



PROFESSIONALS AT WORK

CRI-MAN®



EN

GENERAL CATALOGUE



The company



page 4

Philosophy



page 5

Research & Development



page 6



Livestock slurry management



page 13-14

Pumps



PTS
page 15-16



PTE
PTC
page 17



ETO/ETV
ETO/EPO
page 18



PTH
page 19



Biogas plants

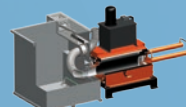


page 28-29

Pumps



PTS
page 30



PLD
page 30



ETO/ETV
ETO/EPO
page 31

Mixers



BMC
MXP
page 32



Waste water treatment



page 40-41

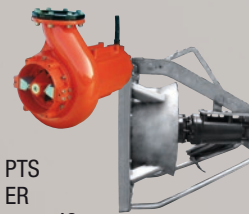
Pumps



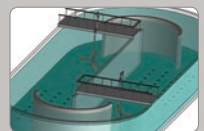
ETO/ETV
ETO/EPO
page 42



PTS
ER
page 43



Mixers



Mixing tanks
page 44

INDEX

Field of use



page 7



Sales organization



page 8

Main strengths



Pumps page 9

Mixers page 10

Separators page 11

Hygienizing Biocell page 12

CRI-MAN

Mixers



PTD
PTO/PTF
page 20



TBM
TBX
page 21



Slalom
systems
page 22

Separators



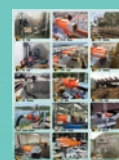
SM
page 23-24

Hygienizing Biocell



HBC
page 25-26

Plants installed



page 27

LIVESTOCK



TBM
AF
page 33



MXB
MXL
page 34



Mixer
accessories
page 35

Separators



SM
page 36-37

Plants installed



page 38-39

BIOGAS



TBM
AF
page 45



TBX
MXV
page 46



SMO
OXIGET
page 47

Separators



SM
page 48-49

Other applications



page 50

Plants installed



page 51

INDUSTRY

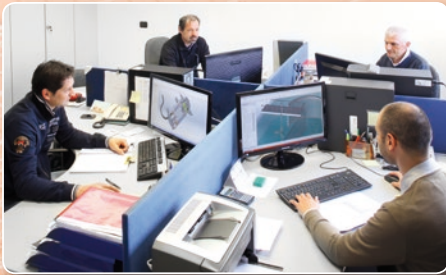
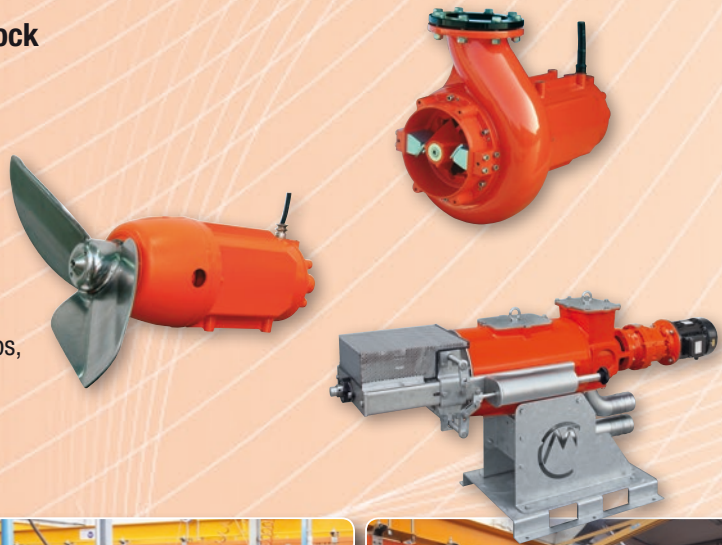
The company

Dedicated technology for processing livestock slurry, biogas, and civil/industrial effluents

We design and construct machines for the processing of livestock slurry, biogas, and civil/industrial effluents. Thirty year's experience, first in the processing of livestock slurry, and then extending with time into the biogas and industrial sectors, enables us to provide our customers with an extremely Reliable and Professional Service.

Our flagship products are our separators, chopper pumps, and mixers.

Our products are manufactured entirely at our sites in Correggio (Reggio Emilia, Italy).



Philosophy

Based on our extended experience and detailed studies of our customers in the effluent treatment sector in general, we strive to fully comprehend our customers' needs, using this as the starting point and guiding principal for the operating methods that permeate all our company activities.

Our Vision is for Professionalism and Reliability in all relations with our customers.

Our Mission is to transform this commitment into operative reality.

The CRI-MAN organization exists in order to fulfil these aims, which are achieved by close attention to the surrounding environment.

This approach is certified by the Quality Management Systems UNI EN ISO 9001:2008 and UNI EN ISO 14001:2004, which emphasise the two aspects that we hold most dear:

- Customer Satisfaction
- Guaranteeing Environmental Sustainability.



Vision

Professionalism and Reliability... through time

**Product
innovation**

**On-time
delivery**

**Technical
assistance**

**Extended product
durability**

**Technical
know-how**

Mission



Research & Development

Professionalism and Reliability underlying every project

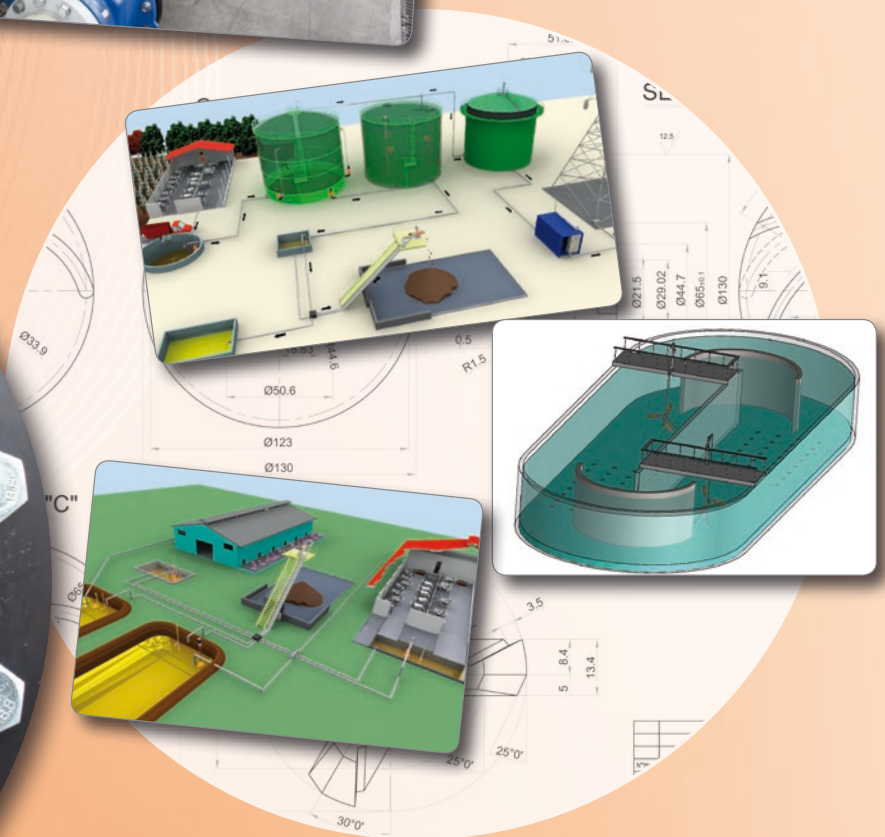
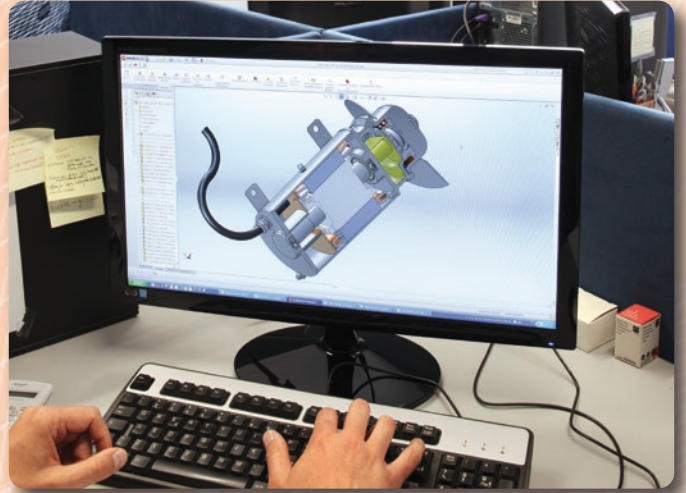
In our projects we place our customers in the leading role, or more specifically, their individual needs. We start by listening very carefully to their real requirements, which become the guiding principles for each project.

In the resulting dialogue there is a convergence of ideas, experience, and know-how allowing the creation of products made-to-measure for each customer, with particular care dedicated to minimizing the consumption of energy and water resources, in full compliance with environmental regulations.

CRI-MAN make available their experience and technological know-how for the development of products that satisfy all the requirements of reliability, flexibility, strength, and durability.

To round off our Vision/Mission, it is worth underlining our strong points in machine performance:

- our comprehensive range makes it possible to offer total solutions, in particular as regards processing livestock slurry
- high efficiency, which translates into low energy consumption



Fields of use

Our experience in **the livestock sector** dates back to the end of the 1970s, when the founders of the company CRI-MAN, subsequently established in 2001, worked in the livestock barn equipment sector.

This in-depth knowledge of the real needs of customers was later invaluable for the development of solutions that reduce the work of livestock farmers in the processing of slurry.

Over the years the technology constantly improved, with an emphasis on the reliability of the developed designs.

Today CRI-MAN are able to offer, in the livestock slurry processing sector, extremely reliable turnkey solutions. This is on the strength of our vast range of equipment, with hundreds of machine and accessory models available.



From its earliest years of operation, CRI-MAN have always dedicated attention to the world of **biogas**, designing and constructing machines and accessories for substrate handling in biogas plants.

Today CRI-MAN are well known among operators in the biogas sector as professional partners who offer a full and reliable range of products.

Thousands of CRI-MAN machines are installed in biogas plants throughout the world.



In the civil and **industrial effluent treatment sector** we are well aware of competing alongside multinationals armed with a considerable "firepower" both in terms of resources and available products.

However, perhaps precisely this difference in scale enables us to offer highly competitive and versatile solutions which at the same time do not cut corners on quality and reliability of products, all of which are designed to handle extremely demanding conditions.

Like the biogas sector, again CRI-MAN have thousands of machines installed in waste water treatment plants worldwide.



Sales Organization

The technical capability to adapt your products to the needs of various different markets, combined with an efficient internal organization, ensures you are competitive in the international scenario.

CRI-MAN export up to 80% abroad through a network of selected distributors who guarantee an excellent Customer Service.



Customer Service

Original Cri-Man spare parts

Choosing original parts means protecting the efficiency of your plants and extending their useful life. All original CRI-MAN spares are totally compatible because they are made to integrate perfectly into our machines.

www.cri-man.com

A website designed to provide a complete instrument for communicating with users and retailers, always up to date with the latest news and providing all the necessary technical information, available directly or for downloading if confidential in nature.





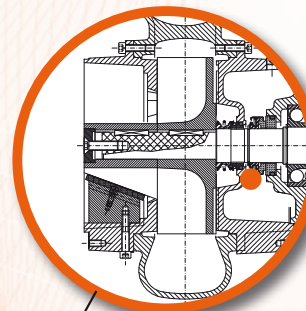
Main strengths: Pumps



Double Chopping System

The first chopping system is composed of two blades made of chrome steel, fixed on the body inlet, that work against a spiral conveyor made from high grade cast iron and is fitted to the motor shaft. Both materials have undergone a specific treatment for hardening. In a pump with a speed of 1750 rpm, the only first chopping system operates at over 170 cuts per second!

The second chopping system is composed of a shear cutting plate of special high grade cast iron that works against the impeller, also in high grade cast iron, blades with sharp profile. Both materials have undergone a specific treatment for hardening.



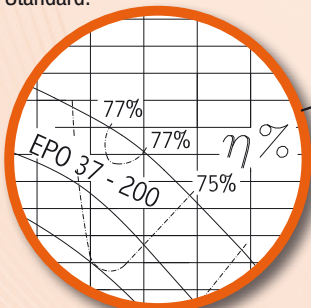
Double mechanical seal
Mechanical seals in silicon carbide and graphite-Ceramics.

Thermal probe sensors

Double thermal probes, immersed in the stator, to prevent overheating of the electric motor and to preserve the operational life span of the motor.

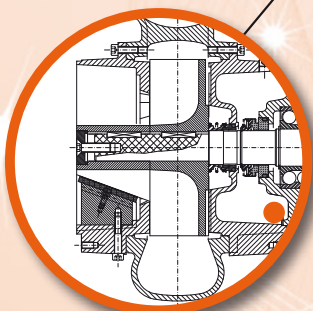
High hydraulic efficiency

Hydraulics designed to correlate high Efficiency (up to 77%) with high chopping and anti-clogging performances. Data according to UNI EN ISO 9906 Standard.



Humidity probe (on request)

Humidity probe installed in the oil chamber to prevent damages in case of leakage.



Range of accessories

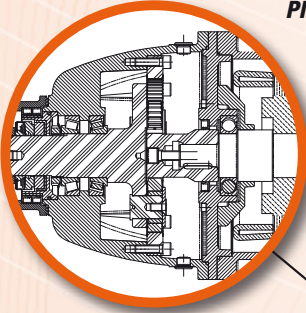
Wide range of accessories for every type of pump installation.



The Best Choice



Main strengths: Mixers



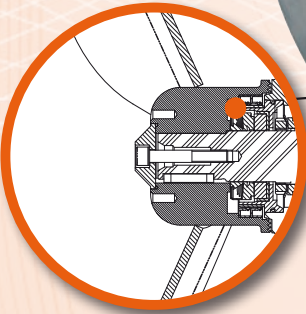
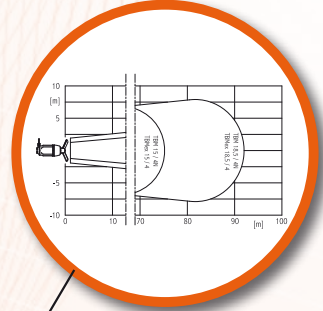
Planetary gearbox (TBM Series only)

Reduced energy consumption and longer gear life.

High axial thrust efficiency

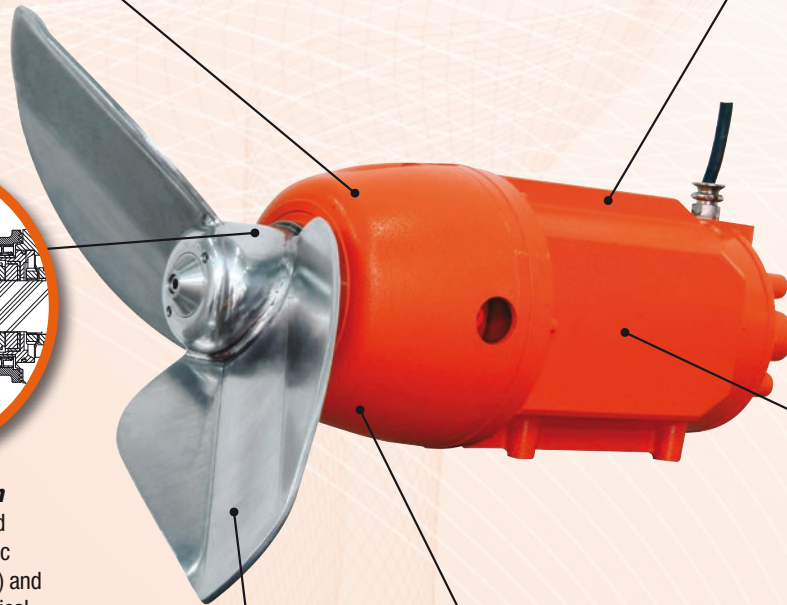
Electric motor, mechanical components and propeller profile designed to achieve high efficiency in terms of axial thrust and low energy consumption.

