

BONDED ABRASIVES

CUMI



murugappa



MOUNT UP
CUMI
1BW

CUMI

50MM
1CUMISA601J6 VS
MOS 1130 RP

Vitrified Centreless Grinding Wheels

CUMI's range of Centreless Grinding Wheels include the versatile and time tested bond systems V10, V45, V2016, V1092, VG which provides high performance and is available in different sizes and grit combinations. These wheels are ideal for **difficult - to - grind materials**, which gives safety tolerances upto 60 mps. The unique characteristics of the highly fusible and cool cutting bonds used also imparts:

- ▶ Excellent form retention
- ▶ Excellent component finish
- ▶ Lesser dressing frequency

CUMI "Krystal" is the newly developed bond system which imparts excellent cutting action along with superior form retention and improved wheel life.

User Industries :

- ▶ Bearing Industry
- ▶ Cutting Tool Industry
- ▶ Automobile Industry
- ▶ Bar Grinding Industry

Product Range

Abrasive	Grain	Dia.(mm)	Thickness(mm)	Grit	Hardness	Structure	Types
Aloxide	A, AA, DA	300 - 600	75 - 250	36 - 120	I - O	5 - 7	1, 5, 7
Silicon Carbide	C, GC	300 - 600	75 - 250	36 - 120	I - N	5 - 7	1, 5, 7
Krystal	Spl grains	300 - 600	75 - 250	36 - 120	I - O	5 - 7	1, 5, 7

Product Recommendation

Regular		
Rough	A463 K5 V10 A463 L5 V10 A463 M5 V10 / A463 N5 V10	For Hardness 55 - 60 HRC For Hardness 45 - 60 HRC For Hardness 280- 330 BHN
Finish	A60 K5 V10 A60 L5 V10 A60 M5 V10 / A60 N5 V10	For Hardness 55 - 60 HRC For Hardness 45 - 60 HRC For Hardness 280- 330 BHN
Better Finish		
Rough	A463 K5 V2016 A463 L5 V2016 A463 M5 V2016 / A463 N5 V2016	For Hardness 55 - 60 HRC For Hardness 45 - 60 HRC For Hardness 280- 330 BHN
Finish	A60 K5 V2016 A60 L5 V2016 A60 M5 V2016 / A60 N5 V2016	For Hardness 55 - 60 HRC For Hardness 45 - 60 HRC For Hardness 280- 330 BHN
Better Productivity better Life		
Rough	A463 K5 V10X A463 L5 V10X A463 M5 V10X / A60 N5 V10X	For Hardness 55 - 60 HRC For Hardness 45 - 60 HRC For Hardness 280- 330 BHN
Finish	A60 K5 V10X A60 L5 V10X A60 M5 V10X / A60 N5 V10X	For Hardness 55 - 60 HRC For Hardness 45 - 50 HRC For Hardness 280 - 330 BHN



Wheel Types

Type 1	Type 5	Type 7

Cylindrical Grinding Wheels

CUMI's versatile range of Cylindrical Grinding Wheels are used for a variety of grinding operations that require fast stock removal, size generation, fine surface finish .

Special wheels are also available for multiple diameters and shoulder grinding with pre-formed wheel faces, where wheel gradings are adjusted for plunge grinding.

CUMI's Cylindrical grinding wheels find wide application in the grinding of Valves, Plunger pins, Eye bolts, transmission shafts, Bearing races, Cam shafts, Crank shafts etc.

Features

- ▶ Better form retention
- ▶ Excellent component finish
- ▶ Less dressing frequency

