

Compact-mixer type CM 80



Features and advantages

- Compact and rugged design
- Few wear parts, low maintenance effort
- Stainless steel mixing chamber with flange connections
- Mixer housing and mixing shaft made of stainless steel
- Electrical motor with or without forced ventilator
- Numerous options make it possible to adapt it in your process
- **Lower polymer consumption from 5....25% possible**
- **Reduction of water consumption**
- Higher content of TR in the filter cake up to 5 % possible
- Low costs because of high concentration of polymer
- Cost-saving because of smaller dosing pump and possibly elimination of subsequent dilution

Technical description and process

The dynamic compact-mixer CM 80 optimizes the entry of flocculants in the mud and can be easily integrated in to existing sludge dewatering equipment and process control systems. It is suitable for a lot of different slurry and polymers.

The to conditioned sludge is exposed with polymer just before reaching of compact-mixer. The stock and process solution comes directly from the flocculant dissolving and dosing system.

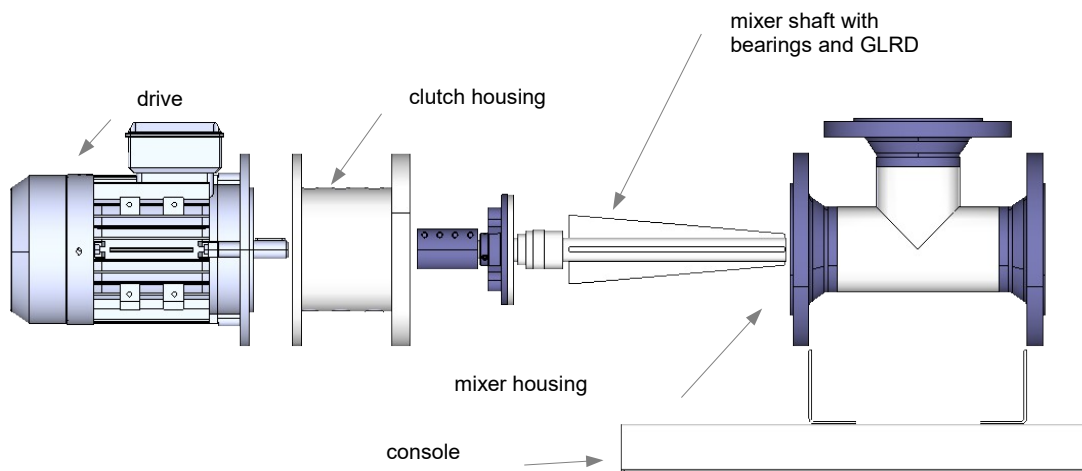
Because of the innovative geometry of mixer blades is the structure of the sludge destabilized and at the same time with polymer wetted and mixed. The resulting slurry/polymer mixture is transported axially by the **mixing housing** and leaves the mixer again at an angle of 90°. The sludge flows then as far as possible free of turbulence in your thickening or dewatering system. During this time the desired floc structure can optimally develop.

Because of the sophisticated and innovative design of the **compact-mixer CM 80** results the robust construction and low maintenance. Ideally the multi-mixer is equipped with optional polymer supplying, a activation with frequency converter and the control for mass proportional polymer dosing.

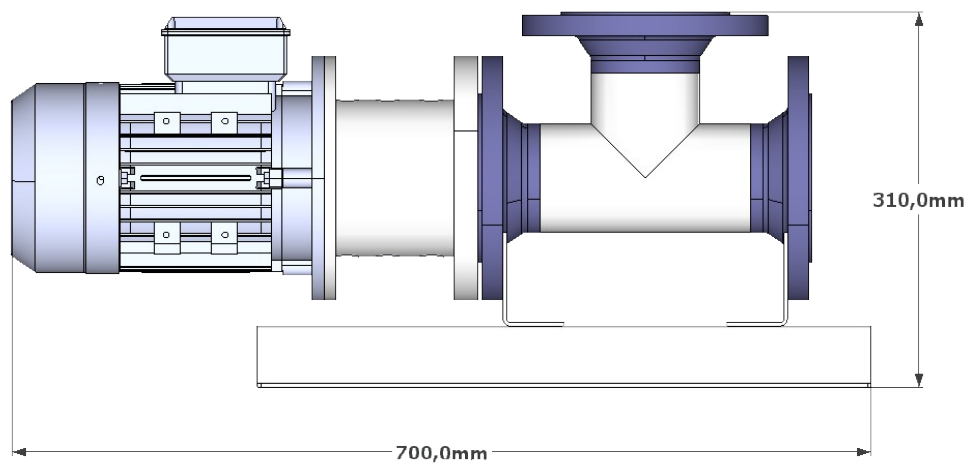
Numerous options are available.



