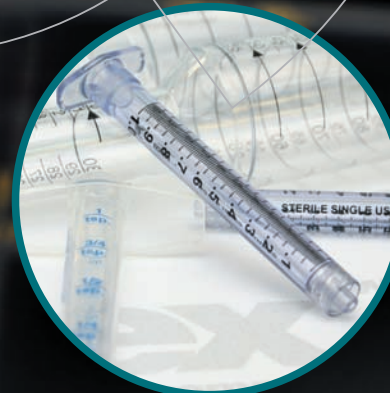




Apex Machine Company

Engineering Better Print Solutions
for the Medical Industry

Committed to
developing tailor made
product printing solutions
for today's markets



Developing and Engineering **Better Print Solutions** for the Medical Market

Boxing Unit



Part Accumulation



Capper



Apex Machine Company was founded in 1902. Based in Fort Lauderdale, Florida, USA, we have since forged a worldwide reputation for engineering excellence in the field of machinery for rigid and semi-rigid medical components of many different types, shapes and forms. Our success is founded on a corporate philosophy that has a single aim: to listen and respond to our customers' requirements, and thereby achieve excellence in both their products and ours.



Apex's expertise covers a wide marketplace, offering custom engineered production solutions for many different types of medical devices including:

- Catheters and Stents
- Disposable and Non-Disposable Syringes
- Cryule Vials
- Centrifuge Tubes
- Blood Tubes
- Single-Dosage Tubes
- Insulin Dispenser Devices
- Pill Containers
- Desiccant Canisters



Endless Versatility

We specialize in the supply of semi and fully-automated systems for flat or round rigid, semi-rigid and flexible components that are injection-molded, thermo-molded or extruded.

To date, Apex has supplied over 1000 medical device printing and decorating machines, many of which have been of standard types specifically tailored to meet the customer's specific needs and requirements.

Our systems range from semi-automatic index-motion machines, to high-speed continuous-motion 1000 part-per-minute machines which can be operated in-line with molding and packaging to offer turnkey, fully-automated systems capable of running 24/7 without the necessity of a dedicated operator.

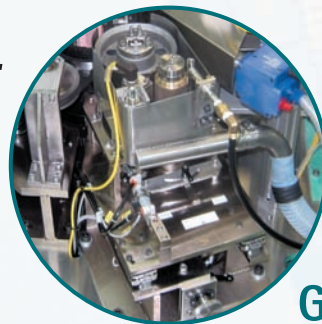
Apex systems can be supplied with a wide range of optional features to suit each customer's specific requirements. These features can include:

- Automated Feeding systems
- Pre-Treatment Systems
- Part Handling Systems
- Print Systems
- Curing Systems
- Vision Systems
- Capping Systems
- Part Accumulation Systems
- Packaging Systems of various types

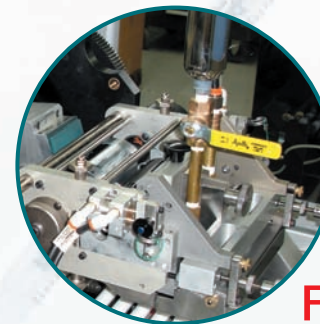
We appreciate your interest in Apex machinery and hope, as a result of your review of our information, that our talented staff will soon be working closely with your company to develop your ideal printing solutions.



Offset



Gravure



Flex-Apex

VISION



Camera Systems



Vision Inspection



Semi and Fully-Automated Disposable and Non-

apex C-40



The C-40 is our least expensive part handling and printing system that is specifically designed for semi-automatic applications where a low volume, versatile machine is required.

This machine can be supplied for manual feeding, or with various types of automation to feed, treat, print, cure and eject a variety of medical components at production speeds of up to 60 parts per minute.

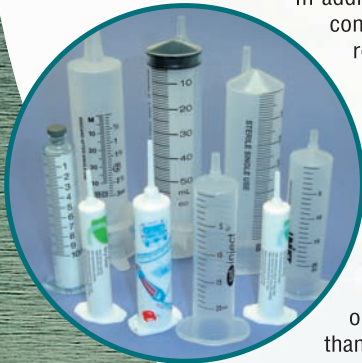
By using proven Apex components and a building block concept, the C-40 can be supplied with pre-

treating systems which include both corona spot-treat or flame treat.