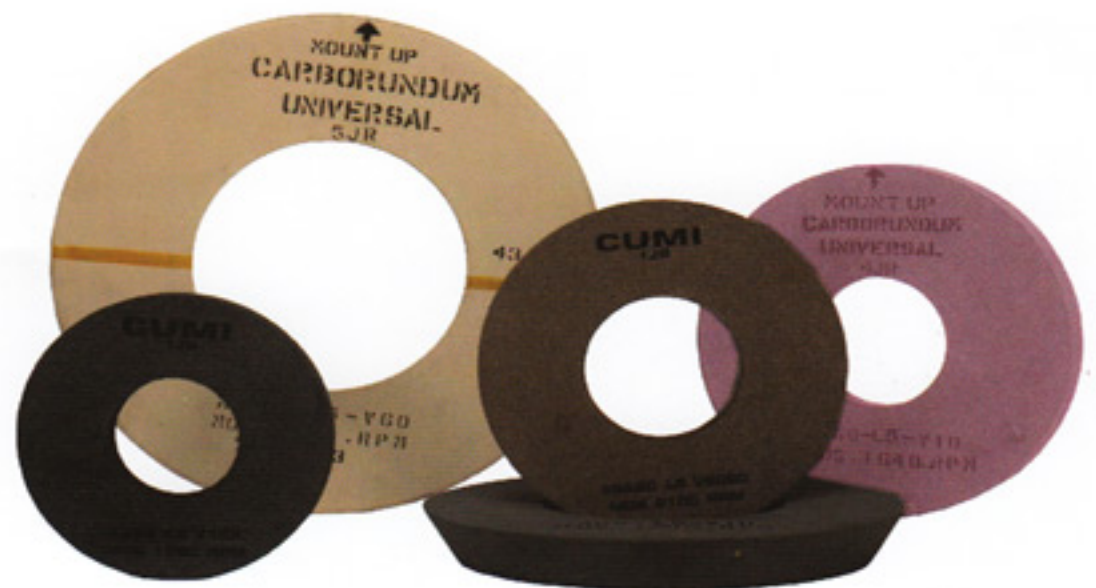
CUMI "Krystal" is the newly developed bond system which imparts excellent cutting action along with superior form retention and improved wheel life.

Product Range

Grain	Dia.(mm)	Thickness(mm)	Grit	Hardness	Structure	Types
A, DA	300 - 750	10 - 150	36 - 120	I - N	4 - 6	1, 5 & 7
AA	300 - 750	10 - 100	36 - 180	I - N	4 - 5	1, 5 & 7
C	300 - 750	10 - 100	36 - 220	I - N	4 - 5	1, 5 & 7
GC	300 - 750	10 - 60	46 - 220	I - N	4 - 5	1, 5 & 7
Krystal	300 - 750	10 - 100	46 - 120	I - N	4 - 6	1, 5 & 7

Product Recommendation

Material	Grading
Cast Iron	C461 L5 VG
Steel - Soft	A463 L5 V10
- Hardened	A463 K5 V10
- High Speed	AA46/54 K5 V8
- Stainless	C363 N5 VG
Tungsten Carbide	GC60 K5 VG
General Purpose	A463 L5 V10



Wheel Types

Type 1	Type 5	Type 7

Crank Shaft Wheels

CUMI's Crankshaft grinding wheels are made using special, high performance bond systems in a unique manufacturing process, tailored to suit each market segment. This manufacturing technology, coupled with the application engineering expertise, makes CUMI's Crankshaft grinding wheels highly cost effective. Besides optimising grinding efficiencies, these wheels also provide surface finish as fine as 4 microns. CUMI also makes dual grade, sandwich wheels with harder sides and softer centres, ideal for grinding crankshafts of differential hardness in diameter and fillet radius. These provide surface speeds upto 60 mps.

Features

- ▶ Better form retention
- ▶ Free cutting
- ▶ Higher life

CUMI "Supreme" is the newly developed product, with excellent fusibility & form retention, for superior performance.



Product Range

Abrasive	Dia.(mm)	Thickness(mm)	Grit	Speed	Hardness	Structure
A	600 - 1200	20 - 50	46 - 80	33 - 60 mps	J - O	3 - 5
DA /AA / SA	600 - 1200	20 - 50	60 - 80	33 - 60 mps	J - O	3 - 5
Supreme	600 - 1200	20 - 50	60 - 80	33 - 60 mps	J - O	3 - 5

Product Recommendation

Material	Size & Grading	New Bond
Forged Steel - Soft	A463 N5 V10; A543 L5 V10X	V223,V2020,V500
Forged Steel - Hard	A463 I5 V10; DA543 K5 V2020	VK5
Cast Iron	DA46 I5 V10	VC500, VCAE
Nodular Iron	AA46 L5 V8	VC500, VCAE

