



PS-110

15:1

MAX. WORKING
PRESSURE: 150 bar

MAX. AIR INLET
PRESSURE: 10 bar



WARNING

This equipment is designed to be used only for pumping non-corrosive and non-abrasive lubricants and greases. Any other use of the machine may result in unsafe operation.

I.MANUAL



**DECLARACION DE CONFORMIDAD “CE”
“EC” DECLARATION OF CONFORMITY**

MODELO / MODEL PS-110 15:1

Este producto cumple con la siguiente directiva de la Comunidad Europea.

This Product complies with the following European Community Directive.

Directivas 2006/42/CE, 2014/34/EU Atex sobre máquinas.

(Ex II 2G c T6 X)

Machinery Directive 2006/42/CE, 2014/34/EU Atex Directive.

(Ex II 2G c T6 X)

APROBADO POR /

APPROVED BY

AITOR ORTIZ

FECHA / DATE

MBP, S.L. figura inscrita en el Registro Industrial del País Vasco con el N° 01/8030 y cumple los requisitos para el desarrollo de su actividad comercial.

MBP, S.L. is registered in the Industrial Register of the Basque Country with the N° 01/8030.

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WARNING

THIS SYMBOL ALERTS YOU ABOUT THE POSSIBILITY OF SERIOUS INJURIES OR DEATH IF INSTRUCTIONS ARE NOT FOLLOWED.



CAUTION

THIS SYMBOL WARNS OF THE POSSIBILITY OF DAMAGE OR DESTRUCTION OF EQUIPMENT IF YOU DO NOT FOLLOW INSTRUCTIONS.



WARNING



INSTRUCCIONES

DANGER DUE TO MISUSE OF THE MACHINE

- Incorrect use can cause equipment to malfunction or even shatter and cause accidents.
- Consult the instruction's handbook before using the equipment.
- Use the equipment for its intended purpose.
- Check periodically the equipment and replace the damaged parts.
- Do not exceed the maximum pressure in the equipment.
- No strangle neither hoses nor nipple.
- No move or lift the equipment with pressure.
- Bear in mind all the local procedure of safety.

TOXIC FLUID OR FUMES HAZARD



- Toxic fluids or fumes can cause serious injury if splashed in the eyes or on skin, inhaled, or swallowed.
- Know the specific hazards of the fluids you are using.



TOXIC FLUID OR FUMES HAZARD

- Store hazardous fluid in approved containers.
- Use always gloves, mask, glasses and clothes to be protected from the possible hurts.



FIRE AND EXPLOSION HAZARD

- Poor ventilation, poor grounding or a spark can create a dangerous situation, causing fires or explosions.
- Ground equipment and conductive objects in work area. See grounding instructions.
- If there is static sparking or you feel a shock, stop operation and do not use the equipment again until you identify and correct the cause.
- Use the equipment in well ventilated area.
- Keep the work area free of debris, including solvent, rags and gasoline.
- Do not smoke in the work area
- Keep a fire extinguisher in the work area.



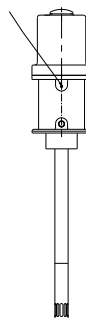
MOVING PARTS HAZARD

- Moving parts can pinch or amputate fingers and other body parts.
- Keep clear of moving parts
- Do not operate equipment without protective guards or covers removed.
- Before checking, moving, or servicing equipment, follow the pressure relief procedure.

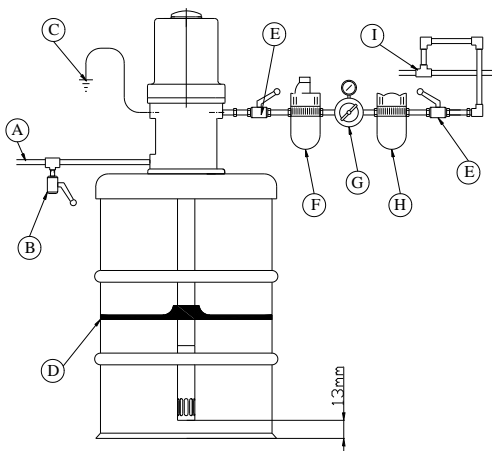
GROUND CONNECTION

It is essential to ground the equipment to maintain safety in the installation. This reduces the risk of sparks caused by static electricity. Ensure that you obtain a true 'GROUND' and use electrically conductive hoses. The product container must comply with current regulations.

