CYCONE®

Conical Mixer

30 m³ mixers

Markets

- Pharmaceuticals
- Chemicals
- Food
- Dairy
- Cosmetics
- Minerals
- Metals
- Others

Applications

- Mixing
- Homogenizing
- Heating and cooling
- Addition or injection of liquids
- De-aeration
- Vacuum/Pressure conditions
- Granulation or agglomeration
- Crystallization

www.bolz-summix.com

BOLZ® summix®
MEMBER OF THE MPE GROUP

BOLZ-SUMMIX® specializes in the design and manufacture of conical mixers and dryers. We supply from the smallest single machine to the most extensive turnkey mixing and drying installation. BOLZ-SUMMIX® is a member of the MPE GROUP. An international oriented group of companies with the focus on development, production and selling of high quality installations and components of processing systems and equipment. For more information please visit our website at www.mpegroup.com

Mixing principle

The mixing screw transports the product upwards. At the same time it is driven along the periphery of the vessel by means of an orbit arm. These combined actions provide one of the best and most efficient mixing principles known, with the following advantages:

Drive line with mixing screw

Advantages

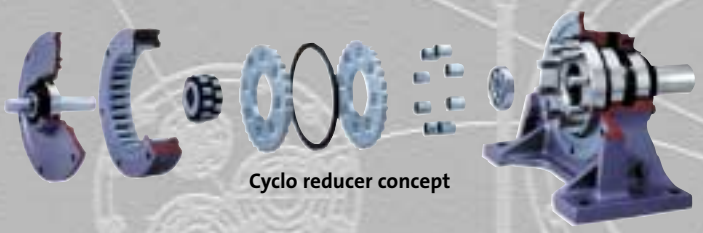
- High mixing accuracy
- Variable volume filling (turndown)
- Three-dimensional mixing zone
- Free hanging mixing screw
- Sizes from 10 to 60,000 litres (3 to 16,000 gallons)
- Variable product density
- Low energy consumption
- Automatic CIP systems
- Ease of maintenance
- Operator, product and environmental safety

Unique CYCONE® drive

Bolz-Summix is the first to combine the proven Cyclo Reducer concept with its orbit arm technology for conical mixers.
The Cyclo Reducers are specifically adapted to meet Bolz-Summix's parameters.

Working principle

The driven shaft is equipped with an eccentric that turns within a flat disc, therefore this disc is moving eccentric, in the opposite direction of the ingoing shaft, at a lower speed. The disc has cycloid-curves that 'unroll' along pins. The cycloid disc in turn drives another disc that is connected to the outgoing shaft.



Cyclo reducer concept

The advantages of this proven design compared to conventional reducers are:

- Low internal friction - reduced energy consumption
- High resistance against peak loads
- Strong and reliable construction
- High resistance against wear
- Compact construction

Orbit arm 30.000 litre mixer

Typical applications

- **Chemical**
  Fertilizers
  Silicon carbide
  Fly ash

- **Chemical**
  Pigments and dyes
  Citric acid
  Synthetic resins

- **Chemical**
  Battery mass
  Fungicides
  Pesticides
  Adhesives
  Plastics
  Glues

- **Chemical**
  Metal powders
  Flavours
  Toner
  Polyester
  Cellulose
  Catalyst

800 litre CYCONE mixer

- **Pharmaceutical**
  Antibiotics
  Vitamines
  Drugs
  Pharma-chemicals
  Intermediates
  Toothpaste
  Veterinaries

- **Minerals and Metals**
  Phosphates
  Limestone
  Cement
  Ceramics
  Gypsum
  Talc
  Carbon

- **Food**
  Bakery ingredients
  Coffee and tea
  Baby food
  Oil and fats
  Dry soups
  Lactose and fructose

- **Food**
  Pet food
  Sugar
  Casein

- **Food**
  Gelatines
  Muesli
  Dairy

- **Food**
  Flour
  Chocolates and cocoa
  Eggpowders
  Sports and diet products
  Flavours and fragrances
  Tobacco

Mixer systems and options to meet your application

We have an extensive range of standard options - typical examples are shown on the backpage of the leaflet. If you have any requirements or queries, please contact us.