Wheel Types for OEM's

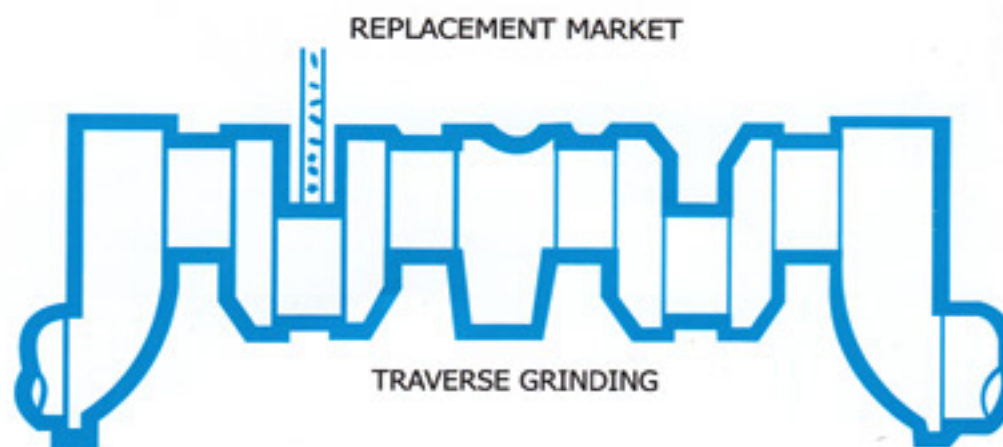
Plain	Sandwich	
Dual Grade	Type 5	Type 7

Crankshaft Re-grinding Wheels

Product Range

Size(In Inches)	Grading
26" x 0.75" x 6"	A463 L5 V10
26" x 0.875" x 6"	A463 L5 V10
26" x 1.26" x 8"	A463 L5 V10
28" x 1" x 8"	A463 L5 V10
30" x 1.58" x 8"	A463 L5 V10
30" x 1" x 8"	A463 L5 V10
31.5" x 1.10" x 8"	A463 L5 V10
31.5" x 1.26" x 8"	A463 L5 V10
32" x 1" x 8"	A463 L5 V10
35.4" x 1.5" x 12"	A463 L5 V10
36" x 1" x 12"	A463 L5 V10

CUMI also manufactures Crank Wheels for Engine re-building industry. These wheels are used for re-grinding crankshafts with the traverse grinding method .



Tool Room Grinding Wheels

Tool Room Grinding Wheels find vast applications in the manufacture and regrinding of cutting tools like drills, reamers, milling cutters, etc. Operations are carried out on the periphery of plain wheels (Type 1), face of cup wheels (Type 6 & 11) and edges of dish wheels (Type 12). These wheels are made of white aluminium oxide (AA) and Pink Aluminium oxide (RAA) abrasives. **Owing to their friable nature and sharp edge retention properties, CUMI's Tool Room wheels give very high productivity.** An exclusive bond system goes into the making which imparts superior properties of:

- ▶ Excellent form retention
- ▶ Excellent cutting action
- ▶ Dimensional accuracy
- ▶ Surface finish

Product Range

Bond	V8	V206
Grain	AA	RAA
Dia (mm)	25 - 300	25 - 300
Thickness (mm)	3 - 25	6 - 25
Grit	46 - 180	46 - 120
Hardness	H - L	H - L
Structure	5	6



"VCOOL" is the newly developed bond system for all Tool Room application.

Product Recommendation

Material	Grading
High Speed Steel	AA46/54 K5 V8, AA46/54 K5 VCOOL
Tools Steel	AA46/54 K5 V8, AA46/54 K5 VCOOL
High Alloy Steel	AA60 J5 V8, AA60 J5 VCOOL
Special Tool Steel	RAA60 K6 V206

Wheel Types

Type I	Type 6	Type 11	Type 12

Internal Grinding Wheels

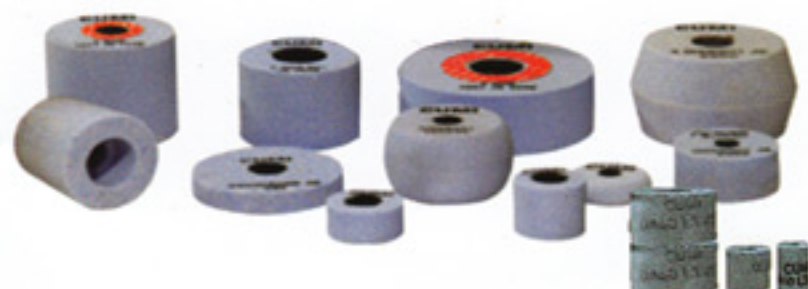
Internal grinding is a process of finishing the inside diameter of the component to an accurate size and desired finish. The high contact areas in this application poses a challenge and CUMI offers both conventional & high performance wheels.

