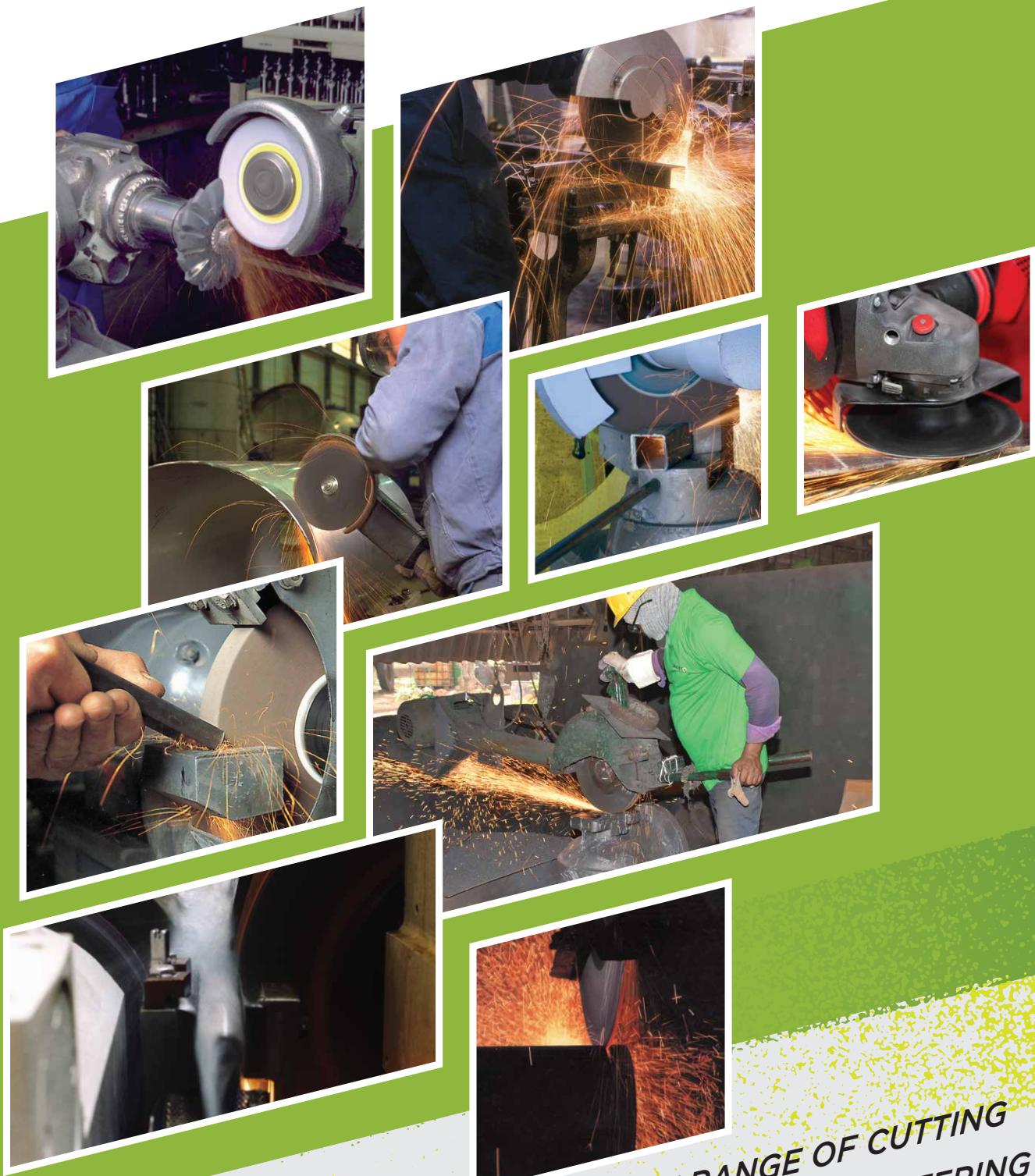


# ORIENT



A VERSATILE RANGE OF CUTTING  
& GRINDING SOLUTIONS CATERING  
TO YOUR DIVERSE NEEDS

# Orient Introduction

## Meeting SME industry requirements

Traditionally, Orient has been renowned for its robust line-up of vitrified and organic grinding wheels. Orient, a brand of Saint-Gobain Abrasives, is known for its dedication to small and medium-sized enterprises, specializing in applications within the foundry, forging, and auto component industries.

