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# KBM MAXI RECYCLING

EPS / EPP / EPE / ARCEL / NEOPOR



VERSION A



MAXI RECYCLING SYSTEM

VERSION B



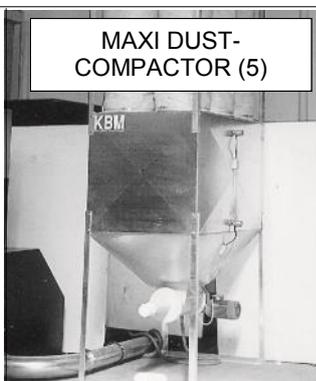
INDIVIDUAL BEADS



STEPLESSLY VARIABLE METERING UNIT (7)



STYROMIX MIXING BEFORE MACHINE



MAXI DUST-COMPACTOR (5)



STYROMETER MIXING BLOCK (9)



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We developed the completely integrated recycling concept for reusing EPS material in 1978 and have in the past supplied more than 350 complete recycling plants world-wide, where they have solved the recycling problems and brought substantial savings. Our experience in this field enables us to solve the problem of reusing the waste material with optimal result.

The KBM MAXI recycling plant for EPS and EPP is suitable for the large shape moulding and the block moulding operations.

For the small shape moulding operations the MINI Recycling plant is available. For very large shape and block moulding operations the JUMBO recycling line is available.

Thanks to the two step/double chamber system with large sieve surface and granulation chamber the MAXI Plant provides from production waste, cut-offs from block production or even from used EPS and EPP/EPE mouldings, a high quality recycled material, which contains a minimum of dust.

The recycled EPS and EPP material can be reused in shape moulding production in a ratio of at least 10-20 percent without any perceptibly optical or physical change of the product quality. For block moulding 20-50 percent can be added.

Due to the fact that the material is broken down to the individual bead size similar to the new beads, it is homogeneous with the new pre-expanded beads and consequently demixing problems in the silos causing uneven density distribution are minimized. Problems like blocking of core vents due to dust and lumps of material causing hot wire cutting problems in terms of inaccurate sheets with bad surface are also minimized.

The KBM MAXI recycling plant consists of one combined pre-crushing and granulating unit (3), and a separate dust separating unit (4). Both units are sound insulated. After the recycling, the material is blown into a storage silo (6) made from plastic fabric, sewn as one big bag, with steel frame for easy assembling.

The dust is blown into the dust compactor (5), with filter bags for exhaustion. The dust is collected in the lower part and is compacted into a octagonal rod with a density of 200-300 Kg/m<sup>3</sup> (12-19 lbs/ft<sup>3</sup>).

Two metering/mixing systems are available for the shape moulding production. The metering unit (7) is steplessly variable to ensure correct metering of EPS before the pre-expander and of EPP before the pre-pressurizing tank.

The KBM STYROMIX units (see photo) are available to give an individual and exact mixing of material for each moulding machine (see special leaflet).

For Block production, STYROMETER (see photo) with 2 silos and metering/mixing station (9), to be placed just before the block mould, is available. In the same way it can be used to fill pre-pressurizing tanks with recycled and new EPP material mixed in an accurate ratio.

All units can be delivered separately.

### Technical Data - MAXI Plant:

#### Capacity/Hour:

(Granulated and dust extracted EPS)

Screen with 6 mm holes (Shape): 10-12 m<sup>3</sup> (350-420 ft<sup>3</sup>)

Screen with 10 mm holes (Block): 18-20 m<sup>3</sup> (630-700 ft<sup>3</sup>)

Screen surface: 1.4 m<sup>2</sup> (15 ft<sup>2</sup>)

Dust compactor with 12 kg/m<sup>3</sup> (0,75 lbs/ft<sup>3</sup>) EPS dust:

approx. 15-20 Kg (33-44 lbs)

Dust compactor with 35 kg/m<sup>3</sup> (2,2 lbs/ft<sup>3</sup>) EPS dust:

approx. 25-30 Kg (55-66 lbs)

#### Space required

ca. 16 m<sup>2</sup> (160 ft<sup>2</sup>)

#### Measurements:

L x W x H

Pre crusher/Granulator (3): 1.9x1.3x2.5 m(76x52x100")

Dust separating unit (4): 1.3x1.2x2.7 m(52x48x108")

Dust compactor (5): 1.6x1.1x5.1 m (64x44x204")

Storage silo (6): 2.0x2.0x6.0 m (80x80x240")

