



## AUTOMATIC BLOCK MOULDS

MACHINES FOR EPS MOULDING DESIGNED TO PRODUCE HIGH QUALITY BLOCKS HAVING VARIABLE SIZE AND DENSITY IN ACCORDANCE TO SPECIFIC PRODUCTION REQUIREMENTS.

### MODELS

- **FIXED:** fixed size sintering chamber
- **SINGLE ADJUSTMENT:** sintering chamber with one adjustable wall (back wall or top) to customize block size in depth or in height
- **DOUBLE ADJUSTMENT:** sintering chamber with two adjustable walls (top and back wall) moving simultaneously to achieve max production flexibility

### ADVANTAGES

#### MANUFACTURING OF EXCELLENCE

- In-house start-up and test
- Equipped with mechanic and electric safety systems against over pressure
- PED mark according to Directive 2014/68/UE
- Designed to facilitate access to all components and to guarantee rapid assembly of screen plates subject to periodical maintenance
- Solid and compact structure, built to guarantee maximum resistance, stability and safety for operators

#### SUPERVISION AND CONTROL

- User friendly interface with synoptic overview of process status displayed over the machine's graphic layout
- Real time monitoring of pressure values, reaction and temperature of the material, available also by means of sintering graphs
- Process indicators displayed over the machine's graphic layout for a rapid resolution of failures / stops
- PID control loop feedback mechanism for optimization of steaming and energy consumption
- Updated machine library containing calendar of events, diagnostic messages and previous working cycles with relevant process data and graphs

#### OUTSTANDING PERFORMANCE

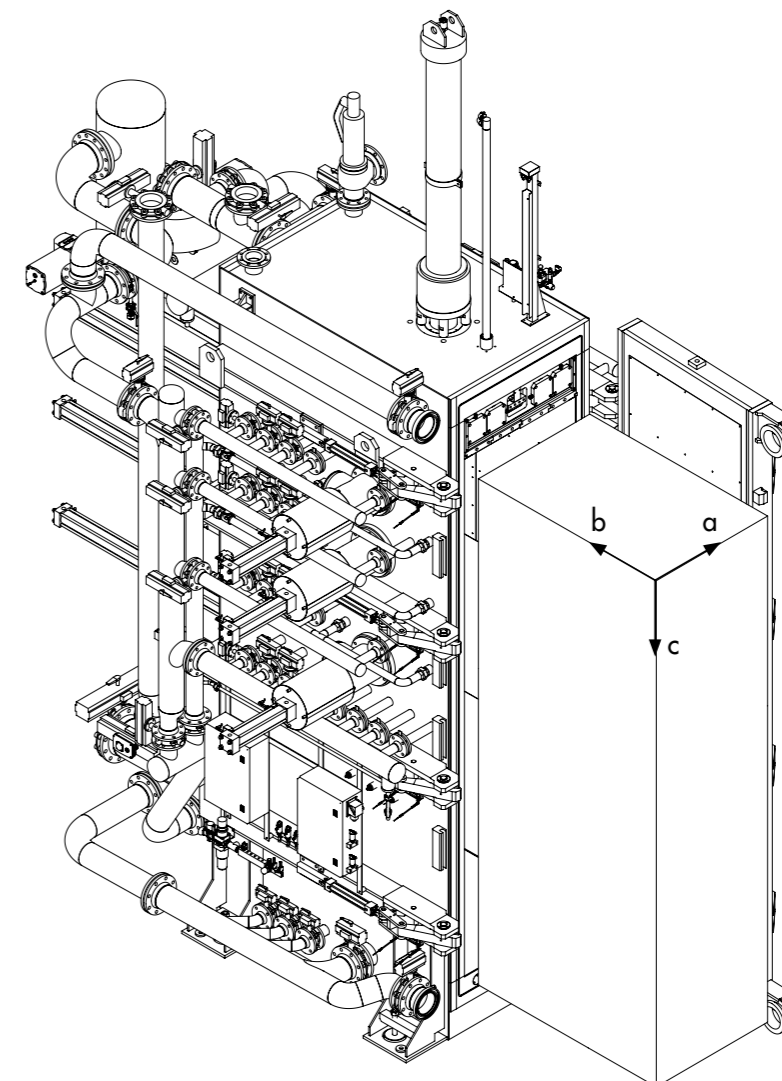
- **Uniform density and low residual moisture content**, as result of advanced studies of steam distribution
- **Moulding up to 100% of recycled material**
- **Energy saving** achieved by automatic control and optimization of steaming
- **No emissions affecting atmosphere** thanks to gas recovery by means of hose systems

