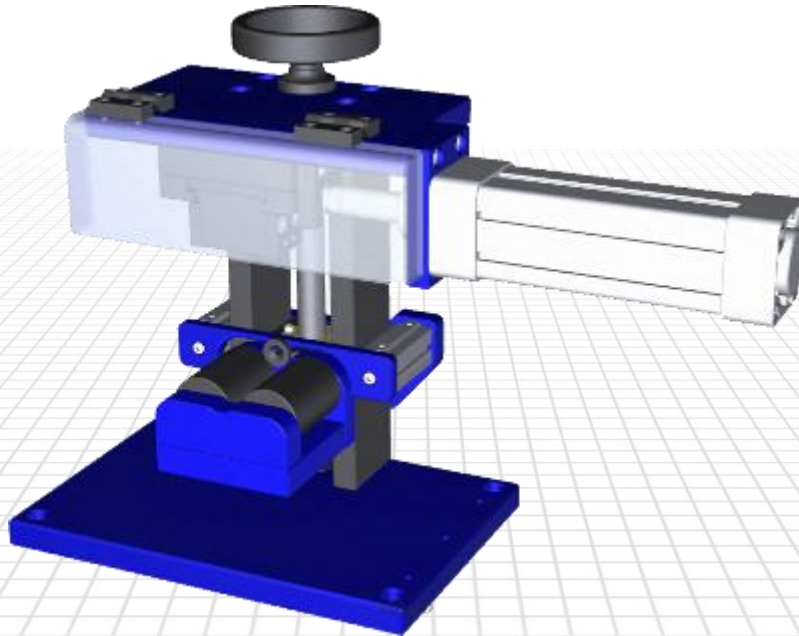


HOSE MARKING MACHINE

ASPM



MAINTENANCE & INSTRUCTIONS MANUAL

A. WARRANTY AND RESPONSIBILITY

Warranty: It's the supplier's responsibility to guarantee the conformity of the product, assuring that it's manufactured without fault and that it meets the agreement settlements between both parts.

The warranty is valid for one year, beginning at the date of the sale document. In this warranty are included all the pieces or parts of the components that may come to need replacement. Within the warranty period the supplier is responsible for any lack of conformity found on the equipment, as long as they are reported by written, within a maximum of 8 days from the delivery of the equipment. Where it concerns to lack of conformity duly verified, the manufacturer undertakes the responsibility to, within a reasonable period of time, to repair or replace the components, or parts of these, that are proven to not be within normal standards.

The return of defective goods, must always be authorized in written by the supplier. Furthermore the goods need to be returned in it's original packaging.

During the term of this warranty, Allswage UK will proceed to the replacement or repair of equipment - according to it's option - assuming the costs that come from it. To this end, it must be informed by the customer, within the 3 days after the malfunction started. All replaced parts are property of Allswage UK.

The warranty is void when: The products have not be correctly assembled, or used for different purposes that the intended; Have not received proper maintenance, or have been modified or repaired without the authorization of the supplier. The manufacturer is not responsible for the natural consumption of the components.

Supplier's Responsibility: the supplier shall be the solely responsible for the proper functioning of the product and, for its characteristics and performances specifically stated by them. However, the manufacturer takes no responsibility as long as it's identified third party interference.

B. INSTRUCTIONS MANUAL PURPOSE

This manual was developed by the technical department of Allswage UK. Its purpose is to establish guidelines, concerning the assembly, installation, maintenance and functioning of the marking machine. Guidelines that are indispensable to assure and proper functioning of the machine, maintaining the safety requirements needed. The marking machine was designed and manufactured following the European Safety Standards Board. As long as it's used properly, it's function, adjustment and maintenance do not present any danger to the operators.

B1. SAFETY REGULATIONS



- **DO NOT USE** the equipment without reading this manual and **UNDERSTANDING ITS CONTENTS.**



- **CAUTION!** The misuse of this equipment can cause injury. The operator shall never be in contact with the moving pieces or work within their reach.



- **CAUTION!** It's absolutely essential that the work operations are performed by one single operator.
- The owner needs to make sure that the manual is kept in an appropriate manner and that the operator understands the whole content of the manual, along with his/her responsibilities.

