

**HIRSCH** Technology



**Blockmolding  
Machines**



Blockmolding Machines	04
Oyster Series	09
Accessories	10
Vacuum System	13
<b>Products</b>	
Monolith	14
Monolith Comp	15
Oyster Comp	16
Oyster OSC2	17
Benefits	18

# Why HIRSCH Blockmolding Machines



We have the most **flexible way** to optimize your block production.



Our machines have the highest level of **energy saving**.



We are the **undisputed leader** in the horizontal blockmold technology.



We are building our machinery from **user to user**.



We provide **turnkey plants** all over the world.



Nearly 50 years in the EPS industry ensures the **most experienced employees** in machinery and application engineering.



Every blockmolding machine is **fully tested** under manufacturing conditions.

All HIRSCH blockmolds are supplied as standard with the complete set of features required for top quality EPS block production. Flexible 4 pipe system, wedge wire screens, pre-filling hopper with active dust separator, vacuum unit, exit line for minimum 3 blocks, teleservice and remote control, telescopic steaming in moving wall (for COMP).



## Energy saving

**No chimney** necessary, therefore no emissions outside

**Less steam** due to

- Fully insulated blockmold with 300 mm rockwool
- Telescopic steaming
- Thinner steam chamber

**No water consumption** due to close loop system

**Material saving** due to side wall adjustment

## Shorter aging time

- Side wall compression of the EPS blocks
- Strongest vacuum
- Less residual moisture

## Perfect block quality

- 4 independent steaming chambers with full flexibility
- Perfect fusion with the wedge wire screens and multipoint steaming system

- Elastification of blocks with the compression wall
- Density control and correction



# How it works

The pre-expanded raw material is transferred from the storage silo to the pre-filling silo (or mixing unit). In the pre-filling silo the expanded EPS is weighed before blockmold filling starts. A suction blower then feeds the expanded beads to the blockmolding machine. When filling is completed, the expanded EPS left in the pre-filling silo is **weighed again** to calculate the exact amount of EPS delivered to the blockmold. Inside the blockmold, the fusing process starts by **cross steaming from opposite sides** with vacuum support.

In order to achieve the best quality (**beads strongly and homogeneously fused together**) the steam jets are either at 90 or 180 degree angles to each other, depending on the block cross section. After steaming, the block undergoes a short, controlled **autoclave phase followed by stabilization/cooling**. When the foam pressure drops to 0, showing that the block is stable and finished, the cycle ends with block ejection by hydraulic cylinder(s).

Features	Monolith	Monolith Comp	Oyster Comp	Oyster OSC2
Compression		●	●	●
Adjustable block width		●	●	●
Fully square block		●	●	●
Density correction		●	●	●
Wedge wire screens	●	●	●	●
4 pipes system	●	●	●	●
Full thermal insulation	●	●	●	●
Telescopic steaming		●	●	●
Pre-filling silo with active dust separator	●	●	●	●

# Our benchmark

## Advantages

- **The density segregation effect** between beads of different weight, especially when using regrind, is almost non-existent in the case of horizontal blockmolds. This effect increases with the machine height in case of vertical blockmolds, but does not change on horizontal blockmold.
- **Steam distribution is balanced and equally dispersed** all over the block, indifferent of the machine length.
- **Filling time of the machine is always the same**, indifferent of the machine length.
- **Easier, quicker and risk-free maintenance** since the machine is on the floor level.
- **Less building height requirements.**
- **No draft angle**, which means less scrap after cutting: 0.5 % up to 1 % material saving.
- **Density gradient optimization.**
- **Easy maintenance.**



# Accessories available

**Density control system** is a tool which helps the density correction in the blockmold with the help of weighing cells installed on the pre-filling silo and a specific software which manages all the process automatically (possible only on the models with compression).

**Water management system** is integrated in our vacuum system, containing two water tanks, one for cold water and one for hot water, in order to have the highest efficiency in water cooling. The water management system ensures, together with the air coolers, that there is closed circuit of the water, and therefore the water consumption is zero.

**Weighing scale** installed on the exit line helps calculate the moisture inside the EPS block.

**Mixing, metering and de-dusting system** – for precise dosing of mixed materials in one step. Each HIRSCH screw mix is equipped with a high-performance integrated de-dusting system. Both screws, virgin and regrind, are enclosed in a long, perforated cylinder. Both cylinders are mounted in two independent suction chambers and connected to a high-performance active air filter.