Data according to ISO 21630 Standard.



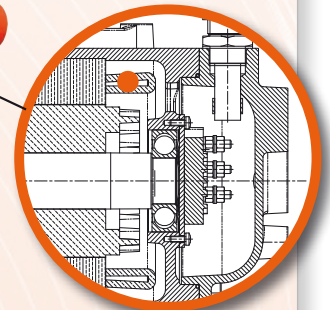
Double sealing system

Sealing system composed of two lip seals on ceramic bushing (TBM Series only) and tungsten carbide mechanical seal.



Self-cleaning propeller

Propeller in stainless steel with self-cleaning profile.

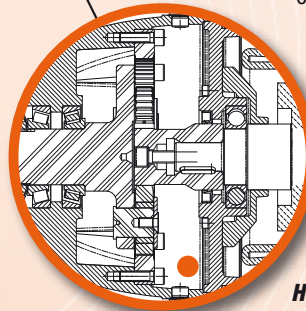


Thermal probe sensors

Double thermal probes, immersed in the stator, to prevent overheating of the electric motor and to preserve the operational life span of the motor.

Range of accessories

Wide range of accessories for every type of mixer installation.



Humidity probe (on request).

Humidity probe installed in the gear box to prevent damages in case of leakage.



The Best
Choice



Main strengths: Separators



Screw treatment
Innovative coating treatment with mixtures of tungsten carbide and metallic matrix which ensures very high hardness and low brittleness.



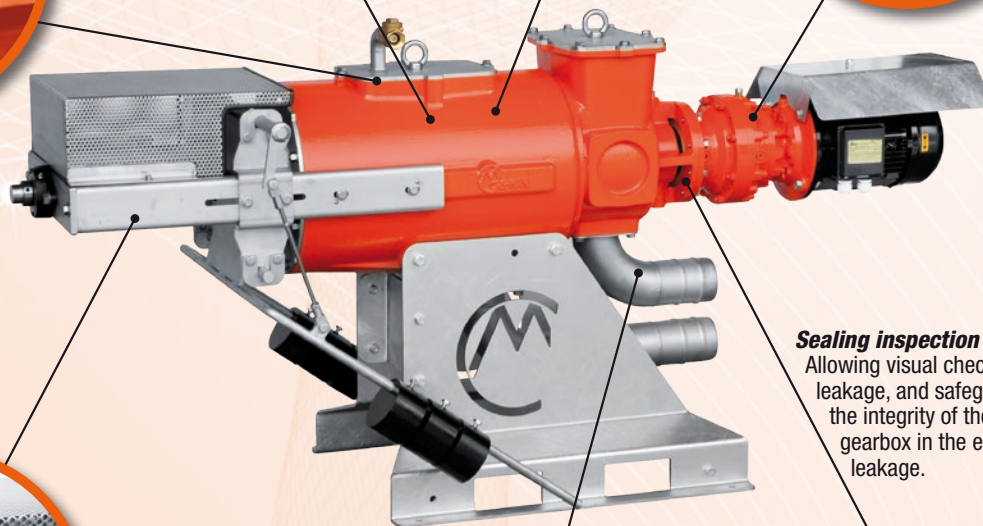
Screens
Stainless steel screens with geometrical structure, strength and material chemical composition specifically designed for each application.



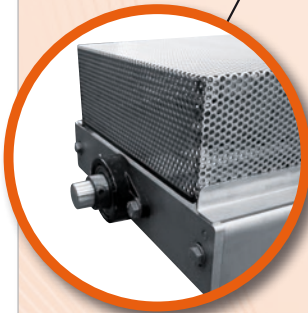
Screen inspection window
Top inspection window for easy and quick check of screen cleaning.



Planetary gearbox
Reduced energy consumption and longer gear life.

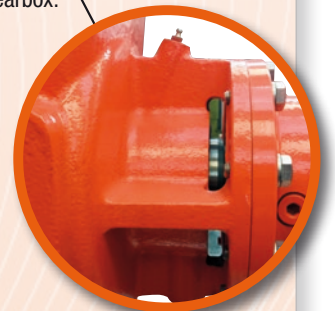


Sealing inspection window
Allowing visual check for leakage, and safeguarding the integrity of the gearbox in the event of leakage.



Front side supported screw
Front bearing structure for a perfect guide of the screw which reduces the wearing on the screen.

Sealing system
System of three lip seals with grease for a secure sealing between the separator and the gearbox.



Smart Piping input
Inlet piping designed to leave them empty, and avoid the possible freezing, during the inactivity of the machine.





Main strengths: Hygienizing Biocell

Consistent quality

The machine's electronic control system ensures hygienisation of the material through a pasteurization process.



Financial savings

By balancing the savings obtained from using hygienized solids in the place of traditional bedding (straw, sand, sawdust, etc.) it can easily be verified that returns on the investment are achieved within a few years.



Easy to use

The machine is simple to assemble (install) and easy to use thanks to its "user friendly" control system.



Improved and more economic management of manure

The quantity of manure to be managed is reduced since traditional bedding materials are not present.

Low energy consumption

Maximum power consumption 6,5 kW.

Additional storage is not required

The hygienized solid material is produced daily and so additional storage is not required (in barns) as is the case with traditional bedding materials.



Option of remote control

It is possible to control the operation of the machine from an office PC (temperature, weight, unloaded material, alarms history, etc.).



Very compact size

The overall dimensions of the machine are very small compared to competing systems.



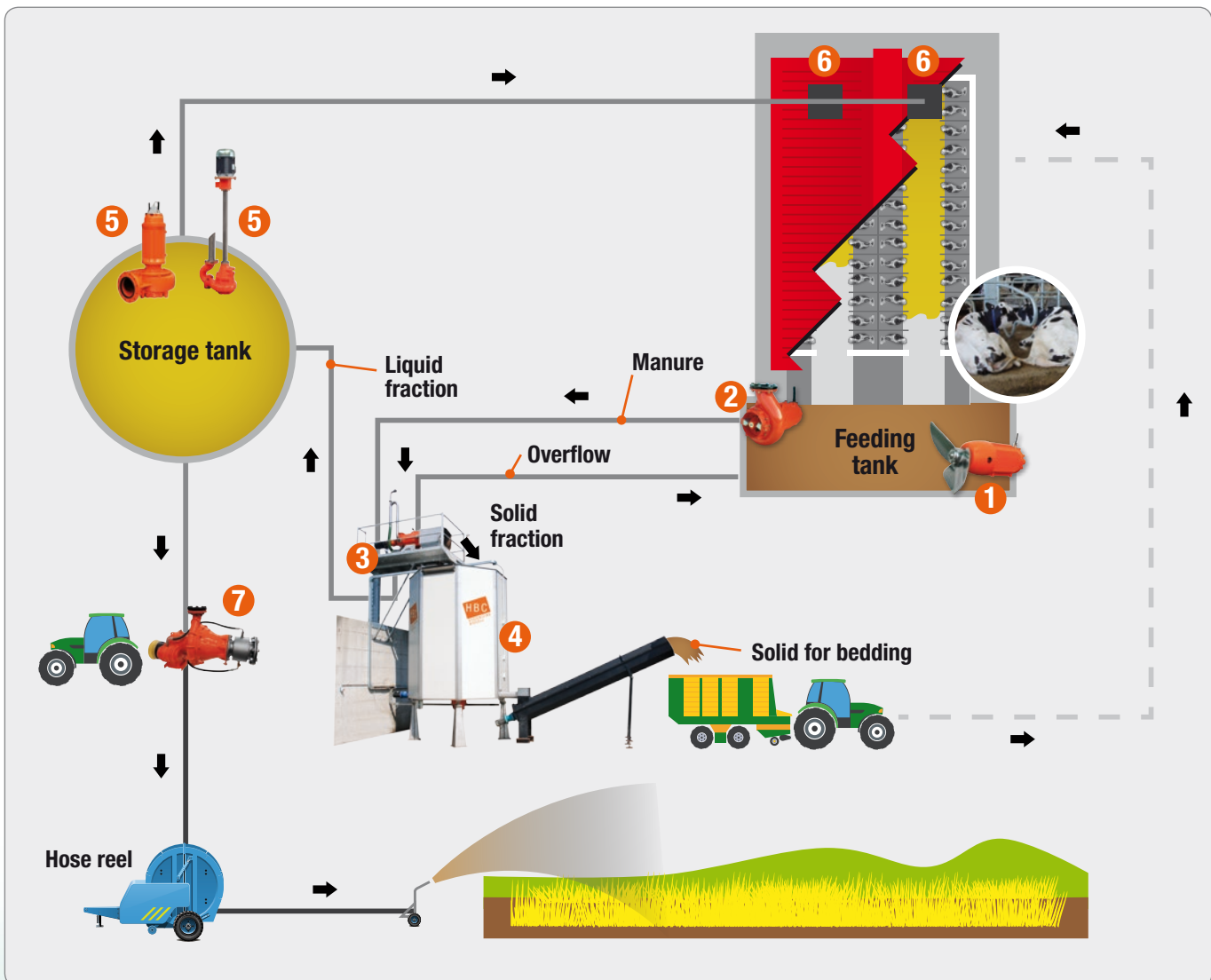
Easy to transport

The machine is modular and so a 20 foot container is sufficient for transport.





Livestock manure management



Application of CRI-MAN products in a typical Livestock

1. TBM mixer to homogenize the manure
2. PTS submersible pump to feed the separator
3. SM separator to divide solid fraction from liquid fraction
4. HBC hygienized biocell for bedding recovery
5. PTE vertical pump or PTS submersible pump for flushing
6. VF flushing valve for flushing
7. PTH pump for tractor

Why to divide solid fraction from liquid fraction?

Benefits of Solid Fraction

- To use as Compost in Greenhouses, Fruit crops, etc.
- To use in the field before seeding because the Nitrogen, present in Organic form in the solid fraction, is slowly absorbed by the ground
- Reduction of methane and odour emissions, due to aerobic stabilization of Solid Fraction
- To use as bedding in the barn (instead of straw)
- Easy and cheap to transport

Benefits of Liquid Fraction

- Can be used for Flushing of barns, channels, etc.
- Can be used for Fertigation in the field
- Volume reduction of the Lagoon for Liquid Fraction recovery (due to the absence of Solid Fraction volume)
- In the Liquid Fraction the Nitrogen is in Ammoniac form, that means fast absorption by the ground. Therefore, it can be used in the field after seeding, during crop growth.
- Reduction of Ammoniac NH₃ emission because the Liquid Fraction penetrates in the ground faster
- Can be used in the Nitrogen Removing Plant



Livestock manure management



Check on video

Pumps

PTS 40 SERIES

Submersible chopper pump

Technical specifications:

| | | |
|-------------------|----------------------|---------------|
| • Chopping system | | |
| • Max capacity: | 26 m ³ /h | 114 US gpm |
| • Head: | 17 m | 56 ft |
| • Motor power: | 0,75 - 1,1 kW | 1 - 1,5 HP |
| • Suction: | 65 mm | 2 9/16 inches |
| • Discharge: | 40 mm | 1 9/16 inches |



PTS 65 SERIES

Submersible chopper pump

Technical specifications:

| | | |
|-------------------|-----------------------|---------------|
| • Chopping system | | |
| • Max capacity: | 110 m ³ /h | 484 US gpm |
| • Head: | 29 m | 95 ft |
| • Motor power: | 7,5 - 11 kW | 10 - 15 HP |
| • Suction: | 100 mm | 4 inches |
| • Discharge: | 65 mm | 2 9/16 inches |



PTS 80 SERIES

Submersible chopper pump

Technical specifications:

| | | |
|---|-----------------------|--------------|
| • Chopping system and anti-clogging screw | | |
| • Max capacity: | 160 m ³ /h | 705 US gpm |
| • Head: | 46 m | 151 ft |
| • Motor power: | 2,2 - 18,5 kW | 3 - 26 HP |
| • Suction: | 100 mm | 4 inches |
| • Discharge: | 80 mm | 3 1/8 inches |



PTS 100-150 SERIES

Submersible chopper pump

Technical specifications:

| | | |
|--------------------------|-----------------------|--------------|
| • Double chopping system | | |
| • Max capacity: | 340 m ³ /h | 1497 US gpm |
| • Head: | 21 m | 69 ft |
| • Motor power: | 4 - 18,5 kW | 5,4 - 26 HP |
| • Suction: | 150 - 200 mm | 6 - 8 inches |
| • Discharge: | 100 - 150 mm | 4 - 6 inches |





Pumps

PTS 100K SERIES

Submersible chopper pump

Technical specifications:

- Double chopping system
- PTR version: with cooling jacket for dry installation
- Max capacity: 260 m³/h 1145 US gpm
- Head: 51 m 167 ft
- Motor power: 15 - 45 kW 20 - 60 HP
- Suction: 150 mm 6 inches
- Discharge: 100 mm 4 inches

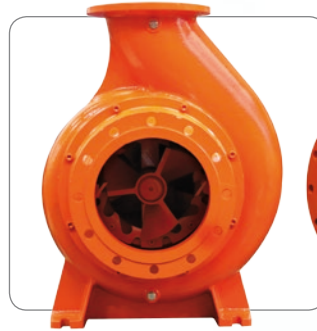


PTS 200 / PS 200 SERIES

Submersible chopper pump

Technical specifications:

- PTS version: double chopping system
- PS version: without chopping system
- PTR version: with cooling jacket for dry installation
- Max capacity: 720 m³/h 3170 US gpm
- Head: 22 m 72 ft
- Motor power: 15 - 30 kW 20 - 40 HP
- Suction: 250 mm 10 inches
- Discharge: 200 mm 8 inches

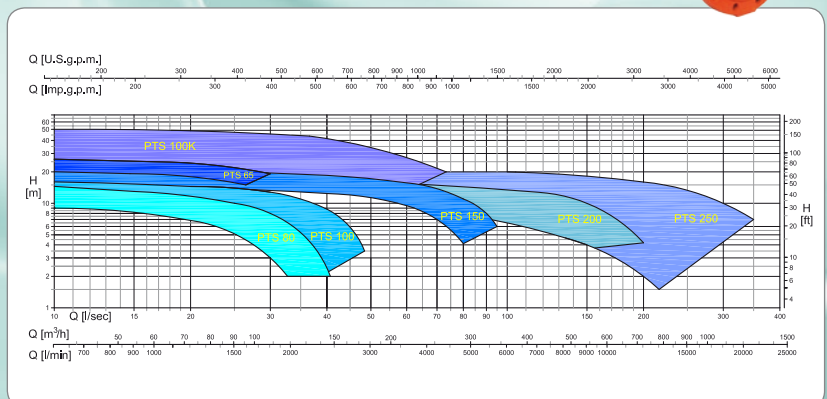
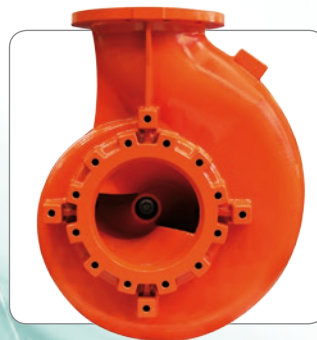


