NEW!

T27 and T28

Type 27

General Purpose - A24R
- For general purpose grinding
- Longer life for fewer wheel changes

Fast Cut - A24N
- Rapid stock removal on a wide variety of materials
- Softer grade for faster material removal

Pipe Cut - Pipeline grinding/cutting wheel - A24T
- Performance engineered for use on pipeline construction
- Designed for aggressive grinding and cutting on all grades of steel
- Superior performance on heavy wall, high carbon steel

Part No. (Gen. Purp. A24R)	Part No. (Fast Cut A24N)	Part No. (Pipe Cut A24T)	Size (dia. x thick. x arbor)	Max RPM
27-41838			4 x 1/8 x 3/8	15,000
41858			4 x 1/8 x 5/8	15,000
27-41438			4 x 1/4 x 3/8	15,000
41458			4 x 1/4 x 5/8	15,000
4121878	27FC45187	27PC45187	4 1/2 x 1/8 x 7/8	13,300
41287T	27FC4518T	27PC4518T	4 1/2 x 1/8 x 5/8-11	13,300
4121478	27FC45147		4 1/2 x 1/4 x 7/8	13,300
41247T	27FC4514T		4 1/2 x 1/4 x 5/8-11	13,300
51878			5 x 1/8 x 7/8	12,220
587T			5 x 1/8 x 5/8-11	12,220
51478			5 x 1/4 x 7/8	12,220
547T			5 x 1/4 x 5/8-11	12,220
0787	27FC7187		7 x 1/8 x 7/8	8,600
787T	27FC718T	27PC718T	7 x 1/8 x 5/8-11	8,600
0747	27FC7147		7 x 1/4 x 7/8	8,600
747T	27FC714T		7 x 1/4 x 5/8-11	8,600
0987			9 x 1/8 x 7/8	6,640
987T		27PC918T	9 x 1/8 x 5/8-11	6,640
0947	27FC9147		9 x 1/4 x 7/8	6,640
947T	27FC914T		9 x 1/4 x 5/8-11	6,640

Type 28

Part No	Size	Grade	Max RPM
0748T	7 x 1/4 x 5/8-11	A24R	8,600
948T	9 x 1/4 x 5/8-11	A24R	6,640

Razor Cut

- .045 Ultra thin cutting wheel
- Quick and easy cutting
- Aluminum oxide wheels for steel and stainless steel
- Zirconia wheels for steel, stainless steel and aluminum
- Iron-free eliminates contamination on stainless steel

Part No. (Aluminum Oxide A46V)	Part No. (Zirconium ZA46T)	Size (dia. x thick. x arbor)	Max RPM
27RC457	27RCZ457	4 1/2 x .045 x 7/8	13,290

B-Flex Type 27 & 29 Reinforced

- **Grind and Finish**...can remove material as aggressively as a 24 grit depressed center wheel, and then blend in a "ready to paint" finish like a sanding disc.
- **Flexibility**...flexes to follow contoured surfaces. A smooth finish with no gouging.
- **Versatility-No loading-No glazing**...one specification performs on a wide range of materials. No loading on soft material such as aluminum plus no glazing on hard material such as stainless steel.
- **Long life and economy…**has an impressive ratio of material removal.
- **M-Medium Grade…** general purpose, metal grinding/finishing comparable to 24 through 60 grit sanding disc.
- **Iron-free..** for steel, stainless steel and aluminum.

Part No	Size (dia. x thick. x arbor)	Type	Max RPM	Spec
4A27M	4 x 1/8 x 5/8	27	15,000	Medium
45A27M	4 1/2 x 1/8 x 7/8	27	13,000	Medium
45A27TM	4 1/2 x 1/8 x 5/8-11	27	13,000	Medium
5A27M	5 x 1/8 x 7/8	27	12,000	Medium
7A27M	7 x 1/8 x 5/8-11	27	8,600	Medium
7A29M	7 x 1/8 x 5/8-11	29	8,600	Medium

CP50 Adapter Kit

- The CP50 Adapter Kit includes all parts necessary to properly mount a 7" or 9" Type 27 or 28 wheel on grinders with 5/8-11 NC spindles. One per package.

