



# **ADDITIVE MANUFACTURING**



## CONTAINER BLENDER

### *The Market Leader*

#### OUR ADVANTAGES:

- ✓ Homogeneous blending of metal powder
- ✓ Patented blending elements
- ✓ Starting blending volume from 2 Liters
- ✓ Significantly smaller footprint than comparable blenders
- ✓ Fast, simple, and inexpensive installation as well as low maintenance requirements
- ✓ Quick product changeover by exchanging the blending containers
- ✓ Containment execution as an option
- ✓ Inertisation possible for preventing oxidation or explosive atmosphere

## L.B. BOHLE BLENDING TECHNOLOGY

With patented blending elements on the inside of the hopper lid, our blenders provide homogeneous blending of metal powder batches. The blending process is scalable and blending containers of different capacities can be used for optimum flexibility. The blending process allows effective blending at 20 - 85 % fill level with a density of 0.2 - 0.8 kg/l.

The blending process is completely closed. Each container is equipped with an inner lid for filling. In addition, the blender can be used as a milling station for transport from container to container.

#### The container blender PM is a stationary blending device with the following components:

- ✓ PM machine body with load suspension device
- ✓ Electrical switch cabinet integrated in machine body
- ✓ A separate installation is available upon request
- ✓ Separate operator panel (15" touch panel)
- ✓ Safety light barrier or laser scanner available as an option
- ✓ Printer/PDF print option



## CONTAINER BLENDER

### *The No. 1 Blending Technology*

The range of L.B. Bohle blending systems demonstrates the flexibility of our technology and production.

Our container blenders can be used and adapted for every conceivable production situation. Whether you use round or square containers in your plant, our blenders guarantee first-class blending results.

#### **L.B. Bohle offers a wide range of pick-up options for its blending systems**

- ✓ Standard arm connection and clamp
- ✓ Round forks on the lifting arm
- ✓ Lifting arm with eccentric clamp, power clamp and hydraulic clamp

#### **Multiple processes in one system – blending, chopping and liquid addition:**

- ✓ Closed system, therefore optimal for containment applications
- ✓ No cleaning required between batches
- ✓ Gentle product movement
- ✓ Rotates up to 6 rpm
- ✓ Blending elements in intermediate bulk container (IBC)



#### **Blending elements**

- ✓ Rectangular or round containers
- ✓ Rotation without tumbling
- ✓ Filling degree from 20 to 85 %



## LM 40 BLENDER

The LM 40 blender is optimized for use in the metal powder blending for the use of your 3D metal printer. The blender is driven by a three-phase motor located in the machine housing. The machine control is also located there.

The space requirement of the blender has been minimized by space-saving rotation around only one axis and a small footprint. At the same time, wheels make the LM 40 highly mobile, allowing it to be used in a variety of scenarios.

The LM 40 can be safely scaled up to the desired production size.

### Advantages:

- ✓ High mobility: Mobile blender optimized for metal powder blending
- ✓ Secured scaling-up process
- ✓ Fast and complete discharge
- ✓ High flexibility: Use of different containers and bins possible

**SECURED  
SCALE-UP**



## PTM TELESCOPE BLENDER

The PTM is a mobile blending and transport unit. Built on a stable stainless-steel frame, all aggregates and energy supply components are accommodated under the stainless-steel casing.