#### Further accessories

- Additional pre-filling silo
- Automatic emptying system
- Inkjet printer
- Labelling device
- Air cooler (more details on page 12)
- Exit line cutting station



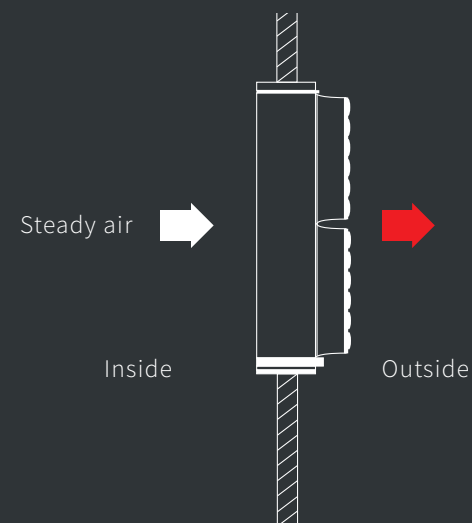
# Air cooler for a closed loop

Cool summer, warm winter. HIRSCH offers a special dry type of cooler controlled by a temperature control. It means you can adjust it to keep the building temperature constant in winter and summer. In both working modes, water consumption is zero.

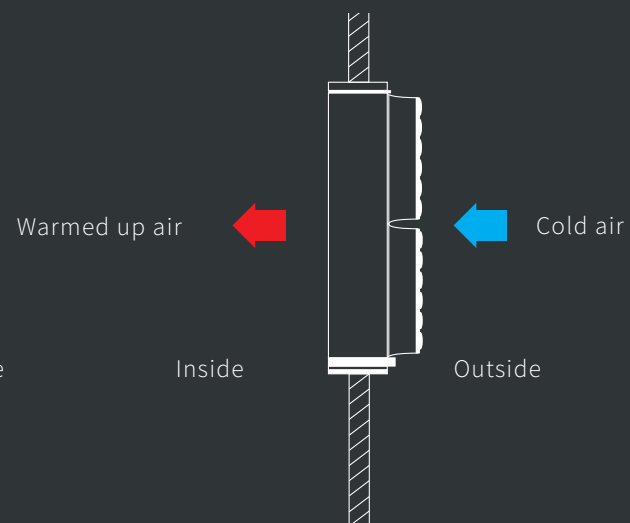
Summer mode: Air inside the building is steadily blown out and used to reduce the process water temperature.

Winter mode: Cold air from outside is warmed up and blown in. Due to the heat exchange process, water is cooled down and air in the building is warmed up.

Summer Mode



Winter Mode



# High energy efficient vacuum unit

The HIRSCH power vacuum system has been well known as the best performing in the EPS industry. The horizontal layout of its condensing unit provides the highest exchange surface. Thanks to their design, our blockmolds do not have a chimney with direct emission. All the steam – including autoclave exhaust – is collected in the vacuum unit.

## Advantages

- Less moisture in the EPS block
- No direct emissions from the roof
- Full steam energy recovery
- No water consumption
- Energy ready to use for different applications, such as silo heating, block storage heating, boiler water pre-heating, etc.



# Monolith

Blockmold with fixed cavity

**Ideal for**

- Geofoam
- Low % of regrind
- Limited floor space



	Footprint (l x w)*	Required room height	Weight	Net block size after cutting	Net throughput EPS 100 – EN13163
<b>ME3-10</b>	11500 x 6250 mm	5200 mm	14000 kg	3000 x 1200 x 1000 mm	75 m <sup>3</sup> /h
<b>ME4-10</b>	11500 x 6250 mm	6300 mm	16000 kg	4000 x 1200 x 1000 mm	100 m <sup>3</sup> /h
<b>ME5-10</b>	11500 x 6250 mm	7300 mm	19000 kg	5000 x 1200 x 1000 mm	120 m <sup>3</sup> /h
<b>ME6-10</b>	11500 x 6250 mm	8300 mm	23000 kg	6000 x 1200 x 1000 mm	142 m <sup>3</sup> /h
<b>MA16-4</b>	41' x 21'	40000 lb	40000 lb	16' x 4' x 4'	5100 ft <sup>3</sup> /h
<b>MA18-4</b>	41' x 21'	46300 lb	46300 lb	18' x 4' x 4'	5600 ft <sup>3</sup> /h
<b>MA20-4</b>	41' x 21'	51000 lb	51000 lb	20' x 4' x 4'	6100 ft <sup>3</sup> /h
<b>MA24-4</b>	41' x 21'	57600 lb	57600 lb	24' x 4' x 4'	7000 ft <sup>3</sup> /h