Additionally, we offer an extensive range of thin-wheel products tailored for the foundry and fabrication industries. Our technologically advanced white and pink toolroom wheels are designed to deliver superior performance, setting a high standard in the market.

## Segment Specialists:



Foundry & Steel Industry



Auto & Auto Ancillary Industries



Fabrication Industry



General Engineering Industries



Reach & Service

Our dedicated sales team covers the entire country, supported by Product Engineers and Managers to develop customer-specific solutions.

Our robust and expanding pan-India distribution network of Authorized Channel Partners is strategically located near industrial areas and cluster markets for easy access and prompt service.

## Plants





Orient OXP Snagging Wheel is a testament to Orient's dedication to delivering high-performance solutions. This product offers up to seven times the lifespan of competing products, significantly reducing the frequency of wheel changes, and thus minimizing downtime. This exceptional durability translates directly into cost savings for foundries, as fewer wheels are needed over time.

### OXP SNAGGING WHEEL: A GAME-CHANGER IN CAST IRON FOUNDRIES



#### Features & Benefits



##### Up to 7 times existing wheel life

New bond technology combined with tougher grains gives superior wheel life

##### Easy Grinding

Less fatigue during operations

##### Less Dust Generation

Reduced wheel wear directly contributes to less abrasive dust generation

##### Tougher Bond

Modified bond ensures superior grain hold

##### Increased Safety

Tougher bond provides higher safety rating than conventional wheel to prevent wheel breakage

# Foundry & Steel Solution

## Snagging Wheels

Versatile and safe, these wheels are suitable for a wide range of materials and machines. The in-built features in their design ensure that the wheels are very safe to use.

### Features

- Reinforced Wheels
- Smooth Cutting Wheel
- Premium Silicon Carbide Wheels

### Benefits

- Excellent Life & Material Removal Rate
- Also suited for Non-Steel Application

### Applications

- Smoothening of Weld Seam
- Cleaning casting burrs
- Preparing surface for plating or painting
- Billet Conditioning

### Availability

- 12", 14", 16", 18" & 20"

### Machines

- Swing Frame Grinder
- Flexible Shaft Grinder
- Bench Grinder



### Availability

## Snagging Wheel

Application Type	Abrasives	Grit Size	Diameter	Thickness
Swing Frame Grinding/ Pedestal Grinding	10A, 14A, AC, IC	Up to 30	Up to 500	Up to 75
Portable Grinding	10A, 14A, AC, IC	Up to 24	Up to 200	13-50.8



Building on our legacy of innovation, Orient Abrasives proudly present the Foundry+ range of wheels. These wheels are designed with a clear focus on delivering high performance and cost-effectiveness. The Foundry+ wheels are engineered to provide exceptional grinding power, ensuring efficient material removal and a smooth finish.

Application Type	Abrasives	Grit Size	Diameter	Thickness
Swing Frame Grinding/ Pedestal Grinding	XA, ZRC	Up to 30	Up to 500	Up to 75
Portable Grinding	XA, ZRC	Up to 24	Up to 200	13-50.8

### Features

- Up to 3X product life
- Cost-effective grinding solution
- Superior performance at a lower cost per operation
- Enhanced productivity



# Foundry Solution

## Diamond Wheels for Foundry

Single-layered abrasive products with high diamond grain exposure for easy grinding. With coarse diamond grains, these wheels find their place in the foundry and are best suited for fettling.

It is used for a wide range of applications and work on; Automated Robotic Machines and Manual Pedestal machines. Diamond wheels tooled up in automated- robotic fettling machines make operation simple for fettlers producing components in mass quantity.

### Features

- Premium Diamond Grains
- High Grain Protrusion
- Produced in customized shape

### Benefits

- Extremely high material removal rates
- Long lasting wheel life
- Free from abrasive dust
- Safe - No breakage concern

### Applications

- Grinding - Flashes, Parting Lines and Vent Pins,
- Cutting - Runners, Risers and Castings

### Materials

- Grey Cast Iron
- SG Iron

Application Type	Grain Size	Diameter (D)	Thickness (T)
Grinding	Up to D1001	Up to 760	4 to 60
Cutting	Up to D1001	Up to 600	4 to 6
*Customized sizes made available on request as per required drawing			
All dimensions are in mm			



# Foundry & Steel Solution



## Chakra - Cutting & Grinding Discs

### Features

- DCD's with 3GFD Robust Design
- Specialized specification for Cast Iron and material in Foundry