NEW!

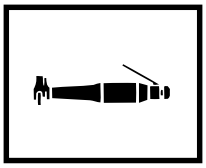
Type 1 Cut-Off Wheels

BB-3825 Adapter Mandrel

- Permits the use of wheels with $^3/_8$" arbor hole on die or pencil grinders with a $^1/_4$" chuck. For wheels up to 4" diameter and $^1/_2$" thickness. One per package.

Specifications For Die Grinders Only

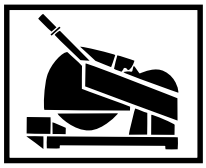
- **A60T, A46T, A36R: General Purpose Metal**
  Cutting - .035, $^1/_{16}$", $^1/_8$", and $^3/_{16}$" thickness designed for fast, burr free cutting and slotting. Ideal for thin wall tube.
- **A36Q: Cutting & Peripheral Grinding**
  Grinding - from $^3/_{16}$" - $^1/_2$" thick, these wheels perform on weld burr removal and surface conditioning of metal.



Type-1 Die Grinders-reinforced

- For use on die grinders, small wheel grinders and some end grinders with straight or flexible shafts.
- Indispensable aids to production, construction and maintenance at refineries, power plants, foundries and fabrication shops.
- Wheel composition meets requirements of nuclear fabrication, pressure vessel and piping projects.
- Small diameter cut off wheels are available with $^1/_4$" arbor.

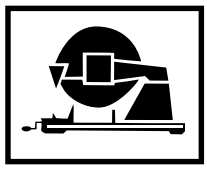
Part No	Size	Grade	Max RPM
203538	2 x .035 x $^3/_8$	A60T	31,513
211638	2 x $^1/_{16}$ x $^3/_8$	A46T	31,513
21838	2 x $^1/_8$ x $^3/_8$	A36R	31,513
303538	3 x .035 x $^3/_8$	A60T	25,461
311638	3 x $^1/_{16}$ x $^3/_8$	A46T	25,461
31838	3 x $^1/_8$ x $^3/_8$	A36R	25,461
31438	3 x $^1/_4$ x $^3/_8$	A36Q	20,372
403538	4 x .035 x $^3/_8$	A60T	19,100
411638	4 x $^1/_{16}$ x $^3/_8$	A46T	19,100
41838	4 x $^1/_8$ x $^3/_8$	A36T	19,100
41438	4 x $^1/_4$ x $^3/_8$	A36Q	19,100



Type-1 Dry Cutting on Stationary Machines-reinforced

- These wheels are designed for use on popular chop stroke machines, oscillating machines and other cut off machines where the work is fixed and the cutting plane of the wheel is controlled.

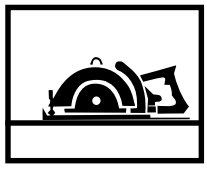
Part No	Size	Grade	Max RPM
103258	10 x $^3/_{32}$ x $^5/_8$	A30S	6,112
101858	10 x $^1/_8$ x $^5/_8$	A30R	6,112
12181	12 x $^1/_8$ x 1	A30R	5,092
14181	14 x $^1/_8$ x 1	A30R	4,366
16181	16 x $^1/_8$ x 1	A30R	3,820
203161	20 x $^3/_{16}$ x 1	A30R	3,056



Type-1 Metal Cutting on Chopsaws-reinforced

- Use on low horsepower chopsaw machines only.
- Aluminum oxide grain.
- Use on angle iron, channel iron, and other ferrous metals.
- **A24P Fast Cut** - Fast cutting.
- **A30R General Purpose** - Longer life, burr-free cutting

