

Stationary Dressers



Star

Range of Stationary Dressers

- Single Point Dressers
- Multi-point Dressers
- Cluster Type Dressers
- Grit Impregnated Dressers
- Blade type Dressers
- Chisel Type Dressers

Star offers Stationary Dressers with a high quality standard on par with Global Standards. These Dressers are manufactured in a state-of-the art manufacturing unit.

Single Point Dressers (Brutted)



Single Point Brutted Diamond Dressers are made with selected Congo Rounds mounted in a matrix.

Diamonds for single point dressers are selected in accordance with quality and size. It is normally based on the required grinding finish, machine, working parameters, size and type of wheels.

These are offered in three grades – A, B and C – for diamond sizes from 0.25 to 5.00 carat size.

Guidelines

- Considerable care should be taken in mounting the diamond dresser in position. Diamonds are sensitive to shock and heat.
- The dresser must be clamped rigidly in place to avoid vibration once dressing begins.
- Ample supply of coolant should be directed at the point of contact of the diamond point before dressing begins. Sudden application of coolant to the diamond dresser once the diamond gets heated up could cause it to shatter.
- The diamond holder must not be set directly on the center of the grinding wheel but at an angle of 5° to 15° to the direction of rotation of the wheel so that it appears to be trailing,
- At normal wheel peripheral speeds, dressing rates of approximately 20-25 m/sec can be achieved.
- The maximum depth of cut achieved per dressing pass is 0.03mm or on fine grit wheels approximately 0.005 - 0.01mm
- The cross feed rate is dependent upon grit size and can have a marked influence on the quality of the finish imparted to the grinding wheel surface. The lower the speed, the finer the surface finish.



Recommended feed rates for the grinding wheels

Grinding Wheel	Feed Rate
30 - 46	0.60 - 0.30
50 - 120	0.30 - 0.10
180 - 320	0.10 - 0.02

Applications

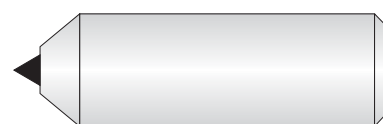
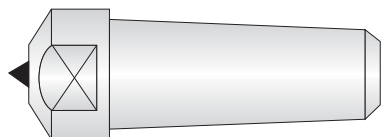
Single point dressers are used for OD and/or side dressing of conventional wheels. They can be used on Cylindrical Grinders, Surface Grinders, Tool and Cutters. Also for Larger Profiles, Male or Female Generations on wheels, or to remove the existing profiles (Random Dressing). They can also prepare the wheel for a fresh form.

Sizes

Standard Shanks: 1/2" x 5" up to 3.50 cts and 5/8" x 5" over 3.50 cts. We also offer Customized Shanks to match your application. While ordering specify both grade and ct. wt.

Brutted Type

Ct. Wt.	0.25	0.35	0.50	0.75	1.00	1.50	2.00	2.50	3.00	3.50	4.00	4.50	5.00
Grade	A					B					C		



Natural Diamond

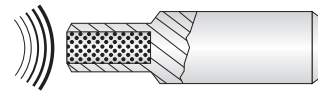
We also offer Single Point Dressers with Natural Diamond in the following carat size.

Ct. Wt.	0.10	0.15	0.20	0.25	0.35	0.50	0.75	1.00
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Shank types and Dimensions need to be specified by customers while ordering

Grit Impregnated Dressers



Diamond grit impregnated dressers are manufactured from crushed diamond grit rather than a large number of small natural diamonds. The advantages lies in its exceptional sharpness, which results from sharp edges and points of the broken diamond grit.

Diamond grit impregnated dressers are more economical because of their low initial cost and their resistance to shock and impact which prevents shattering.

Dressing times are reduced as higher feed rates can be used. There is an unlimited number of sharp pull-out-free cutting edges contained in the crushed diamond grit.

These dressers demand greater care in selecting the correct dresser for a given application. The bond and diamond grit size used are both variable according to the type of grinding wheels to be dressed. The size of the diamond grit particles should be matched to the grit size of the grinding wheel.

Guidelines

Normal dressing speeds are used. A good supply of coolant should be provided both before and during dressing to ensure longer life. The diamond grit impregnated cutting face of the dresser should be set at an angle of 90° to the grinding wheel to be dressed, so that all the cutting edges of the diamond grit are able to make contact with the wheel face.

The feed rates could be double of those used with single point diamond dressers.



Applications

These dressers can be used where longer life, frequent dressing cycle, consistent surface finish are required. They are suitable for use on Centerless Grinders of larger diameters and lengthy dressing cycles.