Schematic representation



Dimensions of Multi-Mixer CM 80



Options

For an optimal adaptation and integration into your process are numerous options available:

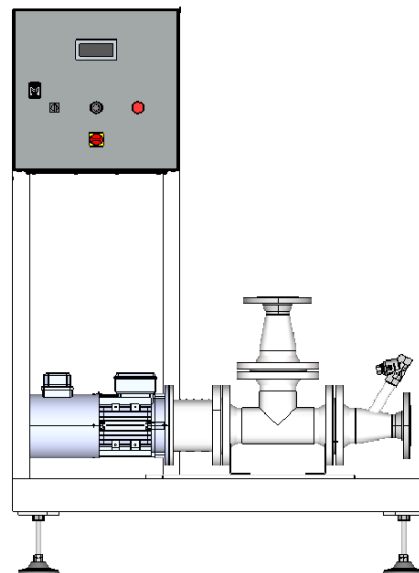
Polymer feed with check valve



Reduction of the ingress and egress flange DN80



Stainless steel machine base frame for compact-mixer and the electrical cabinet

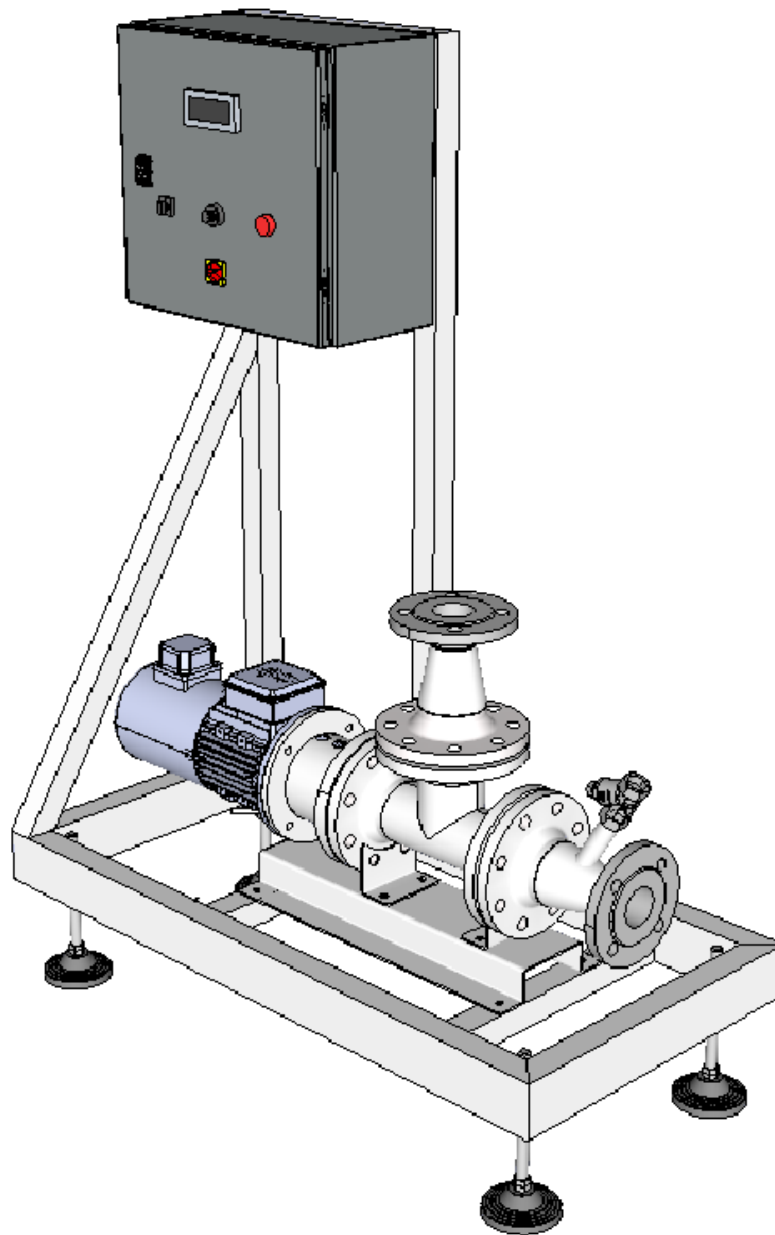


Application areas

The **waterprocesstec compact-mixer CM 80** is used in the treatment of municipal and industrial wastewater in sewage plants, the recycling of process and circuit water as well as the clarification of raw and surface water for the production of industrial and drinking water. Other applications are possible without doubts.

If you have any further questions, please do not hesitate to contact us.

3D-view



Technical dataElectric motor

Design	3-phase motor
Protection class	IP55
Effect class	IE3 High Efficiency
Cooling	self cooling without filter Cooling with optional fan by using FU
Temperature range	-20°C...+40°C
Material housing	gray iron
Colour	RAL 5010 enzianblue painted
Power	0,75 KW (see Order Code) 1,1 KW (see Order Code)
Voltage	230/400VAC, 500 VAC on request
Rotation Speed	1400 U/min or 2880 U/min
Min. frequency for FU	20Hz

Mixer module

Design	compact
Material housing	stainless steel 1.4571
Material agitator	stainless steel 1.4301
Material shaft	stainless steel 1.4301
Material flange	stainless steel 1.4571
Process connection	flange DN80 entry/exit (see also options)
Max. pressure	PN16

Compact Mixer

Weight	ca. 50Kg
Dimension	see on technical drawing

Order code CM 80-...

Material mixer

-A stainless steel 1.4571, 1.4301, (see on technical data)

Design electrical motor

-1 400 VAC motor, power 0,75 kW, flange DN80, rotation speed 1400 U/min

-2 400 VAC motor, power 0,75 kW, flange DN80, rotation speed 2880 U/min

-6 400 VAC motor, power 1,1 kW, flange DN80, rotation speed 1400 U/min