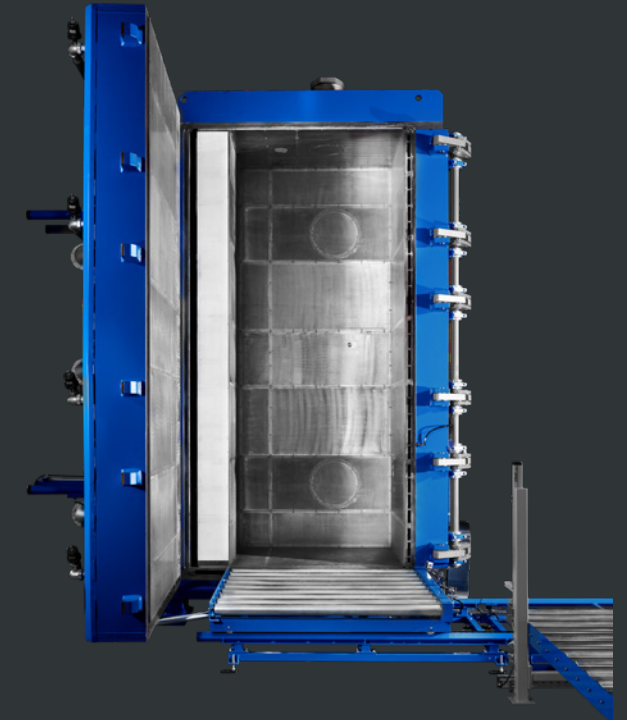
Above specified dimension are only indicative.  
\* includes blockmold, exit line, pre-filling silo, vacuum unit and condenser

# Monolith Comp

Blockmold with moving wall from the side

**Ideal for**

- Geofoam
- High % of regrind (up to 100 %)
- Limited floor space
- Density correction



	Footprint (l x w)*	Required room height	Weight	Net block size after cutting	Net throughput EPS 100 – EN13163
<b>MCE24-12</b>	13000 x 7200 mm	5000 mm	15000 kg	2400 x 1400 / 800 x 1200 mm	80 m <sup>3</sup> /h
<b>MCE3-10</b>	12500 x 7200 mm	5500 mm	21000 kg	3000 x 1400 / 800 x 1000 mm	84 m <sup>3</sup> /h
<b>MCE4-10</b>	12500 x 7200 mm	6300 mm	24000 kg	4000 x 1400 / 800 x 1000 mm	112 m <sup>3</sup> /h
<b>MCE4-10XL</b>	12500 x 7500 mm	6300 mm	25000 kg	4000 x 1600 / 1000 x 1000 mm	128 m <sup>3</sup> /h
<b>MCE4-12XL</b>	13000 x 7500 mm	6300 mm	27000 kg	4000 x 1600 / 1000 x 1200 mm	154 m <sup>3</sup> /h
<b>MCE48-12</b>	13000 x 7200 mm	7200 mm	28000 kg	4800 x 1400 / 800 x 1200 mm	159 m <sup>3</sup> /h
<b>MCE5-10</b>	13000 x 7200 mm	7300 mm	26000 kg	5000 x 1400 / 800 x 1000 mm	138 m <sup>3</sup> /h
<b>MCE5-12</b>	13000 x 7200 mm	7300 mm	27500 kg	5000 x 1400 / 800 x 1200 mm	165 m <sup>3</sup> /h
<b>MCE6-10</b>	12500 x 7200 mm	8300 mm	28000 kg	6000 x 1400 / 800 x 1000 mm	160 m <sup>3</sup> /h
<b>MCA16-4</b>	43' x 24'	23'	57000 lb	16' x 56" / 32" x 4'	5850 ft <sup>3</sup> /h
<b>MCA18-4</b>	43' x 24'	26'	62000 lb	18' x 56" / 32" x 4'	6400 ft <sup>3</sup> /h
<b>MCA20-4</b>	43' x 24'	27'	64000 lb	20' x 56" / 32" x 4'	7000 ft <sup>3</sup> /h
<b>MCA24-4</b>	43' x 24'	32'	70000 lb	24' x 56" / 32" x 4'	8100 ft <sup>3</sup> /h

