

USA MADE FLAP DISC



CGW Offers the **Most Extensive Line** of Flap Discs in the Marketplace

CGW flap discs blend and finish in one operation which replaces the traditional two-step grinding process of T27 grinding wheels and sanding discs.

Flap discs provide a more consistent finish.

CGW flap discs reduce processing time which increases productivity for lower parts finishing costs and provides an overall cost savings.

CGW flap discs are engineered for full use of the coated abrasive material. Layering the abrasive cloth flaps allows the discs to wear evenly which constantly exposes new sharp grain.

CGW's flap disc program contains fully consumable fiberglass and rigid aluminum backings.

CGW Program Features

Bonding system: CGW uses a resin bond developed especially for flap disc applications which withstands the high temperatures that develop when a flap disc is in action – on average 16,000 SFPM (surface feet per minute). This strong bond provides for longer grain retention and leads to better stock removal and longer life.

Backing system: The water resistant polyester-cloth (C3, A3, Z-Stainless, Aluminum) or poly-cotton (Z3, Z-PCE, Z-THRU) backing provides greater strength for grain retention, low stretch, and is tougher than typical cotton cloths. CGW also offers the cotton backed Z-Flex for applications that require maximum flexibility.

Backing Plate: Fiberglass, trimmable (see pg 12).

Multiple Grains: CGW offers multiple grain options; the right grain for the work at hand.

Diameters: Available in 2" – 7"

Grits: 24 – 120

Design Type (Shape): Type 27, Type 29 and Compact (see illustrations on page 7)

4-1/2" Z3 has five disc densities: Regular, Compact, Ultimate, XL, and XXL (see page 8). Compact and Ultimate have 20-25% more material than regular. XL and XXL have 35-80% more material than regular.

5/8-11 hub available for 4-1/2" – 7" flap discs. 4" has 3/8-24 available.

FEATURES & BENEFITS

CGW – USA Flap Disc Market Leader



XL40 – The Production Grinding Workhorse

TASK APPLICATION	RECOMMENDED FLAP DISC MATERIAL	SIZES AVAILABLE
Metal/Weld Removal	Z3 / C3	4, 4½, 5, 6, 7
Stainless Steel	Z-Stainless / Z3 / C3	Z3 - 4, 4½, 5, 6, 7 Z-Stainless - 4½, 5, 7
Precise Welds	Z-THRU®	4½, 5
Aluminum	Aluminum / A3	A3 - 4, 4½, 5, 7 Aluminum - 4½, 5, 7
Non Ferrous Metals/Soft Metals	A3	4, 4½, 5, 7

What Type (Shape) Of CGW Flap Disc To Use



T-27/Flat - For working on flat grinding surfaces. Most efficient when used between 0°-15° angle. The best choice for smooth finishing.



T-29/Conical - For working on contoured and edge work. Flaps are angled at 8 degrees for greater surface contact and aggressive use. Best used at 15°-25° angle.



Hybrid/Compact - For working on rough edge work. Flaps are compressed at a 4 degree angle for flap edge strength. **All items marked compact in name use this backing plate.** Best used at 5°-20° angle.

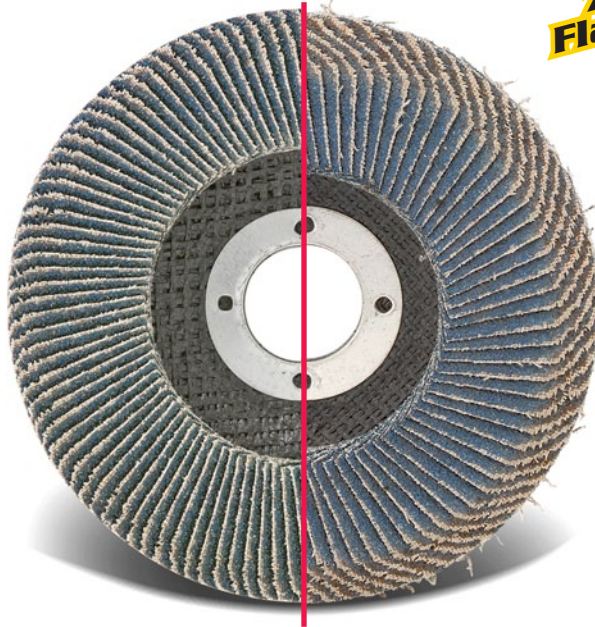
USA MADE FLAP DISC



**CGW XXL Z3 Flap Discs
Outgrind the Competition***

**Z3 is the best
Flap Disc material
in the world!**

CGW XXL Z3 Flap Disc



Top Competitor Flap Disc
1/3 less life

* Each 40 grit flap disc was tested on carbon steel for one 5-minute cycle.

CGW 4 1/2 Z3 T27 Flap Disc Comparison **5 Material Configurations**

Flap Disc Type



Regular (pg 14-15) – Fast removal rate for aggressive use and heavy duty applications.

Edge Grinding



Compact (pg 17) – Hybrid compact disc design – Flaps are compressed and compacted at a 4 degree angle. **20% more material** than regular Z3 flap discs.

Flexible for Finish Work



Ultimate (pg 16) – Z3 Ultimate flap discs have fewer flaps than Z3 XL flap discs which allows the material to further spread out **reducing heat generation** for easier break down compared to XL discs.

Production grinding



XL (pg 14-15) – Approximately **35-55% more material** than regular Z3 flap discs.

