

TECHNICAL DATA SHEET

FACE MILLING RECOMMENDATIONS FOR GLIDCOP® AL-15 DISPERSION STRENGTHENED COPPER

GEOMETRIES

The following milling cutter and insert geometries were selected for face milling GlidCop® AL-15 (C15715):

Milling Mode:	Climb
Cutter Geometry:	Axial rake: +20°
	Radial rake: -5°
	Lead Angle: 45°
Insert Type:	SEKN (corner facet also called parallel land)
Insert Clearance:	20°
Carbide Grade:	ANSI C2-C3, ISO K10-K30

CUTTING PARAMETERS

Recommended cutting parameters for face milling GlidCop® AL-15 (Table 1) vary according to application and part configuration. Applications can be grouped into three categories which include finishing, roughing and heavy roughing. The recommendations can be interpolated (Table 2) for depths-of-cut not given or for optimization purposes. Finishing cuts (0.050 inch depth-of-cut and low chip loads) will produce the best surface finishes with the recommended cutter and insert geometry and the following guidelines:

- Keep ipr at least 0.020 inch less than facet width ($ipr = ipt \times \text{number of teeth}$).
 - Use inserts in the up-sharp condition (no edge prep or hones).
 - Index inserts before 0.015 inch flank wear; surface finish will deteriorate as the tool wears.
- The critical flank wear criterion may change depending on the specific finish tolerance of the part.

TABLE 1: Cutting Parameter Recommendations

APPLICATION	Depth-of-Cut (inches)	STARTING CONDITIONS		RANGE OF CONDITIONS	
		Speed (sfpm)	Feed (ipt*)	Speed (sfpm)	Feed (ipt)
Finishing	0.050	1500	0.005	1000-2000	0.005-0.010
Roughing	0.150	900	0.010	600-1200	0.005-0.015
Heavy Roughin	0.300	650	0.018	400-900	0.015-0.020

*ipt; inches per tooth

TABLE 2: Interpolating the Recommendations

PARAMETER	SPEED (sfpm)	FEED (ipt)
Decrease Depth-of-Cut	Increase	Decrease
Increase Dept-of-Cut	Decrease	Increase
Increase Tool Life	Decrease	Same

MATERIAL SAFETY DATA

See MSDS before using this product.

SAMPLES AND SERVICES

For further information or sample quantities for test, contact our Customer Service Department.

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