



**GRINDING
APPLICATIONS**



Unit for vitrified bonded grinding wheels



Unit for resin bonded grinding wheels



CERTIFICATE

Management system as per
ISO 9001 : 2015

The Certification Body TÜV NORD CERT GmbH hereby confirms as a result of the audit, assessment and certification decision according to ISO/IEC 17021-1:2015, that the organization

STERLING ABRASIVES LIMITED
 HO & Unit I - 45/46, GIDC Estate,
 Odhav - Kathwada Road, Odhav,
 Ahmedabad - 382 415, Gujarat,
 India
 with the locations according to the annex



operates a management system in accordance with the requirements of ISO 9001 : 2015 and will be assessed for conformity within the 3 year term of validity of the certificate.

Scope -

Design, Manufacture and Supply of Standard & Special Purpose Bonded Abrasives Products.

Certificate Registration No.44 100 074148
 Audit Report No.2.5-3528/2007

Valid from **25.06.2022**
 Valid until **24.06.2025**
 Initial certification 25.06.2007

Certification Body
at TÜV NORD CERT GmbH

Mumbai, **10.06.2022**

TÜV NORD CERT GmbH Am TÜV 1

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TÜV India Pvt. Ltd., 801, Raheja Plaza – 1, L.B.S. Marg, Ghatkopar (W), Mumbai - 400 086, India www.tuv-cert.com/in




Quality Certificate

COMPANY PROFILE


Sterling Abrasives Limited (SAL) is an ISO 9001 : 2015 certified enterprise manufacturing a wide range of grinding wheels for the past five decades. We are one of the leading manufacturers of Grinding wheels, making full range of Vitrified and Resin Bonded grinding wheels upto Diameter 1220mm. Our quality is comparable with the best in the industry. We pride ourselves for our ability to provide :

- Consistent high quality products
- On time, error-free shipments
- Prompt, accurate information and answers

Sterling Abrasives Limited today caters to the need of major industries like Auto, Auto components, Bearing, Steel, Spring, Surgical blades, General engineering, Foundry, Glass, Agri sector etc. With the in house development, Sterling Abrasives Limited has mastered the manufacturing of Rice Whitening stones and is the largest supplier of Rice Whitening Stones in India.



NOMENCLATURE OF STERLING GRINDING WHEELS

		A	46	L	5	VSC			
		TYPE OF ABRASIVES	GRAIN SIZE	HARDNESS	STRUCTURE	BOND TYPE	WHEEL SPEED MPS		
A	REGULAR BROWN ALUMINIUM OXIDE	8	↑ ↓ VERY COARSE	D	CLOSE	V – VITRIFIED	33		
AA	WHITE ALUMINIUM OXIDE	10		E		EXTREMELY SOFT	BS – RESINOID		45
DA	REGULAR + WHITE ALUMINIUM OXIDE	12		F		VERY SOFT	EF/ EFP – SHELLAC		60
PA	PINK ALUMINIUM OXIDE	14		G		SOFT	ED – EPOXY		80
PAA	PINK + WHITE ALUMINIUM OXIDE	16	↑ ↓ COARSE	H	MEDIUM	PD – PLASTIC			
FS	SEMI FRIABLE ALUMINIUM OXIDE	20		I		MEDIUM	OXD – MAGNESITE		
RB	RUBY GRAINS	24		J					
ZR	ZIRCONIA GRAINS	30		K					
NZ	SPECIAL NORZON GRAINS	36	↑ ↓ MEDIUM	L	OPEN				
CG	CERAMIC GRAIN (BLUE)	46		M					
SK	CERAMIC GRAIN (WHITE)	54		N					
MCA	MONOCRYSTALLINE ABRASIVES GREY	60		O		HARD			
MCZ	MONOCRYSTALLINE ABRASIVES - BLUE	70	↑ ↓ FINE	P	POROUS				
C	BLACK SILICON CARBIDE	80		Q					
GC	GREEN SILICON CARBIDE	90		R		VERY HARD			
CGC	BLACK + GREEN SILICON CARBIDE	100		S					
MG	PREMIUM CERAMIC	120	↑ ↓ VERY FINE	T	VERY POROUS				
		150		U		EXTREMELY HARD			
		180							
		220							
		320							
		400							
		500							
		600							
		800							
		1000							
		1200							

CENTRELESS WHEELS

- Centreless grinding is grinding the outer surface of any cylindrical part, supported without centres on a stationary work rest blade and moving between the grinding wheel and the regulating wheel.
- Normal speed of operation: 25 to 45 MPS.
- Sterling's Centreless grinding wheels have versatile application in Bearing, Auto and Auto Components, Cutting Tools, Stainless Steel Bar, Fastner and other General Engineering Industries.
- Commonly used on machines like HMT, Cincinnati, Foldage, Solitaire, WMW, Micromatic, Jyothi, Scarlo, Parishudh, Lidkoping etc.

International Range

FEATURES

- High performance abrasive grains.
- Versatile for all low, medium and high force application ranging from cast iron to stainless steel.
- Higher depth of cut without burn marks, Lower dressing frequency.
- Excellent surface finish and profile retention.
- Constant grinding pressure, Highest productivity & lowest grinding cost.

Premium Range

FEATURES

- Good cutting action, Less dressing frequency, Good surface finish, Long wheel life.
- High material removal rate, Able to grind large area of contact.

