



Dedicated technology for domestic/industrial waste water treatment and Biogas



For over 20 years we have been designing and manufacturing products for moving and treating industrial water and waste water and for moving the substrate in the Biogas plants.

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

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



COMPANY VIDEO



Sustainability

We invest in research to protect the environment

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 the following operative realities:

- Product innovation
- On-time delivery
- Technical assistance
- Extended product durability
- Technical know-how

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 9001:2015 and
UNI EN ISO 14001:2015

which emphasise the two aspects that we hold most dear:

- **Customer Satisfaction;**
- **Guaranteeing Environmental Sustainability.**

It is worth underlining our strong points in performance and environmental impact of the machines:

- our comprehensive range makes it possible to offer total solutions;
- high efficiency, which translates into low energy consumption;
- environment protection, with over 95% recyclability percentages of the components.

Industry

WASTE WATER TREATMENT PLANTS



Waste water treatment

The waste water treatment, achieved with different plant configurations depending on the type of effluent being treated, in all cases requires the use of components that are reliable in extreme operating conditions and energy efficient.

Pumping to primary treatment tank (mechanical separation and primary settlement).

Pumping to the primary treatment tank with the presence of solid bodies can be achieved with a PTS pump, equipped with:

- hydraulic design able to handle concentrations up to 10-12% of TS
- a double chopping system capable of breaking up and shifting

effluents with fibers or solid bodies guaranteeing system reliability even under demanding operating conditions.

Accumulation / Balancing

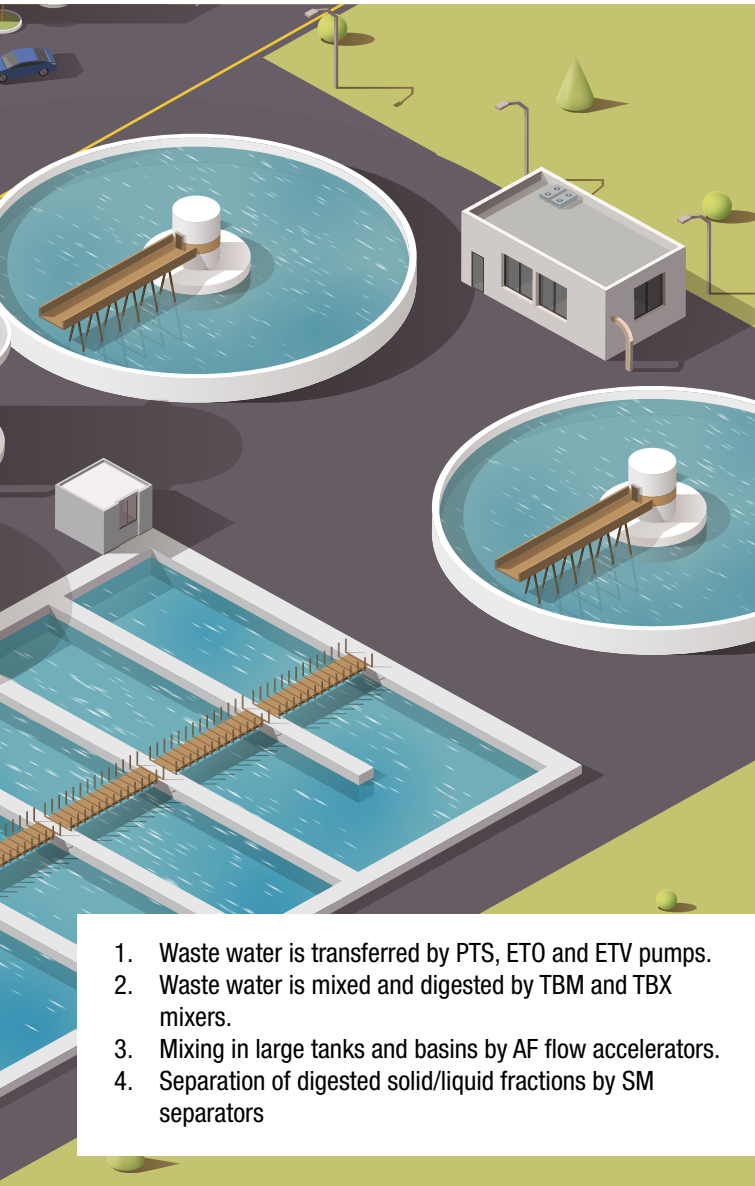
In the effluent accumulation and balancing tanks, any suspended solids are kept in suspension thanks to the TBM type mixers. To avoid anaerobiosis phenomena, the correct oxygen content is supplied by OXIGET and SMO type oxygenators.

Activated sludge treatment

In plug-flow systems the circulation of effluent undergoing treatment for dephosphorization, denitrification and oxygenation is handled by AF model super-high efficiency flow accelerators.

CRI-MAN products

for waste water treatment plants



1. Waste water is transferred by PTS, ETO and ETV pumps.
2. Waste water is mixed and digested by TBM and TBX mixers.
3. Mixing in large tanks and basins by AF flow accelerators.
4. Separation of digested solid/liquid fractions by SM separators

The recirculation of the aerated mixture in the denitrification tank can be achieved using ER model pumps.
The correct oxygen input is achieved using OXIGET and SMO oxygenators.

Sludge recirculation / settler tank

The recirculation of settled sludge can be achieved using a PTS pump, equipped with:

- hydraulic design able to handle concentrations up to 10-12% of TS
- a double chopping system that breaks up and pumps effluents with fibers or solid bodies that escape the mechanical separation treatment or that form after the waste water treatment.



Pumps

PAGE

10



Mixers

PAGE

17



Separators

PAGE

23

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.

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 and the formation of crusts, that in the long run might reduce 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.

Biogas

MOVING THE SUBSTRATE
IN THE PLANTS



CRI-MAN products

for Biogas plants:



1. Pre-storage tank with TBM mixer, MXP mixer and PTS pump.
2. Primary digester with TBM mixer, SB Biogas bracket, MXS mixer and ETO pump.
3. Secondary digester with MXB mixer and CS Service boxes with TBM mixer.
4. SM separator fed by ETO pump.
5. Tank for separated liquid with TBM mixer and SB Biogas brackets.



Pumps

PAGE 10



Mixers

PAGE 17



Separators

PAGE 23

PUMPS

Electric motor-driven pumps, both submersible and external, are used to feed the primary digester, transferring the substrate between digesters and for mixing inside the digester by means of nozzles. The chopping system provided in all CRI-MAN pumps facilitates the anaerobic fermentation process, thereby improving plant efficiency.

MIXERS

Submersible mixers are used in digesters to mix and homogenize the substrate, thus increasing the output of the plant and prevent solids settling down and the formation of crusts, that in the long run might reduce the efficiency of the plant.

SEPARATORS

Separators are used at the end of the anaerobic fermentation process to separate the solids from the liquid fraction. The liquid fraction can be used for fertigation. The solid fraction can be used as a soil improver, bedding for animals, etc. Use of separators is also recommended as a pre-treatment for nitrogen removal systems.

Pumps

Your best choice



01

DOUBLE CHOPPING SYSTEM

The first chopping system is formed by two chrome steel blades fixed to the suction part that skim over a conveyor plate in special cast iron fixed to the rotating shaft. Both materials are subjected to a specific hardening treatment. In a 1450 rpm pump, the first chopping system alone operates at a rate of 140 cuts/second!

The second chopping system features a toothed plate in special cast iron which skims over an impeller, also in special cast iron, with sharp-edged blades. Both materials are subjected to a specific hardening treatment.

02

HIGH EFFICIENCY HYDRAULICS

Hydraulics designed to combine high efficiency (up to 77% efficiency rating) and strong chopping power without clogging. Data in accordance with UNI EN ISO 9906 standards.

03

DOUBLE MECHANICAL SEAL*

Mechanical seals in Silicon Carbide and Carbon-Ceramic.

04

TEMPERATURE SENSORS

Double temperature sensors embedded in the stator to prevent the motor from overheating and ensure it continues to function correctly over time.

05

HUMIDITY SENSOR (IF REQUESTED)*

The humidity sensor is installed in the oil chamber to prevent damage should fluid leak out.

ACCESSORIES

Broad range of accessories for every type of pump installation.

* Double mechanical seal and Humidity sensor not available for all pump versions.

