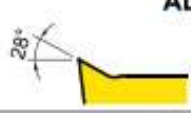
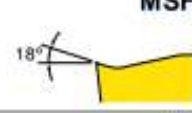
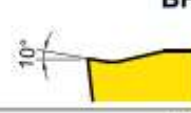
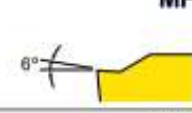

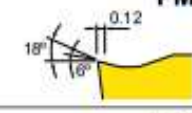
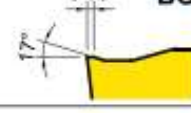
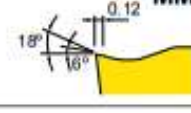


POSITIVE CHIPBREAKER GUIDE

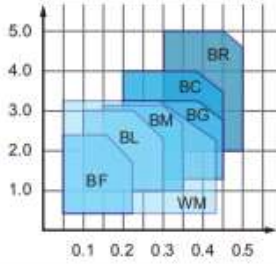
| ISO | Finishing | Semi-Finishing | Medium | Semi-Roughing | Roughing | Heavy Roughing | |
|----------|-----------|----------------|-----------|---------------|----------|----------------|----------------|
| P | PF | | PM | | | | ▲ Lighter Cuts |
| | BF | | | | | | ▼ Heavier Cuts |
| | | | BG | | | | ▲ Lighter Cuts |
| M | PF | | PM | | | | ▲ Lighter Cuts |
| | MF | | | | | | ▼ Heavier Cuts |
| | | MSF | | | | | ▲ Lighter Cuts |
| | | | MM | | | | ▼ Heavier Cuts |
| K | PF | | PM | | | | ▲ Lighter Cuts |
| | BF | | | | | | ▼ Heavier Cuts |
| | | | BG | | | | ▲ Lighter Cuts |
| N | | | AL | | | | ▲ Lighter Cuts |
| | | | | | | | ▼ Heavier Cuts |
| S | MF | | | | | | ▲ Lighter Cuts |
| | | MSF | | | | | ▼ Heavier Cuts |
| | | | MM | | | | ▲ Lighter Cuts |
| H | BF | | | | | | ▲ Lighter Cuts |
| | | | BG | | | | ▼ Heavier Cuts |

| P | M | K | N | S | H | POSITIVE | P | M | K | N | S | H | POSITIVE |
|----------|----------|----------|----------|----------|----------|--|----------|----------|----------|----------|----------|----------|---|
| | | | ● | | | AL  For Aluminium | | | ● | | ● | | MSF  Finishing to medium cutting of clean HRSA material and stainless steel |
| ● | | ● | | | | BF  Finishing | | ● | | | ○ | | MF  Finishing of stainless steel |
| ● | ● | ● | | | | PF  Cermet chipbreaker for finishing | ● | ● | ● | | | | PM  Cermet chipbreaker for medium cutting |
| ● | | ● | | | | BG  Medium cutting | | ● | | | ○ | | MM  Medium cutting of stainless steel |

