

SICOPOINT 9000

The professional marking system to use in production and quality controls.

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MAIN USES

“**Sicopoint 9000**”, is a marking system for the quality control. In outline, these are some of its most common uses:

- 1. Marking in pieces of difficult access.** Thanks to the possibility of adjustment of special rods, you can be able to mark in areas that could not be possible with other systems. Example: In automatism or robotized areas where there is little space.
- 2. For the control of piece manipulation.** It allows us to mark a point in screw connections to control if those pieces have been manipulated. Example : Shock absorbers, carburetors, airbag,....
- 3. For the elimination of manual marking.** We eliminate, this way, the manipulation, oversights and we win in mark quality and in time.
- 4. For the placing of a piece.** It always indicates to us its right position.
- 5. For process controls.** Example: When it shoots a green colour point, it shows us it has passed the process of quality control correctly. If, on the other hand, it prints a red point, or it leaves the colour point out, that indicates to us that piece is not valid.

MAIN ADVANTAGES OF THE “SICOPOINT 9000” SYSTEM

- Immediate reuse for its use in another production line (immediate assembly and disassembly).
- Elimination of manipulation.
- Quality and image in the mark.
- Immediate drying.
- Hardly measurable maintenance.
- According to mark size, it marks between 5,000 or 8,000 pieces without cartridge change.
- System cleaning.

This is a small summary of some of the advantages and uses of our system, “**Sicopoint 2000**”. A marking system broadly used and approved in the automotive sector.

SICOPOINT 9000, a simple system to incorporate in productions lines and process controls. The way of marking is the projection of a colour point. This system is useful and safe. Its installation requires very little effort and investment, and, thanks to its simplicity and hardly measurable maintenance, its recovery is very quick.

The colour cartridge is easily replaced during the production process. The standard range of colours can be increased according to the client’s needs.

The colour marking size with the sign colour pointer “SICOPOINT 9000” depends on the following factors:

1. Distance of the nozzle to the object.
2. Assembly position - SICOPOINT 9000.
3. Length of impulse of the marking.
4. Used valve.
5. Length of the flexible tube of the valve – SICOPOINT 9000.
6. Air pressure.
7. Used nozzle (extension).
8. Used colour.

1.- Distance of the nozzle to the object.

The distance between the SICOPOINT 9000 nozzle and the object to mark should be 30 mm. maximum. This distance guarantees ideal results as for colour intensity and a homogeneous diameter of the marking.

2.- Assembly position – Sicopoint 9000.

The best results are obtained when the sign colour pointer SICOPOINT 9000 is flat. If it is impossible to avoid a slight inclination, the angle should not be bigger than 45° with the nozzle leaned downwards.

It is necessary to avoid the vertical assembly of the cartridge with the nozzle leaned downwards. There is the risk of accumulating too much colour in the felt of the cartridge, therefore, after a long waiting time, the first marking would be too large.

It is necessary to avoid the vertical assembly of the cartridge with the nozzle leaned upwards. The correct working of the cartridge could not be guaranteed in this position.

If there weren't another possibility but vertical with the nozzle leaned upwards or backwards, we recommend to assemble the cartridge horizontally using standard extensions (length 200 mm.).

When using extensions, the quantity of markings for cartridge decreases.

3.- Length of impulse of the marking.

The length of impulse of air for the marking establishes, in an essential way, the diameter of the colour point the same as the quantity of the possible markings for cartridge.

Our experiences with different screwing systems manufacturers have proved that considerable oscillations appear, in some cases, with the lengths of impulse and, therefore, in the marking results.

The programming display, that is, of adjustment in the existing controls for a length of sign to use for the marking system SICOPOINT 9000 is often very high. To reduce the costs for the adjustment of the marking system SICOPOINT 9000 to a minimum, we recommend the use of our timer device VARIO PULSE.

The timer has a lineality of +/- 1%.

The control of the timer can be carried out by a voltage sign of 24V/AC or by a sign without potential energy. For the control of the timer with a sign without potential energy, there has to be a supply of constant voltage of 220V/AC in the timer.

The advantage of the external timer VARIO PULSE is in the simple adjustment and, as a consequence, in the adjustment of the colour point size.

The maintenance staff won't have any problems if they put a potentiometer directly in the timer.

The advantages of the timer VARIO PULSE are in its easy handling and high flexibility, besides avoiding high programming costs in the controls.

4.- Used valve.

We recommend for SICOPOINT 9000 the specially developed box of valves. This one guarantees the highest effectiveness possible.

If another valve is used, the valve should be a quick ventilation one with a flow of 850l/mn to 6 bar of service pressure.

If a quick ventilation valve is not used, there is risk of "additional marking", that is, the point sizes cause strong oscillations.

You can get the box of valves SICOPOINT 9000 optionally with the timer described in point 3.