-7 400 VAC motor, power 1,1 kW, flange DN80, rotation speed 2880 U/min

Design fan

-A without fan

-B with fan

Options

-000 design standard

Accessories and extensions

Adapter sludge input

CM 80 adapter DN 80 to DN 80 with polymer injection
Input side stainless steel flange DN 80
Output side stainless steel flange DN 80
Polymer injection Storz fixed coupling 3/4"
with check valve 3/4"
Art.-No.: 88-000352

Adapter sludge output

CM 80 Adapter DN 80 to DN 80 with sampling ball valve
Input side stainless steel flange DN 80
Output side stainless steel flange DN 80
with sampling sludge 1/2" with manual ball valve
Art.-No.: 88-000353

Base frame to accommodate the mixer and optional the electrical cabinet

CM 80 base frame with heavy duty machine feet
height adjustable
to accommodate the mixer or a pump
Art.-No.: 88-000399

CM 80 base frame with castors
to accommodate the mixer or a pump
Art.-No.: 88-000396

CM 80 Extension to accommodate the optional control cabinet
Art.-No.: 88-000404

Electrical cabinet to control the mixer

Essentially consisting of:

- Painted sheet steel switch cabinet
- Main switch
- Emergency stop relay with emergency stop button
- Digital display to show the speed
- Switch local/remote
- Poti for setting the speed on site
- Transducer for specifying speed externally
- Frequency converter
- Control of optional external fan
- including documentation (wiring diagram, operating instructions)

Function and operation

The speed of the CM 80 can be changed in the "Local" position using the potentiometer on the electrical control Cabinet. In the "Remote" position, the speed can be controlled with an external 4-20 mA signal. Therefor an additional enable signal is required (see circuit diagram). So it is possible to convert the CM 80 into one include automated process.

Art.-No: 88-000402 (Electrical cabinet for 0,75 KW motor)

Art.-No: 88-000428 (Electrical cabinet for 1,1 KW motor)