Commonly Used Sizes (In mm)

300 X 80 X 140	400 X 150 X 228.60	600 X 200 X 304.8
350 X 100 X 127	400 X 200 X 203.2	600 X 250 X 304.8
350 X 100 X 152.4	500 X 150 X 304.8	600 X 300 X 304.8
350 X 150 X 127	500 X 200 X 304.8	600 X 500 X 304.8

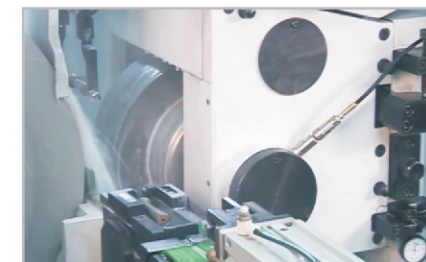
Application	Professional Range	Premium Range	International Range
Bearing Industries			
Bearing Ring	A80 K5 VC11	PAM80.5 K5 VC11	2CG80.5 K6 VC11
Bearing Roller	A80 L8 VP7	DA80 K5 V15	FSW70.2 K8 VC8
Automotive Industries			
Engine Valve	A463 M3 VC10	DA463 M3 VC10	2CG463 M3 VC10
Gudgeon Pin	A60 L5 VC10C	AA60 L5 VC8	
Bright Bar	A60 L5 VC10	C463 L5 V4M	C463 L5 V23
Liner	CGC54 LINER-4	GC54 LINER-4	
Drills & Tap	A60 M5 VC10	DA60 M5 VC10	FSW60 M5 VC10



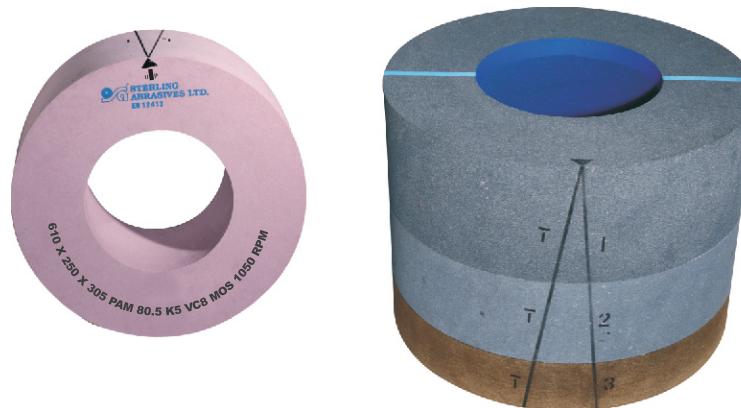
Taper Roller Bearing



Gudgeon Pin



Application



F-TYPE WHEELS (ALSO KNOWN AS DISC GRINDING/NUT INSERTED WHEELS)

- Disc grinding is the production of flat surfaces by presenting the work piece to the wheel face in horizontal or vertical spindle machines.
- In double disc grinders, opposite and parallel surfaces are ground flat at high rates of production providing good surface finish. Sterling offers specially designed disc grinding wheels with special bond systems, which is the best in India.
- Suitable for machines like Gardner, Besley, Diskus, Foldage, Nippie, Modular, Parivartan, OMD, Bennet, Rolland, Nissie, Daisho etc.

International Range

FEATURES

- High performance abrasive grains.
- Efficient cutting action on all types of material.
- Able to take more depth of cut, Lower threshold power, Superior surface finish.
- Highest productivity, Lowest grinding cost per component.

Premium Range

FEATURES

- Sharp, durable abrasive grains.
- Exceptional part integrity & quality.
- Able to grind large contact area.

Commonly Used Sizes (In mm)

350 X 65 X 25.4	585 X 65 X 19.05	660 X 90 X 12.7/25.4
355 X 52 X 110	585 X 65 X 250	660 X 90 X 300
400 X 65 X 75	585 X 75 X 195	750 X 60 X 38
450 X 65 X 150	600 X 65 X 300	750 X 70 X 350
450 X 80 X 151	600 X 80 X 20	760 X 75 X 19
450 X 80 X 40	660 X 75 X 480	762 X 75 X 25.4
500 X 65 X 140	660 X 76.2 X 12.7	810 X 65 X 280
500 X 75 X 300		

Application	Professional Range	Premium Range	International Range
Bearing Industries			
Bearing Ring	FSW OR AA80 J8 BS	73A80 J8 BS	3CG80 J8 BS/ 73A80-1 I11 PD1
Bearing Roller	A60 J5 BS	AA60 J5 BS/ SA160 C PD1	73A60 J5 BS
Automotive Industries			
Connecting Rod	Aa60 K5 BS	73A60 L5 BS	3CG60 K5 BS
Piston Ring	C60 K8 BS	GC60 K8 BS	1CG/GC K8 BS
Spring	A24 P7 BS	FSP24 P7 BS	3CG24 L7 BS
Disc brake		FSP46 H+8 BS75	2CGF46 H+8 BS75
Valve Plate	AA54 N5 BS	FSW46 N5 BS	73A46 N5 BS
Washer	DA60 N4 BSM	AA60 J8 BS	73A60 J8 BS
Piston Ring	C40 O BS	C60 L6 BS706	74A70 J8/K8 BS33



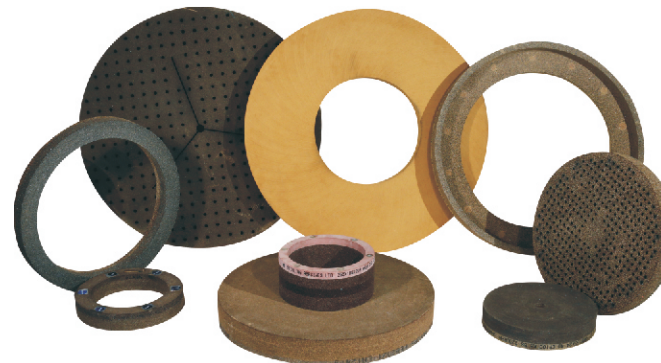
Spring



Bearing



Piston Ring



Application

CYLINDRICAL GRINDING WHEELS

- Cylindrical Grinding is the grinding of the outside diameter of components revolving between centres or while held in a chuck. Cylindrically ground parts are more accurate in size with better finish than those turned on lathes.
- Sterling's versatile range of cylindrical grinding wheels are used for a variety of grinding operations that require size generation, fine surface finish and fast stock removal.
- Special wheels are available for multiple diameters and shoulder grinding with the side of the wheel, where wheel gradings are adjusted for plunge grinding without any traverse.
- Suitable for machines like Landis, Kirloskar Landis, Churchill, Newall, WMW, Praga, HMT, Riat, Toshiba, Norton, Parishudh etc.