- Shields, protections and safety guards should never be removed.
- Check if the pressure corresponds to the one mentioned on the characteristics of the equipment.
- Make sure the marking is always done under safe conditions. Never put your hands in the marking area while the machine is working. Keep a minimal distance of 200mm between your hands and moving parts.



- Use gloves and appropriate protective gear.
 - While working, always follow the instructions shown in the machine labels.
 - Always turn the air pressure off during maintenances that should be done by specialized personal.
- The marking machine should only be operated by qualified adults.
 - The moving parts must be kept clean and well lubricated.
 - Original replacement parts must be used in order to maintain it's original characteristics and it's certification and warranty.
 - Keep the power tube away from the work area and make sure that it doesn't make the operations difficult.
 - Our equipment is designed according to the safety technical characteristics in accordance with the EC normative.
 - The operators are advised to follow strictly the instructions supplied in this manual.

C. TRANSPORTATION



Transportation and work place: Although the machine is easily located, ensure the machine is safely moved and intact.

Ensure the machine is placed on a solid, level surface.

Always work under safety conditions and with the necessary space around the machine.

The Manufacturer is not liable for any damages caused by negligence.



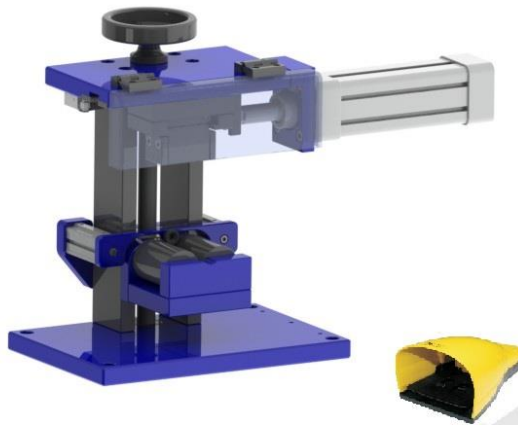
Production waste: The production waste is compared to solid waste and can be disposed without difficulty.

If the machine is installed in countries where there are specific rules, production waste should be disposed of according to local regulations in force.

D. EQUIPMENT CHARACTERISTICS

TECHNICAL FILE/DIMENSIONS	MARK100P
MARKING CAPACITY	0.8MM>120MM
MARKING LINES	3
CHARACTERS	3mm
NUMBER OF	30
DIMENSIONS	508mmX241mmX348mm
WORK PRESSURE	6bar
CONTROLS	PNEUMATICS
WEIGHT	28KG
SOUND LEVEL	80dBA
PROTECTION	INCLUDED
PNEUMATIC CIRCUIT	INCLUDED
FITTINGS EXTRACTOR	INCLUDED

E. MACHINE INSTRUCTIONS



Picture 1 – Marking Machine

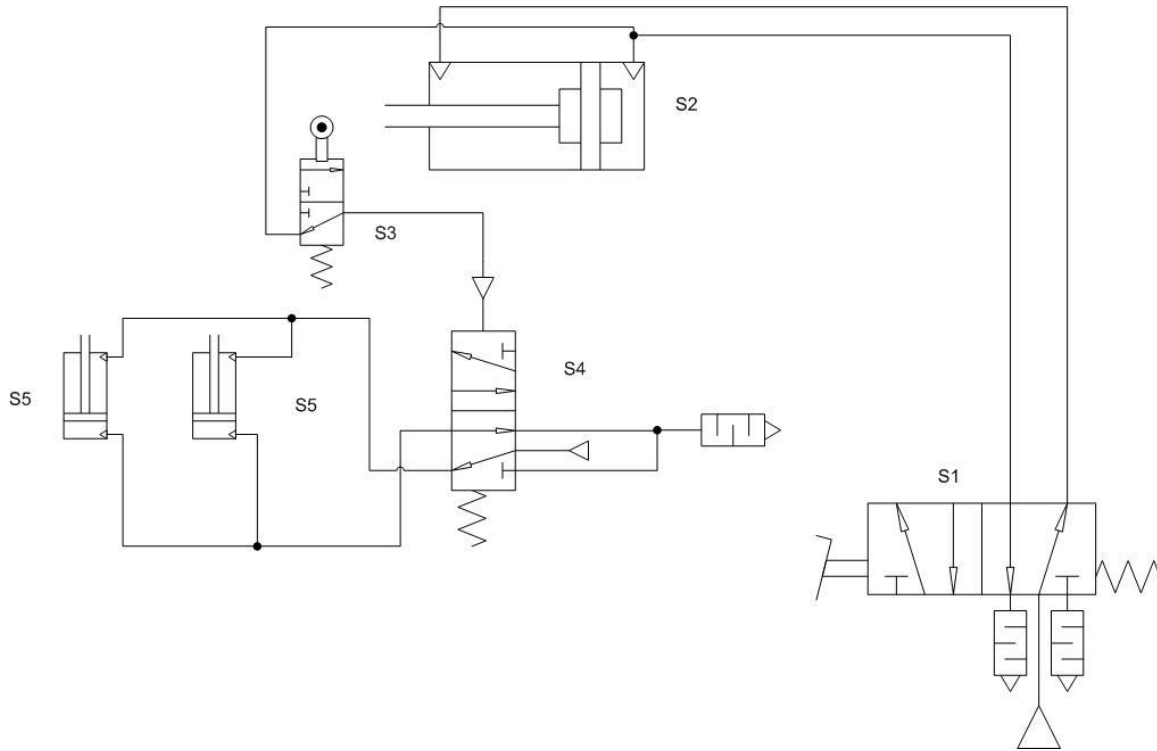
E1. MACHINE DESCRIPTION & PROTECTION SYSTEMS

