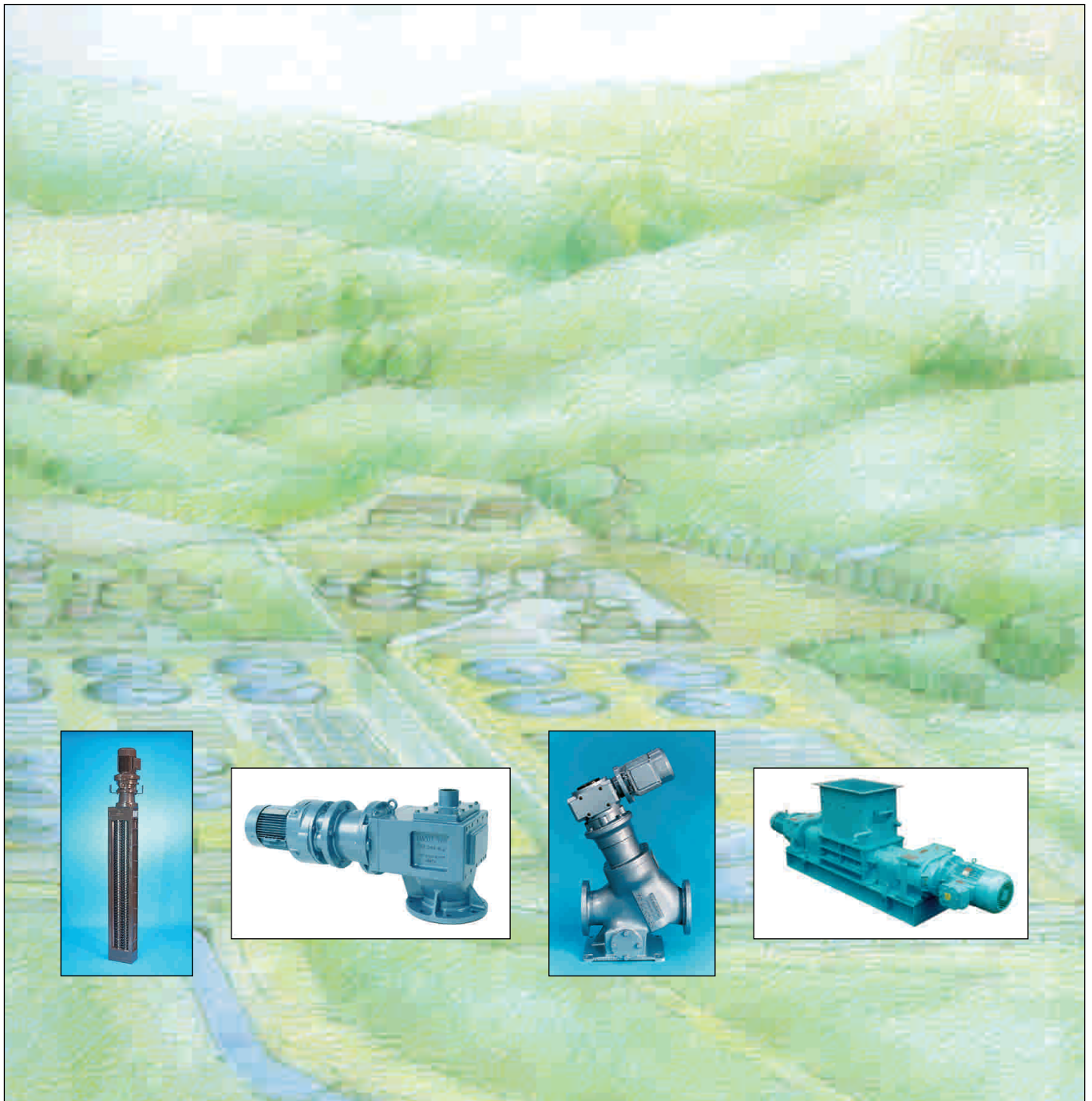


# Mono<sup>®</sup>

## The Muncher<sup>®</sup> Family



## Introduction

Time and time again The Muncher Family proves to be the most economical solution to a problem many of our customers previously thought impossible to solve.

- protection of submersible or dry well sewage pumps prone to blockage problems
- economical solution for small headworks requirements
- efficient disintegration of extracted screenings prior to treatment
- high volume fine grinding of sludges improving digestion plant efficiency
- handling of tankered sludges to a whole host of industrial wet waste grinding duties

The Muncher Family is designed to cope with modern waste waters and sludges with all the discarded trappings of today's disposable society that find their way into community and industrial waste collection and treatment systems.

### The Principle

The Muncher Family is a Range of Twin Shaft Slow Speed High Torque Grinders.

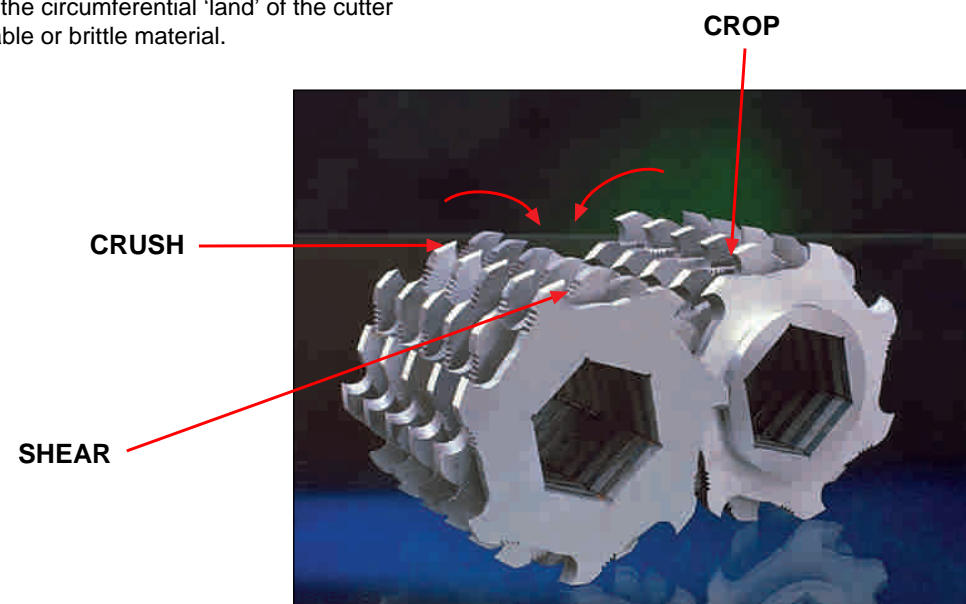
Each shaft is fitted with a series of interleaving cutters and spacers to give real "positive displacement" solids grinding. Once an object becomes trapped in the slowly revolving cutter stacks there is no escape - rags, rope, plastic, drink cans, panty-hose, wood and sundry rubbers are all easily processed through the machine.

Powerful it may be - energy wasteful it is not!

