

Cold Chamber

2P Series

Symbol of technology,
innovation and precision.

colosiopresse.it



EN

2P - Cold Chamber

Clamping force from 1000 to 4400 tons

The production of Colosio 2P cold chamber machines - for the die casting of aluminum and magnesium alloys - ranges from 1000 to 4400 tons of clamping force.

The closing movement is carried out by means of a hydraulic locking device. This system provides two inverted rod cylinders for the movement of the platen during the approach and opening phases; and 4 large section cylinders to apply the clamping force by means of special jaws gripping the tie-bars.

These are in high-strength alloy steel, tempered, with hard chrome plating, with rolled threads and with well-sized bronze guide bushings which have the function of adequately supporting the platen in its translation movement.

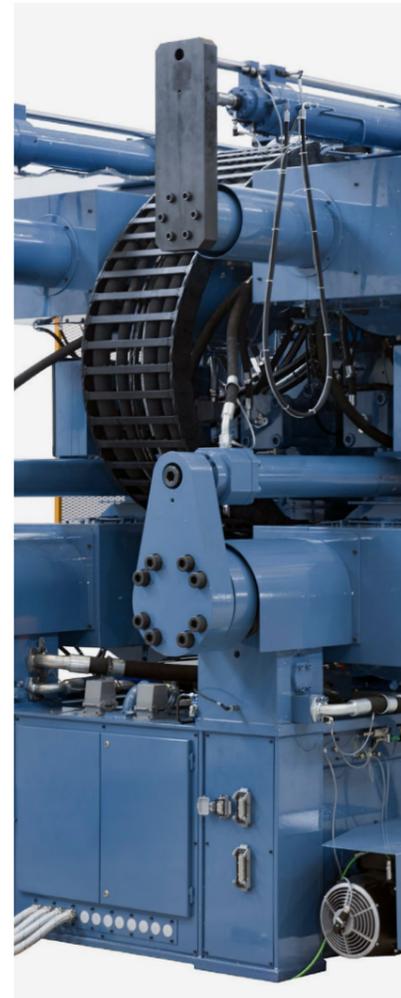
The whole clamping unit is equipped with protective casings to reduce the sensitivity of the mechanics to dirt.

The new Colosio 2P series pays particular attention to the dimensions of the working cell, significantly reducing the space required for a traditional toggle machine with same tonnage.

Thanks to the new clamping system, the machine is able to control the clamping force at each cycle, automatically compensating for any parallelism problems of the dies.

The control of the data and their recording and saving on a PC allow to repeat the optimal pressure, speed and stroke parameters for each individual die, showing the injection curves for each injection. (FULLCOLTROL)

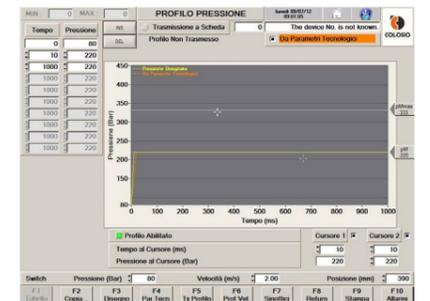
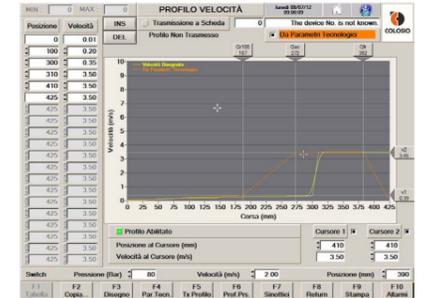
Equipped with double circuit injection, they operate at the highest speeds and are therefore suitable for any production requirement. The system allows to choose between a first phase at constant speed "under pump" or progressive "under accumulator". Furthermore, the control of the intensifier takes place by means of an independent circuit powered by its own pre-chargeable accumulator which guarantees to carry out this phase with all the required force.



