



ABRASIVE SOLUTIONS FOR
AEROSPACE

About CUMI (Carborundum Universal Limited)

Part of the 124-year-old Murugappa Group, CUMI began as an abrasives manufacturer in 1954 and has grown into a fully integrated, mines-to-market materials science company. With operations spanning mining, fusion, manufacturing, marketing, and distribution, CUMI serves global markets while staying rooted in local values.

Its diverse businesses in abrasives, electrominerals, industrial ceramics, super refractories, and energy storage materials are driven by innovation, collaboration, and a strong people culture. Guided by its purpose of Making a Material Difference, CUMI continues to deliver world-class solutions that empower industries and communities alike.



One of the largest producers of silicon carbide grains worldwide



One of the market leaders in abrasives, in India and Russia



One of the largest producers of the full range of electrominerals worldwide



World's second-largest player in metallised cylinders



4 Business Verticals

Over **20,000** Products





Presence in **5** continents

Over **7** decades in business






CREEP FEED GRINDING WHEEL



Key Features

-  Advanced vitrified bond technology for high form stability under deep cuts
-  Premium abrasive grains for aggressive, damage-free cutting
-  Engineered open pore design for effective coolant flow and heat control
-  Designed for consistent performance on CNC creep feed machines

Advantages and Benefits

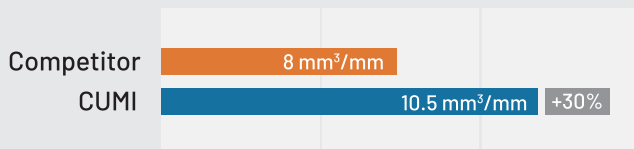
-  Burn-free surfaces with low thermal impact
-  Controlled wear for longer wheel life and less dressing depth
-  High feed rates for shorter cycle times
-  Reduced load on dressing roll
-  Accurate form holding for consistent geometry and size

Grain Type	Grit Size	Dia - mm	Thickness - mm	Hardness	Structure	Bond	Wheel Speed
SA / AA	46 - 100	150 - 600	10 - 170	E - I	16 - 28	V2020 / V600	40 m/sec

Common Machines: BLOHM, Magerle, Campbell, Makino

Grinding of a Nozzle Guide Vane SA603 H24 V600

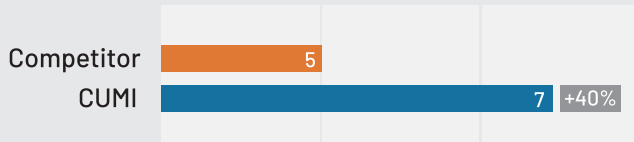
STOCK REMOVAL RATE



GRINDING TIME PER COMPONENT



PARTS PER DRESS (COMPONENTS)

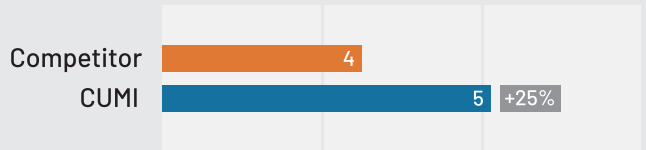


Grinding of Leap A & Leap B components SA603 G28 V2020

GRINDING TIME PER COMPONENT

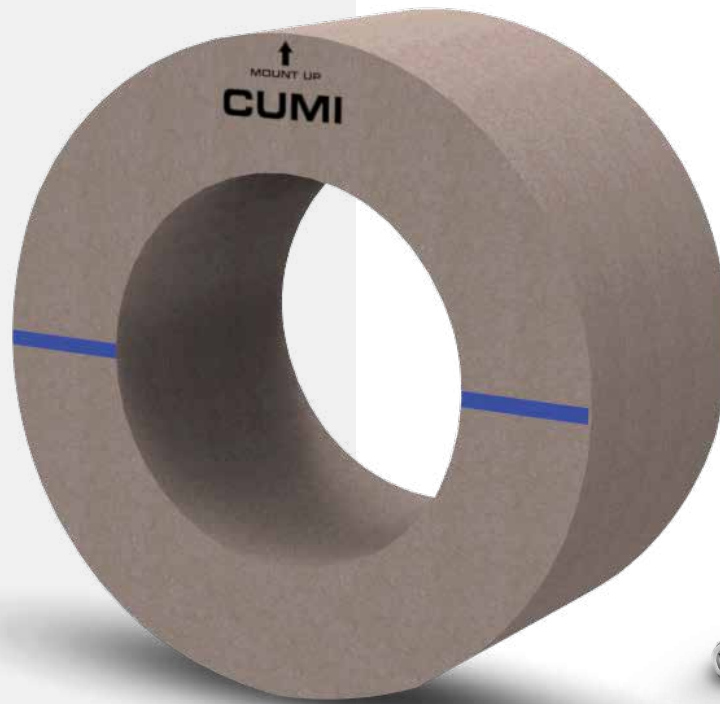


PARTS PER DRESS (COMPONENTS)