- Shafts operate at differential speeds - to promote a tearing action on the solids
- Low operating speed (typically 50-80 rpm) give high torque capability
- Low cutter tip speeds ensure power is not wasted in "water horsepower" and abrasive wear rates are minimised
- Various Unique Patented Items

### Optimum Grinding Capability

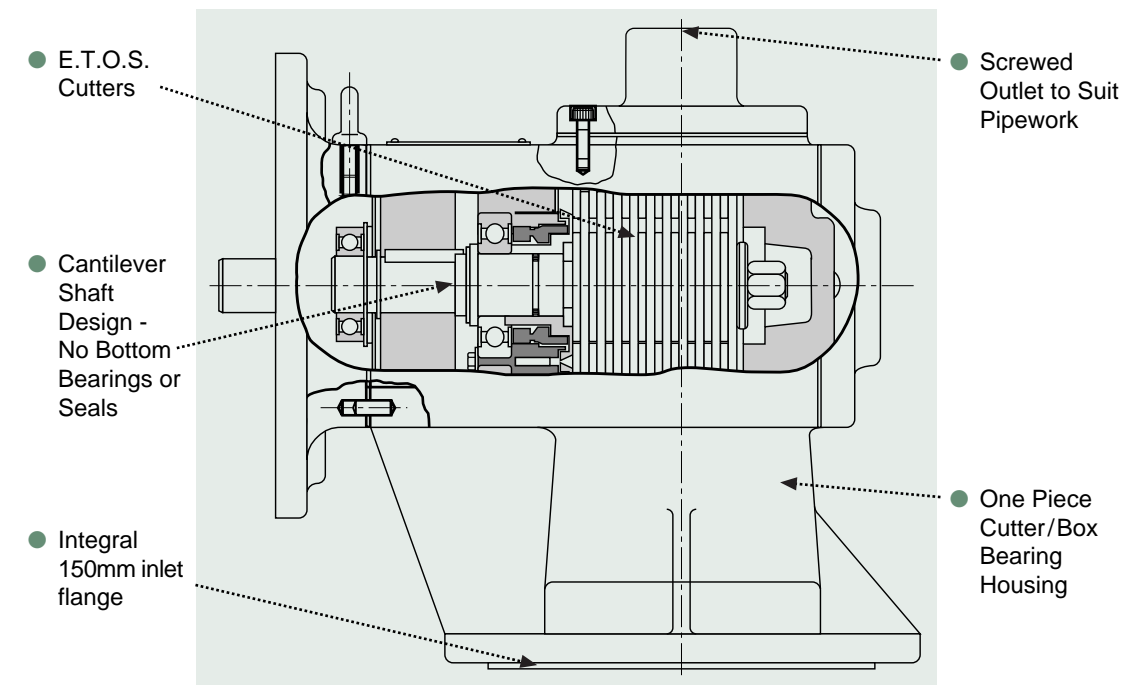
The differential speed of the cutter stacks pull apart fibrous material whilst the leading edge and sides of the cutter teeth crop and shear plastic into small pieces and the circumferential 'land' of the cutter crushes friable or brittle material.



## Features - SB and TR

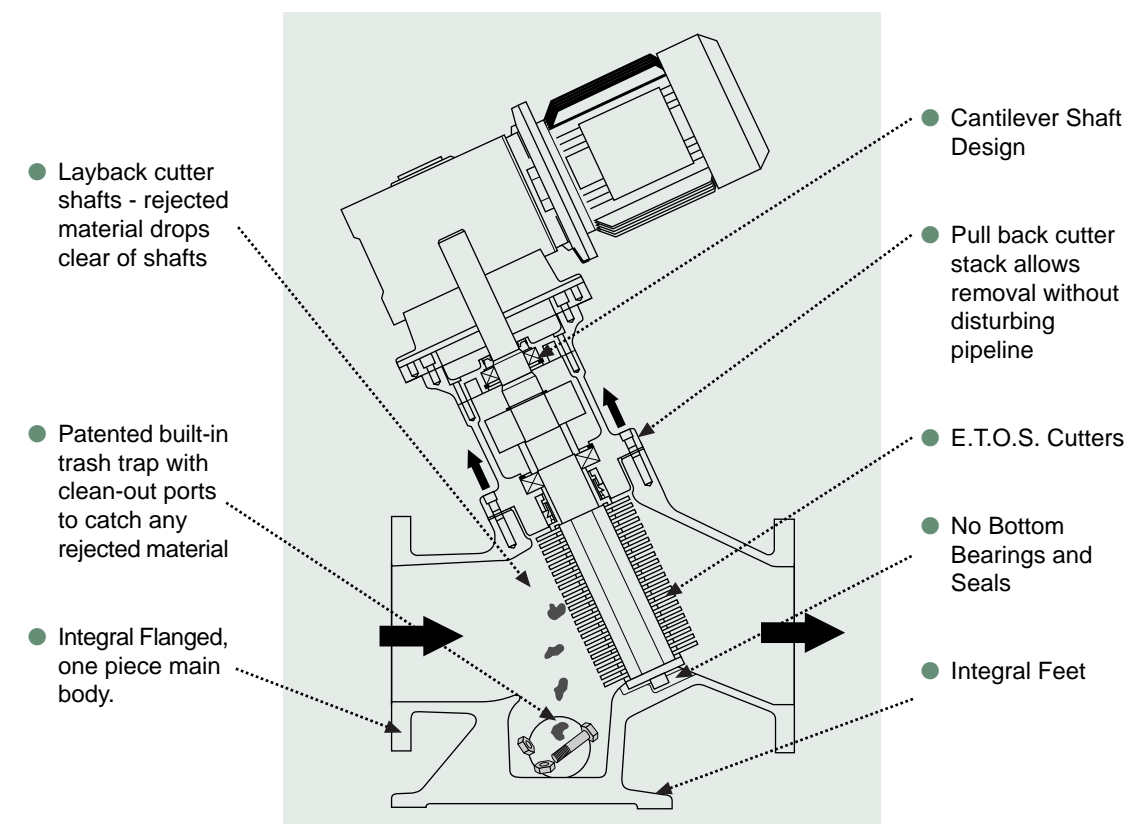
### SB Range

- Designed to replace traditional high speed, high power centrifugal macerators
- Low cutter tip speeds - Low power - Low noise level
- 3 Year warranty on Raw Sewage applications for pipeline units.



### TR Range

- Latest Generation Twin Shaft Grinder
- Designed Specifically for Efficient Treatment of Abrasive Sludges