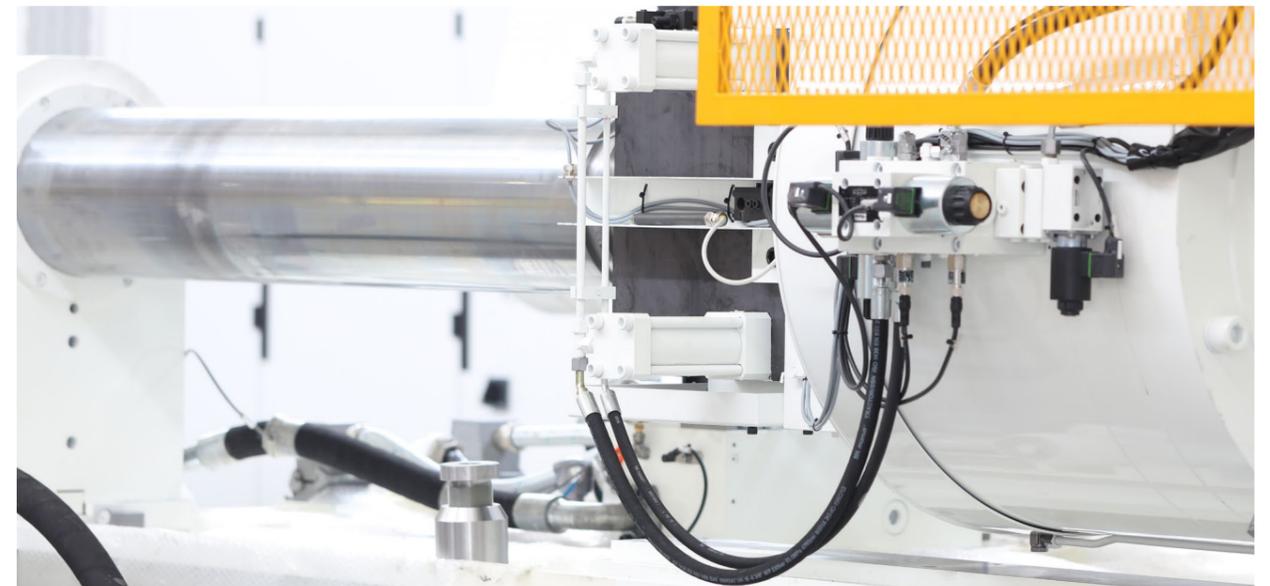
On request, the machines can be equipped with a **REAL TIME** closed loop speed and pressure injection system. It consists of three servo-proportional valves used respectively for the control of the delivery flow rate, for the speed modulation and the braking control (speed closed loop) and for the control of the final pressure by acting on the intensifier (pressure closed loop).

Features and benefits:

- Injection profiles in predeterminable speed and pressure
- Self-correction in real time
- Complete programmability
- Controlled braking to reduce mass inertial peaks
- Longer life of the dies
- Qualitative and quantitative improvement of the castings
- Complete SPC system
- Adaptability of the die casting process to new alloys



Speed and Pressure Profiles



Technical features

Efficiency and reliability

* = optional

1. GreenLine system

High energy saving system for a reduction in electricity consumption of up to 80%.

4. Double circuit injection

Two separate circuits, one for the first and second phase and one for the intensifier, always guarantee rapid and precise injection phases.

5. Automatic lock of injection position high

Automatic locking and unlocking system of the injection unit for a quick change of the injection positions. No manual adjustments are required anymore.

