



Cenomic™.  
**Flexible  
full-volume  
bead mill.**

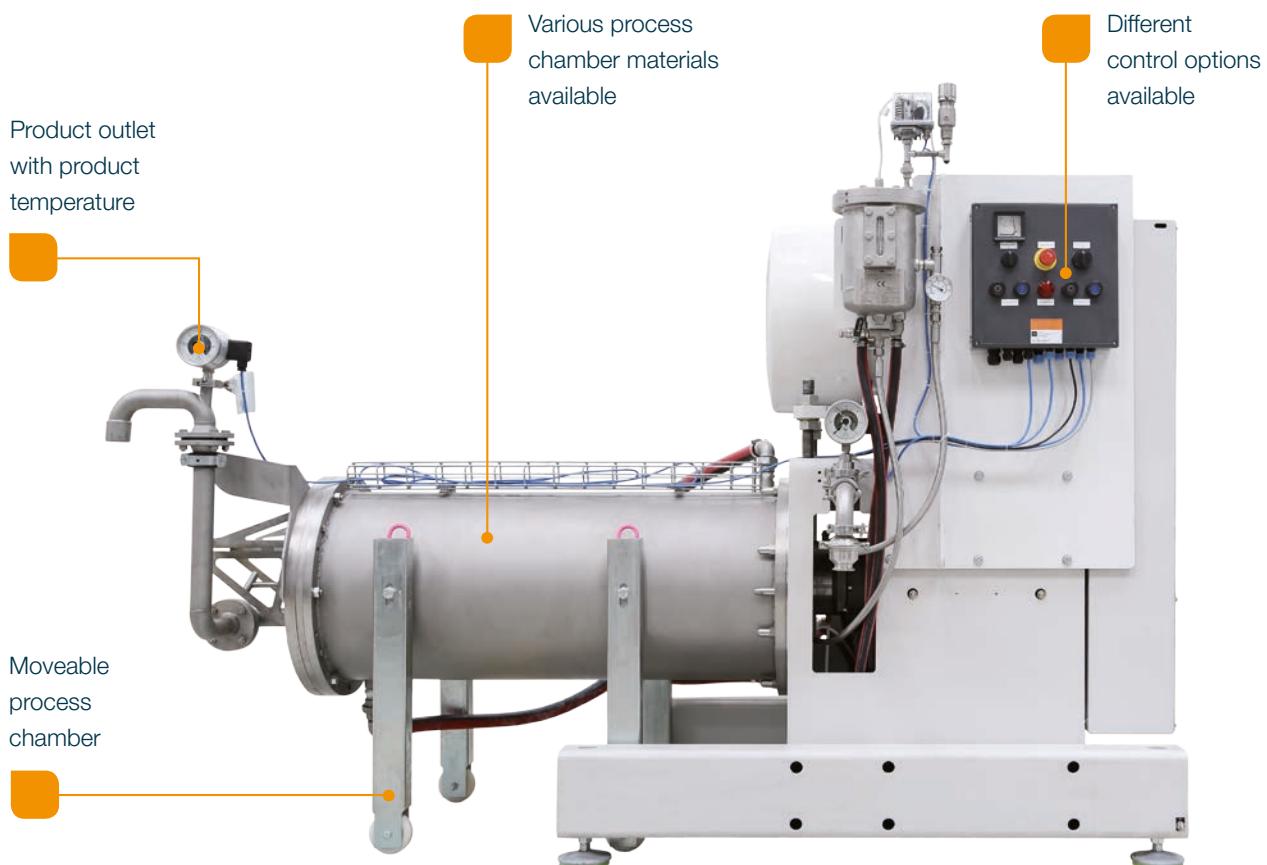


Innovations for a **better world.**

 **BÜHLER**

# Full-volume agitated bead mill. For an **unbeatable price-performance ratio.**

Leading companies have been relying on Bühler Cenomic™ technology for many years. The concept assures reduced specific grinding costs due to higher flow capability and long service life.



## Benefits

- Minimized specific energy requirement
- Higher productivity from smaller mill volume
- High flow capacity
- Entire machine family from 10 to 1000 l available

