### SP LINE MACHINES

Designed and Manufactured to Integrate to customer's Specific instrumentation



Olamef's knowledge and experience manufacturing forming machines are applied when designing this new line of equipment It helps to eliminate manually forming and inserting through hole components

Operate components without nicking or cracking leads.

The SP machines cut, bend and form components placing them in a position where they can be picked up by an automatic system to complete an assembly cycle.

Weight, dimension and volume of feeders

vary on each individual unit and depend greatly on the customer's requirements.



## Pneumatic step by step feeder for the preparation of radial taped components



SP21.03 STRIGHT CUT ADJUSTABLE HEIGHT





SP21.09 CUT AND 90° BEND



Pneumatic feeder SP21 is designed to preform taped radial components. Very fast system suitable to height adjustable cut or cut and 90° bend. It is supplied mechanically operating, complete with cylinders; without electrical or pneumatic systems and PLC. This feeder can prepare components to be picked up by a mechanical gripper. It is suitable as working point in automatic placement lines.

PRODUCTION: 1.200 P/H



### AUTOMATIC STEP BY STEP MACHINE FOR RADIAL TAPED COMPONENTS



SP 21/A 03 STRAIGHT CUT ADJUSTABLE HEIGHT



SP 21/A 09 CUT AND 90° BEND

SP21/A is a pneumatic machine suitable to operate radial taped components. Very fast system suitable to height adjustable cut or cut and 90° bend.

It automatically operates components for their subsequent ejection into a part bin.

PRODUCTION: 1.200 P/H



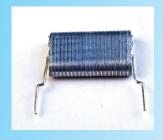
#### STEP BY STEP PNEUMATIC FEEDER EQUIPPED WITH MORE STATIONS ABLE TO OPERATE TAPED RADIAL COMPONENTS



SP27.01 cut and form with KINKS







SP27.02 CUT AND PITCH SPREAD





SP27.04 CUT AND SMD OUTWARD FORM





SELECTION OF SP27.06 FORMS ON DEMAND

PRODUCTION: 700 P/H

SP27 pneumatic feeder is designed to operate taped radial components. As this model have more posts, it is able to operate different and more complex forms depending on the customer's request. It is supplied mechanically operating, complete with cylinders; without electrical or pneumatic systems and PLC. This feeder can prepare components to be picked up by a mechanical gripper. It is suitable as working post in automatic placement lines.

### STEP BY STEP AUTOMATIC MACHINE SP27 A EQUIPPED WITH MORE STATIONS ABLE TO OPERATE TAPED RADIAL COMPONENTS

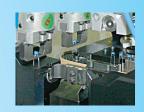


SP27/A 01 CUT AND FORM WITH KINKS





SP27/A 02 CUT AND PITCH SPREAD





SP27/A 04 CUT AND SMD OUT-WARD FORM



SELECTION SP27/A 06 OF FORMS ON DEMAND

PRODUCTION: 700 P/H

SP27/A is an automatic machine designed to operate taped radial components. Having it more posts, it's able to operate different and more complex forms depending on the customer's request. Automatically operate components are ejected into a dedicated part bin.



### PNEUMATIC STEP BY STEP FEEDER FOR THE PREPARATION OF TAPED AXIAL COMPONENTS



SP22.05 CUT BEND AND **SWAGF IFADS** 







SP22.08 CUT AND 90° BEND



SP22.17 CUT AND DOUBLE BEND



SP22.21 CUT AND BEND FOR VERTICAL MOUNT



SP22.25 CUT, BEND AND

PRODUCTION: 1.200 P/H

Special pneumatic post designed on specific data received by customer for the cut, bend and form of taped axial components. Tape feed occurs on horizontal axis. Components are individually and vertically operated from top to bottom. The leads of the component are held on the right and left sides of the body during the cut. This way all risks of damaging the body are avoided. This position is supplied without electrical, electronic or pneumatic system and it is mechanically operating. Then it can be integrated to an automatic placement system.



