Technical Specifications

VJ INSTRUMENTS®
TECH-INNOVATIONS

Extruder & Spheronizer

Model No.- VJEX - 01

WATCH NOW

VJ Instruments I 166/1 Deoda Sadan I Main Road I Karanja Lad - 444105 I Maharashtra I India
Contact - 9423128314 I Email : enquiry@vjinstruments.com Web: www.vjinstruments.com

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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.

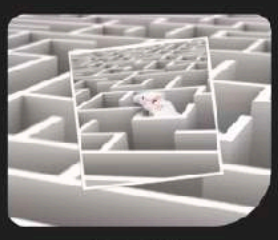
Industries we Serve


PHARMACEUTICALS


FOOD


COSMETICS


NUTRACEUTICALS


PRE-CLINICAL

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General

Extruder is widely used for making pellets of different sizes starting from minimum 400 microns to maximum 2000 microns. Extruder gives mild compaction and is ideal for most of the Pharmaceutical formulation related to pelletization

The function of a spheronizer is to convert extrudes into spheroids. Spheronization is the necessary second step of granulation by extrusion – spheronization process where pharmaceutical products are made into small spheres or spheroids

Activate the machine and load the Pre-formulated wet mass into the feed funnel(Hopper). The material is forced through the extrusion chamber to cone mesh by axial force of Counter rotating screws. Conical pressing roller forces the material through the perforations of Single cone mesh and the extrudes formed.

Application - Extruder

- Extruder is widely used for making pellets of different sizes starting from minimum 400 microns to maximum 2000 microns.
- Extruder gives mild compaction and is ideal for most of the Pharmaceutical formulation related to pelletization.
- Extruder consist of Hopper for loading of wet mass, Hopper as internal blades connected to gear to rotate and push material in a systematic manner in to the feed hopper of Extruder Chamber, Extrusion chamber is Jacketed from outside for circulation of cold water to maintain temperature of the product in case the product is sensitive in nature.
- Extrusion chamber consist of single screw which transfer the material towards the pressing cam and out from the perforation of the screen of desired dia.
- Extruder is available from R&D batches with minimum output of 250 gms.
- Extruder is cGMP complied equipment with self standing Table Top Model for R&D scale which control operation with built in electrical panel for ease in maintenance.

Application- Spheronizer

- The function of a spheronizer is to convert extrudes into spheroids. Spheronization is the necessary second step of granulation by extrusion – spheronization process where pharmaceutical products are made into small spheres or spheroids.
- Spheronizer consists of a plate, which is having a special cross-hatched groves, known as chequered plate. This plate rotates inside a cylindrical bowl.
- The radial clearance between the plate and the bowl is kept minimal (<0.3 mm) to reduce the powder leakage.
- Purging air is supplied in this gap to prevent the falling of powder beneath the chequered plate. This air also helps for the evaporation of excess moisture from extrude and prevent particle agglomeration.
- While rotating in the grooved plate with pre-desired groove size, the vermicelli will fragment into pieces with length equal to the diameter of extrudes.
- Broken extrudes, because of the tangential force and centrifugal force, collide with the cylindrical wall of the spheronizer. The rotating rope type movement of extrudes at the outer border of the bowl gives a rolling action on the fragmented extrudes and it will be converted to spheres.
- When the particles attain required spherical shape they are centrifugally discharged through the discharge door which opens into the discharge hopper

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Sr. No.	Specification	Details
1	Certificates	GMP, ISO, CE
2	Type	Single Screw
3	Production Capacity	2-6 kg/hr depends on formulation.
4	Perforated mesh hole diameter	Ø 1 mm standard. Optional with addition Cost- Ø 0.5 mm Ø 0.6 mm Ø 0.8 mm Ø 1.2 mm Ø 1.5 mm 
5	Product	Any Aqua base or solvent base formulation.
6	RPM of screw	10 to 150 rpm
7	Hopper Discharge	Auto discharge by gravity
8	Electric Accessories	230 V 1 Phase 50 Hz
9	MOC Contact Parts	SS 316
10	MOC Non-Contact Parts	SS 304
11	Hardware	Standard Make (Bearing shaft seal of SKF etc or equivalent)
12	Finish	Non Contact Area Matt Finish Contact area Matt Finish Machine part- Machine Finish
13	VFD	Delta
14	Drive Motor	Crompton or equivalent
15	Reduction Gear Box	Standard Make.
16	Documents	User Manual, Warranty Certificate.
17	Electric Consumption	1 kWh
18	Dimension (LXWXH) in mm	525 mm (L) X 305 mm (W) X 455 mm (H)
19	Weight	50 kg. (Approximately)

