Dig a hole and YOU'RE DONE! APP-M3-10

Muffin Monster® Manhole

Description

The Muffin Monster Manhole (M3) makes it easier to install a grinder in sewage lines. This fiberglass reinforced polyester (FRP) manhole has the exclusive Muffin Monster grinder that shreds troublesome solids and eliminates costly pump breakdowns. This new Muffin Monster Manhole option makes for a quick installation. Simply dig a hole and lower the prefabricated manhole into position in gravity fed sewer lines.

The M3 is customizable based on site requirements. The manhole diameter is 4' (1200mm). The height, as well as pipe size and the type of top (traffic or hatch), are customizable.

Features & Benefits

Dual Shafted Muffin Monster Grinder

- Low-speed, high torque grinder handles rags, rocks, wood, clothing, plastics and other debris
- JWC exclusive immersible motor.

Manhole

- Fiberglass Reinforced Polyester- High- strength, water tight
- Manhole barrel thickness: 1/2" (12mm), diameter: 4' (1200mm)

Installation and Maintenance

- Factory installed guide frame/access ladder make it easy to access the grinder
- Only maintenance is semi-annual inspection

Applications

 Jails, Prisons, Hospitals, Sewage Lines, Nursing Homes, Colleges, Pump Stations, and many more.







Exclusive

Muffin Monster Grinder



Top view of M3



Hatch access door to M3 (street manhole option also available)



Guide frame and access ladder inside an M3 (the grinder has been removed)



Guide frame and grinder



Muffin Monster with lifting bail (*optional extended shaft)



Muffin Monster controllers







Trust Monster Quality™

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Trust Monster Quality™









Muffin Monster sewage grinders are designed to protect pumps and other equipment by grinding down the toughest wastewater solids. Applications including:
 lift station, sludge lines;
 septage receiving stations;
 headworks screenings
 reduction, prisons and more.

10K series Muffin Monster®

The 10K Series Muffin Monster is a compact grinder, tough on solids in sludge and sewage applications. It fits into areas with limited space requirements while still providing the necessary power for downstream protection. The 10K Series is an ideal, low-cost solution that goes beyond sludge grinding at resource recovery facilities, and fits perfectly into office buildings, apartment complexes, resorts, retail centers and package treatment plants.

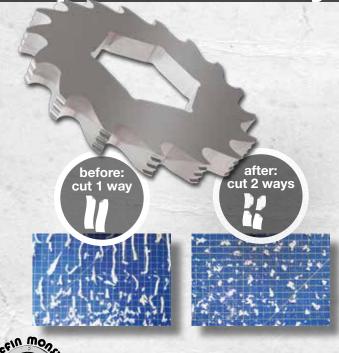
30K series Muffin Monster®

Troublesome solids are now easier than ever to reduce with the Muffin Monster dual-shafted grinder. Its slow speed, high-torque design shreds tough solids that typically cause sewer problems. With over 35,000 installations, the proven capabilities of the Muffin Monster is legendary in providing solutions for the ever more stringent operational needs arising throughout the industry.

40K series Muffin Monster[®]

The 40K Series Muffin Monster excels in wet and dry grinding applications. It's a powerful shredder for large sludge processing systems. It also serves in many industrial applications including fish and beef processing, petroleum, pulp and paper mills, chemical plants, and recycling plants. The proven capabilities of the Muffin Monster are now providing solutions for the ever more stringent operational needs arising throughout the industry.

wipes ready technology





Wipes Ready Cutters*

Achieve the desired 2-Dimmensional cutting capabilities to control both the width and length of output, preventing materials from forming long strips and reweaving in the waste stream.

- Cut wipes in 2 directions
- Smaller particle size
- No reweaving

Features

Dual Shafted Grinder

- Slow-speed, high torque grinders handle rags, rocks, wood, wipes, clothing, plastics and other debris.
- Capable of grinding a wider variety of solids than single shafted machines, macerators, or chopper pumps.

Compact and Efficient Design

- Adapts to pipelines or channels with little or no modification.
- Custom stainless steel frames allow easy installation in channels, wet wells and pump stations.
- In-line 30K Muffin Monster incorporate an easy to remove cutter cartridge.