Sizes

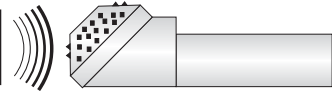
Customized to customer requirements

Catalog Number	Diamond Section	Diamond size in micron	Bond
DG - 4		500	U
DG - 5		500	U
DG - 6		630	U W
DG - 8		850	U W
DG - 10		1000	U W
DG - 10-P		1000	U W
DG - 12		1250	U W
DG - 12-P		1250	U W

Catalog Number	Diamond Section	Diamond size in micron	Bond
DG - 15		1450	U W
DG - 15P		1450	U W
DG - BL-1 10X10X6		850	U W
DG - BL-2 15X10X7		1000	U W
DG - BL-3 20X15X7		1250	U W

While ordering Specify D and L Dimensions

Multi-point: Indexable Crown type Dressers



In a Multipoint Diamond Dressers, sharp natural diamonds are set in a straight or circular crown at right angles to the operating plane. As soon as the diamonds on the indexed position are completely used up, the crown can be re-adjusted on the shank for new points. Shanks are made to customer specifications.

Advantages

- The diamonds can be completely used and resetting is redundant.
- Since two or more diamonds come in contact with the wheel, the work load on the diamonds is divided and diamonds last longer.
- A large area of the wheel is dressed more efficiently in a relatively shorter time than a single point dresser
- As several points are in use simultaneously the speed may be safely increased.
- Finer finish is obtained on the wheel due to the crystal shape of the diamonds employed.

Applications

- Dressing of OD grinding, centerless grinding and surface grinding of abrasive wheel
- Specially recommended for cylindrical grinders

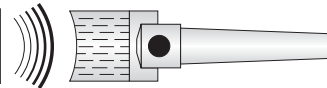
Sizes

EM 24 - with 24 diamonds for wheel size up to Ø600mm wheel

EM 36 - with 36 diamonds for wheel size above Ø600mm wheel



Blade Type Dressers



Blade dressers use thin natural diamond needle which are more economical than single point diamonds. Blade type dressers are designed to utilize their full life span with minimum deterioration of form and tolerances. They are developed on the "fix and forget" principal – a concept of right type of dresser for an operation – when the next attention to machines is warranted only when the dresser is fully used up.

Unlike single point dressers which are more or less independent of the grinding wheel specifications, blade dressers have to be selected considering the grinding wheel specifications and conditions of dressing.

Advantages

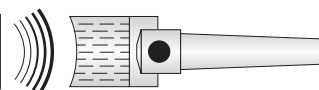
- Blade type dressers are highly economical compared to single point dressers
- They have higher form retention capability
- Minimum in-process service attention compared to any other dresser due to their self-wearing property.
- They are ideal for optimum dressing conditions. In turn provide higher dressing accuracy.
- Greater flexibility in selection from a wide range of varieties of dressers to suit different grinding wheel specifications and grinding conditions.



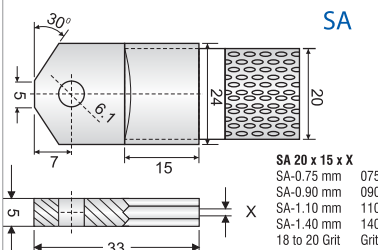
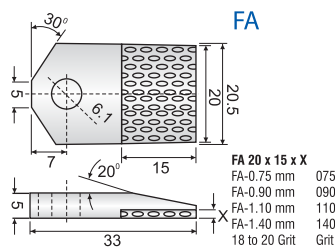
Applications

Blade Type Dressers are ideal for applications where consistent surface finish and longer life are important. They can be used for Profile Generation (Male and Female), Side Dressing, Angular Dressing, OD Straight Dressing.

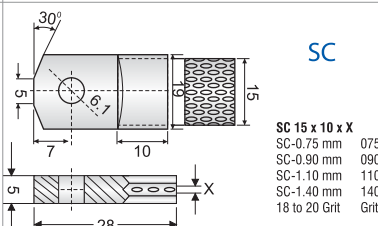
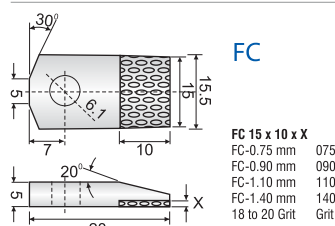
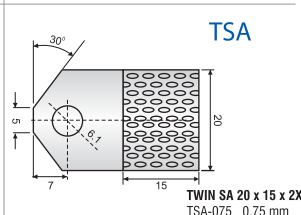
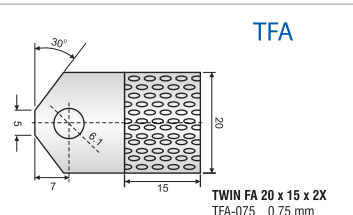
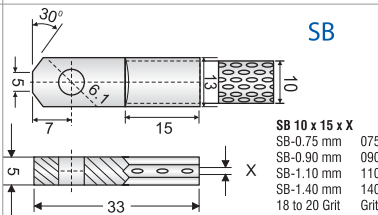
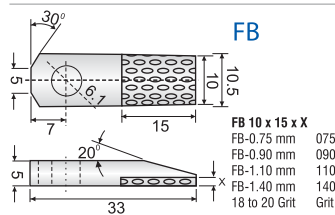
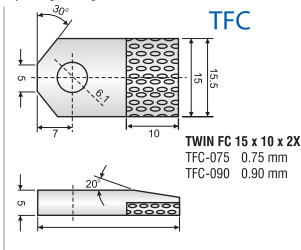
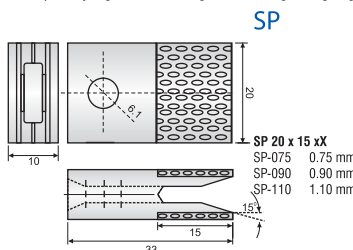
Blade Type Dressers