Chopper Pumps

our complete range



PTS 40 SERIES

Submersible chopper pump

INDUSTRY

BIOGAS

TECHNICAL SPECIFICATIONS

Chopping system		
Max capacity	26 m³/h	114 US gpm
Head	17 m	56 ft
Motor power	0,75 - 1,1 kW	1 - 1,5 HP
Discharge	40 mm	1 9/16 inches



PTS 65 SERIES

PTSex 65 SERIES

Submersible chopper pump

INDUSTRY

BIOGAS

TECHNICAL SPECIFICATIONS

PTSex = ATEX Version

Chopping system		
Max capacity	110 m³/h	484 US gpm
Head	29 m	95 ft
Motor power	7,5 - 11 kW	10 - 15 HP
Discharge	65 mm	2 9/16 inches



PTS 80/80N SERIES

PTSex 80/80N SERIES

Submersible chopper pump

INDUSTRY

BIOGAS

TECHNICAL SPECIFICATIONS

PTSex = ATEX Version

Double chopping system version		
Chopping system and anti-clogging screw version		
Max capacity	140 m³/h	616 US gpm
Head	46 m	151 ft
Motor power	2,2 - 18,5 kW	3 - 26 HP
Discharge	80 mm	3 1/8 inches



Chopper Pumps

our complete range

PTS 100/150N SERIES PTSex 100/150N SERIES

Submersible chopper pump

INDUSTRY

BIOGAS

TECHNICAL SPECIFICATIONS

PTSex = ATEX Version

Double chopping system

Max capacity	460 m³/h	2025 US gpm
Head	21 m	69 ft
Motor power	4 - 22 kW	5,4 - 29 HP
Discharge	100 - 150 mm	4 - 6 inches



PTS 100K SERIES

Submersible chopper pump

INDUSTRY

BIOGAS

TECHNICAL SPECIFICATIONS

Double chopping system

Max capacity	260 m³/h	1145 US gpm
Head	51 m	167 ft
Motor power	15 - 45 kW	20 - 60 HP
Discharge	100 mm	4 inches



PTS 200 SERIES

Submersible chopper pump

INDUSTRY

BIOGAS

TECHNICAL SPECIFICATIONS

Double chopping system

Max capacity	720 m³/h	3170 US gpm
Head	18 m	59 ft
Motor power	15 - 30 kW	20 - 40 HP
Discharge	200 mm	8 inches



ETO/ETV SERIES

Horizontal electric chopper pump
Vertical electric chopper pump

INDUSTRY

BIOGAS

TECHNICAL SPECIFICATIONS

Double chopping system

Max capacity	460 m ³ /h	2025 US gpm
Head	112 m	367 ft
Motor power	0,75 - 75 kW	1 - 100 HP
Suction	65 - 200 mm	2 ⁹ / ₁₆ - 8 inches
Discharge	40- 150 mm	1 ⁹ / ₁₆ - 6 inches



Chopper Pumps

our complete range

ETO 200/EPO 200 SERIES

Horizontal electric chopper pump

INDUSTRY

BIOGAS

TECHNICAL SPECIFICATIONS

ETO version: double chopping system

EPO version: without 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



CFS SERIES

Shredder for solids

INDUSTRY

BIOGAS

TECHNICAL SPECIFICATIONS

External planetary gearbox

Double shaft with opposing blades pack

Blades profile to shred solids contained in the liquid

Inlet-outlet flanges DN200 PN10

Motor power	11 - 22 kW	15-30 HP
Max capacity	50 m³/h	220 US gpm



PLD SERIES

Hydraulic piston pump

INDUSTRY

BIOGAS

Suitable to viscous liquids with high percentage of dry matter. It consists of a pair of parallel pistons controlled by an hydraulic power unit and an automatic valve system that permits alternating loading and unloading of the pistons.

TECHNICAL SPECIFICATIONS

Hydraulic motor power	9,2 kW	12,3 HP
Capacity	50 m³/h	220 US gpm
Head	80 m	262 ft
Piston stroke	900 mm	35,4 inches



ER SERIES

Horizontal axis propeller pump

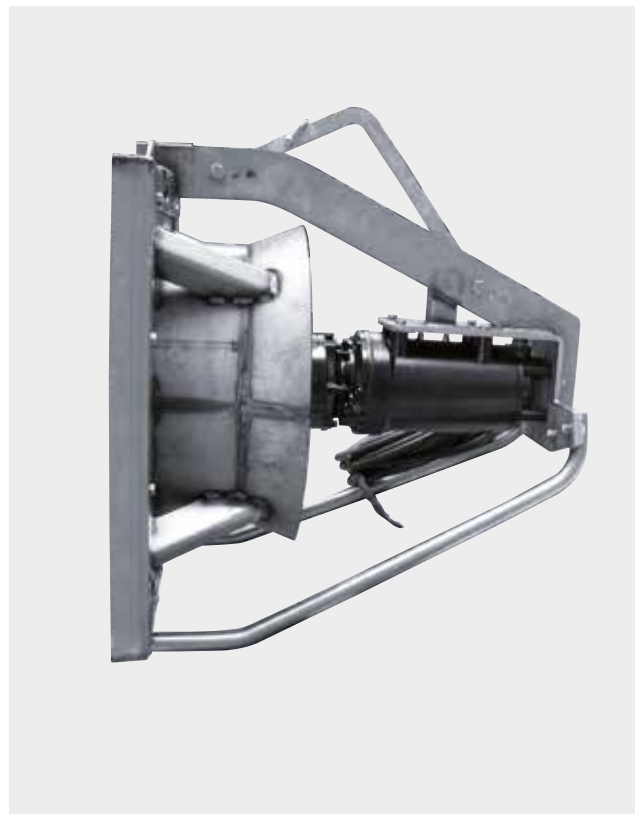
INDUSTRY

BIOGAS

- Quick coupling system at discharge outlet
- Large volumes of water are circulated with excellent hydraulic efficiency
- Cast iron motor housing and planetary gearbox, stainless steel propeller and frame

TECHNICAL SPECIFICATIONS

Motor power rating	2,2 - 18,5 kW	2,9 - 24,8 HP
Flow rate	5000 m³/h	22014 US gpm
Head	1,5 m	4,9 ft
Suction inlet	500 - 800 mm	19,7 - 31,5 inches
Discharge outlet	500 - 800 mm	19,7 - 31,5 inches

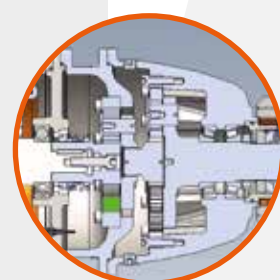




HIGH EFFICIENCY PROPELLER

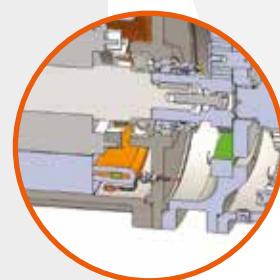
DOUBLE MECHANICAL SEAL*

Double mechanical seal at the front in cemented carbide (Widia) and at the rear in SIC for perfect impermeability.



HIGH EFFICIENCY PLANETARY GEARBOX

High efficiency planetary gearbox with oversized oil chamber for longer life even under load.

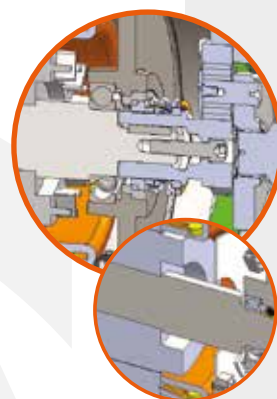


HUMIDITY SENSOR (IF REQUESTED)*

Humidity sensor to protect the motor in the event of infiltrations.

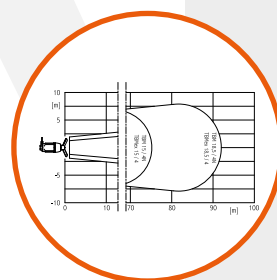
DOUBLE TEMPERATURE SENSOR*

Double temperature sensor
to prevent the motor from
overheating due to abnormal power
consumption in heavy duty work.



HIGH THRUST EFFICIENCY

The motor, machine mechanics and vane profile have been designed to achieve high efficiency in terms of axial thrust and low energy consumption. Data in accordance with ISO 21630 standards.



ACCESSORIES

Broad range of accessories for every type of mixer installation.



16

Mixers

our complete range



TBM SERIES TBMex SERIES

Submersible horizontal mixer

INDUSTRY

BIOGAS

TECHNICAL SPECIFICATIONS

TBMex = ATEX Version

Planetary gearbox

Blades in stainless steel with self-cleaning profile

Rpm	275 - 925 (50 Hz)	388 - 1110 (60Hz)
Motor power	1,5 - 25 kW	2 - 34 HP
Axial thrust	230 - 5369 N	52 - 1206 lb
Capacity	643 - 10138 m³/h	2831-44638 US gpm
Max working temp	40 °C	104 °F



TMS SERIES TMSex SERIES

Mid size submersible mixers

INDUSTRY

BIOGAS

TECHNICAL SPECIFICATIONS

TMSex = ATEX Version

Planetary gearbox

Blades in stainless steel with self-cleaning profile IE3 high efficiency electrical motor

Rpm	116 (50 Hz)	140 (60Hz)
Motor power	7.5 - 15 kW	10-20 HP
Axial thrust	3265 - 4695 N	734 - 1055 lb
Capacity	9300 - 11930 m³/h	40946-52526 US gpm
Max working temp	40 °C	104 °F



Mixers

our complete range

TBX/E SERIES

Stainless steel horizontal submersible mixer

INDUSTRY

BIOGAS

TECHNICAL SPECIFICATIONS

Completely produced in stainless steel AISI316

IE3 high efficiency electrical motor

Rpm	950 - 1430 (50 Hz)	1140 - 1716 (60Hz)
Motor power	0,75-4 kW	1 - 5 HP
Axial thrust	137-794 N	31 - 179 lb
Capacity	251-1448 m³/h	1105 - 6375 US gpm
Max working temp	40°C	104 °F



MXP SERIES

Vertical internal mixer

INDUSTRY

BIOGAS

TECHNICAL SPECIFICATIONS

Planetary gearbox

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 II 2G Ex d T4 (on request)

Rpm	10 - 15 (50 Hz)	12 - 18 (60Hz)
Motor power	7,5 - 18,5 kW	10 - 25 HP



MXS SERIES

Adjustable external mixer

INDUSTRY

BIOGAS

TECHNICAL SPECIFICATIONS

Planetary gearbox

Propeller in stainless steel with two (400rpm) or three (60rpm) blades

Atex Motor II 2G Ex d T4 (on request)