Automated Monitoring and Controls

 Auto load sensing and reversals reduce interrupts and optimize the grinder's performance.

Benefits

Equipment Protection

 Protect pumps and other critical equipment from costly clogs and damage from tough solids.

Efficient Treatment Operations

- Grinding separates organic from inorganic materials in the waste stream.
- Organics stay in treatment process and screening are cleaner.

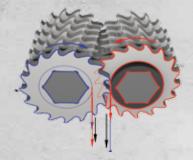
Lower Operating Cost

 Clear pipes and pumps means shorter pump run cycles and lower electrical costs.





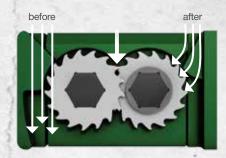




Optimized Cut Control*

Improve cutting by tailoring the speed of the new wipes-ready cutter rotation with optimized cut control.

- Cutters Stay Clean
- Prevents Long Strips



DELTA P* Side Rails

Ensure the capture of all items in the waste stream and drive debris into the cutter stack.

- Drives Debris into Cutters
- Prevents Build Up
- Enhances High Flow



Materials of Construction

Housings: Ductile iron

Cutters: Hardened alloy steel **Shafts:** Hardened alloy steel

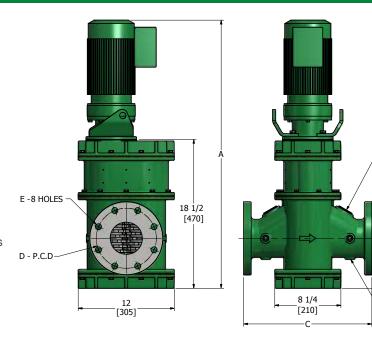
Mechanical Seals: Tungsten carbide faces

Specifications

2" (50 mm) hex shafts;

2 HP (2.2 kW) motor standard; 29:1 reducer **Cutter Size:** 4-3/4" (120 mm) diameter cutters

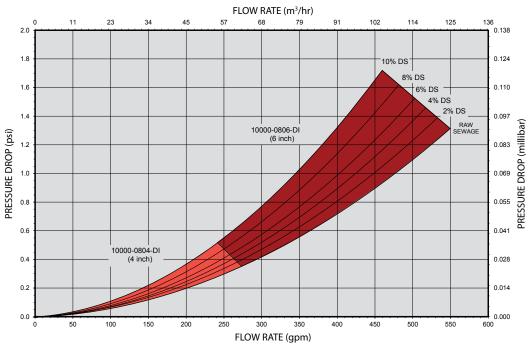
Seal Max Working Pressure: 90 PSI (6 bar)



1-1/2" NPT INSPECTION PORTS

1/2" NPT DRAIN PORTS

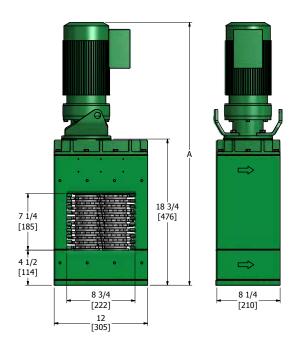
MODEL 10000



IN-LINE Model	Flow Rate* - gpm (m³/hr)	Pipeline Size - inches	Pressure Drop - psi (bar)	Standard Dimensions - inches (mm)				Drop - inches (mm) - inches (mm)				Approximate Net Weight - Ibs (kg)
	<u> </u>	(mm)		A - 2 hp (1.5kW)	A - 3 hp (2.2kW)	В	С	D	E	, ,,		
10000-0804-DI	275 (62)	4 (100)	0.36 (0.03)	33-7/16 (850)	35-7/16 (900)	6-1/4 (158)	16 (406)	7-1/2 (180)	3/4 (19)	303 (137)		
10000-0806-DI	550 (125)	6 (150)	1.33 (0.09)	33-7/16 (850)	35-7/16 (900)	7-1/4 (184)	19 (483)	9-1/2 (240)	7/8 (23)	323 (147)		

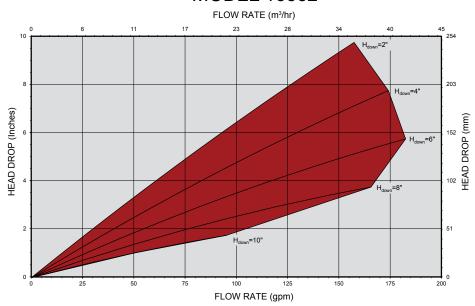
^{* 0-2%} solids • In-Line unit typically installed prior to suction side of pump • Consult factory for analysis of application • Drive dimensions are based on a unit with gear motor.