Part No. (Fast Cut A24P)	Part No. (Gen. Purp. A30P)	Size	Max RPM
1FC14321	12321	12 x $^3/_{32}$ x 1	5,092
	14321	14 x $^3/_{32}$ x 1	4,366
	16321	16 x $^3/_{32}$ x 1	3,820



Type-1 Circular Saws-reinforced

- Will transform any circular saw into a fast, effective economical tool to cut steel (in sheet, bar or profile) as well as concrete, brick and masonry products.
- These wheels feature a diamond arbor and are supplied with a $^5/_8$" round bushing for use with both standard circular saw arbors.

Part No	Size	Grade	Max RPM
ME718DIA	7 x $^1/_8$ x $^5/_8$	A36TBF	8,600
ME818DIA	8 x $^1/_8$ x $^5/_8$	A36TBF	7,500
MA718DIA	7 x $^1/_8$ x $^5/_8$	C36R	8,600
MA818DIA	8 x $^1/_8$ x $^5/_8$	C36R	7,500

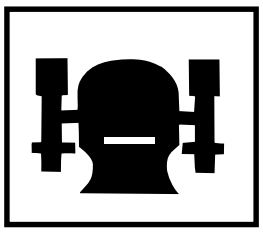
A36TBF for metal, C36R for masonry.

NEW!

Bench & Pedestal Grinding Wheels / Cones & Plugs / Mounted Points

Straight Resinoid Wheels - non-reinforced

- Resin bonded wheels designed for general purpose shop grinding. More rugged than vitrified wheels.



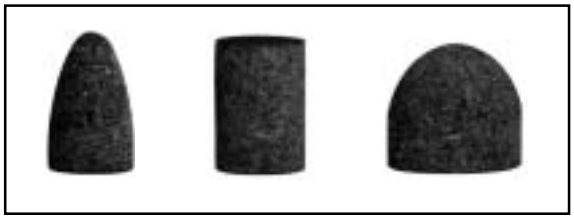
- Fine: 46-60 grit
- Medium: 30-36 grit
- Coarse: 20-24 grit

Wheels with 1" arbors have 1/2", 5/8", 3/4", Bushings included
Wheels with 1 1/4" arbors have 3/4", & 1", Bushings included

Part No.	Size	Grit	Max RPM
6341C	6 x 3/4 x 1	Coarse	6,048
6341M	6 x 3/4 x 1	Medium	6,048
6341F	6 x 3/4 x 1	Fine	6,048
611C	6 x 1 x 1	Coarse	6,048
611M	6 x 1 x 1	Medium	6,048
611F	6 x 1 x 1	Fine	6,048
711C	7 x 1 x 1	Coarse	5,183
711M	7 x 1 x 1	Medium	5,183
711F	7 x 1 x 1	Fine	5,183
811C	8 x 1 x 1	Coarse	4,538
811M	8 x 1 x 1	Medium	4,538
811F	8 x 1 x 1	Fine	4,538
10114C	10 x 1 x 1 1/4	Coarse	3,629
10114M	10 x 1 x 1 1/4	Medium	3,629
10114F	10 x 1 x 1 1/4	Fine	3,629
12214C	12 x 2 x 1 1/4	Coarse	3,023
12214M	12 x 2 x 1 1/4	Medium	3,023
12214F	12 x 2 x 1 1/4	Fine	3,023
14214C	14 x 2 x 1 1/4	Coarse	2,592
14214M	14 x 2 x 1 1/4	Medium	2,592