A variety of print technologies can also be integrated within this machine. In addition to being able to offer up to 4 colors in the dry-offset configuration, this machine can also be supplied as a 1-color rotary gravure printer, 1-color rotary hot-stamper, up to 4 colors FlexApex, or a combination dry-offset and FlexApex printing machine.

A variety of different curing units can be incorporated to offer either infrared, convection, or ultraviolet curing applicable for the client's appropriate inks and product requirements.

Medical devices of varying styles and sizes can be printed on this machine, but the C-40 typically handles parts less than 155mm in diameter and 300mm in length.



apex C-500



The C-500 is an index-motion part handling system, supplied with servo-driven 8-station, 12-station or 16-station horizontal dials to suit a wide variety of medical devices and customer requirements.

The C-500 is also of a modular design and, as with other Apex machines, utilizes a building block concept to integrate various features suitable for each application within the system.

Extensive and varied feeding systems can be integrated within the C-500 to accept parts in bulk and to sort, orientate and feed these into the machine in a fully automated operation. Often this is done in-line with the client's molding machines.

These feeding systems include rotary, vibratory, centrifuge and hopper feeders, in-feed conveyors, vertical chutes and linear conveyors with servo-driven part loading systems.

Pre-treatment units can also be integrated to pre-treat components with flame or corona discharge units.

The Apex C-500 can also be offered with different print technologies to suit specific applications with a choice from rotary gravure, 5-color dry-offset, 5-color FlexApex, hot foil stamping and as a combination system that utilizes multiple printing technologies in a customized format.



Systems for the Disposable Syringe Markets

apex C-90

The C-90 is known as the “work-horse” among our multiple styles of syringe printing machines. This particular machine routinely runs 24/7, at production speeds of up to 250 parts per minute.

The C-90, typically supplied as a fully automated system, accepts a variety of styles and sizes of syringes in bulk and will automatically capture, singulate, orientate, treat, print, cure and exit parts utilizing many technologies.

And as with most Apex machines, the C-90 can also be fully customized to suit each customer's exact needs and requirements. Options include feeders, pre-treatment, orientation (flange and zero-line), print, cure, vision/inspection, auto-reject, auto-eject, part accumulation, and auto-carton/auto-boxing.



apex C-900

The C-900 is the fastest disposable syringe printing machine in the world. This system can be supplied with or without mandrels, to automatically feed, treat, orientate, print, cure and exit a range of different disposable syringes at production speeds of up to 800 parts per minute.

The C-900 can be supplied with a variety of feeding, pre-treating and orientation systems, curing units, vision inspection systems, part accumulation and packaging modules to suit each customer's needs and requirements.



For high-speed disposable syringe printing applications, the C-900 is clearly the industry leader. Approximately 250 of this machine type are in production, on a 24/7 basis, with the top syringe manufacturers in the world.





Apex Machine Company has been designing and manufacturing direct-product printing equipment, not only for the medical industry, but for the pharmaceutical disciplines used in the global marketplace. For over a century, Our equipment ranges from semi-automatic systems that print at 20 parts per minute, to machinery that will decorate your product at over 800 parts per minute. Fully automatic and innovatively integrated machines are manufactured to international quality standards and specifications. Some standard styles offered are outlined below.

High Speed, cost effective Uncompromising

apex C-25

Catheter

The C-25 is primarily designed for catheters and stents, automatically capturing, printing, curing and exiting a multitude of product lengths and diameters at production speeds of up to 40 parts per minute.

The C-25 can be supplied with rotary gravure, dry-offset and FlexApex print heads in many combinations, to print a range of graphics that include



both text, graduation lines, and calibration marks on the full length, 360° around. The C-25 can also utilize FDA inks to offer a VOC-free system, safe and suitable for most medical applications.



apex S-40

Single-Dosage Tubes

The S-40 is typically supplied as a 1-sided part printing machine, however pictured here is a 2-sided, fully automated system, capable of feeding, treating, printing 4 colors on both sides, curing and exiting



single-dosage tubes at production speeds of up to 600 parts per minute.

