

LATEST
TECHNOLOGY PRODUCTS

The Most Productive Combination
for Centreless Applications

SAINT-GOBAIN
ABRASIVES

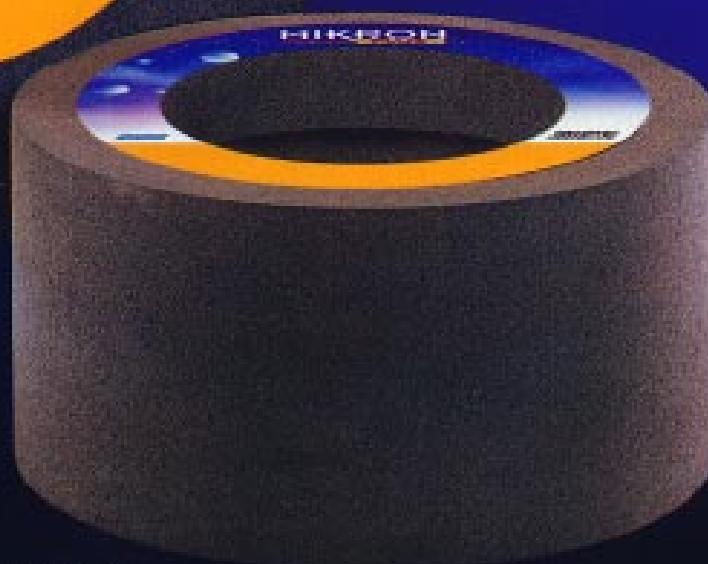
MIKRON PLUS

CENTRELESS & REGULATING WHEELS



CENTRELESS WHEELS

- Longer wheel life and higher productivity
- Requires less dressing
- Lesser wheel wear ensures consistent part quality
- Smooth grinding action – hence fewer rejects due to size, finish or metallurgical damage
- Rated upto 60 m/s.
- Available in a wide range



REGULATING WHEELS

- State-of-the-art technology from Unicorn Abrasives, UK
- Higher resilience
- Minimal slippage
- Lower wear rate
- Better part roundness
- Higher depth per pass
- Longer wheel life and higher productivity

NORTON

Super Edge, Super Grinding

GRINDWELL
NORTON LTD.

MIKRON PLUS

CENTRELESS WHEELS

In 1941, Grindwell made the first grinding wheel in India. It has since been offering the best in abrasive technology to Indian industry. Grindwell Norton manufactures over 25,000 different shapes and sizes of abrasive products – grinding wheels of all kinds, sharpening and polishing stones, mounted points, etc.

Today, with its fully integrated operations, strong manufacturing base and a technically qualified product engineering and marketing team, Grindwell Norton has a reputation for service, quality and reliability. Grindwell Norton is committed to being the full line source for the "total solution" to all abrasive needs of the industry.

At Grindwell Norton, we continuously invest in plant, equipment and manufacturing processes that adhere to stringent international quality standards. And being a part of the global Saint-Gobain Abrasives and Norton family has its advantages. It helps us to have access to the best technologies from the world's leading manufacturers from the Saint-Gobain Abrasives Group. This is what gives us a technological edge in the products that we manufacture. Thus, while the existing products are still unmatched in performance, Grindwell Norton relentlessly works on upgrading its product offering based on emerging market needs. SpitFire Gold, Compass Gold, Norton SG, Mikron range of precision grinding wheels are just a few examples.

Introducing – MIKRON PLUS Centreless and Regulating Wheels

Grindwell Norton now offers you **MIKRON PLUS** – a wide selection of Centreless and Rubber Regulating wheels for centreless machines.

Thanks to Norton Company's latest developments in bond technology, now you can have **Mikron Plus** Centreless Wheels with the new high technology VCNM Bond system. Developed at the Higgins Grinding Technology Centre, USA, using simulated Centreless grinding conditions, the VCNM bond system is specially engineered to maximise the abrasive utilisation. While providing smooth grinding action, this special bond system significantly improves overall wheel life.



MIKRON PLUS CENTRELESS WHEELS

- **Advanced VCNM Bond System** – provides smoother grinding action, reducing rejections on account of size, finish or metallurgical damages.
- **Higher wheel output** – the special bond system maximises abrasive utilisation, thereby giving lower abrasive cost per part, longer wheel life and higher productivity.
- **Requires less dressing** – lowering dressing cost, longer tool life and cutting down 'non-productive' time.
- **Lesser wheel wear** – giving consistent part quality and better Cpk values.
- **Lower downtime** – on account of fewer wheel changes, resulting in higher throughput.