Size Silo bag:  
(Any size available) 2.0x2.0x4.0 m (80x80x160")  
(approx. 17 m<sup>3</sup>/600 ft<sup>3</sup>)

Metering unit (7): 0.9x0.9x4.0m (36x36x160")

Styrometer mixing (9):  
(block or EPP) 4.0x2.0x6.0m (160x80x240")

Size each silo bag:  
(approx. 17 m<sup>3</sup>/600 ft<sup>3</sup>) 2.0x2.0x4.0m (80x80x160")

Pipe connections: 160 mm (6")

#### Hopper top opening:

1400x600mm (56x24")

Reusable EPS material after recycling:

min. 93-95 %

Extracted EPS dust and fines:

max. 5-7 %

Dust content after dust separation:

max. 1 %

(Experienced with EPS granulated on a KBM granulator.)

#### Electrical load:

EPS

EPP

Pre crusher/Granulator (3):

26.0 Kw

43.0 Kw

Dust separating unit (4):

7.0 Kw

7.0 Kw

Dust compactor MAXI (5):

2.2 Kw

2.2 Kw

Metering unit (7) with blower:

1.0 Kw

1.0 Kw

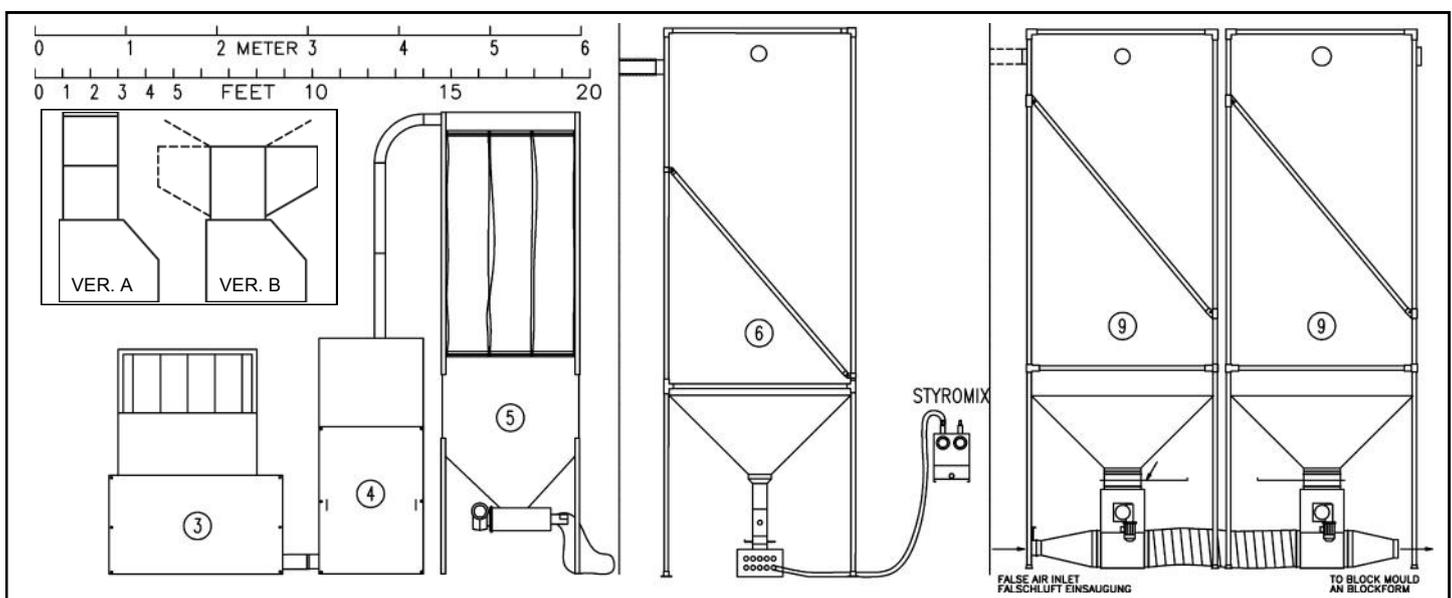
STYROMETER Mixing (block or EPP) (9):

1.6 Kw

1.6 Kw

Voltage: 3x400V/50Hz or other voltages.

SUBJECT TO ALTERATIONS



**Explanation of drawing:** 3. Combined pre crusher and granulator (sound insulated). 4. Dust separating unit. 5. EPS and EPP dust compactor. 6. Storage silo for recycled material. STYROMIX. Mixing before each moulding machine. 9. STYROMETER metering/mixing station to introduce recycled material before the block mould or EPP right before the pre-pressurizing tank.