Grounding point



(fig.1)



(fig.2)

Recommended air pipe route to reduce humidity in the pump unit.

DESCRIPTION

- A.- PRODUCT OUTLET PIPE
- B.- PURGE VALVE (PRODUCT)
- C.- GROUND CONNECTION
- D.- FOLLOWER PLATE
- E.- THREE-WAY VALVE (AIR PURGE)
- F.- AIR LUBRICATOR
- G.- AIR REGULATOR WITH PRESSURE GAUGE
- H.- AIR PURIFIER
- I.- AIR INSTALLATION



WARNING

Install the pump securely so that it cannot move during operation.

1.- During installation, ensure that the operator has easy access to the air regulators for the pump and lift. Check that there is enough space above the pump and lift when they are in their highest position.

2.- Use wedges to level the base of the lift.



WARNING

Your system requires three accessories:

- 1.- A three-way air inlet valve.
- 2.- A three-way valve for product purging.
- 3.- A grounding cable is required.

By incorporating these three elements, you can significantly reduce the risk of accidents.

The valves are designed to decompress the equipment.



OPERATION PRESSURE RELIEF PROCEDURE



WARNING



INJECTION DANGER

The equipment is pressurized until the pressure inside is manually released. To reduce the risk of accidents and serious damage caused by liquid escaping from the dispensing gun, you must depressurize the equipment whenever:

- A- Finish dispensing the product.
- B- When I change the drum.
- C- When servicing any part of the installation or equipment.
- D- Review, inspect, or install new items.



WARNING



MOVING PARTS HAZARD.

The working pressure may not be the same for all components of the installation, so to reduce the risk of accidents, you should find out the recommended pressure for each element.

Do not exceed the working pressure of the component that supports the lowest pressure.

The pump creates a pressure 15 times greater than that of the air inlet. Knowing which components can withstand lower pressure, multiply the indicated inlet pressure by 60 to allow for a safety margin.

- 1- Close the pump air regulator until it reads "0" bar.
- 2- Close the air passage of the three-way air valve. This is near the pump. This will release pressure from the motor.
- 3- Place a metal part of the gun in physical contact with a grounded metal waste container and squeeze the trigger until no more product comes out.
- 4- Open the product's purge valve "B" (fig. 2).

START-UP

- 1- Keep regulators n°11 and n°12 at “0” pressure (see fig 3).
- 2- The line air should be introduced at point n°10 of the air group.
- 3- Ensure that valves n°8 and n°9 are in the closed position.
- 4- Move valve n°6 to the left and apply pressure to regulator n°4 until the pump begins to rise; it will stop automatically when it reaches the highest point. (CAUTION: do not release the air pressure).
- 5- Place the container on the platform and remove the lid and leaning on the stops.
- 6- Rotate valve n°6 to the right to slowly lower the pump until the follower plate is positioned on the drum. Then adjust the stops to fit the drum.

Open valve n°9.

- 7- Once the follower plate is pushing the product, adjust the pressure of the plate on the product using regulator n°11.

- a) If the pressure is too high in regulator n°11, the product will leak out around the edges of the follower plate and through valve n°9.
- b) The pump will not prime or will lose its prime during operation if there is too low a pressure in regulator n°11.

- 8- Close valve n°9. This valve is for air to escape between the follower plate and the grease.
- 9- We apply pressure directly to regulator n°12 on the pump, starting to absorb the grease from the drum. We will keep the gun open for a short time, until the grease comes out of the gun.

DRUM CHANGE

- 1- Put regulator n°12 to pressure “0”.
- 2- Open valve n°8.
- 3- Rotate valve n°6 to the left.
- 4- When this operation is performed, the pump with its follower plate will rise and the drum will remain on the platform.
- 5- Close valve n°8.



WARNING

Follow the pressure relief procedure before servicing or installing the equipment to reduce the risk of accidents.

Release the pressure from the equipment before servicing any part of the installation.