Dimensions Diameter x Thickness x Arbor				MAX RPM
1 x 3 x 3/8-24	C1610303	———	C18R10303	36,300
1 1/2 x 2 1/2 x 3/8-24	C1615253	P1815253	C18R15253	24,200
1 1/2 x 2 1/2 x 5/8-11	C1615255	P1815255	C18R15255	24,200
1 1/2 x 3 x 3/8-24	C1615303	P1815303	C18R15303	24,200
1 1/2 x 3 x 5/8-11	C1615305	———	C18R15305	24,200
1 3/4 x 3 x 3/8-24	C16134303	———	———	20,700
2 x 3 x 3/8-24	C1620303	———	———	18,100
2 x 3 x 5/8-11	C1620305	P1820305	C18R20305	18,100
3 x 3 x 5/8-11	C1630305	———	C18R30305	12,000
3 x 4 x 5/8-11	C1630405			12,096

Cones & Plugs



- **A20PB6…**aluminum oxide general purpose. Use on mild steels, stainless steels, alloys - most metals and applications.
- For grinding pressure vessels and piping, boiler retubing and casting.
- All plugs and cones are dressed, with mold skin removed, ready to cut.

Vitrified Mounted Points

Mounted points are made with premium oxide grains and a strong vitrified bond.
Used for grinding and deburing metals.

Shape	Type	Part No.	Size (dia. x thick. x shank)	Grade	Color	RPM
	A1	A1BG	3/4 x 2 1/2 x 1/4	46-P	Blue-Gray	19,800
	A3	A3BG	1 x 2 3/4 x 1/4	46-P	Blue-Gray	16,100
	A11	A11BG	7/8 x 2 x 1/4	46-P	Blue-Gray	19,860
	W220	W220-D2BG	1 x 1 x 1/4	46-P	Blue-Gray	25,500
	W222	W222-D2BG	1 x 2 x 1/4	46-P	Blue-Gray	15,900
	W225	W225-D2BG	1 1/4 x 1/4 x 1/4	46-P	Blue-Gray	30,560

NEW!

Cup Wheels & Resin Fiber Discs

Part No	Size	Grade	Max RPM
Without Safety Back - Aluminum Oxide			
0004	4/3 x 2 x 5/8-11	A16Q4B	9,000
0005	5/4 x 2 x 5/8-11	A16Q4B	7,200
0006	6/4 3/4 x 2 x 5/8-11	A16Q4B	6,000
With Steel Safety Back - Aluminum Oxide			
004S	4/3 x 2 x 5/8-11	A16Q4B	9,000
005S	5/4 x 2 x 5/8-11	A16Q4B	7,200
006S	6/4 3/4 x 2 x 5/8-11	A16Q4B	6,000
Without Safety Back - Silicone Carbide			
004C	4/3 x 2 x 5/8-11	C16PB	9,000
006C	6/4 3/4 x 2 x 5/8-11	C16PB	6,000

Cup Wheels

Type 11 Flaring Cup Wheels

- **A16Q4B…**
  Aluminum oxide specification for general purpose work. Mild steels, stainless steels, alloys, cast steels. Most metals, most applications.
- **C16PB…**
  Silicon carbide specification for general purpose work on masonry.

Part No. Aluminum Oxide	Part No. Zirconium	Grit	Size	Arbor Hole
4A24		24	4"	5/8"
4A36		36	4"	5/8"
4A50		50	4"	5/8"
4A60		60	4"	5/8"
4A80		80	4"	5/8"
4A100		100	4"	5/8"
4A120		120	4"	5/8"
45A16		16	4 1/2"	7/8"
45A24	45Z24	24	4 1/2"	7/8"
45A36	45Z36	36	4 1/2"	7/8"
45A50	45Z50	50	4 1/2"	7/8"
45A60	45Z60	60	4 1/2"	7/8"
45A80	45Z80	80	4 1/2"	7/8"
45A100		100	4 1/2"	7/8"
45A120		120	4 1/2"	7/8"
5A24	5Z24	24	5"	7/8"
5A36	5Z36	36	5"	7/8"
5A50	5Z50	50	5"	7/8"
5A60	5Z60	60	5"	7/8"
5A80	5Z80	80	5"	7/8"
5A100		100	5"	7/8"
5A120		120	5"	7/8"
7A16		16	7"	7/8"
7A24	7Z24	24	7"	7/8"
7A36	7Z36	36	7"	7/8"
7A50	7Z50	50	7"	7/8"
7A60	7Z60	60	7"	7/8"
7A80	7Z80	80	7"	7/8"
7A100		100	7"	7/8"
7A120		120	7"	7/8"
9A16		16	9"	7/8"
9A24		24	9"	7/8"
9A36		36	9"	7/8"
9A50		50	9"	7/8"
9A60		60	9"	7/8"
9A80		80	9"	7/8"
9A100		100	9"	7/8"
9A120		120	9"	7/8"

