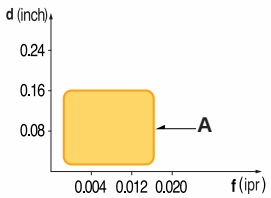
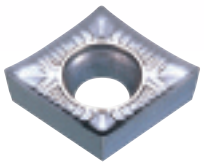
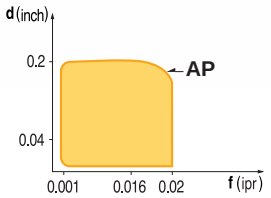
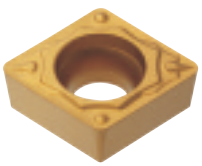
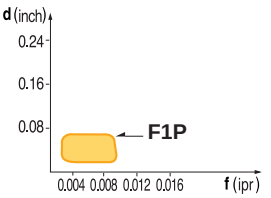
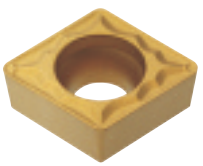
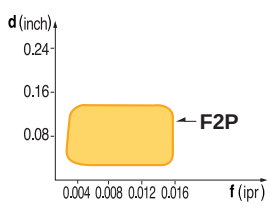
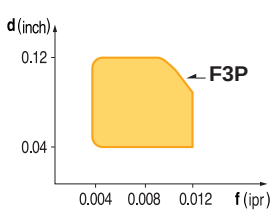
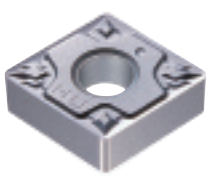
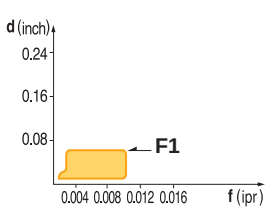
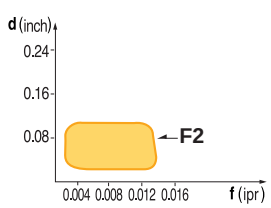
Turning Chipbreakers

TURNING CHIPBREAKERS

Shape	Application Range	Special Feature
A (Neg) 		■ **For Light-alloy, Stainless-steel machining.** · Sharp cutting edge generate low cutting force. · Specially designed tough main cutting edge. · Suitable for cutting of low carbon steel, stainless steel, aluminum. ■ **Recommended Cutting Conditions** d = 0.03 ~ 0.16inch f = 0.004 ~ 0.016ipr
AP (Pos) 		■ **For Aluminum cutting** · Exclusive chip breaker for aluminum and aluminum alloy. ■ **Recommended Cutting Conditions** d = 0.04 ~ 0.2inch f = 0.001 ~ 0.02ipr
F1P (Pos) 		■ **For Finishing** · Excellent chip control at shallow depth of cut and low feed rate. · Excellent surface finish of work piece due to reduced cutting force. · Suitable for fine boring. ■ **Recommended Cutting Conditions** d = 0.004 ~ 0.06inch f = 0.002 ~ 0.01ipr
F2P (Pos) 		■ **For Medium cutting** · Excellent chip control at wide range of cutting conditions. · Suitable for stainless steel cutting. ■ **Recommended Cutting Conditions** d = 0.02 ~ 0.14inch f = 0.002 ~ 0.016ipr
F3P (Pos) 		■ **For Medium cutting** · Suitable for intermittent cutting and cast iron machining. · Good surface finish due to low cutting force. · Suitable for both boring and outer diameter turning. ■ **Recommended Cutting Conditions** d = 0.04 ~ 0.12inch f = 0.004 ~ 0.012ipr
F1 (Neg) 		■ **For Ultra-fine Finishing, Finishing** · Suitable for a machining need fine surface finish and a machining generate low cutting force due to sharp cutting edge design. · Specially designed chip breaker ensure stable chip control at ultra fine-finishing condition. ■ **Recommended Cutting Conditions** d = 0.004~0.006inch f = 0.0012~0.01ipr
F2 (Neg) 		■ **For Finishing** · Excellent chip control at varied depth of cut cutting. · Strong cutting edge toughness due to special design. ■ **Recommended Cutting Conditions** d = 0.012 ~ 0.1inch f = 0.002 ~ 0.14ipr