WARNING

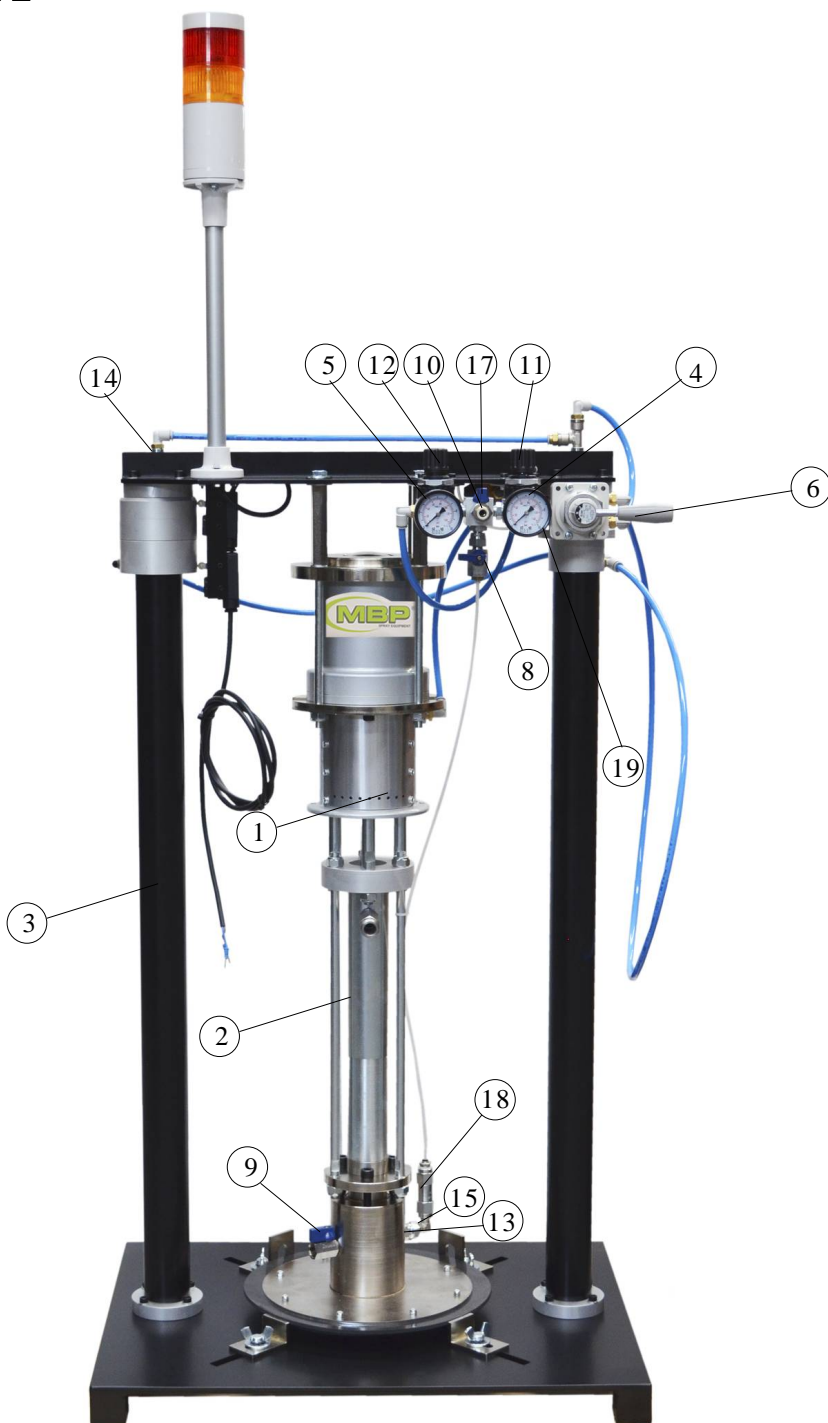


**MOVING PARTS
HAZARD.**

Never operate the pump without the protective plates on the air motor.

These plates protect the fingers from cuts or amputations.

PROBLEM	CAUSE	SOLUTION
The follower plate does not go up or down.	The air valve is closed or the air line is blocked.	Open or clean.
	Insufficient pneumatic pressure.	Increase.
The follower plate moves up or down too quickly.	Pressure too high.	Reduce the pressure.
Air loss in pneumatic cylinders.	The guide is for loose pneumatic axles or worn joints.	Replace.
Product loss.	Pressure is too high.	Decrease.
	Worn or damaged joints	Replace.
The pump is pumping air, or it is not priming correctly.	Insufficient pressure.	Increase the pressure.
	There are worn or damaged gaskets.	Replace.
	The control valve is closed or blocked.	Open, clean, or replace.
The air valve does not keep the reservoir down or push the follower plate up.	Air valve closed.	Open.
	The air line is blocked.	Clean.
	Insufficient pneumatic pressure.	Increase.