5.- Length of the flexible tube of the valve – SICOPOINT 9000.

The length of the tube should be the shortest possible, no more than 2 m. If a too long tube is used, air could be accumulated in the flexible tube running the risk of additional marking.

The impulse time will be adapted to the length of the flexible tube.

6.- Air pressure.

The ideal air pressure for the sign colour pointer SICOPOINT 9000 is 5 – 7 bar.

If the pressure is too low, the desirable colour intensity is not obtained. If, on the other hand, the pressure is too high, the quantity of markings for cartridge decreases.

7.- Used nozzle (extension).

The original nozzles (standard nozzles and extension nozzles) should not be modified in any case, this would decrease the working of the colour marking system.

When using extensions, the effectiveness is related to the length.

The more extensions, the more effectiveness.

8.- Used colour.

The SICOPOINT 9000 colours are specially developed for the system. Special colours are available (by order).

ELECTRONIC CONTROL OF PNEUMATIC CYLINDER

TECHNICAL CHARACTERISTICS

The equipment of the electronic control of the pneumatic cylinder controlled by microprocessor, allows to adapt to many applications, thanks to all the available configuration options.

The equipment has an electropneumatic valve to shoot a pneumatic cylinder during a programmable time.

It also has a red pilot light and a green one that indicate the state of the equipment. If the green pilot light is on, it indicates the equipment is under pressure; if it blinks, it indicates the equipment is timing. The red pilot light is on when the valve is activated.

The inlet amplifier admits sensors of the type "INDUCTIVE SENSOR PNP" and coaxial cable should be used for long distances.

INSTRUCTIONS OF HANDLING AND CONFIGURATION

To change the equipment configuration, the programming console should be connected to the card; if this one doesn't light up, it indicates the connector has been placed in a wrong way. The console can be taken off or put with the equipment on.

The number of pulses given to the cylinder must appear in the display, as well as the waiting and activation times that the equipment carries out.

To put the pulses meter to zero, just press the two keys on the right at the same time.

To enter in configuration, the key "Fun" must be pressed, that will make the equipment ask for the access code; to introduce it, you can use the two keys on the right. The key "Up" increases the value of the selected digit and the key "Displace" selects the following digit. If, finally, the key "Fun" is pressed and the code is right, the word **[Config]** will appear in the equipment display for a few seconds.

To modify the configuration parameters, the parameter to be modified will be selected with the keys "Up" and "Displace". When this one is in the display, the key "Fun" will be pressed to modify the value of the parameter. The digits are selected with the key "Displace" and modified with the key "Up". Finally, to end up, the key "Fun" will be pressed again, this allows you to return to the configuration menu. If you press "Esc" the parameter will not be modified.

To leave the configuration menu, just press the key "Esc", it will record the present configuration indicating it with the word [record] and returning to the initial visualization.

Now you can read about the configuration parameters of the equipment in upward order as they appear in the configuration menu.

[Waiting] It fixes the waiting time in hundredths (1-65535). It determines the waiting time in hundredths from the moment the equipment receives a pulse to the moment it shoots the pneumatic cylinder, its value can be between 1 and 65535.

[Active] It fixes the activating time in hundredths (1-65535). It determines the activating time of the pneumatic cylinder in hundredths from the moment the equipment shoots the cylinder to the moment it deactivates it, its value can be between 1 and 65535.

[-Mode-] It fixes the different options of the work of the equipment. These options are represented in the shape of short and long bars, so that a short bar indicates the option is deactivated and a long one, activated. These options are represented in the figure as they appear in the display.

(III – III)

1-Base of times in tenths or hundredths.

2-Yes/No restartable timer.

3-Shot to activation or deactivation.

4-Reshot mode.

5-Visualization of the timers.

Extension.

Extension.

Extension.

- 1) Short Bar : The values of the times (Waiting and Active) will be in hundredths.
Long Bar: The values of the times (Waiting and Active) will be in tenths.
- 2) Short Bar: The "Waiting" timer will be started again if a new shot appears. Long
Bar: The "Waiting" timer will not be restarted until the cycle is finished.
- 3) Short Bar: The shot takes place when the sensor is activated. Long
Bar: The shot takes place when the sensor is deactivated.
- 4) Short Bar: The shot takes place when the sensor is activated and, although this remains activated, the cycle does not recur.
Long Bar: The shot takes place when the sensor is activated and if this one remains activated when the cycle finishes, a new cycle will recur.
- 5) Short Bar: Every time a shot takes place, it can be visualized in the console; first, The "Waiting" timer and, when it reaches "0", the "Active" timer is visualized. When the cycle is finished, the shots meter is visualized.
Long Bar: Only the shots meter is visualized.

The value, if it is not changed, is (All the options deactivated).