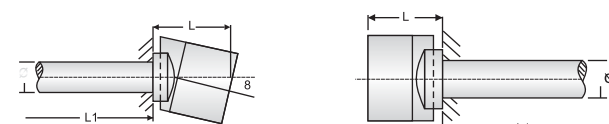
Sizes



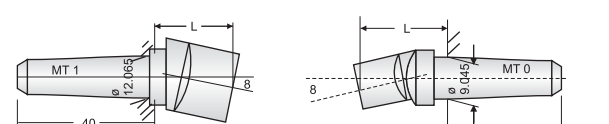
Diamond twin blade with cooling duct, coolant supply necessary.
For specially high demands, e.g. centerless grinding, high-speed grinding



Holders for Blade type tools
Diamond blades rigidly brazed in the shank

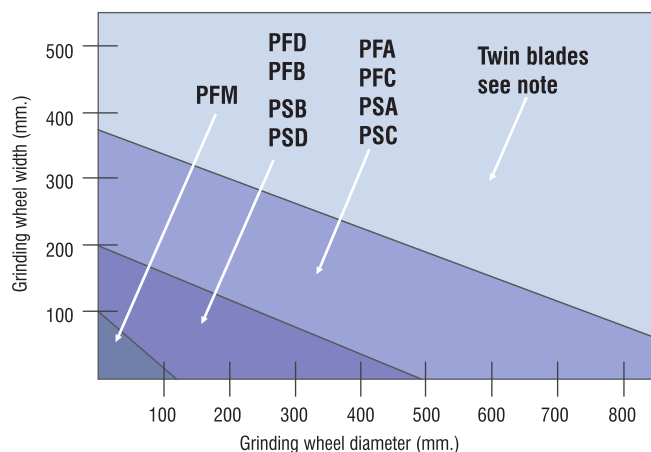


Cylindrical shank with blade	FA SA	FB SB	FC SC	FD SD
L Approx.	25	25	20	20
Angle L1 and shank-diameter according to stated requirements				



Shank MT1 or MT0 with blade	FA SA	FB SB	FC SC	FD SD
L Approx.	25	25	20	20
Angle according to stated requirements				

We also supply Precision Series for all the above dressers, where in they are designed to utilize their full life span with minimum deterioration of form and tolerances. Accordingly the price is higher than the standard price.



PFA/PFC, PSA/PSC = PFA/PFC Blade with W = 20mm or 15mm And Useful length 15 or 10mm, for large Wheels

PFD/PFB, PSB/PSD = Blade with W = 10mm and Useful length 15 or 10mm, for small wheels

PFM = Mini Blade, width W = 6mm and useful length 6mm, for very small wheels

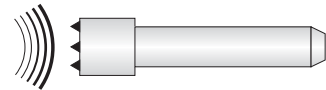
Note: For dressing work with high wear, or for large single and ganged Grinding Wheels, We recommend twin blades

Select Bond for Abrasive

Bond: W Preferred for fused alumina (Al₂O₃, including sintered Al₂O₃-sol-gel).

Bond: U Preferred for silicon carbide (SiC).

Cluster Type Dressers



Cluster type diamond dressers consist of a number of small natural rough diamonds of good crystal character set in a geometric pattern in single layer and sintered in to a special wear resistant bond.

These dressers are more economical than single type dressers because diamonds used in these type of dressers are much smaller in size and hence cheaper.

Cluster type dressers give rapid dressing without scoring and produce a consistent even surface on the grinding wheel. They are resistant to shock and impact.

Guidelines

The dressing face of the cluster type diamond dresser should be set at an angle of 90° to the grinding wheel so that all the diamond points are in contact at the same time.

Finer in feeds and smaller cuts will produce higher surface finishes, hence normal wheel speeds should be used.

Adequate supply of coolant should be used both before and during the dressing operation, in order to prolong tool life.

Applications

The cluster type diamond dressers are ideal for coarse or rough dressing of grinding wheels in sizes up to 80 grit. Ideal for mainly rough grinding or grinding to eliminate imbalance.