#### FLEXIBILITY

- Wide range of configurations of recipes and process parameters to optimize production in any operating conditions
- Fully automatic working cycle with possibility of real time variation of parameters
- Automatic or manual density correction by means of mechanical compression
- Customized library for storage and quick upload of recipes and relevant process data concerning previous working cycles

#### CONNECTIVITY

- Possibility of connection to local network, interface with enterprise management system and centralized control of any devices/plant connected to the machine
- Download and export of process data in the main commercial formats
- Remote control and monitoring
- Remote assistance software



Model	Block mould height (mm)		Block size (mm)			Production	Consumptions	
	Fixed and depth adj.	Height adj. and double adj.	a	b	c	Blocks/h (*)	Steam (kg/m <sup>3</sup> )	Installed power (kW)
TD3060	5.100	5.600	600	1.000 ÷ 1.450	3.000 ÷ 2.000	22	8 ÷ 10	36 ÷ 65
TD4060	6.100	7.200	600	1.000 ÷ 1.450	4.000 ÷ 2.500	20	8 ÷ 10	54 ÷ 75
TD5060	7.100	8.200	600	1.000 ÷ 1.450	5.000 ÷ 3.500	18	8 ÷ 10	62 ÷ 80
TD30100	5.100	5.600	1.000	1.000 ÷ 1.450	3.000 ÷ 2.000	20	10 ÷ 12	55 ÷ 78
TD40100	6.100	7.600	1.000	1.000 ÷ 1.650	4.000 ÷ 2.500	18	10 ÷ 12	76 ÷ 88
TD50100	7.100	8.600	1.000	1.000 ÷ 1.650	5.000 ÷ 3.500	16	10 ÷ 12	80 ÷ 92
TD60100	8.100	10.200	1.000	1.000 ÷ 1.650	6.000 ÷ 4.000	16	10 ÷ 12	82 ÷ 96

(\*) Average hourly production with blocks having density 15 kg/m<sup>3</sup>



### BLOCK MOULDS ACCESSORIES

BLOCK MOULDS CAN BE INTEGRATED WITH THE FOLLOWING ACCESSORIES / FUNCTIONS:

#### 1. VACUUM PLANT

- It creates vacuum inside the machine with the aim of improving the initial steaming process then speeding up the complete cooling phase
- Available also in the version **DRY VACUUM** (with no use of water or other cooling liquids) **for an energy saving up to 30% and higher vacuum efficiency**

#### 2. HEAT RECOVERY SYSTEM

- Reutilization of hot air or water used in the vacuum plant

#### 3. PENTANE GAS RECOVERY SYSTEM

- This plant automatically recovers exhaust air from the process and re-use the pentane gas contained as supplementary fuel for steam generation

#### 4. PRE-FEEDING SILO

Made of galvanized sheet modules, it's supplied complete with:

- sleeve filters for dust
- loading cells for the automatic weighting of the material (available only for block moulds with automatic density control)

#### 5. AUTOMATIC DENSITY CONTROL

- Automatic weighting of the material to be fed in the block mould and fine tuning of expansion parameters in order to obtain the pre-set block density

#### 6. MIXING PLANT RAW-RECYCLED EPS

(page 56 - Recycling)

- Mixing unit composed by two or more coupled silos
- Each silo has installed one steel auger. The rotation speed is electronically controlled by inverter therefore obtaining a dosing rate of material at the desired percentage (from 0% to 100%)
- Mixing controls can be integrated with either the supervision system of block mould or silos plant

#### 7. DISCHARGE UNIT

Available in the following versions:

**SEMI-AUTOMATIC:** the unloading and weighing of the block is automatic while subsequent storage is performed manually. This system includes:

- unloading chain conveyor, adjustable in height in order to collect and unload outgoing blocks
- automatic weighing system by means of electronic loading cell
- free roller conveyor for block unloading

**AUTOMATIC:** automatic unloading, weighing and storing of blocks. This system includes:

- powered roller belt for blocks collecting and unloading
- automatic weighing system by means of electronic loading cell
- block magazine consisting of powered chain conveyors