Product Range

Bond	Grain	Dia.(mm)	Thickness(mm)	Grit	Hardness	Structure
V10, V206, VG VF8,V8V144	A, DA, AA, RA, RAA, GC, CGC	10 - 120	5 - 75	36 - 220	H - N	5 - 8

Product Recommendation

	High Performance	Conventional
Bearing / Steel	3MSB601/J6 VSAE 3MSB801/J6 VSAE	SA801TDV144
Auto Components	3MSB601/J6 VSAE	SA601TDV144



Green / Tip Grinding Wheels

These wheels are made with Silicon Carbide Grains and Available in Green(GC) and combination (CGC) grains. Silicon Carbide Abrasives are harder than Aluminium oxide which makes them ideal for grinding low tensile materials like tungsten carbide, grey iron, unannealed malleable iron and non ferrous materials, **A special bond system goes into the making which imparts superior properties like :**

- ▶ Excellent form retention
- ▶ Dimensional accuracy
- ▶ Surface finish

Product Range

CGC / Green	
Bond	VG
Grain	GC / CGC
Dia (mm)	100 - 250
Thickness (mm)	3 - 25
Grit	46 - 220
Hardness	H - L
Structure	5

Product Recommendation

Material	Application	Grading
Tool Steel	Surface	GC46H5VG
Tool Steel	Cylindrical	GC60J5VG
Tungsten Carbide	Cylindrical	GC60K5VG
HSS M42	Cylindrical	GC60I5VG
HSS M42	Surface	GC46H5VG



General Purpose - AIO Wheels

CUMI wheels cater to Bench Grinding , low speed snagging and various other general purpose application. **These wheels are made of Brown AIO (A) with bonds V6 & V30, thus providing high stock removal rate. Popular gradings are Coarse, Medium, Fine & A24R5V6. Product Selection is based on stock removal & finish requirement**

Product Range

Bond	V6, V30
Grain	A
Dia (mm)	20 - 450
Thickness (mm)	6 - 25
Grit	46 - 120, C, M, F
Hardness	H - L
Structure	5



Saw Sharpening (C Face)

CUMI wheels cater to Saw grinding application, These wheels are made of specially processed brown aluminium oxide (A) **that give rapid action, cooler cutting and excellent finish.** The self - dressing property of these abrasive result, in higher productivity of the wheels. Suitably designed bond systems are used to hold the abrasives strongly, thereby resulting in higher material removal rate and longer life.

Product Range

Grain	A
Dia (mm)	150 - 300
Thickness (mm)	6 - 30
Grit	46 - 60
Hardness	H - Q
Structure	5



Valve Lapping Compound

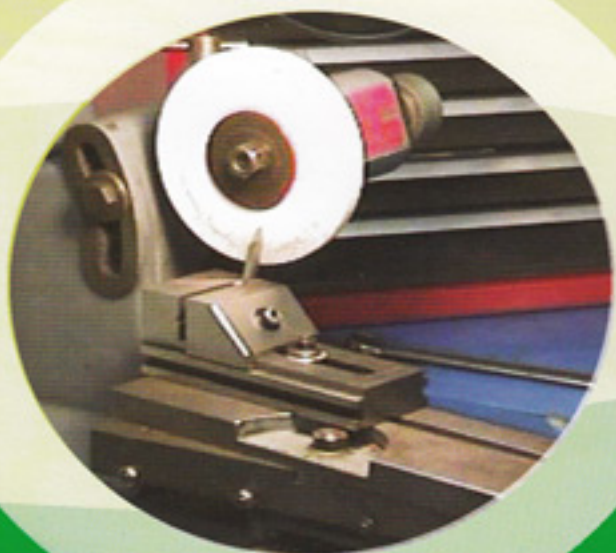
Used for polishing of Valve seats and disks

Product Range

Extra Coarse	L. NO.363	400 gm
Coarse	L. NO.362	400 gm
Medium	L. NO.361	400 gm
Fine	L. NO.360	400 gm



Also available in 50 gm Tubes (L. NO. 276)



Specialities

Specialities are Abrasive stones, sticks, blocks or cylinders of various sizes and cross sections used for sharpening or reconditioning chisels, plane-irons, gauges, knives, scythes, axes, shears and for polishing marble, mosaic, granite etc. These are made specifically to suit particular needs and the use of the right product will ensure both ease and speed in carrying out the sharpening or polishing jobs.