STANDARD STOCK ITEMS

| Stock Code | Wheel Size | Specification |
|------------|-------------------|---------------|
| V294M. | 300 x 80 x 140 | A60 M6 VCNM |
| V338M. | 350 x 100 x 127 | A46-3 M6 VCNM |
| V334M. | 350 x 100 x 127 | A60 M6 VCNM |
| V336M. | 350 x 100 x 127 | A60 N6 VCNM |
| V339M. | 350 x 100 x 152.4 | A46-3 M6 VCNM |
| V335M. | 350 x 100 x 152.4 | A60 M6 VCNM |
| V337M. | 350 x 100 x 152.4 | A60 N6 VCNM |
| V417M. | 350 x 150 x 127 | A60 M6 VCNM |
| V418M. | 350 x 150 x 127 | A60 N6 VCNM |
| V410M. | 500 x 150 x 304.8 | A60 M6 VCNM |
| V411M. | 500 x 150 x 304.8 | A60 N6 VCNM |
| V415M. | 500 x 200 x 305 | A46-3 M6 VCNM |
| V412M. | 500 x 200 x 305 | A60 M6 VCNM |
| V414M. | 500 x 200 x 305 | A60 N6 VCNM |

MIKRON PLUS

RUBBER REGULATING WHEELS

Introducing – MIKRON PLUS Rubber Regulating Wheels



Maximum throughput from any centreless grinding operation can only be obtained through the best combination of centreless as well as the regulating (or control/feed wheels). Therefore, having the right regulating wheel as well assumes immense importance.

Grindwell Norton is proud to offer a new range of **Mikron Plus** Rubber Regulating wheels. Made with the state-of-the-art technology from Unicorn Abrasives, UK, (another Saint-Gobain Abrasives Group company) these wheels are ready to set a new standard in the Indian industry.

Unicorn Abrasives is UK's, and one of the world's largest bonded abrasives manufacturers, with a reputation for precision and quality that is unmatched. Unicorn's technology for rubber regulating wheels is one of the best in the world.



The new **Mikron Plus** range of rubber regulating wheels from Grindwell Norton are made using the latest REU Bond system. This advanced bond system exhibits high resilience and low wheel wear.

MIKRON PLUS REGULATING WHEELS

The new Mikron Plus rubber regulating wheels offer :

- **Higher stock removal per pass in grinding** – increasing productivity and eliminating frequent setups.
- **Higher resilience**
- **Improved component roundness**
- **Minimal chatter marks** – by avoiding 'jumping' of the components over the work rest blade, thereby significantly reducing the number of rejections.
- **Lower wear rate** – giving improved Cpk values.
- **Reduced dressing** – lowering dressing cost and reducing non-productive downtime as well as setting time.
- **Higher depth per pass**

Beyond Stock

In addition to a wide range of standard stock wheels in popular sizes and specifications, Grindwell Norton can custom engineer a Centreless or a Rubber Regulating wheel to meet any special requirements that your centreless application demands.

Off-the-shelf Availability

Standard stock wheels listed in this catalog are available through a wide nationwide network of Grindwell Norton dealers and stockists.

STANDARD STOCK ITEMS

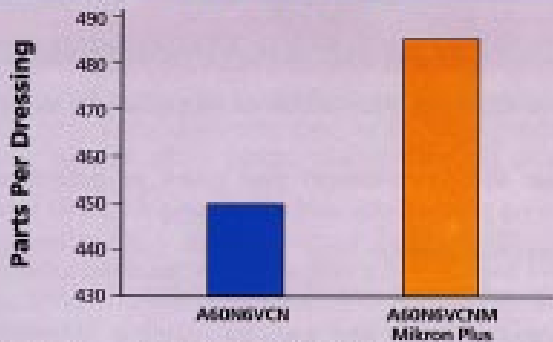
| Stock Code | Wheel Size | Specification |
|-----------------|---------------------------------|---------------|
| TYPE - 1 | | |
| RR1 R | 200 x 80 x 75 | A80 R REU |
| RR3 R | 230 x 100 x 76.2 | A80 R REU |
| RR5 R | 230 x 150 x 76.2 | A80 R REU |
| TYPE - 2 | | |
| RR2 R | 200 x 80 x 75 2 - 120 x 10 | A80 R REU |
| RR4 R | 300 x 150 x 127 2 - 200 x 40 | A80 R REU |
| RR6R | 300 x 200 x 127 2 - 200 x 40 | A80 R REU |