OPTIONS AVAILABLE								
	In-Line	Open Channel						
2hp (1.5kW) or 3hp (2.2kW) Motors	•	-						
7, 11, 13 Tooth Cutters	•							
17 Tooth Wipes Ready Cutter	•	-						
Custom Mounting Frames								
SS & NEMA 7 Control enclosures	-	-						
Alternate Voltage & HP Motors	•							
Explosion Proof Motors	•	-						
Immersible Motors	•	•						
Extended Motor Shafts	•	-						
ANSI, JIS, JWA, BS & AS Flanges	•							

MODEL 10002



OPEN CHANNEL Model			Standard Dimensions - inches (mm)				
		A - 2 hp (1.5kW)	A - 3 hp (2.2kW)	,			
10002-0008-DI	180 (41.4)	33-11/16 (856)	35-11/16 (906)	338 (153)			

 $^{^{\}star}$ Flow based on optimum channel conditions. \bullet Consult factory for analysis of application



[•] Drive dimensions are based on a unit with gear motor.

Materials of Construction

Housings: Ductile iron

Cutters: Hardened alloy steel **Shafts:** Hardened alloy steel

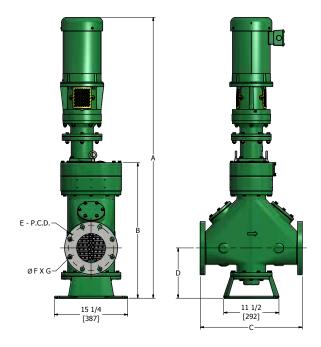
Mechanical Seals: Tungsten carbide faces

Specifications

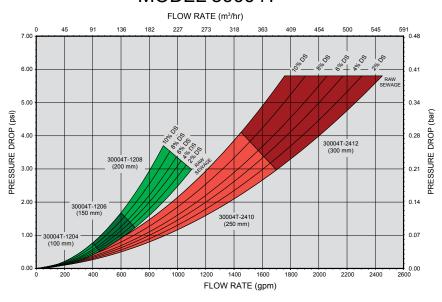
2" (50 mm) hex shafts;

3 HP (2.2 kW) motor standard; 29:1 reducer **Cutter Size:** 4-3/4" (120 mm) diameter cutters **Seal Max Working Pressure:** 90 PSI (6 bar)

OPTIONS AVAILABLE								
	In-Line	Open Channel						
7, 11, 13 Tooth Cutters	•	•						
17 Tooth Wipes Ready Cutter	•							
Custom Mounting Frames								
SS & NEMA 7 Control enclosures	•							
Solids Scrapers								
Stainless Steel Feed Hopper								
Alternate Voltage & HP Motors	•	•						
Explosion Proof Motors	•							
Immersible Motors	•	•						
Hydraulic Power Pack	•							
Extended Motor Shafts	-							
ANSI, JIS, JWA, BS & AS Flanges	•							



MODEL 30004T



IN-LINE Model	Flow Rate - gpm (m³/hr)	Pipeline Size - inches	Pressure Drop - psi (bar)		Flange I - inch	Approximate Net Weight - lbs (kg)					
	(,	(mm)	po. (bu.)	Α	В	С	D	E	F	G	()
30004T-1204	450 (102)	4 (100)	0.52 (0.04)	58-1/4 (1480)	28-1/4 (718)	19-1/4 (483)	9-3/8 (238)	7-1/2 (191)	3/4 (19)	8	562 (255)
30004T-1206	700 (159)	6 (150)	1.23 (0.08)	58-1/4 (1480)	28-1/4 (718)	21-1/4 (534)	10-3/8 (264)	9-1/2 (241)	7/8 (22)	8	559 (254)
30004T-1208	1100 (250)	8 (200)	3.00 (0.21)	58-1/4 (1480)	28-1/4 (718)	23-1/4 (584)	11-1/4 (238)	11-3/4 (286)	7/8 (22)	8	568 (258)
30004T-2410	1700 (386)	10 (250)	2.97 (0.20)	69-3/4 (1772)	39-3/4 (1010)	27-1/4 (686)	12-5/16 (313)	14-1/4 (362)	1 (25)	12	789 (358)
30004T-2412	2450 (556)	12 (300)	5.80 (0.40)	69-3/4 (1772)	39-3/4 (1010)	31-1/4 (787)	13-1/4 (337)	17 (431)	1 (25)	12	809 (367)

