

ENCLOSURE A

LCH 722 M **STANDARD / SE / SU / SE-SU**

SPECIFICATIONS AND INSTALLATION

REGISTRO DELLE MODIFICHE

I.M.	DATA	R.M	FIRMA
a	28/02/2017	003/17	Gherardi
b	22/03/2017	004/17	Gherardi

SYMBOLS



This symbol stands for a danger and it will show whenever the operator's safety is implicated.



This symbol stands for caution and it underlines fundamental operations for a correct and lasting working of the machine.



This symbol stands for an environmental note (waste water, working waste, oils...).

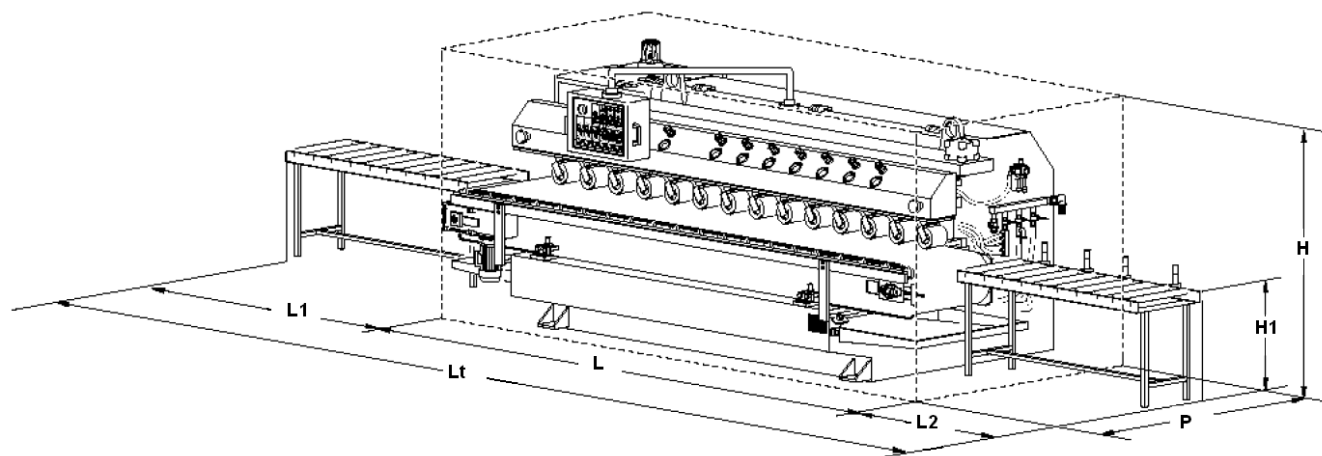
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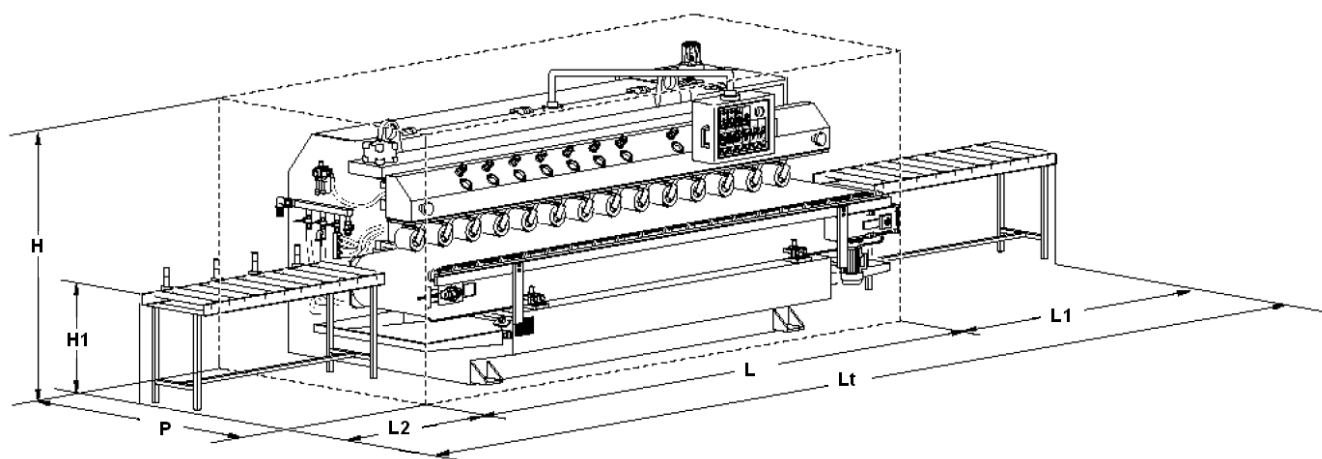
1. SPECIFICATIONS

1.1 OVERALL DIMENSIONS

LCH RIGHT-LEFT MODEL



LCH LEFT-RIGHT MODEL



LCH 722 M				
	BASE	SE	SU	SE-SU
Lt (mm)	6676	7029	6676	7029
L1 (mm)	1500			
L (mm)	3676	4029	3676	4029
L2 (mm)	1500			
P (mm)	1700			
H (mm)	1750			
H1 (mm)	730			