(fig.3)



- 1.- AIR MOTOR (110.100.00)
- 2.- LOWER PUMP (112.200.00)
- 3.- PNEUMATIC ELEVATOR (110.301.00)
- 4.- AIR REGULATORS ASSEMBLY (110.400.00)
- 5.- GAUGE (CNB.001)
- 6.- VALVE (UP-DOWN) (CNC.020)
- 8.- VALVE (CNC.003)
- 9.- VALVE (CNC.004)
- 10.- AIR INLET (CNA.106)
- 11.- PRESSURE REGULATOR FOLLOWER PLATE (CNB.051)
- 12.- AIR REGULATOR PUMPING (CNB.051)
- 13.- NIPPLE (CNA.140)
- 14.- NIPPLE (CNA.065)
- 15.- NIPPLE (CNA.080)
- 17.- DISTRIBUTOR (110.300.08)
- 18.- NON-RETURN VALVE (CNA.028)
- 19.- LIMIT SWITCH(CNA.029)



WARNING

Before starting any maintenance work on the equipment or installation, follow the **PRESSURE RELIEF PROCEDURE**.

- 1- Wash the pump, hose, and spray gun using a degreaser that is compatible with the product and with the wet parts of the equipment.
- 2- Depressurize the equipment following the **SAFETY RULES**.
- 3- It is essential that you disconnect the pump hose.
- 4- Loosen screws n°28 (fig. 4) and remove the follower plate.
- 5- Loosen nut n°9 (fig.11).
- 6- Push the pump downwards to access screw n°16 (fig.11). Loosen screw n°16 with nut n°17. Then unscrew shaft n°8 from the motor.
- 7- Remove shaft n°26 from piston n°23 by loosening pin n°22.
- 8- Pull the shaft downwards.

Disassemble piston n°23 from the shaft. Remove gaskets and springs. It is recommended not to touch the gaskets if they are not going to be replaced.

- 9- Replace all necessary parts. Whenever the displacement pump is loosened, it is recommended replace seal n°24.
- 10- Assemble the displacement pump, having in mind that the packings will be interleaved: polyethylene, teflon, polyethylene, etc.

When assembling piston n°23 on shaft n°18, apply Loctite 542 and allow it to dry before assembly.



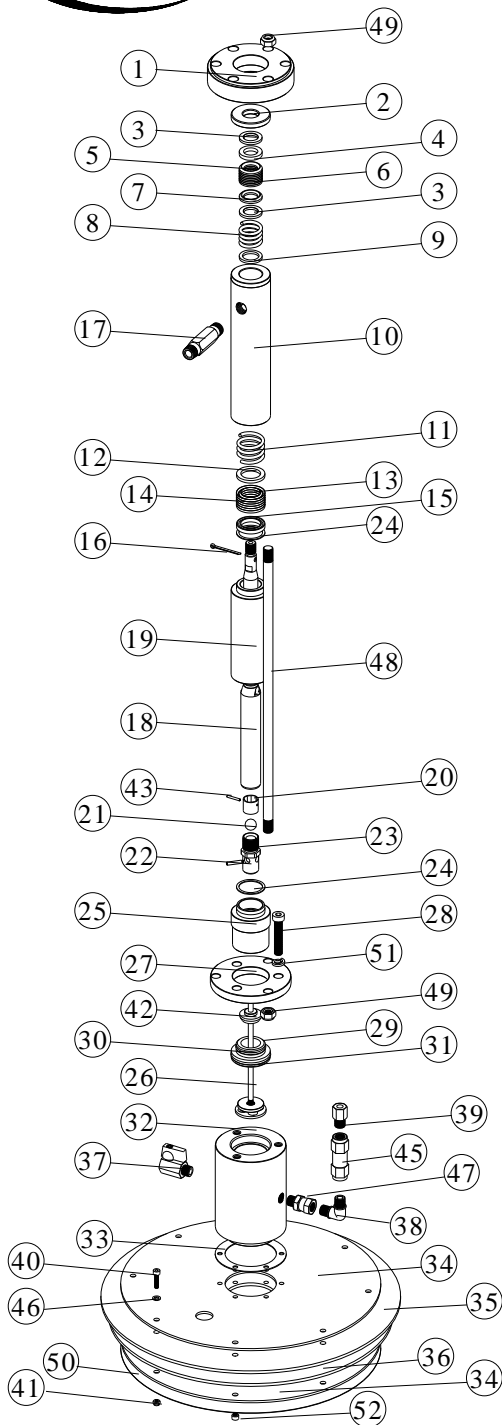
WARNING

If you have any problems, please contact technical support. Do this before disassembling anything.