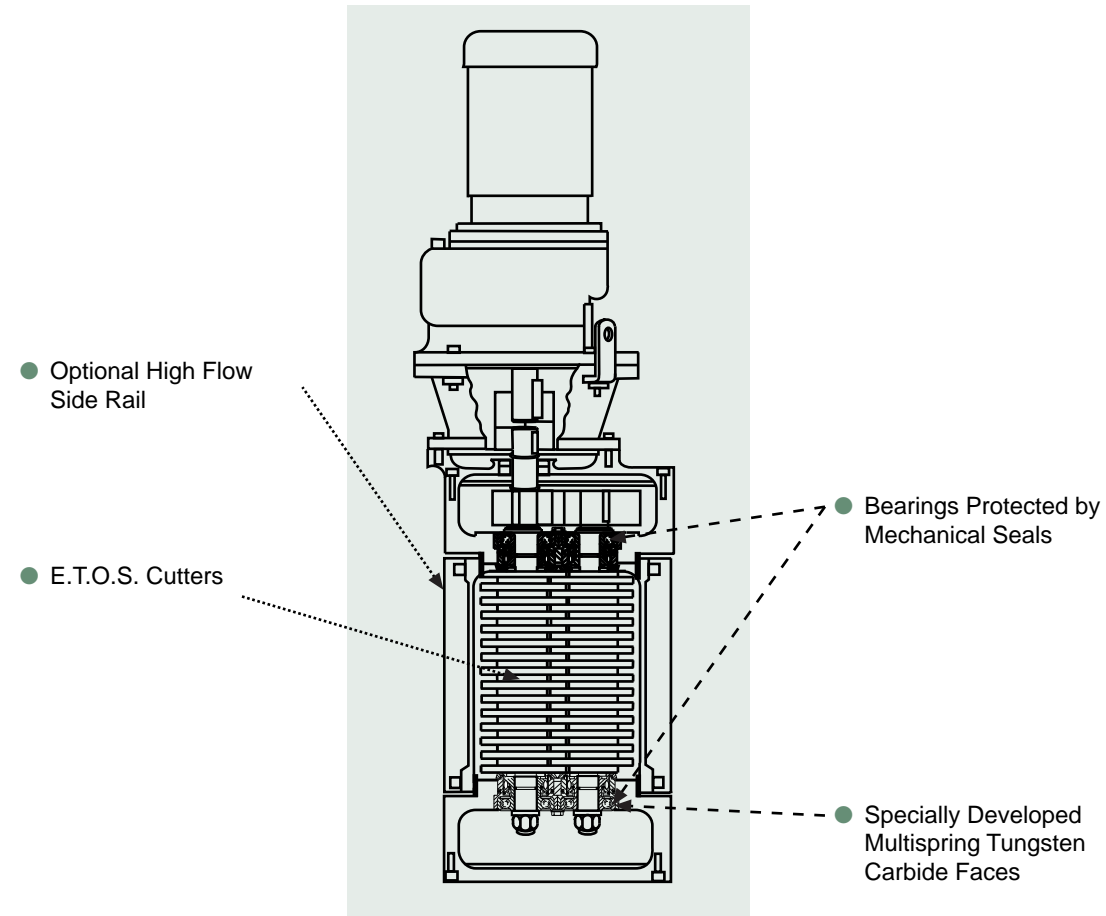




## Features - Series 'A' and F

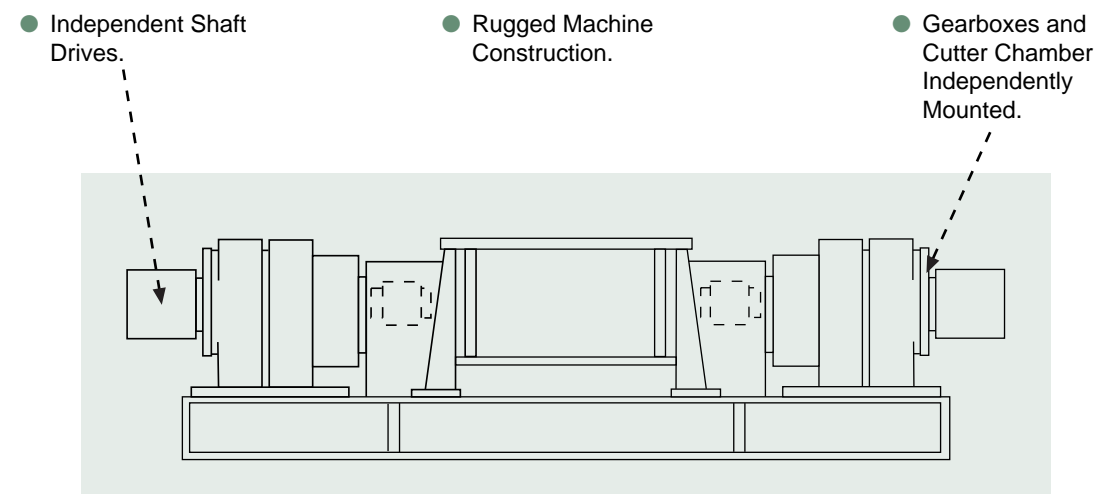
### Series 'A' Range

- Engineered and improved through 35 years experience in waste water grinding



### Series F Range

- For wet and dry material processing
- Ideally suited for screenings/bio-degradable waste processing
- Eliminates need for costly disposal - can generate income from better digester gas yields



## Control Equipment

Each Muncher is supplied with a Programmable Logic Controller (PLC) designed to protect the machine against damage from rogue materials and overloads. This can be as an individual PLC unit, a chassis backplate, or a complete control panel.



The Muncher PLC is designed to distinguish between a locked rotor full overload requiring instant reversal and a varying allowable periodic low level overload allowing an ongoing running period before the reversal mode is engaged. The critical time/power relationship is continually monitored by the logic to avoid either unnecessary shutdowns or failure to respond to genuine overloads that less sophisticated systems could induce.

This logic control unit is programmed to operate in the following manner:

- To operate in a normal On/Off mode.
- To sense an overload condition (jam), momentarily reverse the cutters to clear the condition and then return to normal operation.
- If a third overload (jam) occurs within 60 seconds of the first, the machine will then automatically shut down in reversed mode and an alarm circuit will be energised. (Alarm not supplied in standard packages).

Panel layouts are available to all UK Water Company standards, Sewers for Adoption and most international standards including I.E.C., N.E.M.A., and Australian.

*Typical PLC Unit for assembly into composite systems*



*Typical Control Panel*

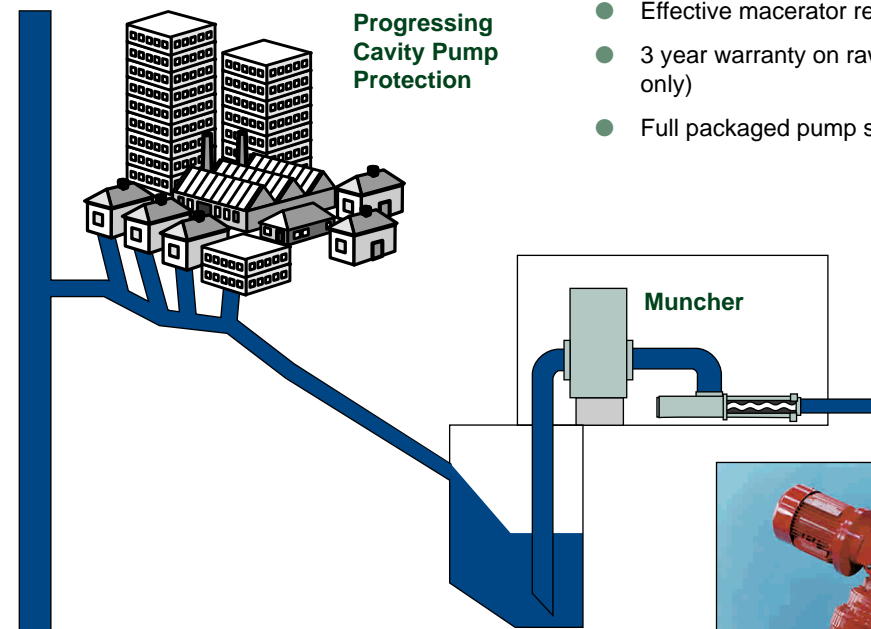


### Standard Supply is:

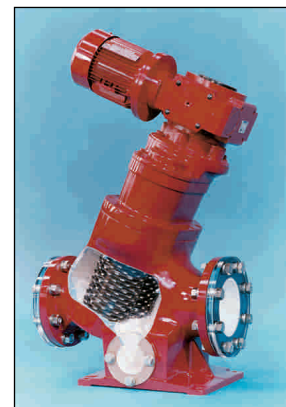
- Series 'A' Muncher - Complete control panel to IP55
- SB Muncher - Controller optional
- TR Muncher - PLC Unit
- Series F Muncher - Complete control panel to IP55