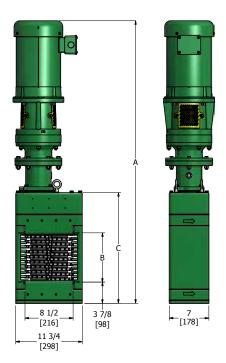
 $In-Line\ unit\ typically\ installed\ prior\ to\ suction\ side\ of\ pump.\ \bullet\ Consult\ factory\ for\ analysis\ of\ application.$

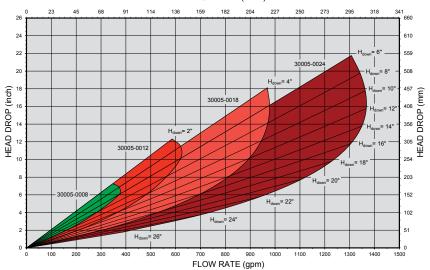
• Drive dimensions are a maximum based on a unit with a 3 HP (2.2 kW) drive.



MODEL 30005

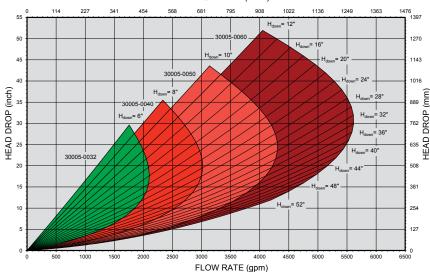
FLOW RATE (m³/hr)





MODEL 30005

FLOW RATE (m³/hr)



OPEN CHANNEL Model	Flow Rate - gpm (m³/hr)	Head Drop - inches (mm)		Standard Dimensions - inches (mm)			
			A	В	С	- lbs (kg)	
30005-0008	370 (84)	7 (178)	49-1/2 (1257)	8 (203)	19-1/2 (495)	370 (168)	
30005-0012	620 (141)	11-1/2 (290)	53-5/8 (1362)	12 (305)	23-5/8 (600)	410 (186)	
30005-0018	980 (223)	16 (405)	59-1/2 (1511)	18 (457)	29-1/2 (749)	465 (211)	
30005-0024	1370 (311)	16 (405)	65-1/4 (1657)	24 (609)	35-1/4 (895)	520 (236)	
30005-0032	2100 (477)	17-1/2 (445)	73 (1854)	32 (813)	43 (1092)	580 (263)	
30005-0040	3020 (686)	19-1/2 (495)	81 (2057)	40 (1016)	51 (1295)	650 (295)	
30005-0050	4310 (979)	23-1/2 (595)	90-7/8 (2308)	50 (1270)	60-7/8 (1546)	740 (336)	
30005-0060	5620 (1277)	30 (760)	101-3/8 (2575)	60 (1524)	71-3/8 (1813)	845 (383)	

 $^{^{\}star}$ Flow based on optimum channel conditions. \bullet Consult factory for analysis of application.



[•] Drive dimensions are a maximum based on a unit with a 182T motor frame. • Extended drive shafts are available on request.