NOTE: See figure n° 4 pag.on page11

We have different sizes of extrusion plates available.

+++34:	110.260.03	PLATE	Ø329
	110.261.03	PLATE	Ø250
	110.265.03	PLATE	Ø205
+++35:	110.260.04	JOINT	Ø379
	110.261.04	JOINT	Ø295
	110.265.04	JOINT	Ø245
	110.266.04	JOINT	Ø310
	110.267.04	JOINT	Ø317
+++36:	110.260.05	JOINT	Ø360
	110.261.05	JOINT	Ø275
	110.265.05	JOINT	Ø225
	110.266.05	JOINT	Ø290
	110.261.04	JOINT	Ø295
+++50:	110.260.06	NYLON	Ø329
	110.261.06	NYLON	Ø250
	110.265.06	NYLON	Ø205



(fig.4)

N°	REF.	DESCRIPTION	Q
1	112.200.01	SUPPORT PUMP	1
2	110.200.02	STOP	1
*3	110.230.03	WASHER	2
*4	110.230.01	FEMALE GLAND	1
*5	110.230.04	PACKING	4
*6	110.230.05	PACKING	4
*7	110.230.02	MALE GLAND	1
*8	110.230.07	SPRING	1
*9	110.230.06	WASHER	1
10	110.200.03	CYLINDER	1
*11	110.240.05	SPRING	1
*12	110.240.02	MALE GLAND	1
*13	110.240.03	PACKING	3
*14	110.240.04	PACKING	3
*15	110.240.01	FEMALE GLAND	1
16	CPA.101	PIN	1
17	110.200.05	NIPPLE	1
18	110.210.01	ROD	1
19	110.200.04	CYLINDER	1
20	110.210.03	BUSHING	1
21	CBO.111	BALL	1
22	CPA.012	PIN	1
23	110.210.02	PISTON	1
24	110.220.04	JOINT	2
25	110.220.01	VALVE	1
26	110.250.00	TIE	1
27	112.220.02	SUPPORT	1
28	CTB.038	SCREW	3
29	110.220.03	SHUT-OFF VALVE	1
30	CJT.169	O-RING	1
31	CJT.170	O-RING	1
32	110.260.01	CYLINDER	1
33	110.260.02	JOINT	1
34	++++	PLATE (SEE PAGE10)	2
35	++++	JOINT (SEE PAGE10)	1
36	++++	JOINT (SEE PAGE10)	1
37	CNC.004	VALVE	1
38	CNA.080	NIPPLE	1
39	CNA.135	NIPPLE	1
40	CTB.003	SCREW	8
41	CTU.103	NUT	8
42	110.251.00	BUSHING	1
43	110.210.04	PIN	1
45	CNA.028	NON RETURN VALVE	1
46	CAR.001	WASHER	14
47	CNA.140	NIPPLE	1
48	112.200.02	TIE	3
49	CTU.108	NUT	6
50	++++	JOINT (SEE PAGE10)	1
51	CAR.053	WASHER	3
52	CTB.021	SCREW	6

* Included in KIT.052



WARNING

Before starting any maintenance work on the equipment or installation, follow the **PRESSURE RELIEF PROCEDURE**.

- 1- Wash the pump, hose, and spray gun using a degreaser that is compatible with the product and with the wet parts of the equipment.
- 2- Depressurize the equipment following the **SAFETY RULES**.
- 3- It is essential that you disconnect the pump hose.
- 4- Unscrew the pneumatic motor from the base by turning it to the left and, once the cylinder is loose from the base, pull the motor until the pin connecting the motor shaft and the base shaft appears. Use a punch and hammer to remove the pin and unscrew the shafts.
- 5- Loosen the plug n°1 with a spanners and remove the screws n°19. Finish removing plug n°1 and, using a spanner with a padded jaw to avoid marking shaft n°7, remove it from plug n°1, placing a nut on the thread of shaft n°7 to prevent it from falling inside the mechanism.



CAUTION

To perform step 5, it is essential to use a padded spanner so as not to damage the surface of shaft n°7, as failure to do so may result in distorted motor movement.