Adjustable Inclination high-low and right-left

Rpm	60 - 400 (50 Hz)	72 - 480 (60Hz)
Motor power	11 - 22 kW	15 - 29 HP
Axial thrust	2697 - 6474 N	606 - 1455 lb
Capacity	5335 - 20165 m³/h	23489-88784 US gpm
Max length of shaft	4,5 m	15 ft
Max working temp.	60°C	140 °F



MXL SERIES

Lateral external mixer

INDUSTRY

BIOGAS

TECHNICAL SPECIFICATIONS

Planetary gearbox

Blades in stainless steel with self-cleaning profile

Atex II 2G Ex d T4 (on request)

Rpm	350 (50 Hz)	420 (60 Hz)
Motor power	11 - 18,5 kW	15 - 25 HP
Axial thrust	2158 - 3826 N	485 - 860 lb
Capacity	3977 - 6884 m³/h	17510-30309 US gpm
Max length of shaft	5,5 m	18 ft
Max working temp.	60 °C	140°F



SERIE AF

Submersible flow accelerator

INDUSTRY

BIOGAS

- Two-stage planetary gearbox
- Blades in glass fibre-reinforced polyamide
- Stainless steel propeller hub

TECHNICAL SPECIFICATIONS

Motor power rating	1,5-5,5 kW	2-7,3 HP
Flow rate	11490 - 17803 m ³ /h	50588- 78384 US gpm
Rpm	34	40
Axial thrust	1226 - 2943 N	275-661 lbf
Max. working temp.	40 °C	104 °F



SERVICE BOX

INDUSTRY

BIOGAS

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

INDUSTRY

BIOGAS

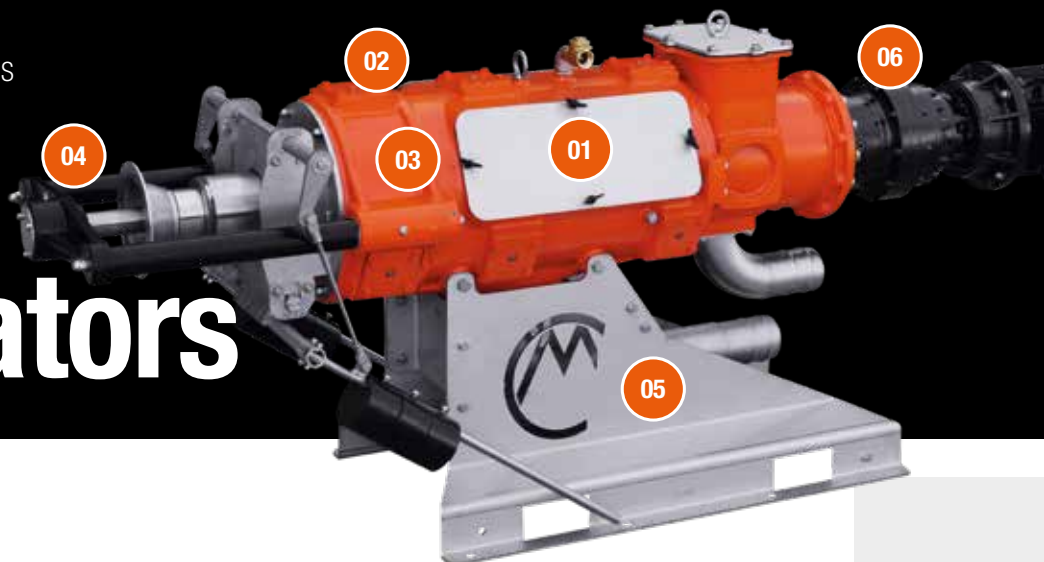
The bracket is used to mount the mixers on the wall and features a system that enables it to move up and down and rotate around the vertical axle. So the location of the mixers and the direction of the flow may be adjusted at any time.

Entirely made of AISI 304 stainless steel.



Your best choice

Separators



01

NEW INSPECTION WINDOW

Double, generously sized inspection window that makes checking the filter and its state of cleanliness much easier.



02

NEW FILTER SUPPORT

New support inside the filter to improve stress distribution over the entire length of the filter itself.



03

NEW DESIGN

New design for separator body.



04

NEW SCREW PRESS SUPPORT

New, sturdily built front screw press support for the Professional, DM and FADM versions.



05

STAINLESS STEEL FRAME

New frame to support the separator completely made of stainless steel, with wider bearing base for improved stability.



06

NEW GEARBOX

New high-efficiency gearbox with improved resistance to severe stress.



PRESSING SYSTEM WITH ACTUATOR (ON REQUEST)
Instead of the pressing system with weights we can supply an electric actuator to guarantee stability of the dry percentage when non-homogeneous effluents are separated (on request).



ACCESSORIES

Broad range of accessories for every type of separator installations.

Separators

our complete range



SM260 MINI SERIES

INDUSTRY
BIOGAS

For small plants

TECHNICAL SPECIFICATIONS

Screw in AISI 304 treated stainless steel		
Standard Screen in stainless steel		
Planetary gear box		
Sealing system with three lip seals		
Capacity	4,5 - 18 m³/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		
Available in mono-phase version		



SM260 BASIC SERIES

INDUSTRY
BIOGAS

For medium size plants

TECHNICAL SPECIFICATIONS

Screw in AISI 304 treated stainless steel		
Standard Screen in stainless steel		
Planetary gear box		
Sealing system with three lip seals		
Capacity	4 - 50 m³/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

INDUSTRY
BIOGAS

For medium-large size plants

TECHNICAL SPECIFICATIONS

Screw in AISI 304 treated stainless steel		
Front side supported screw		
Standard Screen in stainless steel (Heavy Duty screen on request)		
Planetary gear box		
Sealing system with three lip seals		
Capacity	4 - 50 m³/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

INDUSTRY
BIOGAS

For large plants

TECHNICAL SPECIFICATIONS

Screw in AISI 304 treated stainless steel		
Front side supported screw		
Standard Screen in stainless steel (Heavy Duty screen on request)		
Planetary gear box		
Sealing system with three lip seals		
Capacity	6 - 72 m³/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		



Separators

our complete range

SM260 SERIES MINI DM DRY MATTER

INDUSTRY

BIOGAS

Suitable to obtain a drier solid fraction
For small plants

TECHNICAL SPECIFICATIONS

Standard screen in stainless steel

Screw in treated stainless steel

Planetary gear box

Sealing system with three lip seals

Capacity	4 - 16 m³/h	17 - 70 US gpm
Rpm	15 (50 Hz)	17 (60Hz)
Motor power	5,5 kW (7,5 HP)	7,5 HP
Screen mesh	0,50 - 1 mm	0,02 - 0,04 inches

Up to 35% Dry Matter



SM260 SERIES DM DRY MATTER

INDUSTRY

BIOGAS

Suitable to obtain a drier solid fraction
For medium size plants

TECHNICAL SPECIFICATIONS

Screw in AISI 304 treated stainless steel

Front side supported screw

Heavy Duty Screen in stainless steel

Planetary gear box

Sealing system with three lip seals

Capacity	6 - 22 m³/h	26 - 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 35% Dry Matter



SM260FA SERIES DM DRY MATTER

INDUSTRY

BIOGAS

Suitable to obtain a drier solid fraction
For large plants

TECHNICAL SPECIFICATIONS

Screw in AISI 304 treated stainless steel

Front side supported screw

Heavy Duty main Screen in stainless steel

Heavy Heavy Duty Auxiliary Screen in stainless steel

Planetary gear box

Sealing system with three lip seals

Capacity	5 - 32 m³/h	22 - 140 US gpm
Rpm	20 (50Hz)	24 (60Hz)
Motor power	7,5 kW	10 HP
Screen mesh	0,50 - 1 mm	0.02 - 0,04 inches