### Applications

- Angle Grinding
- Cutting
- Vertical Grinding

### Availability

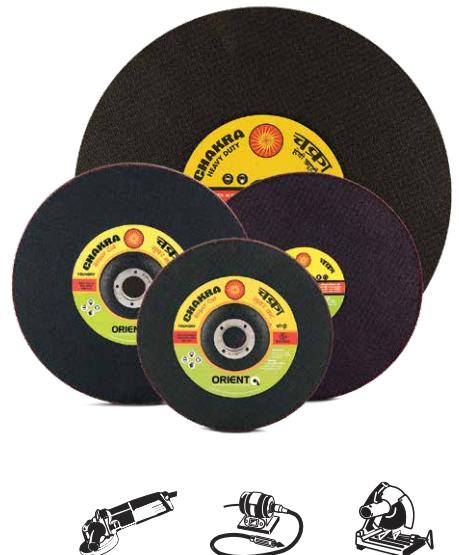
- 4", 5", 7", 9" DCD
- 5", 7", 9" & 14" Cut-off Wheels

### Benefits

- Product can work on versatile Heavy/ Aggressive applications
- Excellent life & material removal rate
- Complies to EN & oSa Standards and hence are much safer to use

### Machines

- Angle Grinder
- Flexible Shaft
- Non Standard LDCOW Machine



## Garuda – Grinding Discs

### Features

- DCD's with 3GFD Robust design
- Specially designed specification

### Benefits

- Fast Material Removal Rate with optimum life
- Good combination of performance & price

### Applications

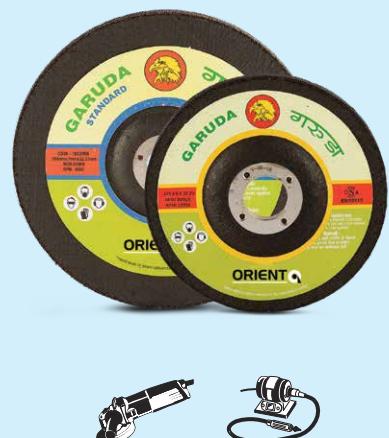
- Angle Grinding
- Vertical Grinding

### Availability

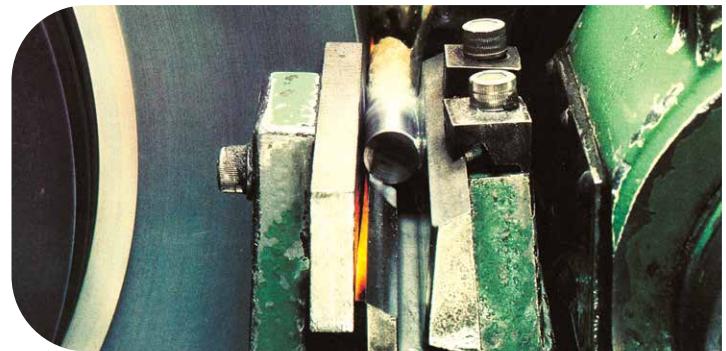
- 4", 5", 7", 9" DCD

### Machines

- Angle Grinder
- Flexible Shaft



# Auto & Auto Ancillary



## Orient - Centerless Grinding Wheels

### Features

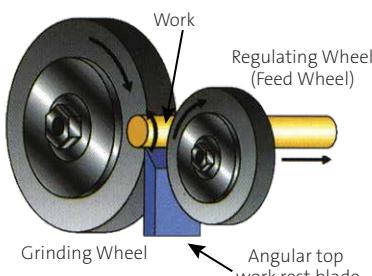
- Versatility on a wide range of materials
- Superior wheel balance
- Advance Bond System

### Benefits

- High wheel life & stock removal capability
- Superior finish with no chatter mark, Burn-free
- Extended dressing intervals

### Applications

- Centerless Grinding & Finishing of
  - ▶ Bright Bars
  - ▶ Bearing & Rollers
  - ▶ Auto Parts - Piston Pins & Shock Absorbers
  - ▶ Tubes & Rods, Engine Valve Stems & Dowels
  - ▶ Fasteners
  - ▶ Tool Manufacturing
  - ▶ Machine Tools



Centerless Grinding -  
Machine Type

## Orient - Rubber Control & Regulating Wheels

Orient offers a superior range of regulating feed wheels - available in both, the more popular rubber bonded variety as well as in resinoid bond.

