



PAT 1:1



**PAT 1 BSL
PAT 1 BSLX**

**PAT 1 BS
PAT 1 BSX**

* AVAILABLE STAINLESS
STEEL VERSION

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

MODELO / MODEL PAT

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

This Product complies with the following European Community Directive.

Directiva 2014/34/EU Atex sobre máquinas. (Ex II 2G c T6 X)

Machinery Directive 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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GENERAL SAFETY

Any misuse of the equipment or accessories, such as overpressurizing, modifying parts, using incompatible chemicals and fluids, or using worn or damaged parts, can cause them to rupture and result in serious bodily injury, such as splashing fluid in the eyes or on the skin, fire, explosion, or property damage.

Never alter or modify any part of this equipment; doing so could cause it to malfunction.

Check all equipment regularly and repair or replace worn or damaged parts immediately.

This pump can develop 10 bar (140 psi). Be sure that all equipment and accessories are rated to withstand the maximum working pressure of this pump. Do not exceed the maximum working pressure of any component or accessory used in the system.

FIRE OR EXPLOSION HAZARD

Static electricity is created by the flow of fluid through the pump and hose. If every part of the equipment is not properly grounded, sparking may occur, and the system may become hazardous. Sparking may also occur when plugging in or unplugging a power supply cord. Sparks can ignite fumes from solvents and the fluid being dispensed, dust particles and other flammable substances, and can cause fire or explosion and serious bodily injury and property damage.

If you experience any static sparking or even a slight shock while using this equipment, stop spraying immediately. Check the entire system for proper grounding. Do not use the system again until the problem has been identified and corrected.



PRESSURE RELIEF PROCEDURE

To reduce the risk of serious bodily injury, including splashing in the eyes or on the skin, or injury from moving parts, always follow this procedure whenever you shut off the pump, when checking or servicing any part of the system, when installing, cleaning or changing nozzles, and whenever you stop dispensing.

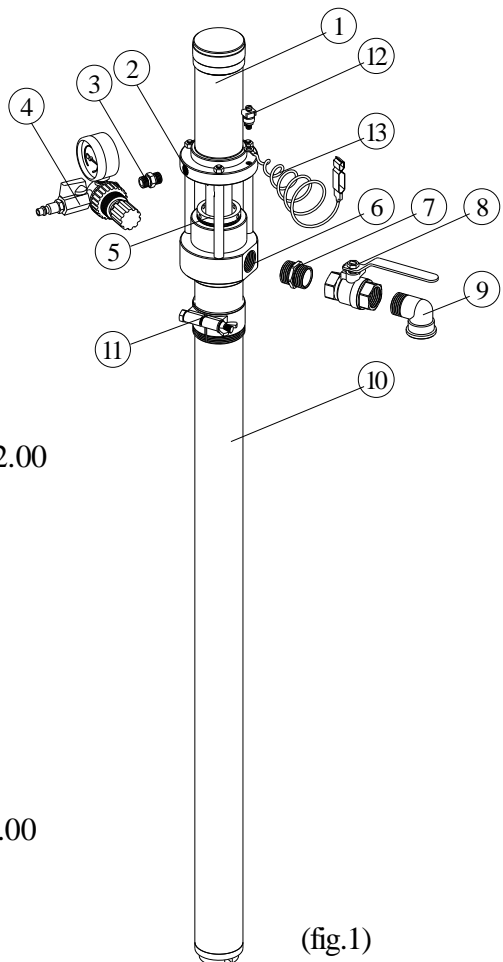
- 1.- Shut off the air to the pump.
- 2.- Close the bleed-type master air valve.
- 3.- Hold a metal part of the dispensing valve firmly to the side of a grounded metal pail, and actuate the valve to relieve pressure.
- 4.- Open the drain valve, having a container ready to catch the drainage.
- 5.- Leave the drain valve open until you are ready to dispense again.

If you suspect that the nozzle or hoses is completely clogged, or that pressure has not been fully relieved after following the steps above, very slowly loosen the hose end coupling and relieve pressure gradually, then loosen completely. Now clear the nozzle or hose.

Low pressure, high flow pump for quick and efficient transfer of fluids. It can draw liquid straight out of a 200 litres barrel or as a pump for a pipe distribution system.

The divorced design prolongs the working life of the pump, avoids deterioration of the air motor joints otherwise caused by contact when the fluids are being transferred and allows packing to be adjusted externally.