## Applications - Pump Protection

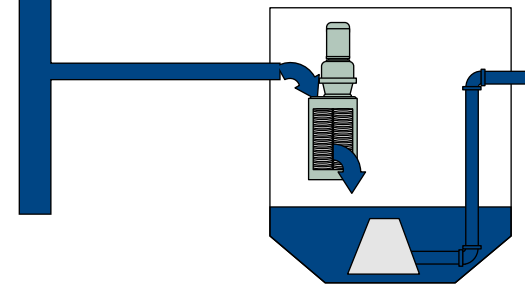
### SB, TR & Series 'A' Munchers



- Facilitates use of small bore rising main
- Effective macerator replacement
- 3 year warranty on raw sewage (SB Pipeline only)
- Full packaged pump stations available



### Centrifugal Pump Protection



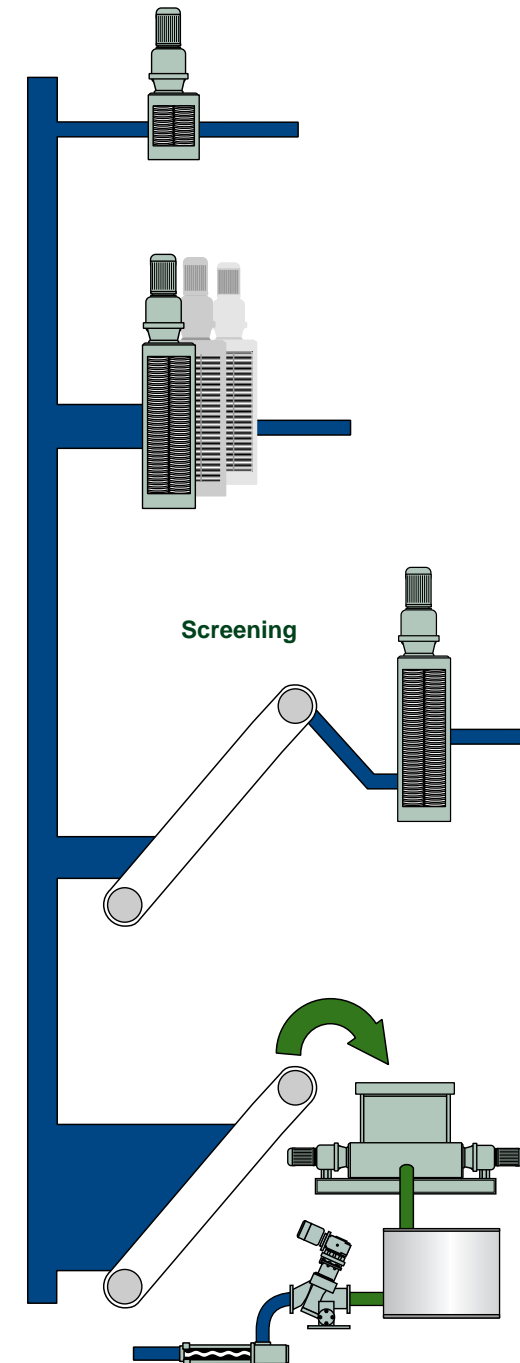
- Single Muncher protects duty/standby pumps
- Above sewage installation
- Allows use of better efficiency pumps



## Applications - Inlet Works

### SB, Series 'A' and F Munchers

#### In-flow Disintegration



- Small works automation
- Downstream system protection
- No removal costs
- Small footprint
- Minimal civil requirements

