BS-miniDRY®

BOLZ summix®

Lab Dryer and Mixer

Application
Research
Development
Smallest Volumes

Processes
Drying
Mixing
Moistening
Granulation
Homogenizing

Masters in Drying

BOLZ-SUMMIX lab dryers and mixers for research, development and for smallest product volumes...

Lab Dryer for Research and Development

Together with one of the leading pharmaceutical companies in Switzerland, the new GMP conform lab dryer- and mixer *BS-miniDRY*® has been developed

Small - Modular - Flexible - Mobile

During research and development normally only a few grams of a new substance are available. In order to guarantee representative results, for example when developing drying processes, laboratory dryers are necessary with low working volumes, small size, and which are suited to process simulation as flexibly as possible. To fulfill these requirements a new lab dryer has been developed with our partner. His laboratory experience combined with our dryer design and construction know-how has resulted in the development of a highly advanced laboratory dryer.

The dryer is suited to the special requirements of a laboratory in terms of size, instrumentation, equipment and use and thus offers maximum flexibility and diverse application. Prior to the development of the ***BS-miniDRY*®**, modular construction, mobility and flexibility were significant handicaps in our partner's laboratory.

The ***BS-miniDRY*®** offers a broad operating window for research and development as a result of our collaboration. Drying processes under vacuum and also other procedures such as mixing, homogenizing, degassing, moistening and so forth can be carried out. Modern Lab-soft- and hardware guarantees, that all process datas can be evaluated, reappraised and are available for necessary Scale Up calculations.

One highlight is the redesigned, optionally available hybrid stirrer, that opens the possibility for the lab dryer either to work as conical screw dryer, or to be used also as central shaft dryer. Innovative technical developments facilitate this unique variability of the new ***BS-miniDRY*®**. This allows testing of general suitability and direct comparison of the lab results of one agitator's performance with another.

During the design phase we considered the possible need to install the ***BS-miniDRY*®** in a laboratory fume cupboard. The dryer can be installed in a fume cupboard either as a complete unit or with the (utility) power supply separated. Two separate drives with variable speeds, dust filter, manuel sampler, CIP nossles and adjustable support frame are some of the exeptional features.

Turn-key Package or Semi - Equipped

The entire ***BS-miniDRY*®** system can be matche to the end-user's needs. Depending on requirements the scope of supply can include the following

- Dryer
- SPS Control and lab software
- Vacuum system
- Solvent recovery system
- Heating/cooling system
- Mobile frame

Alternatively should some of the above items such as the vacuum or the heating/cooling system be already installed in the customer's lab, then the existing utilities can be connected to the ***BS-miniDRY*®**. With the correct interfaces the control systems can also be connected.

The new lab dryer is the ideal and logical development of the already very successful Bolz-Summix pilot dryes in the ML range with working volumes from 10 to 50 liters. These dryers are also well suited for larger volume scale-up or small volume production requirements. They are available in a variety of materials and equipment specifications.

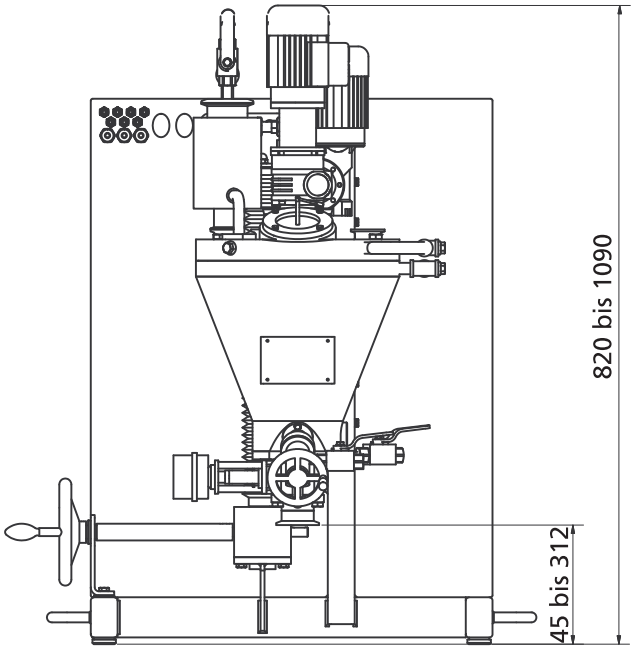
summix®

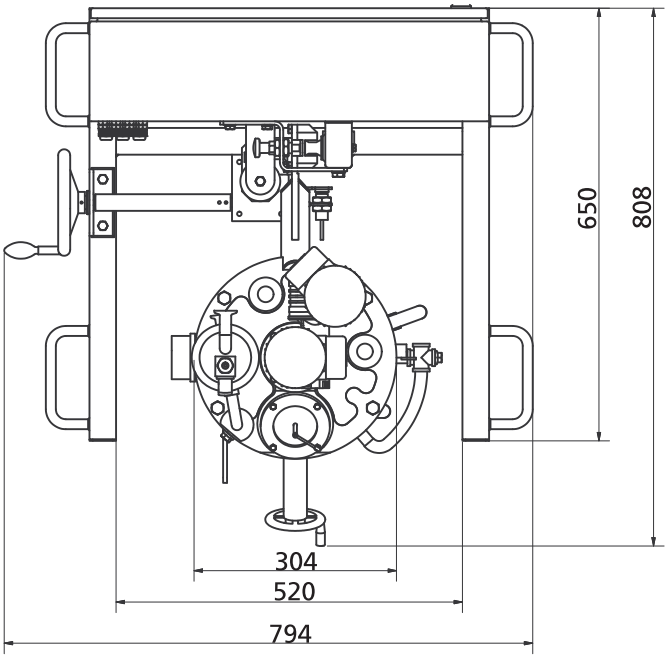
Standard Specification:

Material	SS 316L or Alloy C22
Working volume	Type DKL 015: 0,15 to 1,5 Liter
Working pressure	-1,0 to 0,5 barg
Working temp.	-20 to 120 °C
Heating/Cooling	Water/thermal oil at 0 to 6 barg
Surfaces	inside Ra < 0,8 µm

Basics:
- Heating/Cooling jacket
- Insulation jacket
- Dust filter
- Two drives with variable speeds
- Manuel ball discharge valve
- Pressure and temperature sensors
- Sampler
- Hight adjustable support frame

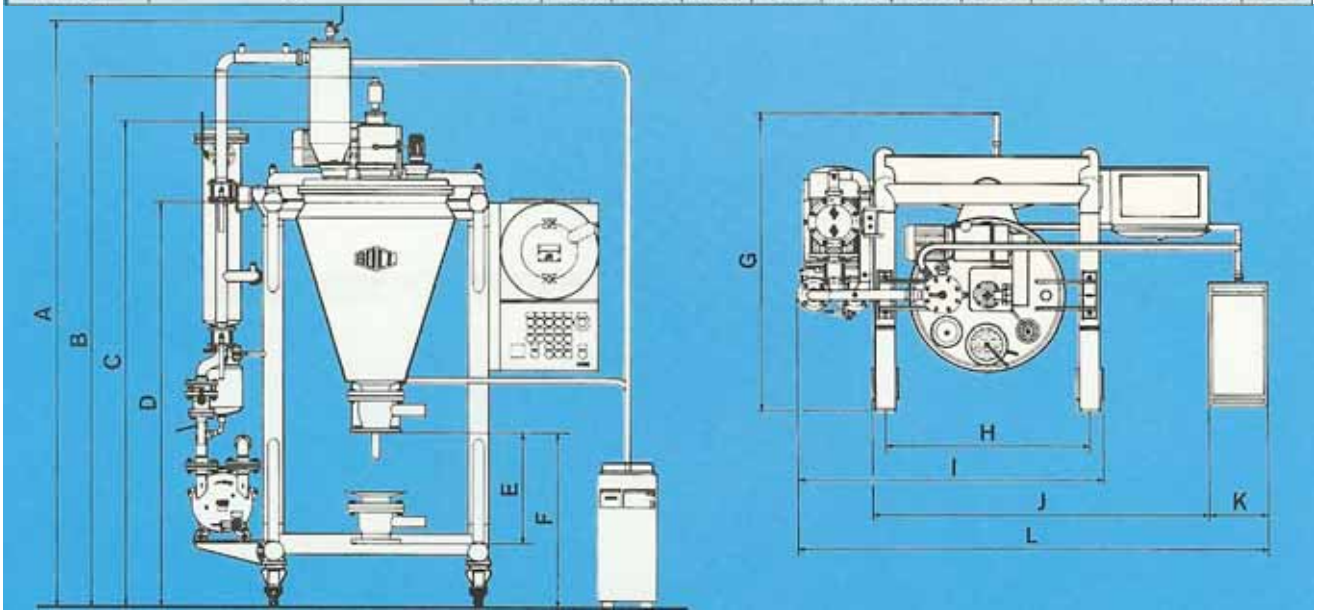
Options:
- **Hybrid agitator with central shaft mixer**
- Vacuum system with solvent recovery
- Heating/Cooling System
- SPS Control with Lab software
- Operation via PC or Laptop
- Free programmable process control
- ATEX Conformity
- Please ask for additional, special equipment and design





... for larger volumes BOLZ-SUMMIX offers pilot sized dryer/mixers, the small units for a wide range of applications

Summary of dimensions of BOLZ-SUMMIX laboratory blenders													
Model	Effective capacity in ltrs	A	B	C	D	E	F	G	H	I	J	K	L
ML 001	15	2230	1985	1785	1455	300	625	1075	740	1170	1250	260	1883
ML 003	30	2595	2350	2150	1800	500	783	1345	900	1343	1480	260	2073
ML 005	50	2595	2450	2250	1900	500	783	1375	1050	1493	1630	260	2223



The small pilot units, equipped with all necessary auxiliaries, are available for trials in pilot scale range or as small production unit.

The machines are available in 316L or Alloy C22. Many international standards are available such a, PED, ASME, GB 150 or others.

ATEX regulations, controls and mechanical equipment fulfill all safety regulations. Equipped with Heating/Cooling System, Solvent Recovery and vacuum pump the pilot dryer matches the specification and performance of larger dryers.

For pilot scale trials mobile rental dryers of 10, 30, or 50 liters working volume are available.

Call us and we will be pleased to advise you!

BOLZ® summix®
Member of the MPE Group NV

MPE Group GmbH
BOLZ - SUMMIX
Simoniusstrasse 13
88239 Wangen, Germany
Tel. +49-7522-9162-0
Fax +49-7522-9162-105
Email info@mpegroup.de
www.mpegroup.de

EN *BS-miniDRY*® 08.08 • Modification without notice