6. FULLCOLTROL system for injection graphs and reports

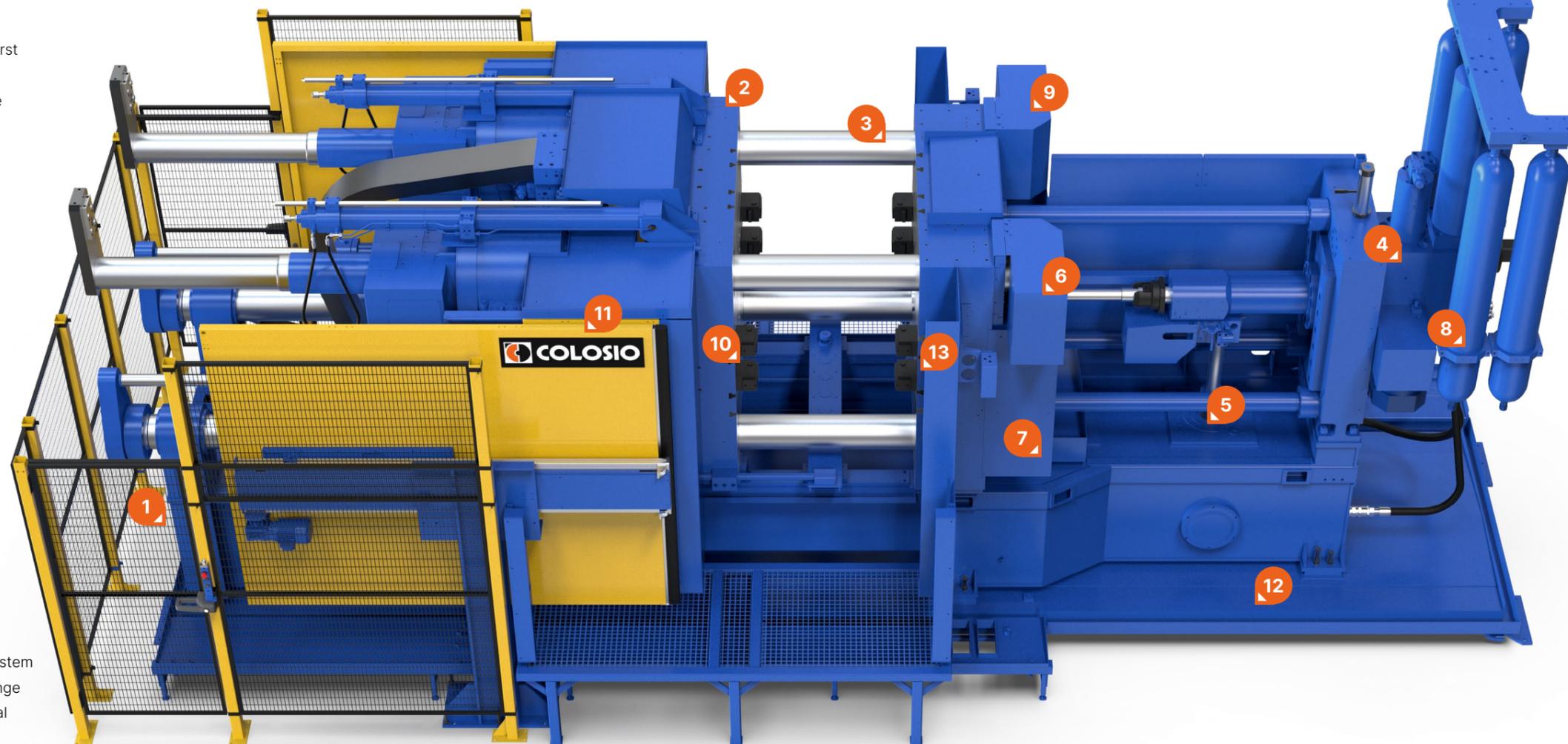
Each injection curve generated by the machine is saved and all the main process parameters can be tolerated to monitor production consistency.

2. Forged steel platens

For a constant resistance over time, a guarantee of quality and strength.

3. Chromed tie-bars with rolled threads

Modern manufacturing technology for an ideal tie-bars life.



7. Closing force control

Monitoring the closing force of the machine allows to avoid working situations with unbalanced dies. The machine is also equipped with a special automatic search cycle for the "machine closed" position in the event of a new setup of a die or its expansion due to an increase in temperature.

8. Real Time closed loop injection*

It controls and self-regulates the injection parameters during the working cycle thanks to the use of modern servo valves and software that can manage speed and pressure profiles separately.

9. Automatic withdrawal of tie-bars*

To facilitate die changes, the upper tie-bars can be hydraulically extracted in order to make the access area to the dies free.

10. Automatic die locking system COLBLOCK*

The system, through hydraulic clamps, automatically and safely locks the die to the machine platens, greatly speeding up and facilitating the change of tools. Alternatively, locking is available by means of pins inserted in the platens.

11. Quick lock of central ejection*

The ejection system consists of a sliding plate in which special slots are made for the ejector pins. The system guarantees perfect coupling to the plate without the need for any adjustment, removing often inaccessible screws and speeding up die change operations.