### Features

- Better Resiliency
- Better Grinding Power
- Less Dressing Frequency

### Applications

- Used in centreless grinding as a control and feed wheel

### Markets

- Auto / Auto Ancillary
- Bearing
- Tool Industry

### Features

- Superior Surface Finish
- Reduced Chatter Tendency
- Greater Shock Absorbtion, Greater Roundness
- Less Slippage

### Availability

Bond	Abrasives	Grit Size	Diameter	Thickness
R-Rubber	10A, 50A	60 - 220	50 - 600	25 - 250

# Auto & Auto Ancillary

## Orient - Crankshaft Grinding Wheels

Special high-performance bond system and unique manufacturing technology make Orient Crankshaft Wheels highly cost effective. Orient Crankshaft Wheels give best-in-class efficiency and superior finish.

### Features

- V22- Bond for General Crankshaft Grinding Application

### Benefits

- High Material Removal Rate with Excellent form Holding
- Good Dimensional Tolerance
- High Grinding Efficiency
- No Shoulder Burning & Correct Radius

### Availability

Abrasives	Grit Size	Diameter	Thickness
10A, 50A 89A & 91A	46-80	610 - 1066	20 - 50



### Applications

- Crank Pin Grinding
- Journal Grinding

### Markets

- Auto / Auto Ancillary Industries

### Machines

- Cincinnati, Newall, Landis, Nexus Union & Toyoda

## Cylindrical Grinding Wheels

Orient ICECUT Wheel with engineered micro-fracture properties of new grains & superior retention capability of the bond, delivers excellent advantage of chatter-free grinding with good surface & high cut-rate, thereby reducing dressing time – further increasing the efficiency.

### Features

- Engineered to grind a wide variety of materials
- Superior Wheel balance
- Advance Bond System
- Grinding Efficiency
- Wheel Life & Material Removal Rate
- Excellent form retention
- Superior finish

### Applications

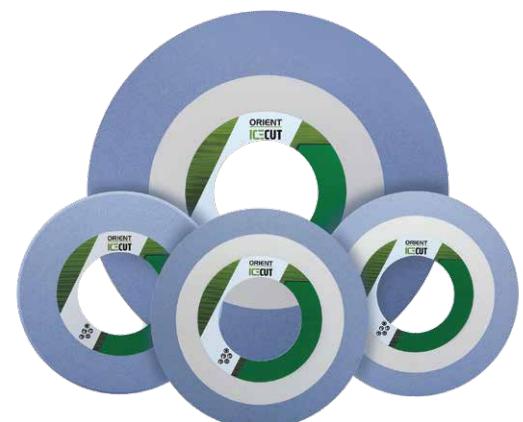
- OD Grinding of Gear Shaft / Traverse Grinding
- Spline Shaft
- OD & Straight Plunge Grinding
- Angular Plunge Grinding
- Cincinnati / WMW / Solitare Cylindrical Grinding Machines

### Availability

Bond	Abrasives	Grit Size	Diameter	Thickness
V22, V22C	10A, 50A	36 - 120	300 - 750	10 - 150
V41	89A	36 - 180	300 - 750	10 - 100
V93	IC, C, CG	36 - 220	300 - 750	10 - 100

### ICECUT Availability:

Abrasive Type	Blue Aluminium Oxide	
	Tough and friable for cool cutting and increased wheel life	
Grain Size (FEPA)	46	100
	Coarse Grain for aggressive cutting action	Finer Grain for improved surface finish
Grade	H	
	Softer wheel hardness for easier grain refresh and free cutting ability	Harder grade wheel for less aggressive cutting and improved form hold and wheel life
Bond	Latest Vitrified Bonds for grain holding	
Speed	45 m/s	



# Auto & Auto Ancillary



## Gear Grinding Wheels

Orient offers high-performance grinding wheels engineered to deliver a complete technical solution for worm and dual worm grinding, profile grinding and bevel grinding.



### Worm Grinding:

An engineered micro-structured ceramic grain provides excellent free-cutting action and durability to maximize performance and quality.



### Features & Benefits:

- Modified Bond to Grain Interaction for Superior Cut rate
- Improved Homogeneity
- Patented Bond for High Porosity
- Improved Toughness

### Profile Grinding:

High-porosity and permeability in this ceramic-based wheel offering metal removal rate.



