

# Grinder - CMD Channel Monster™ - Open channel series

**SULZER**

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 1500 mm
- Hardened alloy steel cutters (standard), 120 mm diameter
- Ductile iron housings
- Stainless steel drum with 12 mm perforations, 254 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 for easy installation

## Performance

- Flow rates up to 1590 m<sup>3</sup>/hr

## Applications

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

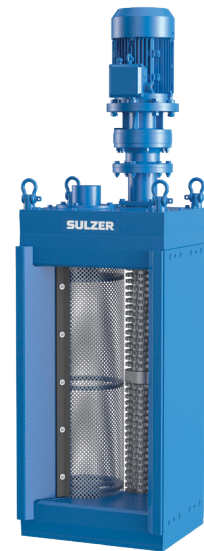
## Monster Renew grinder

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 |



## Channel Monster motor assembly

- Single 4.0 kW motor powers grinder stack and drum
- 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

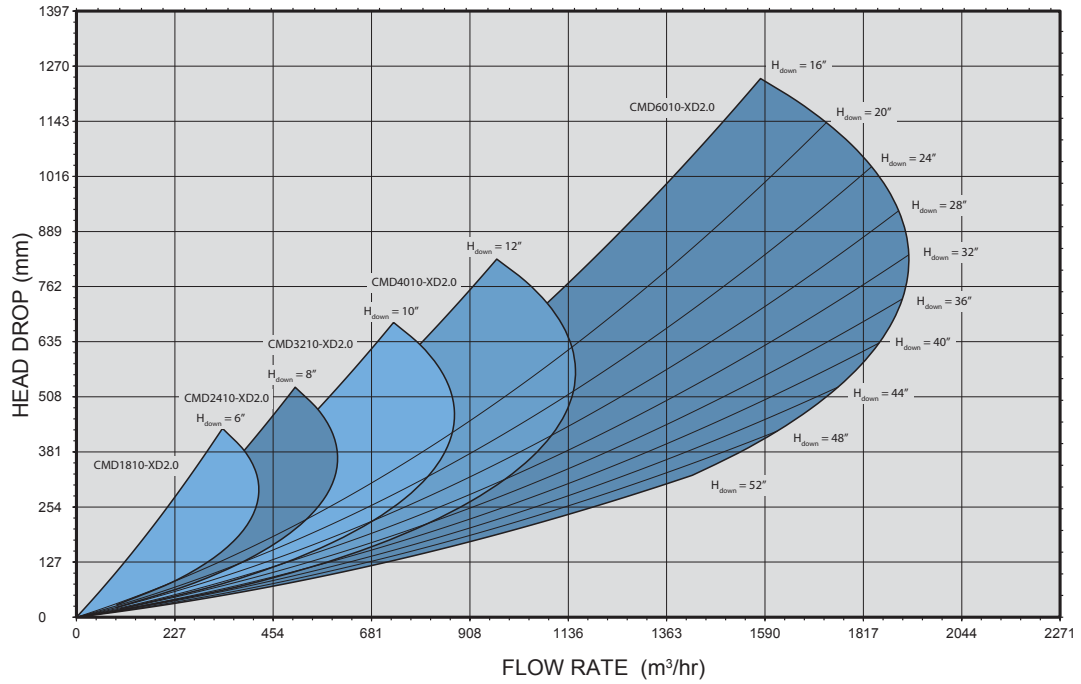
- Ensures maximum grinding ability with minimum stoppage
- Designed and programmed for specified motor

## 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                  |

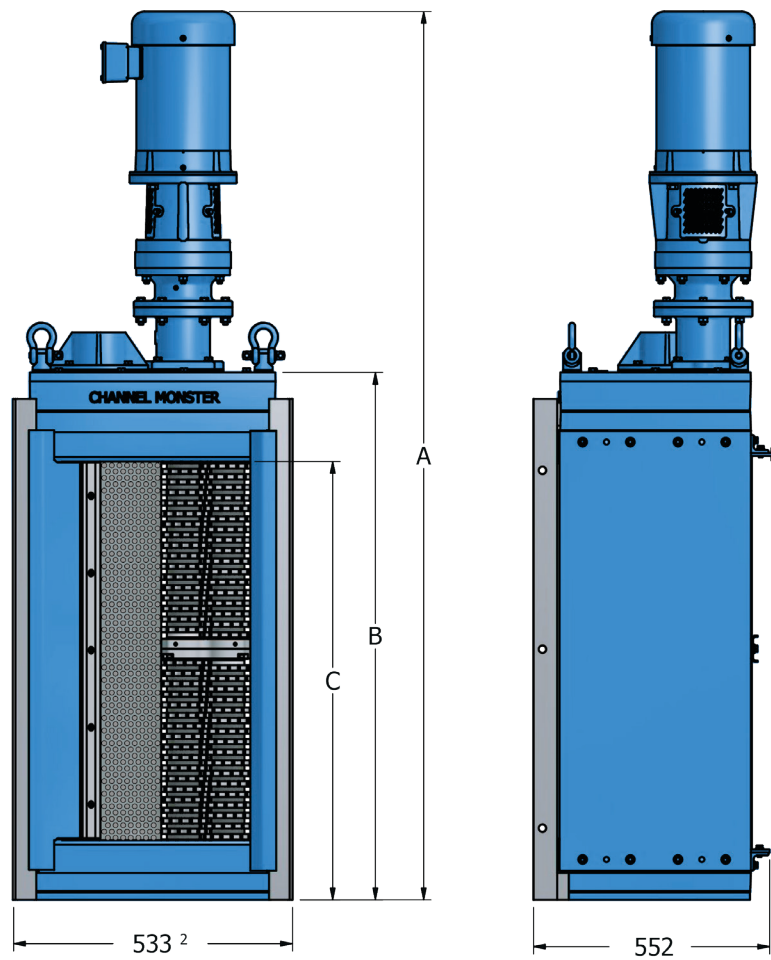
For guidance in selecting a CMD Channel Monster, please contact Sulzer.