Resin Fiber Discs

Aluminum Oxide

- Weld smoothing and cleaning.
- All purpose grinding-metals, plastic, wood and fiberglass.
- Rust removal.
- Paint removal (boats, walls, automobiles).
- Dimensional reduction.
- Removal of imperfections.

Zirconium

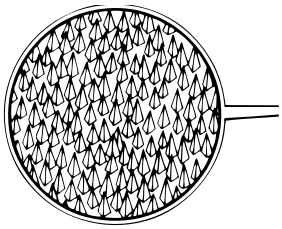
- High-performance metal grinding for stainless steel,
  tool steel and hard to grind materials.

Aluminum Oxide Grain

- Grains wear during use.
- Fast, smooth cutting action.
- High resistance to heat, glazing and loading.

Zirconium Grain

- Grains fracture during use, resharpening themselves as they grind. They have 2-3 times longer life than conventional grains.
- Superior cutting action.
- Ultra-high resistance to heat, glazing and loading.



Electrostatically Deposited Grains

- Ensures complete grain coverage including the outside edge of the disc.
- The grain is evenly dispersed and oriented with cutting edge facing up or outwards from the disc.

NEW!

Pads For Resin Fiber Sanding Discs

High quality general purpose pads for use with any sanding disc with a 7/8" diameter arbor hole. Each pad includes retaining nut to fit tools with 5/8-11 shafts.

Part No.	Diameter	Arbor	Flex
PP-4250	4.5"	5/8-11	Firm
PP-5000	5"	5/8-11	Firm
BP-700	7"	5/8-11	Firm
BP53230	Wrench for all retaining nuts		
BP505811	Spare nut for 7" & 9" pads		
BP455811	Spare nut for 4.5" & 5" pads		

Ribbed Face

Ribbed face pads are recommended with grits 36 and coarser. They are used for heavy stock removal applications. The ribs allow air to pass under the disc for cooler operation.

Part No.	Diameter	Arbor	Flex
BP-400	4"	5/8-11	Medium
BP-450	4.5"	5/8-11	Medium
BP-500	5"	5/8-11	Medium
BP-700M	7"	5/8-11	Medium
BP-700F	7"	5/8-11	Soft
BP-900	9"	5/8-11	Medium

Smooth Face

Smooth face pads are recommended with grits 36 and finer. They are more flexible than ribbed face pads.

Back-up Pads For Surface Conditioning Discs

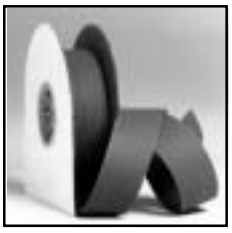
These pads have a special extended hook system to firmly hold surface conditioning discs. The pads feature a thin cushioning layer to provide the ideal flexibility for Surface Conditioning Discs.

Part No.	Diameter	Arbor
SCP-2	2"	1/4" shank
SCP-3	3"	1/4" shank
SCP-4	4"	5/8-11
SCP-45	4 1/2"	5/8-11
SCP-5	5"	5/8-11
SCP-7	7"	5/8-11

Shop Rolls

- Abrasive shop rolls are manufactured of flexible material and are a must for any metal fabrication and machine shop. Ideal for light touch-up on finishing small parts.
- Aluminum oxide grain.