This machine was designed to mark fittings (production of hydraulic hoses)

The machine is a character holder linked to a pneumatic cylinder which marks fittings, with enough protections to avoid risks or injuries.

The equipment has a frontal shield to protect the operator from steel pieces and to avoid being too near the marker. This shield must always be down.

E2. PNEUMATIC SCHEME

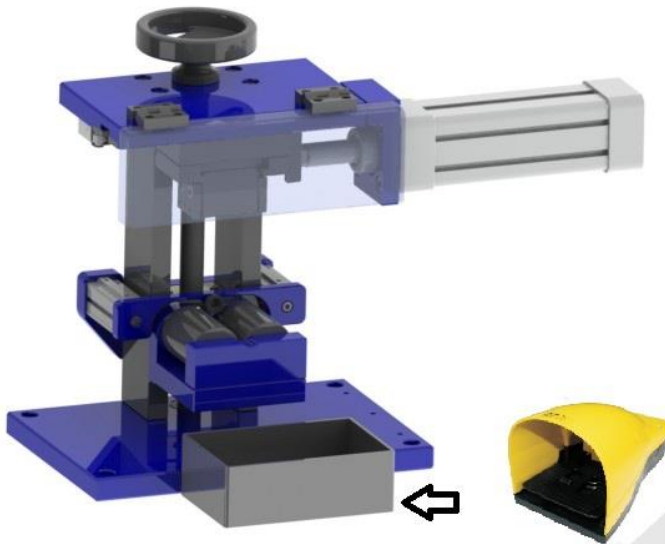


Picture 2 – Pneumatic Scheme

E3. DATA RELATING TO THE ELECTRIC EQUIPMENT

Identification	Designation
S1	5/2 coupling triggered by foot pedal and with spring return.
S2	Double acting cylinder
S3	End of circuit
S4	5/2 coupling pneumatic triggered and with spring return.
S5	Double acting cylinders

