

A range of cutting & grinding solutions to meet your diverse needs



Orient Introduction

Meeting SME industry requirements

Traditionally, Orient Abrasives had a strong lineup of Vitrified and Organic grinding wheels. The Grinding Wheels Division of the company was acquired by Grindwell Norton Ltd. in 2006. Today, the Orient brand is recognised for its focus on the Small and Medium size enterprises with specialization in applications pertaining to Foundry, Forging and Auto Component Industries.

Besides, we have a very comprehensive line up of Thin Wheel products to cater to Foundry and Fabrication industry. Our white and pink Toolroom Wheels are technologically superior and deliver great performance.

Segment Specialists:



Foundry & Steel Industry



Auto & Auto Ancillary Industries



Fabrication Industry



General Engineering Industries

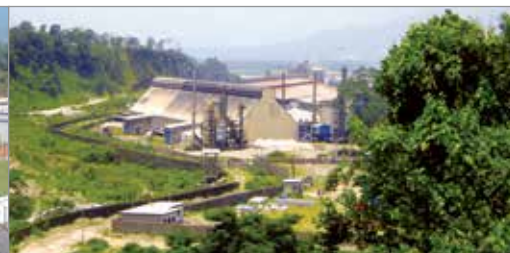


Reach & Service

A dedicated team of front line Sales Engineers and Area Managers cover the length and breadth of the country. They are ably assisted by Product Engineers and Product Managers to develop customer-specific solutions based on customer and market needs.

Our pan-India distribution network of Authorized Dealers is robust and growing by the day. The dealers are located near Industrial areas and cluster markets for easy access and quick service. They also carry sufficient inventory of Made-to-Stock items. Our products offer great value for money and are dedicated to the SME industry requirements.

Plants



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



Foundry & Steel Solution

Orient Snagging Wheels

Cold Pressed Snagging Wheels designed for Swing Frame Grinding/ Pedestal Grinding use conventional Aluminium Oxide or Silicon Carbide 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 & Cold Pressed Wheels
- Smooth Cutting Aluminum Oxide Wheel
- Premium Silicon Carbide IC Wheels

Applications

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

Benefits

- Best suited for fast & smooth grinding of Steel & Alloy Steel
- Excellent life & material removal rate
- Also suited for Non-Steel application

Availability

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

Machines

- Swing Frame Grinder
- Flexible Shaft Grinder
- Bench Grinder



Availability

Swing Frame Grinding/ Pedestal Grinding

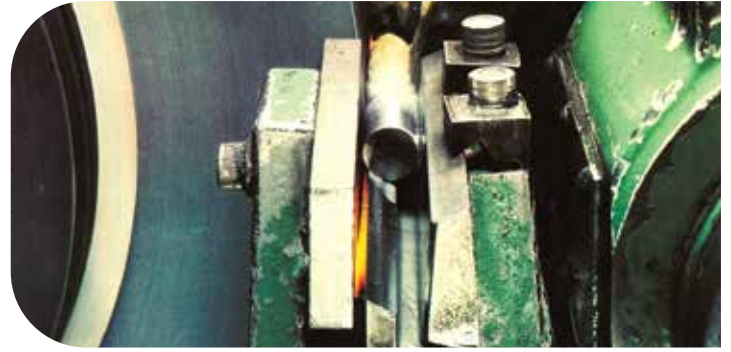
Bond	Abrasives	Grit Size	Grade	Diameter	Thickness
B84TR B912, B913	10A. AC IC	14-24	P - T	300 - 500	25 - 75

Portable Grinding

Bond	Abrasives	Grit Size	Grade	Diameter	Thickness
B912 B913	10A. AC IC	14-24	Q - T	40 - 200	13 - 50.8



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

Machines

- Cincinnati / WMW / Bhagwandas / Solitare Centerless Grinding machines

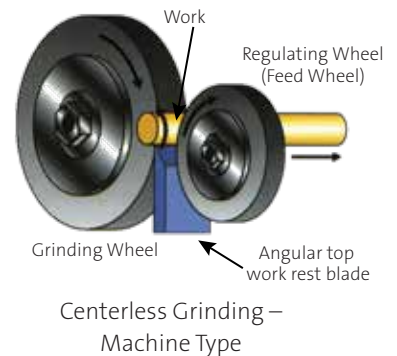
Applications

- 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



Availability

Bond	Abrasives	Grit Size	Grade	Diameter	Thickness
V22, V22C	10A, 50A	36-80	H-O	350-610	25-305
		100-120	H-O	350-610	25-100
		150-180	H-O	350-500	25-100
V41	89A	36-80	H-P	350-610	25-200
		100-150	H-P	350-500	25-100
V18, V93	IC, C, CG	36-80	I-O	350-610	25-200
		100-150	I-O	350-610	25-100



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

Features

- Superior surface finish
- Reduced chatter tendency
- Greater shock absorption, greater roundness
- Less slippage

Applications

- Used in centreless grinding as a control and feed wheel

Markets

- Auto / Auto Ancillary
- Bearing
- Tool industry

Availability

Bond	Abrasives	Grit Size	Grade	Diameter	Thickness
R-Rubber	10A	60 - 220	R - T	50 - 600	25 - 250
B86N	10A	80 - 180	K - R	230 - 400	25 - 250

Auto & Auto Ancillary

Orient – Crankshant 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.