PS 250 SERIES

Submersible pump for flushing

Technical specifications:

- PTR version: with cooling jacket for dry installation
- Max capacity: 1400 m³/h 6164 US gpm
- Head: 24 m 79 ft
- Motor power: 11 - 45 kW 15 - 60 HP
- Suction: 250 mm 10 inches
- Discharge: 250 mm 10 inches

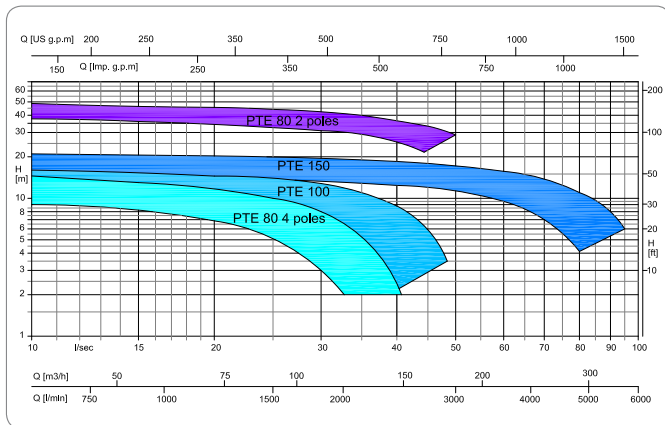


PTE / PTEM SERIES

PTE vertical chopper pump with electric motor
PTEM version with adjustable mixing nozzle

Technical specifications:

- Double chopping system
- Max capacity: 340 m³/h 1497 US gpm
- Head: 53 m 174 ft
- Motor power: 4 - 22 kW 5,4 - 30 HP
- Suction: 150 - 200 mm 6 - 8 inches
- Discharge: 100 - 150 mm 4 - 6 inches



PTE



PTEM



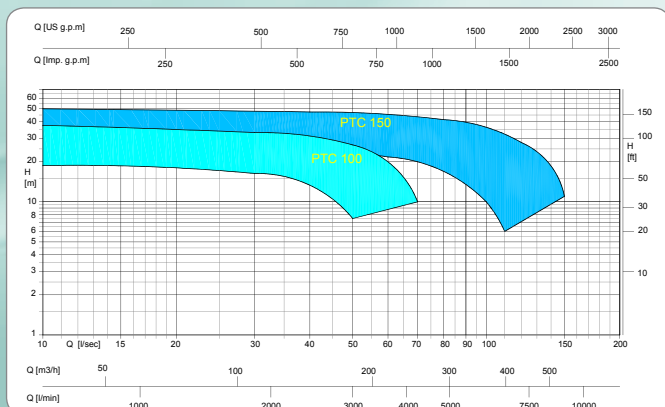
LIVESTOCK

PTC / PTCM SERIES

PTC vertical chopper pump with overgear for tractors
PTCM version with adjustable mixing nozzle

Technical specifications:

- Double chopping system
- Max capacity: 550 m³/h 2422 US gpm
- Head: 51 m 167 ft
- Tractor rated power: 40 - 95 kW 54 - 127 HP
- Suction: 150 - 200 mm 6 - 8 inches
- Discharge: 100 - 150 mm 4 - 6 inches



PTC



PTCM





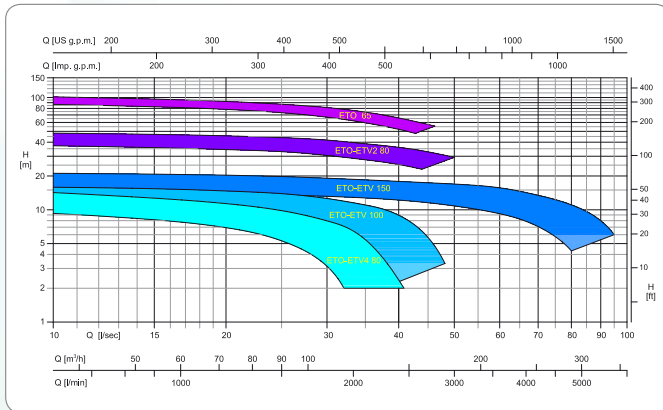
Pumps

ETO/ETV SERIES

Horizontal electric chopper pump

Technical specifications:

- Double chopping system
- Max capacity: 340 m³/h 1497 US gpm
- Head: 106 m 348 ft
- Motor power: 0,75 - 45 kW 1 - 60 HP
- Suction: 65 - 200 mm 2 9/16 - 8 inches
- Discharge: 40- 150 mm 1 9/16 - 6 inches

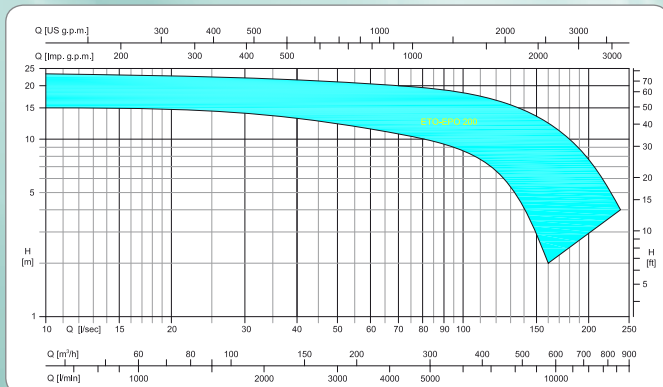


ETO 200 / EPO 200 SERIES

Horizontal electric chopper pump

Technical specifications:

- ETO version: double chopping system
- EPO version: single chopping system
- Max capacity: 720 m³/h 3170 US gpm
- Head: 22 m 72 ft
- Motor power: 22 - 45 kW 29 - 61 HP
- Suction: 250 mm 10 inches
- Discharge: 200 mm 8 inches

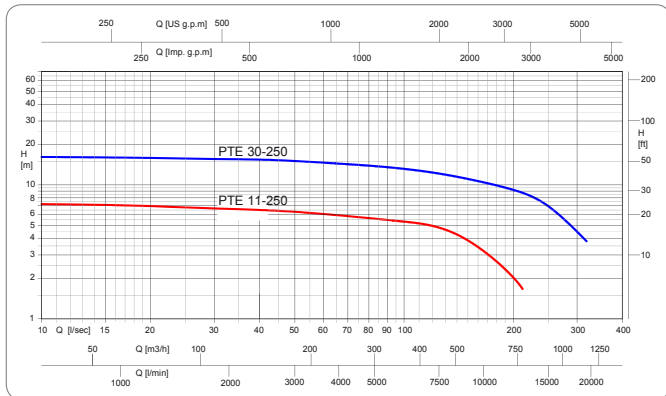


PTE 250 SERIES

Vertical pump with external electric motor for Flushing

Technical specifications:

- Max capacity: 1080 m³/h 4756 US gpm
- Head: 16 m 52 ft
- Motor power: 11 - 30 kW 15 - 40 HP
- Suction: 250 mm 10 inches
- Discharge: 250 mm 10 inches



PTE 250



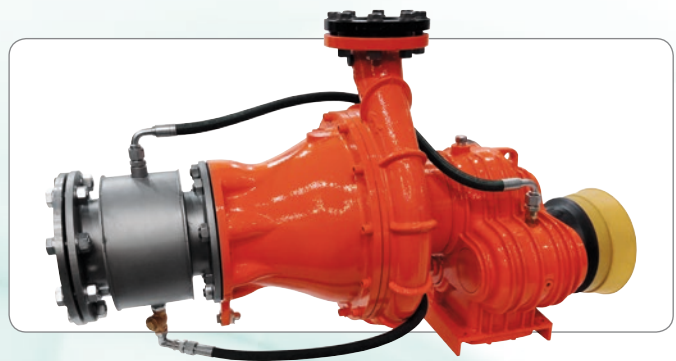
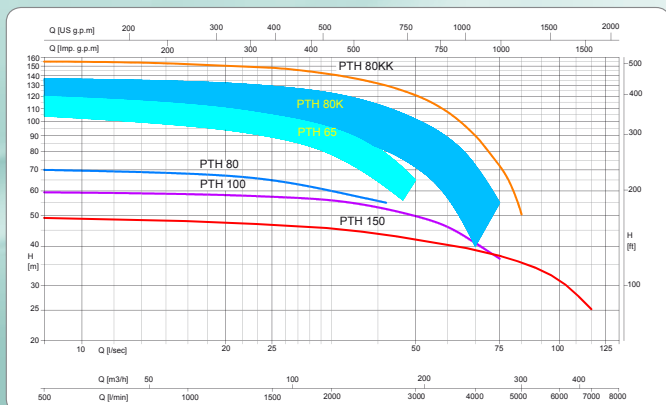
LIVESTOCK

PTH SERIES

Horizontal chopper pump with overgear for tractors

Technical specifications:

- Double chopping system
- Max capacity: 460 m³/h 2026 US gpm
- Head: 155 m 508 ft
- Tractor rated power: 50 - 140 kW 68 - 188 HP
- Suction: 100 - 150 mm 4 - 6 inches
- Discharge: 65 - 100 mm 2 9/16 - 4 inches





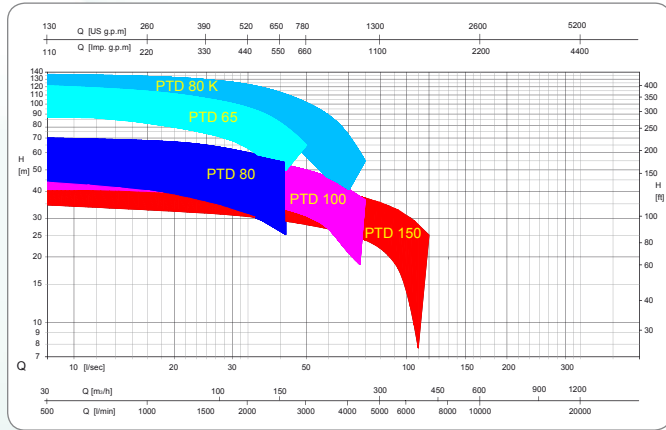
Pumps

PTD SERIES

Horizontal chopper pump with overgear for Diesel engine

Technical specifications:

- Double chopping system
- Max capacity: 460 m³/h 2026 US gpm
- Head: 137 m 449 ft
- Diesel engine power: 30 - 87 kW 40 - 117 HP
- Suction: 100 - 200 mm 4 - 8 inches
- Discharge: 65 - 150 mm 2 9/16 - 6 inches



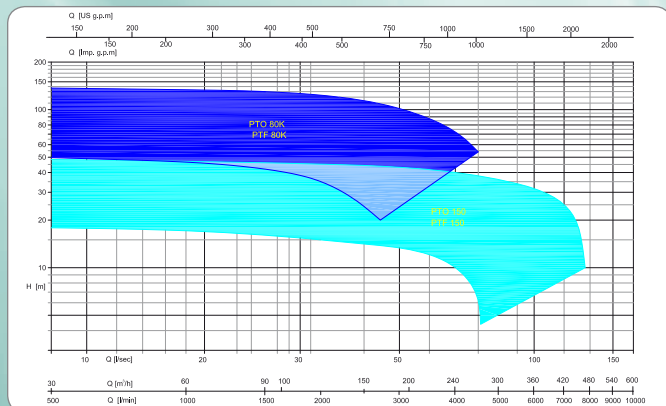
PTO/PTF SERIES

PTO Horizontal chopper pump with coupling for Diesel engines and electric motors

PTF Horizontal chopper pump with standard SAE housing

Technical specifications:

- Double chopping system
- Max capacity: 460 m³/h 2026 US gpm
- Head: 137 m 449 ft
- Motor power: 20 - 90 kW 27 - 121 HP
- Suction: 150 - 200 mm 6 - 8 inches
- Discharge: 80 - 150 mm 3 1/8 - 6 inches



Mixer

TBM SERIES

Submersible horizontal mixer

Technical specifications:

- Planetary gearbox
- Blades in stainless steel with self-cleaning profile
- Rpm: 320 - 940 (50Hz) 380 - 1130 (60Hz)
- Motor power: 1,5 - 25 kW 2 - 34 HP
- Axial thrust: 230 - 5396 N 52 - 1206 lb
- Capacity: 643 - 10138 m³/h 2831 - 44638 US gpm
- Max working temp: 40 °C 104 °F



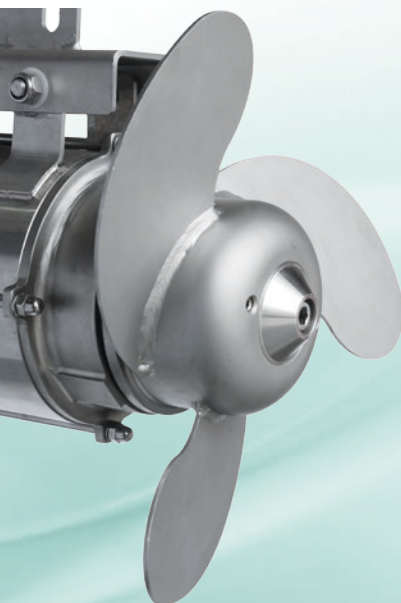
LIVESTOCK

TBX SERIES

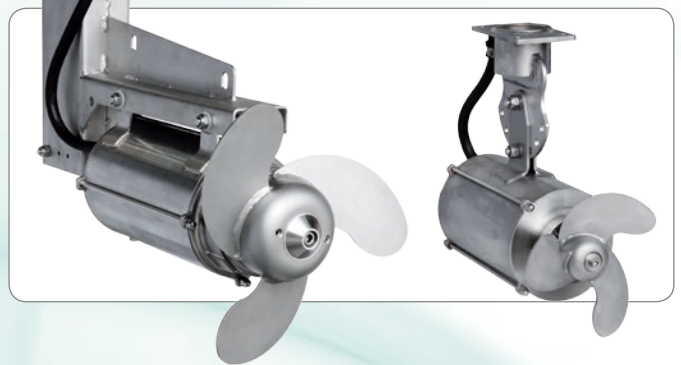
Stainless steel submersible horizontal mixer

Technical specifications:

- Made entirely in stainless steel
- Blades in stainless steel with self-cleaning profile



- Rpm: 925 - 1400 (50Hz) 1110 - 1680 (60Hz)
- Motor power: 0,75 - 3 kW 1 - 4 HP
- Axial thrust: 117 - 373 N 25 - 84 lb
- Capacity: 279 - 1061 m³/h 1229 - 4672 US gpm
- Max working temp: 40 °C 104 °F