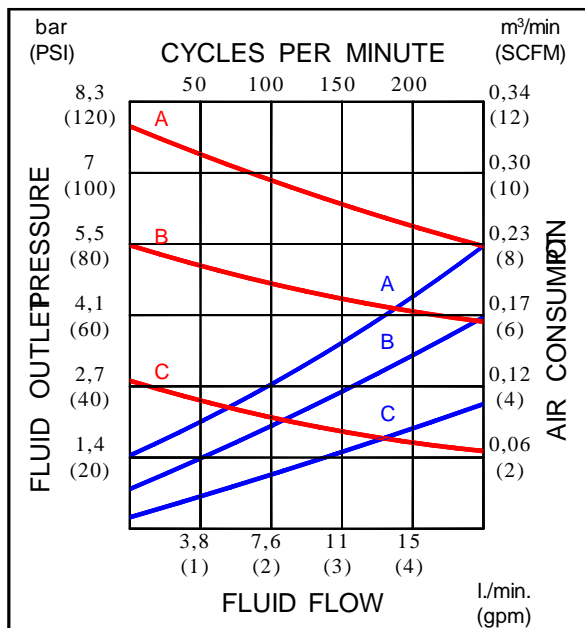
The Pat 1 can be used with a wide variety of products including: solvents, thin dyes, lacquers, enamels, varnish, paints, oil, etc.



- 1.- Air motor
- 2.- Air inlet 1/4 gas
- 3.- Coupling (optional) CNA.055
- 4.- Pressure control (optional) F.102.00
- 5.- Packing nut
- 6.- Product outlet 3/4 gas
- 7.- Coupling (optional) CNA.008
- 8.- Valve (optional) CNC.008
- 9.- Coupling (optional) CNA.056
- 10.- Cylinder
- 11.- Bung adapter (optional) 4.500.00
- 12.- Ground 101.400.00
- 13.- Wire ground 101.610.00

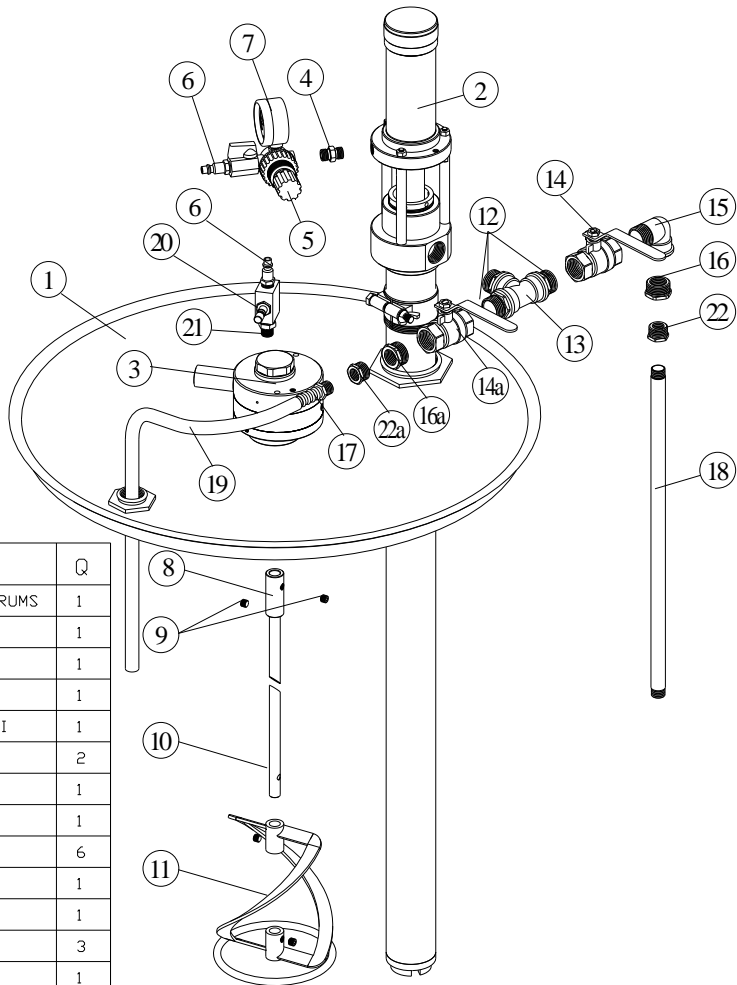
(fig.1)