1.2 WEIGHT OF THE MACHINE

LCH 722 M				
	BASE	SE	SU	SE-SU
WEIGHT (kg)	2150	2240	2240	2600

1.3 TECHNICAL CHARACTERISTICS

1.3.1 MODEL LCH 722 M

	POLISHING MANDRELS	POLISHING MANDRELS	SUPERIOR CHAMFERING MANDRELS	INFERIOR CHAMFERING MANDRELS
PROCESS	POLISHING	POLISHING	- EDGE MILLING - CHAMFERING	- EDGE MILLING - CHAMFERING
NUMBER OF MANDRELS	5	2	2	2
MOTOR POWER	1,5 kw (TOTAL 7,5 kw)	1,1 kw (TOTAL 2,2 kw)	2,2 kw	2,2 kw
ROTATION SPEED	1400 rpm	900 rpm	1400 rpm	1400 rpm
TOOL Ø	120 ÷ 150 mm	120 ÷ 150 mm	120 ÷ 130 mm	120 ÷ 130 mm
CONNECTION	M 24x3 RIGHT THREAD STANDARD RIGHT FEMALE SCREW	M 24x3 RIGHT THREAD STANDARD RIGHT FEMALE SCREW	M 24x3 RIGHT THREAD STANDARD RIGHT FEMALE SCREW	M 24x3 RIGHT THREAD STANDARD RIGHT FEMALE SCREW

1.3.2 MODEL LCH 722 M SE

	CALIBRATING/ DRIPSTONE MANDREL	POLISHING MANDRELS	POLISHING MANDRELS	SUPERIOR CHAMFERING MANDRELS	INFERIOR CHAMFERING MANDRELS
PROCESS	---	POLISHING	POLISHING	- EDGE MILLING - CHAMFERING	- EDGE MILLING - CHAMFERING
NUMBER OF MANDRELS	1	7	2	2	2
MOTOR POWER	3,6 kw	1,5 kw (TOTALE 7,5 kw)	1,1 kw (TOTAL 2,2 kw)	1,1 kw (TOTAL 2,2 kw)	1,1 kw (TOTAL 2,2 kw)
ROTATION SPEED	1400 rpm	1400 rpm	900 rpm	1400 rpm	1400 rpm
TOOL Ø	250 mm	120 ÷ 150 mm	120 ÷ 150 mm	120 ÷ 130 mm	120 ÷ 130 mm
DISC HOLE	50 mm				
CONNECTION	FLANGE	M 24x3 RIGHT THREAD STANDARD RIGHT FEMALE SCREW	M 24x3 RIGHT THREAD STANDARD RIGHT FEMALE SCREW	M 24x3 RIGHT THREAD STANDARD RIGHT FEMALE SCREW	M 24x3 RIGHT THREAD STANDARD RIGHT FEMALE SCREW

1.3.3 MODEL LCH 722 M SU

	POLISHING MANDRELS	POLISHING MANDRELS	SUPERIOR CHAMFERING MANDRELS	INFERIOR CHAMFERING MANDRELS	SHAPING/ DRIPSTONE MANDREL
PROCESS	POLISHING	POLISHING	- EDGE MILLING - CHAMFERING	- EDGE MILLING - CHAMFERING	---
NUMBER OF MANDRELS	7	2	2	2	1
MOTOR POWER	1,5 kw (TOTAL 7,5 kw)	1,1 kw (TOTAL 2,2 kw)	1,1 kw (TOTAL 2,2 kw)	1,1 kw (TOTAL 2,2 kw)	5,5 kw
ROTATION SPEED	1400 rpm	900 rpm	1400 rpm	1400 rpm	2800 rpm
TOOL Ø	120 ÷ 150 mm	120 ÷ 150 mm	120 ÷ 130 mm	120 ÷ 130 mm	250 mm
DISC HOLE					50 mm
CONNECTION	M 24x3 RIGHT THREAD STANDARD RIGHT FEMALE SCREW	M 24x3 RIGHT THREAD STANDARD RIGHT FEMALE SCREW	M 24x3 RIGHT THREAD STANDARD RIGHT FEMALE SCREW	M 24x3 RIGHT THREAD STANDARD RIGHT FEMALE SCREW	FLANGE

1.3.4 MODEL LCH 722 M SE-SU

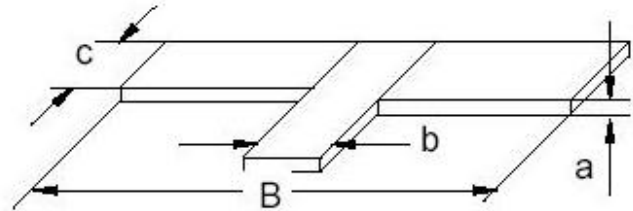
	CALIBRATING/ DRIPSTONE MANDREL	POLISHING MANDRELS	POLISHING MANDRELS	SUPERIOR CHAMFERING MANDRELS	INFERIOR CHAMFERING MANDRELS	SHAPING/ DRIPSTONE MANDREL
PROCESS	---	POLISHING	POLISHING	- EDGE MILLING - CHAMFERING	- EDGE MILLING - CHAMFERING	---
NUMBER OF MANDRELS	1	7	2	2	2	1
MOTOR POWER	3,6 kw	1,5 kw (TOTAL 7,5 kw)	1,1 kw (TOTAL 2,2 kw)	1,1 kw (TOTAL 2,2 kw)	1,1 kw (TOTAL 2,2 kw)	5,5 kw
ROTATION SPEED	1400 rpm	1400 rpm	900 rpm	1400 rpm	1400 rpm	2800 rpm
TOOL Ø	250 mm	120 ÷ 150 mm	120 ÷ 150 mm	120 ÷ 130 mm	120 ÷ 130 mm	250 mm
DISC HOLE	50 mm					50 mm
CONNECTION	FLANGE	M 24x3 RIGHT THREAD STANDARD RIGHT FEMALE SCREW	M 24x3 RIGHT THREAD STANDARD RIGHT FEMALE SCREW	M 24x3 RIGHT THREAD STANDARD RIGHT FEMALE SCREW	M 24x3 RIGHT THREAD STANDARD RIGHT FEMALE SCREW	FLANGE