Materials of Construction

Housings: Ductile iron

Cutters: Hardened alloy steel Shafts: Hardened alloy steel

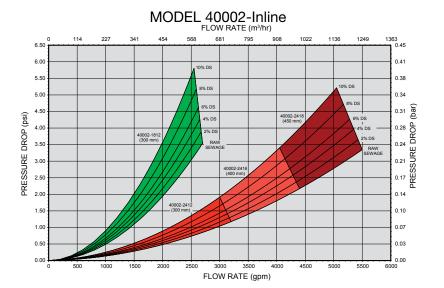
Mechanical Seals: Tungsten carbide faces

Specifications

2-1/2" (64 mm) hex shafts;

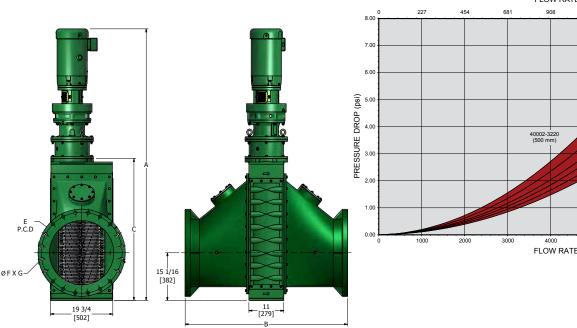
Standard 10 HP (7.5 kW); 43:1 reducer

Cutter Size: 7-1/2" (191 mm) diameter cutters Seal Max Working Pressure: 90 PSI (6 bar)



MODEL 40002-Inline





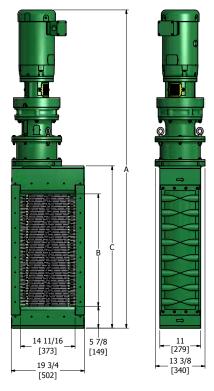
			FLO ¹	W RATE (m ³	/hr)			
	27 454	. 68	1 90	08 11	36 136	33 15	90 1	817 • 0.55
								0.48
					10% D	s 8% DS —		0.41
						4%	DS	0.34 G 0.28 G
			40002-3 (500 m	220 m)			RAW SEWAGE	0.28 C
								0.21 V.
								0.14
								0.07
10	2000	30				00 70	000 8	4 0.00 000
				227 454 681 99 40002-3 (500 m	227 454 681 908 11 40002-3220 (500 mm)	4002-3220 (500 mm)	227 454 681 908 1136 1363 15 10% DS 8% DS 6% D 4% 22 40002-3220 (500 mm) 5000 6000 70	227 454 681 908 1136 1363 1590 1 10% DS 8% DS 6% DS 4% DS 2% OS RAW SEWAGE

IN-LINE Model	Flow Rate - gpm (m³/hr)	Pipeline Size - inches	Pressure Drop - psi (bar)	Standard Dimensions - inches (mm)			Flange - in	s	Approximate Net Weight - lbs (kg)	
	(,,	(mm)	po. (5a.)	Α	В	С	E	F	G	120 (119)
40002-1812	2700 (612)	12 (300)	3.5 (0.24)	69-5/8 (1768)	35-1/4 (895)	30-1/4 (768)	17 (254)	1 (25)	12	1520 (690)
40002-2412	3200 (727)	12 (300)	1.2 (0.08)	76-5/8 (1946)	35-1/4 (895)	37-1/4 (946)	17 (254)	1 (25)	12	1775 (805)
40002-2416	4400 (999)	16 (400)	2.2 (0.15)	76-5/8 (1946)	43-1/4 (1099)	37-1/4 (946)	21-1/4 (539)	1-1/8 (29)	16	1895 (860)
40002-2418	5500 (1249)	18 (450)	3.4 (0.23)	76-5/8 (1946)	47-1/4 (1200)	37-1/4 (946)	22-3/4 (578)	1-1/4 (32)	20	2095 (950)
40002-3220	6860 (1558)	20 (500)	4.2 (0.29)	83-1/4 (2115)	51-1/4 (1301)	43-7/8 (1114)	25 (635)	1-1/4 (32)	20	2610 (1184)

In-Line unit typically installed prior to suction side of pump. • Consult factory for analysis of application.

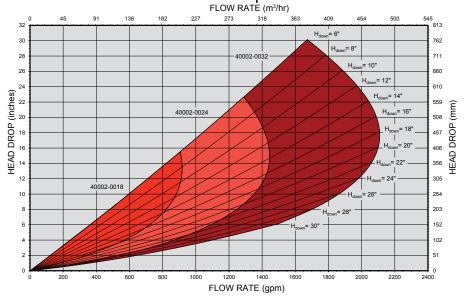
• Drive dimensions are a maximum based on a unit with a 10 HP (7.5 kW) drive.