Part No. 1 1/2" x 50 yd.	Part No. 2" x 50 yd.	Grit
15-40	2-40	40
15-60	2-60	60
15-80	2-80	80
15-100	2-100	100
15-120	2-120	120
15-180	2-180	180
15-240	2-240	240
15-320	2-320	320



Safety Guide

General Safety Guide

- Grinding wheels improperly used are dangerous. Be safe. Protect yourself. Adhere to American National Standards Institute (A.N.S.I.) standards.
- A.N.S.I. and the Occupational Safety & Health Administration (OSHA) have published standards concerning the proper use, handling and storage of abrasive wheels.
- It is recommended that all personnel involved in the use, handling and purchasing of abrasive wheels become familiar with these standards.
- The following guidelines are based on material contained in A.N.S.I. B7-1 "Safety Requirements for the Use, Care and Protection of Abrasive Wheels."
- This information is not intended as a substitute for a full knowledge of A.N.S.I. and OSHA Standards.

Warning

- Avoid inhalation of dust generated by grinding and cutting operations. Exposure to dust may cause respiratory ailments. Use approved NIOSH and MSHA respirators, safety glasses, faceshields, gloves and protective clothing. Provide adequate ventilation to eliminate dust, or to maintain dust level below the Threshold Limit Value for nuisance dust as classified by OSHA.

Portable Grinding

- All portable grinders should be inspected at regular intervals to ensure that mounting flanges are in good condition, of proper size and shape, that the speed governing device is functioning properly, and that no damage has occurred to the grinder or wheel as a result of abusive use or careless handling.

Cutting Off

- Must be rigid and maintain straight line cuts.
- Must provide "hold down" of work piece; avoids pressure.
- Must have adequately heavy arbor and arbor bearings.
- Must have proper drive flanges, min. 1/4" wheel diameter. Flanges must be clean, straight, have the same diameters, and have the proper arbor clearance.
- Must have adequate guard over wheel, at least 1/2" diameter.
- Must be maintained in first class condition.
- DO - always start cut gently.
- DO NOT- grind on the side of a cut off wheel or stand directly in front of a grinding wheel when a grinder is started.

Solving User Problems with Abrasives

When users complain of problems with resin bonded abrasives, they usually can be attributed to one of the following causes:

- The wrong application for the wheel being used.
- The operator is not using the product correctly.
- The wheel is being used on a tool other than for which it was designed.
- The wheel is being used on the proper tool, but one that is worn or defective.

Wrong Application:

- The most common problem with abrasives is the wrong product application. The use of cut-off and grinding wheels that are too hard is a frequent misuse. Operators want long life and tend to opt for harder wheels than they should be using. If the wheel is too hard for the material being cut or ground, it will generate excessive heat causing wheel distortion or chipping. Excessive heat can cause cut-off wheels to not cut straight or produce too much burring.

Operator Misuse:

Some of the most common misuses encountered in the field are:

- Using depressed center wheels too flat causes face wear instead of edge wear.
- Not having the material, being cut or ground, properly clamped.
- Excessive force or too little force with cut-off wheels.

Using Wheels on the Wrong Tool:

- All abrasive wheels are designed to be used on specific types of tools. The tool factors include:rotation speed, power, wheel flanges or attachment means, safety guarding, and whether it is for fixed or off-hand use. Using wheels on tools that provide appreciably different conditions can cause serious safety problems and performance.

Defective Tools:

A worn tool can make an abrasive wheel look like a poor or defective product. Some of the most frequently encountered problems are:

- Bad bearings can cause excessive vibration or chattering.
- Mounting flanges or uneven size can warp cut-off wheels, causing them to cut unevenly. Flanges that are not clean and free from blotters can result in off-center mounting.
- A worn arbor shaft can cause the wheel to mount off center.
- Loss of power due to motor or power transmission problems will cause the wheel to slow and not cut properly.