1.4 CONSUMPTIONS

DATA		LCH 722 M	LCH 722 M SE	LCH 722 M SU	LCH 722 M SE-SU	+ MO
POWER SUPPLY		VOLTAGE ON THE CUSTOMER'S REQUEST				
ELECTRICAL FREQUENCY		50/60 Hz				
MOTORS TOTAL POWER		15 kw	18,5 kw	20,5 kw	24 kw	+ 0,75 Kw
ABSORPTION	400 V	32	40	44	52	-
	230 V	54	65	72	83	-
WATER CONSUMPTION		44 l/min	48 l/min		52 l/min	-
COMPRESSED AIR ENTRY		6 bar				-
COMPRESSED AIR CONSUMPTION		27,5 l/min				-

1.5 SLAB DIMENSIONS

WORKING LENGTH (B)	CONTINUOUS CYCLE
SLAB LENGTH (b)	MINIMUM 270 mm
SLAB MINIMUM THICKNESS (a)	10 mm
SLAB MAXIMUM THICKNESS (a)	60 mm
SLAB MINIMUM LENGTH (b)	270 mm
SLAB MINIMUM WIDTH (c)	80 mm
WORKING SPEED	MINIMUM 18 m/h MAXIMUM 130 m/h



MIN AND MAX WIDTH (c)

	c min. (mm)	c max. (mm)
$a \leq 30$	c_{min}	$5*b$
$30 < a \leq 60$	c_{min} $2*a$	$4*b$
$a > 60$	c_{min} $2*a$	$3,5*b$

	a	c	
		min. (mm)	max. (mm) con b_{min}
LCH standard	10	80	1350
	20	80	1350
	30	80	1350
	40	80	1080
	50	80 100	1080
	60	80 120	1080

	a	c	
		min. (mm)	max. (mm) con b_{min}
LCH NS	10	45	1350
	20	45	1350
	30	45	1350
	40	45 80	1080
	50	45 100	1080
	60	45 120	1080

2. INSTALLATION

2.1 TRANSPORT

The machine can be carried on trucks, boats, trains and airplanes.
It has not a particular packing and the attachments are sent separately.

2.2 LIFTING AND MOVING



ATTENTION!
Before lifting the machine verify its weight on the special plate, or in the table of par. 1.2

The machine can be lifted by a crane or a bridge crane through two hook-up ropes of a length of 2,5 m at minimum. The ropes are connected above to the lifting hook, and below to the two eyelets on the bench of the conveyor belt.

mamo meccanica			
ZONA IND. Z.I.P.A. P.O. BOX 204 60035 JESI (AN) ITALIA		CE	
MOD.		Kw	
MATR. N.		VOLT	
ANNO		Hz	
		Kg	

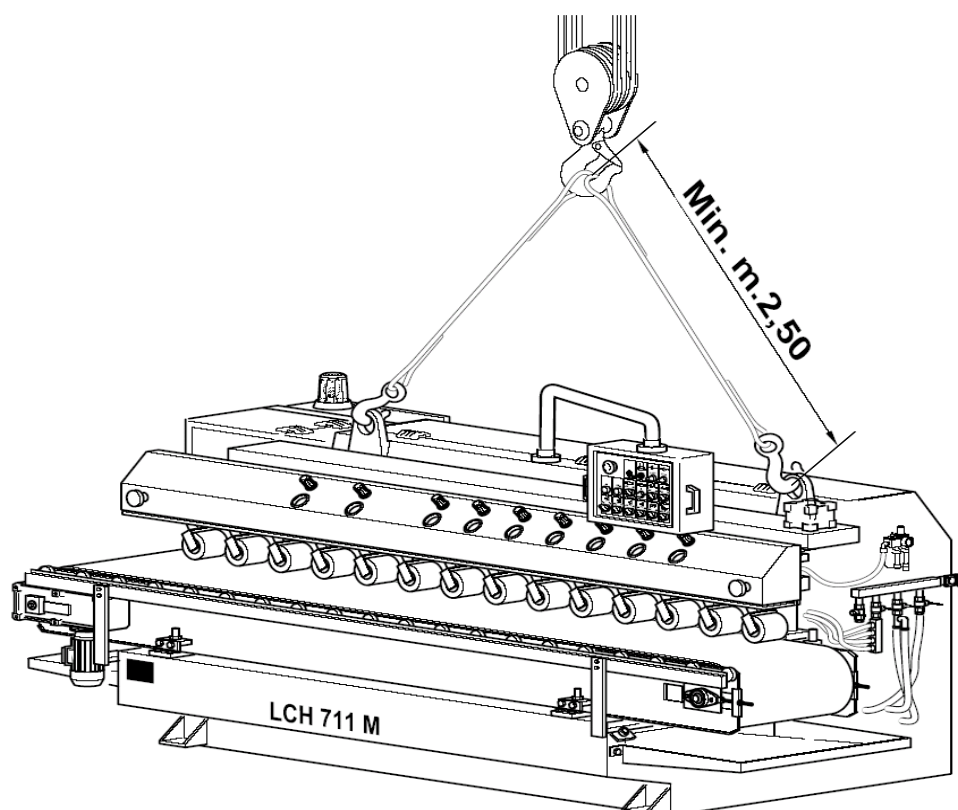
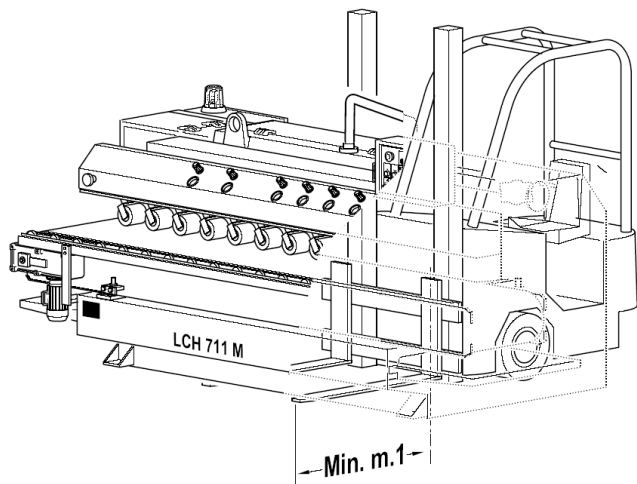


Fig. 01

**ATTENTION!**

The structure of the bench can buckle if the machine is lifted with ropes shorter than the above-mentioned ones.



