

Fliese Dressers

Fliese dressers are the most versatile and cost effective type of stationary multipoint dressing tools available for modern high productive dressing. Fliese dressers comprise of a thin layer of high quality diamonds, in different forms depending on the usage and application, set in a matrix. Fliese or Blade Tools can give 4-10 times higher feed rates of dressing compared to Single Point Dressers and 5-20 times life. The manufacturing process and technology of Fliese dressers ensure that consistent finish could be obtained at very low wear rates of the diamond. Fliese dressers combine the productivity aspects of Nibs, Igel tools and precision dressing capabilities of single point and Chisel dressers to offer unmatched versatility.

Plants for Fliese dressers

Fliese dressers are made in world class Saint-Gobain facilities in Europe. These dressers are backed by pre and after sales service expertise in India from Grindwell Norton who has an extensive network of branch offices aided by technical support from Bangalore in India.

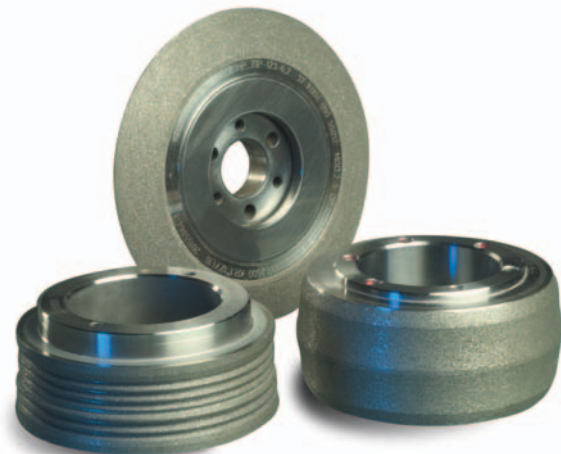


TYPICAL APPLICATIONS

- ▶ Cost effective option for Cylindrical grinding and angle head grinding where the precise controls and consistencies are required on finish and raddi

Rotary Dressers

In addition to Stationary Dressers, Grindwell Norton also offers the full range of Rotary Dressers. Rotary Dressers are generally custom built to specific customer applications and machines.



TYPICAL APPLICATIONS

▶ Automotive

- Crankshafts
- Camshafts
- Piston rings
- Oil seals
- Rocker arm guides
- Valves
- Valve needles
- Water pumps
- Expansion bolts
- Gear shafts
- Pinion gears
- Gears
- Spined shafts
- Clutch bearings
- Clutch release rings
- Synchronesh rings
- Oil pump worm wheels
- Universal joints
- Bearing outer races
- Cross pins
- Ball joint journals
- Ball screws
- Servo steering pistons
- Toothed racks
- Stub axles
- Propeller shafts
- Propeller journals
- Ball races
- Ball cages
- Threads

▶ Turbine

- Rotor shafts
- Guide valves
- Rotor blades

▶ Bearings

- Inner and outer rings
- Spherical races
- Cylindrical races
- Tapered races
- Crowned races

▶ Tools

- Screw taps
- Thread rolling dies
- Collet chucks
- Drill bushes
- Broaches
- Clamping jaws
- Quick change holders

▶ Hydraulics

- Piston Rods
- Piston Valves
- Rotary Pistons

What is a Rotary Dresser?

A Rotary Dresser is a high precision form tool consisting of diamonds strategically positioned around the periphery of a metal core and held in place by a metal matrix. In use, these Rotary dressers are rotated by means of a precision spindle and either plunged into a grinding wheel imparting the form to be dressed or traversed across the wheel to generate the desired form. Being accurate, Rotary dressers need careful selection of the best quality diamonds and state-of-the-art precision equipment to manufacture and inspect the form on the dressers.

Advantages of Rotary Dressing

- ▶ Profiling/truing and dressing of the wheel could be done in one operation
- ▶ Reduction in dressing cost per piece especially for high volume production and/or applications where high profile accuracies are needed
- ▶ Higher utilization of machine capacity
- ▶ Automation in dressing
- ▶ Consistent quality with low rejection rates
- ▶ Rapid transfer of accurate profiles
- ▶ Part accuracies less than one micron
- ▶ Reduced dresser setup changes
- ▶ Improved process control

Economics and Technical aspects

The advantages of diamond Roller Dressers have enabled rapid breakthroughs in usages especially in large scale production jobs. In some applications complete automation of parts become possible only by using rotary dressing. Stationary dressers have to be indexed or replaced and corrected for dressing in-feed changes very often resulting in frequent set up changes.

The main reasons for the usage of these tools are:

- ▶ Increasing automation in production
- ▶ Reproducible manufacturing accuracies
- ▶ Introduction of Flexible Manufacturing Systems (FMSe)
- ▶ Shortage of skilled labour in series production
- ▶ Rising machine and labour costs

DRESSER TYPES

CDP Handset Layered Pattern

CDP Handset Dressers utilise a single layer of diamond set by hand around the periphery in a specific interlocking pattern according to application. The diamond size and spacing is adjusted to suit the job. High wear areas like small radii and corners are reinforced with stones using various shapes. These are used for less accurate forms.

CDP Handset Random Pattern

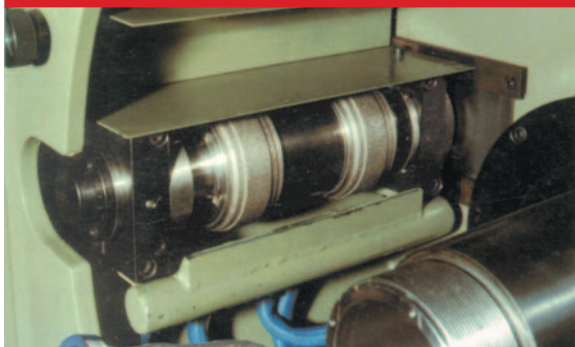
CDP Random Set Dressers also have a single layer of random set diamonds. These dressers are similar to layered hand set but are suitable for less accurate profiles. However, some dressers can be bond relieved to project diamonds.

RPC Reverse Plated Dressers

Accuracies less than one micron can be produced on these dressers. These dressers are hence recommended for high precision applications like bearing track grinding, turbine root profile grinding, etc. Reverse Plated Dressers are manufactured by a special precision electro-forming process. This process requires no furnacing and hence requires little or very less diamond lapping to produce even very accurate profiles. As the diamonds are not normally lapped they are very sharp. In this process high concentration of diamonds are randomly distributed. Diamond size can be varied to suit application.

Rotary Dressers are made in world class facilities in Saint-Gobain plant locations in Europe and USA. Grindwell Norton offers the full range of all types of Rotary dressers. Rotary dressers are generally custom built to special customer applications and machines. These dressers are backed by pre and after sales service expertise in India from Grindwell Norton through their extensive network of branch offices aided by technical support from product specialists from Bangalore.

HOW TO ORDER?



- ▶ For standard dressers, specify Stock No.
- ▶ For special dressers, specify diamond type, shank details, and dressing applications
- ▶ Enclose drawing of dressers showing details wherever possible
- ▶ For special dressers, preferably send used samples for cross matching.