12. Fluid collection tray*

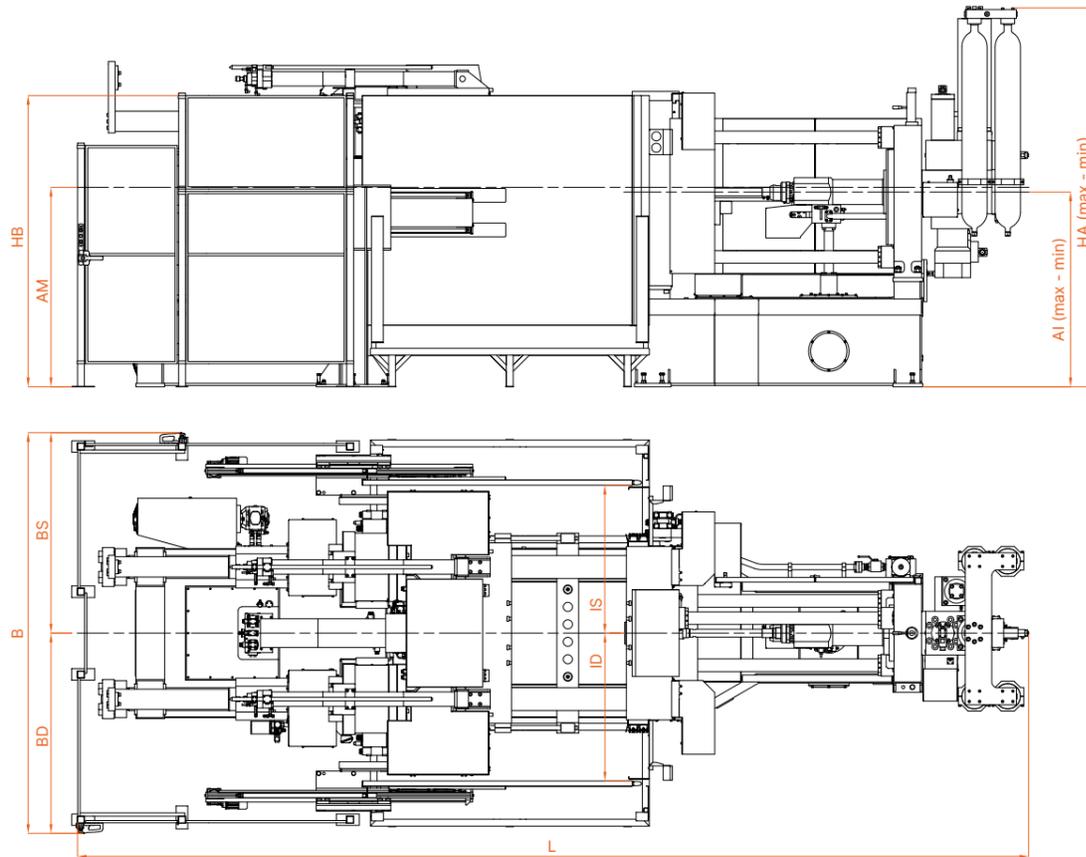
The tray is tailor-made to collect the waste produced by the process and optimize the plant connections for the die casting cell. With a single air and water inlet, the tank distributes the utilities to the necessary points, simplifying the connection of the cell to the power supplies.

13. Stainless steel layer on fixed or moveable plate*

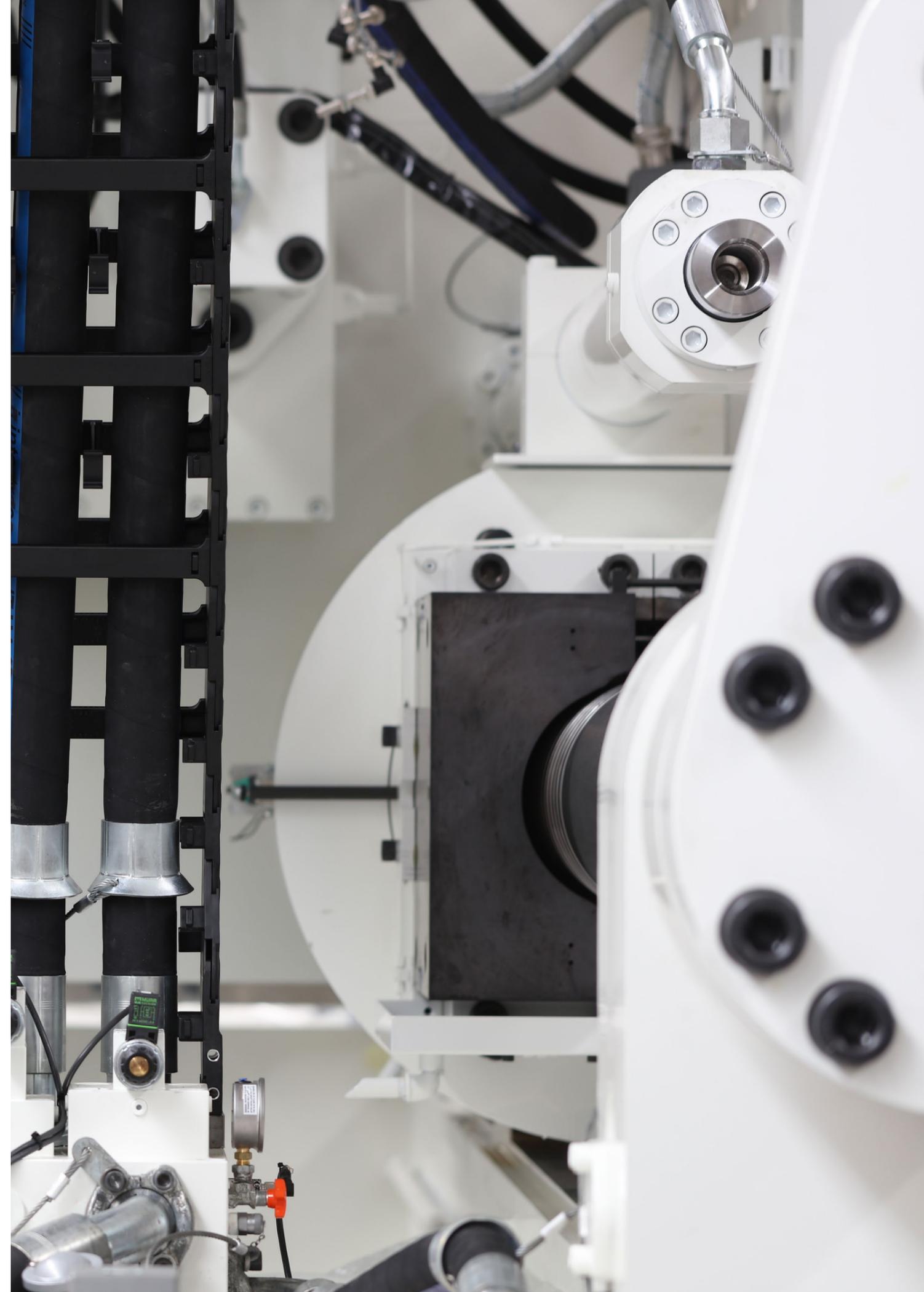
In presence of frequent thermal changes and / or particularly aggressive release fluids, which can attack the machine platens and create corrosion, it is possible to carry out a stainless steel layer to make them more resistant to any oxidation.

