



Azar Sayan Machine Co.

Model: N-D0-5

Full Automatic Pail Printer



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➤ **Main Features**

- ❖ Full automatic pail printer machine
- ❖ Dry offset printing system
- ❖ Six colors
- ❖ Machine can print on rectangular and oval shaped containers
- ❖ Machine can print on pails with steel or plastic handle
- ❖ UV dryer and treatment system on mandrel
- ❖ Corona or gasflame pretreatment
- ❖ Counter and stacker system in output
- ❖ Two mechanisms for setting pail handle. The first one sets it at the beginning of print line and the other one set the pail handle after print and before restacking.
- ❖ Possibility of installing magnetic plate cylinders.
- ❖ Maximum machine's speed for 20 liter container with rim diameter 30cm, is 35 units per min.
- ❖ **Additional option:** Loader and down loader arms in front of input and output conveyor with automatic pail bank (up to 750 pails capacity)

➤ **Printable cups dimension**

- ❖ Max. rim diameter 450mm
- ❖ Max. print height 300mm
- ❖ Max taper 15°

➤ **Dimension&weight**

- ❖ Length – 7.5 m
- ❖ Width – 5 m
- ❖ Height – 3.8 m
- ❖ Weight approx. – 17000kg

➤ **Technical Information**

- Whole incoming and outgoing conveyors & whole the greeper which related to feeder & rejecter with their movement amount can be adjusted by only three handles easily.
- Machine can print on pails with steel or plastic handle or without handle
- Capable to print full automatically and perfectly on biggest size of pail, up to 45 cm rim diameter
- UV dryer and treatment system on mandrel
- whole treatment and uv adjustments are applied easily in ten minutes
- Machine can print on rectangular and oval shaped containers
- Installing print features for oval-shaped containers will be applied easily in two hours
- Each print unit has 17 ink transmit rollers
- Two form rollers working on each color head at the same time resulting sharp print
- Whole print horse moves smoothly and accurately on rollings

➤ Pail Bank (Optional Addition)

The machine has a pail bank with the capacity up to 750 pails. This capacity avoids frequent referral of the operator to the pail bank and filling of it. You can stack the pails on the pail bank infrequently and leave it, the machine will automatically work for a long time.

The other advantage of the pail bank comparing the similar pail printers is the way it loads the pails. When loading the pails stack from the pail bank, it prevents them from falling and helps them remain consistent. Also, filling the pail bank made easy for the operator.

The pail bank is one of the unique specifications of the machine which has not been performed in any other similar machines.



➤ PAIL LOADING AND INDEXING MECHANISM

Pails are transferred, separated and feeding on mandrels using 12 pneumatic cylinders.



The thripple-index-technology of the machine had added convenience usage and many facilities to this machine. This is a unique mechanism which is designed and manufactured in our factory.

As the input and output of the pails are parrellel and next to each other, it is easy and convenience to adjust the machine. For example adjusting the machine for different size of the pails.

By turning only one handle, these settings will be applied at the same time: 1. Input conveyor 2. Output conveyor 3. Two guides at the sides of the input conveyor 4. Two guides at the sides of the output conveyor 5. Eight cylinders of separator grippers and pail feeders at input and 6. Two pail discharging from mandrel grippers.

The whole input and output mechanism complex of this machine is adjusted by turning only three handles(even when the machine is working). While this machine has the most automatic mechanism of input and output.

Also while UV, treatment and two mechanism of handle setting are at the same direction, they have shared adjustments which makes the pail size changing process much faster.

Accurate mandrels under the print are only four and other index mandrels are formed by a little cost from metal sheet. The mandrels under the print are installed by 0.02 tolerance.

The first index causes an easier treatment for oval-shaped containers; comparing with machines by lower level of technology which use conveyor, it peresents an assured mechanism with a conveneince operator adjustments.

UV projector approaches to the preset space with the pail while machine working and as soon as the machine stops the shatel hatch closes and distances from the pail. Also it is capable to monitor the current so that enables the operator to detect lamps' life and their charge.