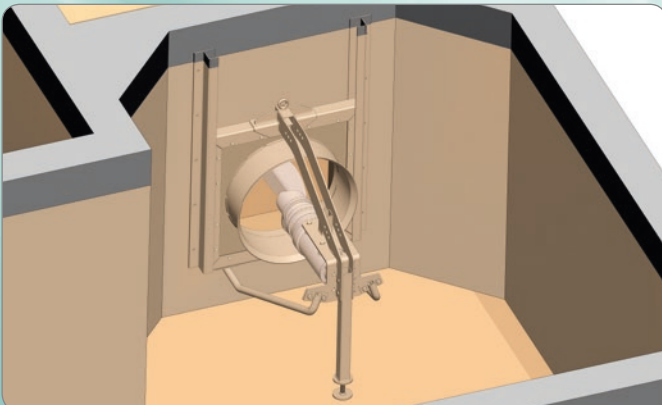
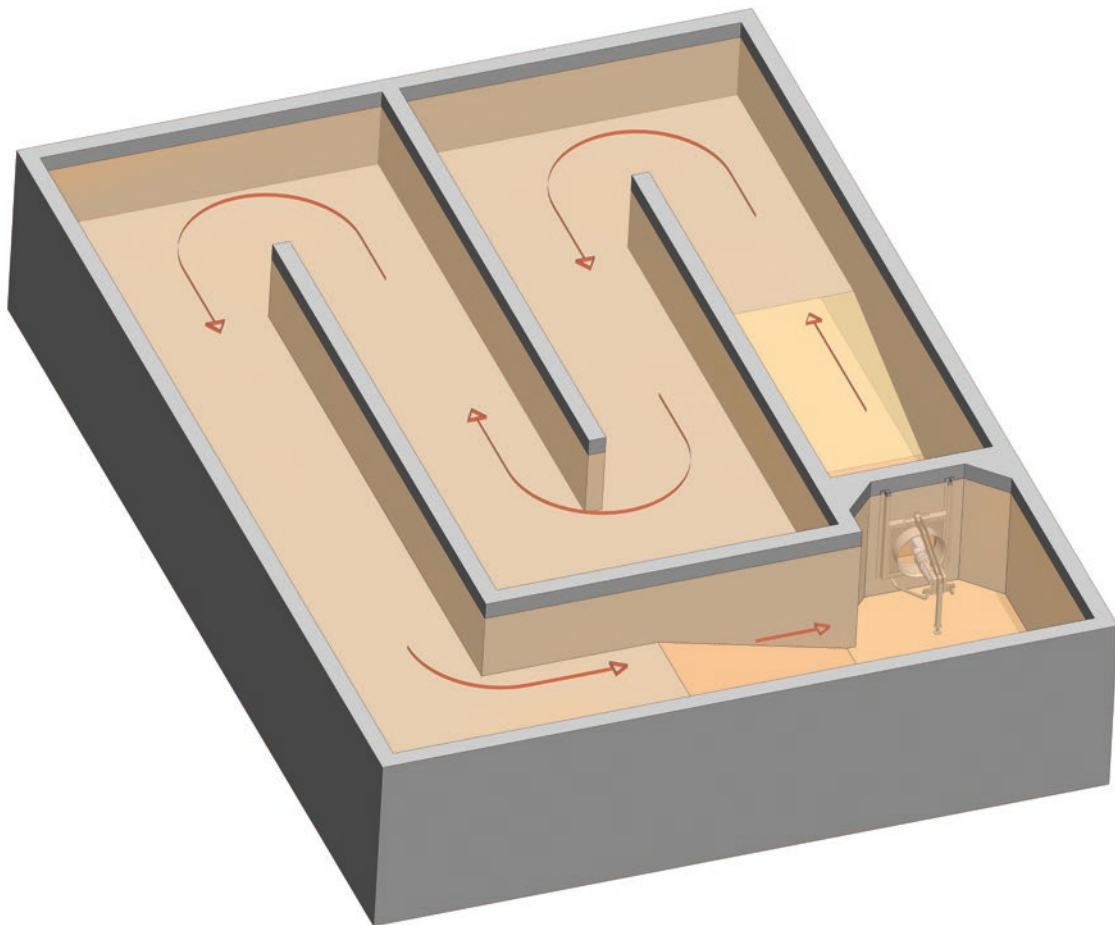


Slalom systems

The Slalom system is a reasonable and economical way to store the slurry and use it when needed.

Thanks to the system, consisting of sluice gate and TBM mixer, is possible to keep the slurry in circulation while avoiding the formation of crusts.

The sluice gate, available in either galvanized steel or stainless steel AISI 304, can accommodate TBM mixers from 5,5 to 18,5 kW.



Separators

SM260 MINI SERIES

Technical specifications:

- Screw in AISI 304 treated stainless steel
 - Standard Screen in AISI 316 stainless steel
 - Planetary gear box
 - Sealing system with three lip seals (mechanical seal on request)
- | | | |
|----------------|----------------------------|--------------------|
| • Capacity: | 4,5 - 18 m ³ /h | 20 - 79 US gpm |
| • Rpm: | 20 (50Hz) | 24 (60Hz) |
| • Motor power: | 3 kW | 4 HP |
| • Screen mesh: | 0,25 - 1 mm | 0,01 - 0,04 inches |
- Up to 30% Dry Matter

For farms up to 300 cows



SM260 BASIC SERIES

Technical specifications:

- Screw in AISI 304 treated stainless steel
 - Standard Screen in AISI 316 stainless steel
 - Planetary gear box
 - Sealing system with three lip seals (mechanical seal on request)
- | | | |
|----------------|--------------------------|--------------------|
| • Capacity: | 4 - 50 m ³ /h | 18 - 220 US gpm |
| • Rpm: | 33 (50Hz) | 40 (60Hz) |
| • Motor power: | 4 kW | 5,4 HP |
| • Screen mesh: | 0,25 - 1 mm | 0,01 - 0,04 inches |
- Up to 30% Dry Matter

For farms from 300 - 800 cows

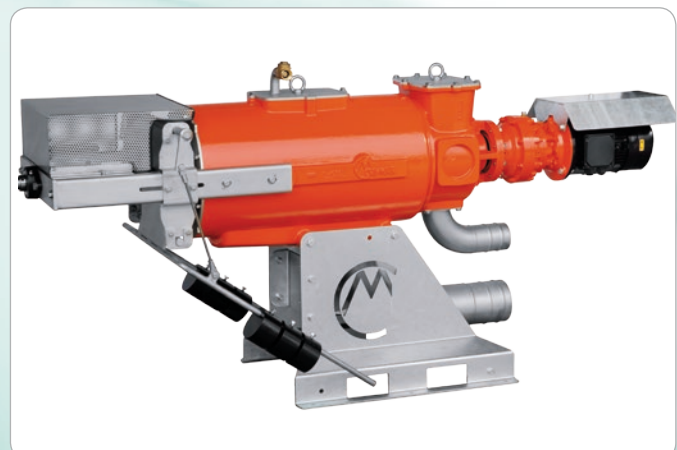


SM260 PROFESSIONAL SERIES

Technical specifications:

- Screw in AISI 304 treated stainless steel
 - Front side supported screw
 - Standard Screen in AISI 316 stainless steel
 - Planetary gear box
 - Sealing system with three lip seals (mechanical seal on request)
- | | | |
|----------------|--------------------------|--------------------|
| • Capacity: | 4 - 50 m ³ /h | 18 - 220 US gpm |
| • Rpm: | 33 (50Hz) | 40 (60Hz) |
| • Motor power: | 4 kW | 5,4 HP |
| • Screen mesh: | 0,25 - 1 mm | 0,01 - 0,04 inches |
- Up to 30% Dry Matter

For farms from 700 - 1200 cows and Biogas Plant.





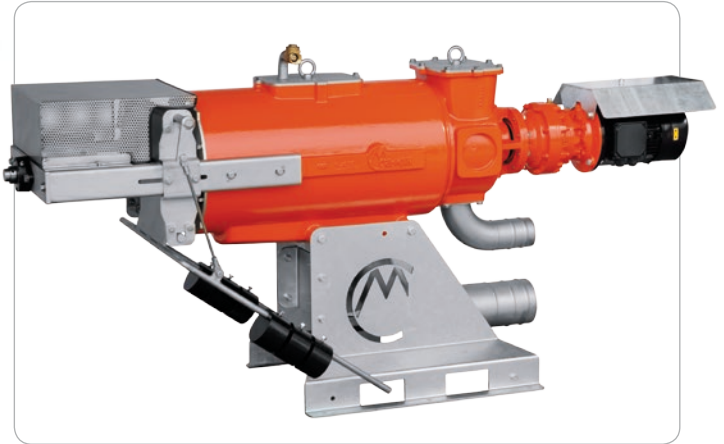
Separators

SM300 PROFESSIONAL SERIES

Technical specifications:

- Screw in AISI 304 treated stainless steel
 - Front side supported screw
 - Standard Screen in AISI 316 stainless steel (Heavy Duty screen on request)
 - Planetary gear box
 - Sealing system with three lip seals (mechanical seal on request)
- | | | |
|----------------|--------------------------|--------------------|
| • Capacity: | 6 - 72 m ³ /h | 26 - 317 US gpm |
| • Rpm: | 33 (50Hz) | 40 (60Hz) |
| • Motor power: | 5,5 kW | 7,4 HP |
| • Screen mesh: | 0,25 - 1 mm | 0,01 - 0,04 inches |
- Up to 30% Dry Matter

For farms over 1000 cows and Biogas Plant

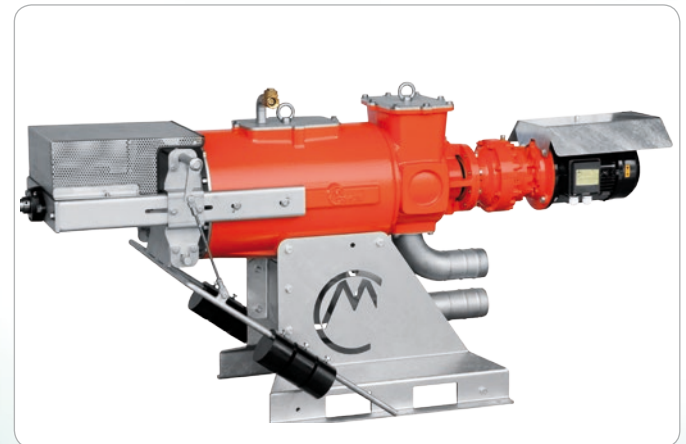


SM260 DM DRY MATTER SERIES

Technical specifications:

- Screw in AISI 304 treated stainless steel
 - Front side supported screw
 - Heavy Duty Screen in AISI 316 stainless steel
 - Planetary gear box
 - Sealing system with three lip seals (mechanical seal on request)
- | | | |
|----------------|--------------------------|--------------------|
| • Capacity: | 4 - 22 m ³ /h | 18 - 97 US gpm |
| • Rpm: | 14 (50Hz) | 17 (60Hz) |
| • Motor power: | 5,5 kW | 7,4 HP |
| • Screen mesh: | 0,50 - 1 mm | 0,02 - 0,04 inches |
- Up to 37% Dry Matter

**Suitable to obtain a drier solid fraction.
For farms up to 400 cows**



SM260FA DM DRY MATTER SERIES

Technical specifications:

- Screw in AISI 304 treated stainless steel
 - Front side supported screw
 - Heavy Duty main Screen in AISI 316 stainless steel
 - Heavy Heavy Duty Auxiliary Screen in AISI 316 stainless steel
 - Planetary gear box
 - Sealing system with three lip seals (mechanical seal on request)
- | | | |
|----------------|--------------------------|--------------------|
| • Capacity: | 4 - 42 m ³ /h | 18 - 185 US gpm |
| • Rpm: | 20 (50Hz) | 24 (60Hz) |
| • Motor power: | 7,5 kW | 10 HP |
| • Screen mesh: | 0,50 - 0,75 mm | 0,02 - 0,03 inches |
- Up to 37% Dry Matter

**Suitable to obtain a drier solid fraction.
For farms from 300 - 800 cows**



Hygienizing Biocell



Manure



Liquid fraction

Hygienized solid



Operating performance:

- Production: up to 8 t/day of hygienized solids.
- Hygienisation: guaranteed pasteurization system (1 hour at 70°C).
- Drying: up to 55% of dry material (by adjustment of the HRT).

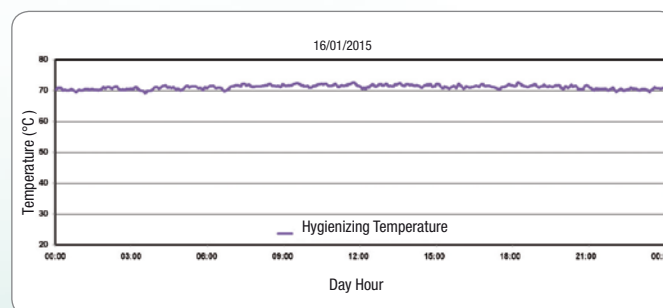
Process:

The process of biodrying or biostabilization occurs inside the HBC biocell:

the presence of oxygen (air) supports an aerobic process of biological degradation of the organic substances present in cow manure.

The process is highly exothermic and the resulting heat production is used to ensure the hygienisation of the product and to evaporate the water content.

The exothermic biological process means that the material remains at a temperature of 70°C for at least 60 minutes, ensuring pasteurization.



Quality of hygienized solid⁽¹⁾:

Escherichia coli

Limit value 1.000 MPN/g according to

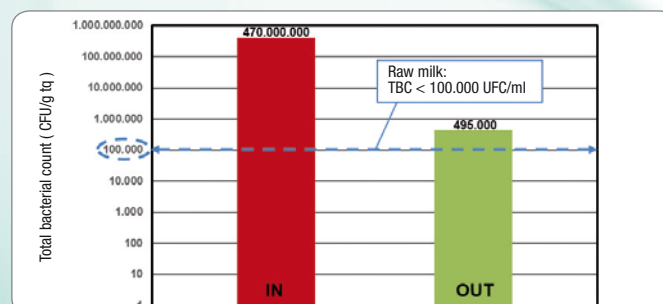
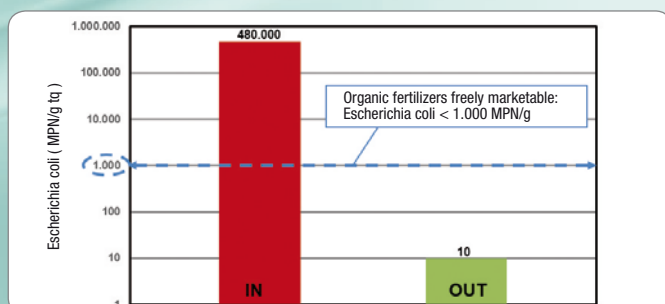
- Animal by-products after pasteurization (Legislative Decree n. 75/2010).

- Freely marketable organic fertilizers (Reg. UE 142/2011).

Total Bacterial Count TBC

In Europe there are not official limits for TBC.

As only indicative information, the limit value for raw milk is 100.000 UFC/ml.



(1) Analyses relating to Laboratory tests. Absence of salmonella.