Combination Sharpening Stones

No.	Length	Width	Thickness
108	200	50	25
109	150	50	25
111	125	50	20
112	100	45	15
150	40	12	

Silicon Carbide Files

List No.	Grade	Size & Shape
57C	Coarse	355 mm long including handle, taper bevel
57M	Medium	
57F	Fine	
57EF	Extra Fine	

Slip Stones

List No.	Length	Width	Thickness	Grit
174	150 mm	55	20/10	Fine
175	150 mm	55	20/10	Medium
176	150 mm	55	20/10	Coarse
177	115 mm	45	6/1.5	Fine
178	115 mm	45	6/1.5	Medium
179	115 mm	45	6/1.5	Coarse

Rubbing Bricks

List No.	Size	List No.	Size
205	150 x 75 x 50 mm	214	150 x 50 x 50 mm
206	200 x 75 x 50 mm	222	100 x 50 x 50 mm
211	200 x 50 x 50 mm		



Portable Grinding

A portable grinder is small grinder handled manually, which can be carried from place to place and used for rough grinding of large forging and welded joints. Since the operating pressures are quite low in the hand held portable grinders, the wheels have to highly fast cutting. The wheel design ensures excellent cutting action with least operator fatigue.

Product Range

Bond	Grain	Dia.(mm)	Grit	Hardness	Structure
BM6, BM4, BI551, BSN821, TD931A	A, C	40 to 200	14 - 24	R - Q	2 - 5

Recommendation Chart

Work Material	For Better Cutting Action	For Higher Wheel Life
M.S / Forged Steels	A163 R5 BM4	A163 R2 BM4
Cast Iron / Gray C.I.	A163 R5 BM4	A163 R2 BM4
S. G. Iron	C163 Q3 B1551	A 163 R5 BM4
Hi – Chrome / Ni Hard	A 163 BSN821	
Stainless Steel	A163 TD931A / A143 R5 BM6	
High Alloy Steel	A163 TD931A / A143 R5 BM4	



Pedestal Grinding

The Snagging wheels designed for Pedestal Grinding comes in the full range for Grinding various work material , These wheels are designed for giving long wheel life while maintaining good cutting action.

Product Range

Bond	Grain	Dia.(mm)	Grit	Hardness	Structure
BM4, B1551, TDR186, TDR758, BSN821, TD722, BM50	A, C, CA	300 to 600	14 - 36	R - Q	2 - 5

Recommendation Chart

Work Material	For Better Cutting Action	For Higher Wheel Life
M.S / Forged Steels	A163 R5 BM50 A163 R5 BM4 A143 R5 BM4	A163 R2 BM4 A163 R2 BM50 A163 TDR186
Cast Iron / Gray C.I.	C163 Q5 B1551 CA243 TDR505	C163 TDR719 CA145 TDR505C
S. G. Iron Railway Inserts	A163 R2 BM4	A163 TDR758
Hi – Chrome / Ni Hard	A163 BSN821	
Stainless Steel	A143 TD722	
High Alloy Steel	A163 R5 BM50	



Swing Frame Grinding

A combination of tough and durable Aluminium Oxide with a glassy and yet strong resin bond makes CUMI snagging wheels ideal for Swing frame grinding. The design ensures good cutting action with reduced wheel wear. The inbuilt features in design ensures that the wheels are very safe to use.

