

Grinder - CMD Channel Monster™ - Open channel series

The CMD Channel Monster protects pumps and other sensitive equipment by capturing and grinding the toughest wastewater solids in high-flow systems. It utilizes a rotating drum to capture solids and direct them to a powerful, dual-shafted, slow-speed, high-torque grinder designed to shred the tough solids that typically cause sewer problems.

Construction

- Open channel configuration
- Grinder cutter stack heights from 450 mm to 1'500 mm
- Hardened alloy steel cutters (standard), 120 mm diameter
- Ductile iron housings
- Stainless steel drum with 12.7 mm perforations, 250 mm diameter
- Hardened alloy steel shafts, 50 mm hex
- Mechanical seals with tungsten carbide faces, 10.3 bar maximum dry working pressure
- Available with channel or wall mounted frame options for easy installation

Performance

- Flow rates up to 1'922 m³/hr

Applications

- Pump stations
- Collection systems
- Headworks at wastewater treatment
- Private facility discharge to municipal sewer system
- Prison sewage system protection

Monster Renew grinder

In place of repairing a worn grinder, choose a Monster Renew unit. Sulzer provides a new, factory-built grinder cartridge to replace the worn grinder cartridge. Remove the motor and reducer from the worn unit, install the motor and reducer on the Monster Renew unit, and install the new assembly in place of the worn unit. Benefits include:

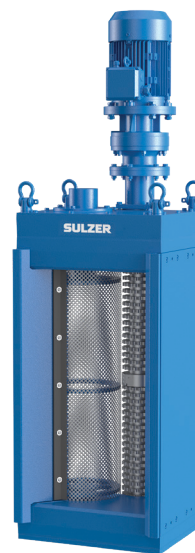
- Minimizes operational downtime
- Quick turnaround
- All new parts
- Great time to upgrade unit
- Full factory warranty on the Monster Renew grinder cartridge

Channel Monster grinder cutters

Tooth count	Thickness	Material
7-tooth	11 mm	Hardened alloy steel
11-tooth	8 mm	Hardened alloy steel
17-tooth Wipes Ready™	11 mm	Hardened alloy steel



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Channel Monster motor assembly

- Single-drive system with 4.0 kW motor powers grinder stack and drum
- Optional multidrive system with one motor to drive grinder stack (4.0 kW) and one motor to drive drum (0.75 kW)
- Optional explosion proof and immersible motors available
- 25:1 reducer, cycloidal design

Channel Monster frame options

- Adapt grinders for easy installation
- Channel frames to fit most channel types
- Wall frames to mount on flat or round walls
- Type 304 or 316 stainless steel construction
- Guide rails for easy installation and maintenance

Channel Monster controller

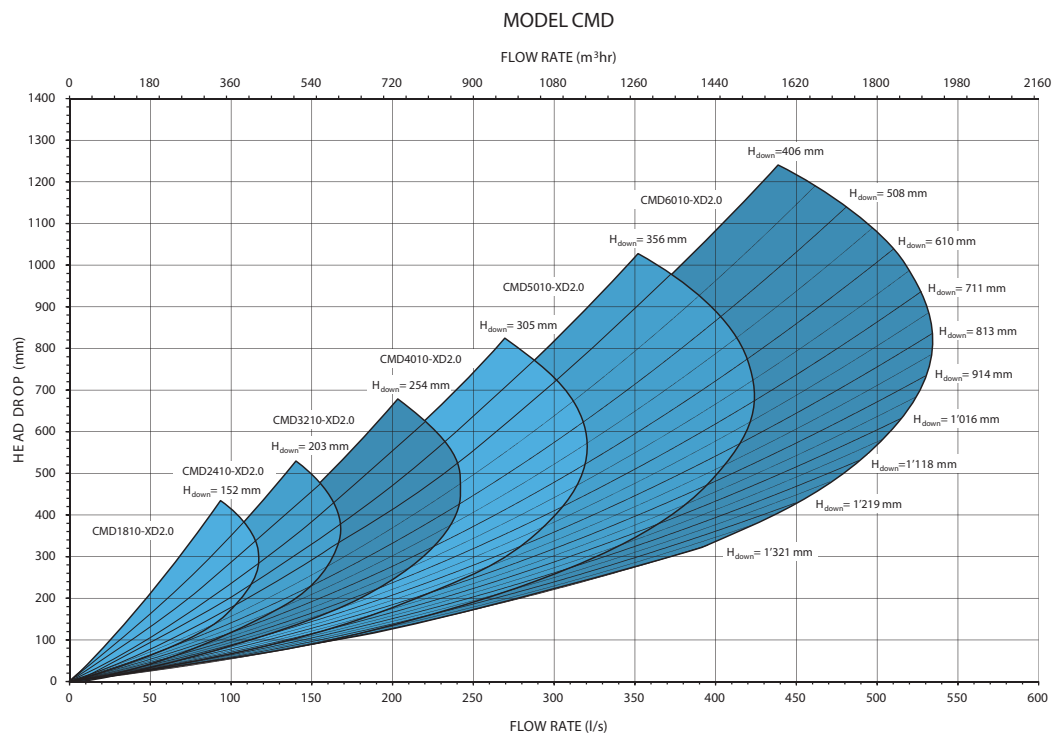
- Ensures maximum grinding ability with minimum stoppage
- Designed and programmed for specified motor

Channel Monster grinder materials

Part	Standard
Housings	Ductile Iron
Cutters	Hardened alloy steel
Drums	Stainless steel
Shafts	Hardened alloy steel
Mechanical seals	Tungsten carbide faces
Gaskets	Viton™