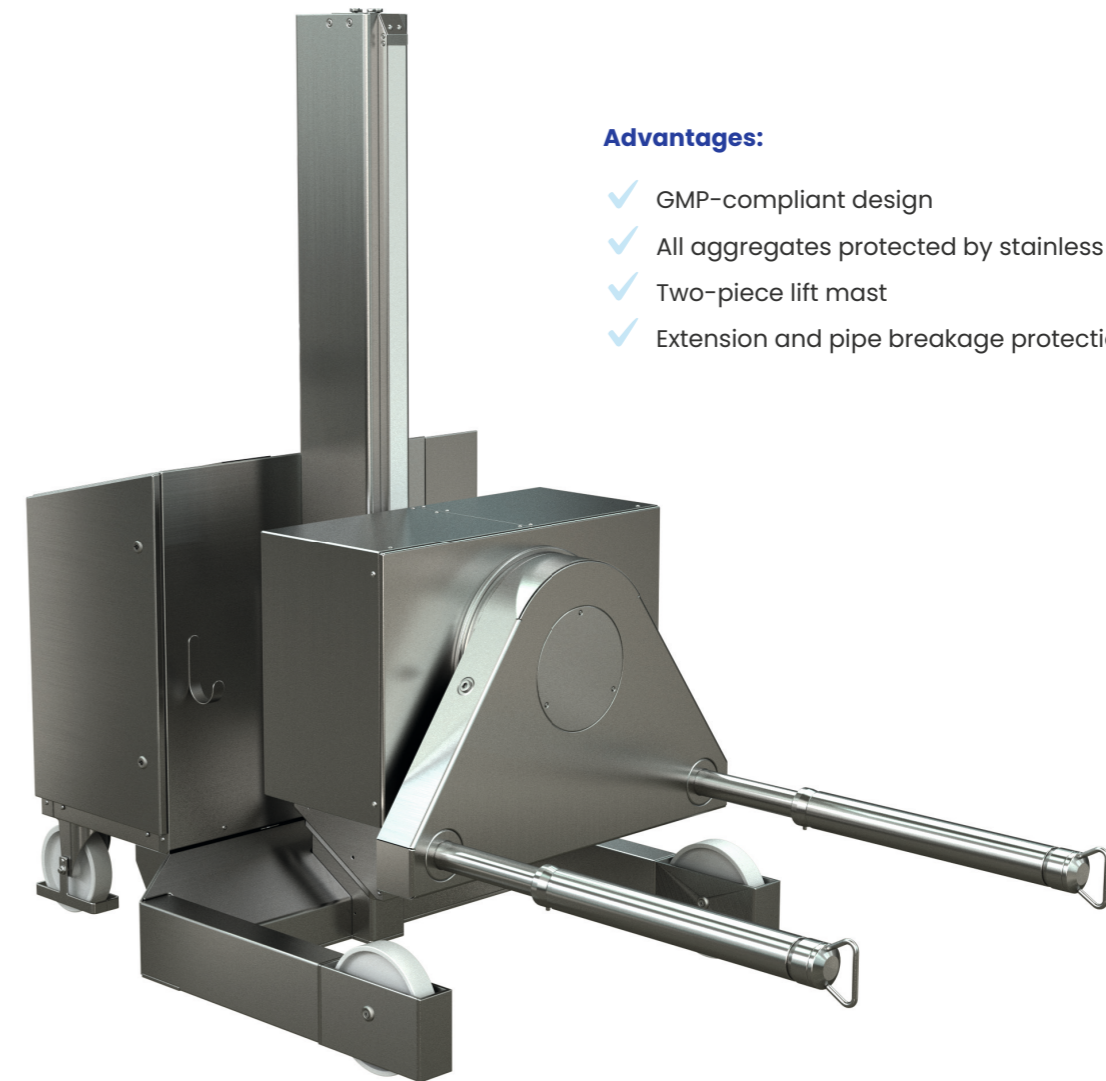
The lifting mast consists of an outer and an inner mast. This sliding mast principle ensures a GMP-compliant design.

The PTM is equipped with a hydraulic lift drive. This is a plunger cylinder that only needs to be pressurized with oil on one side. It is connected to a hydraulic unit driven by a motor.

The PTM is very mobile and can be used flexibly in the production process.

### Advantages:

- ✓ GMP-compliant design
- ✓ All aggregates protected by stainless steel casing
- ✓ Two-piece lift mast
- ✓ Extension and pipe breakage protection