Recommendation

Material	Grading
Cast iron	C46 K5 V4 / DA463 L5 VC11
Aluminium	C46 L10 V23
Steel - hardened	A463 K5 VC10 / 3CG60 K5 VC8
Steel - high speed	AA46/54 K5 VC8
Stainless steel	C463 N5 V4
Tungsten carbide	GC60 K5 V4
General purpose	A463 L5 VC10 / AA60 K5 VC8

Commonly Used Sizes (In mm)

300 X 25 X 127	400 X 40 X 127	500 X 50 X 254
300 X 40 X 127	400 X 40 X 127	750 X 80 X 304.8
350 X 25 X 127	450 X 65 X 254	1060 X 80 X 304.8
350 X 40 X 127		



Transmission Shaft



Application

ROLL GRINDING WHEELS

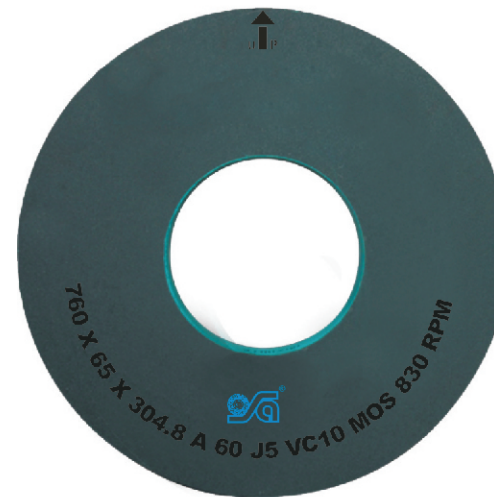
- Roll grinding is a specialized form of cylindrical grinding and precision grinding of various kinds of rolls. Roll grinding wheels are used in the re-grinding and production grinding of rolls for the Steel, Brass, Copper, Aluminium, Printing Paper and textile industries.
- Sterling's Roll Grinding wheels give excellent finish and are used in grinding work rolls and back-up rolls used in Hot Mills, Cold Mills, Sendzimer Mills, Aluminium Mill, grinding chrome plated rolls and rubber rolls.
- Suitable for machines like Churchill, Hercules, Siegen, Pomini, Toshiba, Bhiman, Meska, Vikas etc.

Recommendation

Type of rolls	Grading				
Hardened steel rolls	A60-1 J5 V15	GC36 I EFP	FSW 36 I6 BS	GC180 I EEP	35KMG30 L8 BS86
Soft steel rolls	A54 N5 V15				
Rubber rolls	C36 I5 EF	GC80 J5 V4	C30 J10 BS	AA54 J12 V84	3A80-1 H12 V84
Ebonite rolls	AA60 J5 EF				
W.P.S & C.I. rolls	AA60 J5 V15	C46 J EEP	C320 G EFP		

Commonly Used Sizes (In mm)

510 X 50.8 X 203.2	750 X 65 X 304.8	915 X 75 X 304.8
600 X 50.8 X 203.2	750 X 80 X 304.8	915 X 100 X 304.8
750 X 60 X 304.8	910 X 80 X 305	1066 X 100 X 508



Steel Roll Grinding



Rubber Roll Grinding

CRANK SHAFT GRINDING WHEELS

- Crank Shaft grinding is the cylindrical grinding of the crank pin or bearing by plunge form method. Normal speed of operation: 33 to 45 MPS.
- Sterling's crank shaft wheels grind freely, generate minimum heat and at the same time maintain its form and size for a sufficient length of time. It is used by all types of crank shaft manufacturers and regrinding industry.
- Suitable for machines like Landis, Riat, Norton, Naxos Union, Newall, Churchill, Parishudh etc.

International Range

FEATURES

- Good form retention.
- Lower cycle time, Higher productivity.
- Cool cutting, Crack free components.
- High stock removal.

Type of Material	Professional Range	Premium Range	International Range
Forged Steel – Soft	A463 L5 VSC	DA463 L5 VSC	AA463 L5 VSC
Forged Steel – Hard	A601 K5 VSC	DA601 K5 VSC	AA601 K5 VSC
Cast Iron		DA463 L5 VSC	
Nodular Iron	DA543 L5 VSC	AA543 L5 VC11	PAA543 K5 VSC
SG IRON	DA543 K5 VSC	AA543 K5 VSC	PAA543 K5 VSC