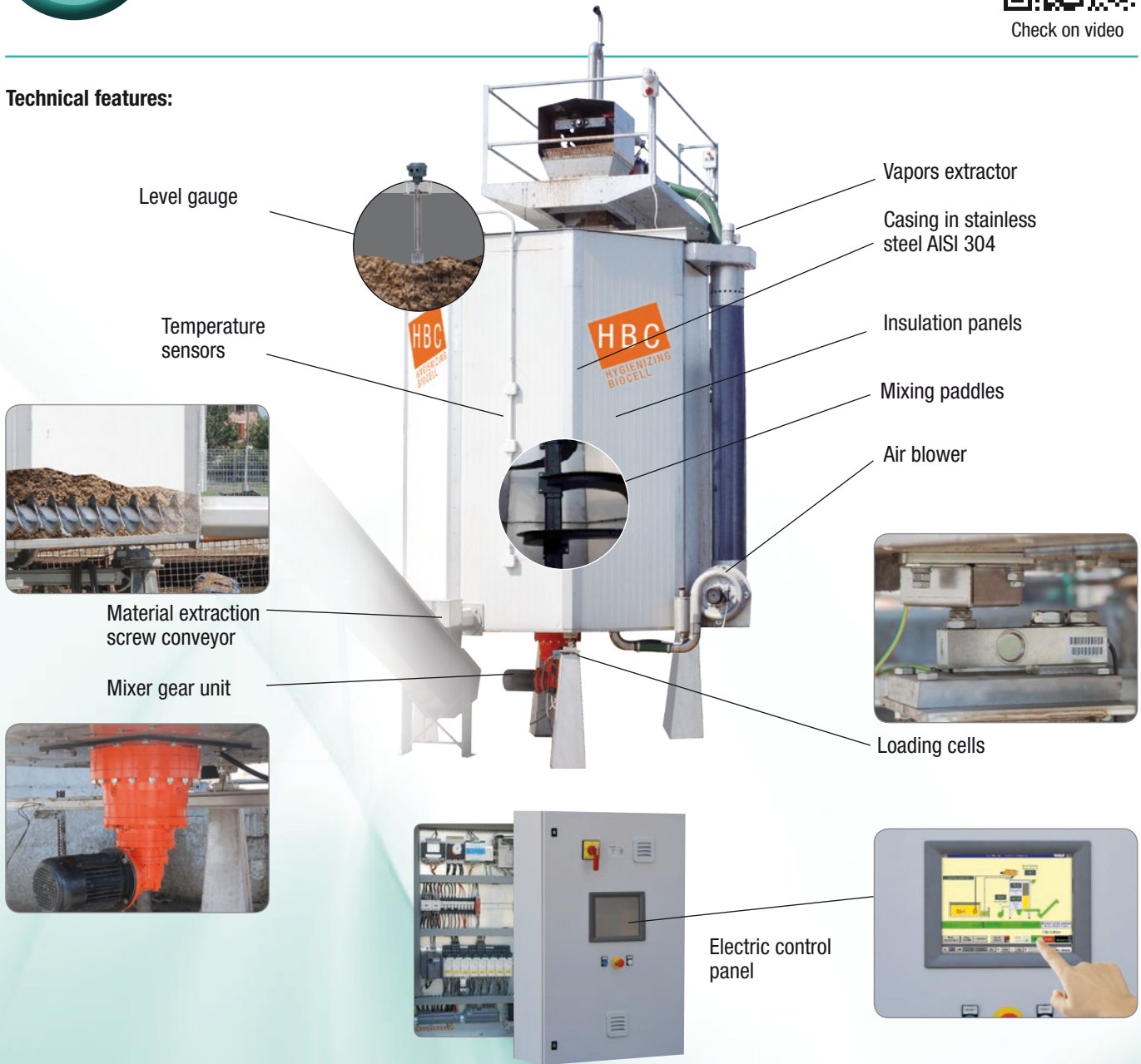


Hygienizing Biocell

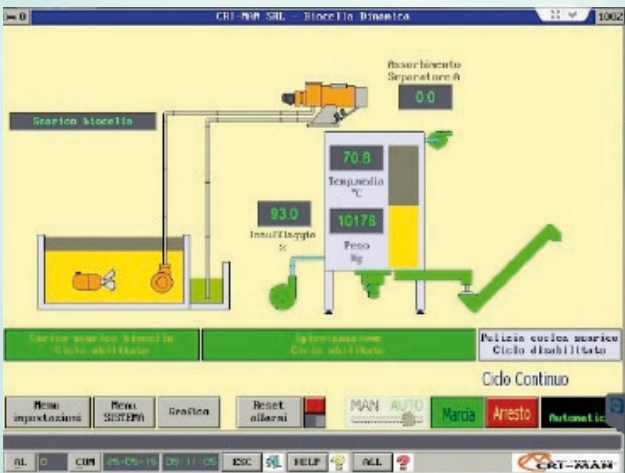


Check on video

Technical features:



Operational functioning of the software:



- Biomass temperature.
- Biomass weight.



- Air blower adjustment.
- Constant monitoring of unloaded material: Hygienisation.
- Full system management: mixer, pump, separator.

Plants installed



150 - Italy



50.000 - Russia



500 - Australia



850 - Italy



5.000 - China



150 - Finland



300 - Romania



150 - Italy



6.000 - China



10.000 - Russia



108.000 - Russia



50 - Switzerland



3.000 - Estonia



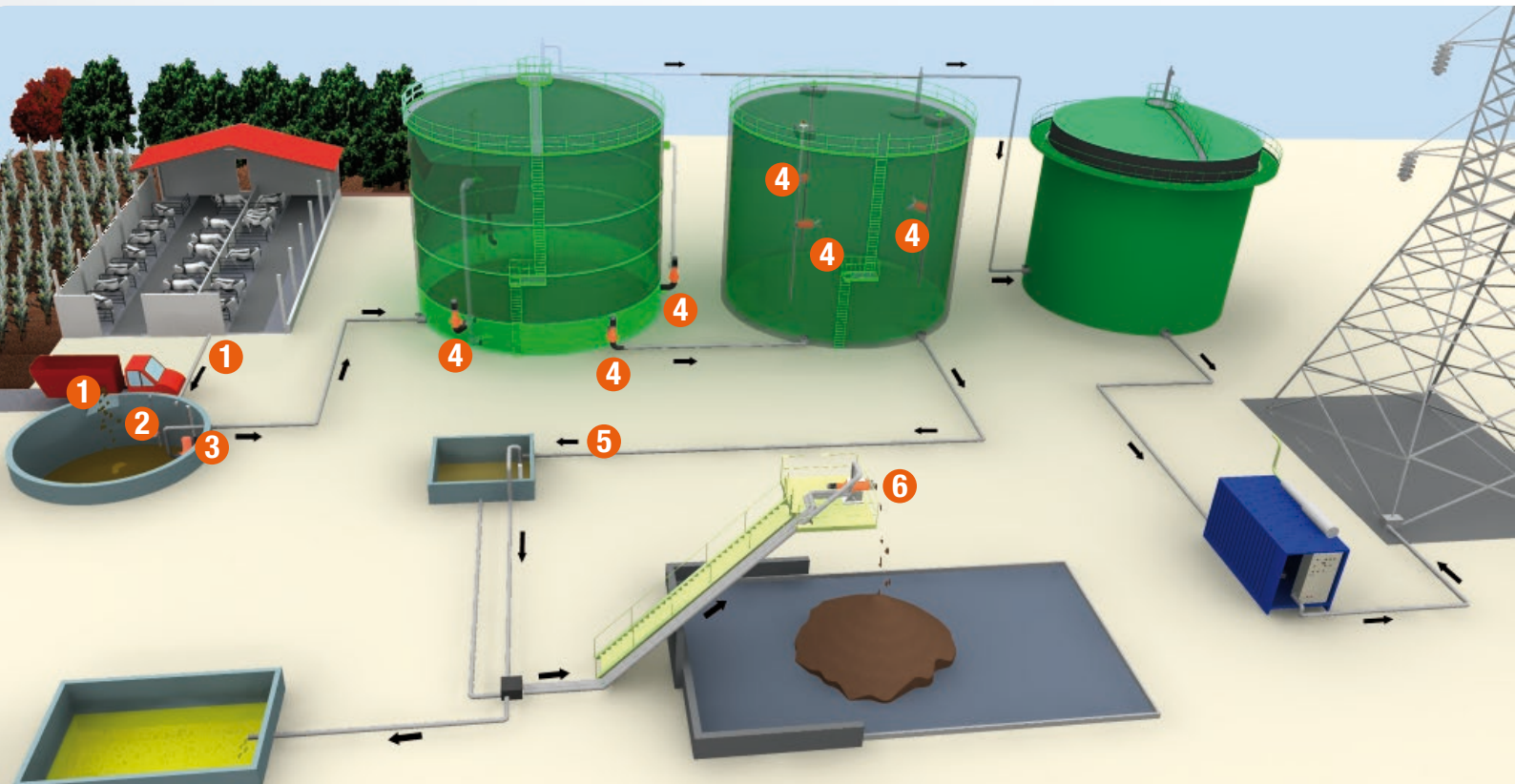
3.000 - Iran



8.000 - North Korea



Biogas plant



Application of CRI-MAN products in a typical Biogas plant:

1. Filling feed tank with slurry and/ or agricultural waste
2. Mixing feed tank with TBM series submersible mixer
3. Feeding digester with
 - PTS series chopper submersible pump
 - BMC series macerator and PLD series double piston pump
 - CFS series shredder and PLD series double piston pump
4. Mixing digester with
 - TBM series submersible mixer
 - MXB and/or MXL series vertical and/or lateral mixer
 - AF series submersible flow accelerator
 - Nozzle and ETO/ETV series chopper electric pump
5. Transferring substrate into separator feed tank
6. Liquid-solid separation

Mixers



Submersible mixers are used in digesters to mix and homogenise the substrate, thus increasing the output of the plant and prevent solids settling down which in the long run might reduce the efficiency of the plant, for instance by clogging its pipes.

Pumps



Motor-driven pumps, both submersible and external, are used to feed the primary digester and/ or handle the substrate between digesters and/ or for mixing through the nozzles inside the digester. The chopping system provided on all CRI-MAN pumps aids the anaerobic fermentation process, thus improving the efficiency of the plant.

Separators



Separators are used to separate the solid fraction from the liquid in the anaerobic fermentation process. The liquid fraction can be used as a fertiliser and for irrigation. The solid fraction may be used as an amender, as cattle beds, etc.. Use of separators is also recommended as a pre-treatment in nitrogen-reducing plants.



Check on video

BIOGAS





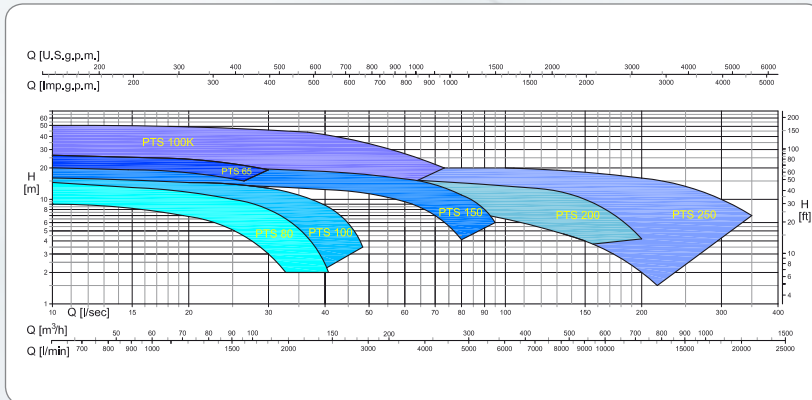
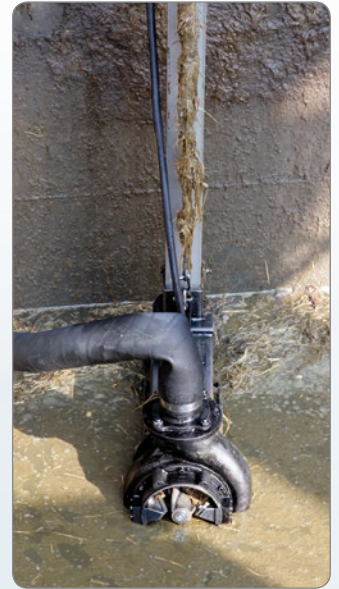
Pumps

PTS SERIES

Submersible chopper pump

Technical specifications:

- Double chopping system
- Max capacity: 1400 m³/h 6164 US gpm
- Head: 51 m 167 ft
- Motor power: 0,75 - 45 kW 1 - 61 HP
- Suction: 65 - 250 mm 2 9/16 - 10 inches
- Discharge: 40 - 250 mm 1 9/16 - 10 inches



PLD SERIES

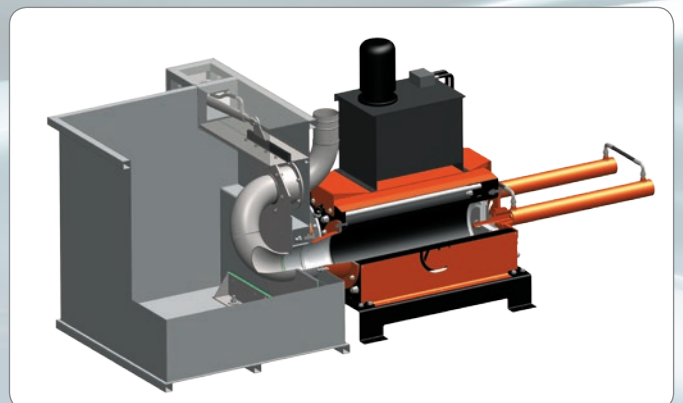
Hydraulic piston pump

Combined with a BMC Macerator it can form a system for maceration, homogenization, and loading for a biogas digester.

It comprises a materials loading tank supplying the double pump pistons and an automatic valve system that permits alternating loading and unloading of the pistons.

Technical specifications:

- Hydraulic motor power: 5,5 kW 7,4 HP
- Capacity: 10 - 30 m³/h 44 - 132 US gpm
- Head: 80 m 262 ft
- Piston stroke: 900 mm 35,4 inches

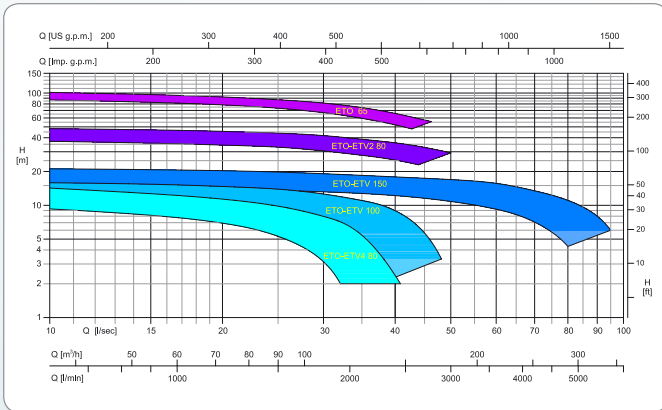


ETO/ETV SERIES

Horizontal electric chopper pump

Technical specifications:

- Double chopping system
- Max capacity: 340 m³/h 1497 US gpm
- Head: 106 m 348 ft
- Motor power: 0,75 - 45 kW 1 - 60 HP
- Suction: 65 - 200 mm 2 9/16 - 8 inches
- Discharge: 40- 150 mm 1 9/16 - 6 inches

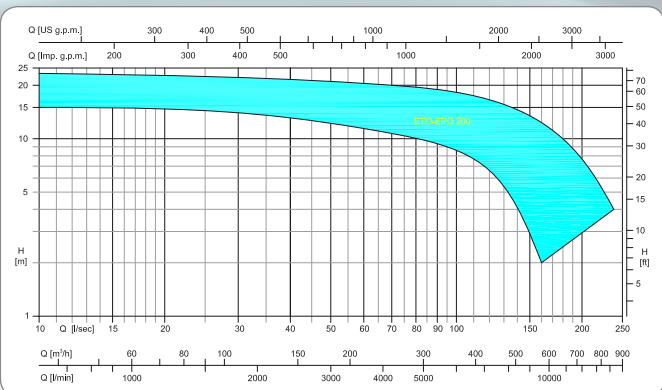


ETO 200 / EPO 200 SERIES

Horizontal electric chopper pump

Technical specifications:

- ETO version: double chopping system
- EPO version: single chopping system
- Max capacity: 720 m³/h 3170 US gpm
- Head: 22 m 72 ft
- Motor power: 22 - 65 kW 29 - 87 HP
- Suction: 250 mm 10 inches
- Discharge: 200 mm 8 inches





Mixers

BMC SERIES

Macerator

Machine for maceration and homogenization of the biomass before entering into the digester. It can be provided with a loading system, which may be a hopper or a conveyor belt, and a discharge system, which may be another conveyor belt or directly to the PLD pump. Available with electric motor or PTO for tractor.