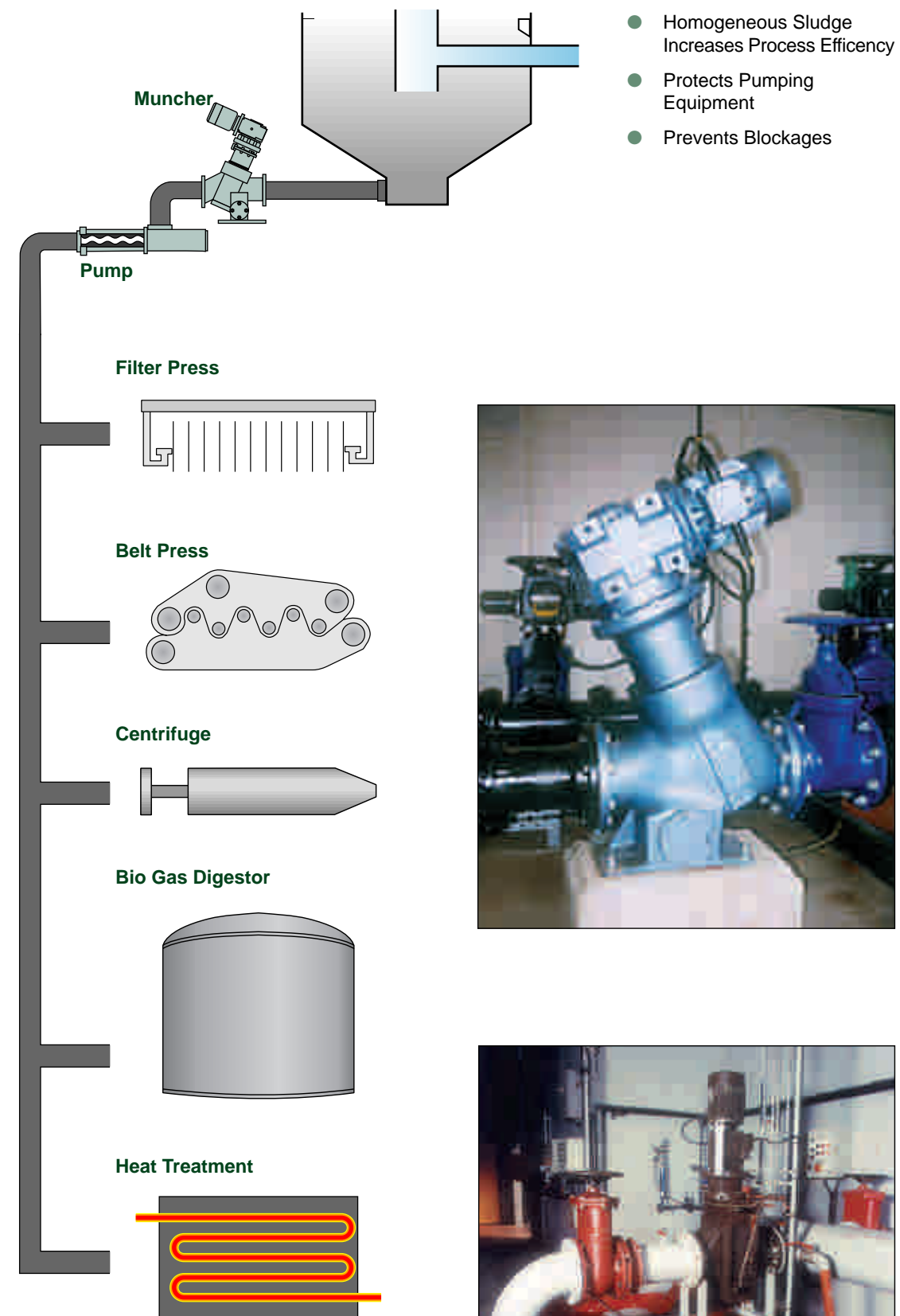


- Eliminate disposal costs
- Heavy duty capability
- Increase digester gas yield



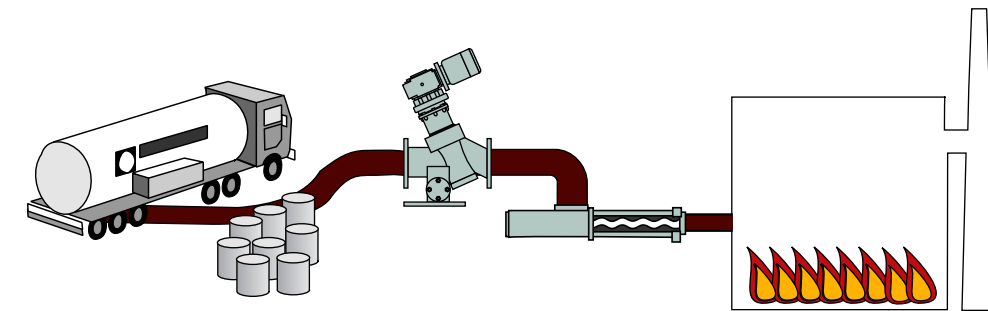
## Applications - Sludge

### SB, Series 'A' and TR Munchers

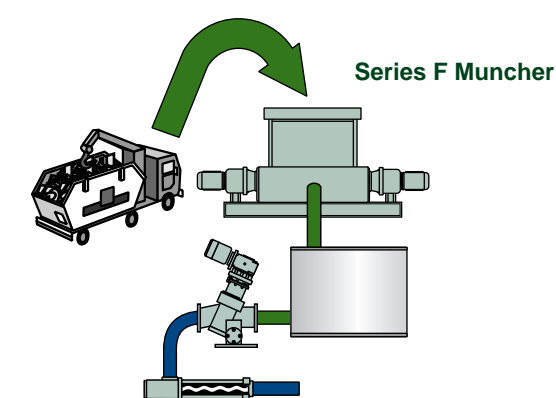


## Applications - Industrial

### Municipal or Industrial Incineration - Series 'A', TR and F Munchers



- Profit from waste
- Bulk reduction
- Product recycling

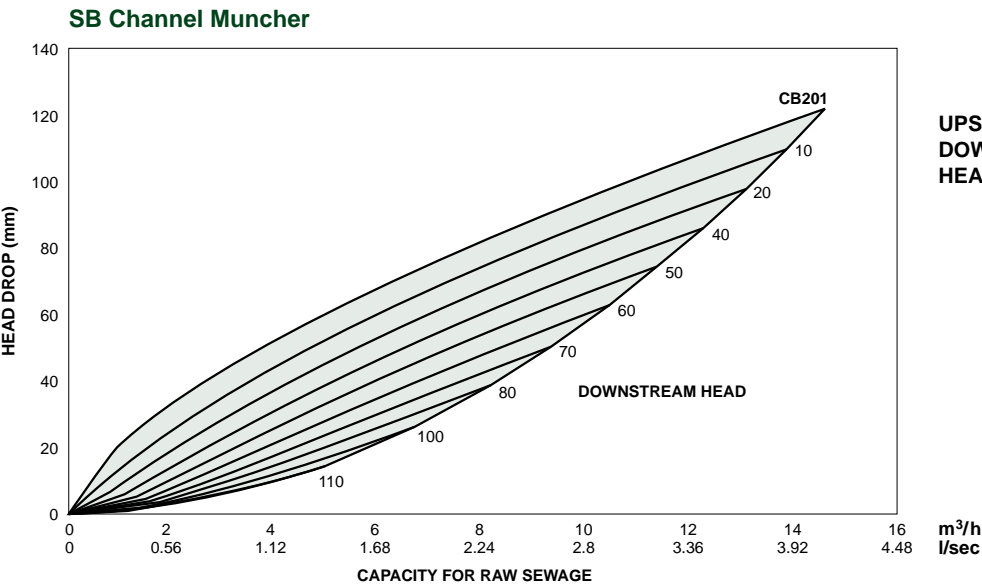
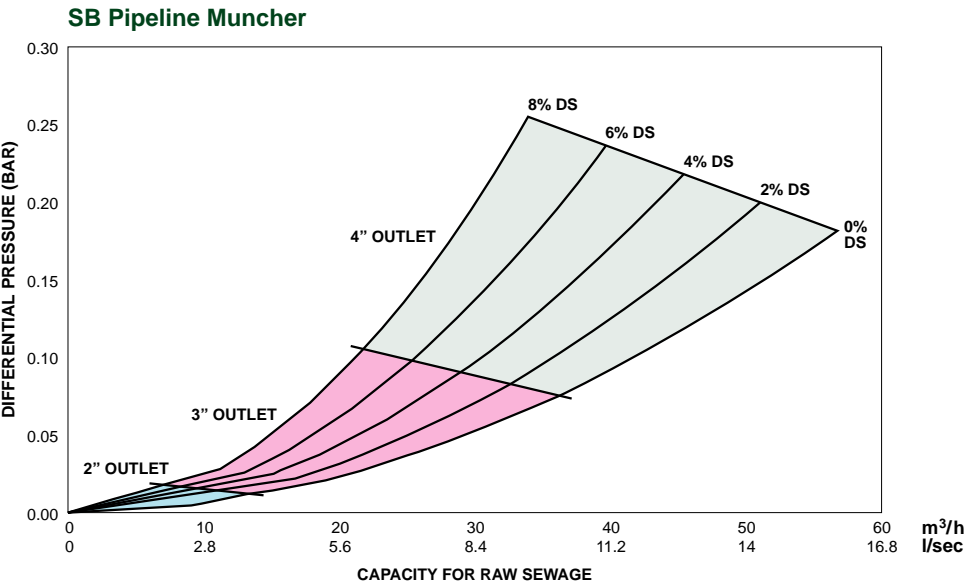


Organic Waste e.g. Food Processing Waste, Household Waste Fractions, Plant Thinnings Waste