The lifting is also possible through a lift truck supplied with 1 m long forks. That is because the barycentre of the machine is at about 600 mm from its edge.

Fig. 02

2.3 ATTACHMENTS

The only attachments of LCH are two roller extensions.

2.4 ENVIRONMENTAL SPECIFICATIONS

When positioning the machine it should be considered that its working is guaranteed in the following environmental conditions:

- Temperature: +5°C / +40°C
- Relative humidity: 35% - 75%

The machine should be installed in a place with a proper lighting, so that there are no dangerous shades during the working, and/or the maintenance.

2.5 INSTALLATION

LCH requires neither foundations nor slopes for water disposal. You need simply to lean it on a hard ground and level it by adjusting the provided screws. The base of the machine should stay 2-4 cm lifted from the ground, as to allow air recycling for the cooling of the motors.

If the ground is not sufficiently plane, you shall arrange hard fulcrums in accordance with the enclosed diagram.

For the levelling of the machine there are four points: two external points for the lengthwise levelling (Fig. 03/3), and two internal points for the transversal levelling (Fig. 03/4). To enter the internal points you need to open the back protective crankcase (Fig. 03/1), and fix it by the special rod (Fig. 03/2).



ATTENTION!

The level should be placed only on the 4 above-mentioned points.

Moreover, to level the machine in the most accurate way it is necessary:

- to adjust the screws until you reach an optimum levelling (Fig. 03/5,6,7);
- to adjust the screws so that they lean on the ground (Fig. 03/8,9).

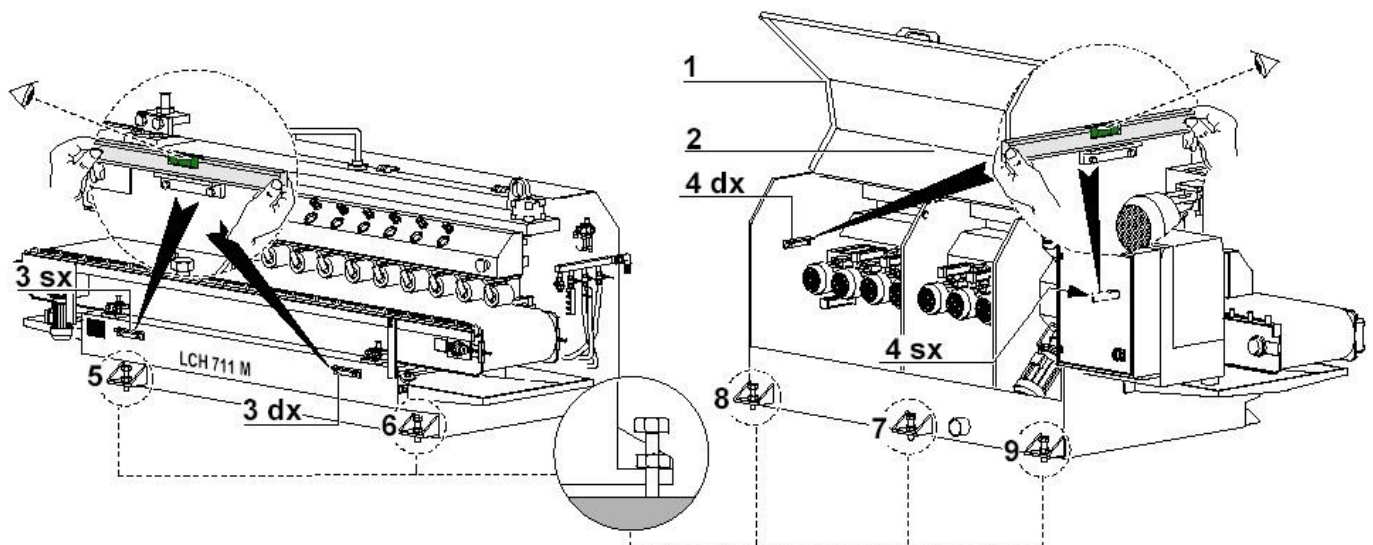
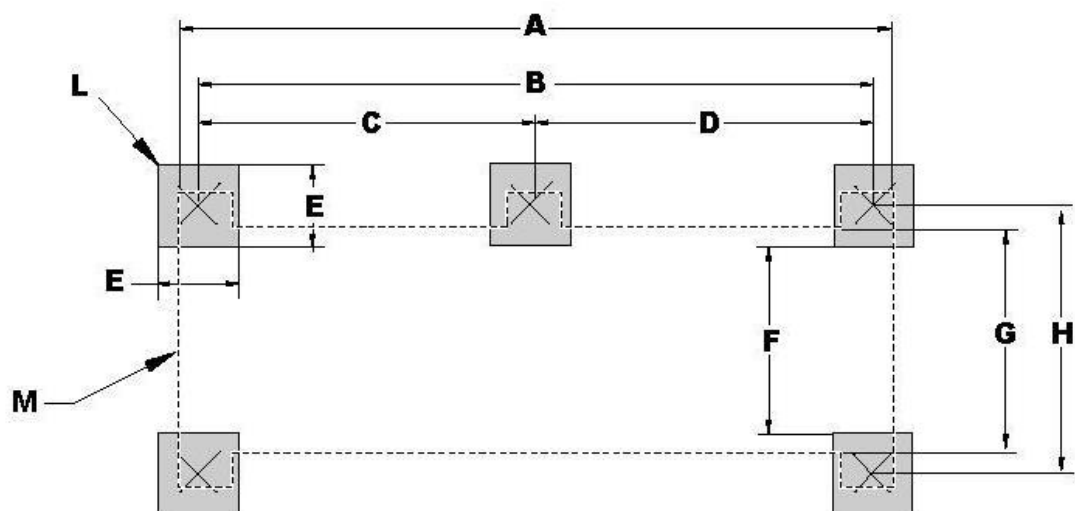