F. WORKING INSTRUCTIONS



Picture 3 – Machine with Container

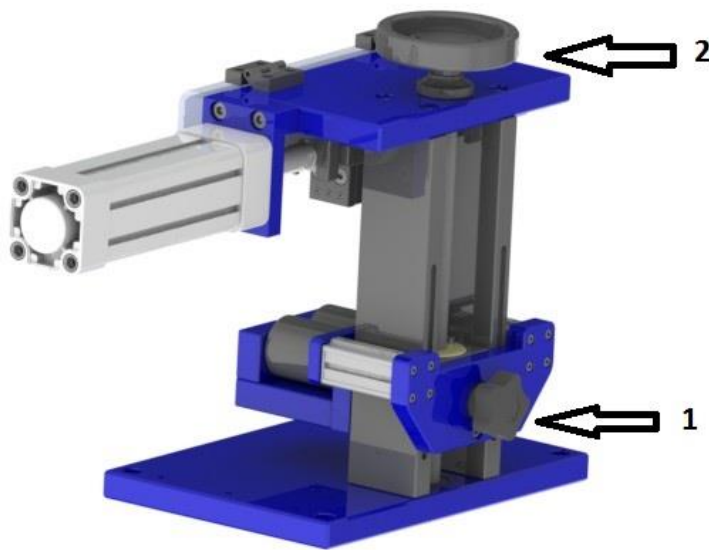
F1. FUNCTIONS OF THE CONTROLS

The marking machine has a single command that triggers the entire pneumatic system. This command is triggered by the foot pedal.

- The operator must place the fitting on top of the roller.
- Remove their hands to a safe area and step on the foot pedal;
- When pressing the foot pedal the character holder will do the markings.

The operator must always place a container in front of the work balcony (as shown on the above picture), so that the fitting, through the extraction system, is projected to it.

F2. INSTRUCTIONS FOR ADJUSTING & TUNING



Picture 4 – Adjusting the Marking Machine

The depth of the fittings marking is set-up manually by the operator.

To adjust the marking, the following steps need to be taken:

- 1 - Loosen the handle (1)
- 2 - Turn the wheel (2) (To the right it's up, to the left it's down)
- 3 - Tighten the handle (1)

F3. INSERTING THE MARKING CHARACTERS



Picture 5 – Character Holder

The characters must be placed in the character holder as following:

- 1 - Loosen the bolts (3) on both sides.
- 2 - Place the desired characters in the slots.
- 3 - Tighten the handle (3) so that the characters are well fasten.

F4. PROHIBITED WAYS OF USING THE MACHINE

- It's strictly forbidden to use the cutting machine for other ends besides the already mentioned above.
- It's forbidden to remove any of its original protection.
- It's strictly forbidden using this equipment without reading the work instructions.
- This machine can only be operated by qualified adults, and only after they have read the work instructions.

F5. POSSIBLE MALFUNCTIONS AND SOLUTIONS

- The cylinders don't work:
 - Check if there is pressure in the circuit
 - Check the pneumatic circuit
 - Verify the alignment of the various components

F6. INSTRUCTIONS USING PROTECTION EQUIPMENT



- ✓ Work wear
- ✓ Work gloves



Under no circumstances can the operator stop using the personal protection equipment mentioned above. Must always follow the basic safety principles in the installation and use of the tools listed.

G. INITIAL CHECK UP

- Place the machine on top of a level and stable surface.
- Fasten the machine to the workbench.
- It's mandatory to connect the machine to a pneumatic coupling.
- Never connect the machine directly to the pneumatic circuit.
- The pneumatic coupling must remain accessible.
- Make sure that the moving parts are clean and lightly lubricated.
- Never remove the machine protections.

THE MANUFACTURER DISCLAIMS ANY LIABILITY FOR DAMAGE TO PERSONS OR PROPERTY, CAUSED BY THE FAILURE TO FOLLOW THE ABOVE MENTIONED REQUIREMENTS OR RESULTING FROM THE CHANGE IN EVEN IF ONLY ONE PIECE OF THE EQUIPMENT AND USE OF SPARE PARTS WHICH ARE NOT ORIGINAL.

H. LIGHTING



The equipment does not have its own lighting and so it should be used in areas properly illuminated.

If the visibility at the site is not adequate, you should use artificial lighting equipment.

I. MAINTENANCE INSTRUCTIONS

The indicated activities must be performed by qualified personnel.

