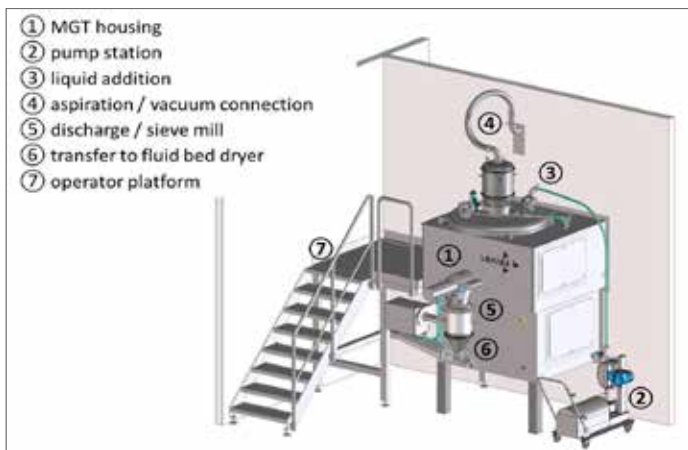


HIGH SHEAR MIXER MGT FOR PHARMACEUTICALS, COSMETICS AND FOOD PRODUCTS



- GMP design with straight surfaces
- Modular WIP system
- Multiple possibilities for automatic liquid addition
- CFR 21 Part 11 conform pharma compliant control system
- Temperature control jacket for heating / cooling
- Integrated sieve mill at machine's discharge
- Vacuum feeding system
- Customized ATEX solutions for explosion protected design



Sample MGT installation with various options



Mixing tools and chopper

High Shear Mixer MGT

The High Shear Mixer MGT is designed for mixing, granulating and sieving of pharmaceuticals powders, granules and a wide range of cosmetics and food products.

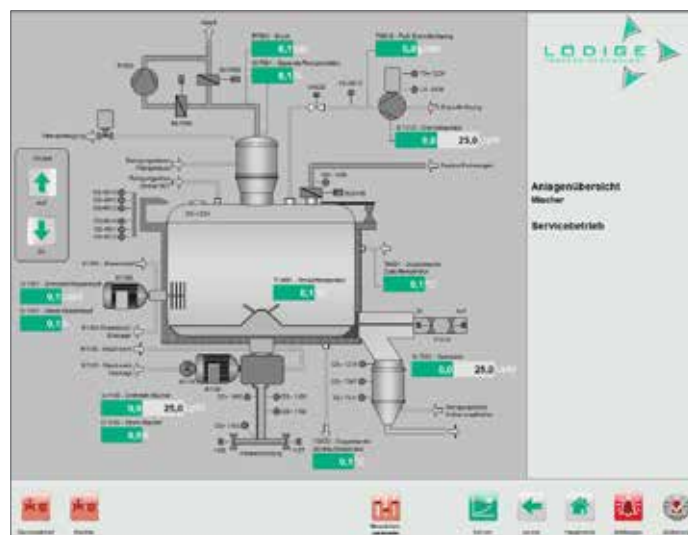
A three-arm mixing impeller rotates close to the wall and bottom of the vertical, cylindrical mixing drum. The shape and peripheral speed of the impeller are coordinated in such a way that the product forms a vortex. This achieves short mixing times, excellent homogeneity and enables a buildup of granules. A separately driven chopper is used for adjusting and breaking up any excessively large agglomeration of product as well as for even moistening and granulation. Liquid addition is carried out with a pump or by gravity. The liquid is added into the mix right above the chopper which achieves best possible distribution. The optional wet sieve calibrates the wet granules while discharging from the mixer. Discharge can take place into a vessel or product can be transported pneumatically to a Fluid Bed Dryer.

Sizes

Mixer Type	Working volume in Litre
MGT 30	8 - 24
MGT 70	18 - 56
MGT 125	31 - 100
MGT 250	63 - 200
MGT400	100 - 320
MGT 600	150 - 480
MGT 900	225 - 720
MGT 1200	300 - 960

CFR 21 Part 11 Pharma Control System

The PC/PLC-based control system is equipped with the SCADA system WinCC and designed CFR 21 Part 11 compliant. The user surface enables an intuitive machine control in service and automatic mode for production or cleaning processes. All parameters, graphs and messages are indicated on the screen. A batch documentation takes place as hard and soft copy. For warnings and alarms the whole screen is highlighted in specific colours for getting an immediate operator attention. Users can be managed individually based on the user rights. Selected users have the option of creating individual recipes for production or cleaning. A recipe can have up to 100 steps and a maximum of 100 recipes can be stored.



System overview of mixer