TECHNICAL SPECIFICATIONS	
PUMP RATIO	1:1
MAXIMUM CONTINUOUS FLOW	19 l/min.(5 gpm)
AIR MOTOR DIAMETER	50 mm.
AIR INLET PRESSURE RANGE	2-10 bar (30-140 psi)
MAXIMUM FLUID PRESSURE	10 bar (140 psi)
AIR INLET SIZE	1/4''npt (f)
FLUID OUTLET	3/4''npt (f)
PACKINGS	Teflón
WEIGHT	corta 5 kgs, larga 7 kgs



— Fluid pressure
— Air consumption

Air pressure: A= 7 bar(100 psi)
 B= 5 bar (70 psi)
 C= 3 bar (40 psi)



Nº	REF.	DESCRIPTION	Q
1	7.401.00	COVER FOR 200L DRUMS	1
2	AM60010220	PAT 1 BSL	1
3	7.100.00	PNEUMATIC MOTOR	1
4	CNA.055	COUPLING	1
5	CNB.054	REGULATOR 1/4 MINI	1
6	CNA.106	COUPLING	2
7	CNB.002	GAUGE	1
8	7.200.01	CONNECTION	1
9	CTG.013	PIN	6
10	7.720.01	SHAFT	1
11	7.210.00	BLADE	1
12	CNA.008	COUPLING	3
13	CNA.003	COUPLING	1
14	CNC.008	VALVE	2
15	CNA.056	COUPLING	1
16	CNA.009	COUPLING	2
17	CNA.091	COUPLING	1
18	D.600.01	TUBE	1
19	7.400.01	TUBE	1
20	7.300.00	AIR REGULATOR	1
21	G.100.06	COUPLING	1
22	CNA.005	COUPLING	2

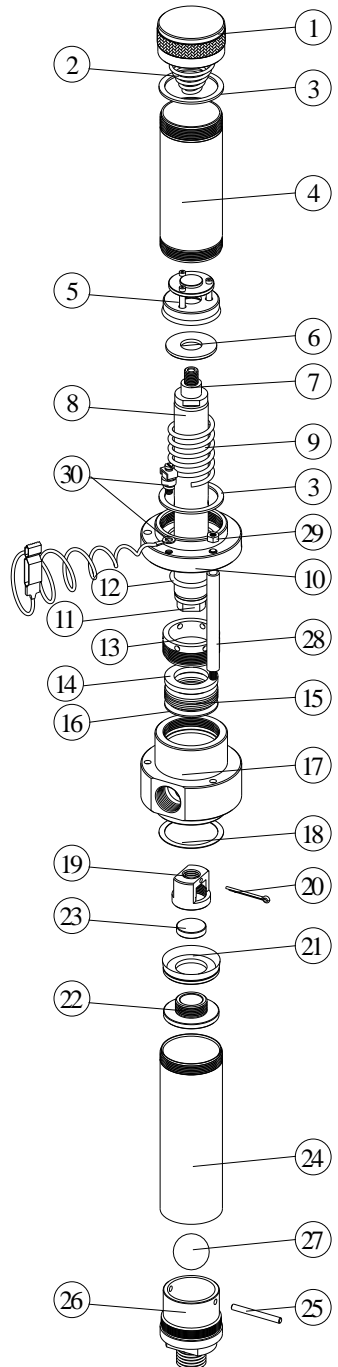
(fig.2)

N°	Ref.BS	Ref.BSX	Description	Q.
1.-	3.000.01	3.000.01	CAP	1
2.-	3.000.02	3.000.02	SPRING	1
3.-	3.000.03	3.000.03	JOINT	2
4.-	3.000.04	3.000.04	SLEEVE	1
5.-	3.100.00	3.100.00	VALVE	1
6.-	3.000.14	3.000.14	WASHER	1
7.-	3.200.02	3.200.02	ROD	1
8.-	3.200.01	3.200.01X	ROD	1
9.-	3.000.05	3.000.05	SPRING	1
10.-	6.000.02	6.000.02	BODY	1
11.-	3.200.03	3.200.03X	CAP	1
12.-	CJT.016	CJT.016	O-RING	1
13.-	6.000.03	6.000.03X	PACKING NUT	1
14.-	6.000.04	6.000.04X	FEMALE GLAND	1
*15.-	6.000.05	6.000.05	PACKING	6
16.-	6.000.06	6.000.06X	MALE GLAND	1
17.-	6.000.07	6.000.07X	BODY	1
18.-	3.000.12	3.000.12	JOINT	1
19.-	3.300.01	3.300.01X	VALVE	1
20.-	CPA.101	CPA.101	PIN	1
*21.-	3.300.02	3.300.02	JOINT	1
22.-	3.300.04	3.300.04X	SEAT	1
23.-	3.300.03	3.300.03	DISK	1
24.-	3.000.17	3.000.17X	SLEEVE	1
25.-	3.400.02	3.400.02	PIN	1
26.-	3.400.01	3.400.01X	BODY	1
27.-	CB0.115	CB0.115	BALL	1
28.-	6.000.01	6.000.01	TIE	3
29.-	CTU.002	CTU.002	NUT	3
30.-	TIE.PQ	TIE.PQ	GROUND	1