Above specified dimension are only indicative.  
\* includes blockmold, exit line, pre-filling silo, vacuum unit and condenser

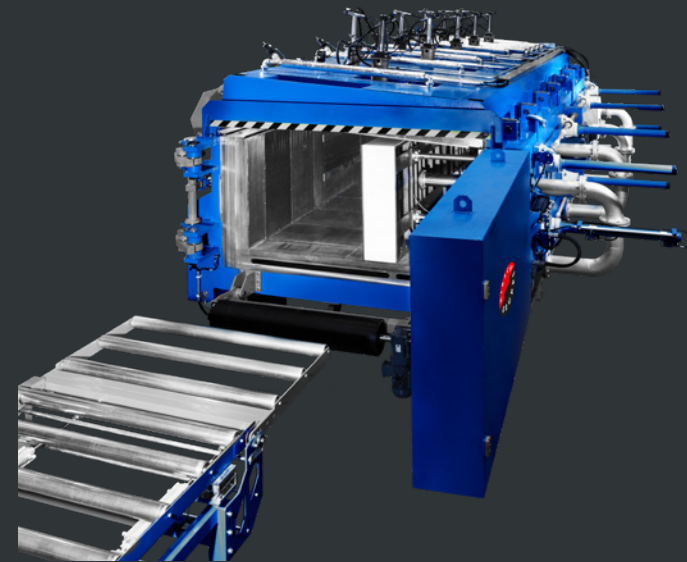


# Oyster Comp

Horizontal blockmold with moving wall

**Ideal for**

- Geofoam
- High % of regrind (up to 100 %)
- Density correction
- Low ceiling height

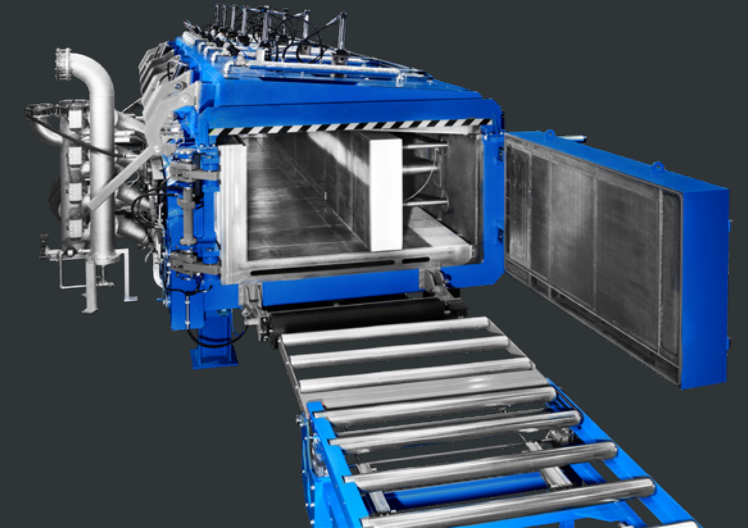


# Oyster OSC2

Horizontal blockmold with double adjustment

**Ideal for**

- Geofoam
- High % of regrind (up to 100 %)
- Density correction
- Products with different lengths
- Low ceiling height



	Footprint (l x w)*	Required room height	Weight	Net block size after cutting	Net throughput EPS 100 – EN13163
<b>OCE4-10</b>	14000 x 7000 mm	6000 mm	24000 kg	4000 x 1400 / 800 x 1000 mm	112 m <sup>3</sup> /h
<b>OCE4-10XL</b>	14000 x 8000 mm	6000 mm	25000 kg	4000 x 1600 / 1000 x 1000 mm	128 m <sup>3</sup> /h
<b>OCE4-12XL</b>	14000 x 8000 mm	6000 mm	30000 kg	4000 x 1600 / 1000 x 1200 mm	154 m <sup>3</sup> /h
<b>OCE48-12</b>	14000 x 7000 mm	6000 mm	35000 kg	4800 x 1400 / 1200 x 1200 mm	161 m <sup>3</sup> /h
<b>OCE5-10</b>	14000 x 7000 mm	6000 mm	35000 kg	5000 x 1400 / 800 x 1000 mm	140 m <sup>3</sup> /h
<b>OCE5-12</b>	14000 x 7000 mm	6000 mm	37000 kg	5000 x 1400 / 800 x 1200 mm	168 m <sup>3</sup> /h
<b>OCE6-10</b>	14000 x 7000 mm	6000 mm	39000 kg	6000 x 1400 / 800 x 1000 mm	168 m <sup>3</sup> /h
<b>OCE8-10</b>	14000 x 7000 mm	6000 mm	45000 kg	8000 x 1400 / 800 x 1000 mm	225 m <sup>3</sup> /h
<b>OCA16-4</b>	53' x 23'	16'	77000 lb	16' x 56" / 32" x 4'	5850 ft <sup>3</sup> /h
<b>OCA18-4</b>	55' x 23'	16'	81000 lb	18' x 56" / 32" x 4'	6600 ft <sup>3</sup> /h
<b>OCA20-4</b>	56' x 23'	16'	88000 lb	20' x 56" / 32" x 4'	7350 ft <sup>3</sup> /h
<b>OCA24-4</b>	69' x 23'	16'	92000 lb	24' x 56" / 32" x 4'	8800 ft <sup>3</sup> /h