Technical specifications:

- Transmission with pulleys and trapezoidal belts
- Hydraulic adjustment system for the holding time of materials inside the macerator
- Level sensors for monitoring the load of solid and/or liquid materials
- Electric motor power: 37 - 55 kW 50 - 74 HP
- Capacity: rpm 2400 (50 Hz) 2400 (60 Hz)
- Blades in wearproof steel: 10 m³/h 44 US gpm



MXP SERIES

Vertical internal mixer

Technical specifications:

- Planetary gearbox
- Inspection porthole with window wiper
- Open tank version: parts in contact with liquid in painted steel
- Digester version (water tight): parts in contact with gas in stainless steel
- Shaft in various lengths
- N. 4 adjustable blades
- Atex
- Rpm: II 2G Ex d T4 15 - 18 (60 Hz)
- Motor power: 10 - 15 (50 Hz) 10 - 15 HP
- 7,5 - 11 kW

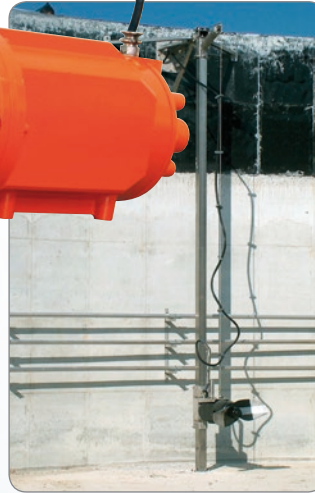
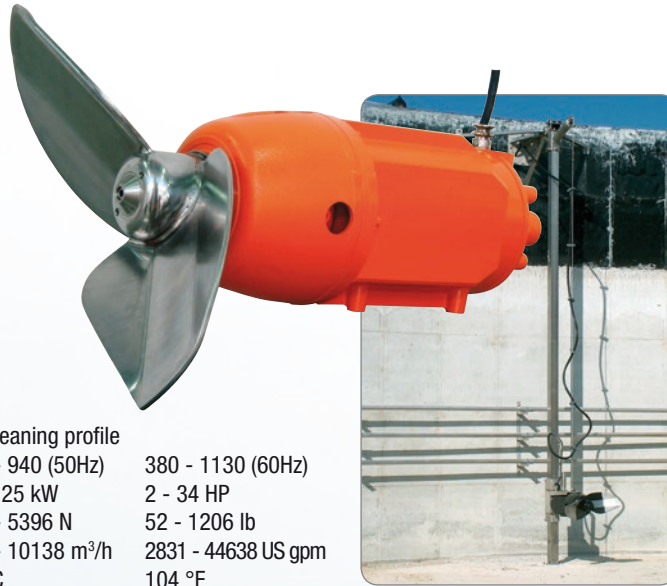


TBM SERIES

Submersible horizontal mixer

Technical specifications:

- Planetary gearbox
- Blades in stainless steel with self-cleaning profile
- Rpm: 320 - 940 (50Hz) 380 - 1130 (60Hz)
- Motor power: 1,5 - 25 kW 2 - 34 HP
- Axial thrust: 230 - 5396 N 52 - 1206 lb
- Capacity: 643 - 10138 m³/h 2831 - 44638 US gpm
- Max working temp: 40 °C 104 °F

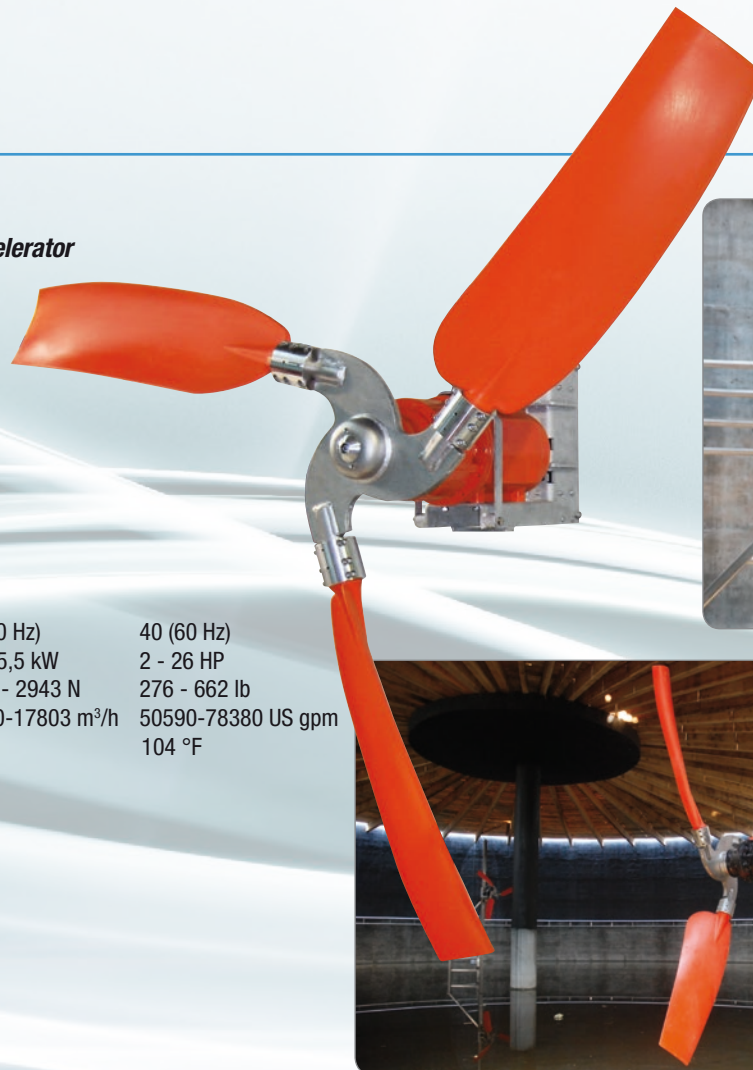


AF SERIES

Submersible horizontal flow accelerator

Technical specifications:

- Two-stage planetary gearbox
- Adjustable blades
- Blades in polyamide and fibreglass
- Blades hub in stainless steel
- Rpm : 53 (50 Hz) 40 (60 Hz)
- Motor power: 1,5 - 5,5 kW 2 - 26 HP
- Axial thrust: 1226 - 2943 N 276 - 662 lb
- Capacity: 11490-17803 m³/h 50590-78380 US gpm
- Max working temp: 40 °C 104 °F





Mixers

MXB SERIES

Vertical external mixer

Technical specifications:

- Planetary gearbox
- 3 vibration dampers
- Automatic lubricator
- Can be adjusted 360°
- Inspection porthole complete with window wiper
- Parts in contact with gas in stainless steel
- Adjustable blades
- Atex II 2G Ex d T4
- High efficiency (tests compliant with International Standard ISO21630)
- Motor power: 5,5 - 18,5 kW 7,4 - 25 HP
- Rpm 33 - 45 (50 Hz) 40 - 54 (60 Hz)



MXL SERIES

Lateral external mixer

Technical specifications:

- Planetary gearbox
- Blades in stainless steel with self-cleaning profile
- Rpm 350 (50 Hz) 420 (60 Hz)
- Atex II 2G Ex d T4
- Motor power 11 - 18,5 kW 15 - 25 HP
- Capacity 3977 - 6884 m³/h 17510 - 30309 US gpm
- Axial thrust 2158 - 3826 N 485 - 860 lb
- Max length of shaft 5,5 m 18 ft
- Max working temp. 60°C 140°F



Patent pending

Mixer accessories

Service box

The service box is used to mount the mixers on the concrete covers of digesters. This solution is perfectly waterproof and can be used to move and rotate the mixer 120° while it works. In the event of unscheduled maintenance, it allows to take the mixer out of the digester while minimising gas leaks. In addition, it is provided with an inspection porthole to check the mixer at regular intervals.

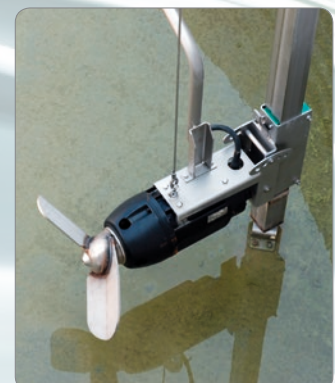
Entirely made of AISI 304 stainless steel.



BioGas bracket

The bracket is used to mount the mixers on the wall and features a system that enables it to move up and down and rotate around the vertical axle. So the location of the mixers and the direction of the flow may be adjusted at any time.

Entirely made of AISI 304 stainless steel.





Separators

SM260 MINI SERIES

Technical specifications:

- Screw in AISI 304 treated stainless steel
 - Standard Screen in AISI 316 stainless steel
 - Planetary gear box
 - Sealing system with three lip seals (mechanical seal on request)
- | | | |
|----------------|----------------------------|--------------------|
| • Capacity: | 4,5 - 18 m ³ /h | 20 - 79 US gpm |
| • Rpm: | 20 (50Hz) | 24 (60Hz) |
| • Motor power: | 3 kW | 4 HP |
| • Screen mesh: | 0,25 - 1 mm | 0,01 - 0,04 inches |
- Up to 30% Dry Matter



SM260 BASIC SERIES

Technical specifications:

- Screw in AISI 304 treated stainless steel
 - Standard Screen in AISI 316 stainless steel
 - Planetary gear box
 - Sealing system with three lip seals (mechanical seal on request)
- | | | |
|----------------|--------------------------|--------------------|
| • Capacity: | 4 - 50 m ³ /h | 18 - 220 US gpm |
| • Rpm: | 33 (50Hz) | 40 (60Hz) |
| • Motor power: | 4 kW | 5,4 HP |
| • Screen mesh: | 0,25 - 1 mm | 0,01 - 0,04 inches |
- Up to 30% Dry Matter



SM260 PROFESSIONAL SERIES

Technical specifications:

- Screw in AISI 304 treated stainless steel
 - Front side supported screw
 - Standard Screen in AISI 316 stainless steel
 - Planetary gear box
 - Sealing system with three lip seals (mechanical seal on request)
- | | | |
|----------------|--------------------------|--------------------|
| • Capacity: | 4 - 50 m ³ /h | 18 - 220 US gpm |
| • Rpm: | 33 (50Hz) | 40 (60Hz) |
| • Motor power: | 4 kW | 5,4 HP |
| • Screen mesh: | 0,25 - 1 mm | 0,01 - 0,04 inches |
- Up to 30% Dry Matter

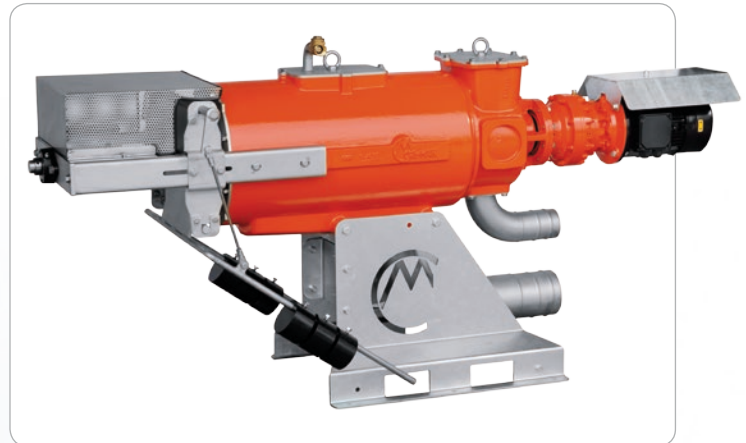


SM300 PROFESSIONAL SERIES

Technical specifications:

- Screw in AISI 304 treated stainless steel
- Front side supported screw
- Standard Screen in AISI 316 stainless steel (Heavy Duty screen on request)
- Planetary gear box
- Sealing system with three lip seals (mechanical seal on request)

| | | |
|------------------------|--------------------------|--------------------|
| • Capacity: | 6 - 72 m ³ /h | 26 - 317 US gpm |
| • Rpm: | 33 (50Hz) | 40 (60Hz) |
| • Motor power: | 5,5 kW | 7,4 HP |
| • Screen mesh: | 0,25 - 1 mm | 0,01 - 0,04 inches |
| • Up to 30% Dry Matter | | |

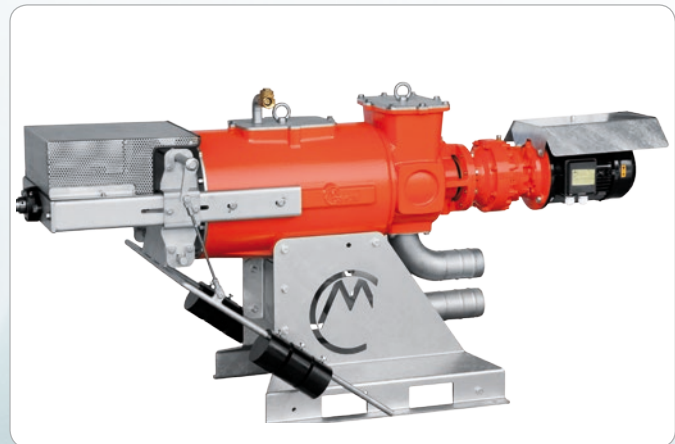


SM260 DM DRY MATTER SERIES

Technical specifications:

- Screw in AISI 304 treated stainless steel
- Front side supported screw
- Heavy Duty Screen in AISI 316 stainless steel
- Planetary gear box
- Sealing system with three lip seals (mechanical seal on request)

| | | |
|------------------------|--------------------------|--------------------|
| • Capacity: | 4 - 22 m ³ /h | 18 - 97 US gpm |
| • Rpm: | 14 (50Hz) | 17 (60Hz) |
| • Motor power: | 5,5 kW | 7,4 HP |
| • Screen mesh: | 0,50 - 1 mm | 0,02 - 0,04 inches |
| • Up to 37% Dry Matter | | |



SM260FA DM DRY MATTER SERIES

Technical specifications:

- Screw in AISI 304 treated stainless steel
- Front side supported screw
- Heavy Duty main Screen in AISI 316 stainless steel
- Heavy Heavy Duty Auxiliary Screen in AISI 316 stainless steel
- Planetary gear box
- Sealing system with three lip seals (mechanical seal on request)

| | | |
|------------------------|--------------------------|--------------------|
| • Capacity: | 4 - 42 m ³ /h | 18 - 185 US gpm |
| • Rpm: | 20 (50Hz) | 24 (60Hz) |
| • Motor power: | 7,5 kW | 10 HP |
| • Screen mesh: | 0,50 - 0,75 mm | 0,02 - 0,03 inches |
| • Up to 37% Dry Matter | | |