Fig. 03



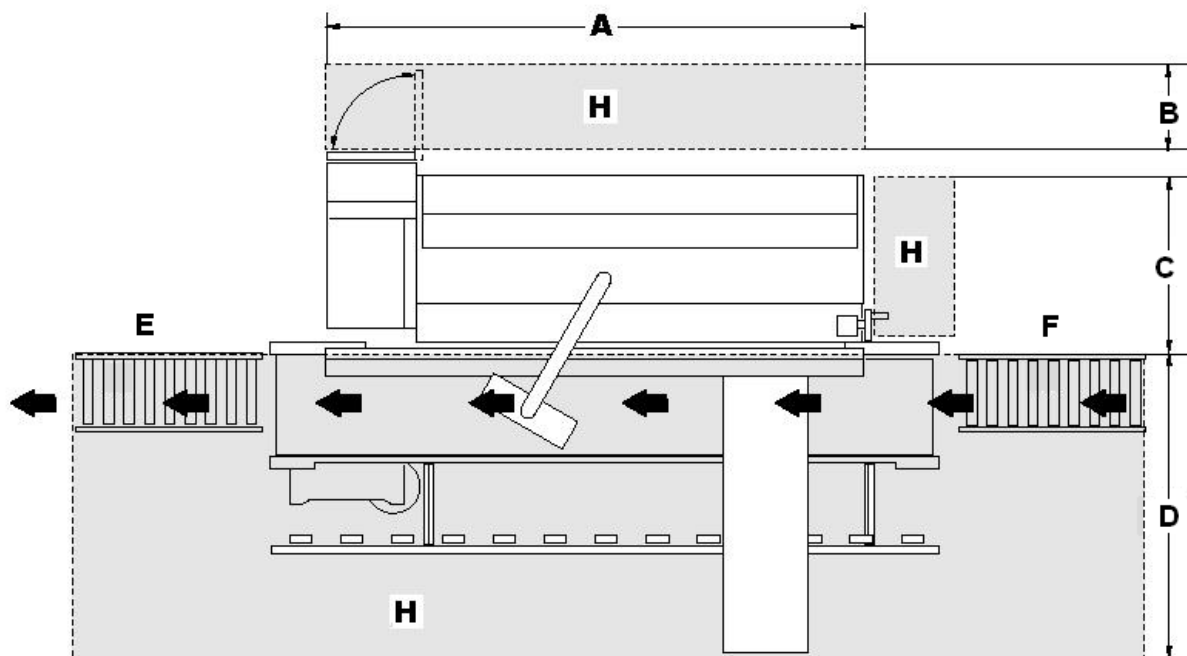
A	2332 mm
B	2190 mm
C	1095 mm
D	1095 mm
L	SUPPORTING AREA

