

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.