Plants installed

Italy



50 kW - Italy



1998 kW - Italy



700 kW - Italy



250 kW - Italy



999 kW - Italy



999 kW - Italy



999 kW - Italy



1999 kW - Italy



999 kW - Italy



999 kW - Italy



999 kW - Italy



999 kW - Italy



999 kW - Italy



999 kW - Italy



999 kW - Italy

Abroad



300 kW - Austria



300 kW - Germany



1000 kW - Germany



300 kW - Japan



100 kW - UK



500 kW - Thailand



999 kW - Sweden



500 kW - Germany



500 kW - Germany



500 kW - Germany



500 kW - Holland



5000 kW - Germany



1000 kW - Germany



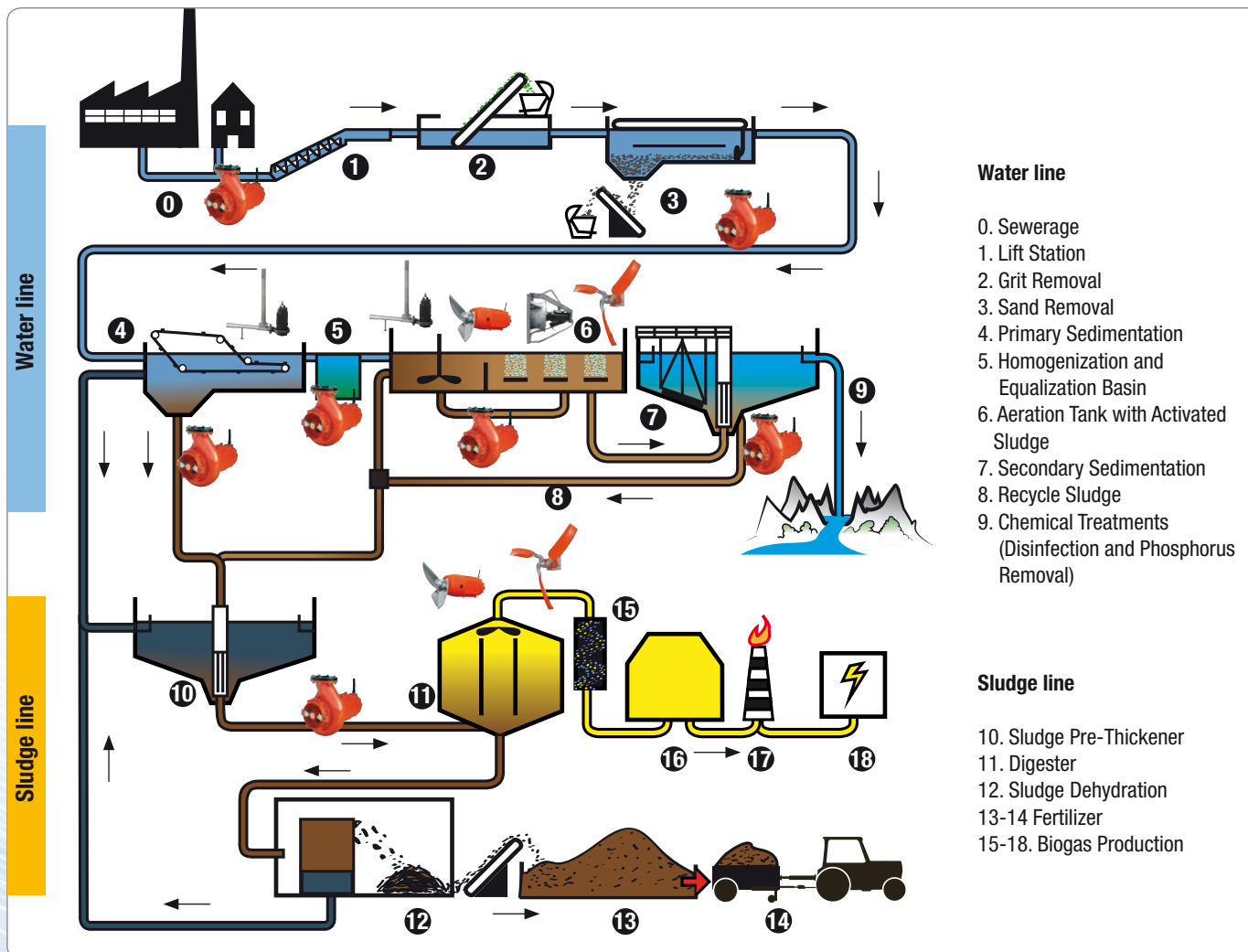
700 kW - Germany



1000 kW - Germany



Waste water treatment



Waste water treatment process

Cri-Man machines can be used for the following applications in the WWTP.

PTS, ETO, and ETV Series Pumps

- Drain cleaning hatches. The drainage system can accumulate sediments of considerable bulk which are carried into drain cleaning hatches during rainy periods. The elimination of these is usually achieved using submersible chopper pumps that reduce them into more easily transported elements.
- Tanks for the wheeled removal of industrial effluents. The removal of industrial effluents is achieved using vacuum pumps that extract solid bodies of over 100 mm diameter. Extraction from the collection tank is conducted with chopper pumps.
- Hatches for removal of waste leachate.
- Full biological treatment, in which the transport of the "effluent" is obstructed by the formation of fibrous materials that block the pipes and wind around mixer blades making them unbalanced.

In sections of the plant where effluent transport is required, including:

- Circulation of sludge sediments for denitrification.

- Evacuation of primary and secondary sludge from a decantation tank to a sludge thickener.
- Circulation in anaerobic digesters.
- Transfer to dehydration section.

ER Series Pumps

- Transfer of liquids between tanks with high capacity and very low pumping head (circulation from nitrification tank to denitrification tank).

TBM, AF, and TBX Series Mixers

- TBM: small tanks with coarse suspended solids (emptying hatches of various types), small balancing and denitrification tanks, anaerobic digesters (also ATEX version).
- AF: in "Carousel" tanks, sludge digesters.
- TBX: mixers for small tanks including "aggressive" effluents.

SMO and OXIGET Series Oxygenators

- Oxygenation tanks in small scale plants when it is a priority to avoid plant management problems.



0 3 4



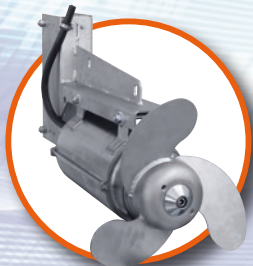
5 6 11



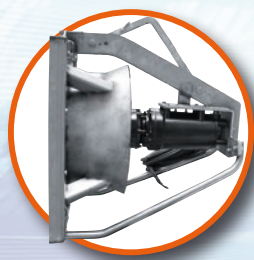
5 6 11



5 6



3



6



5 6 11



Check on video



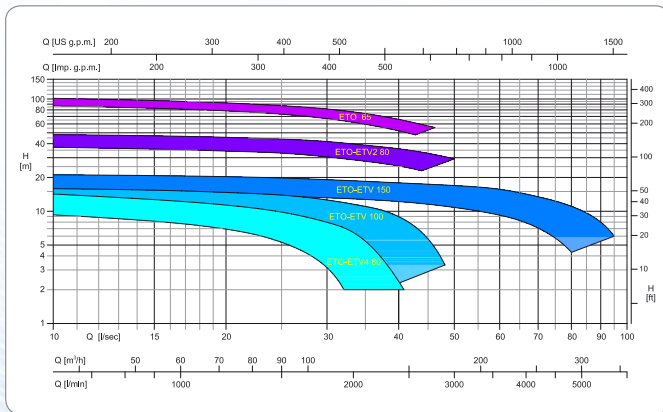
Pumps

ETO/ETV SERIES

Horizontal electric chopper pump

Technical specifications:

- Double chopping system
- Max capacity: 340 m³/h 1497 US gpm
- Head: 106 m 348 ft
- Motor power: 0,75 - 45 kW 1 - 60 HP
- Suction: 65 - 200 mm 2 9/16 - 8 inches
- Discharge: 40- 150 mm 1 9/16 - 6 inches

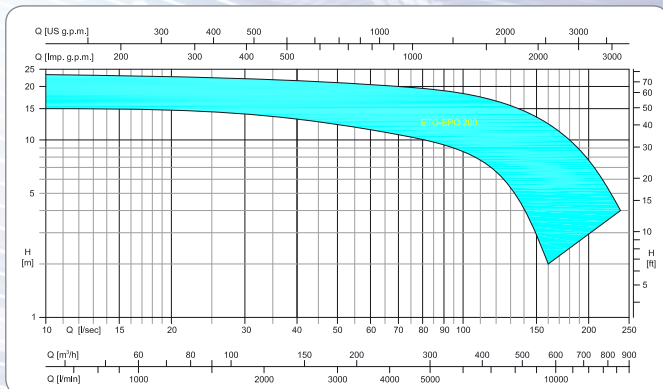


ETO 200 / EPO 200 SERIES

Horizontal electric chopper pump

Technical specifications:

- ETO version: double chopping system
- EPO version: single chopping system
- Max capacity: 720 m³/h 3170 US gpm
- Head: 22 m 72 ft
- Motor power: 22 - 65 kW 29 - 87 HP
- Suction: 250 mm 10 inches
- Discharge: 200 mm 8 inches

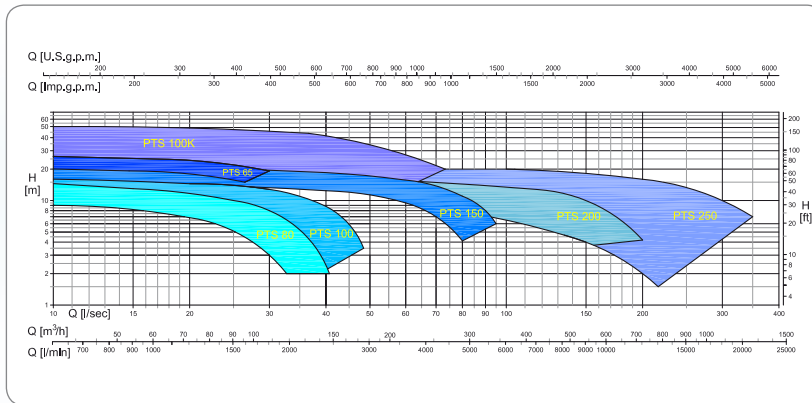


PTS SERIES

Submersible chopper pump

Technical specifications:

- Double chopping system
- Max capacity: 1400 m³/h 6164 US gpm
- Head: 51 m 167 ft
- Motor power: 0,75 - 45 kW 1 - 61 HP
- Suction: 65 - 250 mm 2 9/16 - 10 inches
- Discharge: 40 - 250 mm 1 9/16 - 10 inches

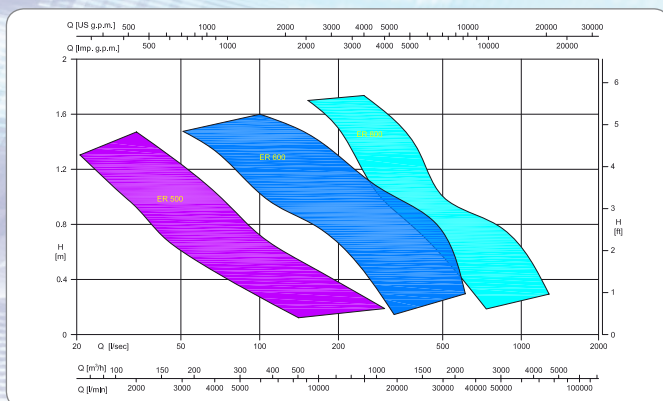
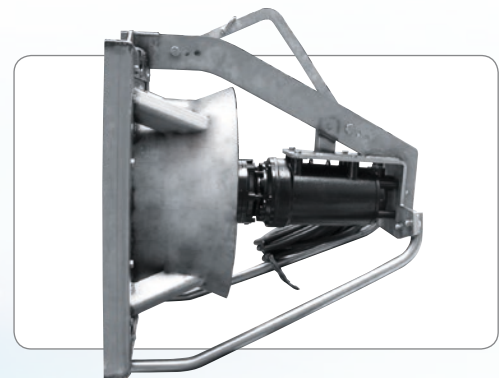


ER SERIES

Horizontal axis propeller pump

Technical specifications:

- Horizontal axis blades pump with fast delivery coupling system
- Circulation of large volumes of water with excellent hydraulic yield
- Cast iron motor and gearbox, blades and frame in stainless steel
- Capacity: 450 m³/h 19800 US gpm
- Head: 1,8 m 5,9 ft
- Motor power: 2,2 - 18,5 kW 3 - 26 HP
- Suction: 500 - 800 mm 19 11/16 - 31 1/2 inches
- Discharge: 500 - 800 mm 19 11/16 - 31 1/2 inches



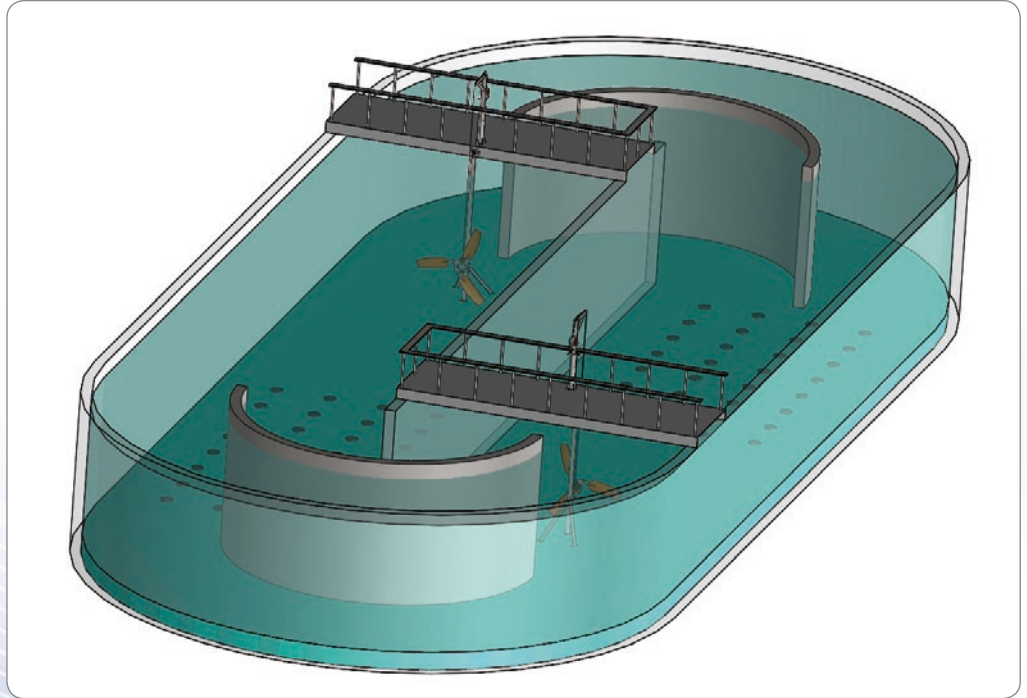


Mixing tank solutions

Large volume tanks:

500 ÷ 4000 m³ and above

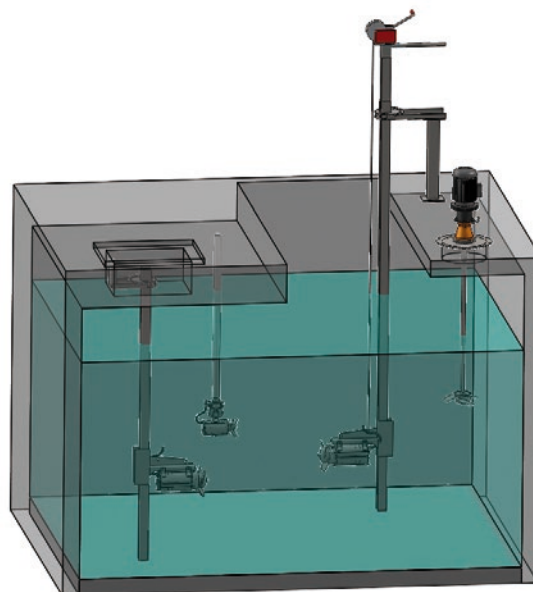
- Wide range of solutions for the
- correct positioning of mixers in relation to the geometry, volume, and type of fluids to be mixed
- Trestle and tripod options for installation without tank side support
- Option of submersed rail guide pipe for regulating the flow height and angle
- Option of combining flow accelerators and traditional mixers in order to optimize mixing and energy consumption



