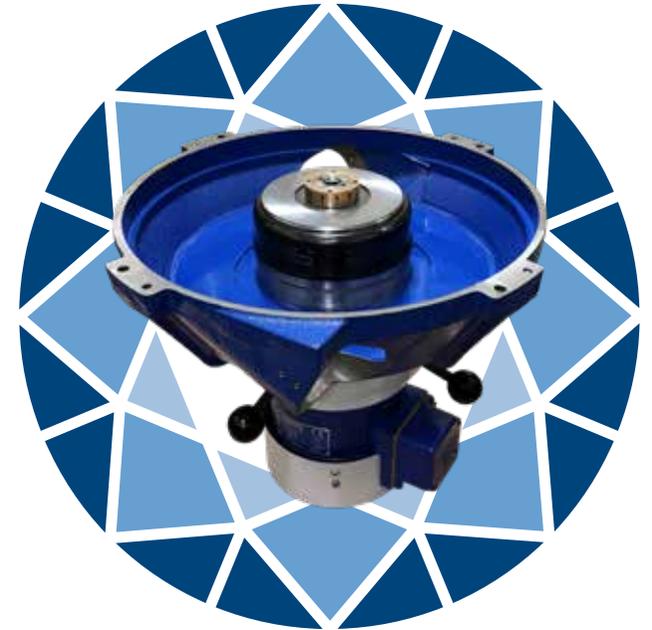


## Coborn can also supply:

- Cast iron and impregnated scaife plates
- Machines to dynamically balance scaife plates, wheels and rotating tools
- Portable balancing units to dynamically balance re-machined plates in-situ
- Planetary grinding machines for natural and synthetic crystal diamond tooling
- Manual and CNC grinding machines for PCD and PcBN tool making
- Brushing machines to hone cutting edges



## SCAIFE SPINDLES & BENCHES



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# COBORN

ENGINEERED SOLUTIONS

## New Generation Spindles - KK Range

Coborn Scaife Spindles are high-precision, self-driven motors for running diamond-loaded scaife plates, at high speed and to a maintained accuracy. The whole shaft assembly, including drive rotor, is dynamically balanced to gyroscopic limits, resulting in the complete elimination of vibration.

The spindles are designed to be mounted beneath a bench and are sealed for their many years of life. The integral motor eliminates the use of belts, thus diminishing vibration. Coborn's spindles provide extreme rotational accuracy due to the quality of manufacture and bearings and are designed to run continuously for years.



Without an inverter, these 3 phase spindles may be directly wired to run at 2,860 rpm at 50Hz (or 3400rpm at 60Hz). An inverter can also be fitted to give speed control from 1,500 rpm -- 4,200 rpm.

Voltages: 220v @ 60Hz or 220/380v @ 50Hz, 3 phase.

## KK --- Self-Pressurising Air-flow Spindles

The KK adjustable-height spindles are also available with an extraction bowl which captures dust and debris created during the polishing process. This ensures a much cleaner work environment. No fan or vacuum source is needed; the rotation of the scaife plate at high speed entrains air and results in a powerful suction at the edge of the plate.



All the spindles are equipped with the Coborn Expanding Nose System as standard, which has removed the problems of mounting and dismantling scaife plates where there is a tight fit on the spindle nose. The expanding nose also improves the quality of polish especially if the scaife plate has an oversize bore on a parallel nose, which may result in the scaife plate taking a random position causing unbalance and vibration.

## The Complete Product Range

| <b>1.4 H.P. (1.1kW)</b> |                              |
|-------------------------|------------------------------|
| KK                      | Fixed height                 |
| KKS                     | Adjustable height            |
| KKBS                    | Adjustable height + air flow |
| <b>2.8 H.P. (2.2kW)</b> |                              |
| KKFS                    | Adjustable height            |
| KKAS                    | Adjustable height + air flow |

Quantity discounts apply: please contact us for details.

## Benches

Coborn offers polishing benches designed and manufactured to customer specifications and various control systems are available. The Coborn Complete Polishing System (CPS) is an upgrade to the standard polishing bench, more detailed information available on request.



## Planetary Benches

A planetary bench combines the rotation of the scaife plate with a smooth orbital motion; the plate moves constantly under the diamond over a wider track.

The amplitude of the planetary motion can be adjusted in 24 steps from 0.25mm to 32mm. The planetary motion ensures the plate does not get scored and the constantly changing approach angle means difficult 'Knarted' stones are more easily polished.



The motion produces a self 'zooting' action and helps ensure line free facets. The 'Avalon Smoothness Viewer' (details on request) allows the perfection of facets to be examined easily and the plate corrected if necessary.

Note: Air-flow spindles cannot be fitted to a planetary bench.