Crank Shaft

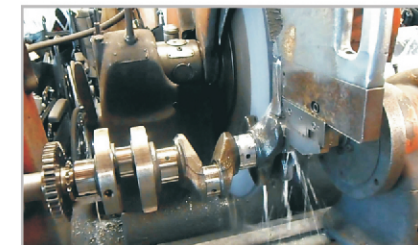
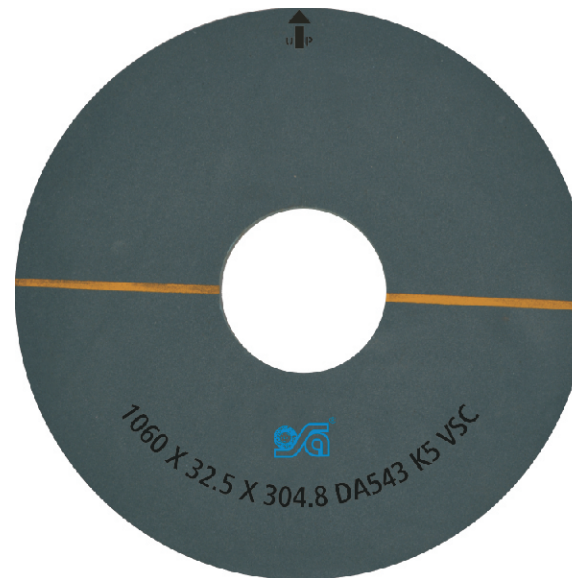
Premium Range

FEATURES

- Good dimensional accuracy
- Lower dressing frequency
- No surface crack

Commonly Used Sizes (In mm)

660.4 X 22.23 X 152.4	812 X 25.4 X 203.2
660.4 X 22.23/32/33/40 X 203.2	900 X 38.1 X 304.8
711 .2 X 25/32/38 X 203.2	914 X 25.4 X 304.8
762 X 25 X 203.2	1060 X 32.5 X 304.8



Application

CAMSHAFT GRINDING WHEELS

- The camshaft or cam profile grinding process is a special form of external cylindrical plunge grinding between centres, in which the grinding wheel axis machines the cam profile in a controlled manner. As a result of the extremely high cutting volumes, requires vitrified bonded grinding wheels, particularly in grinding camshafts for the automotive sector. Conventional vitrified bonded grinding wheels are still the first choice for larger camshafts used in the truck, locomotive and marine engine sectors.
- Suitable for machine like Landis, Naxos, Union, Fortuna, SRB, Schaudt etc.

International Range

FEATURES

- Excellent form retention
- Burn free cutting, Lower dressing frequency
- Reduction in cycle time, Excellent surface finish

Type of Material	Professional Range	Premium Range	International Range
Cast Iron	AA54 O5 VSC	GC54 M5 V23	2CG54 O5 VC11
EN8, EN9, EN35, EN40B	A460 M5 VC10	FSA30 P5 VC9	FS80-1 K7 VSC
			PA80-1 K7 VSC

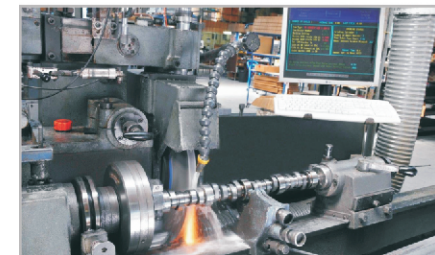


Camshaft

Premium Range

FEATURES

- Dimension accuracy
- Good surface finish
- No surface crack



Application

Commonly Used Sizes (In mm)

400 X 50 X 127

500 X 40 X 127

600 X 25 X 304.8

600 X 40 X 304.8

750 X 25 X 304.8



GEAR GRINDING WHEELS

- Gear grinding is a finishing process to remove considerable amount of metal after heat-treatment operation to obtain a predetermined quality. Gear grinding is done to meet the exact requirement of form, dimension and surface texture. Gear grinding gives a very high degree of dimensional accuracy.

Methods of Gear grinding

- Generating type method - In this process, the wheel progressively approaches the root of the gear from the tip of the gear tooth. Suitable for Machines like Maag & Hoffler.
- Form/ Profile grinding - In this process the wheel is in constant touch with the work piece. Suitable for Machines like Reishauer & Csepel.

International Range

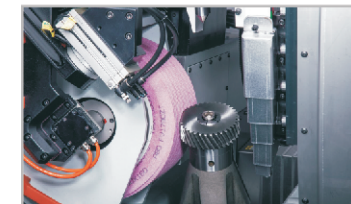
FEATURES

- High performance abrasive grain and ceramic bonding system.
- Cool grinding, Excellent profile retention.
- High porosity in wheel, Reduction in grinding cycle.
- Higher wheel life due to less dressing, Excellent surface finish.

Application	Gear Module	Professional Range	Premium Range	International Range
SINGLE RIB GEAR GRINDING Conventional m/c (Niles, Hofler, Maag)	UP TO 8 M	PAA60 H10 VC8	5MCA70/80 I12 VSC	3CG60 H10 VP7
	ABOVE 8 M	PAA601 G18 VC8	5MCA601 G15 VSC	11A60 E11 V17
	UP TO 5 M	PAA801 G13 VC8	5MCA80 G13 VSC	11A80 E11 V17
	ABOVE 10 M	PAA46 G18 VC8	5MCA46 G16 VSC	3CG46 G16 V17
CNC m/c (Gleason-Pfauter, Samputensili, Hofler, Niles)	UP TO 5 M	PAA601 G13 VC8	5MCA601 G13 VSC	3CG601 G13 V17
	UP TO 6-10 M	PAA601 G18 VC8	5MCA601 G16 VSC	3CG601 G13 V17
	ABOVE 10 M	PAA46 G18 VC8	5MCA46/54 G18 VSC	3CG601 G15 V17
MULTI-RIB GEAR GRINDING Conventional & CNC m/c (Reishauer / Gleason / Pfauter / Samputensili / Kapp /Csepel / Hofler, Niles)	UP TO 1.5 M	PAA180 H10 VC8	5MCA150 H10 VSC	3CG180 H10 V17
	1.75 - 2.25 M	PAA120 J8 VC8	5MCA80 I12 VSC	3CG100 I7 V17
	2.5 - 4 M	PAA100 J10 VC8	5MCA80 I12 VSC	3CG80 K5 V17
	ABOVE 4.25 M	PAA80 J10 VC8	5MCA60 J12 VSC	3CG60 K5 V17



