

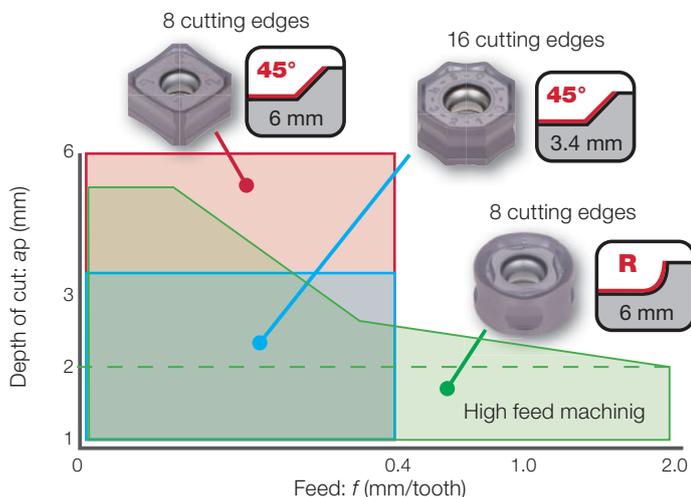
# THE FACE MILL THAT NO JOB MACHINE SHOP SHOULD DO WITHOUT. VERSATILITY & ECONOMY

Tungaloy is pleased to offer one of the most versatile and economical face-mills available on the market today.

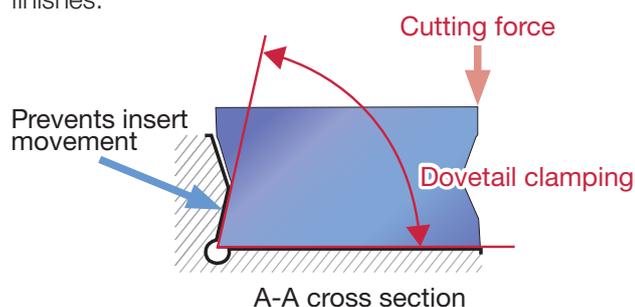
## **Tungaloy's DoTriple-Mill can use three unique inserts in just one cutter body.**

The DoTriple-Mill can use an octagon insert that offers 16 cutting edges. The octagon insert can take a depth of cut (DOC) up to 3.4mm (0.134"). However, if the depth of cut requirement is greater, then the same cutter body can accommodate an 8-edged square insert with DOC capability of 6mm (0.236"). The DoTriple-Mill is also capable of using an 8-edged round insert. There are many advantages to a round insert. Round inserts are the strongest of all cutting tool geometries and can handle sever applications. Another feature of round inserts is that with a light depth of cut, round inserts utilize chip-thinning to offer feed rates that rival high-feed cutters.





Versatility and economy are just part of the reason the DoTriple mill is one of the best face mills available today. The performance of the DoTriple mill is in a class of its own, regardless of the insert geometry. A big part of the performance advantage is found in the way the insert is secured into the pocket. The insert has a ground in groove that circumnavigates the periphery of the insert, midway through the insert thickness. This groove acts to lock the insert into a mating protuberance in the pocket. With conventional face mills the neck of the screw is the only factor holding the insert down. Where the DoTriple Mill uses the milling cutter pocket to wedge the insert into place. This method of securing the inserts acts as a dove-tail locking mechanism that secures the insert, prevents movement, accurately tracks the insert and reduces the strain on the insert screw, common in conventional milling cutters. What this means is higher feed rates, more accurate tracking, improved repeatability, increased dependability and better surface finishes.



Chip removal is often a concern when milling, especially when machining a large DOC. Conventional face mills tend to focus on curling the chip in the radial axis to form wide spiral long chip. This can be problematic in large DOC applications making it difficult to evacuate the chip. The DoTriple-Mill inserts have a concave edge which bends the chip in the axial axis which reduces the height of the chip while at the same time curling the chip in the radial axis to form a "6". The result is a barrel shaped chip that is much easier to expel.

Reduced cycle time often makes the difference between a profitable job and a non-profitable job. The DoTriple-Mill can significantly reduce cycle time in roughing applications. However, an often-overlooked part of cycle time is the finishing pass. Many machine shops live with a slower feed rate to achieve the desired surface finish, eroding cycle time and profits. DoTriple-Mill can dramatically reduce the finishing process by including 1 Wiper type insert in the cutter. The Octagon wiper insert has a flat width of 3.9mm (0.154"), and just by clamping 1 wiper insert and the rest are regular inserts the tool can advance at up to 3.9mm per revolution ( $f_z \times z$ ) < 3.9mm (0.154"), and still produce a high-quality finish. The Octagon wiper insert comes standard with 8 wiper edges on one insert, where the Square insert has a wiper flat with a width of 7.9mm (0.311") to dramatically reduced cycle time in finishing operations.

Inserts are available with MJ chip-breakers for general purpose machining and MH chip breakers for heavy roughing. Inserts are offered in ground periphery and pressed to size economical inserts, and are designed with a neutral geometry, meaning the same insert can be used in a right hand or left-hand cutters.

Insert are available in both CVD and PVD coated grades. The CVD grades run at elevated RPMs while the PVD grades are used for sharper cutting edges. For Steels and Stainless steels Tungaloy's advanced multi-layered grade T3225 has proven to outperform in both metal removal rates and long, dependable tool life. The CVD grade T1215 is ideal for cast iron machining. Inserts are also available in Tungaloy's advanced PVD grade AH3135 where a sharper cutting edge is desired.

Cutter bodies come in coarse pitch, close pitch and extra close pitch options. Diameters start at 50mm and go to 160mm. (2.00" to 6.00")