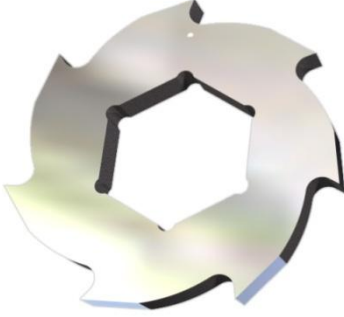




## TECHNICAL BULLETIN

Topic:	<b>JWCE's Cutters</b>	Date:	<b>8/9/10</b>
To:	<b>All JWC Staff, Reps and Distributors</b>	Code:	<b>JWCE-TB-20100809-01</b>
From:	<b>Alec Mackie, Marketing Manager</b>	<b>PUBLIC **Okay to release**</b>	
Product: <b>Sludge Monster, Mini Monster, Muffin Monster, Macho Monster, and all Channel Monsters</b>			

Over the last four decades JWCE has gathered considerable data on cutters, materials and performance. In this document we'll outline our cutter options and how they can be used to improve your system.

			
<b>Cutter</b>	<b>7-tooth</b>	<b>11-tooth</b>	<b>13-tooth</b>
<b>Standard Material</b>	8620 alloy steel , through hardened and heat treated. 60-65 HRc	8620 alloy steel , through hardened and heat treated. 60-65 HRc	8620 alloy steel , through hardened and heat treated. 60-65 HRc
<b>Uses</b>	Pump stations; JWCE's screening systems; prisons; jails and industrial shredding. <b>New JWCE exclusive thicker cutter 0.438" (11mm).</b>	Cuts through plastics and latex well. Sludge grinding.	Centrifuge or heat exchanger protection; fine grinding. <b>JWCE exclusive (specifiable).</b>
<b>Equipment</b>	Honey Monster, Screenings Washer Monster, Auger Monster, Channel Monster.	Muffin Monster, Sludge Monster and Mini Monster.	Muffin Monster, Sludge Monster and Mini Monster.

## CUTTER MATERIALS

**AISI 8620** alloy steel has a carbon content of 0.2%, making it ideal for carburizing. Because it is an alloy, it can also be through-hardened first to give it desired core-strength characteristics. The combination of through-hardening followed by carburization allows cutters made from 8620 to be very strong and wear resistant. Rockwell hardness between 60-65 HRC. In independent laboratory abrasion tests the 8620 cutter had significantly less material removed than 4130 and AR500 under identical test conditions.

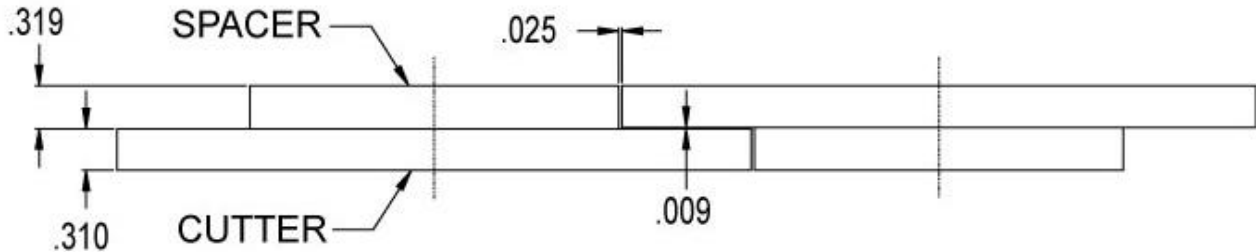
## OPTIONS

JWCE offers several cutter options:

- **17-4 stainless steel** - An option for specialized applications, such as sites near or using salt water, high/low pH or industrial facilities, where corrosion resistance is more important than abrasion resistance.
- **AR500** is a common name for an abrasion and impact resistant proprietary alloy that is used primarily in the mining industry. 500 refers to its Brinell hardness number of 500 BHN. This is equivalent to a Rockwell hardness of approx 52 HRC. Cutters made from AR500 can only be laser-cut from plate stock and ground to finish thickness and diameter. Since AR500 plate stock is already heat treated, no additional heat treatment is required.
- **3 tooth cutters** – The fish grinding cutter was developed for fish cleaning stations and food processing applications where strong pulling and grabbing action is needed to process slippery, spherical or fibrous materials. Currently produced in 4130 alloy steel 45-50 HRC or 17-4 sst 34-38 HRC. Not suitable for sewage applications.



## TOLERANCES



JWCE's innovative design and high quality manufacturing result in precision meshing of cutters. Minimal gaps of 0.009" (0.23mm) allow for effective grinding with minimal cutter to cutter contact (and wear). The tight tolerances JWCE achieves allows cutters to more efficiently slice through debris instead of crushing it.

## THICKNESS



<b>7-tooth</b>	<b>11-tooth</b>	<b>13-tooth</b>
Thickest at 0.438" (11mm)	0.310" (8mm)	Slimmest at 0.215" (5.5mm)
Coarse grind. Good for open channel products and grinding prior to our auger screen systems.	Good balance between particle size and solids handling ability	Produces the smallest particle size available.

## HELICAL STACKING

The benefits of helical stacking include:

- ◆ Concentrates cutter force on fewer cutters at one time to improve shredding
- ◆ Encourages solids movement into chamber
- ◆ Reduces particle size (better tearing of solids)
- ◆ Improves energy efficiency



## CHANNEL MONSTERS® CUTTER SIZES

JWCE's high-flow Channel Monster grinders come in three series designations – 2.0, 2.5 and 3.0. Within each series we offer several models to properly match the flow rate and channel size of the site. Muffin Monsters use the 2.0 cutter sizes and Macho Monsters use the 2.5. The Channel Monster CDD9020-XD uses the 3.0.





Corporate Headquarters  
 290 Paularino Avenue  
 Costa Mesa, CA 92626 USA  
 phone (949) 833-3888  
 toll-free (800) 331-2277  
 fax (949) 833-8858  
 jwce@jwce.com

**CUTTER PART NUMBERS**

Hex Size	2.0	2.5	3.0	4.0
Grinder Models	20000 Mini Monsters, 30000 Muffin Monsters, Channel Monster XD2.0	40000 Macho Monsters, Channel Monsters XD2.5	Channel Monster CDD9020-XD3.0	70000 Macho Monster
<b>7 Tooth</b>	30070-0007-AH (.438)	40070-0007-AH (.875)	60070-0007-AH (.875)	70070-0007-AH (.875)
<b>11 Tooth</b>	30070-0011-AH (.310)	40070-0011-AH (.438)	None	None
<b>13 Tooth</b>	30070-0013-AH (.215)	None	None	None

- end -