20% Improvement in Overall Grinding Economics





CENTRELESS GRINDING FOR STEEL FASTENERS



Key Features

-  Premium aluminium oxide grain blend for sharp, durable, and controlled cutting
-  Hard grade structure for superior form holding and dimensional stability
-  New generation bond for excellent form holding & cool cutting

Advantages and Benefits

-  Excellent dimensional control
-  Reduced dressing frequency through controlled wheel wear
-  Burn-free components with minimal thermal damage
-  Consistent performance throughout wheel life

Grain Type	Grit Size	Dia - mm	Thickness - mm	Hardness	Structure	Bond	Wheel Speed
A	80 - 120	525 - 600	63.5 - 203	N - R	3 - 5	V2018	33 m/sec

Common Machines: Cincinnati

Steel

PARTS PER DRESS (COMPONENTS)






25% Improvement in Overall Grinding Economics





CENTRELESS GRINDING FOR TITANIUM FASTENERS



Key Features

-  High purity silicon carbide grains for sharp and efficient cutting
-  New generation bond for excellent form holding and cool cutting
-  Excellent thermal conductivity for effective heat dissipation

Advantages and Benefits

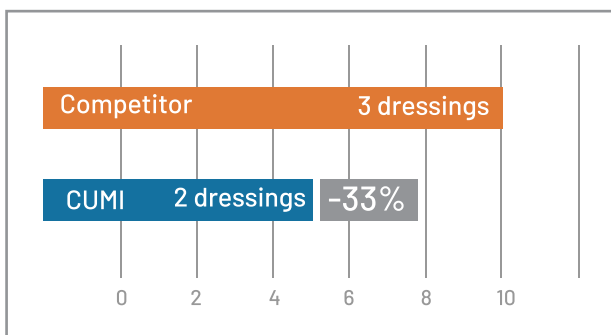
-  Faster grinding with higher productivity and lower cycle time
-  Superior surface finish with reduced thermal damage
-  Reduced dressing frequency
-  Improved overall grinding economics

Grain Type	Grit Size	Dia - mm	Thickness - mm	Hardness	Structure	Bond	Wheel Speed
GC	120	525 - 600	63.5 - 203	N - R	3 - 5	VFG1	33 m/sec

Common Machines: Cincinnati

Titanium

DRESSING FREQUENCY (PER 2 SHIFTS)



PARTS PER DRESS (COMPONENTS)






30% Improvement in Overall Grinding Economics




CENTRELESS GRINDING FOR INCONEL FASTENERS



Key Features

-  Micro-crystalline grains for sustained cutting performance
-  Advanced bond system for enhanced strength and stability
-  Hard structure design for tool longevity

Advantages and Benefits

-  Cool cutting prevents thermal damage
-  Superior surface finish with reduced thermal damage
-  Improves overall productivity

Grain Type	Grit Size	Dia - mm	Thickness - mm	Hardness	Structure	Bond	Wheel Speed
CSA	120	525 - 600	63.5 - 203	N - R	3 - 5	VF920	33 m/sec

Common Machines: Cincinnati

Inconel

PARTS PER DRESS (COMPONENTS)






35% Improvement in Overall Grinding Economics




RUBBER CONTROL WHEEL



Key Features

-  Hard rubber bond ensures controlled grip
-  Tough abrasive grains deliver consistent performance
-  Slotted design enables smooth, controlled fastener feed

Advantages and Benefits

-  Enhanced form holding.
-  Stable, vibration-free operation
-  Better control over grinding cycle time

Grain Type	Grit Size	Dia - mm	Thickness - mm	Hardness	Bond	Wheel Speed
A	120	254 - 355	25 - 50.8	S - T	R	33 m/sec

Common Machines: Cincinnati



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