# Maximum flexibility. Available for all production sizes.



Cenomic™ 3



Cenomic™ 6

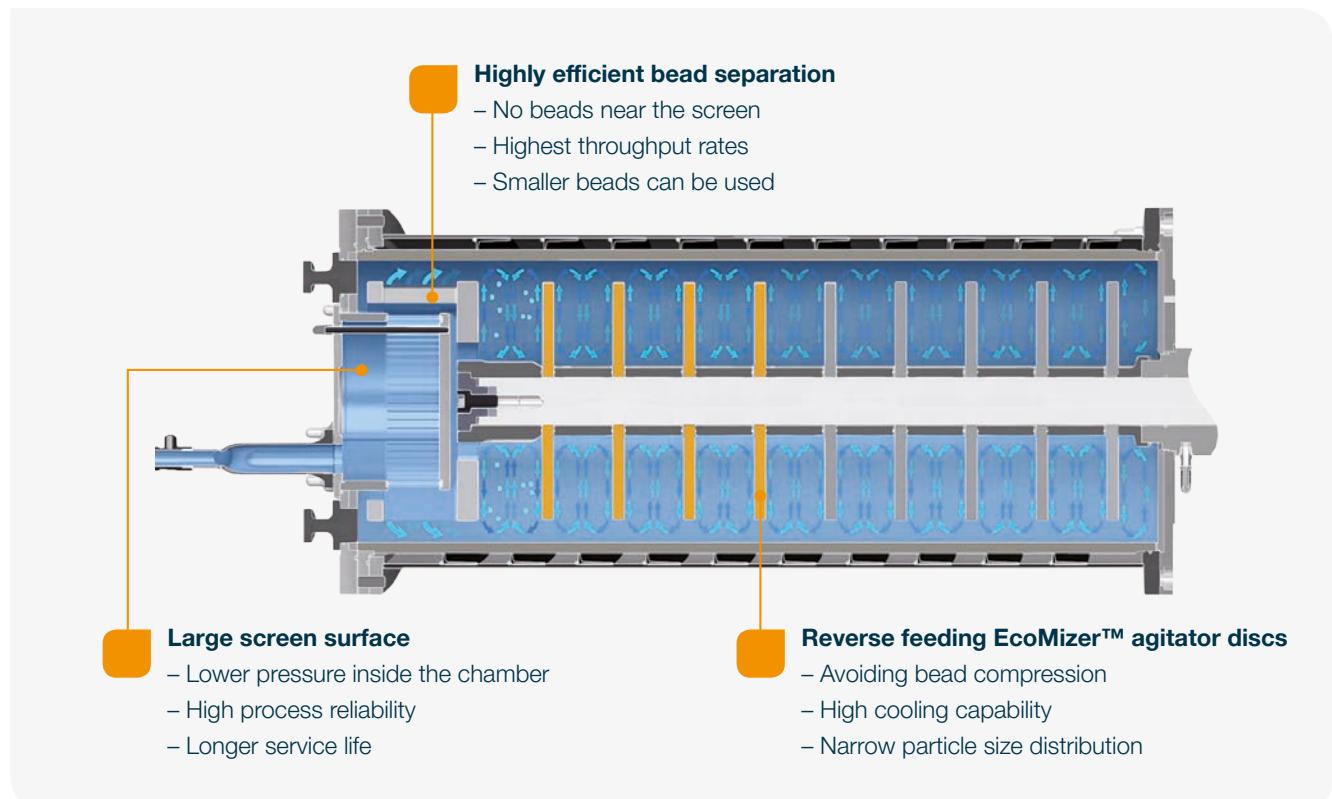


Cenomic™ 30

In order to fit every need, the Cenomic™ is available in various sizes. The scope ranges from the Cenomic™ 1 with a 10 l active chamber volume and the Cenomic™ 3 with 20 l to the

Cenomic™ 30 with a volume of around 220 l. This broad range is complemented by the laboratory solution PML 2 and the Centex™ T4 and T5 for volumes above 500 l.

## Elaborate machine technology.



### Highly efficient bead separation

- No beads near the screen
- Highest throughput rates
- Smaller beads can be used

### Large screen surface

- Lower pressure inside the chamber
- High process reliability
- Longer service life

### Reverse feeding EcoMizer™ agitator discs

- Avoiding bead compression
- High cooling capability
- Narrow particle size distribution

# Cenomic™ – suited to every application. Thanks to **flexibility and efficiency**.



## Cenomic™ 3 for protective coatings.

**Highest throughput rates:** Marine coatings have relatively low specific energy requirements and need good flow capability. At the same time, hydraulic bead compression needs to be avoided to reduce wear and achieve a long service life.

**Efficient bead separation:** Smaller beads give the advantage of better energy efficiency or higher product quality levels. For high throughput rates with the small beads, the bead separation needs to be as efficient as possible.

**Easy to clean:** The compact design and a piston installed in the screen help to easily flush the machine for convenient cleaning and fast product change.



## Cenomic™ 15 for offset ink.

**Ideal temperature control:** The big disc diameter and low rotation speed provide optimal cooling characteristics, which are important to avoid layering of product at the stator surface and building up an insulation layer.