MIKRON PLUS

CENTRELESS WHEELS

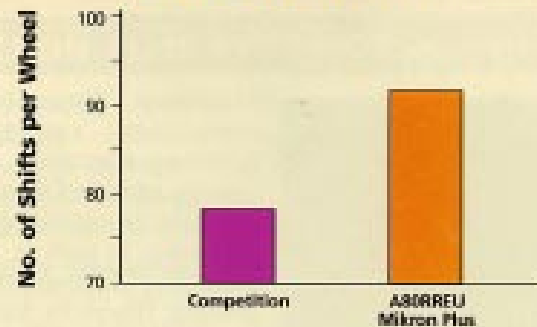
REGULATING WHEELS

CASE STUDY # 1



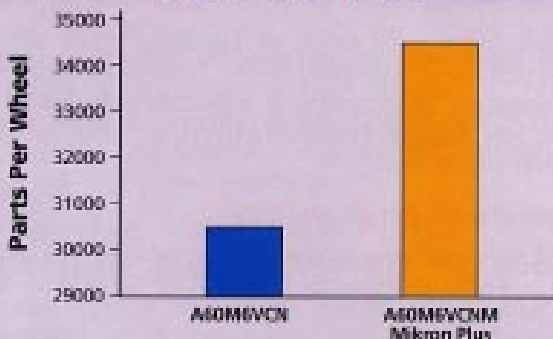
Customer : Auto Component Manufacturer
 Machine : Rlat Centreless Grinder
 Power : 5 Hp
 Speed : 33 m/s
 Component : Universal Joint Cross
 Grinding Stock : 300 µm on diameter
 Regular Wheel : A60M6VCN
 Trial Wheel : A60M6VCNM
Result : 8% more components per dressing

CASE STUDY # 1



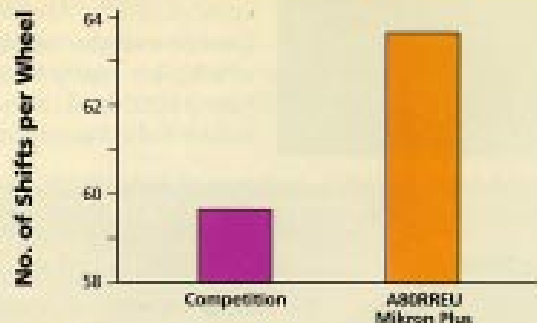
Customer : Bright Bar Grinding Unit
 Wheel Size : 230 x 100 x 76.2
 Trial Specification : A80 R REU
 Component : Bars of - 8.5 mm - 17 mm diameter
 Material : S5 304
 Feed Rate : 1.85 m/min
 Grinding Wheel : A60M6VH - Grindwell Norton make
Result : 18% more life

CASE STUDY # 2



Customer : Auto Component Manufacturer
 Component : Shock absorber tubes
 Machine : Jyothi Centreless Grinder
 Power : 7.5 Hp
 Speed : 33 m/s
 Grinding Stock : 200 µm on diameter
 Regular Wheel : A60M6VCN
 Trial Wheel : A60M6VCNM
Result : 13% more components per dressing

CASE STUDY # 2



Customer : Bearing Manufacturer
 Component : Bearing Type - 32212, 6309 Outer Ring
 Machine : Lidkoping - 20KW motor
 Wheel size : 330 x 610 x 127 - 3 piece match set
 Trial Specification : A80RREU
 Thru feed rates : 1.3 m/min
 Stock removal/pass : 400µm in roughing - 30 µm in finishing
 Grinding wheel : A80K8VH + A100M6BL2 - Match set
Result : 7% more life

Central Marketing Group : Army & Navy Building, 148, Mahatma Gandhi Road, Mumbai 400 001.
 Tel: 2844727 Fax: 022-2023711

NORTON

Lowering your costs, not your expectations.

**GRINDWELL
NORTON LTD.**