* Included in KIT.006

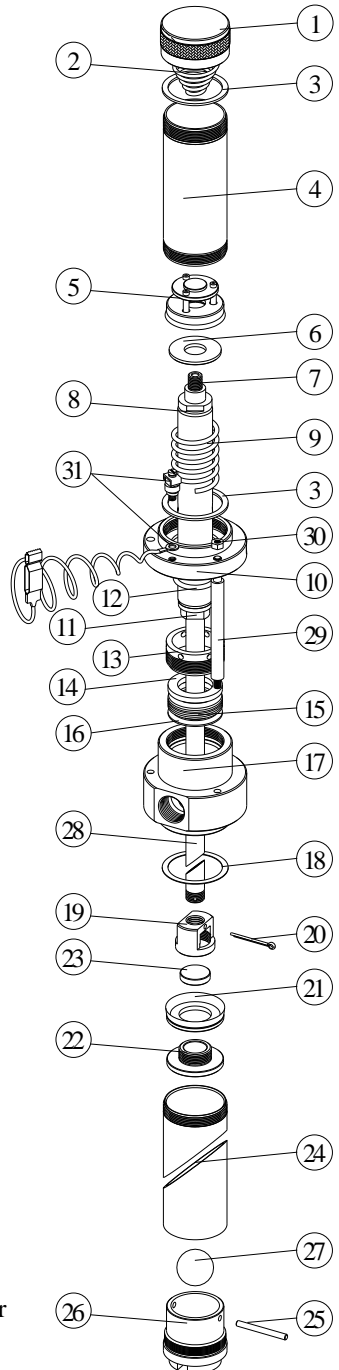
NOTE: Fix parts 19 and 22 with locite 542 or similar (wait 1 hour before start running the unit).

PAT 1 BSX: STAINLESS STEEL VERSION



(fig.3)

N°	RefBSL	RefBSLX	Description	Q.
1.-	3.000.01	3.000.01	CAP	1
2.-	3.000.02	3.000.02	SPRING	1
3.-	3.000.03	3.000.03	JOINT	2
4.-	3.000.04	3.000.04	SLEEVE	1
5.-	3.100.00	3.100.00	VALVE	1
6.-	3.000.14	3.000.14	WASHER	1
7.-	3.200.02	3.200.02	ROD	1
8.-	3.200.01	3.200.01X	ROD	1
9.-	3.000.05	3.000.05	SPRING	1
10.-	6.000.02	6.000.02	BODY	1
11.-	4.200.03	4.200.03X	CAP	1
12.-	CJT.016	CJT.016	O-RING	1
13.-	6.000.03	6.000.03X	PACKING NUT	1
14.-	6.000.04	6.000.04X	FEMALE GLAND	1
*15.-	6.000.05	6.000.05	PACKING	6
16.-	6.000.06	6.000.06X	MALE GLAND	1
17.-	6.000.07	6.000.07X	BODY	1
18.-	3.000.12	3.000.12	JOINT	1
19.-	3.300.01	3.300.01X	VALVE	1
20.-	CPA.101	CPA.101	PIN	1
*21.-	3.300.02	3.300.02	JOINT	1
22.-	3.300.04	3.300.04X	SEAT	1
23.-	3.300.03	3.300.03	DISK	1
24.-	4.000.17	4.000.17X	SLEEVE	1
25.-	3.400.02	3.400.02	PIN	1
26.-	4.400.01	4.400.01X	BODY	1
27.-	CB0.115	CB0.115	BALL	1
28.-	4.000.21	4.000.21X	SHAFT	1
29.-	6.000.01	6.000.01	TIE	3
30.-	CTU.002	CTU.002	NUT	3
31.-	TIE.PQ	TIE.PQ	GROUND	1



(fig.4)

* Included in KIT.006

NOTE: Fix parts 19 and 22 with loctite 542 or similar (wait 1 hour before start running the unit).