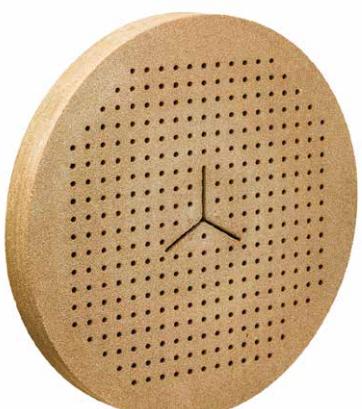
### Features & Benefits:

- Unrivalled DIN Quality
- Fast Material Removal Rate

## Nut-Inserted Wheels

### Features & Benefits:

- Up to 3x product life
- A new Ceramic Aluminium Grain for enhanced cutting efficiency
- A perfect blend of sharpness and toughness



# General Engineering

## Orient - Toolroom Grinding Wheels

Made with White Aluminium & Pink Aluminium, Toolroom Wheels are designed to be used on a variety of applications in manufacturing and regrinding of cutting tools like drills, reamers, milling cutters, etc.

### Features & Benefits

- Excellent Form Retention
- Free Cutting Action
- Burn Free Finish
- Versatility of cutting over vast range of steels

### Applications

- Surface Grinding
- Regrinding / Grinding of shapes & contours of cutting tools, drills, reamers & milling cutters
- Die & Molds Grinding

### Machines

- Surface grinder
- Tool & Cutter Grinder



### Availability

Bond	Abrasives	Grit Size	Diameter	Thickness
V31, V41	10A, 89A, 90A, 88A	Up to 180	Up to 250	3 - 120

## Orient - Offhand Grinding Wheels

### Features

- Available in both Aluminum Oxide & Silicon Carbide
- Strong Bond V17

### Benefits

- Ability to grind variety of materials
- Safe operations

### Markets

- General Engineering / Small manufacturers

### Applications

- Grinding of excess material in casting & forging
- Re-sharpening of Single Point Cutting Tools
- Removing irregularity on steel flats
- Fabrication Area Blending / Weld Preparation Marks

### Machines

- Bench Grinder
- Portable Grinder



# General Engineering

## Orient - Carbide Grinding Wheels

### Features

- Free Cutting Action - Higher Life and Better Productivity
- Improved Surface Finish
- Burn Free Grinding

### Benefits

- Less Metallurgical Damage
- High Productivity and Efficiency
- Less Operator Fatigue

### Applications

- Blazed Carbide Tool Grinding
- Button Bit Grinding
- Mining Bit Grinding
- Toolroom for Carbide Dies

### Markets

- General Engineering / Small Manufacturers of Mining Tools

### Machines

- Bench Grinder
- Surface Grinder



Orient Carbide Product Range			
Product Position	Best	Better	Good
Grain	C	CG	CC
Bond	V93	V93	V93
Diameter Range ( MM)	150-200	Up to 300	150
Thickness Range ( MM)	25	6-25	25
Grit Size Range	Up to 120	60-120	60
Grade Range ( Hardness )	K-L	K-M	K-N

## Combination Stones

Premium grain facilitates quick edge sharpening & clean deburring

### Typical Applications

Sharpening of Carpentry Tools, Knives, Scissors, Mould and Die Polishing & Deburring

### Availability

150 x 50 x 25mm  
200 x 50 x 25mm



## Saw Gumming Grinding Wheels

Controlled Structure and Special Bond System

- Metallurgical Damage Free Grinding

### Typical Applications

Resharpening of teeth of Circular or Band Saw Blades

### Availability

Dia - 150 - 300mm,  
Thickness - 3 - 6mm



# Light to Medium Fabrication

## Zeetech - Grinding Disc

### Features

- Specialized Norzon Grain for SS Material Grinding

### Benefits

- Unbeatable combination of Life & Cut-Rate
- Product complies to EN & oSa Standard Requirements