Up to 35% Dry Matter







ITALY



ITALY



ITALY



GERMANY



ITALY



SPAIN



ITALY



SWEDEN



SWEDEN



ITALY



SPAIN



POLAND



ITALY



GERMANY



LITHUANIA

Biogas

Plants installed



ITALY



ITALY



FRANCE



GREECE



ITALY



ITALY



ITALY



ITALY



ITALY



ITALY



ARGENTINA



FRANCE



ITALY



GERMANY



ITALY



CRI-MAN S.p.A. a socio unico

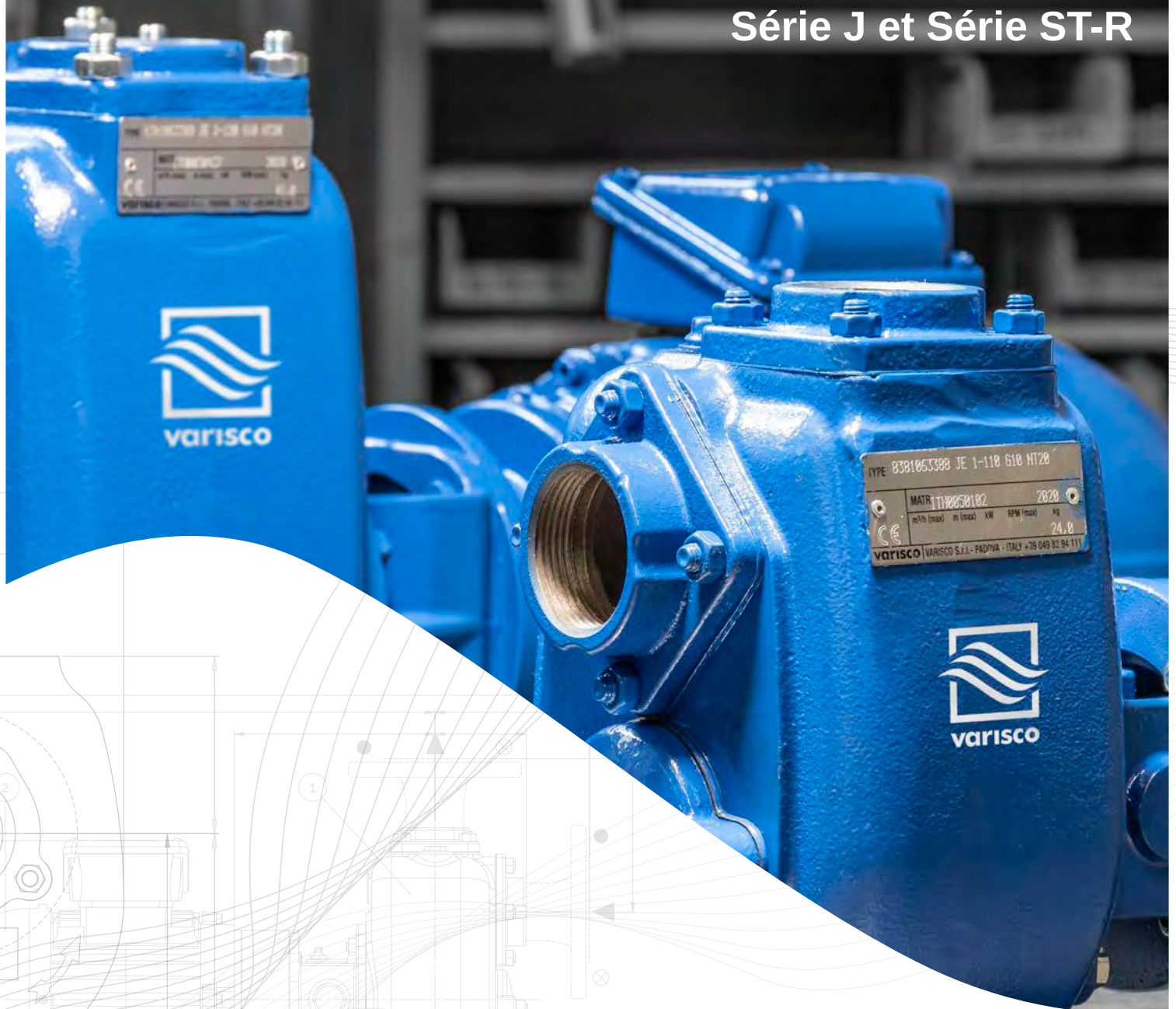
Via del Lavoro, 9/A
42015 Correggio (RE) Italy
Tel. +39 0522 732204
Fax +39 0522 746363
E-mail: info@cri-man.com

www.cri-man.com



Pompes centrifuges auto-amorçantes

Série J et Série ST-R



Pompes centrifuges auto-amorçantes

Série J et Série ST-R

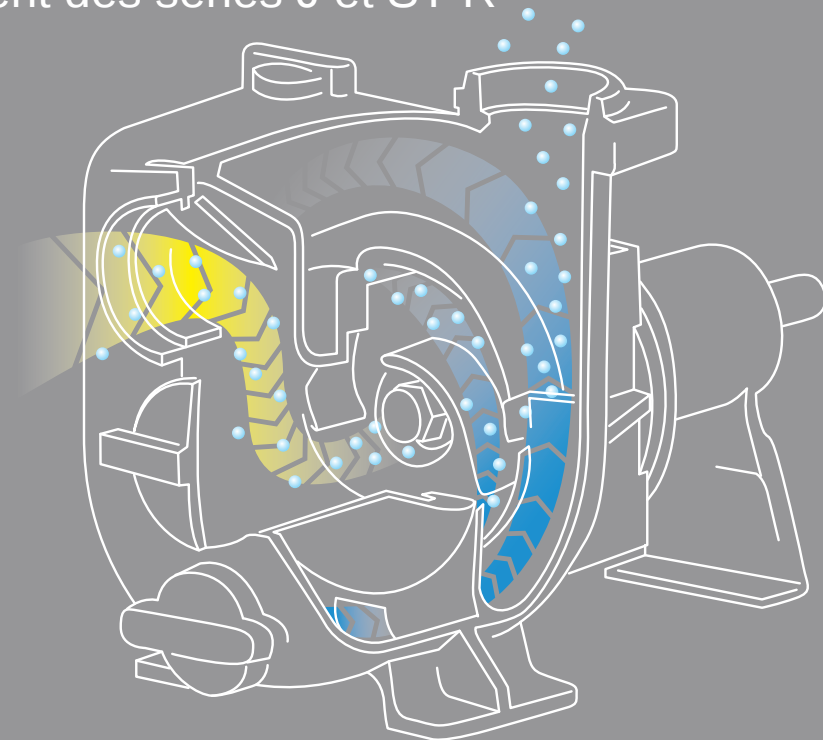
Les pompes centrifuges auto-amorçantes des séries J et ST-R Varisco sont conçues et développées pour garantir des **performances élevées** et une grande **facilité d'utilisation** dans de nombreux secteurs **industriels, d'épuration et de traitement des fluides chargés en général**.

Active depuis 1932, Varisco possède une longue expérience consolidée dans la conception et la production de pompes destinées à être utilisées dans des processus industriels. Tous les produits se caractérisent par leur fiabilité et leur qualité et sont testés dans notre centre de recherche et de développement interne.



L'auto-amorçage le principe de fonctionnement des séries J et ST-R

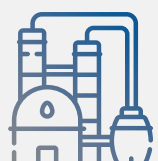
L'air (flux jaune) est aspiré dans la pompe par le vide créé par la turbine en mouvement et s'émulsionne avec le liquide (bleu) contenu dans le corps de la pompe. L'émulsion air-liquide est poussée dans la chambre d'amorçage où l'air le plus léger se sépare et sort du tuyau de refoulement ; le liquide, plus lourd, retombe et est remis en circulation. Une fois que tout l'air a été expulsé de la conduite d'aspiration, la pompe s'enclenche et fonctionne comme une pompe centrifuge normale. La pompe peut également fonctionner avec un mélange air-liquide. Le clapet anti-retour a une double fonction : il évite de vider le tuyau d'aspiration lorsque la pompe ne fonctionne pas ; en cas de vidage accidentel du tuyau d'aspiration, il retient une quantité suffisante de liquide dans le corps de la pompe pour l'amorçage. La conduite d'alimentation doit être libre pour évacuer l'air de l'admission.



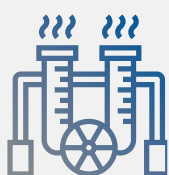
Applications



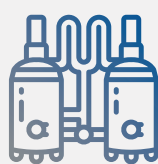
Installations d'épuration et de traitement des eaux: décharges, centrales électriques, désenfumage et lavage.



Industrie : industries de fabrication de machines de peinture, industrie de l'alimentation animale, industries de transformation, de traitement et de récupération des plastiques, industries des solvants-peintures-additifs-colles, industries automobiles, aciéries, tanneries, papeteries ; industries de transformation mécanique ; protection des sites soumis à des risques d'inondation ; usines pétrolières.



Industries chimiques et pétrochimiques.



Industries alimentaires: industrie du vin (lavage), industries des conserves



Plateformes navales et de bord pour les services de cale-ballast-incendie- lavage.



OEM : Industries de transformation des véhicules (bétonnières, pulvérisateurs, lavage des rues, distribution d'eau).



Agriculture pour l'irrigation et la gestion des eaux usées, engrais ; installations d'aquaculture ; lisiers d'élevage.

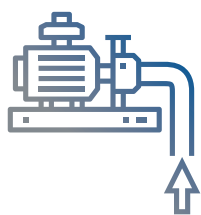
Série J

Caractéristiques clés de la gamme

Les pompes centrifuges auto-amorçantes J sont utilisées dans des applications où une capacité d'amorçage rapide est requise à partir de hauteurs d'aspiration exigeantes, combinée à la possibilité de transférer et de manipuler des fluides pollués, chargés et abrasifs avec des solides en suspension.

Le système est basé sur un corps de pompe inspectable qui fait également office de réservoir d'eau, permettant un démarrage initial rapide sans système auxiliaire, en simplifiant la gestion du système et en réduisant le temps d'entretien.

Dans les limites de la hauteur d'aspiration physiquement admissible, les pompes J constituent une solution plus pratique et plus fiable que les pompes submersibles et les pompes submersibles verticales à turbine.