Vacuum drying and solids handling systems

The solids division within the MPE GROUP designs, manufactures and supplies solids handling systems and (turnkey) conical vacuum dryer systems that meet the highest standards. A vacuum dryer system typically comprises:

- Bolz-Summix conical dryer
- Dust filter
- Discharge hopper
- Steel support structure
- Condensor
- Filling/-weighing unit
- Solvent receiver
- Vacuum pump
- Piping/ducting
- Control system

From the most basic single machine to the most extensive system, Bolz-Summix is your partner

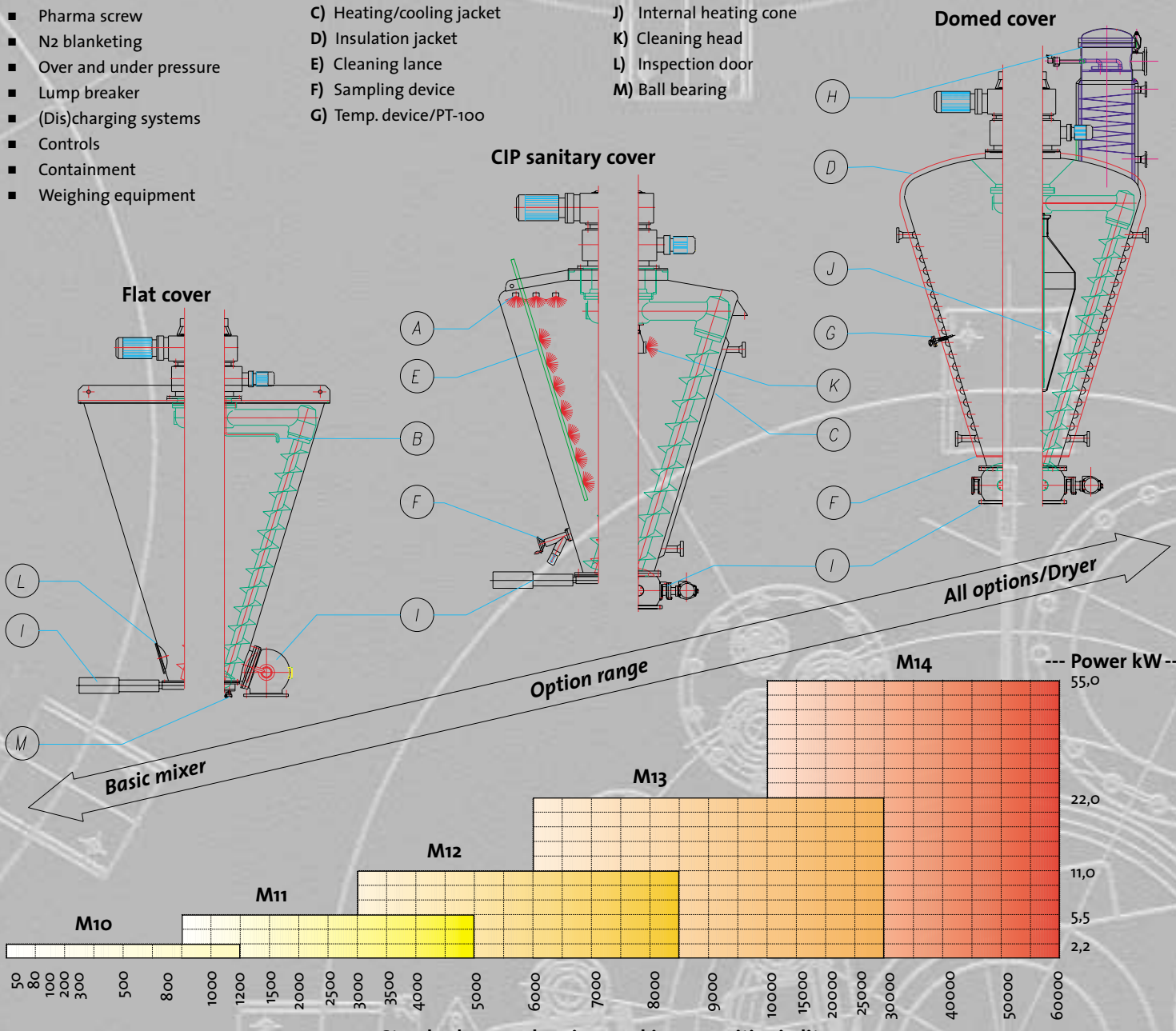
Ball bearing

Options

- Seal types
- WIP/CIP
- Pharma screw
- N2 blanketing
- Over and under pressure
- Lump breaker
- (Dis)charging systems
- Controls
- Containment
- Weighing equipment

A) Spray nozzles
B) Liquid injection
C) Heating/cooling jacket
D) Insulation jacket
E) Cleaning lance
F) Sampling device
G) Temp. device/PT-100

H) Dust filter
I) Slide valve/ball segment valve
J) Internal heating cone
K) Cleaning head
L) Inspection door
M) Ball bearing



--- Standard range showing working capacities in litres ---

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