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Sr. No.	Specification	Details
1	Certificates	GMP, ISO, CE
2	Chequered Plater	3.00 mm Pitch  Optional with extra cost. 1.0 mm Pitch to 8 mm Pitc
3	Production Capacity	40 to 500 gm per batch (2-6 kg/hr depends on formulation.)
4	Product	Any Aqua base or solvent base formulation.
5	RPM	100 to 1400 rpm
6	Electric Accessories	230 V 1 Phase 50 Hz
7	Air purged inlet (Optional)	Filter Air with min 2 Bar Pressure supply should be provided by Client.
8	MOC Contact Parts	SS 316
9	MOC Non-Contact Parts	SS 304
10	Hardware	Standard Make (Bearing shaft seal of SKF etc or equivalent)
11	Finish	Non Contact Area Matt Finish Contact area Matt Finish Machine part- Machine Finish
12	Drive Motor	Crompton or equivalent
13	Switch Gear	Standard Make
14	VFD	Delta
15	Documents	User Manual & Warranty Certificate
16	Electric Consumption	1 kWh
17	Dimension (LXWXH) in mm	450 mm X 280 mm X 425 mm
18	Weight	35 Kg (Approximately)

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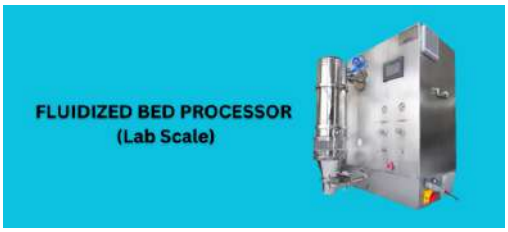
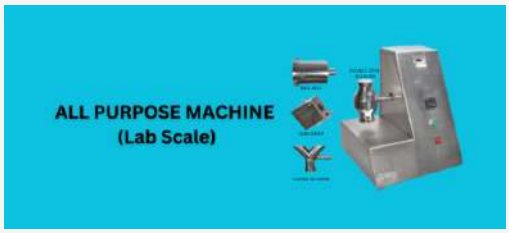
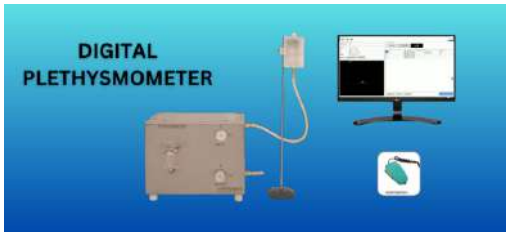
Some of Our Other Instruments.







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

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International Clients

hikma. Medisca Seedcare syngenta. Global Y.S.P. SAH®
helicon Комплексное оснащение лабораторий с 1997 года
FITABEO THERAPEUTICS
VIRA RAHESH PHARMA
DEC PHARMACEUTICAL COMPANY
Astron Estd. 1956

Industrial Clients

Akums
fertin India a Fertin Pharma Company
LUPIN
HILTI
Incozen
inventia
MEDCHEM
TATA CONSUMER PRODUCTS
iPHARMED
MOREPEN The Joy Of Growing Together
KASHIV BIOSCIENCES
BELLATRIX AEROSPACE Propelling Dreams
MICRO LABS
nsr
ETONEX LABORATORIES PVT. LTD.
Talent Healthcare
LEBEN
Rusan A TECHNOLOGY DRIVEN ENTERPRISE
Optimus
AUXILLA Pharmaceuticals And Research LLP
YUTIKA Natural Private Limited
NuLife
Sai
CRYSTAL BIOLOGICAL SOLUTIONS
UMESH MODI GROUP MOD NAGAR
AMTZ

IITs, AIIMS, CSIR, Goverment & Private Institute

IISER PUNE
DRDO
KOLKATA
AIIMS New Delhi
NEERI
CSIR भारत का नवाचार इंजन The Innovation Engine of India
सी एम एफ आर आइ CMFRI
DPU
AMITY UNIVERSITY
MIT-WPU
Bombay COLLEGE OF PHARMACY Estd 1957 Autonomous
NIPER GUWAHATI
CENTRAL UNIVERSITY OF PUNJAB
KAKATIYA UNIVERSITY Warangal - 506009, Telangana, India

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