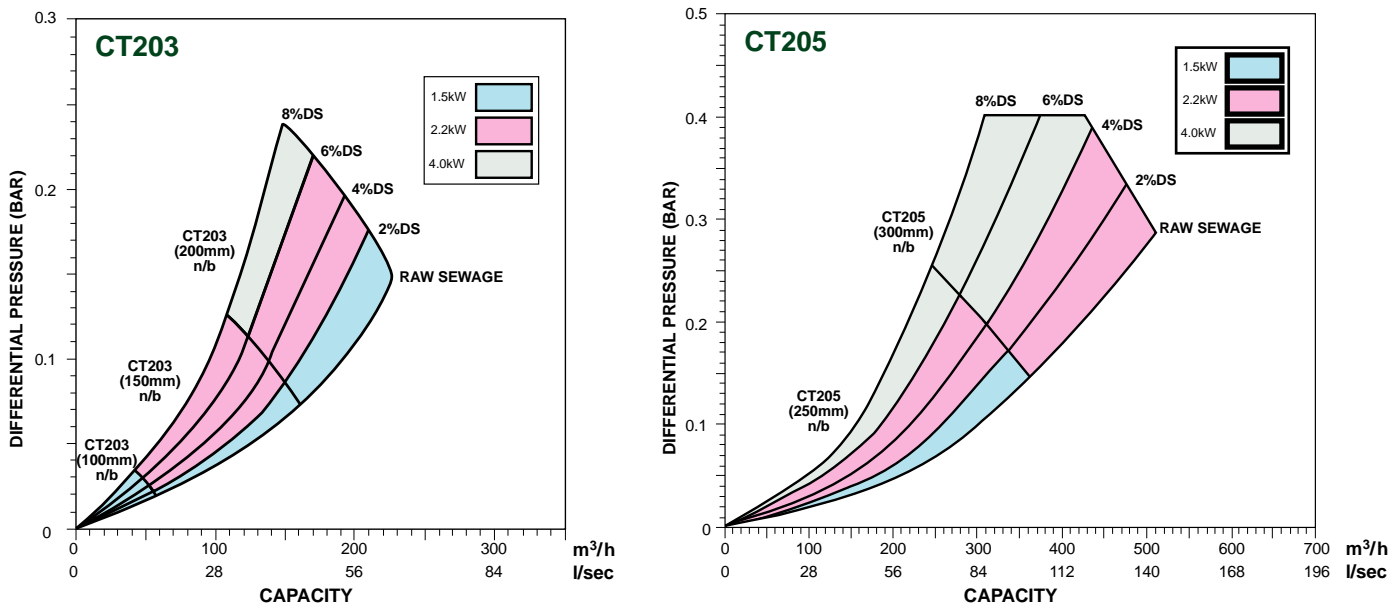


## Capacities

### SB Muncher Range

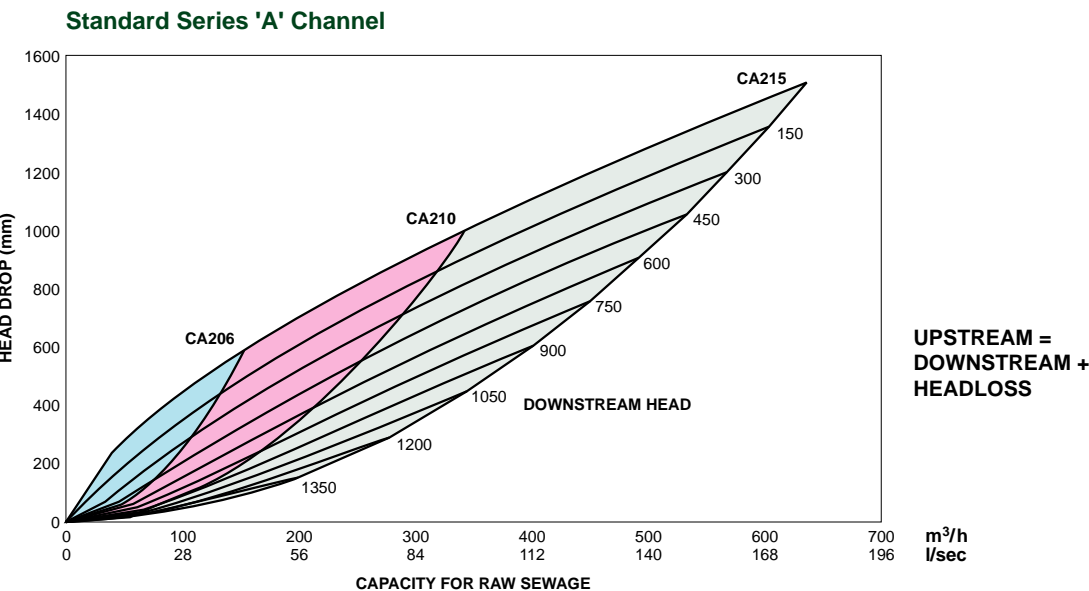
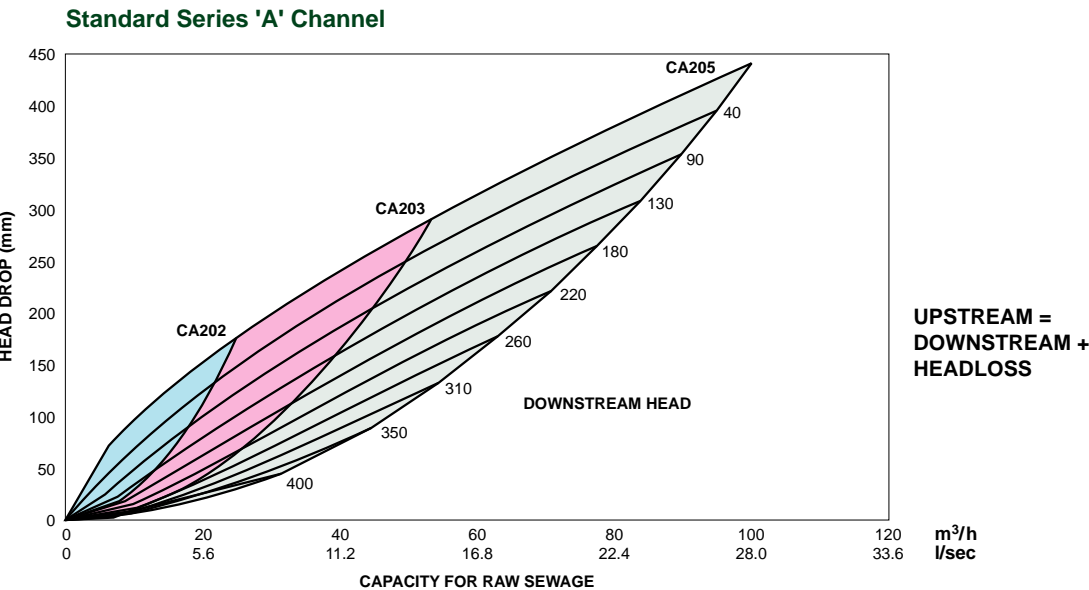


### TR Muncher Range



## Capacities

### Series 'A' Muncher Range



**NOTE:** For high flow options, capacities will be increased by approximately 40%

### Series F Muncher Range

#### Typical Capabilities

Model	Tree Bark $\text{m}^3/\text{h}$	Minerals $\text{kg/h}$	Bio Waste/ Compost $\text{kg/h}$	Screenings $\text{m}^3/\text{h}$	Forest Waste $\text{m}^3/\text{h}$
CF03--	3 - 5	500 - 800	600 - 800	1 - 2	3 - 5
CF05--	6 - 8	800 - 1400	1000 - 1300	1.5 - 3	6 - 8
CF06--	8 - 10	1100 - 1500	1200 - 1600	2 - 4	8 - 10

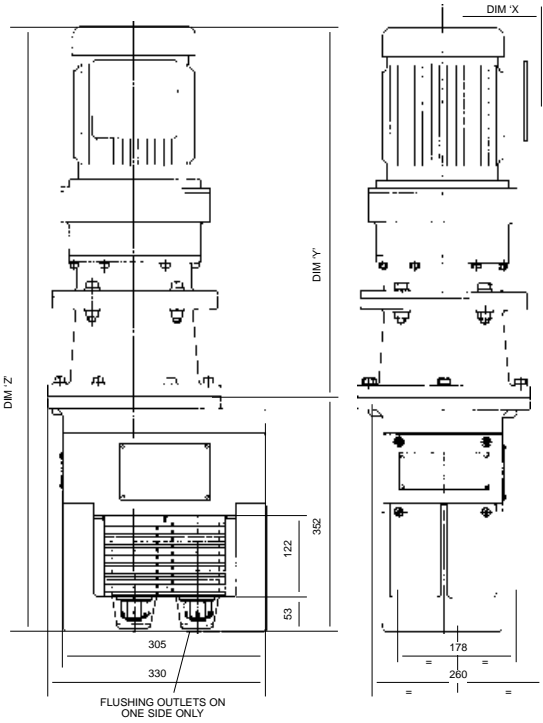
Minimum kW 7.0	Maximum kW 18.5
----------------	-----------------