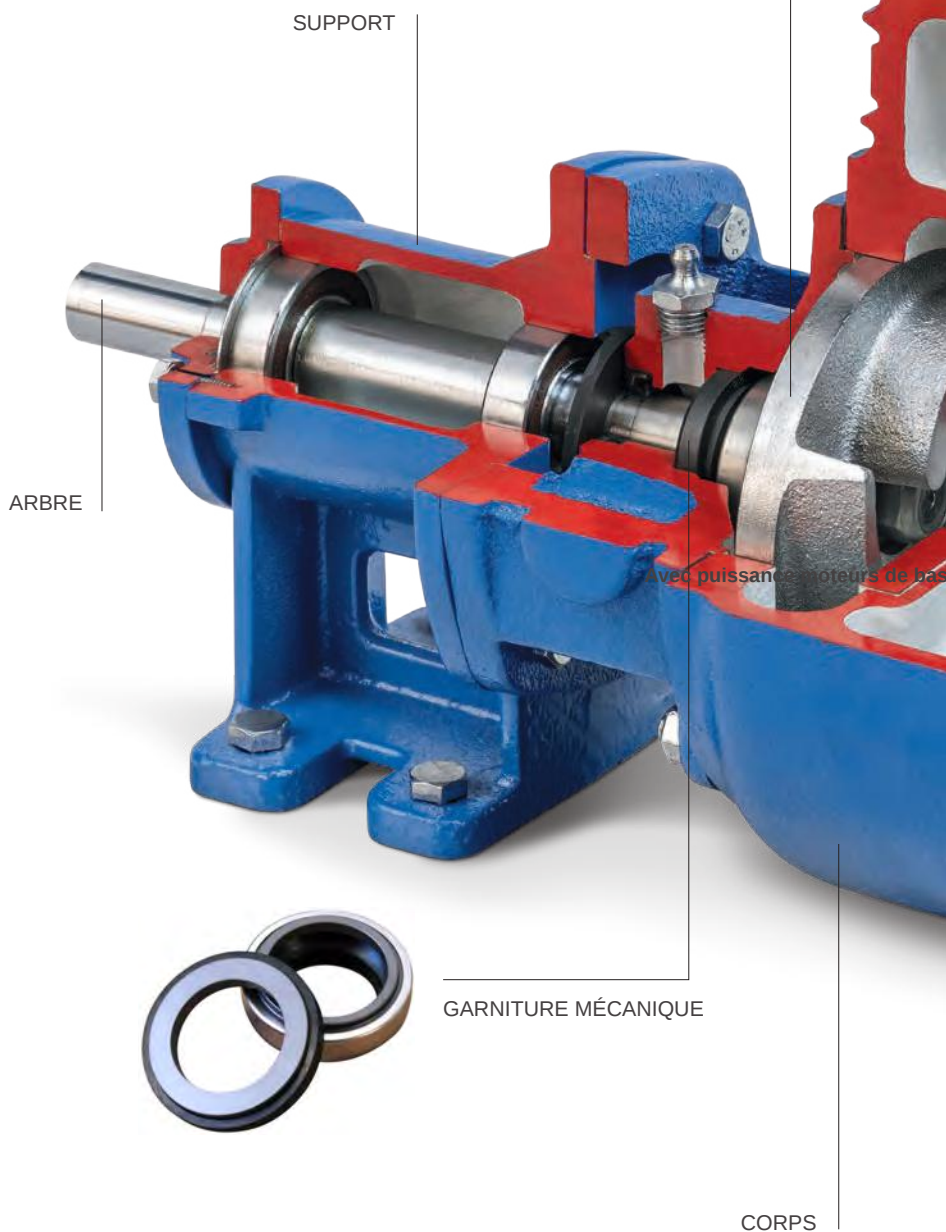
AMORÇAGE
DEPUIS DE GRANDES HAUTEURS



GESTION DES FLUIDES
POLLUANTS, CHARGÉS
ET CONTENANT DES
SOLIDES



TURBINE



GARNITURE MÉCANIQUE

CORPS

DONNÉES TECHNIQUES

Passage de solides jusqu'à 76 mm

Hauteur manométrique maximale jusqu'à 110 m

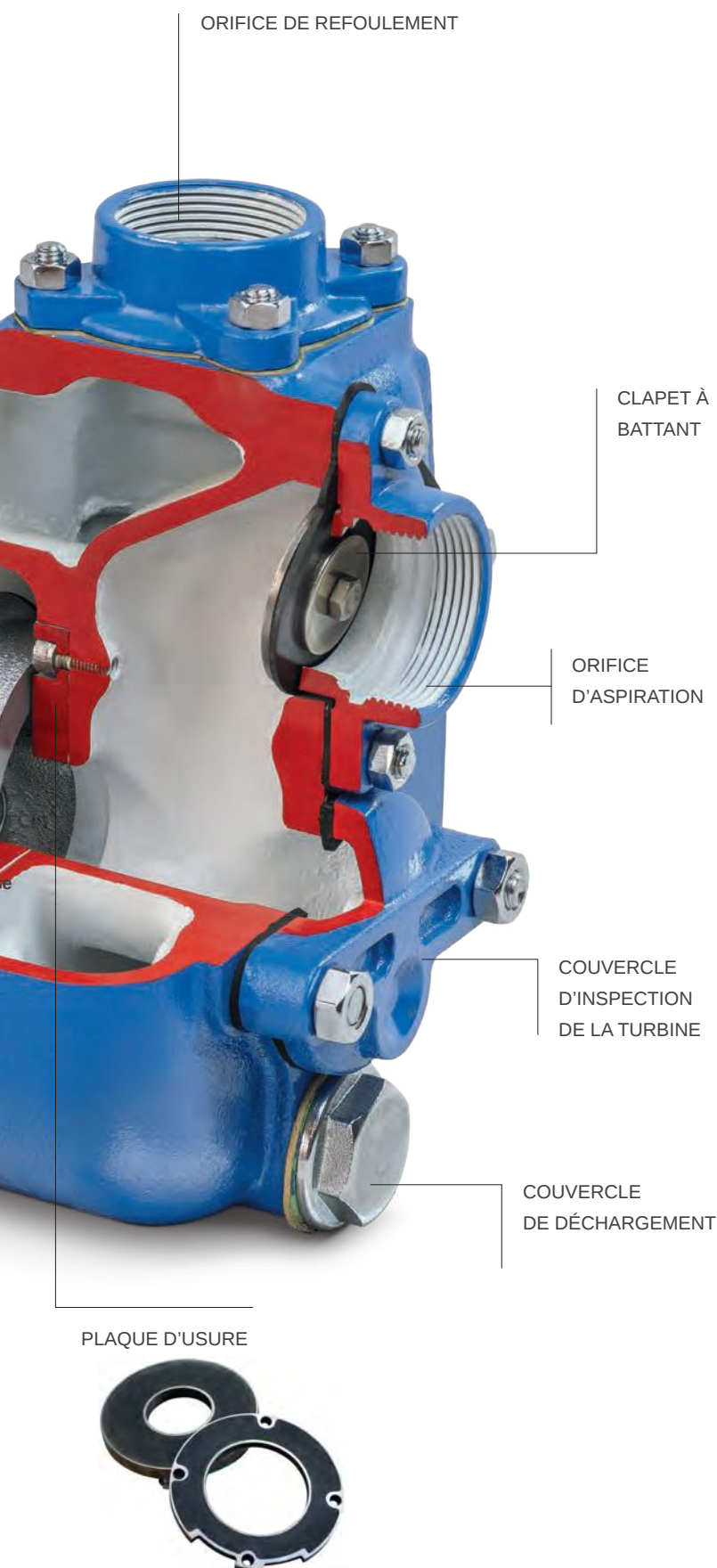
Débit maximal jusqu'à 1 200 m³/h

Bouches jusqu'à 300 mm

Capacité d'auto-amorçage sans systèmes auxiliaires jusqu'à 7,5 m

Matériaux : fonte, fonte trempée, acier inoxydable

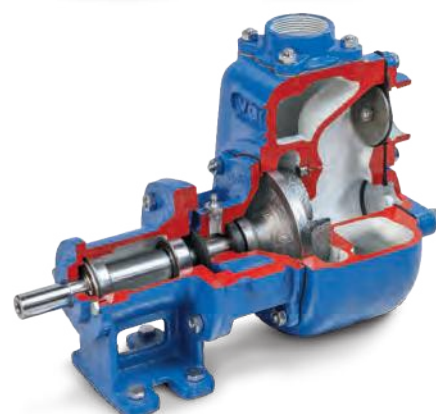
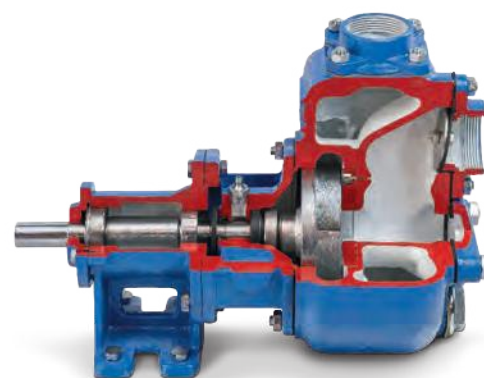




- > **Installation aérienne** et sèche pour un contrôle, un entretien et une gestion plus faciles que les solutions submersibles ou à arbre vertical avec turbine submergée
- > Adaptées à la gestion des **fluides difficiles** et aux applications lourdes
- > Moulages sous pression en **différentes métallurgies** haute épaisseur pour la résistance aux liquides abrasifs et corrosifs
- > Boîtier avec **portes d'inspection et de drainage** pour le remplissage, le rinçage et le débouchage
- > **Turbine semi-ouverte** dans différentes métallurgies avec passage de solides de 11 à 76 mm
- > Pièces d'usure **facilement remplaçables** pour rétablir les performances d'origine
- > **Joints mécaniques** avec contre-faces en matériaux sélectionnables selon l'utilisation, indiqués pour contenir l'abrasion et l'agression chimique
- > Gestion de fluides d'une viscosité allant jusqu'à 50 mm²/s (cSt) avec un dimensionnement standard ; possibilité de dimensionnement spécial pour les mélanges et boues denses et chargés

EN OPTION

- > Inverter
- > kit de brides
- > graisseur automatique
- > couteaux de déchiquetage
- > anodes de zinc



Série J

Équipements principaux

ARBRE NU
JS - JS Ex



MONOBLOC
JE... – JX...