PAT 1 BSLX: STAINLESS STEEL VERSION



FLUSH PUMP BEFORE USING

Pumps are tested with lightweight oil, which is left in to protect pump parts. To prevent contamination of the fluid you are pumping, flush the pump with a compatible solvent before using it.

To flush pump, connect short hose to pump outlet, insert pump intake into a pail of compatible solvent, direct hose into pail and start pump as explained below.

Allow pump to cycle slowly for at least 5 minutes, than stop and disconnect air hose. Push up on the ball of the intake valve to drain upper part of pump.

STARTING AND OPERATING PUMP

With the air valve or regulator closed, turn on air supply and connect air line coupler. Make sure all valves used in dispensing are open.

Slowly open air valve or regulator until pump cycles 5 to 20 cycles/min. The pump itself only takes a few strokes to prime.

Once the pump and system is primed, use the air valve or regulator to control pump speed and cycle rate: always use the lowest pressure needed to get desired result.

When used for transfer and supply operations with no dispensing valve, pump will run whenever air supplied.



MAINTENANCE

Fill the packing nut 1/2 full of MBP packoil or compatible solvent and keep it 1/2 full to keep fluid from drying on the displacement rod and damaging pump throat packings.

Lubricate the throat packings frequently when you are pumping a non-lubricating fluid, or are shutting down for more than a few days.

To manually lubricate the motor, disconnect the air line at the air motor inlet, put above 15 drops of lightweight oil in the inlet, reconnect the air line and turn on the air to blow oil into the motor.

Never allow the pump to run dry of fluid being pumped. A dry pump will quickly accelerate to a high speed, possibly damaging itself. If your pump accelerates quickly, or is running too fast, stop it immediately and check the fluid supply. If the supply container is empty and air has been pumped into lines, prime pump and lines with fluid, or flush and leave filled with compatible solvent. Be sure to eliminate all air from fluid system.

To shut down, disconnect the air inlet coupler. Follow the pressure relief procedure above whenever you stop pumping.

Periodically, check the tightness of the packing nut. Nut should be tight enough to prevent: no tighter.



TROUBLESHOOTING GUIDE

PROBLEM	CAUSE	SOLUTION
Pump fails to operate.	Dirty or worn air motor.	Clean.
	Inadequate air supply or restricted line.	Clean or increase.
	Closed or clogged air valves.	Open, clear.
	Clogged fluid hose or valve.	Clear.
	Worn or damaged valves or seals.	Service.
Pump operates but output low on both strokes.	Clogged fluid hose or valve.	Clear.
	Exhausted fluid supply.	Refill.
	Worn or damaged valves or seals.	Service.
Pump operates but output low on downstroke.	Worn or damaged valves or seals.	Service.
	Piston valve held open.	Clear, service.
Pump operates but output low on upstroke.	Worn or damaged valves or seals.	Service.
	Piston valve held open.	Clear, service.
Erratic or accelerated operation.	Exhausted fluid supply.	Refill.
	Broken air motor compression spring.	Replace.



BUNG ADAPTER
4.500.00



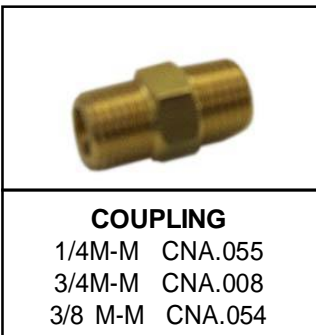
AIR VALVE
1/4M-F CNC.003
3/8M-F CNC.004
3/4H-F CNC.008



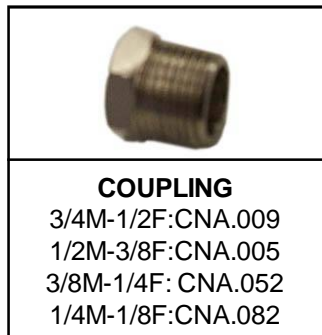
PRESSURE CONTROL
F.102.00



AIR FILTER REGULATOR
CNB.078



COUPLING
1/4M-M CNA.055
3/4M-M CNA.008
3/8 M-M CNA.054



COUPLING
3/4M-1/2F:CNA.009
1/2M-3/8F:CNA.005
3/8M-1/4F: CNA.052
1/4M-1/8F:CNA.082

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.

