

REGO-FIX RELEASE NEW RANGE OF PRECISION TOOLHOLDER COLLET CHUCKS WITH BALANCING RING FACILITY FOR OPTIMUM HIGH SPEED MACHINING BENEFITS.

Rego-fix, the Swiss manufacturers of high precision toolholding chucks have released through their **UK agent, PCM Tooling (UK) Ltd**, a new range of toolholder chucks which have a balancing ring system to eliminate the ' imbalance ' created by the combined natural variations in the balance of the individual components in a spindle tool assembly. These usually include the collet chuck body, the collet, the nut, cutting tool and that often forgotten component in the toolholder assembly, as far as balance / imbalance is concerned, the pull stud.

To perform high speed milling, (which most observers and many machine suppliers specify as machining at spindle speeds over 8000 rpm) satisfactorily, the toolholder / cutting tool assembly needs to be balanced within certain parameters. The recently recognised international machine tool standard being g6.3 for every day high speed machining operations, with higher degree's of balance being required for certain machining operations, especially where very thin section walls are required to be machined. Unbalanced tool assemblies have the effect of ' throwing ' the cutting tool edge away from it's natural axis, leading to cutting on only one edge of the tool, reduced tool life and poor surface finish on the component.

Rego-fix collet chucks are designed and manufactured to offer a run out (O.D to I.D) of 0.003mm and have a natural balance factor ' by design ' of g6.3 @ 15000 RPM. However their experience over 50 years of producing high precision tools gave them the knowledge that the complete tool assembly mentioned above altered the balance factor outside the designed and indeed desired balance parameter for high speed machining. This led to the design of toolholders with the balancing rings, to allow the resulting imbalance to be removed easily and quickly, giving collet chuck users production benefits and peace of mind regarding cutting tools and machine spindle bearings

Balanced toolholder assemblies produce the following minimum benefits:

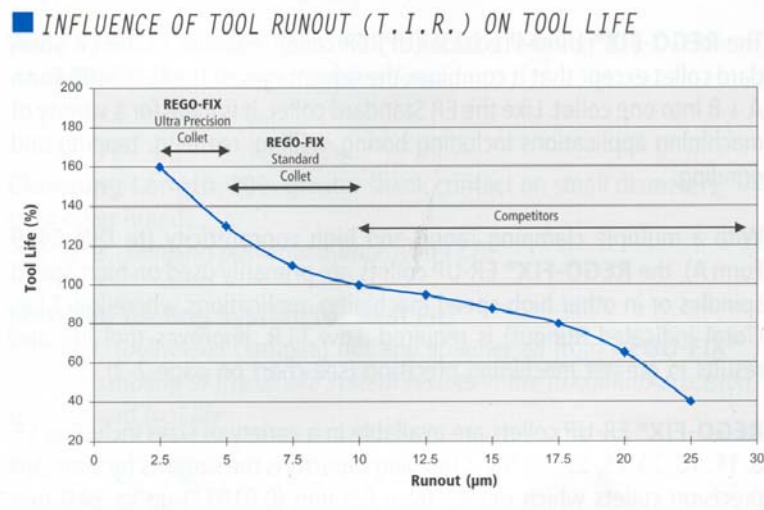
Substantially Longer cutting tool life – with some carbide cutters costing £100 plus this is a significant matter in cost reduction terms.

Better surface finish quality on machined components – essential in the aerospace and other industries where good surface finish is vital to safety

Spindle Bearing Integrity – imbalance increases spindle bearing wear – inducing costly premature bearing failure

The matter of spindle bearing integrity is of prime importance, especially as most machine manufacturers warranties will not cover damage to bearings caused by the use of toolholder assemblies which exceed the recommendations given in the manufacturers operating manual(s). This could lead to expensive spindle refurbishment even in the warranty period, with all the costly loss of production that this could entail.

Tool imbalance has the effect of ‘throwing’ the tool cutting edge away from it’s planned axis and this affects cutting tool life, as shown in the graphic below



Precision is a function of the whole system of toolholder, collet and nut. For best results we recommend that you use **REGO-FIX®** toolholders, **REGO-FIX®** collets and **REGO-FIX®** nuts.

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A catalogue describing the full range of Rego-fix collet chucks with balance rings, and other spindle toolholders, collets, coolant sealing rings and high speed collet nuts, is available from PCM Tooling (UK) Ltd., on request.

The tools will be displayed on the PCM stand Number 4104 at the Mach 2006 exhibition at the N.E.C. Birmingham

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For further information please contact

Jack Champ – PCM Tooling (UK) Ltd – 01 424 753 174

Mrs Linda Baker – Company Secretary PCM Tooling (UK) Ltd 01 424 753174

ukpcmtlg@aol.com