E	120 mm
F	1135 mm
G	1205 mm
H	1255 mm
M	MACHINE PERIMETRE

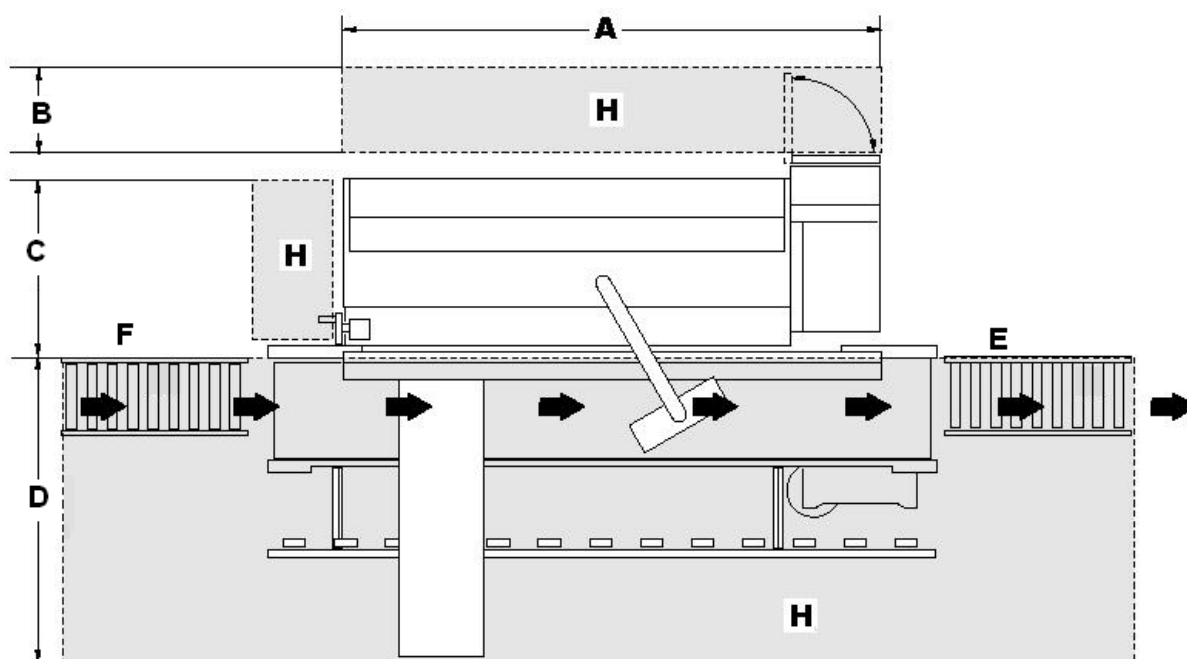
2.6 MAINTENANCE AREAS

You should arrange an area for the maintenance operations:

LCH RIGHT-LEFT MODEL



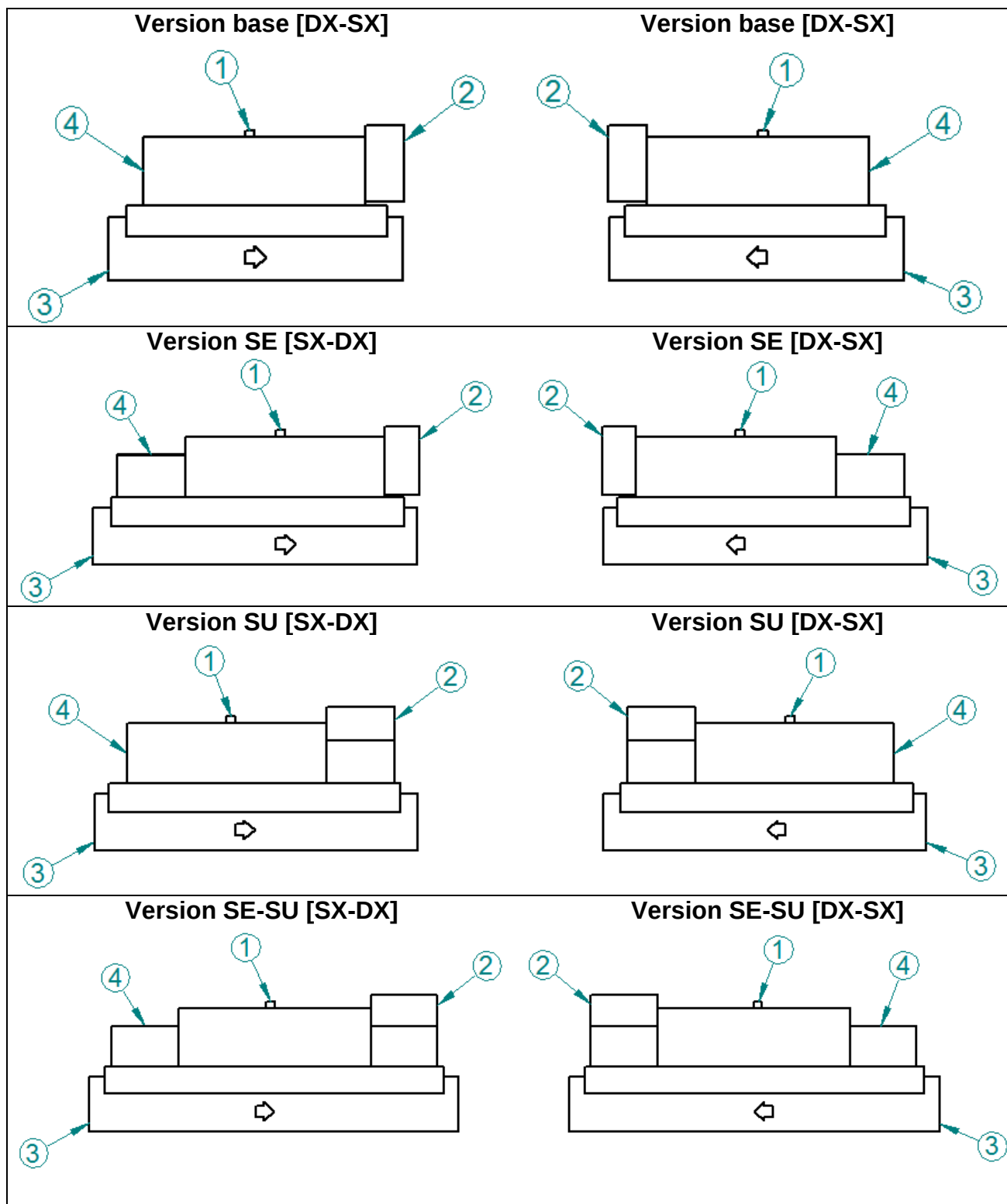
LCH LEFT-RIGHT MODEL



A	2332 mm
B	500 mm
C	700 mm
D	2000 mm

E	SLAB EXIT
F	SLAB ENTRY
G	SLAB
H	SPARE AREA

2.7 CONNECTION



1	Waste water draining
2	Electrical connection

3	Water connection
4	Air Connection

2.7.1 ELECTRICAL CONNECTION



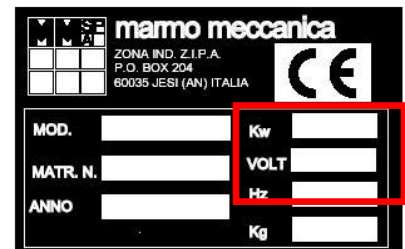
ATTENTION!

Before the electrical connection verify the existence of a proper grounding system in accordance with the European Norms (EN).



