

## Oral Dissolving Film Transdermal Patch

Web Coater for TDP & ODF

Model No.- VJTDP-Pilot Scale



WATCH NOW



**Oral Dissolving Film**



**Transdermal Patch**

# Technical Specifications



## About VJ Instruments

At VJ Instruments, we're not just a pharmaceutical instruments manufacturer; we're a driving force behind scientific innovation in the fields of Pharmacy and Pre Clinical research. Since our inception in 2006, we have continually strived to revolutionise the industry by delivering world-class products that not only meet rigorous quality standards but also prioritise ease of use

Our team comprises seasoned professionals with extensive experience in the pharmaceutical industry and academia. We have a proven track record of excellence and a deep understanding of the unique challenges and requirements of the field.

Our Products are specifically meant for small animal behaviour research as well as tools used in R&D, pilot drug development. We also deal with innovative custom-based requirements, tailoring solutions to the specific needs of our clients.

## Customer Support

At VJ Instruments, we recognise that our clients need to maximise their ROI over the entire lifecycle of ownership. For our clients, machine downtime is not acceptable. To support them, we maintain a dedicated team of service engineers.

## Technical Support and Repair

Live and immediate technical support is available using all major communication tools.

Standard on-site response time.

## Value Added Services

We offer our clients value-added services so that they can run their machines with the highest efficiency over time.

- Operator training programs
- Annual maintenance contract
- Machine upgrade consultations

\*Terms & condition apply.

## Industries we Serve



PHARMACEUTICALS



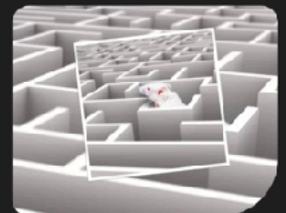
FOOD



COSMETICS



NUTRACEUTICALS



PRE-CLINICAL

## General

The VJ Instruments Pilot Scale Web Coating machine is intended for development and small production of transdermal therapeutic delivery system laminates (TDS-patches) as well as to create edible films/ oral dissolvable film bulk were (EDF/ODF) without any further modification. It permits continuous coating of 150 mm wide webs with successive lamination as specified in Technical Specification Table general data.

The machine contain a coating head, where the coating knife is installed. This special tools guarantees an extreme high product quality with an ultimate accuracy of  $\pm 1\%$  over the entire coating width and has therefore the lowest thickness variation available on the market.

The machine is built in a balcony manner with all the electric and other driving parts on the back of a 1400 x 540 mm big mounting plate. On the front of the plate the coating head, the winder shafts, the web guiding items, and the dryer cabin is mounted. The Temperature settings, the delivery rates of the pump and the web speed are adjustable on the top of the machine. Thus, all functions of the machine can be manipulated from the front side/ topside.

The substrate is coated onto a 3" diameter unwinder shaft mounted on the left side of the machine. From there, the web is pulled through the machine by the rewinder, situated on the right side of the machine. On its way through the machines, the web is at first guided around a coating roll onto which the knife is mounted. This knife spreads the desired fluid onto the passing –by web.

Immediately after the passage of the coating roll the web enters the dryer cabin. The web passes the dryer sliding across a stainless steel plate. This plate is electrically heated by resistive foils, which conductivity heat up the web from ambient room temperature (RT) to 90°C. the heating plate can be adjustable by a digital temperature controller on the top of the machine. The evaporated solvent are sucked away by ventilators fixed to the mounting plate in the rear of the dryer cabin. A lid covers the dryer zone. The drying process can be observed via the window inserted in the dryer lid.

Immediately after the web may be laminated with a protective, covering foil. This foil is unwound from a shaft at the right of the web rewinder and is pressed onto the passing-by web in the lamination station immediately at the dryer's exit. The final laminate is then rewound by the rewinding shaft at the machines lower right corner. The dryer zone has a total drying length of 0.8 m.

## Drying Technique

The dryer consists of one consecutive stainless steel heating plate inside an enclosed cabin. The Plate is arranged linearly within the cabin and the coated film slides across this plate horizontally.

The temperature of the plate is closed loop controlled by a PT-100 element fixed at the bottom side of the plate. The Temperature range is from ambient room temperature upto 80 degree Celsius individually adjustable by a digital controller. A digital Display on the Machine shows the current temperature of the plate.

The dwell period for the coated foil in the dryer is determined by the web speed. The solvent loaded air is removed by a fan in each drying zone. the fan is integrated in the back of the dryers cabin. The dryer is covered by a lid, where a glass window is integrated for screening the drying process.

The dryer zone has a total drying length of 0.8 m.

Sr. No.	Specification	Details
1	Certificates	GMP, ISO, CE
2	Production Capacity	1 inch X 1inch - 15,000 units per day.
3	Size of Film drawn	120 mm width X 100 meter roll.
4	Accepted web widths	The machine is made to be equipped with any web width $\leq$ 150 mm.
5	Coating width	The maximum coating width is 120 mm
6	Max. coating speeds	Mechanical web speed is infinitively variable 0.1m/min to 0.9 m/min During the coating process the speed needs to be slower to dry the wet film.
7	Temperature Range	Room ambient temperature up to 90 degree celsius.
8	MOC of Contact Part	All Product touching part is SS 316
9	MOC of Non contact part	Aluminium and SS304
10	Power Supply	230 Volts, 50Hz, 16 Amp Secured / 110 Volt, 50 Hz, 32 Amp
11	Electric Consumption	1.0 Kw per hour.
12	Coating system	The coating System is built up of an precise coating knife for coating width upto the maximum 150 mm and can easily reduced by Teflon strips to any width. The useable coating width is 120 mm for the maximum coating width of 150 mm with the below mention accuracy. The coating knife is fed solution by precision tooth gear pump or peristaltic pump.
13	Coating accuracy	+/- 1 to 5 $\mu$ m for a 100 $\mu$ m dry coating over the entire coating width
14	Winders	All winders (unwinder for carrier foil, unwinder for backing foil and rewinder for laminates) are with shafts for 3".
15	Interface	HMI Delta.
16	Web coater Dimension (LXWXH) in mm	1435 mm (L) X 645 mm (W) X 700 mm (H)
17	Weight	250 kg. (Approximate) 350 Kg with packing.
18	Solution stand (LXWXH) mm	380mm(L) X 380mm (W) X 1175 mm (H) Weight - 20 kg (Approximate) With packing 120 (Approximate)

## Some of Our Other Instruments.

<https://www.vjstruments.com/products/>



**Note - Upgrading design is continuous process.**

1. All the images displayed in the offer are for representation purpose only but actual may vary.
2. Dimension & weight may vary

### International Clients



Комплексное оснащение лабораторий с 1997 года



Est. 1956

### Industrial Clients



TATA CONSUMER PRODUCTS



### IITs, AIIMS, CSIR, Government & Private Institute