**POUR OU AVEC MO-
TEUR HYDRAULIQUE**
JP MOD - JO MOD



BASE ET JOINT
JE...S... BASE
JX...S... BASE



Caractéristiques techniques

Série J	Orifices		Puissance	Vitesse	Débit	HMT	Puissance	Vitesse	Débit	HMT	ATEX**
Modèle	ISO 228 (BSP)	DN	Kw-50Hz	rpm	Q max - m³/h	H max - m	Kw-60Hz	rpm	Q max - m³/h	H max - m	Zone 1 - 2
J 1-110	1 1/2"	40	1,1	2900	22	16,5	1,5	3450	22	23	•
J 1-160	1 1/2"	40	2,2	2900	20	30	4	3450	21	44	N/A
J 1-180	1 1/2"	40	4	2900	25	35	5,5	3450	25	50	•
J 2-100	2"	50	1,1	2900	30	14	1,5	3450	32	20	N/A
J 2-120	2"	50	2,2	2900	40	20	4	3450	44	30	•
J 2-170	2"	50	4	2900	44	36	7,5	3450	50	52	•
J 2-180	2"	50	5,5	2900	50	38	11	3450	50	50	•
J 2-215	2"	50	11	2900	46	60	18,5	3450	46	85	•
J 3-100	3"	80	2,2	2900	60	14	3	3450	70	20	N/A
J 3-140	3"	80	4	2900	80	21	7,5	3450	83	30	•
J 3-180	3"	80	7,5	2900	84	35	15	3450	85	50	•
J 3-210	3"	80	4	1450	95	16	5,5	1750	105	23	•
J 3-225	3"	80	15	2900	95	55	N/A	N/A	N/A	N/A	•
J 3-240	3"	80	18,5	2900	80	70	30	3450	80	100	•
J 3-252	3"	80	22	2900	95	80	45	3450	95	108	•
J 3-305	3"	80	75	2900	105	110	N/A	N/A	N/A	N/A	•
J 4-100	4"	100	4	2900	100	15	7,5	3450	110	21	N/A
J 4-160	4"	100	11	2900	150	24	N/A	N/A	N/A	N/A	•
J 4-220	4"	100	5,5	1450	130	15	11	1750	160	21	•
J 4-225	4"	100	22	2900	150	46	N/A	N/A	N/A	N/A	•
J 4-250	4"	100	7,5	1450	160	20	15	1750	160	30	•
J 4-316	4"	100	18,5	1450	170	30	30	1750	170	46	•
J 6-250	/	150	11	1450	320	18	18,5	1750	340	26	•
J 6-350	/	150	30	1450	310	35	N/A	N/A	N/A	N/A	•
J 6-400	/	150	45	1450	380	37	75	1750	420	54	•
J 8-300	/	200	22	1450	480	22	45	1750	510	32	•
J 8-305	/	200	18,5	1450	380	20	30	1750	480	32	•
J 10-305	/	250	30	1450	600	21	45	1750	600	34	•
J 12-400	/	300	55	975	1200	17	90	1150	1290	27	N/A

ATEX**
= pas disponible dans toutes les combinaisons de matériaux



Série ST-R

Caractéristiques clés de la gamme

Les pompes centrifuges auto-amorçantes ST-R sont conçues pour faciliter les opérations de débouchage sur le terrain, pour assurer un entretien facile et des niveaux élevés de fiabilité.

Grâce à la porte d'inspection frontale, il est possible d'accéder à toutes les parties internes sans débrancher les tuyaux et sans retirer la pompe du système.