This unique and very versatile system, when supplied as a 1-sided machine, can automatically print IV bags and many other flat medical components, running production speeds of up to 60 parts per minute.

The S-40 APEX Printing system utilizes a building block, modular machine concept, allowing this system to be equipped with a multiple and varied feeding and pre-treating systems, printing and curing stations, and part packaging systems.



apex C-40

Desiccant Canisters



The C-40 is normally supplied as a fully automatic system with desiccant canisters or cryule vials being fed, manually or automatically, into an appropriate bulk bin. Once accumulated in the bin, the vials or canisters are then automatically fed into the orientating and singulating system. From there the product will be automatically treated, printed, cured and capped prior to ejection into a bag, part accumulation bin, or automatic packaging system.



apex C-400

Cryule Vials



The C-400 implements an index-motion or continuous-motion alligator transport chain to automatically capture cryule vials or other round, cylindrical medical components from a feeding station. These are carried in the transport chain through treat, print, cure and capping stations before exiting into a receiving container. The system is designed for rigid cylindrical components with production speeds of up to 250 parts per minute.

This system can also be supplied with unique feeding, treating and printing systems, curing stations, and automation at the exit end to offer a fully-automated, turnkey solution, operating inline or offline with the client's molding and packaging equipment.



Solutions Quality

apex C-400P

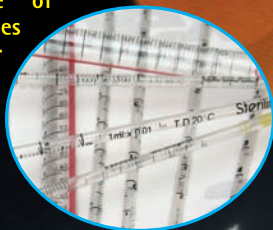


Pipette

The C-400-P is specifically designed for pipettes to automatically feed, treat, print, cure and exit parts into a receiving bin, with production speeds of up to 200 parts per minute.

Up to five colors can be printed on the pipettes, with 360° of copy coverage. Dry-offset, as well as flexographic-offset heads, can be installed in any combination for greater ink coverage and extreme detail of graduation lines and text.

The C-400-P can feed and print various styles and sizes of pipettes, taking advantage of automation processes at the front or back-end to offer a fully-automated turnkey system.



apex C-90

Centrifuge Tubes



The C-90 is designed for centrifuge tubes and this line can handle both 15ml and 50ml polystyrene or polypropylene tubes, at production speeds of up to 500 parts per minute.

The C-90 is normally supplied in a fully-automated configuration, accepting centrifuge tubes in bulk, capturing, orientating, pre-treating, printing, curing, capping, ejecting and bagging/boxing or accumulating product automatically.

With our fully-automated exit-end options, this system affords a turnkey solution capable of printing very high quality one or two-color imprints on medical centrifuge tubes, all virtually hands-free.



apex C-500

Medical Tubes

This C-500 is shown is tooled for medical tubes, and will automatically feed, treat, print, cure, inspect and exit medical tubes at production speeds of up to 150 tubes per minute. Many styles of



cylindrical medical components requiring internal support can be handled on the C-500. Custom modules and features can also be applied within this system to offer a fully-automatic, turnkey system, featuring extreme versatility and user-friendly operation.

Customized vision systems can also be integrated into the C-500's modular design, assuring print quality and part integrity prior to either ejecting or accumulating parts at the exit end.



apex C-506

Pill Containers

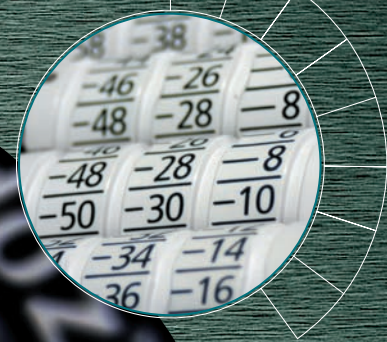
This system, supplied either as a mandrelized machine or with chuck-support systems, can automatically handle different types of pill containers at production speeds of up to 200 parts per minute.

The containers are fed into the machine in bulk, where they are captured, treated, orientated, printed in up to 6 colors, cured, clear-coated, cured again,



and exited into an automated packaging or part accumulation system.

A variety of automated print technologies, such as dry-offset and FlexApex, can be incorporated to offer high-quality decoration.





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