

MFS

TECHNICAL DATA

Capacity:	350 - 7200 m ³ /h
Speed:	1500 - 420 1/min
Shaft seal:	lip seal system
Direction of rotation:	clockwise and anticlockwise



APPLICATION

The mixers are designed to circulate in egg-shaped, conical-cylindrical or cylindrical digesters causing an optimum mixing in both directions and a uniform heating of the sludge.

The mixers designed for continuous reversible operation. The ability to circulate sludge in either direction for long periods of time fulfils two important process requirements:

a) **Downward flow**

The impeller forces surface sludge, including coarse floating residue, down the draft tube resulting in an ideal intermixing and blending action that agitates settled sludge in the bottom of the digester. In the event foam forms on the top of the digester, will be sucked down the draft tube and remixed with the digester content.

b) **Upwards flow**

The circulates sludge under pressure from the bottom of the digester up the draft tube to the rotating splash disc. The splash disc distributes the sludge over a large sludge surface area softening and dispersing the supernatant sludge layer.

DESIGN

Vertical single-stage and two-stage Sterling Halberg mixers with special screw-type impellers and a deflector disk mounted on the shaft.

The draft tube acts either as a suction pipe or as a discharge pipe. The shaft is supported in a combined thrust and guide bearing located in the seating ring.

The mixer is driven by a motor or an intermediate gear whose pedestal is mounted on the foundation.

The draft tube length can be changed to suit the application. Assembly is made easy by the flanged pipe section design.

DESIGN DETAILS

According to code 94/9/EG (ATEX 100 a)

Flanges:

Dimensions of connection:

draft tube, inlet piece, discharge piece: DIN 2501 PN 10

Bearings:

Thrust and guide bearing in combined grease-lubricated rolling bearing design.

Bearing temperature monitoring with two immersion resistance thermometers PT 100 of intrinsically safe construction.

Shaft sealing:

Viton cap-type gaskets provide methane-resistant shaft sealing

Types of installation:

Concrete digester: Gas-tight grouting directly in the digester ceiling.

Steel digester: Gas-tight grouting, with synthetic resin, in a gas cap
or
embedded in a concrete cone.

Retrofits/
reconstructions: Gas-tight grouting, with synthetic resin, in a gas cap

Automatic lubrication:

The bearings and the lip seal system are continuously supplied with a grease deposit (10 l) by a grease pump.

- Level monitoring by means of a proximity switch of intrinsically safe construction
- Lubricants: Sterling Halberg mixer grease (standard) or Sterling Halberg *Planto* (biodegradable)