Gear

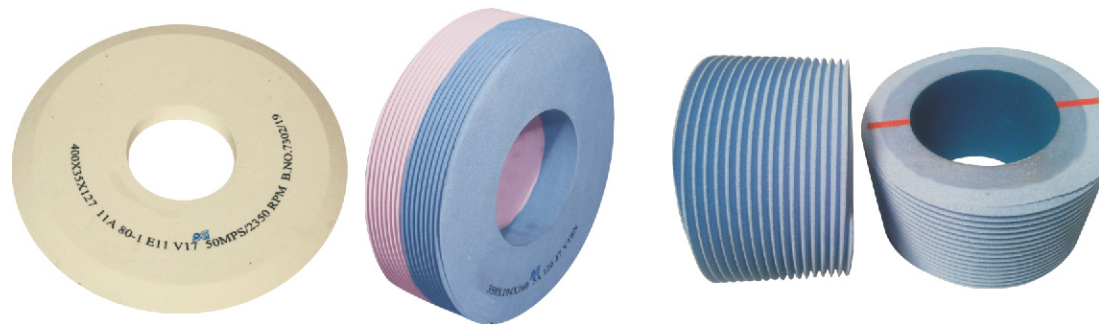


Application

Premium Range

FEATURES

- Sharp, durable abrasive grain.
- High porosity in wheel, Faster metal removal.
- Able to grind large areas of contact.



SEGMENTS

- Segments are generally used on rotary table surface grinding machines. Sterling provides wide range of all purpose shapes, sizes and specifications of segments which are composed with selected abrasives in grits, grades, structures and best bonding system to match any material removal or surface finish requirement from precision tool room grinding to uneven surface production jobs.
- Suitable for machines like Blanchard, Churchill and John Land, Lumsden, Mattison, Gusti, WMW, TOS, Camut, Snow, Gockel, Reform, HMT, Atlas etc.

International Range

FEATURES

- High performance ceramic abrasive grains.
- High performance ceramic bond and induced porosity.
- Fast and cool cutting, No burn on parts.
- Long segment life.

Premium Range

FEATURES

- High performance abrasive grains
- Fast metal removal, Induced porosity
- Long life

Application	Professional Range	Premium Range	International Range
Valve plate	AA54 K5 BS	PAA54 K5 BS	2CG301 F16 VC8
Connecting rod	AA46 H8 V18P	PAA36 H8 V18P	3CG24-2 E12 V32
Disc brake	GC80-2 I4 BS	FSG80-2 I4 BS84	3CG24-2 E12 V32
High chrome casting	AA30 G12 VTR	PAA30 G12 VTR	3CG24-2 D12 V32
Jaw plates	AA30 O5BS	SFP60 N+4 B560	2CG30 O4 B560
Industrial knife	AA46 I5 VC8	PAA45 I5 VC8	2CG46 I8 VC8
Tool bit	AA46 G5 VLT	PAA46 G5 VLT	2CG46 G5 VLT

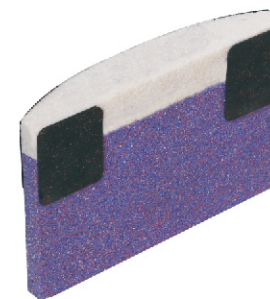


Connecting Rod



Application

Commonly Used Sizes (In mm)			
285.75 X 57.15 X 152.4	117.48 X 73.025 X 247.65	90 X 50/45 X 16	60/65 X 20 X 65
285.75 X 57.15 X 203.2	152.4 X 152.4 X 100	125/85 X 35 X 140	84/80 X 24 X 120
127 X 38.1 X 200	150 X 80 X 25	68/57 X 30 X 130	19.5 X 80 X 70
66.04/55 X 30.54 X 100	175 X 80 X 25	100 X 45/50 X 16	150 X 80/71 X 25
103/94 X 38 X 180	103.19/84.14 X 38.1 X 152.4	305 X 222/130 X 95	74.61/61.91 X 90.48 X 50.8
57/65 X 25 X 105	203.2 X 84.14/103.19 X 38.10	107.16 X 44.45 X 25	125 X 60/25 X 15
100/85 X 40 X 150	185 X 62/56 X 20	118 X 40.50 X 200	64.3/38 X 20 X 60
152.4 X 84.14/103.19 X 38.10	87/103.5 X 38 X 200	110/90 X 45 X 200	222.25/155.58 X 76.2 X 304.8
103/94 X 38 X 180	173.03 X 38.1 X 127	100/85 X 38 X 200	92.08/68.27 X 24.05 X 142.08
70/64 X 25 X 150	170.06 X 45 X 46	117/88 X 45 X 200	120/80 X 44.5 X 200



RESIN BONDED SNAGGING WHEELS

- Sterling's Snagging Wheels are manufactured for a wide use of heavy stock removal in foundries, welding shops, metal fabricators, steel mills, shipyards etc.
- Snagging wheels can be used on portable hand grinder, Pedestal grinder and swing frame grinder.
- Typical Application : Smoothing of weld seams, Cleaning castings, Preparing surfaces for plating or painting, Billet conditioning etc.

International Range

FEATURES

- Very tough abrasive grains.
- Excellent cutting action.
- Controlled wear and longer wheel life.
- Burn free surface, Higher productivity.

Premium Range

FEATURES

- Faster material removal.
- Good grinding ratio.