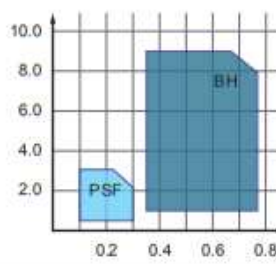
Chipbreaker Feeds & Depth of Cut Map

P
Steels

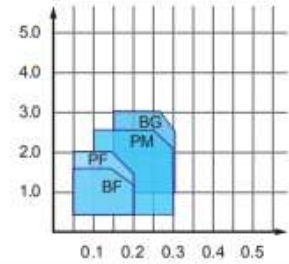
Negative Inserts



Negative - Cermet & Heavy

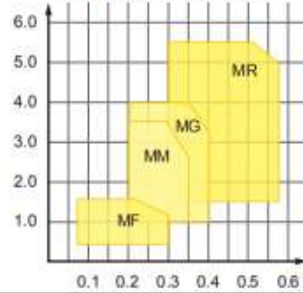


Positive Inserts

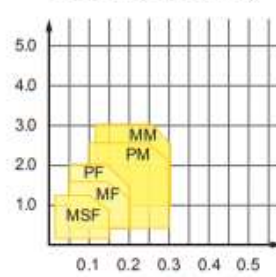


M
Stainless

Negative Inserts

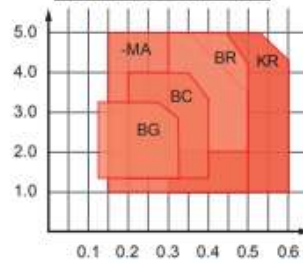


Positive Inserts

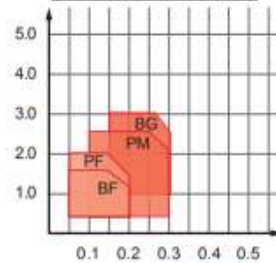


K
Cast Iron

Negative Inserts

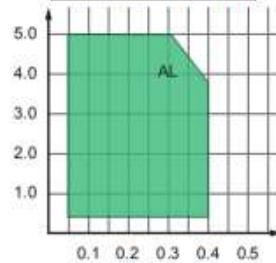


Positive Inserts



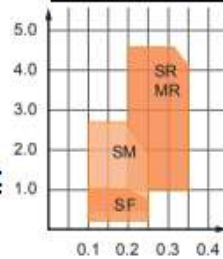
N
Non Ferrous

Positive Inserts

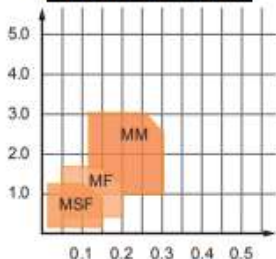


S
Heat Resistant Super Alloys

Negative Inserts

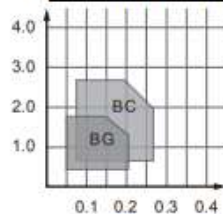


Positive Inserts

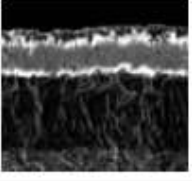
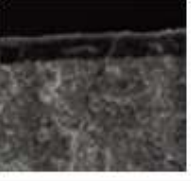
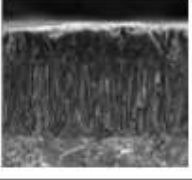
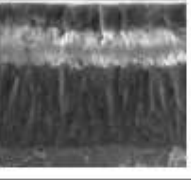
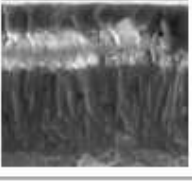

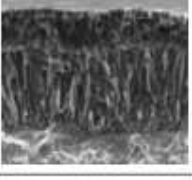
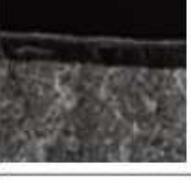
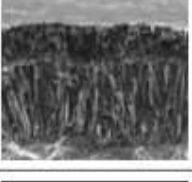
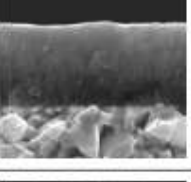
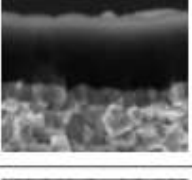





H
Hardened Steels


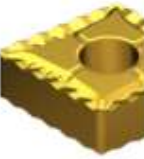

Negative Inserts



INSERT GRADES

| | | | |
|---|--|---|--|
|  | <p>ET101C First choice for stable turning of cast iron</p> <p>K05 - K15</p> <p>CVD TiCN - Al₂O₃</p> |  | <p>P10 - P20</p> <p>M05 - M20</p> <p>S10 - S20</p> <p>ET21P Optimised grade for cutting of stainless steel at high cutting speeds.</p> <p>PVD Coated</p> |
|  | <p>P05 - P20</p> <p>K15 - K35</p> <p>H05 - H10</p> <p>ET31C First choice for high speed finishing of steels and ductile cast iron.</p> <p>CVD TiCN - Al₂O₃</p> |  | <p>M15 - M35</p> <p>ET225C Optimised grade for cutting of stainless steel high speeds and feed rate</p> <p>CVD Coated</p> |
|  | <p>P10 - P25</p> <p>ET315C Balanced grade for continuous cutting of steels.</p> <p>CVD TiCN - Al₂O₃</p> |  | <p>M20 - M35</p> <p>ET23P First choice for stable turning of stainless steel.</p> <p>PVD Coated</p> |
|  | <p>P15 - P30</p> <p>ET32C Versatile grade for general turning of steels.</p> <p>CVD TiCN - Al₂O₃</p> |  | <p>M30 - M40</p> <p>S30 - S50</p> <p>ET24P Optimised grade for interrupted cutting of stainless steel and skin & scale cuts in HRSA.</p> <p>PVD Coated</p> |
|  | <p>P20 - P35</p> <p>M20 - M30</p> <p>ET33C Tough grade for turning of stainless steel and interrupted cutting of steel.</p> <p>CVD TiCN - Al₂O₃</p> |  | <p>M05 - M15</p> <p>S05 - S15</p> <p>ET41P Optimised grade for clean HRSA materials.</p> <p>PVD Coated</p> |
|  | <p>ET10D First choice for high speed turning of aluminium, and Si >10%</p> <p>N05 - N35</p> <p>TaC Diamond Coated</p> |  | <p>P10 - P20</p> <p>M10 - M20</p> <p>K10 - K20</p> <p>CT10U Cermet grade for finishing, semi-finishing and medium cutting</p> <p>Uncoated</p> |
|  | <p>ET10U Polished face for general turning of aluminium.</p> <p>N05 - N35</p> <p>Uncoated</p> |  | <p>P10 - P30</p> <p>M20 - M30</p> <p>K20 - K30</p> <p>H20 - H30</p> <p>ET801 Turning grade for mid and low cutting conditions in most steels, cast iron and some stainless steels</p> <p>PVD Coated</p> |

COATING

| | | | | | |
|---|---|---|---|--|---|
|  | Multi-layer CVD coated grades are finished with a special process to enable smoother chip flow. |  | Single layer PVD coated grades are designed to balance edge strength with extended tool life. |  | TaC Diamond coated inserts maintain sharp cutting edge due to coating thickness of ≤ 1 µm and highly polished face. |
|---|---|---|---|--|---|