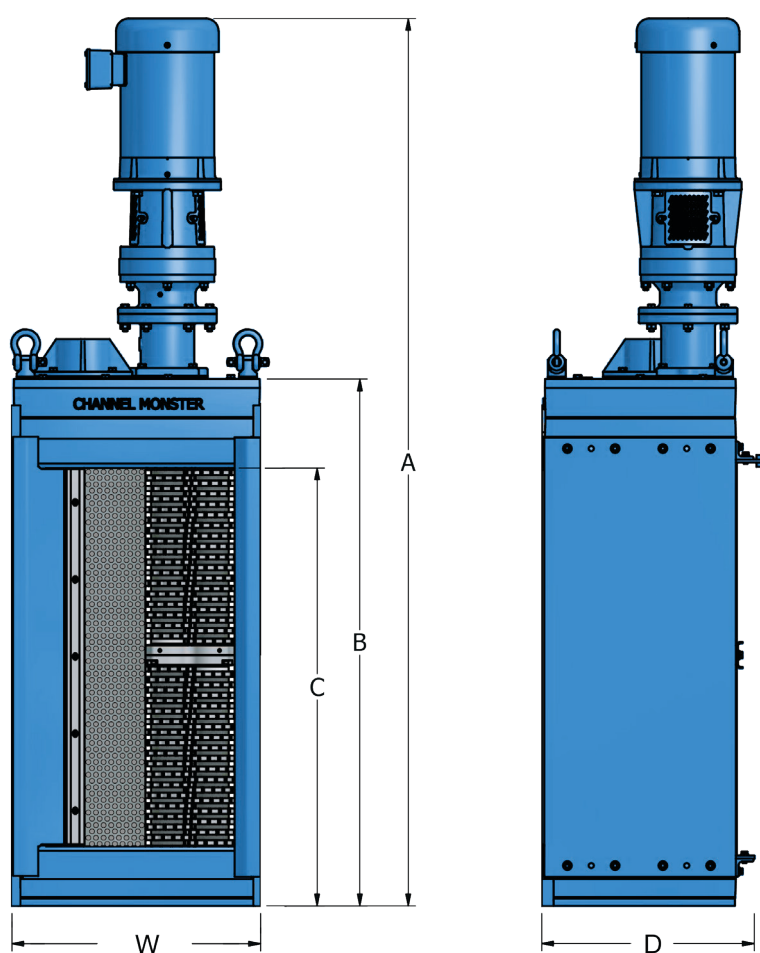
For guidance in selecting a CMD Channel Monster, please contact Sulzer.

Performance curves



mm = head drop
m³/hr = capacity (raw sewage)
H_{down} = downstream head

Dimensions (mm)



Single-drive version shown

Single drum model	B - mm	C - mm	D - mm	W ¹ - mm	Max flow ² - m ³ /hr	Single drive		Multidrive	
						A ³ - mm	Approximate net weight ⁴ - kg	A ³ - mm	Approximate net weight ⁴ - kg
CMD1810-XD2.0	775	578	499	524	421	1'715	630	2'325	691
CMD2410-XD2.0	918	733	499	524	603	1'859	688	2'469	749
CMD3210-XD2.0	1'118	933	499	524	873	2'057	710	2'667	771
CMD4010-XD2.0	1'318	1'130	499	524	1'152	2'259	767	2'869	828
CMD5010-XD2.0	1'572	1'384	499	524	1'525	2'515	840	3'125	901
CMD6010-XD2.0	1'835	1'648	499	524	1'922	2'778	912	3'388	973

1. For ideal channel construction width add 50 mm.

2. Flow based on optimum channel conditions. Consult factory for analysis of application.

3. Drive dimensions are a maximum based on a unit with a 3.7 kW (IP68) motor. Extended drive shafts are available on request.

4. Weight is based on a unit with a 3.7 kW IP68 drive.

CMD Channel Monster grinder model coding

[illegible]

Example:

CMD3210-XDS2.0 new unit with 800 mm cutter stack, 17-tooth (11 mm) Wipes Ready alloy steel cutters, severe duty seals & Viton gaskets, and single drive

Q C 2 N X X 1 W 4 S V 1 B S

Channel Monster motor assembly

Power	Voltage	Protection type	Description	Motor model code
4.0 kW	400V, 3-phase, 50 Hz	IP55 (standard)	Grinder motor	QE1435B2M
4.0 kW	400V, 3-phase, 50 Hz	IP55 for ATEX (Ex d IIC T4)	Grinder motor	QE2435B2M
3.7 kW	400V, 3-phase, 50 Hz	IP68 for ATEX (Ex de IIB T4)	Grinder motor	QE3435B1M
0.75 kW	400V, 3-phase, 50 Hz	IP55 (standard)	Drum motor	QN1435B2Y
0.75 kW	400V, 3-phase, 50 Hz	IP55 for ATEX (Ex d IIC T4)	Drum motor	QN2435B2Y
0.75 kW	400V, 3-phase, 50 Hz	IP68 for ATEX (Ex de IIB T4)	Drum motor	QN3435B2Y

Channel Monster controller

Grinder motor type	Model code for IP65 control panel enclosure		
	Description	Powder coated mild steel material	Stainless steel material
4.0 kW IP55	Single drive	QM1P45XXX	QM1S45XXX
3.7 kW IP68	Single drive	QM2P45XXX	QM2S45XXX
4.0 kW IP55	Multidrive	QM1P45DXX	QM1S45DXX
3.7 kW IP68	Multidrive	QM2P45DXX	QM2S45DXX