Type of Material	Professional Range	Premium Range	International Range
Carbon steel & alloys steel	A16 P5 BS23	A143 P7 BS23C	
High alloy steel & stainless steel	A163 Q5 BS23	A163 R2 BS23C	
Hi-chrome steel	A143 J5 BS23	2NZC14 J7 BS23	3NZC163 J5 BS23 3ZAW16 O+6 BH1
Grey cast iron & SG iron	CA163 Q3 BS23	C162 Q3 BS23	
Investment casting	A14/20 P5 BS23	A12 M5 BS23	



Application

Commonly Used Sizes (In mm)

150 X 25 X 15.88	450 X 50 X 152.4
300 X 40 X 31.75	500 X 75 X 203.2
400 X 50 X 152.4	600 X 75 X 203.2
400 X 65 X 152.4	



CREEP FEED GRINDING WHEELS

- Sterling offers creep-feed grinding wheels which are designed to perform well in high material removal operation without compromise on the form and finish. Be it continuous dressing or conventional intermediate dressing, when it comes to creep-feed grinding, Sterling wheels achieve reduced dressing by superior form holding while removing material at high feed rate.

International Range

FEATURES

- High performance ceramic grains.
- High feed rates for faster cycle time.
- Controlled wear and longer wheel life.
- Burn free surface, Easy on diamond roll.
- Excellent form retention.

Grinding Wheel	Professional Range	Premium Range	International Range
Abrasives Grain	AA	PA	3CG
Grit	46 – 120	46 – 120	46 – 120
Hardness	E – I	E – I	E – I
Structure	16 – 28	16 – 28	16 – 28
Bond	VC8	VC8	VSC, VC8



Application

Premium Range

FEATURES

- High material removal
- Burn free surface



ROLLER END GRINDING WHEELS

- Sterling Offers special single / multi layer grinding wheel for taper roller end grinding operation. Epoxy layer on the outer diameter of wheel helps to maintain grinding edges at the periphery which helps to achieve superior form holding and finishing.
- Multiple layer wheels for roughing and finishing.
- Machine : Custom made machinery is used.

International Range

FEATURES

- Dimension accuracy.
- Excellent surface finish.
- Grinding and polishing in single step.
- Less frequent dressing, longer wheel life.

Application	Premium Range	International Range
Roller End Grinding	AA280 P18 BS33	FSTW 150 L10 BS33 Rough & DA400 J11 BS-33 Finish
		AA 150 L10 BS 86 Rough & AA400 J11 BS-86 Finish
		FSTW 180 L 10 BS 33 Rough & AA400 J 11 BS-33 Finish

Premium Range

FEATURES

- Good form retention.
- Fast stock removal.

Commonly Used Sizes (In mm)

100/102 X 75 X 0.00
125/127 X 75 X 0.00
150/152 X 75 X 0.00
180/182 X 75 X 0.00



Taper Roller Bearing

CERAMIC GRAIN WHEELS

- Sterling's Ceramic Grain wheels are truly advancement in precision grinding. The Ceramic grains used in these wheels has a submicron crystal structure in each grain. The grain sharpens continually exposing fresh, sharp cutting edges during grinding. It is a premium abrasive for hard-to-grind material in high pressure, high productivity applications.

Benefits of Ceramic Grinding (CG) wheels

- Faster material removal
 - Reduction in cycle time
 - Improved form retention ability
 - Ideal for CNC machine application
 - Less metallurgical damage due to cooler cutting action
 - Less dressing
 - Efficient cutting
 - Better productivity
-
- Suitable for surface grinding, external and internal cylindrical grinding, tool room grinding, gear and spring grinding applications



HYPODERMIC NEEDLE GRINDING WHEELS

- Sterling's Hypodermic Needle Grinding Wheels are well established for grinding the tip of hypodermic needle (Human as well as Veterinary), which is made from stainless steel of various gauge pipes.
- Sterling's wheels are designed in special grade having modified bond which gives higher output and burr-less finish.

Recommendation

Category of Needle		Grading		
Veterinary needle	DA400 L5 BS	DA600 J/K5 BS		
Human needle	C600 K5 EFP	C800 K5 EFP	GC600 K5 EFP	GC800 K5 EFP

Selection of grit size as per needle gauge (G)

	JIS	ANSI	FEPA
22G (0.8 mm)	GC800	GC500	GC400
23 to 25G (0.6 mm)	GC1000	GC600	GC500
25 to 26G (0.4 mm)	GC1200	GC800	GC600
26 to 30G (0.2 mm)	GC2000	GC1000	GC 800/1000

Commonly Used Sizes (In mm)

350 X 50 X 127
400 X 100 X127
450 X 50 X 127
450 X 75 X 203.2
450 X 80 X 127



GENERAL PURPOSE GRINDING WHEELS (OFF HAND, BENCH, PORTABLE GRINDER)

- Sterling's vitrified bonded general purpose grinding wheels for use on bench, floor stand and pedestal grinders are most economic and efficient in grinding of all steels.
- These wheels are made of specially processed Brown Aluminium Oxide (A) and Silicon Carbide (Green & Black) Abrasives that give rapid grinding action, cooler cutting and excellent finish. The self-dressing property of these abrasives results in higher productivity of the wheels.

FEATURES

- Ability to grind a wide variety of materials.
- Safe operation.
- Tough brown aluminium oxide wheels are recommended for non-steel and non-ferrous applications.
- Silicon carbide wheels are recommended for steel and steel alloys.