# G.A. Drawings

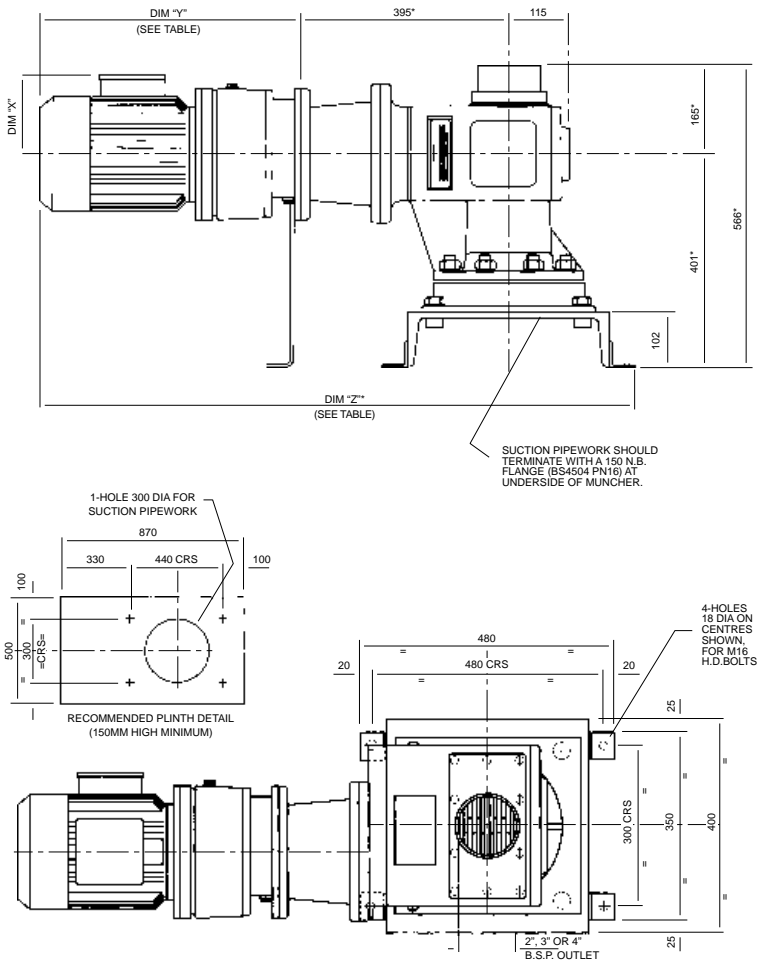
## SB Muncher

### Channel Unit



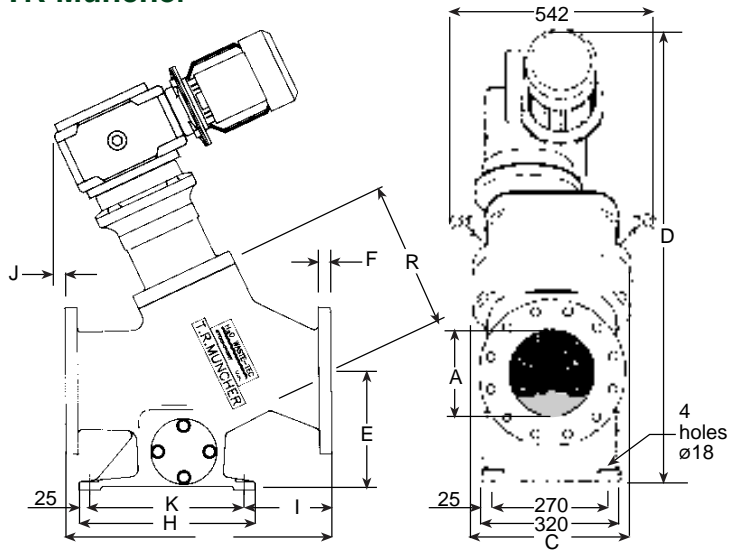
Motor		Dim 'X'	Dim 'Y'	Dim 'Z'	Weight
kW	IP				
0.75	55	125	125	125	125
	67 & 68	233	233	233	233
1.1	55	132	132	132	132
	67 & 68	244	244	244	244
1.5	55	132	132	132	132
	67 & 68	244	244	244	244
2.2	55	146	146	146	146
	67 & 68	292	292	292	292

### Pipeline Unit with Baseplate



Motor	Dim 'X'	Dim 'Y'	Dim 'Z'	Weight
0.75kW	135	507	1142	204
1.1kW	135	507	1142	208
1.5kW	140	567	1202	244
2.2kW	154	589	1224	248

## TR Muncher

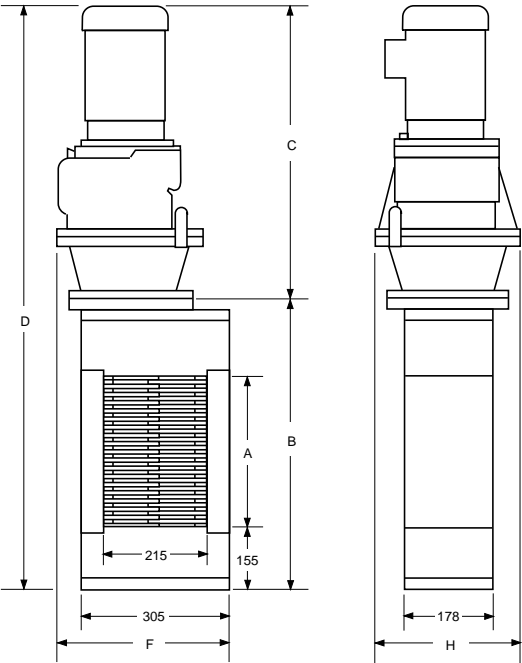


MODEL No.	A	C	D	E	F	G	H	I	J	K	R	MAX Wt kg
1.5 kW MOTOR												
CT203C	100	370	1020	205	24	489	410	99	140	360	250	290
CT203D	150	370	1050	230	25	540	410	155	40	360	250	290
CT203E	200	370	1050	256	29	591	410	205	16	360	250	290
CT205F	250	370	1190	281	32	692	460	205	30	410	450	345
CT205G	300	370	1190	332	32	794	460	263	-17	410	450	345
2.2 & 4.0 kW MOTOR												
CT203C	100	395	1130	205	24	489	410	99	169	360	250	340
CT203D	150	395	1170	230	25	540	410	155	97	360	250	340
CT203E	200	395	1170	256	29	591	410	205	72	360	250	340
CT205F	250	395	1310	281	32	692	460	205	87	410	450	390
CT205G	300	395	1310	332	32	794	460	263	40	410	450	390

All dimensions in mm unless stated otherwise.

# G.A. Drawings

## Series 'A' Muncher



NOTE:  
On IP67 & IP68 motor dimension D is increased by  
74mm on 1.5kW motors.  
18mm on 2.2kW motors.  
165mm on 4.0kW motors.