# Performance curves



mm = head drop. m<sup>3</sup>/hr = capacity (raw sewage). H<sub>down</sub> = downstream head

## Dimensions (mm)



| Single drum model | A <sup>1</sup> - mm | B - mm | C - mm | Max flow - m <sup>3</sup> /hr | Approximate net weight <sup>1</sup> - kg |
|-------------------|---------------------|--------|--------|-------------------------------|--|
| CMD1810-XDS2.0    | 1538                | 775    | 578    | 420                           | 323                                      |
| CMD2410-XDS2.0    | 1681                | 918    | 733    | 584                           | 563                                      |
| CMD3210-XDS2.0    | 1881                | 1118   | 933    | 820                           | 576                                      |
| CMD4010-XDS2.0    | 2081                | 1318   | 1130   | 1057                          | 633                                      |
| CMD6010-XDS2.0    | 2581                | 1835   | 1648   | 1700                          | 778                                      |

1. Based on use of TEFC motor.

2. For ideal channel construction width add 50 mm.

## CMD Channel Monster grinder model coding

|                          |  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |  |  |  |  |   |   |
|--------------------------|--|---|---|---|---|---|---|---|---|---|---|---|---|---|---|--|--|--|--|---|---|
| Product family           | Solids reduction sewage grinder                  | Q |   |   |   |   |   |   |   |   |   |   |   |   |   |  |  |  |  |   |   |
| Grinder family           | CMD single drum Channel Monster                  |   | C |   |   |   |   |   |   |   |   |   |   |   |   |  |  |  |  |   |   |
| Grinder configuration    | New unit with motor (specified separately)       |   |   | 2 |   |   |   |   |   |   |   |   |   |   |   |  |  |  |  |   |   |
|                          | Monster Renew unit                               |   |   |   | E |   |   |   |   |   |   |   |   |   |   |  |  |  |  |   |   |
|                          | Monster Renew unit with spool                    |   |   |   | F |   |   |   |   |   |   |   |   |   |   |  |  |  |  |   |   |
| Cutter stack height      | 450 mm (18 inch)                                 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |  |  |  |  | L |   |
|                          | 600 mm (24 inch)                                 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |  |  |  |  | M |   |
|                          | 800 mm (32 inch)                                 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |  |  |  |  | N |   |
|                          | 1000 mm (40 inch)                                |   |   |   |   |   |   |   |   |   |   |   |   |   |   |  |  |  |  | R |   |
|                          | 1500 mm (60 inch)                                |   |   |   |   |   |   |   |   |   |   |   |   |   |   |  |  |  |  | W |   |
| Flange information       | Not applicable                                   |   |   |   |   |   |   |   | X | X |   |   |   |   |   |  |  |  |  |   |   |
| Cutter material          | Alloy steel                                      |   |   |   |   |   |   |   |   |   |   |   |   |   |   |  |  |  |  | 1 |   |
| Cutter                   | 7-tooth, 11 mm thick                             |   |   |   |   |   |   |   |   |   |   |   |   |   |   |  |  |  |  | C | 4 |
|                          | 11-tooth, 8 mm thick                             |   |   |   |   |   |   |   |   |   |   |   |   |   |   |  |  |  |  | F | 3 |
|                          | 17-tooth Wipes Ready™, 11 mm thick               |   |   |   |   |   |   |   |   |   |   |   |   |   |   |  |  |  |  | W | 4 |
| Body material & colour   | Cast iron blue                                   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |  |  |  |  |   | S |
| Seals & gaskets material | Severe duty seals & Viton gaskets                |   |   |   |   |   |   |   |   |   |   |   |   |   |   |  |  |  |  |   | V |
| Drum diameter            | 254 mm (10 inches)                               |   |   |   |   |   |   |   |   |   |   |   |   |   |   |  |  |  |  |   | 1 |
| Drum information         | 12 mm perforated, stainless steel                |   |   |   |   |   |   |   |   |   |   |   |   |   |   |  |  |  |  |   | B |
| Drive configuration      | Single drive                                     |   |   |   |   |   |   |   |   |   |   |   |   |   |   |  |  |  |  |   | S |
| Example:                 | CMD3210-XDS2.0 with 17-tooth Wipes Ready cutters | Q | C | 2 | N | X | X | 1 | W | 4 | S | V | 1 | B | S |  |  |  |  |   |   |

## Channel Monster motor assembly

| Power             | Voltage              | Protection type              | Motor model code |
|-------------------|----------------------|------------------------------|------------------|
| 4.0 kW TEFC       | 400V, 3-phase, 50 Hz | IP55 (standard)              | QE1435B2M        |
| 4.0 kW TEFC       | 400V, 3-phase, 50 Hz | IP55 for ATEX (Ex d IIC T4)  | QE2435B2M        |
| 4.0 kW Immersible | 400V, 3-phase, 50 Hz | IP68 for ATEX (Ex de IIB T4) | QE3435B1M        |

## Channel Monster controller

| Grinder motor type | Model code for IP65 control panel enclosure |                          |
|--------------------|---|--------------------------|
|                    | Powder coated mild steel material           | Stainless steel material |
| 4.0 kW IP55        | QM1P45XXX                                   | QM1S45XXX                |
| 4.0 kW IP68        | QM2P45XXX                                   | QM2S45XXX                |