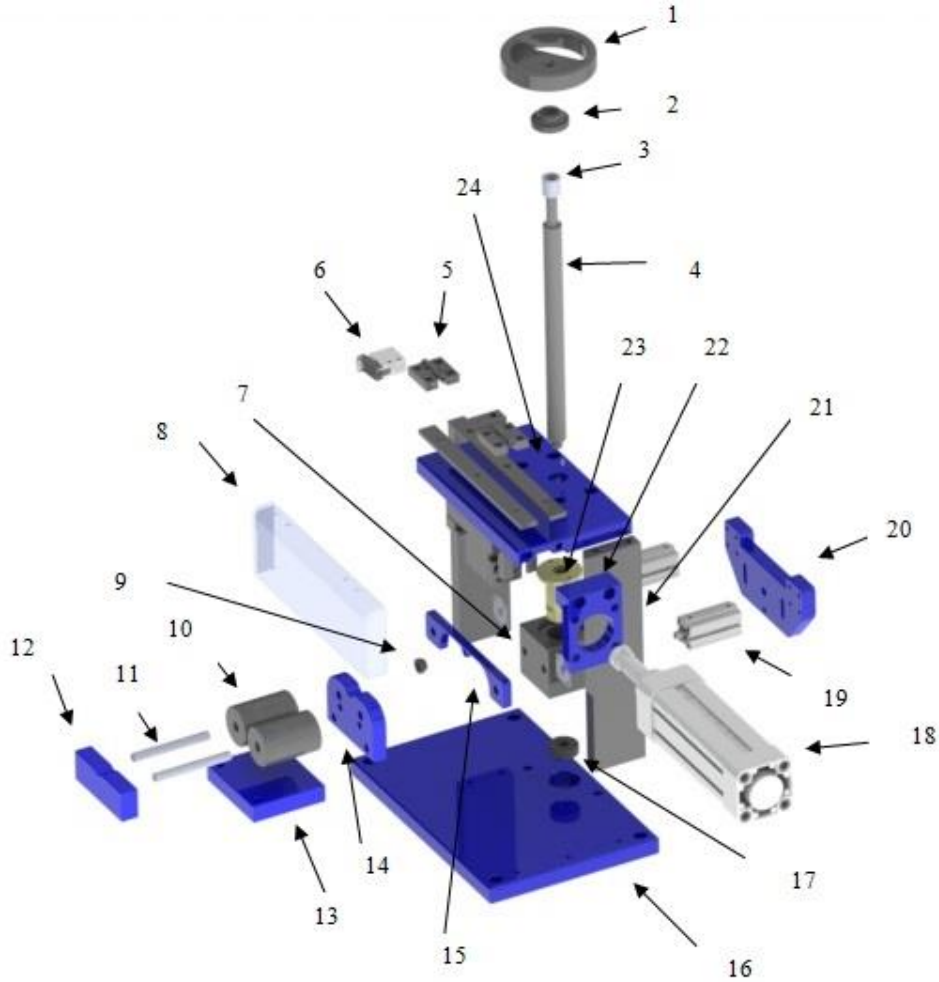
The following essential maintenance activities are therefore to take place every three months:

- ✓ Check the tightness of all screws used;
- ✓ Check the levelling of the machine making the necessary adjustments;
- ✓ Cleaning of the moving parts using compressed air (less than 6 bar) and not products that can cause adverse reactions to the materials of the machine; (You must use facial protection mask, goggles, gloves and work clothes)
- ✓ Lubricate the joints and moving parts;
- ✓ Check the components of the marking machine and replace those that are damaged;
- ✓ Check the circuit and pneumatic components;
- ✓ Check the wear of the moving parts and characters;

II. MAINTENANCE ROUTINE

- ✓ Make sure that the moving parts are always lightly lubricated.
- ✓ Periodically check the wear of the characters.
- ✓ Ensure the machine is on a level surface.