## AUTOMATIC CUTTING BENDING FORMING MACHINE FOR TAPED AXIAL COMPONENTS



48.0[0] CUT BEND AND FLATTEN LEADS



48.0L02.01 cut and "u" bend with kink inward



48.0L02.04 CUT AND "C" BEND



48.0L02.06 CUT AND "SEAGULL WINGS" FORM



48.0L02.11 CUT AND ONLY ONE SIDE 90° BEND

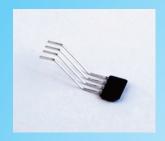
Special automatic machine designed to cut, bend and form axial components to customer's specification and PLC controlled. Tape feed occurs on horizontal axis. Components are ndividually and vertically operated from top to bottom. The leads of the component are held on the right and left sides of the body before the cut and during the forming. This way all risks of damaging the body are avoided.

PRODUCTION: 1.200 P/H



48.0L02.18 CUT AND LOOP FORM

#### AUTOMATIC, PNEUMATIC CUTTING AND FOR-MING MACHINE FOR TAPED HALL TRANSISTORS



SP26.02 CUT AND FORM

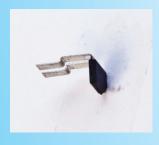




SP26.05 CUT AND 90° BEND



SP26.06 CUT AND "S" SHAPE FORM SUITABLE FOR FLAT LEAD



SP26.09 cut and "s" shape form"

PRODUCTION: 1.200 P/H



SP26 is an automatic, pneumatic machine with tape feed, centring, cut and form for taped Hall transistors. This machine was designed to operate Hall Transistors which are very delicate and weak and need perfect positioning on the forming die. The model SP26 is equipped with a pneumatic centring gripper that locks the body of the component. After cutting the component from the tape the gripper moves it to the subsequent step (i.e. 90° bending, SMD form or other forms) and finally places it into a bin or into a set point where a mechanical hand (robot) can pick it up.

#### MANUAL MACHINES FOR LOOSE COMPO-

NENTS DESIGNED TO CUSTOMER'S SPECIAL NEEDS





SP20.05



SP20.07



SP20.08

PRODUCTION: 600 TO 1.000 P/H

SP20 line Pneumatic machines are manually operated equipment, individual component feed suitable to cut and form radial loose components. Machine's die assembly is designed to quickly reach the forms requested by the customer. It simplifies and speed up the time needed, reducing the number of steps in one single operation

#### Automatic cutting – preforming Machine and subsequent taped filters' placement



SP34.01

SP34.01 is an automatic machine designed to cut, preform and place filters. It is an example of a manipulator that OLAMEF designed to take radial components from the tape, operate the leads at more intermediate posts and then place component where the customer needs it.











### LOOSE COMPONENTS PREFORMING MACHINES



SP36.03 axial loose components forming





SP36.01 SPECIAL COMPONENTS CUTTING AND FORMING

PRODUCTION: 700 P/H

SP36 line pneumatic machines are manually fed equipment for individual loose components cutting and forming.

Machine's die assembly is designed to quickly reach the forms requested by the customer. It simplifies and speed up the time needed, reducing the number of steps to one single operation.



#### Manual machine for the loose l.e.d. Preforming



SP38.01 loose l.e.d. cut and left bend





SP38.02 LOOSE L.E.D. CUT AND RIGHT BEND

PRODUCTION: 700 P/H

SP38 is a pneumatic machine, controlled by a foot pedal . Components to be operated shall be manually fed and this tool cuts, bends and forms loose L.E.D. as requested by the customer

### AUTOMATIC PLECEMENT MACHINE FOR TRADITIONAL THROUGHOLE COMPONENTS







SP2006.01 AXIAL TAPED

COMPONENTS CUTTING BENDING AND FORMING MACHINE

PRODUCTION: 1200 P/H



Thanks to the experience matured with the manufacturing of hundreds special feeders for axial and radial components (SP21, SP22, SP26, SP27) Olamef designed this bench placement machine for through hole components. It is an automatic machine designed for cutting, bending and eventually forming taped axial components that will subsequently be inserted into a circuit Board by the same machine's manipulator. The machine can be supplied in different versions: It can operate as a selfstanding station with manual load and unload of the P.C.Boards; it can be located in line. In this case the components are inserted into the P. C. Board which is directly positioned on a conveyor belt or on a load/unload system and this will make the operation fully automatic. It can be realized on customer's request and beside axial and radial parts it can be designed to place also TO-220 transistors, ICs, connectors and other components in tube.