Small volume tanks:

up to 500 m³

- Installation of mixers on submersed rail guide pipe with tank edge or floor hatch fixture
- Installation with suspended pole and the possibility of tilting the flow upwards or downwards
- Fixing structure made entirely in stainless steel
- Equipped with fixtures for crane and winch hoisting



Mixers

TBM SERIES

Submersible horizontal mixer

Technical specifications:

- Planetary gearbox
- Blades in stainless steel with self-cleaning profile
- Rpm: 320 - 940 (50Hz) 380 - 1130 (60Hz)
- Motor power: 1,5 - 25 kW 2 - 34 HP
- Axial thrust: 230 - 5396 N 52 - 1206 lb
- Capacity: 643 - 10138 m³/h 2831 - 44638 US gpm
- Max working temp: 40 °C 104 °F



AF SERIES

Submersible horizontal flow accelerator

Technical specifications:

- Two-stage planetary gearbox
- Adjustable blades
- Blades in polyamide and fibreglass
- Blades hub in stainless steel
- Rpm : 53 (50 Hz) 40 (60 Hz)
- Motor power: 1,5 - 5,5 kW 2 - 26 HP
- Axial thrust: 1226 - 2943 N 276 - 662 lb
- Capacity: 11490-17803 m³/h 50590-78380 US gpm
- Max working temp: 40 °C 104 °F





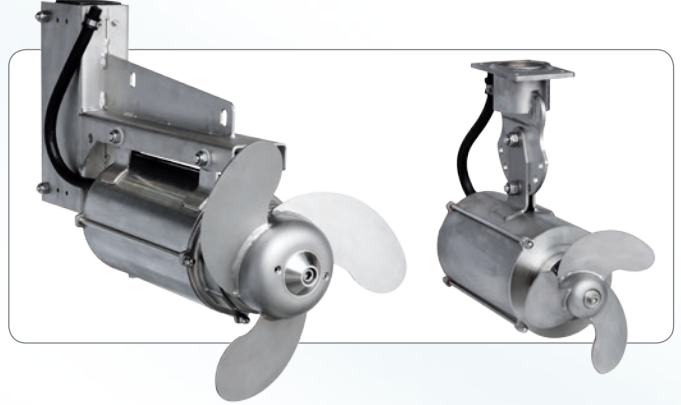
Mixers

TBX SERIES

Stainless steel submersible horizontal mixer

Technical specifications:

- Made entirely in stainless steel
- Blades in stainless steel with self-cleaning profile
- Rpm: 925 - 1400 (50Hz) 1110 - 1680 (60Hz)
- Motor power: 0,75 - 3 kW 1 - 4 HP
- Axial thrust: 117 - 373 N 25 - 84 lb
- Capacity: 279 - 1061 m³/h 1229 - 4672 US gpm
- Max working temp: 40 °C 104 °F



MXV SERIES

Vertical mixer with external electric motor

Technical specifications:

- Blades in stainless steel with self-cleaning profile
- Rpm : 925 - 1400 1110 - 1680
- Motor power: 0,75 - 3 kW 1 - 4 HP
- Axial thrust: 153 - 429 N 26 - 84 lb
- Capacity: 318 - 1138 m³/h 1128 - 4671 US gpm
- Max working temp: 40 °C 104 °F



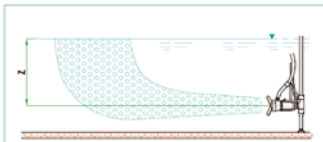
Aerators

SMO SERIES

Submersible mixer with external blower

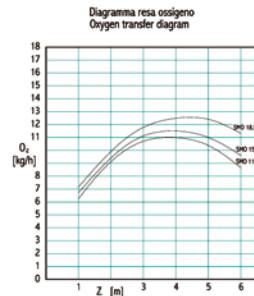
Technical specifications:

- Submersible mixer with external blower complete with flow lifting and orienting system
- Submersible mixer power: 11 - 18,5 kW 15 - 25 HP
- External blower motor power: 5,5 kW 7,4 HP
- Liquid mixing capacity: 3900 - 6800 m³/h 17170 - 29940 US gpm
- Blown in air capacity: up to 280 m³/h up to 1230 US gpm
- Delivered oxygen capacity: up to 10,5 kg/h up to 24 lb/h



| PORTATA ARIA AIR FLOW | | | | | | | |
|--------------------------|------------------------|-----|-----|-----|-----|-----|-----|
| Z [m] | 1 | 2 | 3 | 4 | 5 | 6 | |
| SMO 18,5 | Q [m ³ /h] | 305 | 280 | 250 | 220 | 175 | 140 |
| | QO ₂ [kg/h] | 85 | 78 | 70 | 61 | 49 | 39 |
| SMO 15 | Q [m ³ /h] | 300 | 275 | 243 | 210 | 164 | 138 |
| | QO ₂ [kg/h] | 82 | 75 | 66 | 56 | 44 | 33 |
| SMO 11 | Q [m ³ /h] | 295 | 270 | 240 | 207 | 160 | 135 |
| | QO ₂ [kg/h] | 79 | 72 | 64 | 54 | 41 | 30 |

Q = Aria aspirata - Air capacity [m³/h]
 Z = Battente - Submergence [m]
 QO₂ = Ossigeno aspirato - Oxygen in air capacity [kg/h]
 O₂ = Ossigeno reso - Oxygen transferred in liquid [kg/h]



Curve per liquidi aventi densità 1-viscosità 1 mm²/s - alla temperatura di 20°C.
 Curves established for liquid density 1- viscosity 1 mm²/s- temperature 20° C.

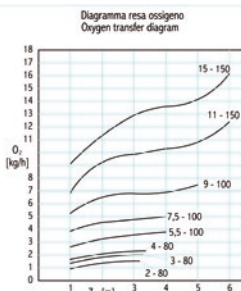
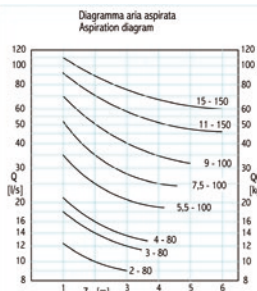


OXIGET SERIES

Jet aerator

Technical specifications:

- Combined chopping, mixing, and aeration
- Motor power: 2,2 - 15 kW 3 - 20 HP
- Air suction pipe diameter: 80 - 150 mm 3 1/8 - 6 inches
- Air suction capacity: up to 400 m³/h up to 1760 US gpm
- Delivered oxygen capacity: up to 16,5 kg/h up to 37 lb/h



Scelta indicativa Oxiget
 Indicative selection Oxiget

$$P = 0,03 \times V$$

P = Potenza del motore
 Motor rating [kW]

V = Volume liquido vasca
 Volume of liquid sump [m³]

Q = Aria aspirata - Air capacity [m³/h]
 Z = Battente - Submergence [m]
 QO₂ = Ossigeno aspirato - Oxygen in air capacity [kg/h]
 O₂ = Ossigeno reso - Oxygen transferred in liquid [kg/h]

Curve per liquidi aventi densità 1-viscosità 1 mm²/s - alla temperatura di 20°C.
 Curves established for liquid density 1- viscosity 1 mm²/s- temperature 20° C.





Separators

SM260 MINI SERIES

Technical specifications:

- Screw in AISI 304 treated stainless steel
 - Standard Screen in AISI 316 stainless steel
 - Planetary gear box
 - Sealing system with three lip seals (mechanical seal on request)
- | | | |
|------------------------|----------------------------|--------------------|
| • Capacity: | 4,5 - 18 m ³ /h | 20 - 79 US gpm |
| • Rpm: | 20 (50Hz) | 24 (60Hz) |
| • Motor power: | 3 kW | 4 HP |
| • Screen mesh: | 0,25 - 1 mm | 0,01 - 0,04 inches |
| • Up to 30% Dry Matter | | |



SM260 BASIC SERIES

Technical specifications:

- Screw in AISI 304 treated stainless steel
 - Standard Screen in AISI 316 stainless steel
 - Planetary gear box
 - Sealing system with three lip seals (mechanical seal on request)
- | | | |
|------------------------|--------------------------|--------------------|
| • Capacity: | 4 - 50 m ³ /h | 18 - 220 US gpm |
| • Rpm: | 33 (50Hz) | 40 (60Hz) |
| • Motor power: | 4 kW | 5,4 HP |
| • Screen mesh: | 0,25 - 1 mm | 0,01 - 0,04 inches |
| • Up to 30% Dry Matter | | |



SM260 PROFESSIONAL SERIES

Technical specifications:

- Screw in AISI 304 treated stainless steel
 - Front side supported screw
 - Standard Screen in AISI 316 stainless steel
 - Planetary gear box
 - Sealing system with three lip seals (mechanical seal on request)
- | | | |
|------------------------|--------------------------|--------------------|
| • Capacity: | 4 - 50 m ³ /h | 18 - 220 US gpm |
| • Rpm: | 33 (50Hz) | 40 (60Hz) |
| • Motor power: | 4 kW | 5,4 HP |
| • Screen mesh: | 0,25 - 1 mm | 0,01 - 0,04 inches |
| • Up to 30% Dry Matter | | |

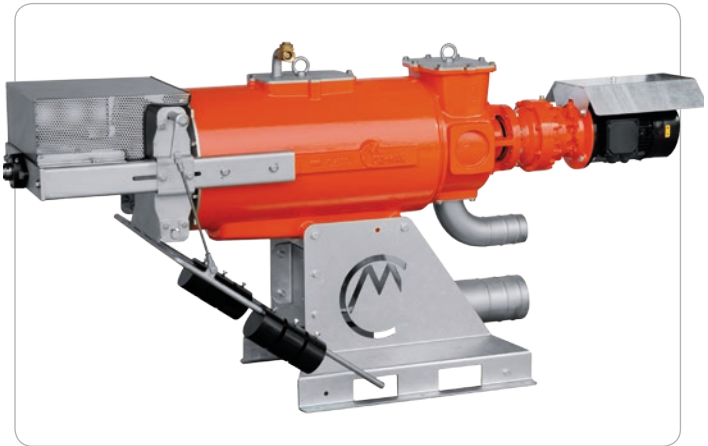


SM300 PROFESSIONAL SERIES

Technical specifications:

- Screw in AISI 304 treated stainless steel
- Front side supported screw
- Standard Screen in AISI 316 stainless steel (Heavy Duty screen on request)
- Planetary gear box
- Sealing system with three lip seals (mechanical seal on request)

| | | |
|------------------------|--------------------------|--------------------|
| • Capacity: | 6 - 72 m ³ /h | 26 - 317 US gpm |
| • Rpm: | 33 (50Hz) | 40 (60Hz) |
| • Motor power: | 5,5 kW | 7,4 HP |
| • Screen mesh: | 0,25 - 1 mm | 0,01 - 0,04 inches |
| • Up to 30% Dry Matter | | |

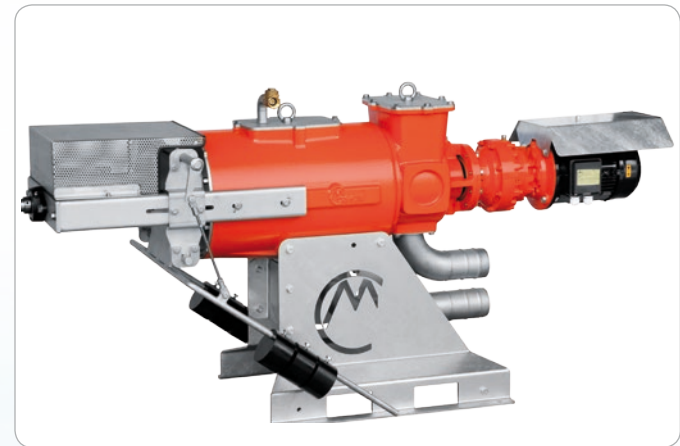


SM260 DM DRY MATTER SERIES

Technical specifications:

- Screw in AISI 304 treated stainless steel
- Front side supported screw
- Heavy Duty Screen in AISI 316 stainless steel
- Planetary gear box
- Sealing system with three lip seals (mechanical seal on request)

| | | |
|------------------------|--------------------------|--------------------|
| • Capacity: | 4 - 22 m ³ /h | 18 - 97 US gpm |
| • Rpm: | 14 (50Hz) | 17 (60Hz) |
| • Motor power: | 5,5 kW | 7,4 HP |
| • Screen mesh: | 0,50 - 1 mm | 0,02 - 0,04 inches |
| • Up to 37% Dry Matter | | |



SM260FA DM DRY MATTER SERIES

Technical specifications:

- Screw in AISI 304 treated stainless steel
- Front side supported screw
- Heavy Duty main Screen in AISI 316 stainless steel
- Heavy Heavy Duty Auxiliary Screen in AISI 316 stainless steel
- Planetary gear box
- Sealing system with three lip seals (mechanical seal on request)

| | | |
|------------------------|--------------------------|--------------------|
| • Capacity: | 4 - 42 m ³ /h | 18 - 185 US gpm |
| • Rpm: | 20 (50Hz) | 24 (60Hz) |
| • Motor power: | 7,5 kW | 10 HP |
| • Screen mesh: | 0,50 - 0,75 mm | 0,02 - 0,03 inches |
| • Up to 37% Dry Matter | | |





Other applications

PTSH SERIES

Submersible chopper pump with hydraulic motor control

Technical specifications:

- Multi channel impeller
- Double chopping system
- Fixed installation with hydraulic unit, or on self-moving arm controlled with a hydraulic circuit
- Capacity: 380 m³/h 1670 US gpm
- Head: 26 m 85 ft
- Hydraulic oil capacity: max 48 l/min max 13 l/gpm
- Hydraulic oil pressure: max 316 bar max 4598 psi

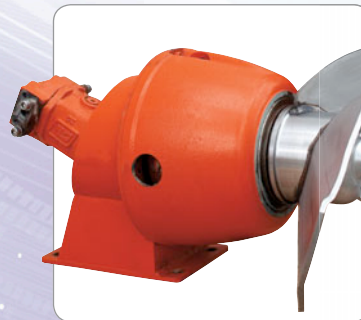


TBHM SERIES

Submersible mixer with hydraulic motor control

Technical specifications:

- Propeller: stainless steel with self cleaning profile
- Fixed installation with hydraulic unit, or on self-moving arm controlled with a hydraulic circuit
- Axial thrust: 3800 N 854 lb
- Hydraulic oil capacity: max 90 l/min 24 US gpm
- Hydraulic oil pressure: max 160 bar 2318 psi



PTS SERIES

Anticorrosion Submersible chopper pump

The treatment consists of a special chemical Nickel coating that protects the surfaces in contact with acid liquids. Applications are for the liquids that have an acid pH, such as, for example, the leachate coming from silage stored in biogas plants or organic fraction of municipal solid waste, etc.

Technical Specifications:

- Thickness 50 µm
- Hardness 48 HRC
- Perfect adhesion to the basic material



Treatment to the complete pump

Treatment to the cutting system

Plants installed



WWTP - Italy



WWTP - Italy



WWTP - Sweden



WWTP - France



WWTP - Italy



WWTP - Italy



WWTP - France



WWTP - Germany



WWTP - Spain



Abattoir - Italy



Salad - Italy



Coffee - Germany



Corn - Russia



Pulp and paper - Sweden



Brewery - Russia



www.cri-man.com



CRI-MAN s.r.l. - via Costituzione, 50F
42015 CORREGGIO (RE) Italy
Tel. +39 0522 732204 - Fax +39 0522 746363
email: info@cri-man.com - www.cri-man.com