**Uniform bead distribution:** Due to high viscosity, the drag forces by the product are increasing. The back-feeding disc design avoids hydraulic packing of beads.

**High output:** For highest possible productivity, the special offset-execution offers up to 25% bigger motor sizes than standard machines.



## Cenomic™ 30 for agrochemicals.

**High flow capability:** For different specific energy requirements the machine can be operated at low and very high flow rates.

**Suitable for different bead materials:** Due to the disc design and the highly efficient bead separation, the power density and the flow rate can be adjusted for the different bead materials – from glass to steel.

**Uniform product quality:** The system geometry (disc diameter, design and distance) supports a uniform residence time for narrow and consistent particle size distribution over the complete production process.

# Case example: Letong Chemical Co. Ltd.

## Top level printing ink production.



Letong Chemical Co. Ltd., which was founded in 1996 and has been listed on the stock exchange since 2009, manufactures packaging inks, color granules, plastic coatings and laminate adhesives.

The company is a leader on the Chinese marketplace in its field, also supplying its products to reputed international corporations.

In 2013, Bühler provided eight automatic production lines, including eight Cenomic™ 3 full-volume bead mills and four SuperFlow™ VCR-200 high-performance mills, to Letong.

Bühler demonstrated with these systems that the printing ink quality and productivity achieved are clearly superior to those of competitor products.

The complete solution not only covers the actual grinding process, but also all the other important processes such as pigment handling, dosing, and premixing.

### Key facts of the Letong Chemical plant:

- 12 mills which guarantee the reproducibility of the ink quality at a top level while at the same time reducing consumption of expensive raw materials.
- Quality and productivity are demonstrably superior to those of competitors.
- 20,000 metric tons of inks are produced every year.

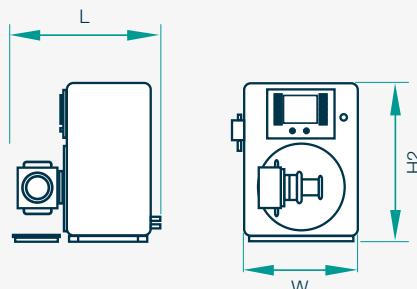
# Technical data Cenomic™ family.