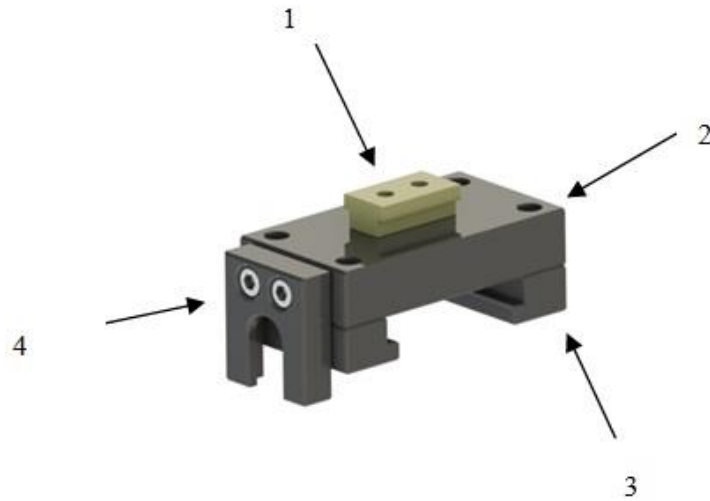
J. REPLACEMENT PARTS



Picture 6 – Replacement Parts A

Picture 6		
A1 - Wheel	A9 - Adjuster	A17 - Roller
A2 - Fitting 1	A10 - Roll	A18 - Marking cylinder
A3 - Fitting 2	A11 - Roll Pin	A19 - Extraction cylinder
A4 - Shaft	A12 - Roll Plate 2	A20 - Cylinder fastening plate
A5 - Hinge	A13 - Roll Plate 1	A21 - Pillar
A6 - End of circuit	A14 - Roll Plate 3	A22 - Cylinder fastening plate
A7 - Cube	A15 - Extractor	A23 - Shaft thread
A8 - Protection	A16 - Base Plate	A24 - Top Plate

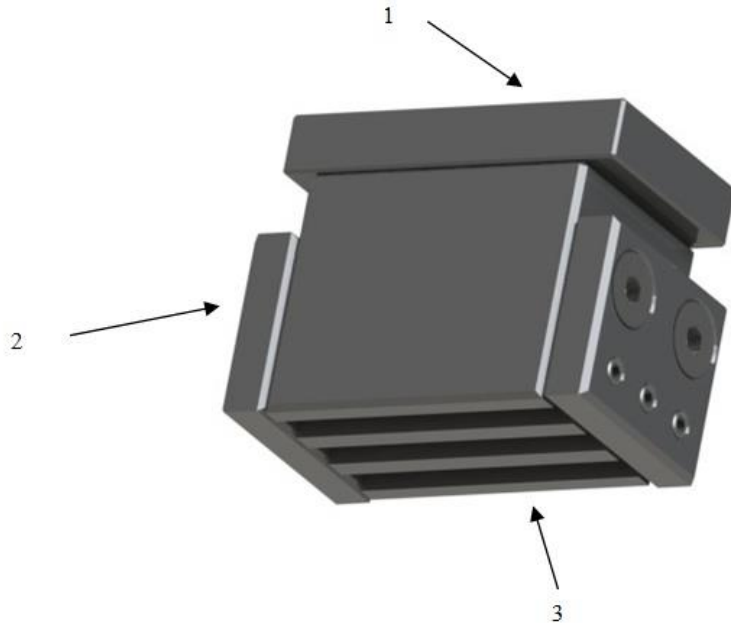
J2. PARTS



Picture 7 – Parts Identification B

Picture 7	
B1 - Guiding part	B3 - Fastening part
B2 - Head fastening part	B4 - Cylinder fastening part

J3. Parts



Picture 8 – Parts Identification C

Picture 8		
C1 - Placement part	C2 - Character holder	C3 - Character slots



K. MARKING ACCORDING TO THE EUROPEAN STANDARDS

Hose Assemblies must be marked preferably at the assemblies with at least the following information:

- The manufacturer's name or identification, BF;
- Maximum working pressure of the assemblies, in bar e.g 350;
- The last two digits of year and month of assembly, e.g. 1201.
e.g. BF-350-1201.

K. MANUFACTURER'S RECOMMENDATIONS

The marking machines were developed based on principles that ensure no risks to all the users of these machines as long as it's correct use is followed by respecting it's safety rules. The lack knowledge or failure of following these standards may put users and others in dangerous situations likely to cause serious harm to people and objects. It is therefore crucial to understand and respect the rules of usage, as well as performing the maintenance tasks required to ensure the correct functioning of the machines and to safeguard the security of the users.

Before using, the operators must be informed about it's correct use by reading carefully the instructions manual provided with this equipment as well as knowing it's characteristics by making sure that:

- ✓ The machine will be exclusively installed by qualified and specialized personnel.
- ✓ The installation of the machine will always be performed on a smooth and stable workbench.
- ✓ The machine is properly installed.
- ✓ The light is sufficient to execute the operations securely, with no obstacles in the work area or personnel not certified.
- ✓ Understand well the work method as well as technical limitations.
- ✓ Under no circumstances, proceed to modify the structure and components of the equipment without authorization from the Manufacturer.
- ✓ Know and respect the available signs on the machine .
- ✓ Do not perform any tasks for which the machine was not designed.