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Model	L	B	BS	BD	IS	ID	HA		HB	AM	AI	
							max	min			max	min
	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]
2P 1000	8455	3280	1640	1640	1285	1285	3310	3050	2535	1735	1695	1435
2P 1000L	8455	3330	1665	1665	1310	1310	3335	3075	2560	1760	1720	1460
2P 1400	9920	3995	1997.5	1997.5	1608	1608	4078	3678	2807,5	2007,5	1957,5	1557,5
2P 1700	10375	4135	2067.5	2067.5	1678	1678	4148	3748	2887,5	2077,5	2027,5	1627,5
2P 2000	11340	4295	2147.5	2147.5	1758	1758	4228	3728	2957,5	2157,5	2107,5	1607,5
2P 2200	11825	4400	2200	2200	1810	1810	4636	4136	3060	2260	2210	1710
2P 2600	12130	4540	2270	2270	1880	1880	4706	4206	3130	2330	2280	1780
2P 3000	13870	5025	2512.5	2512.5	2123	2123	5129	4529	3422,5	2622,5	2572,5	1972,5
2P 3600	14665	5265	2632.5	2632.5	2243	2243	5249	4649	3542,5	2742,5	2692,5	2092,5
2P 4400	16465	5490	2745	2745	2355	2355	5411	4711	3705	2905	2855	2155