The diamonds can be fully utilized without re-setting or re-sharpening.



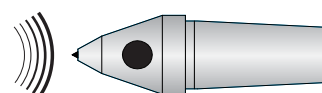
Sizes

Customized to customer requirements

Size	CT. WT	Dimensions
5/D	0.75	
7/D	1.00	
9/D	1.00	
12/D	1.00	

Our Standard is 5/8" X 7. If required other size kindly specify D & L

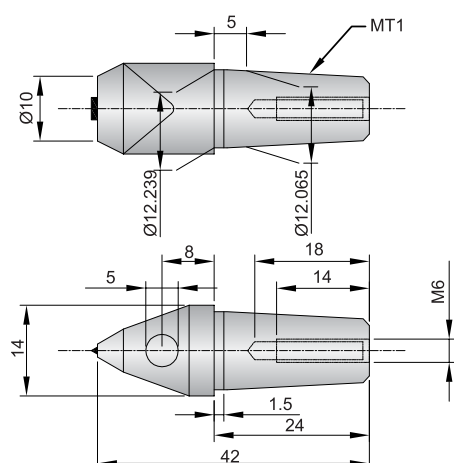
Chisel Type Dressers



Chisel/Profiling Dressers

- Chisel dressers are designed for precise & accurate profile dressing of Grinding Wheel
- They are manufactured from the highest grade natural diamonds which are carefully chosen and manufactured under strict quality checks, for getting optimum performance on wheels with precision geometry
- Star can offer Chisel dressers with included angle ranging from 30° to 90° and the radius 0.05mm to 0.5mm
- Star can offer customized Chisel dressers as per customer drawing

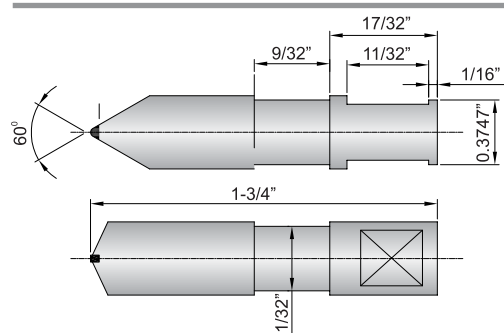
Sizes



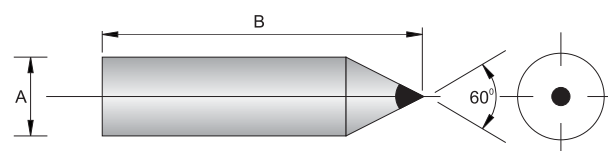
Type	Radius
	0.125"
Diaform	0.250"
	0.500"



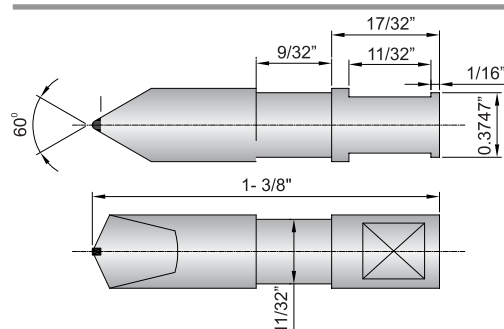
Type	Shank size D x L
	3/8" x 2.5"
	3/8" x 3"
60° Chisel	7/16" x 2.5"
	7/16" x 3"



Type	Radius
Copying	Stahdeud

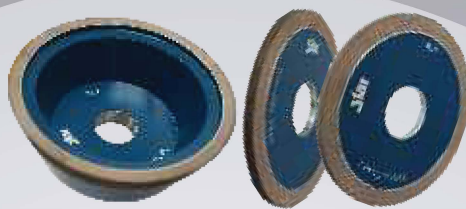


60° Lapped Dressing Tool
Diamond are Ground and Lapped to precise angles
Tolerance: Center set to T.I.R. ± 0.002 Specify ØA & B



Type	Radius
	0.125"
Diaform	0.250"
	0.500"

Star also Offers



Resin Bonded Diamond Wheels



Lapping Paste/ Compound



Brake Truing Device



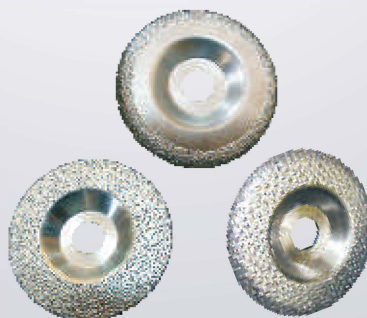
Electroplated Diamond/CBN Mounted Points



Diamond Hand Files



Diamond Hand Lapper



Vacuum Brazed Diamond Disc

Star

Manufactured by
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Hosur – 635 126, Tamil Nadu, India

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