Above specified dimension are only indicative.  
\* includes blockmold, exit line, pre-filling silo, vacuum unit and condenser

	Footprint (l x w)*	Required room height	Weight	Net block size after cutting	Net throughput EPS 100 – EN13163
<b>OSCE6-4-10</b>	20000 x 8000 mm	6000 mm	40000 kg	6000 / 4000 x 1400 / 1000 x 1000 mm	168 m <sup>3</sup> /h
<b>OSCE8-6-10</b>	25000 x 8000 mm	6000 mm	46000 kg	8000 / 6000 x 1400 / 1000 x 1000 mm	225 m <sup>3</sup> /h
<b>OSCA18-14-4</b>	66' x 26'	19,7'	88200 lb	18 / 14' x 56 / 40" x 4'	6600 ft <sup>3</sup> /h
<b>OSCA24-20-4</b>	79' x 26'	19,7'	99000 lb	24 / 20' x 56 / 40" x 4'	8800 ft <sup>3</sup> /h

Above specified dimension are only indicative.  
\* includes blockmold, exit line, pre-filling silo, vacuum unit and condenser

# Our benefits for your success

Features	Advantages	Benefits
300 mm rockwool insulation	- Avoid condensation of steam	- Energy saving (constant temperature) - Less moisture in the EPS block (shorter aging time)
4 independent steaming chambers	- Complete flexibility on cross steaming sequences - Same steam temperature and distribution on all 4 sides	- Same fusion - Quality throughout the block
No draft angle	- Perfectly square block	- Less scrap - Up to 1 % EPS raw material saving
Telescopic steaming inside the moving wall	- Steam goes directly to the EPS block (no hole room to be filled with steam) - Constant steam temperature	- Energy saving - Less moisture inside the EPS block
Multipoint steaming	- Uniform steam temperature throughout the block	- Uniform fusion and product quality throughout the block

Features	Advantages	Benefits
Side wall adjustment	- No draft angle - Different product dimensions possible - Reduces the internal stress of the block - Compression after molding	- Blocks up to 100 % regrind EPS - 0,5 – 1 % virgin EPS savings on each cycle - Less scrap on the cutting line - Shorter aging time - Perfectly straight plates - Smooth surface of the EPS block
Wedge wire screen	- Wider open area for steaming (~12,8 %)	- Fusion throughout the block - Lower steam pressure - Avoid risk of external over burning and core poor fusion
Thinner steaming (only 52 mm) chamber	- Keep the machine temperature constant - Less steam condensation	- Avoid energy waste - Less moisture in the final product - Shorter aging time
Emission collection system	- No chimney - All steam goes into the steam condenser	- No emissions - Reuse of the energy collected
Closed loop system	- Zero water consumption block	- Energy and cost saving - Reuse the energy for different applications (heating the silo room, the block storage, the factory etc.)



**HIRSCH Maschinenbau GmbH**

9555 Glanegg 58, Austria

**T** +43 4277 / 2211 0

**F** +43 4277 / 2211 370

[office.maschinenbau@hirsch-gruppe.com](mailto:office.maschinenbau@hirsch-gruppe.com)

[www.hirsch-technology.com](http://www.hirsch-technology.com)



[/hirsch.maschinenbau](https://www.facebook.com/hirsch.maschinenbau)



[/company/hirsch-maschinenbau-gmbh](https://www.linkedin.com/company/hirsch-maschinenbau-gmbh)



[/HIRSCH Servo Group](https://www.youtube.com/HIRSCH_Servo_Group)

© All rights reserved, HIRSCH Maschinenbau GmbH, 2019