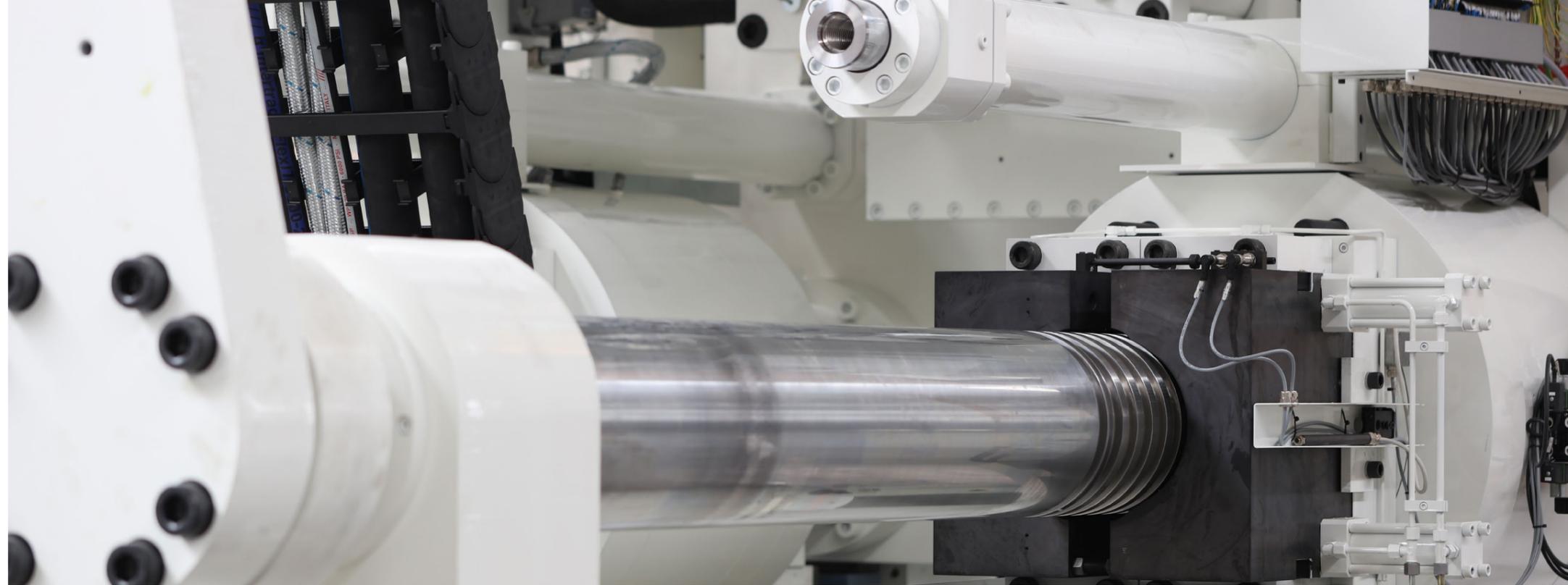
Two platens machines

Expression of the utmost innovation and research

2P Series

Clamping force from 1000 to 4400 tons

The 2P series completes the range to ensure greater closing rigidity thanks to the reduced length of the tie-bars. The clamping unit, without toggle, operates by means of hydraulic cylinders and locking on the threads of the tie-bars, increasing the opening stroke for the use of bulky molds and, at the same time, reducing the overall dimensions of the machine.



Model	U.M.	2P 1000	2P 1000L	2P 1400	2P 1700	2P 2000
Locking force	kN	9810	9810	13734	16677	19620
Max injection force	kN	738	738	1120	1206	1595
Ejection force	kN	372	372	563	603	814
Min die height	mm	520	520	610	665	700
Altezza stampo max	mm	1000	1000	1150	1250	1400
Moving plate stroke in max. die position	mm	950	950	1095	1190	1285
Moving plate stroke in min. die position	mm	1430	1430	1635	1775	1985
Ejection stroke	mm	200	200	240	240	300
External dimension fixed plate	mm	1510 x 1610	1560 x 1660	1745 x 1860	1880 x 2005	2035 x 2170
External dimension moving plate	mm	1570 x 1570	1620 x 1620	1815 x 1815	1955 x 1955	2115 x 2115
Distance between tie-bars	mm	950	1000	1100	1180	1280
Tie-bars diameter	mm	200	200	230	250	270
Max shot weight (AL)	Kg	13,2	13,2	21,3	24,2	35,6
Max projected area (400 kg/cm²)	cm ²	2500	2500	3500	4250	5075
Casting cycles (empty)	N°/1'	6	6	4	3	3
Machine weight	kg	39600	40600	59900	76900	100400
Overall dimensions (width - length - height)	W=mm	3280	3330	3995	4135	4295
	L=mm	8455	8455	9920	10375	11340
	H=mm	3310	3335	4078	4148	4228

2P 2200	2P 2600	2P 3000	2P 3600	2P 4400
21582	25506	29430	35316	43164
1595	1801	2296	2296	2443
814	865	942	1068	1246
750	800	865	955	1010
1550	1600	1800	2000	2150
1330	1425	1570	1710	1855
2130	2225	2505	2755	2995
300	300	350	400	450
2135 x 2275	2270 x 2420	2545 x 2710	2780 x 2960	2990 x 3185
2220 x 2220	2360 x 2360	2645 x 2645	2885 x 2885	3110 x 3110
1350	1430	1620	1770	1900
280	300	330	360	390
42,4	42,4	50,9	62,8	73,3
5500	6500	7500	9000	11000
3	2,5	2,5	2	2
116200	140000	194700	251300	321400
4400	4540	5025	5265	5490
11825	12130	13870	14665	16465
4636	4706	5129	5249	5411

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