#### 8. BLOCK MARKING

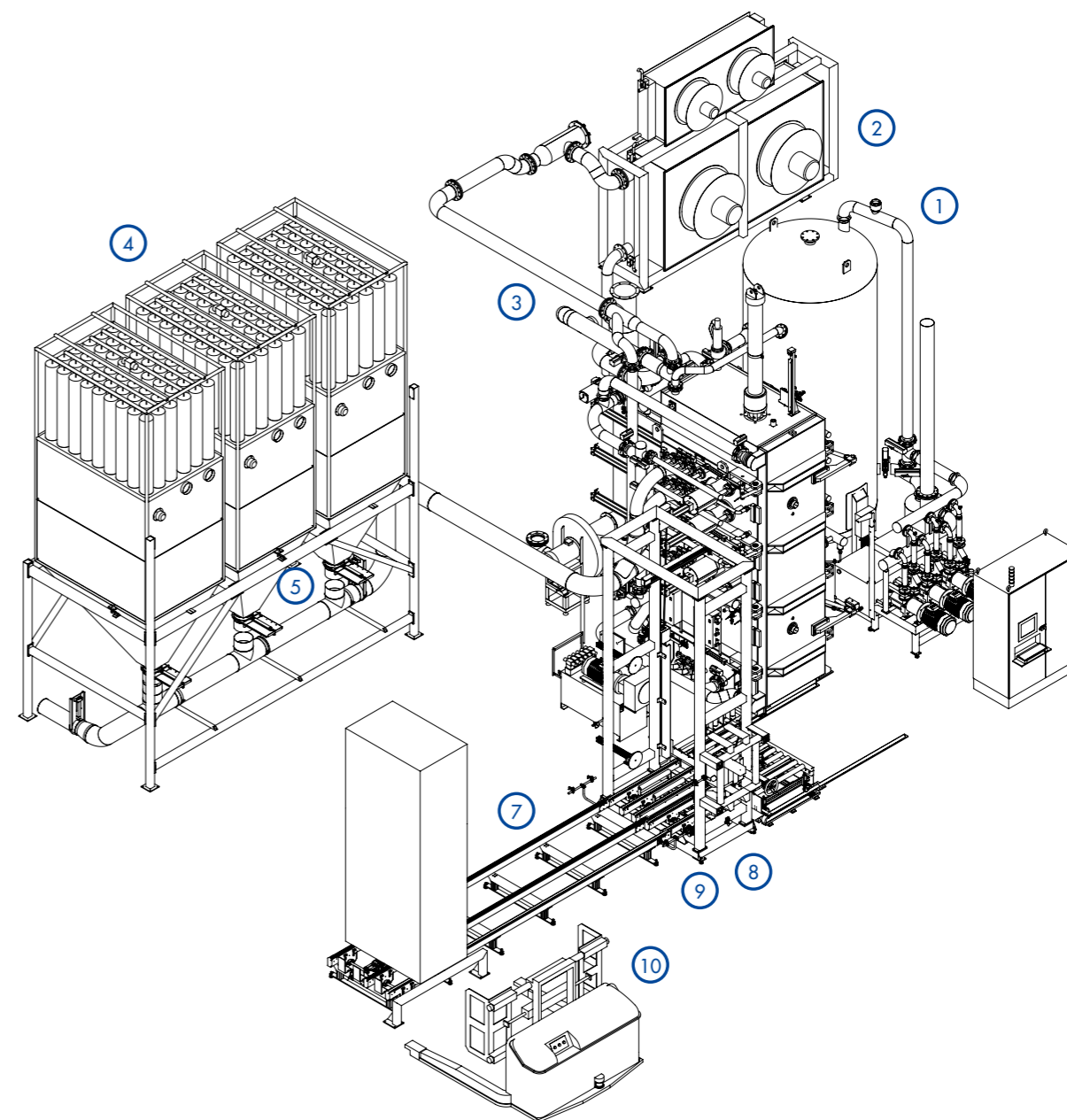
- Automatic block marking or labeling. All marking systems can be fully configured in order to provide complete traceability of blocks and its characteristics (production time and date, density, weight, batch number, operator, etc.)

#### 9. BLOCK CUTTING STATION

- Automatic hot wire cutting system (horizontal or vertical on request)
- Cutting parameter (cutting speed, wire temperature etc.) and related alarms (wire breaking etc.) can be managed in the block mould supervision's software

#### 10. AUTOMATIC MAGAZINE

- Custom designed in order to guarantee the storage of high volumes of blocks or finished products
- The automatic magazine is served by one or more automatic shuttles with magnetic drive and fitted with safety devices for automatic travel
- The entirely automatic system is controlled by a PLC and by a software which control the route, loading unloading, product codes and storage management



## **TECNODINAMICA SRL**

V.LE EUROPA, 37/38  
Z.I. SOLIGO  
31010 FARRA DI SOLIGO  
TREVISO - ITALY  
T +39 0438 98 04 84  
F +39 0438 98 01 99  
info@tecnodinamica.it

**[www.tecnodinamica.it](http://www.tecnodinamica.it)**