ATTENTION!

Check that the tension is compatible with the characteristics of the tag on the machine. Fluctuations of tension bigger than 5% of the nominal tension indicated on the tag can provoke permanent damages to the machine that are not covered by the guarantee.



Verify that the cable feeding the machine has proper dimensions (R-S-T, earth wire, neutral).

For a 380 V tension, section $\geq 16 \text{ mm}^2$ each, for a 220 V tension, section $\geq 25 \text{ mm}^2$.



Verify that at the source of the cable connecting the machine there is a magnetothermal cut-out box with a stop power suited to the system, in accordance with the norms in force.

Put the general switch of the system at 0 (Fig. 04).

The cable going from the general switch to the electrical board of the machine must be protected by a sheathing and inserted in the box through the special cable press. (Fig. 05).

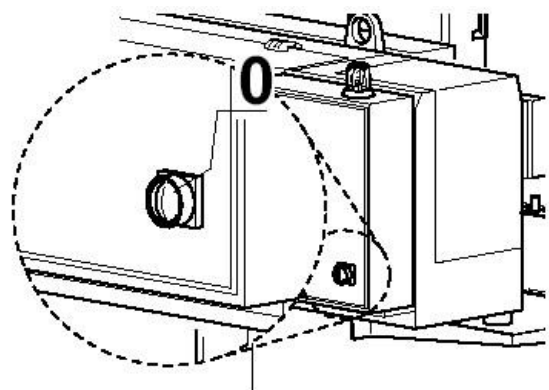


Fig. 04

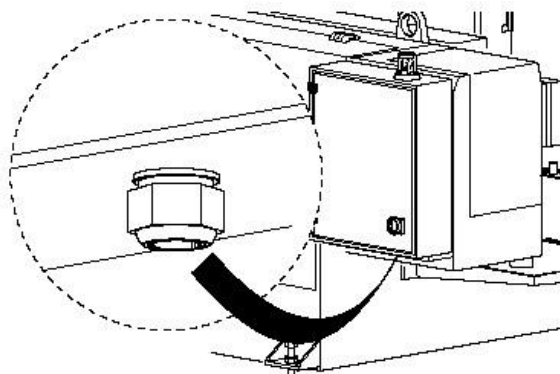


Fig. 05

Connect the wires of the cable to the terminal board according to the enclosed wiring diagram (see ENCLOSURE D). Make sure that wires R-S-T have been connected in phase by starting for a moment the switch of the conveyor belt. If the belt is running contrariwise, exchange two of the three R-S-T wires you had previously connected.

2.7.2 WATER CONNECTION

The water hose must be flexible, with a 25 mm internal diameter. It should guarantee a flow of 30 l/min, and have a structure able to sustain the net pressure (an excess of flow can be eliminated by partially closing the machine ball shutoff valve).

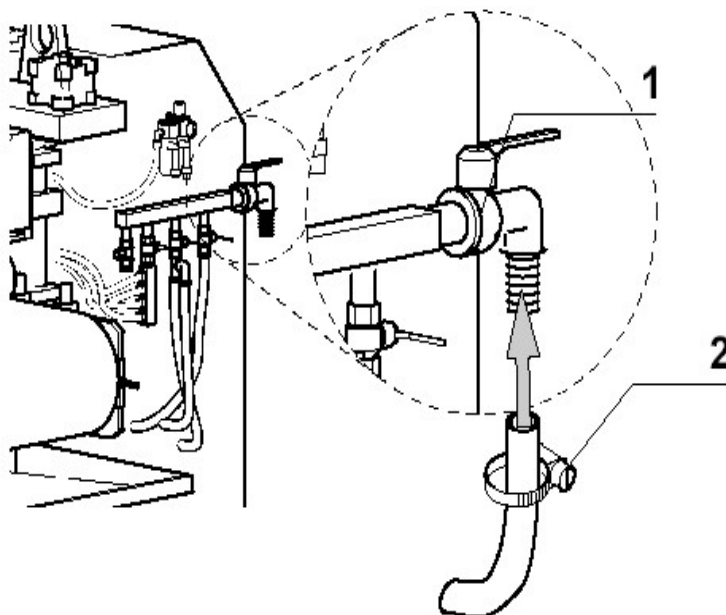


Fig. 06



The models of LCH for Germany have an electrovalve instead of cock 1 of Fig. 06.



The water hose must have a 3/4" cock at the source of the power plant connection.

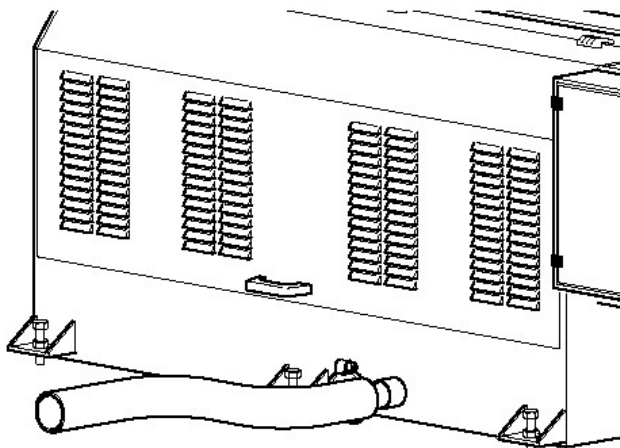


Fig. 07

Connect the water hose to the rubber holder of the distributor on the right side of the machine (left side for LCH SE with entry calibrating-dripstone mandrel), and clamp it (Fig.06). LCH is completely faired, and the water draining occurs through a unique collector that can be extended for some metres to reach the available collecting point (Fig. 07).