POUR LES OPÉRATIONS DE
DÉBOUCHAGE SUR LE TERRAIN



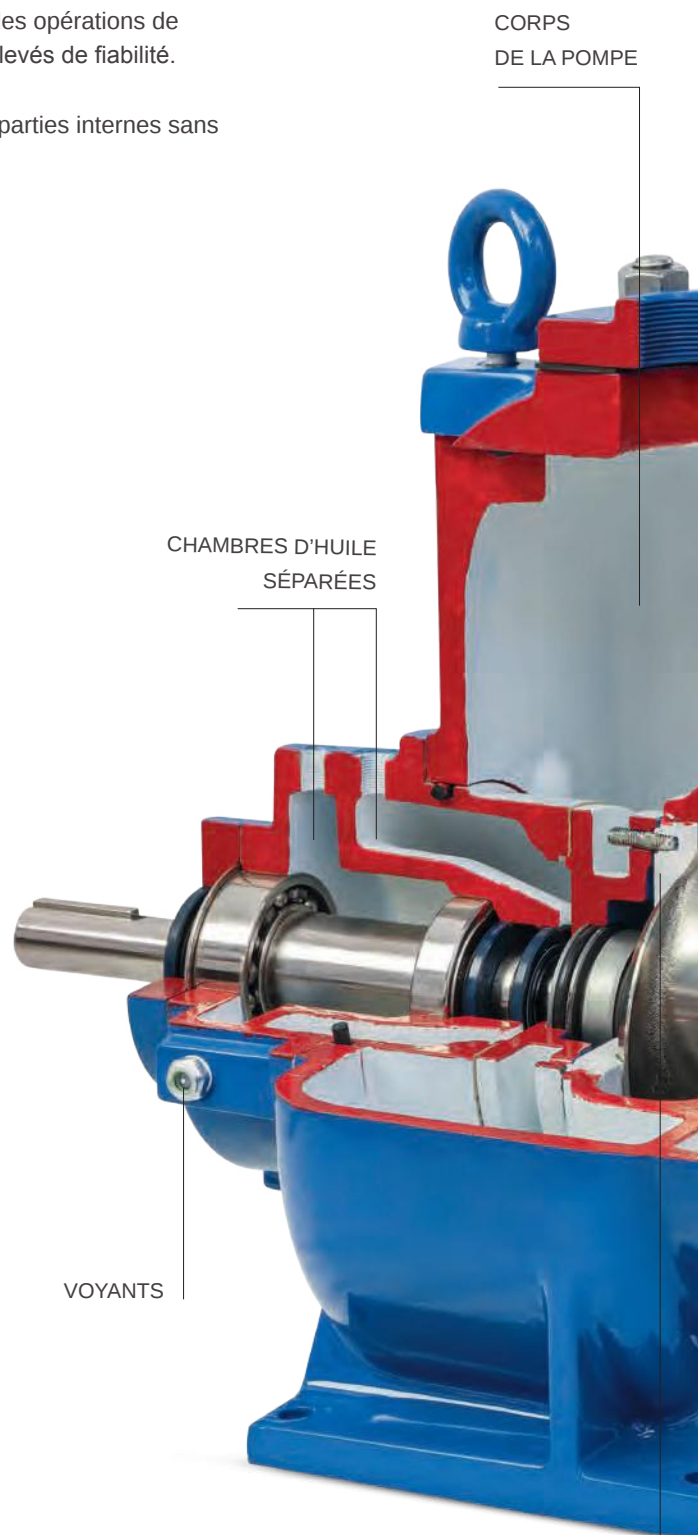
ENTRETIEN AISÉ



GROUPE ROTATIF EXTRACTIBLE



GARNITURE MÉCANIQUE



CORPS
DE LA POMPE

CHAMBRES D'HUILE
SÉPARÉES

VOYANTS

PLAQUE D'USURE PLATEAU
AVANT ENREGISTRABLE
DEPUIS L'EXTÉRIEUR

DONNÉES TECHNIQUES

Passage de solides jusqu'à 76 mm

Hauteur manométrique maximale jusqu'à 35 m

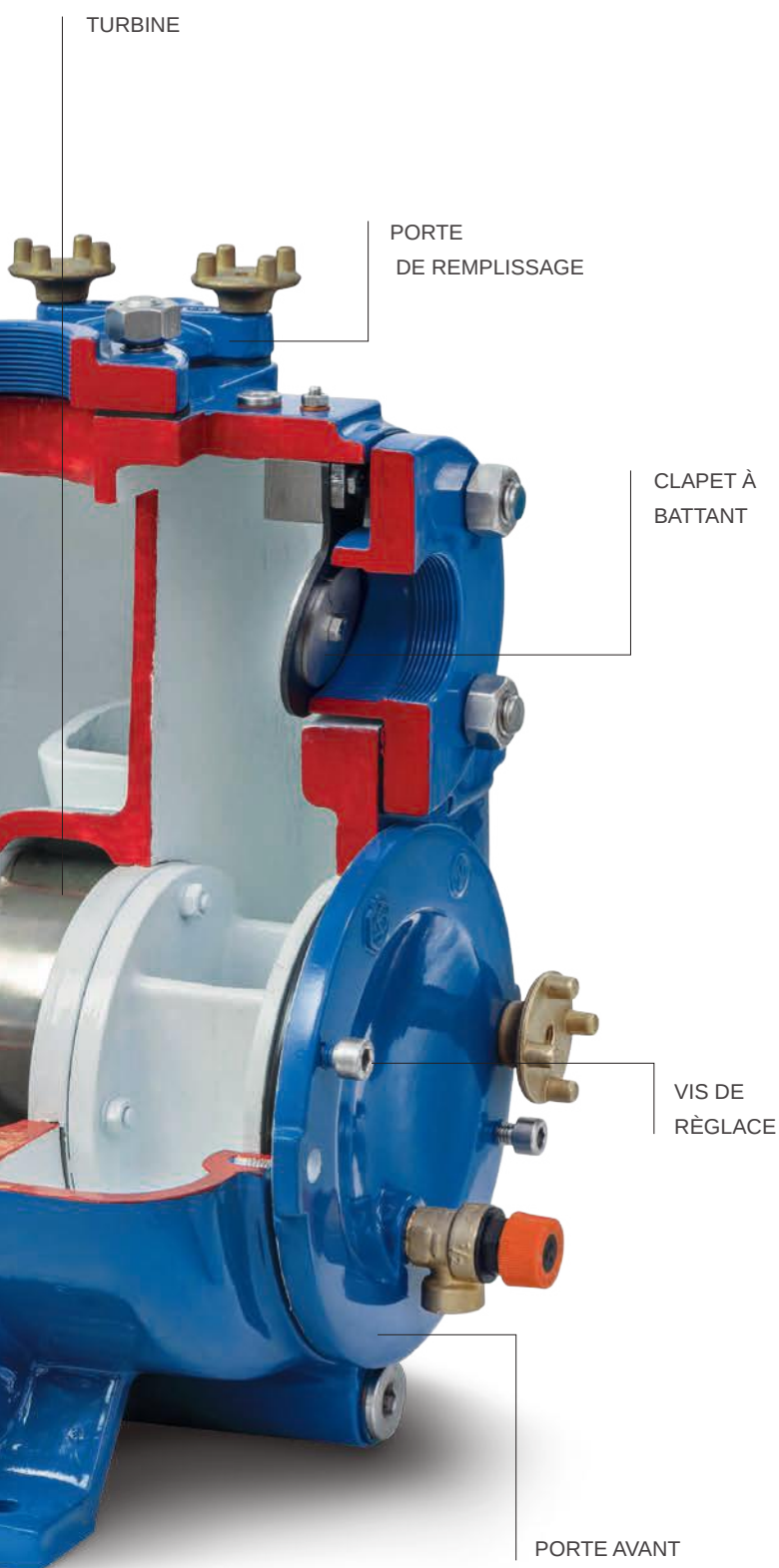
Débit maximal jusqu'à 420 m³/h

Bouches jusqu'à 200 mm

Capacité d'auto-amorçage sans systèmes auxiliaires jusqu'à 7,5 m

Matériaux : fonte, fonte trempée, acier inoxydable





- > **Porte avant** extractible pour permettre le lavage, le débouchage sur le terrain et les opérations d'entretien courant sans débrancher les tuyaux et sans retirer la pompe du système.
- > **Turbine semi-ouverte** en fonte, avec deux pales de forte épaisseur, avec passage de solides de 38 à 76 mm.
- > **Groupe rotatif** extractible intégralement par l'arrière; si un joint d'espacement est prévu, l'opération est possible sans démonter le moteur, la pompe et les tuyaux.
- > **Clapet à battant** facilement remplaçable par la porte arrière sans débrancher les tuyaux.
- > **Plaques d'usures** avant et arrière revêtus pour protéger les pales de la turbine contre l'abrasion.
- > **Plaque d'usures avant** facilement réglable depuis l'extérieur (au moyen de vis de réglage) pour retrouver les performances d'origine
- > **Garniture mécanique** à auto-alignement en carbure de tungstène avec élastomères Viton®
- > **Garniture mécanique** et roulements situés à l'intérieur de **chambres à huile séparés** et indépendants, avec indicateurs visuels de contrôle de niveau pour assurer une plus grande fiabilité en cas de **pompage à sec**
- > **Porte supérieure et bouchon de vidange inférieur** pour permettre le remplissage, la vidange et le rinçage du corps de la pompe
- > **Vanne de surpression** pour protéger la pompe et le système contre un fonctionnement incorrect

EN OPTION

- > kit de brides



Série ST-R

Équipements principaux

ARBRE NU
ST-R



BASE ET JOINT
ST-R BASE



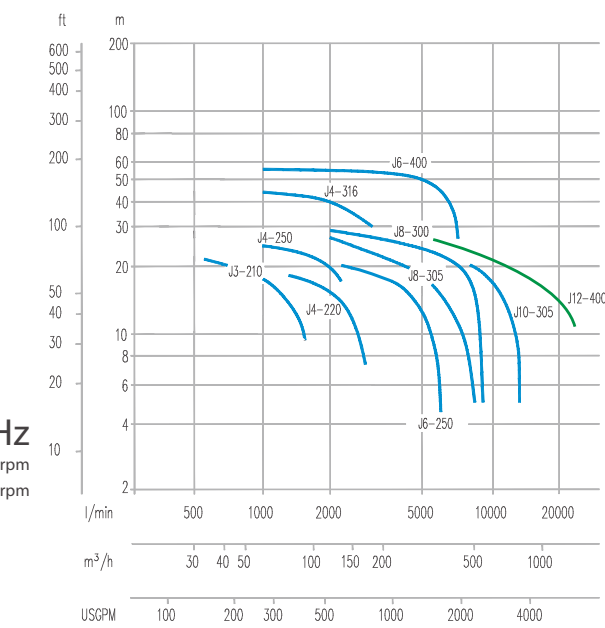
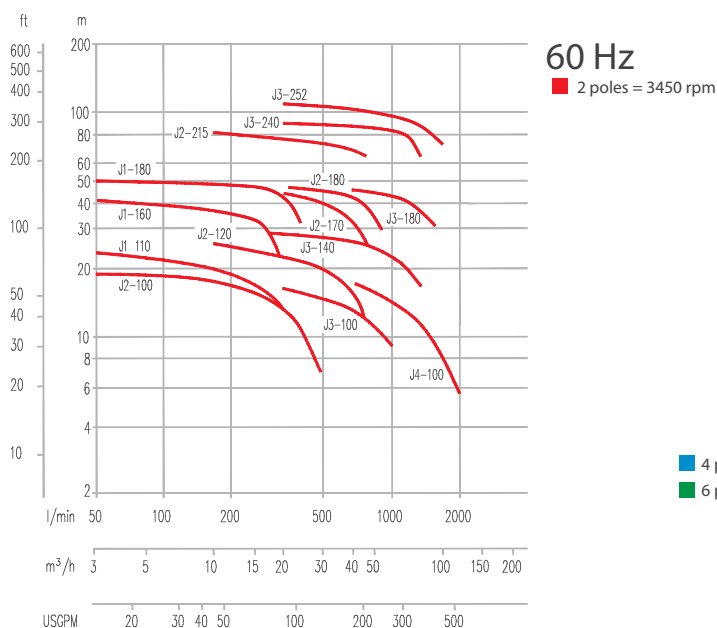
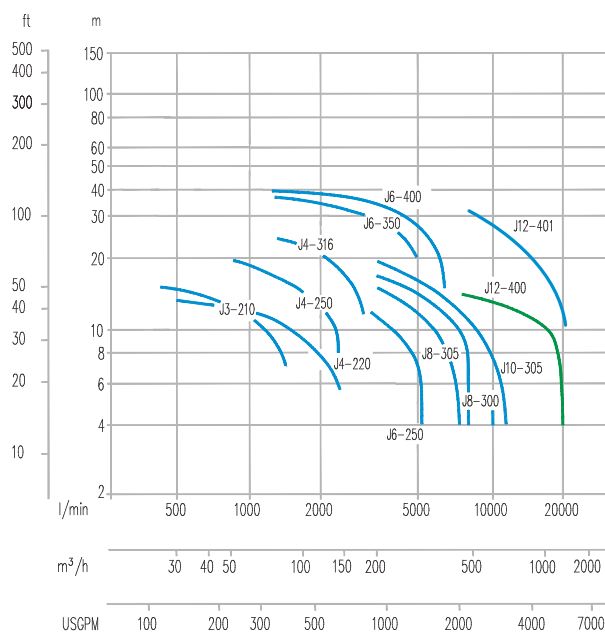
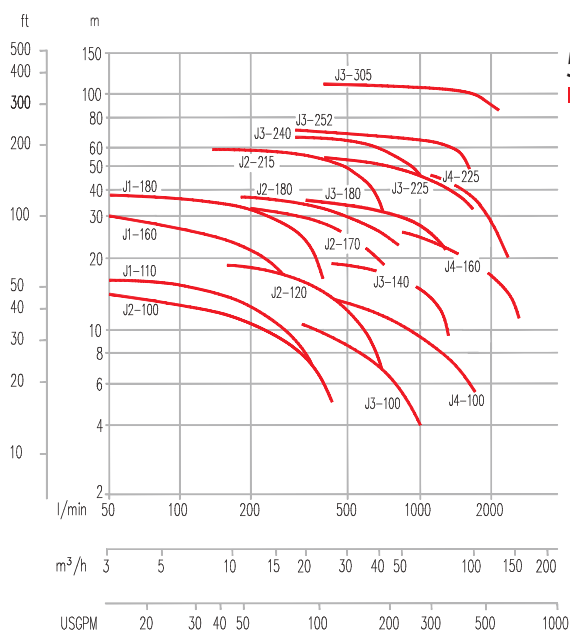
Caractéristiques de la gamme