Neg= Negative
Pos= Positive

Turning Chipbreakers

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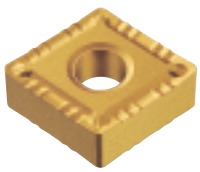
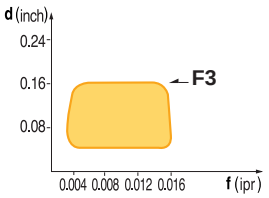
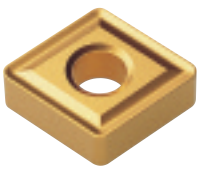
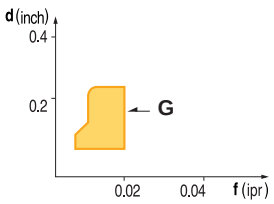
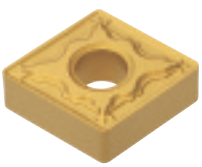
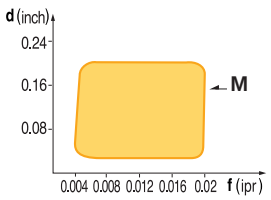
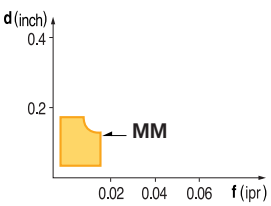
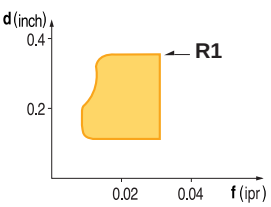
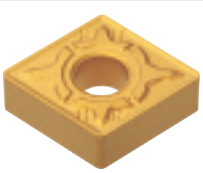
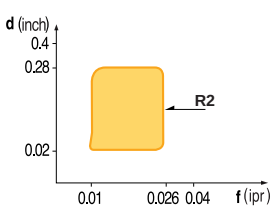
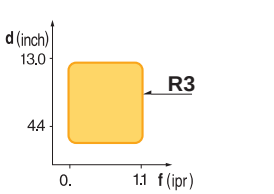
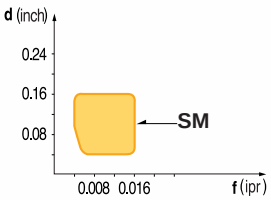
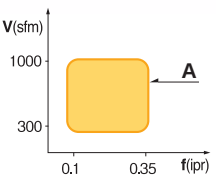
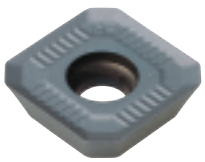
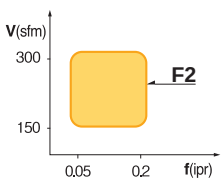
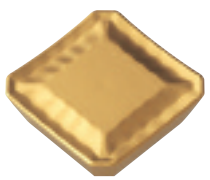
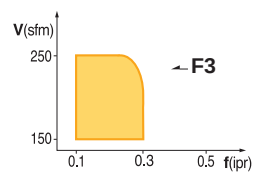
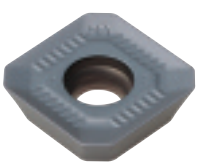
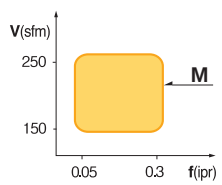
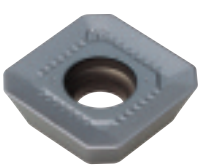
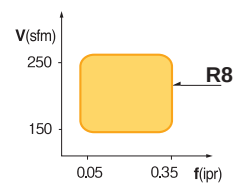
Shape	Application Range	Special Feature
F3 (Neg) 		■ **For Medium to Finish Cutting** ・Excellent for copying of special shape. ・Smooth chip control at shallow cut as well as deep depth of cut. ■ **Recommended Cutting Conditions** d = 0.03 ~ 0.16inch f = 0.003 ~ 0.016ipr
G (Neg) 		■ **For General cutting** ・Suitable for general cutting condition cutting. ■ **Recommended Cutting Conditions** d = 0.08 ~ 0.24inch f = 0.01 ~ 0.02ipr
M (Neg) 		■ **For Medium Cutting** ・Wide available chip control range from medium-finishing to medium-roughing. ・Suitable chip breaker for CNC machining ■ **Recommended Cutting Conditions** d = 0.01 ~ 0.2inch f = 0.004 ~ 0.02ipr
MM (Neg) 		■ **For Medium to Roughing of Stainless-steel** ・Exclusive chip breaker for stainless steel. ■ **Recommended Cutting Conditions** d = 0.04 ~ 0.2inch f = 0.004 ~ 0.02ipr
R1 (Neg) 		■ **For Medium to Roughing** ・Suitable for deep depth of cut and fast feed cutting of steel and cast iron. ・Suitable for intermittent cutting. ■ **Recommended Cutting Conditions** d = 0.12 ~ 0.32inch f = 0.012 ~ 0.032ipr
R2 (Neg) 		■ **For Roughing** ・Excellent chip control at deep depth of cut and fast feed rate. ・Strong cutting edge makes excellent cutting performance at intermittent cutting. ■ **Recommended Cutting Conditions** d = 0.1 ~ 0.28inch f = 0.01 ~ 0.028ipr
R3 (Neg) 		■ **For Heavy duty cutting** ・Specially designed toughest cutting edge provides superior cutting performance at deep depth of cut and fast feed rate. ・Unique design of dot on cutting edge makes smooth chip flow and reduce cutting force. ■ **Recommended Cutting Conditions** d = 0.16 ~ 0.5inch f = 0.018 ~ 0.04ipr