2.7.3 AIR CONNECTION

The air connection occurs in a unique filter-reducer lubricator connection (Fig. 08). The suitable connecting hose for compressed air must have a 1/4" bayonet male connection.

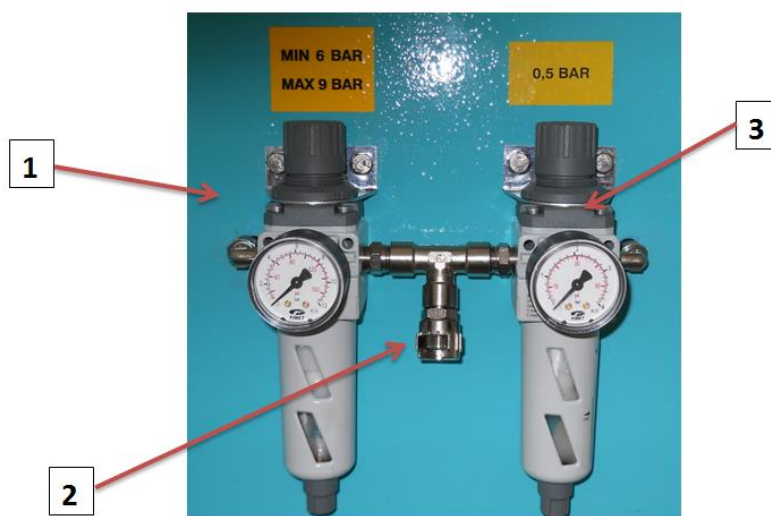


Fig. 08

1	PRESSURE REGULATOR	3	PRESSURE REGULATOR (0,5 bar)
2	COMPRESSED AIR INLET		



The air consumption of LCH is minimum, that is why you just need a small compressor (about 30 l/h).

2.10 FIXING AND LEVELLING OF THE BENCH EXTENSIONS

Lean half of a 2,5 m long bar on the bench and half on the extension. A processed slab with the same dimensions can be used, too.

Referring to light P and operating on the screws of the legs adjust the height of the extension until you reach a perfect levelling (Fig. 10/2). Lower the 4 rods and fix them to the ground through the 4 screw anchors (Fig. 10/1). Clamp the connecting nuts to the leg (Fig. 10/3,4).

Repeat the same operations for the other extension.

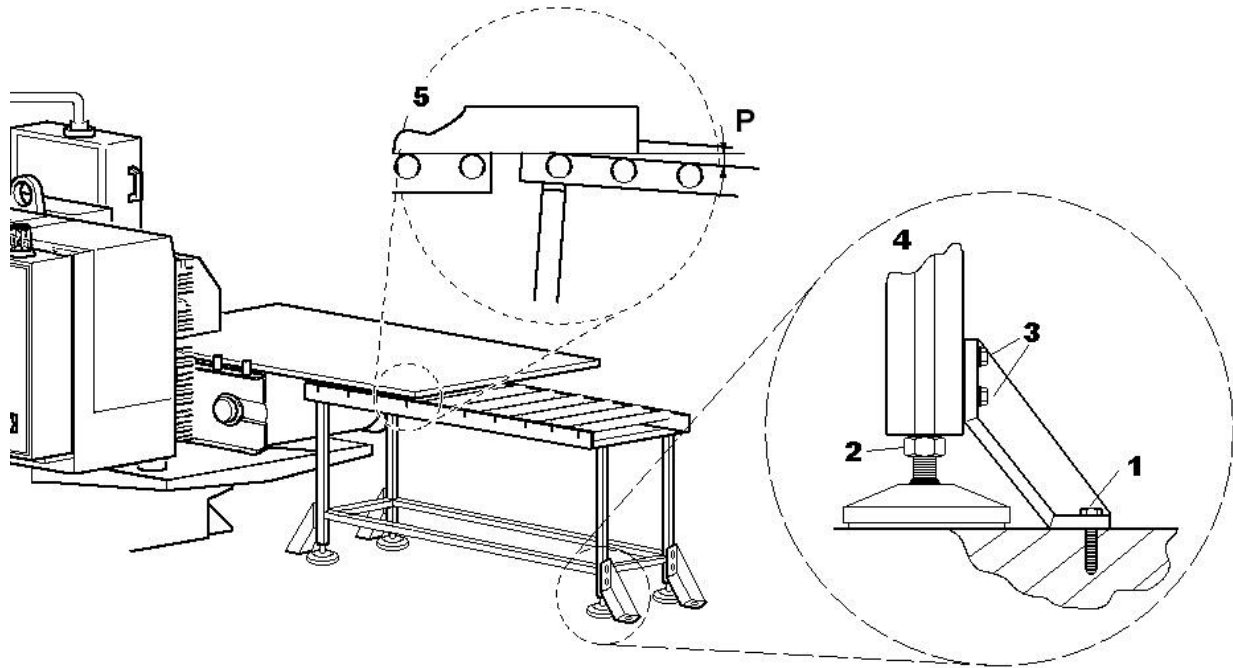


Fig.09

2.11 WASTE WATER

Waste water must be collected and treated in accordance with the norms in force in Europe or in the country where one operates.

Waste water is composed of:

- water;
- working scraps (marble, granite, stone);
- tools scraps (magnesite, catalysed synthetic resins, diamond, metal alloys).



2.12 ENVIRONMENTAL NOTES

PACKING

Select the components of the machine packing according to its material (cardboard, wood, steel, polyester, etc...), and dispose of it according to the norms in force in the country where the machine is being used.



END OF SERVICE

At the end of its service, you should empty the machine of all the oil, remove the rubber parts (O-rings, gaskets...), and scrap it.