CAUTION

When removing cylinder n°3, ensure that you do so vertically to avoid scratching the surface and causing leaks.



WARNING

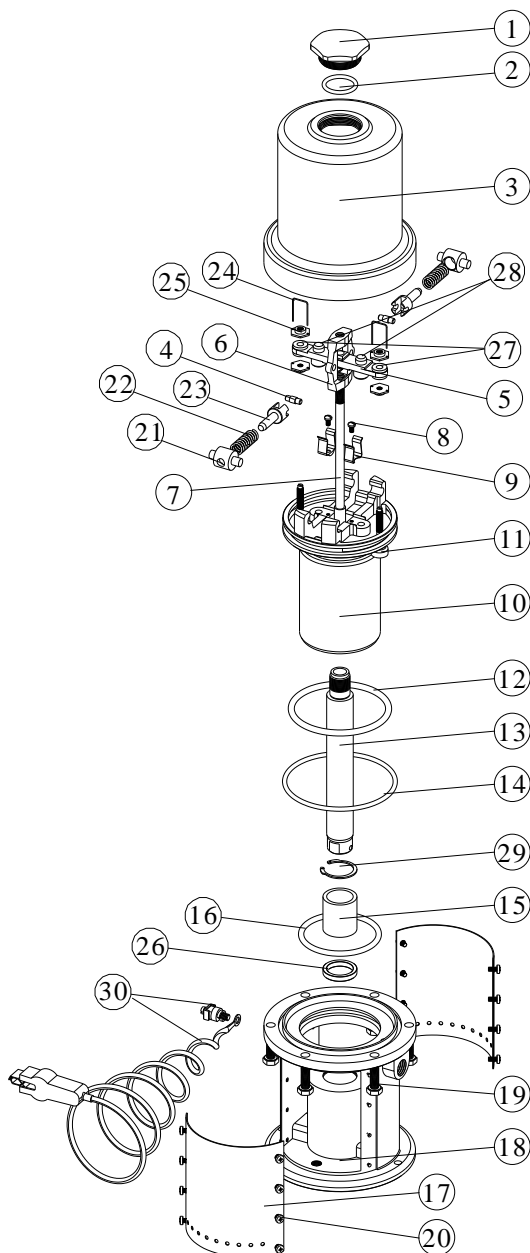
To reduce the risk of accidents, keep your fingers away from the tilting mechanism and when you need to operate it, do so sensibly.

- 6- Remove cylinder n°3 vertically to the pump's natural position, taking care not to scratch the inside. All the seals are now exposed so that their condition can be examined.

NOTE: If you have to remove parts n°11 because they are damaged, when reassembling them, check that the clearance must be exactly the same on both sides and that the measurement is between 4.1 and 4.2 mm.

- 7- Replace the defective parts.

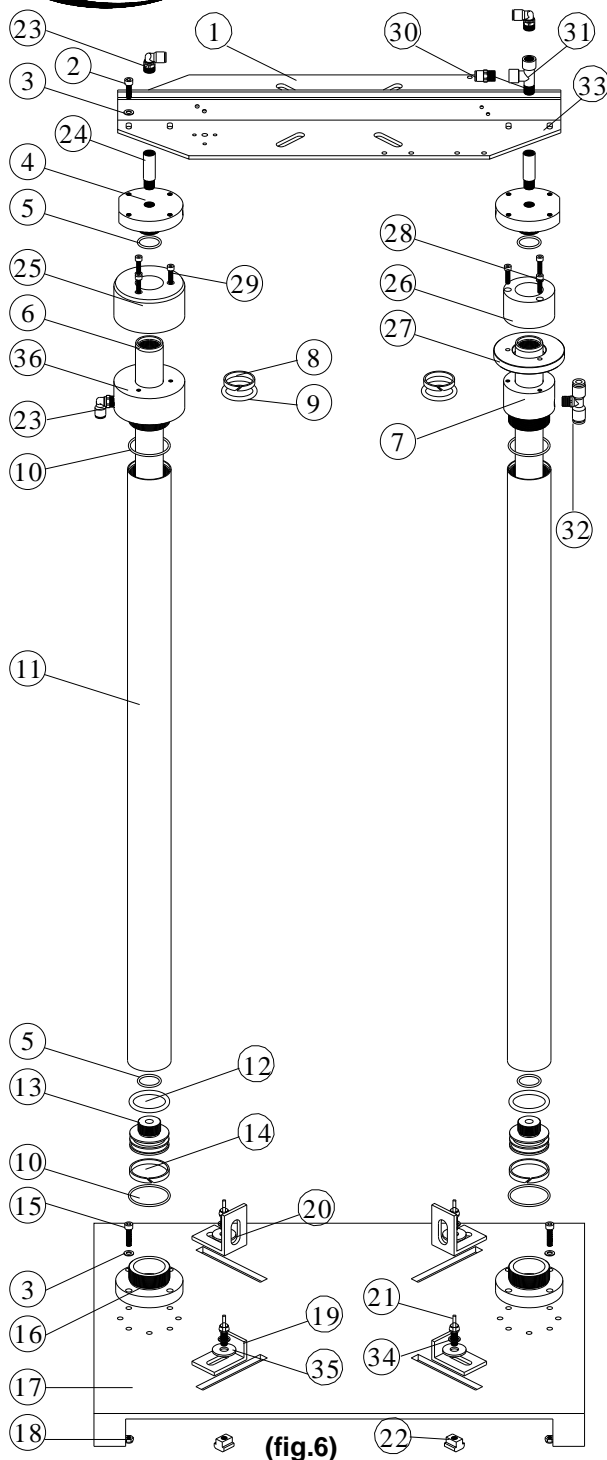
Pneumatic part of the equipment. It is very important that the air flows into the machine clean. The maximum inlet pressure is 6 bar.