Neg= Negative

Turning & Milling Chipbreakers

MILLING CHIPBREAKERS

Shape	Application Range	Special Feature
SM (Neg) 		■ **For Medium cutting of Stainless-steel** · Exclusive design for stainless steel cutting provide longer tool life · Wear resistance have been reinforced through high rake angle of chip breaker land. ■ **Recommended Cutting Conditions** d = 0.04 ~ 0.16inch f = 0.004 ~ 0.016ipr
A (Pos) 		■ **For Aluminum Milling** · Suitable design for aluminum machining, has sharp cutting edge, mirror face of insert top which prevent build up edge, provide excellent cutting performance. ■ **Recommended Cutting Conditions** d = 0.02 ~ 0.2inch f = 0.004 ~ 0.014ipr
F2 (Pos) 		■ **For Finishing of Milling** · Special design for light cutting of gummy materials like stainless steel and hard to machine material provide fine surface finish and longer tool life. ■ **Recommended Cutting Conditions** d = 0.02 ~ 0.2inch f = 0.002 ~ 0.008ipr
F3 (Pos) 		■ **For General Milling** · Possible to increase productivity through increase feed and depth. · Excellent heat resistance due to the special chip breaker design of top face of insert. ■ **Recommended Cutting Conditions** d = 0.004 ~ 0.2inch f = 0.004 ~ 0.012ipr
M (Pos) 		■ **For Medium cutting of Milling** · Chip breaker design to cover general cutting condition provide wide available application range. · Ground type and as sintered type is available. ■ **Recommended Cutting Conditions** d = 0.04 ~ 0.2inch f = 0.002 ~ 0.012ipr
R8 (Pos) 		■ **For Roughing of Milling** · Strongest cutting edge strength provide stable tool life even in case of severe cutting with heavy intermittent and heavy roughing. ■ **Recommended Cutting Conditions** d = 0.06 ~ 0.2inch f = 0.002 ~ 0.014ipr

Neg= Negative
Pos= Positive