### Applications

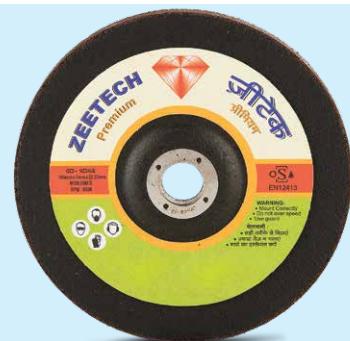
- Angle Grinding

### Availability

- 7" DCD

### Machines

- Angle Grinder



## Garuda - Grinding & Cutting Discs

### Features

- DCD's with 3GFD Robust Design
- Specially designed specification

### Applications

- Angle Grinding
- Vertical Grinding
- Cutting

### Availability

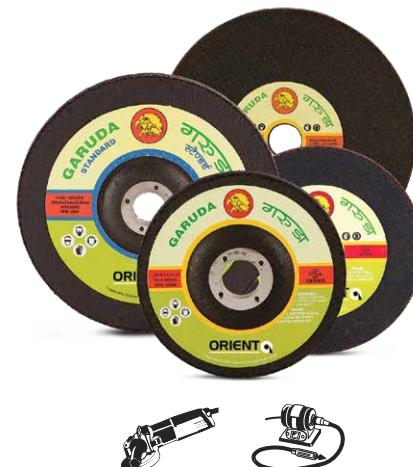
- 4", 5", 7", 9" DCD
- 4", 5" & 7" Cut-off Wheel

### Benefits

- Fast Material Removal Rate with optimum life
- Good combination of performance & price

### Machines

- Angle Grinder
- Flexible Shaft



## Cheetah - Grinding & Cutting Discs

### Features

- Unique product design for ease of grinding
- Specially engineered Grain & bond System

### Applications

- Angle Grinding
- Vertical Grinding
- Cutting

### Benefits

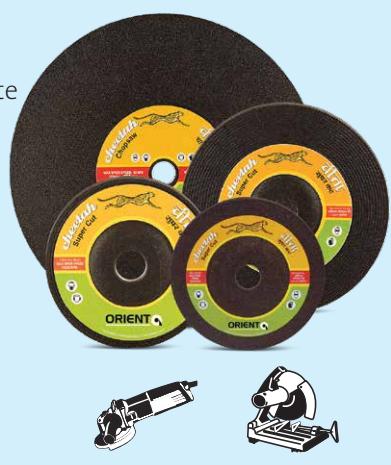
- High Cut-Rate: upto 35% better cut-rate compared to others in class
- Improved productivity & machine life
- Value for Money

### Availability

- 4", 5" & 7" DCD
- 4", 7" Cut-off Wheel
- 14" Chopsaw

### Machines

- Angle Grinder
- Chopsaw



# Heavy Fabrication



## Chakra - Cutting & Grinding Discs

### Features

- DCD's with GFD Robust Design
- Specialized specification for Cast Iron, and Material in Foundry

### Benefits

- Product can work on versatile heavy / aggressive applications
- Excellent Life & Material Removal Rate
- Complies to EN & oSa Standards and hence are much safer to use

### Applications

- Angle Grinding
- Cutting
- Vertical Grinding

### Availability

- 4", 5", 7", 9" DCD
- 5", 7", 9" & 14" COW

### Machines

- Angle Grinder
- Chopsaw



## Notes

## Notes

# PROPER USAGE OF GRINDING WHEELS

**Safe operating practices must be part of every grinding wheel user's operation.  
The greatest efficiency and lowest overall abrasive cost can be realized only if proven care  
and use techniques become standard practice.**

## Dos

- Always handle and store wheels in a careful manner.
- Before mounting, check all wheels for possible damage in transit.
- Check maximum operating speed established for wheel against machine speed.
- Check that mounting flanges are at least one-third diameter of the wheel and relieved around the hole.
- Use the mounting blotters supplied with the wheels.
- Ensure that work rest is correctly adjusted. (Centre of the wheel or above; no more than one-eighth inch away from the wheel).
- Always use a guard covering at least one-half of the grinding wheel.
- Allow newly mounted grinding wheels to run at operating speed (with guard in place) for at least one minute before grinding.
- Always wear safety glasses or some type of eye protection when operating the grinding wheel.
- Avoid creating an imbalance of the wheel by turning off the coolant before stopping the wheel.

## Don'ts

- Don't use a wheel that has been dropped.
- Don't force a wheel onto a machine or alter the size of mounting holes. If the wheel does not fit the machine, get one that will.
- Don't exceed established maximum operating speeds.
- Don't use mounting flanges on which the bearing surfaces are not equal, clean or flat.
- Don't tighten the mounting nut excessively.
- Don't grind on the side of a wheel unless, of course, the wheel has been specifically designed for that purpose.
- Don't start the machine when the wheel guard is not in place.
- Don't jam the work into the wheel.
- Don't stand directly in front of a wheel whenever the grinding begins.
- Don't grind material for which the wheel is not designed.



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