These wheels can run at speeds between 33 and 60 m/s, depending on the machine.

Features

- V501 Bond for 60 M/s
- Strong Bond –V501
- 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

Applications

- Crank pin grinding
- Journal grinding

Markets

- Auto / Auto Ancillary industries

Machines

- Cincinnati, Newall, Landis, Nexos Union, Toyoda



Availability

Bond	Abrasives	Grit Size	Grade	Diameter	Thickness
V22, V501	10A, 50A	46-80	I - N	610 - 1066	20 - 50



Auto & Auto Ancillary



Orient – Cylindrical Grinding Wheels

Orient Cylindrical wheels are powered with versatile bond system to suit all conditions & find wide application in grinding of Valves, Bearing Races, Cam shaft, Plunger pins, transmission shaft, auto parts etc.

Features

- Engineered to grind a wide variety of materials
- Superior wheel balance
- Advance Bond system

Benefits

- Optimum Grinding Efficiency
- High wheel life & material removal rate
- Excellent form retention
- Superior finish



Applications

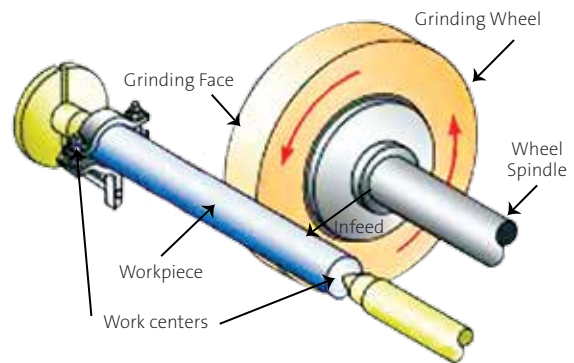
- OD Grinding of Gear Shaft / Traverse Grinding
- Spline Shaft
- OD & Straight Plunge Grinding
- Angular Plunge Grinding

Machines

- Cincinnati / WMW / Solitare Cylindrical Grinding machines

Specification to use for different work materials

Material	Specification
Steel	10A60
HSS	89A60 / 88A60
CI Bushing	IC46
Carbide	C100
Aluminium	C36



Cylindrical Grinding – Machine Type

Availability

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

General Engineering

Orient – Toolroom Grinding Wheels

Toolroom Grinding wheel is designed to be used on a variety of applications in manufacturing and regrinding of cutting tools like drills, reamers, milling cutters, etc.

These wheels are made white Aluminium Oxide (89A) and pink Aluminium Oxide (88A) abrasives. These are most friable abrasives and have sharp edge retention properties, which give high productivity.



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

Tool Room Product Positioning			
Material	Good	Better	Best
HSS and Tool Steel (45-65 HRC)			
Stock Removal >0.2 mm	-----	89A46/45 J+ V41	90A46/54K6V31, 88A46/54 K6 V31
Stock Removal - 0.05 - 0.15	10A60 K6 V22	89A 60 J V41	90A60K6V31, 88A60 K6 V31
Soft Steel (25-45 HRC)			
Stock Removal > 0.2 mm		89A46/45 J+ V41	90A46/54K6V31, 88A46/54 K6 V31
Stock Removal - 0.05 - 0.15	10A60 K6 V22	89A 60 J V41	-----
Low Carbon Steel	10A60 K6 V22	89A46/45 J+ V41	-----
Dies (D2, D3, D4)		89A46/45 J+ V41	90A46/54K6V31, 88A46/54 K6 V31
Stainless Steel (300)		89A46/45 J+ V41	90A46/54K6V31, 88A46/54 K6 V31

Bond	Abrasives	Grit Size	Grade	Diameter	Thickness
V31, V41	10A, 89A, 90A, 88A	46 - 180	H - L	100 - 250	3 - 120



General Engineering



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



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

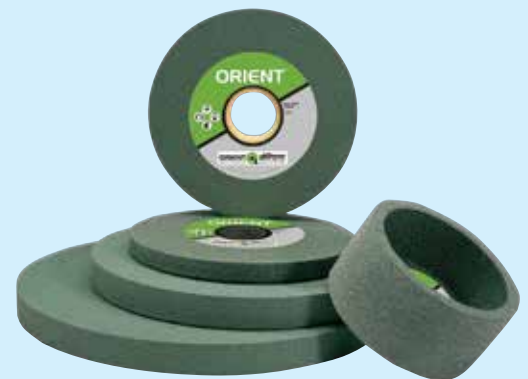
- Blazed Carbide Tool Grinding
- Button Bit Grinding
- Mining Bit Grinding
- Toolroom for Carbide Dies

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	150-300	150
Thickness Range (MM)	25	6-25	25
Grit Size Range	60-120	60-120	60
Grade Range (Hardness)	K-L	K-M	K-N

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

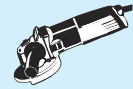
- Angle Grinding

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

Benefits

- Fast material removal rate with optimum life
- Good combination of performance & price

Availability

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

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

Applications

- Angle Grinding
- Cutting
- Vertical Grinding

Machines

- Angle Grinder
- Chopsaw

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

Availability

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



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.

Do's

- 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 one minute before grinding.
- Always wear safety glasses or some type of eye protection when operating 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. Nor should the size of the mounting holes be altered. 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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