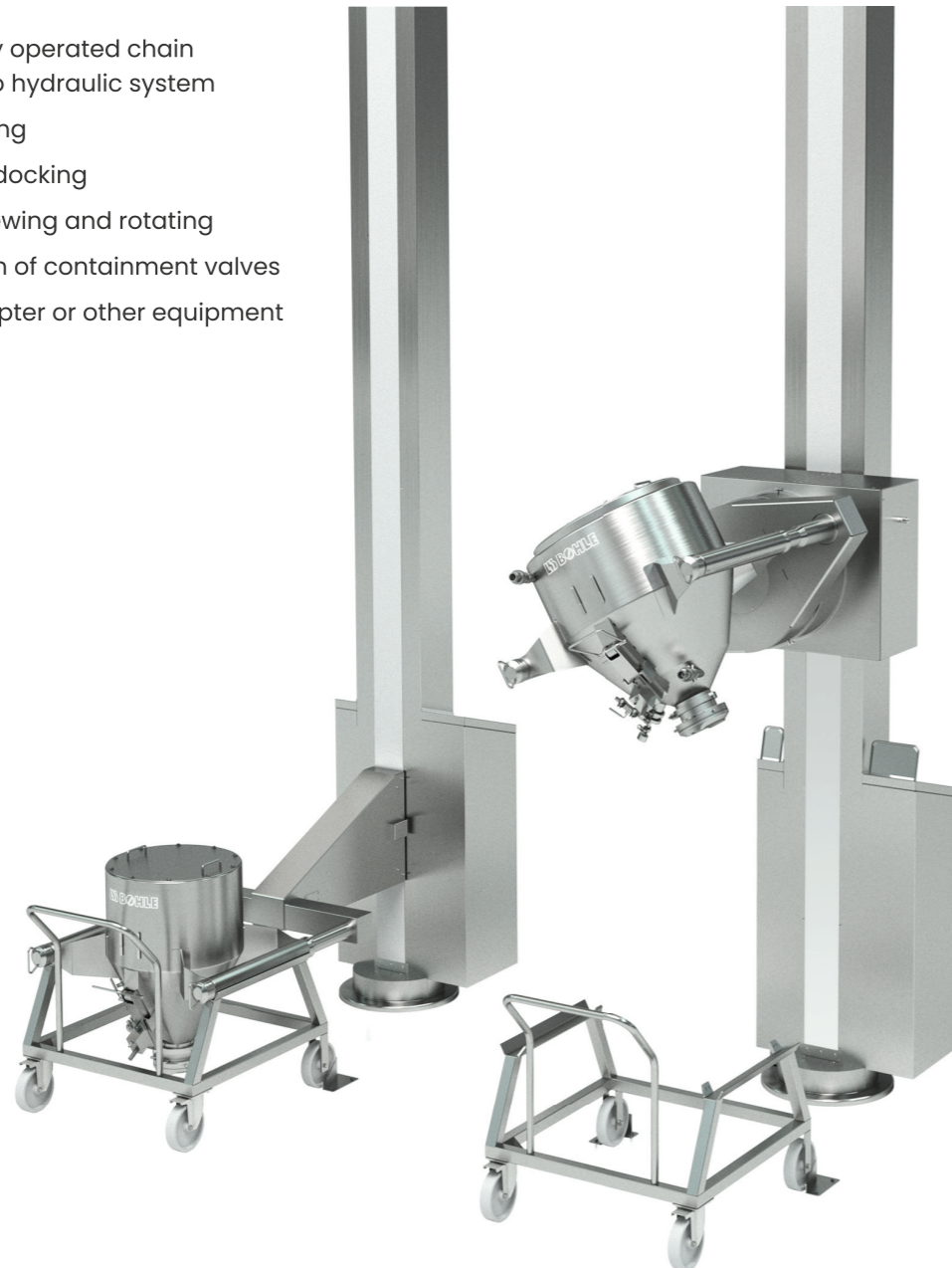


## HS STATIONARY LIFTERS

L.B. Bohle lifting equipment is designed for safe and reliable operation in your environment. Post hoists capable of handling up to 2,000 kg, with heights up to 12 meters are possible. With material handling applications, reliability of the equipment is paramount, and L.B. Bohle delivers with a proven design engineered to operate 24/7 with repeatable accuracy of docking far above industry norms. Safe operation is assured due to micro-controller guided automatic function.

### Advantages:

- ✓ Electrically operated chain drives - no hydraulic system
- ✓ Gentle lifting
- ✓ Accurate docking
- ✓ Precise slewing and rotating
- ✓ Integration of containment valves
- ✓ Drum adapter or other equipment



## DISPENSING

### *Precision from the Start*

L.B. Bohle weighing and dispensing systems are modular and economic solutions, designed to dispense amounts of metal powders. By using L.B. Bohle high containment equipment at critical transfer interfaces, the best human and environmental safety is provided.

### Advantages:

- ✓ High-precision weighing application
- ✓ Smart and ergonomic handling technology
- ✓ Highest accuracy even with large weighing ranges - especially with fully automatic systems
- ✓ Optional containment equipment

PRECISION  
FROM THE  
START



## CONTAINERS

It is important to define the design of the IBC for every single project early on. The IBC can be used flexible in production process and must be filled, docked, undocked, washed etc. The container needs to be connected to every individual unit operation from dispensing to packaging, and therefore is subject to many interfaces.

L.B. Bohle offers several containers with different bin sizes to cover the full range of batches.

### WE HAVE CONSIDERED THE FOLLOWING MAJOR POINTS IN DESIGN FOR APPLICATIONS:

- ✓ Round bin with 60° outlet angle (to allow good discharge abilities; mass flow (!) - no funnel flow)
- ✓ Invertible bin with one passive section of butterfly valve only (overhead filling ability)
- ✓ Identical frame/trolley to connect to all required interfaces with every bin
- ✓ Container lid with special containment gasket (aseptic design)
- ✓ Mobile trolley for easy handling
- ✓ Containment execution with close tolerances to allow precise docking procedures
- ✓ Valve diameter and type of actuator (manual / motorized)
- ✓ Positive or negative pressure inside the container
- ✓ Inertisation possible for preventing oxidation or explosive atmosphere

Containers can be equipped with one or two SBV (Split Butterfly Valve). If one SBV is planned, the container must be rotated 180 degrees.



Container Dimensions	MCL 300	MCG 600
Size [L]	300	600
Diameter [mm]	850	1100
Height [mm]	1060	1353
Filling Volume [L] (20 - 85 %)	60 - 255	120 - 510



---

**L.B. Bohle**  
**Maschinen und Verfahren GmbH**

Industriestr. 18  
D-59320 Ennigerloh

+49 25 24 93 23 0  
info@lbbohle.de



**[www.blending-metal-powder.com](http://www.blending-metal-powder.com)**

---