Série ST			Performances				Performances				ATEX
Orifices			Avec puissance moteurs de base				Avec puissance moteurs de base				
Type de pompe	ISO 228 (BSP)	DN	Kw-50hz	RPM	max Q m³/h	max H m	Kw-60Hz	RPM	max Q m³/h	max H m	Areas 1 - 2
ST-R 2	2"	50	7,5	2900	50	36	N/A	N/A	N/A	N/A	N/A
ST-R 2	2"	50	1,5	1450	34	9	2,2	1750	39	16	N/A
ST-R 3	3"	80	5,5	1450	100	17	11	1750	110	25	N/A
ST-R 4	4"	100	11	1450	170	20	18,5	1750	180	29	N/A
ST-R 6	/	150	30	1450	340	30	N/A	N/A	N/A	N/A	N/A
ST-R 6	/	150	7,5	960	260	14	15	1150	310	19	N/A
ST-R 8	/	200	18,5	960	420	19	37	1150	520	26	N/A

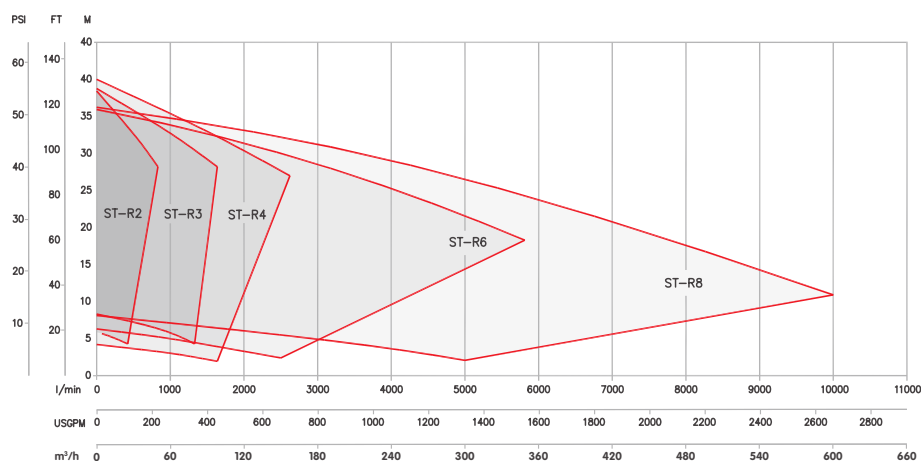


Série J

Courbes de performance



Série ST-R



VARISCO S.r.l.

Prima strada, 37 - Zona Industriale Nord

35129 Padova - Italie

T. +39 049 8294111

export.varisco@it.atlascopco.com

www.varisco.it



WANGEN
PUMPS
PRESENTS

BIOGAS
HERO
PRODUCTS



NEXT LEVEL

BIOGAS 
PERFORMANCE

WANGEN
BIO-ROXX

WANGEN
BIO-MIX 200

PUMPING GREEN ENERGY

NEW ADDITION TO OUR RANGE:
THE BIO-MIX 200 FOR EVEN
MORE CAPACITY

Wangen Pumpen has responded to the increasing demands in the biogas sector with a new pump capable of delivery rates of up to 150 cubic meters per hour. The BIO-MIX 200 thus achieves the highest possible flow rate in this pump class.

POWERED BY



WANGEN PUMPEN

100 % POWERFUL EFFICIENT UNIQUE

Optimise your system capacity with the BIO-ROXX module or with the new BIO-MIX 200 pump. For reliable preparation of the substrate and smooth transport.

WANGEN

BIO-ROXX

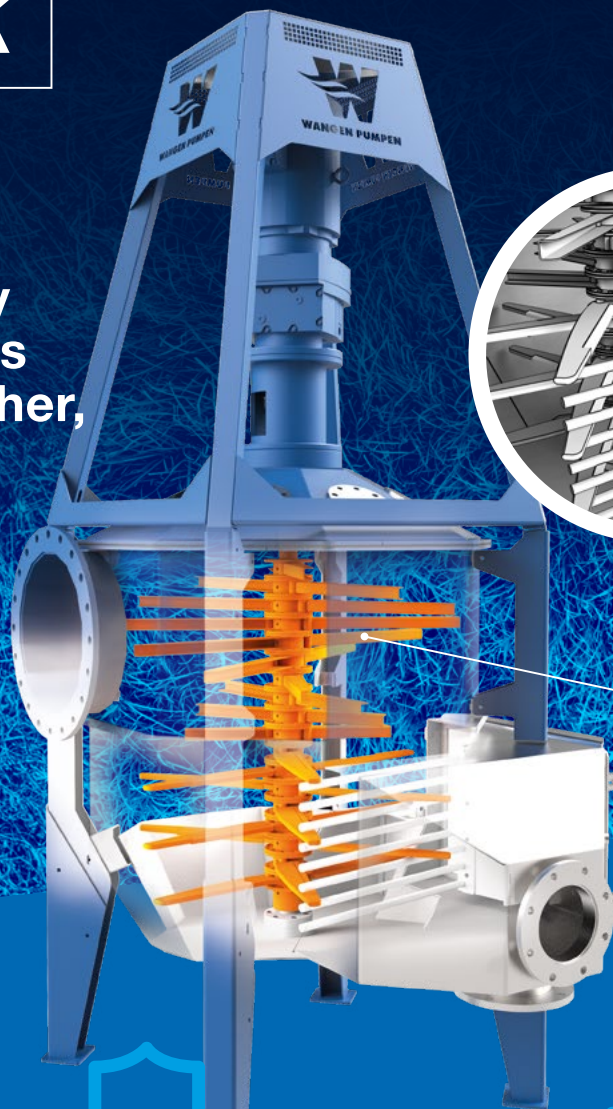
MAX.
FLOW VOLUME
m³/h

85

NOMINAL
MOTOR POWER
kW

7

Optimum
preparation of
the substrate by
mixing the solids
and liquid together,
and separating
contaminants.



STONE TRAP

AGITATOR



MIX

The arrangement of the agitator struts ensures optimum preparation of the substrate.



PROTECT

Contaminants are separated by the stone trap and removed even before the substrate reaches the pump.



PROFIT

Increase the efficiency of your biogas plant to the maximum with the WANGEN BIO-ROXX or the BIO-MIX 200 pump.

WANGEN

BIO-MIX 200

MAX.
CAPACITY
m³/h

150

MAX.
DIFFERENTIAL PRESSURE
bar

8

**Powerful pump
to transport
substrate to
the fermenter.**



LIQUID FEED

SOLIDS FEED

FEED

Solids and liquids are mixed in the hopper chamber. The dwell time increases and the substrate is evenly pumped onwards.

TRANSPORT

Even varying substrates with differing dry matter content are transported with ease over long sections.

MAXIMISE

The BIO-MIX 200 impresses with a throughput of up to 20 tonnes per hour and a minimum of wear and maintenance.

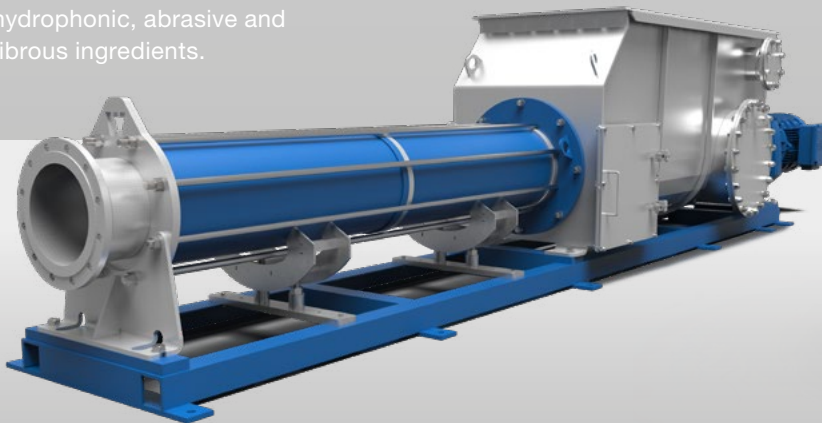
A POWERFUL PAIR



WANGEN

BIO-MIX 200

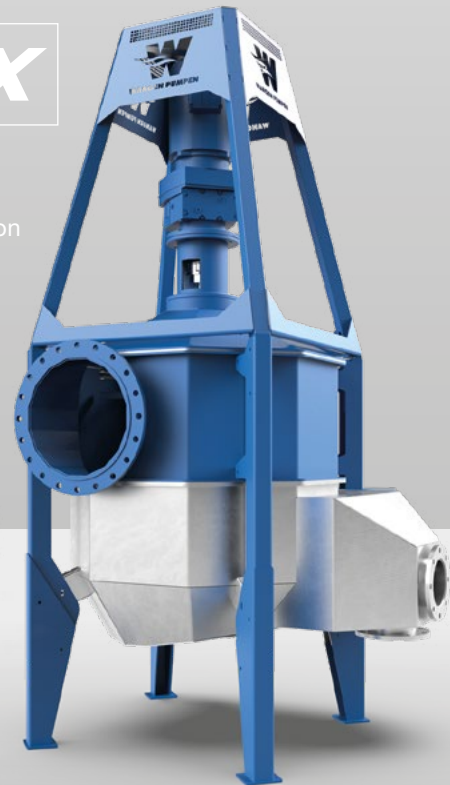
Durable pump to transport hydrophobic, abrasive and fibrous ingredients.



WANGEN

BIO-ROXX

Reliable module to remove contaminants for optimum preparation of the substrate.



Part of the **Atlas Copco Group**



WWW.WANGEN.COM



Pumpenfabrik Wangen GmbH
Simoniusstrasse 17
88239 Wangen im Allgäu
Germany

Technical Support: +49 7522 997-0
Service Hotline: +49 7522 997-0
Spare Parts: +49 7522 997-896