➤ **INKING SYSTEM**

Ink transfer from ink fountain is done similar to other printing machineries. However, you can separate the ink fountain from the machine by only pushing a clamp for wash-up in a very short time. The fountain is well designed enough to avoid ink leak. Moreover, a tray has been installed under each ink fountain to prevent probable ink leak into the other ink units and pollute them.

Inking (the quantity of ink usage) is controlled in two ways:

Using 18 ink fountain screws at the back of ink fountain, similar to other machines. But ink usage control mechanism is a unique mechanism which is designed and manufactured in our factory. Using such mechanism has solved the problem of ink starvation or over-inking which exists in similar machines. Ink amount adjustment is located in the front part of the ink unit so the operator reviews and sets the ink amount whenever needed.

Ink is transferred from the ink fountain by the ductor roller synchronized to the print speed, on to an other roller with 26 cm of diameter. This roller is surrounded by 5 other intermediate rollers in order to harmonized the ink. Ink harmonizing helps better print quality. Application of ink usage control in design of the ink unit has turned this machine to an expert among other similar printing machines.

The ink, in next step, arrives to 4 oscillator rollers. (In similar machines there are 2 oscillator rollers). The sinuous rotations of these rollers are controlled by 2 cylindrical cams which are powered by the main engine. (In most similar machines, small lead shots are used inside the rollers for this purpose which has a short life and needs to be changed or repaired every 6 months). Four oscillator rollers with reliable mechanisms reduce the print shadow as much as possible.

Then, 2 form rollers simultaneously transfer ink from the oscillators to the plate. Settings of these rollers are quite easy and different from other similar machines. You will learn the adjustments easily by a short look at the ink unit.



Whole the ink unit is easily dischargeable from the machine by only 3 screws. There is an electric crane on the machine for helping the operator put the ink unit down to the ground or mount on the machine.

Each print unit holds on and releases from from the printing process by only a mechanical clamp. This process is so time consuming

The anti-backlash gears have been used for transferring power to the cylinder plates.

➤ **PAILS RE-STACKING SYSTEM(Optional Addition)**

After the pails are discharged from the mandrels, they are put inside each other automatically and then transferred to the output conveyer with pre-default stack number.



➤ CONTROL UNIT

An user friendly software with more than 10 pages for operator guidance and also pictorial troubleshooting, Checking out the machine, troubleshooting and software-upgrading by hooking it up to the telephone line everywhere.

This unit controls every part of the machine simply by pushing buttons or adjusting the volumes.

PLC has been programmed in a way to be able to report more than 60 faults and in each case helps the operator with various pages including the related points such as: The function of each fuses, any problem in input electrical power, air pressure loss, most of the probable problems in the function of pneumatic equipment and related sensors, etc.

As an example, if any of three input electric wires breaks off, PLC stops the machine, and the monitor reports an error; even the input terminal number is shown to the operator. If necessary, several troubleshooting guides are available to be presented.

The neutral wire in the electrical system has been removed by using an **isolator transformer in the machine.** (There is no need for the neutral wire in this machine).

The most important feature of PLC's software is that everyone with a single password can operate and manage all the parts and panels such as settings, options, repairs, counter settings and changing the password, etc. without any former instructions.



➤ **SPARE PARTS**

Except the consumable inks, UV lamps, Blanket and Adhesives there would be no need for any spare parts for at least 2 years. However, AZAR SAYAN guarantees that all the probable troubles occurring for the machine will be fixed by its technicians in less than 72 hours. The modem which is placed inside the machine enables us to connect to the machine by telephone line to detect the problems and fix the troubles which are solvable from distance.

➤ **TRAININGS**

Prior to the delivery of the machine, 1 or 2 operator will be invited to the seller's factory for being trained and learning how to operate the machine for 20 days. All the expenses of their accommodation and transportations inside the seller's country are on AZAR SAYAN. They will receive a certificate at the end of this training course.

➤ **INSTALLATION AND ASSEMBLY**

Once the machine arrives, a technician will be sent to the buyer's place for installation, operation, printing and giving instruction to the buyer's operators.

➤ **GUARANTEE**

The machine is fully guaranteed (replace defected parts and fix any probable problem) for one year and supported for 10 years as after sales services.