## Laboratory and production mills.

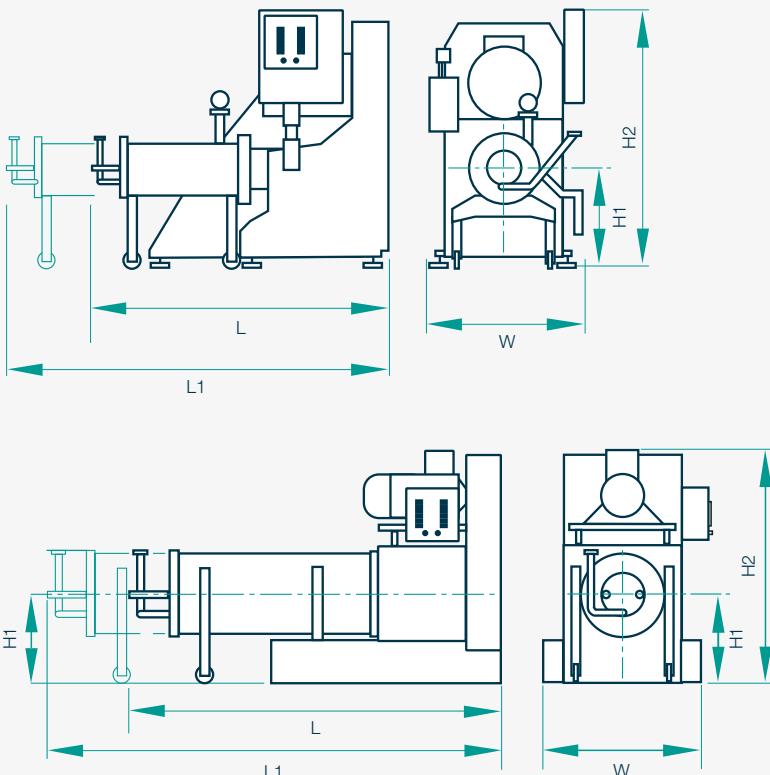
Specification	Cenomic™ S1	Cenomic™ S2	Cenomic™ 1	Cenomic™ 3	Cenomic™ 6	Cenomic™ 15
<b>Drive</b>	2.2 kW	2.2 kW	15 kW	22 kW	37–45 kW	55–75 kW
<b>EcoMizer™ disc</b>	DraisResist™, Silicon carbide	DraisResist™, DraisElast™ (PU), Silicon carbide, Oxide ceramics	DraisResist™, DraisElast™ (PU), Silicon carbide, Oxide ceramics	DraisResist™, DraisElast™ (PU), Silicon carbide, Oxide ceramics	DraisResist™, DraisElast™ (PU), Silicon carbide	DraisResist™, DraisElast™ (PU)
<b>Stator tube</b>	DraisResist™, Silicon carbide	DraisResist™, DraisElast™ (PU), Stainless steel, Silicon carbide, Oxide ceramics	DraisResist™, DraisElast™ (PU), Stainless steel, Silicon carbide, Oxide ceramics	DraisResist™, DraisElast™ (PU), Stainless steel, Silicon carbide, Oxide ceramics	DraisResist™, DraisElast™ (PU), Stainless steel, Silicon carbide	DraisResist™, DraisElast™ (PU), Stainless steel
<b>Inner liner exchangeable</b>	Yes	DraisResist™, Silicon carbide, Oxide ceramics	Yes	Yes	Yes	Yes
<b>Volumes DraisResist™ (metal) / SSiC (ceramic)</b>						
Volume inner liner (Liter)	0.28	0.85	15	30	68	159
Active chamber volume (Liter)	0.222	0.6	11	21	50	117
<b>Volumes DraisElast™ (metal-free)</b>						
Volume inner liner (Liter)	–	0.85	15	29	66	151
Active chamber volume (Liter)	–	0.6	10	19	46	108
<b>Volumes DraisElast™/ DraisResist™ (metal-free/metal)</b>						
Volume inner liner (Liter)	–	0.85	15	30	68	159
Active chamber volume (Liter)	–	0.6	10	20	49	115
<b>SuperScreen</b>	Stainless steel	Stainless steel, Ceramic	Stainless steel, Ceramic	Stainless steel, Ceramic	Stainless steel, Ceramic	Stainless steel
<b>Execution</b>	non-Ex / Ex	non-Ex / Ex	non-Ex / Ex	non-Ex / Ex	non-Ex / Ex	non-Ex / Ex
<b>Bead size</b>	0.2–2 mm	0.2–2 mm	0.3–2 mm	0.3–2 mm	0.3–2 mm	0.3–2 mm
<b>Tip speed</b>	up to ~14 m/s	up to ~14 m/s	~9.5 up to ~13 m/s	~9.5 up to ~13 m/s	~8 up to ~13 m/s	~8 up to ~12 m/s
<b>In-situ cleaning device</b>	Not available	Not available	Optional	Standard	Optional	Optional
<b>Dimensions</b>						
Length – L	756 mm	756 mm	1590 mm	1800 mm	2000 mm	2200 mm
Length – L1	–	–	2300 mm	3000 mm	3200 mm	3600 mm
Width – W	617 mm	617 mm	980 mm	1070 mm	910 mm	910 mm
Height 1 – H1	–	–	600 mm	595 mm	620 mm	620 mm
Height 2 – H2	862 mm	862 mm	1570 mm	1460 mm	1800 mm	1830 mm
<b>Weight<sup>(1)</sup></b>	Approx. 150 kg	Approx. 150 kg	Approx. 1100 kg	Approx. 1230 kg	Approx. 2200 kg	Approx. 2440 kg

Cenomic™ 30	Centex™ T4	Centex™ T5
75–110 kW	160–200 kW	250–315 kW
DraisResist™, DraisElast™ (PU)	DraisResist™, DraisElast™ (PU)	DraisElast™ (PU)
DraisResist™, DraisElast™ (PU), Stainless steel	DraisResist™, DraisElast™ (PU), Stainless steel	DraisResist™, DraisElast™ (PU), Stainless steel
DraisResist™, Stainless steel	DraisResist™, Stainless steel	DraisResist™, Stainless steel
296	673	–
226	510	–
296	673	1264
217	493	945
296	673	1294
217	493	945
Stainless steel	Stainless steel	Stainless steel
non-Ex / Ex	non-Ex / Ex	non-Ex
0.3–2 mm	0.3–2 mm	0.3–2 mm
~8 up to ~12 m/s	~8 up to ~13 m/s	~8 up to ~13 m/s
Optional	Not available	Not available
2970 mm	3850 mm	4380 mm
4600 mm	6200 mm	7300 mm
1160 mm	1360 mm	1360 mm
650 mm	885 mm	885 mm
1940 mm	2600 mm	2650 mm
Approx. 4160 kg	Approx. 6500 kg	Approx. 9800 kg

#### Cenomic™ S1 and S2 (Laboratory)



#### Cenomic™ and Centex™ (Production)



<sup>(1)</sup> Without control cabinet, without beads. All data are approximate.  
Technical alterations reserved.

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