### 1.5kW IP55 motors (dimensions in millimetres)

Model No.	A	B	C	D	F	H	Wt. kg
CA202AA	175	515	565	1080	330	260	220
CA203AA	290	629	565	1194	330	260	230
CA205AA	440	779	565	1344	330	260	255
CA206AA	585	924	565	1489	330	260	265
CA210AA	1000	1339	565	1904	330	260	330

### 2.2kW IP55 motors (dimensions in millimetres)

Model No.	A	B	C	D	F	H	Wt. kg
CA202AB	175	515	629	1144	330	260	235
CA203AB	290	629	629	1258	330	260	245
CA205AB	440	779	629	1408	330	260	265
CA206AB	585	924	629	1553	330	260	275
CA210AB	1000	1339	629	1968	330	260	350
CA215AB	1510	1849	629	2478	330	260	420

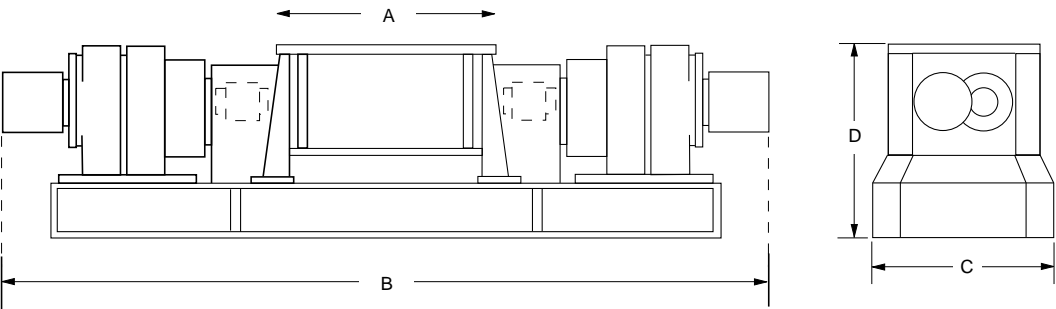
### 4.0kW motors IP55 (dimensions in millimetres)

Model No.	A	B	C	D	F	H	Wt. kg
CA202AC	175	515	682	1197	350	300	265
CA203AC	290	629	682	1311	350	300	275
CA205AC	440	779	682	1461	350	300	295
CA206AC	585	924	682	1606	350	300	305
CA210AC	1000	1339	682	2021	350	300	380

## Series F Muncher

### Series F

MODEL	A	B	C	D	WEIGHT (kg)
CF03RK	342	2575	532	501	950
CF05RK	534	2767	532	501	1050
CF06RK	630	2863	532	501	1050



## Proposal Request



# Request For Information

Please fax to address shown on back page.

Company \_\_\_\_\_ Name \_\_\_\_\_

Address \_\_\_\_\_ Position \_\_\_\_\_

\_\_\_\_\_ Tel. No. \_\_\_\_\_ Extension \_\_\_\_\_

\_\_\_\_\_ Post Code \_\_\_\_\_ Fax No. \_\_\_\_\_

Material/Liquid	Solids Content
-----------------	----------------

Volts	Ph	Hz	Special Electrical Requirements
-------	----	----	---------------------------------

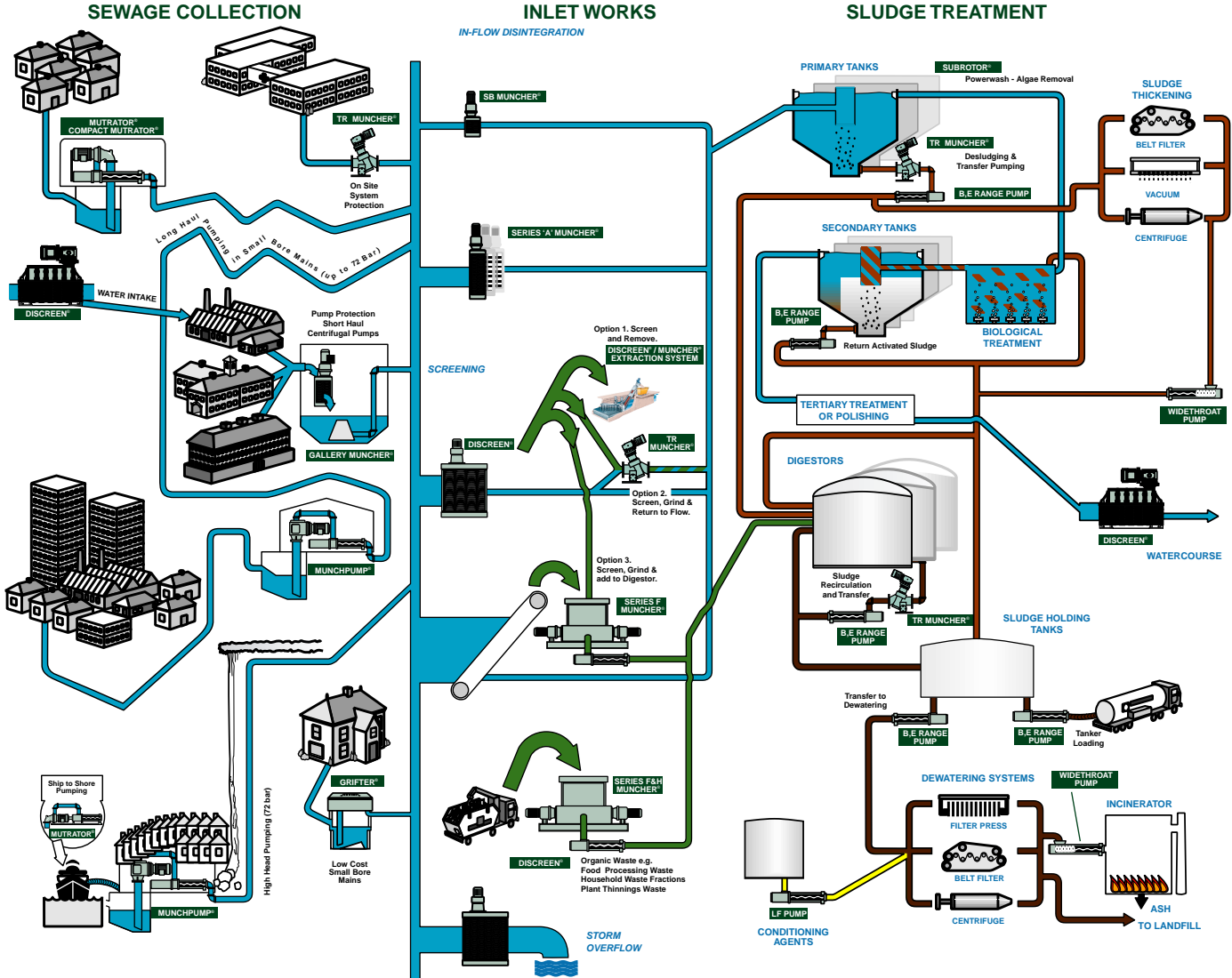
## Capacity

IP	Zone	Head/Pressure
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### Other Requirements/Sketch

**Action (for internal use)**

## Processing Flowchart



## Notes

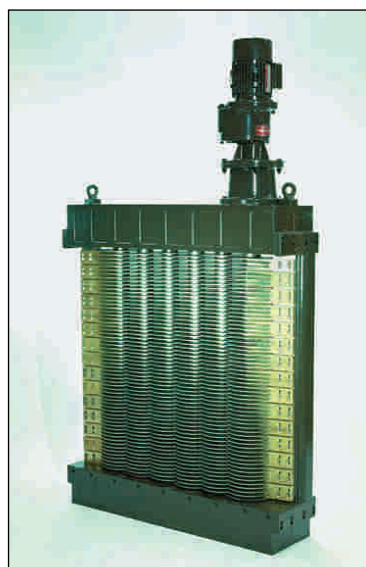
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## Other Products

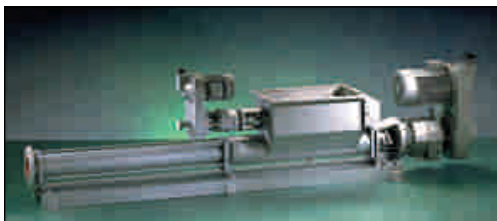
### Grinders/Screens

- Mutrator®
- Compact Munchpump®
- Grifter®
- Macerator®
- D Series Discreen®
- L Series Discreen®



### Mono Pumps

- E Range
- LF Range
- W Range
- Merlin® Industrial Range
- Monobloc® B Range
- S Range
- B/G/M Range



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