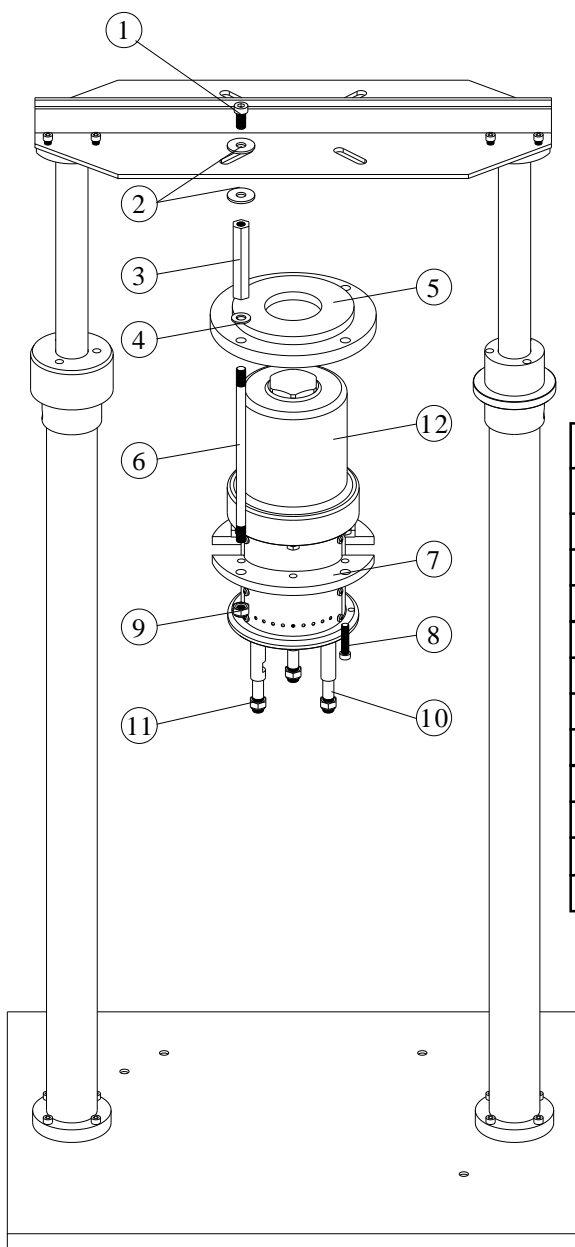
(fig.5)