OPTIONS AVAILABLE								
	In-Line	Open Channel						
7, 11, 23 Tooth Cutters	•	•						
Stainless Steel Cutters	•							
Custom Mounting Frames		-						
SS & NEMA 7 Control enclosures	•	•						
Solids Scrapers		-						
Nickel Plated Housing		•						
Stainless Steel Feed Hopper		•						
Alternate Voltage & HP Motors	•							
Explosion Proof Motors	-	-						
Immersible Motors	•	•						
Hydraulic Power Pack	-	-						
Extended Motor Shafts	•	•						
ANSI, JIS, JWA, BS & AS Flanges								

MODEL 40002-Open Channel



OPEN CHANNEL Model	Flow Rate - gpm (m³/hr)	Head Drop - inches (mm)		Approximate Net Weight - Ibs (kg)		
			Α	В	С	
40002-0018	915 (207)	8 (203)	69-5/8 (1768)	18 (457)	30-1/4 (768)	1175 (533)
40002-0024	1440 (327)	16 (406)	76-5/8 (1946)	24 (610)	37-1/4 (946)	1365 (619)
40002-0032	2100 (477)	18 (457)	83-1/4 (2115)	32 (813)	43-7/8 (1114)	1560 (708)

- * Flow based on optimum channel conditions. Consult factory for analysis of application.
- Drive dimensions are a maximum based on a unit with a 10 HP (7.5 kW) drive. Extended drive shafts are available on request.

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Muffin Monster

options



7-Tooth: Pump Stations or Prisons



11-Tooth: Wastewater, Sludge or Scum



13-Tooth: Heat-exchanger or Centrifuge Protection



17-Tooth: ★ Rags, Stringy Materials

Cutters

- 7, 11, 13, 17 and 23 tooth Options.
- Special Cutter designs for unique needs.
- Optional stainless steel cutters.
- ★ 17-Tooth Serrated Wipes Ready Cutter.



Electric motor



Exclusive: JWC designed immersible motor (NEMA-6P)



Hydraulic drive

Motors

- TEFC Totally enclosed fan cooled electric.
- XPFC Explosion proof fan cooled electric.
- XPNV Exclusive electric immersible.
- Hydraulic Drives.
- Available in: 2, 3, 5, 10 HP (2.2, 3.7, 7.5 kW).

Hydraulic Power Packs

• Available in 5, 10, 15 HP (3.7, 7.5, 11 kW).



Custom Control Configurations



Model PC2200 Standard Enclosure

Smart Controller

- Load sensing control system automatically reverse to clear jams.
- Standard NEMA-4X FRP Enclosure with 3-position switch and status indicators.
- Optional NEMA 4X Stainless Steel or NEMA 7 enclosures.
- Customized control configurations for any installation.
- UL registered.







Muffin Monster

options



Custom Wall frames



Custom Channel Frame



Pre-fab Muffin Monster Manhole

Custom Wall Frames

- Stainless steel guide frames attach to pump station to make installation easier.
- Frame is customized to fit each site and includes: guide rails; grinder support base; overflow bar racks and more.

Custom Channel Frames

- Adapt grinders to fit any channel.
- Guide rails for easy installation and maintenance.
- Stainless Steel construction.

Muffin Monster Manhole

- Pre-fabricated fiberglass reinforced manhole with grinder.
- Custom Depth.
- Hinged cover or H-20 traffic rated top.



Scrapers (optional)

Scrapers

- Integrated steel scrapers increase throughput and help cutters cleanout faster.
- Improves performance of hopper fed applications.



Extended motor shaft



Custom Hoppers

Hoppers

- Custom made to fit application.
- 304 or 316 Stainless Steel.



Extended Motor Shaft

Places motor above highest water level.
 Available in 1' (305 mm) increments.
 Maximum: 15' (4570 mm).







Since its founding in 1973, JWC Environmental has become a world leader in solids reduction and removal for the wastewater industry with its Muffin Monster grinders and Monster Separation Systems. JWC also solves challenging size reduction and processing problems in commercial and industrial applications through its Monster Industrial division. JWC Environmental is headquartered in Costa Mesa, California, and has a global network of representatives, distributors and regional service centers to provide customer support.

For more information, visit JWC Environmental at www.jwce.com.



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