Typical Applications

- Grinding of excess materials in castings and forgings, Re-sharpening of single point cutting tools
- Grinding of excess material in large castings and forgings
- Smoothing of weld seams and to give better finish



Application

Commonly Used Sizes (In mm)			
Size Dia x Thick x Bore	Specification	Size Dia x Thick x Bore	Specification
150 X 13 X 31.75	A24 R5 V9	200 X 25 X 31.75	A60 L5 VC10
150 X 13 X 31.75	A60 L5 VC10	200 X 25 X 31.75	C24 S5 V13
150 X 20 X 31.75	A24 R5 V9	250 X 25 X 31.75	A24 R5 V9
150 X 20 X 31.75	A36 P5 V9	250 X 25 X 31.75	A243 P5 V9
150 X 20 X 31.75	A46 P5 V9	250 X 25 X 31.75	A36 P5 V9
150 X 20 X 31.75	A60 L5 VC10	250 X 25 X 31.75	A46 P5 V9
150 X 20 X 31.75	C24 S5 V13	250 X 25 X 31.75	A60 P5 V9
150 X 25 X 31.75	A24 R5 V9	300 X 25 X 25.4 LB	A24 R5 V9
150 X 25 X 31.75	C24 P5 V13	300 X 25 X 25.4 LB	A36 Q5 V9
200 X 20 X 31.75	A60 L5 VC10	300 X 25 X 31.75	A24 R5 V9
200 X 25 X 31.75	A24 R5 V9	300 X 25 X 31.75	A36 Q5 V9
200 X 25 X 31.75	A36 Q5 V9	300 X 40 X 50.8	A24 R5 V9
200 X 25 X 31.75	A46 Q5 V9	300 X 40 X 50.8	A243 P5 V9



TOOL ROOM GRINDING WHEELS

- In the manufacturing and regrinding of cutting tools like Drills, Reamers, Milling Cutters, Gears, Hobs etc, tool room grinding wheel of different shapes are used to sharpen their cutting edges and to obtain required angle.
- Operations are carried out on the periphery of plain wheels, Face of Cup Wheel / Taper Cup Wheel and edges of Dish Wheels.
- Due to their friable nature and sharp edge retention properties, Sterling's Tool Room wheels give high productivity.
- Special bond system imparts following advantages:
 - Excellent form retention
 - Dimensional accuracy
 - Surface Finish
- Suitable for machines like Praga Tool and Cutter, PMT, BFW, MTC etc.

Recommendation

Material	Grading	
High speed steel	AA46/54 K5 VC8	
Tool steel	PAA46/54 K5 VC8	3CG 60 J5 V31
Tungsten carbide	GC60 K5 V4	
High alloy steel	AA60 K5 VC8	AA46/54 K5 VC8
Special tool steel	PAA60 K6 VC8	

Commonly Used Sizes (In mm)

100/71 X 40 X 31.75 (Taper Cup Wheel)	180 X 13 X 31.75
100 X 50 X 31.75 (Cup Wheel)	180 X 25 X 31.75
150 X 6 X 31.75	200 X 13 X 31.75
150 X 13 X 31.75	200 X 20 X 31.75
150 X 13 X 31.75 (Dish Wheel)	200 X 25 X 31.75



Application



MOUNTED POINTS, PLUGS & CONES

- Mounted points are capable of reaching places inaccessible to larger types of grinding wheels. It can be used safely on high speed portable grinding machines.
- Sterling's mounted points are available in various abrasives to suite every need of the end user.

Typical Application

- Deburring
- Tool sharpening
- Removing metal marks and parting lines
- Finishing cavities
- Smoothing intricate profiles of castings, forgings
- Die Grinding.
- Grinding of steel rolling rolls

Standard Spindles

- Type A - 6 and 6.35mm diameter
- Type B - 3, 6 and 6.35mm diameter
- Type W - 3, 6 and 6.35mm diameter



Applications

STICKS & STONES

Dressing sticks

- Dressing sticks are used for truing and dressing bench and pedestal grinding wheels to keep grinding wheel sharp and running smoothly.
- Sterling's dressing sticks are extensively used in glass industry for cleaning and conditioning.
- Dressing sticks are available in silicon carbide and white aluminium oxide.

FEATURES

- Free cutting and load resistant.
- Advanced fine grit technology for precision applications.
- Customization is possible to meet special dressing applications.

Honing Sticks

- Honing is the finishing of internal dimensions of automobile cylinder heads and other components when an excellent and accurate finish is required.
- Honing is generally performed with square, rectangle or specially shaped sticks or blocks.
- Certain honing sticks, particularly when used for steel, are treated with sulphur to increase stick life and prevent loading.

Recommendation

Material	Grading
Cast iron	C150 L V4
Carbon steel	AA150 L V18N (S)
Steel & Nitrally	AA150 H V18N (S)
Bearing steel	C180 N V4

