENZ	EUP EGU	Flat Top			

Application Ranges



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