N°	REF.	DESCRIPTION	Q
1	A.110.02	CAP	1
2	CJT.001	JOINT	1
3	A.110.01	CYLINDER	1
4	A.120.04	ROD	2
5	A.120.07	SUPPORT	1
6	A.120.08	YOKE	1
7	A.121.00	ROD	1
8	CTH.008	SCREW	2
9	A.140.02	CLIP	2
10	A.140.01	PISTON	1
*11	A.122.00	STEM	2
*12	CJT.002	JOINT	1
13	A.120.11	ROD	1
*14	CJT.003	JOINT	1
15	CB2.015	SLEEVE	1
*16	CJT.004	JOINT	1
17	A.130.02	PLATE	2
18	A.150.01	BASE	1
19	CTA.001	SCREW	6
20	CTC.001	SCREW	16
21	A.120.01	ROCKER	2
22	A.120.02	SPRING	2
23	A.120.03	ROD	2
*24	A.120.05	CLIP	2
25	A.120.06	NUT	4
26	A.150.02	JOINT	1
*27	A.120.10	JOINT	2
*28	A.120.09	JOINT	2
29	CAR.125	RETAINER	1
30	TIE.GR	GROUND	1

* Included in KIT.058



N°	REF.	DESCRIPTION	Q
1	110.300.01B	SUPPORT	1
2	CTB.001	SCREW	8
3	CAR.021	WASHER	24
4	110.320.02	SUPPORT	2
5	CJT.174	O-RING	4
6	110.320.05	HOSE	2
7	110.320.04	GUIDE ROD	1
8	110.320.08	JOINT	2
9	CJT.173	O-RING	2
10	CJT.172	O-RING	4
11	110.320.03	HOSE	2
12	CJT.171	O-RING	2
13	110.320.06	PISTON	2
14	110.320.07	JOINT	2
15	CTB.011	SCREW	8
16	110.320.01	SUPPORT	2
17	110.310.00	SUPPORT	1
18	CTU.105	NUT	8
19	110.300.02	STOP	2
20	110.300.03	STOP	2
21	CTA.025	SCREW	4
22	CTU.145	NUT	4
23	CNA.065	NIPPLE	3
24	110.300.06	NIPPLE	2
25	110.320.12	TIE	1
26	110.320.10	TIE	1
27	110.320.11	SUPPLEMENT	1
28	CTB.017	SCREW	3
29	CTB.003	SCREW	3
30	CNA.066	NIPPLE	1
31	CNA.059	T	1
32	CNA.133	T	1
33	110.300.01A	SUPPORT AIR MOTOR	1
34	CAR.256	WASHER	4
35	CAR.252	WASHER	4
36	110.321.04	GUIDE ROD	1



N°	REF.	DESCRIPTION	Q
1	CTA.017	SCREW	4
2	CAR.252	WASHER	8
3	110.100.04	TIE	4
4	CAR.005	WASHER	4
5	110.100.01	SUPPORT	1
6	112.100.05	TIE	4
7	110.100.02	SUPPORT	2
8	CTB.039	SCREW	8
9	CTU.101	NUT	4
10	110.100.07	TIE	3
11	CTU.108	NUT	3
12	A.100.00	AIR MOTOR	1

(fig.7)

Pressure ratio	15:1
Max. Fluid outlet pressure	150 bar
Max. Air inlet pressure	10 bar
Air inlet to the pump	1/4"
Fluid outlet	3/8"
Flow rate	35 cc/cycle
Joints plate follower	VITON/EPDM
Weight	60 kg

Typical applications: - Lubricants

- Inks

- Sealants

- Adhesives

WARRANTY

M.B.P., will any repairs necessary during the first 12 months after purchase of a new unit, with the exceptions shown under 1 and 2 below, and under the conditions shown in item 3.

- 1.- Damage caused by external abuse, customer negligence, or failure to operate the unit in accordance with the instructions supplied with the unit.
- 2.- Normal maintenance items.
- 3.- Within the first 12 months after purchase, M.B.P. will pay 100% of the cost of covered repairs.

In no case will M.B.P. liability extend beyond repair or replacement of the equipment. Such liability is limited to the amount of the original purchase price paid for the unit, minus a reasonable deduction for the time the unit has been in service. It is the responsibility of the purchaser under this warranty to ship or deliver the failed paint sprayer to the authorized service center at the purchaser's expense. Parts or components covered under this warranty may either be repaired or replaced at M.B.P. option.

Equipment not covered by M.B.P. warranty. Accessories or components of equipment sold by M.B.P. that are not manufactured by M.B.P. are subject to the warranty, if any, of their manufacturer. M.B.P. will provide purchaser with reasonable assistance in making such claims.

The Industry Department of The Basque Government, states that all electric and pneumatic airless equipment manufacture by M.B.P. S.L., follows the "CE" standards under the number 83/392/CEE.



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