80% More



XXL (pg 17) – **10-20% more material** than XL flap discs. Extra wide flaps for longer working life.

Note: 40 grit discs shown

Samples Available for Testing - Contact CGW for Details

FEATURES & BENEFITS

Flap discs are used for rough grinding and finishing in one step.

- Replaces the combined work of grinding wheels and fiber discs.

**Fastest Growing
Abrasive Category**

CGW Flap Discs vs. Grinding Wheels

- Faster Stock Removal – No gouging and smooth finish.
- Cooler Performance – Less glazing and loading. Less re-work.
- Consistent Finishing – Easier to control for better quality and no discoloration.
- Easier Operation – Lightweight, layered design has a cushioning effect for reduced operator fatigue and reduced noise and vibration.



CGW Flap Discs vs. Resin Fibre Discs

- **20 Times Longer Life** – Longer working life for great cost savings.
- Self-Sharpening Action – More consistent finishes.
- Easier Storage – No problems with humidity.
- No Back-Up Pad Needed – Reinforced phenolic fiberglass backing wears away with the flaps. No marring, unlike plastic or aluminum backings.



CGW Flap Discs Only vs. Grinding Wheels + Resin Fibre Discs

- Faster stock removal, less gouging, reduced operator fatigue, and longer life
- Intermediate *and* finishing of welds
- All ferrous *and* non-ferrous materials
- Deburring, deflashing, rust removal *and* snagging
- Surface finishing, blending *and* stock removal
- Cleaning *and* finishing



LABORATORY RESULTS

Flap Disc Performance Comparatives

Flap Disc Specimens

- Disc #1: CGW A3 Material 7"x7/8" 40 Grit (A/O material), Type 29, Regular Density
- Disc #2: CGW Z3 Material 7"x7/8" 40 Grit (A/Z material), Type 29, Regular Density
- Disc #3: CGW Z-Stainless Material 7"x7/8" 40 Grit (A/Z material), Type 29, Regular Density
- Disc #4: Competitor's Material 7"x7/8" 40 Grit (A/Z material), Type 29, Regular Density

Power Tool Source

Bosch GWS 20-80, 2KW, 8,500 RPM Right Angle Grinder

Test Parameters

- Engagement load of power tool: 11 lbs. vertical force
- Angle of disc contact: 10 degrees (disc automatically changes its tilt, left to right, 5 times/minute)
- Rotation and speed of material: Clockwise @ 21 RPM
- Measurement criteria: Each disc was tested for six 5-minute grinding cycles, totalling 30 minutes. After each 5-minute cycle the disc and material was weighed to determine weight loss during cycle.

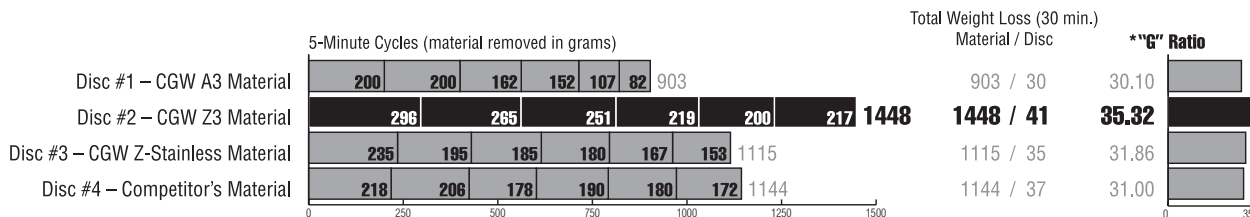
"G" Ratio

The "G" Ratio is the number of grams removed (material) per gram of abrasive cloth (disc) lost during test.

Carbon Steel Test

Test Material

1010 Carbon Steel Tubing – 5/16" wall thickness



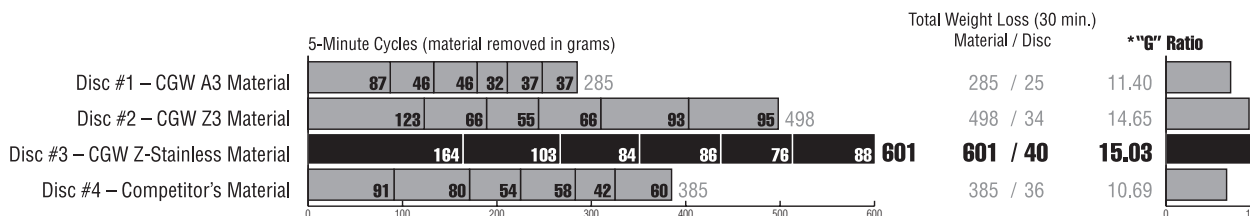
*Note: The "G" Ratio is the number of grams (material) per gram of abrasive cloth (disc) lost during test.

CGW Z3 flap discs have a 36.6% stock removal advantage and a +13.9% "G" ratio compared to competitor's material. Having a superior stock removal rate coupled with a cost of labor savings make the CGW Z3 flap disc the top choice for carbon steel applications.

Stainless Steel Test

Test Material

316 Stainless Steel Tubing – 3/16" wall thickness



*Note: The "G" Ratio is the number of grams (material) per gram of abrasive cloth (disc) lost during test.

CGW Z-Stainless flap discs have a significant +56.1% stock removal rate and a +40.6% "G" ratio compared to competitor's material. Utilizing a grinding aid that reduces heat and lubricates the grain during operation, the CGW Z-stainless flap disc is the superior choice for stainless steel applications.