Product Range

Bond	Grain	Dia. (mm)	Grit	Hardness	Structure
BM4,BM50,B1551,TD722 BSG,BSN821,TDR505C	A, C, CA	400 to 500	14 - 36	R - Q	2 - 5
BHT1	AZA	400 to 500	10 - 12	V	-

Recommendation Chart

Work Material	For Better Cutting Action	For Higher Wheel Life
M.S / Forged Steels	A 163 R2 BM4, A 163 R5 BM50	A163 TDR186 A163 R2 BM50
Cast Iron / Gray C.I	C163 S3 B1551 CA243 TDR505	CA163 TDR505C C163 T3 BSG
S. G. Iron	A163 R2 BM4	A163 R2 BM50
Hi – Chrome / Ni Hard	A 143 TDR942C A143 Q5 BSN821	
Stainless Steel	A163 R5 BM4	A143 TD722
High Alloy Steel	A143 Q5 BSN821	A143 R5 BSN821



6" Resinoid Taper Cup Wheels

CUMI has developed a very special 6" Taper Cup Wheels for grinding of welded joints of RAILS by means of portable grinders.

152.4X50.8X22.23, SK 5824, A163 R2 BM4.

These wheels have exceptionally high cutting action and also good life.

CUMI has also come out with "THREADED NUT BORE" which will enable accurate mounting of wheels that ensures smooth running without any vibration.

Available in .5/8 - 11" threaded bush arbor.



Rubber Control & Centreless wheels

CUMI was the first abrasive manufacturer to produce Rubber Bonded Control wheels and Centreless wheels in India, The calendaring process enables excellent control in size & finish of components being ground.

Special features of these wheels are

- ▶ Longer wheel-life
- ▶ Lesser dressing frequency
- ▶ Superior form retention
- ▶ Superior surface finish

The Rubber bonded Control and Centreless grinding wheels for

- ▶ Bearing Industry
- ▶ Automobile Industry
- ▶ Hydraulic Industry
- ▶ Cutting Tool Industry
- ▶ General Purpose



Product Range - Rubber Control Wheels

Size Range	Diameter(mm)	100 - 400
	Thickness(mm)	25 to 250 max. Single Piece
Grain	Brown Aloxiide	
Grit Size	80 to 180	
Grade	R to T	
Bond	Rubber - R	

Product Range - Rubber Centreless Wheels

Size Range	Diameter(mm)	50 - 600
	Thickness(mm)	Max. thickness 250 single piece
Grain	Brown Aloxiide	
Grit Size	60 to 220	
Grade	K to M	
Bond	Rubber - RT1	

Product Recommendation

Control Wheels

For all conventional Centreless applications	A80 RR
For fine and precision applications	A120 RR A150 RR

Centreless Grinding Wheels

For Taper Roller OD	Grinding - Roughing	A80 LRT1
	Finishing	A220 LRT1
	Combined Roughing and Finishing	A80 LRT1
For Needle Roller OD	Grinding - Roughing	A120 LRT1
	Finishing	A220 LRT1
For Shock Absorber OD	Grinding - Roughing	AA80 LRT1
	Finishing	A220 LRT1





CARBORUNDUM UNIVERSAL LIMITED

Abrasives Divison : No. 655 Thiruvottiyur High Road, Thiruvottiyur, Chennai - 600 019.
Tel.: 91-44-4221 1000 Fax : 91 - 44 - 2573 3499

AREA OFFICES

AHMEDABAD: Tel: 079 - 26422501 / 26569721 Fax: 079 - 26568214 **BANGALURU:** Tel: 080 - 30770600 / 601 Fax: 080 - 25584785
CHENNAI: Tel: 044 - 26157084 / 86 / 88 Fax: 044 - 26157086 **NEW DELHI:** Tel: 011 - 25811342 / 3 / 4 **GURGAON:** Tel: 0124 - 222
1085 / 6 / 7 Fax: 0124 - 2221086 **KOLKATA:** Tel: 033 - 24436461 / 2 / 3 Fax: 033 - 24436465 **LUDHIANA:** Tel: 0161 - 2544300 / 5300
Fax: 0161 - 2546300 **KOCHI:** Tel: 0484 - 4093701 / 2 Fax: 0484 - 2532019 **MUMBAI:** Tel: 022 - 22663894 / 22661360 Fax: 022 - 22662289
PUNE: Tel: 020 - 27502105 / 6 / 7 Fax: 020 - 27502108 **SECUNDERABAD:** Mobile: 961864556 **JAMSHEDPUR:** Mobile: 09830993138
NAGPUR: Mobile: 09823089990 **UTTAR PRADESH (UP):** Mobile: 09560200025 **INDORE:** Mobile: 09826033425

www.cumiabrasives.com