(S) Indicates sticks treated with sulphur



Application



FEED / REGULATING GRINDING WHEELS

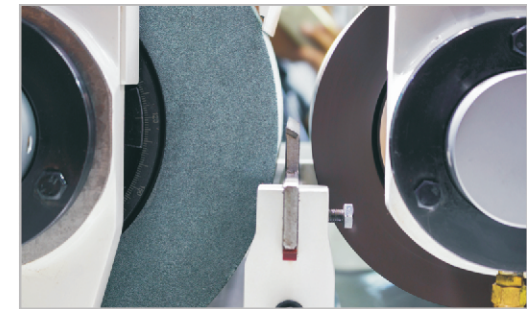
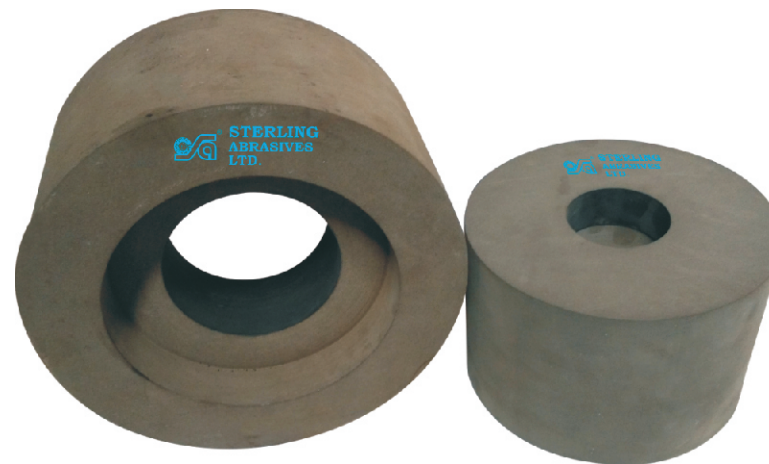
- Sterling's regulating wheels are made in rubberised resin by a special process that enhances the gripping power and life of the wheel. The regulating wheels come in a wide dimensional availability and are available in type 1, 5 and 7 with recesses according to customer specification. Suitable for in-feed and through-feed centreless applications.

Key Benefits

- Longer wheel life
- Better surface finish
- Less slippage

Commonly Used Sizes (In mm)

Size Dia x Thick x Bore	Specification
230 X 50 X 76.20	A120 BS75
230 X 100 X 76.20	A120 BS75
230 X 150 X 76.20	A120 BS75
300 X 150 X 127	A120 BS75
300 X 200 X 127	A120 BS75
350 X 150 X 127	A120 BS75
350 X 200 X 127	A120 BS75



Application

EPOXY BONDED WHEELS

- Epoxy wheels transcend the old-tradition technologies with a new proven systematic approach to improving processes. Epoxy bonded wheels can be modified to control the porosity and hardness of the wheel. With this flexibility, combined with a wide selection of grains, Sterling is able to customize the grade to match a wide variety of applications.

FEATURES

- Very efficient for grinding and finishing in single operation
- Capable for heavy stock removal on hardened metals
- Very short processing time

Epoxy wheels are found effective in the following applications.

- Cutlery, Scissor
- Bearing face grinding
- Industrial blades
- General surface grinding applications
- Cutter grinding
- Drill pointing
- Automotive
- Large variety of other applications



INTERNAL GRINDING WHEELS

- Internal grinding wheels are used in production of precision components demanding a highly accurate geometry and surface.
- Sterling's internal grinding wheels are available in sharp aluminium oxide grains for excellent cutting actions.

International Range

FEATURES

- High performance abrasive grain
- Reduction in grinding cycle, Reduction in dressing frequency
- Superior surface finish, Dimension accuracy

Professional Range	Premium Range	International Range
DA60/80 I7 VC10	PAA60 K5 VC10	MCA80 K8 VC10
AA80 I7 V615	PA60 I5 V15	3CG80 K7 VC10
DA80 J7 V615	PA90 J5 V615	3CG46 I8 V615

Premium Range

FEATURES

- Fast cutting, Good form retention
- Good surface finish

Typical Application

- Bearing
- Small Cylinder
- Compressor parts
- Injection nozzle parts
- Gear parts
- Hydraulic Cylinder
- Tappets
- Connecting rods

Commonly Used Sizes (In mm)

13 X 13 X 6.35

20 X 20 X 6.35

20 X 25 X 6.35

25 X 25 X 6.35

40 X 20 X 12.7

50 X 40 X 12.7



Application

AEROSPACE INDUSTRIES

- Sterling has developed solutions for many applications in the Aerospace industry where high performance and accuracy matters the most. Sterling's products are individually tested, thereby guaranteeing high productivity at optimized performance.

Component	Specification
Turbine blade	FSW80-3 E20 VC11/1CG80-1 E20 VC11
Fastener	A120 N5 VC8
Inconel material	4CG120 M4 V17

FEATURES

- Burn free surface
- Reduced dressing frequency
- Controlled wear and longer wheel life
- Superior form retention



Fastener



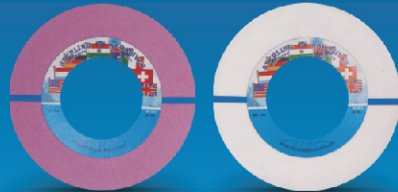
Application

SPECIAL GRINDING WHEELS AS PER REQUEST

GLASS GRINDING WHEEL



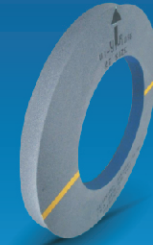
KEY STONE GRINDING WHEEL



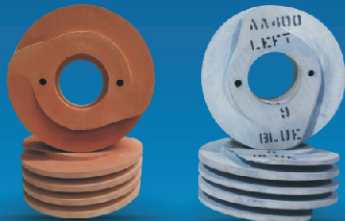
DRESSING WHEEL FOR CBN LAPPING WHEEL



CAGE GRINDING WHEEL



KNIFE GRINDING WHEEL



HUB BEARING TRACK GRINDING WHEEL



KNIFE GRINDING PLATE MOUNTED WHEEL



THREAD GRINDING WHEEL



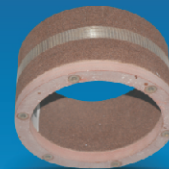
GEAR SHAVING CUTTER GRINDING WHEEL



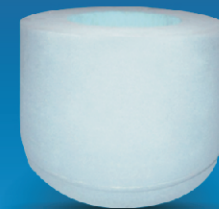
TAPER ROLLER END GRINDING WHEEL



VENEER KNIFE GRINDING WHEEL



RAIL AXLE GRINDING WHEEL



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