

## Rapid Mixer Granulator RMG

Model No.- VJRMG-01



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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



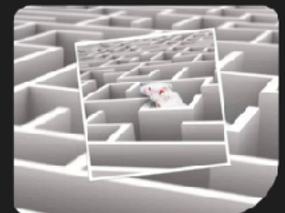
FOOD



COSMETICS



NUTRACEUTICALS



PRE-CLINICAL

**Rapid Mixer & Granulator** designed for optimum performance. cGMP Complaint with special attention given to clearing Validation. Rapid Mixer Granulator is designed to achieve excellent mixing and consistent granules at lower operating cost along with higher productivity. Better Mixing and closed control of granule size leads to faster tableting speeds with improved quality and least rejections.

## Salient Features

- Compact GMP Model.
- All contact parts made from Stainless Steel 316 with non-contact part made from Stainless Steel SS304
- All Contact parts are mirror polished to 220 Grit and external surface to matt finish of 180 Grit.
- Homogeneous Binder Distribution.
- Short batch time and reduce cleaning time.
- Maximise CIP effectiveness.
- Air Purge Sealing System for main stirrer shaft and granulator shaft.
- All internal contract parts are polished to the mirror finish.
- PLC based operating panel for precise control of process & automation. (Optional)
- A high-speed granulator is inserted horizontally through wall of bowl to assist blending of powder and to break the product to the granules of required size.
- The seal housing and drive shaft may be flushed with cleaning water, which is then drained away from the machine through built in drain tubes.
- Granulator motor is provided with a removable stainless-steel shroud with covers the motor and simplify cleaning.
- All moving parts of the machine are totally enclosed to eliminate accident.
- The machine cannot be started unless and until the mixer cover is properly closed.
- Flush wall type discharge valve eliminates pockets at the port of discharge valve.



Sr. No.	Specification	Details
1	Certificate	GMP, ISO, CE
2	Purpose / Application	Homogeneous mixing of dry & wet powders, deagglomeration of wet mass and fast dispersion of binding agent.
3	Type	Standard Unit GMP Model
4	Working Volume	0.5 Liters, 3 Liters, 5 Liters & 10 Liters or any specific dimension upto 0.5 L to 10 L.
5	MOC	Contact part SS316 & Non contact part SS304
6	Discharge	Nylon / SS316
7	Discharge port	Manual / pneumatic
8	Operation	Manual / Trough HMI
9	Bowl Test pressure	Water fill up, this test for weld joints only. Discharge assembly is not necessarily watertight.
10	Quality Assurance	Design, manufacture, installation & documentation in accordance with Good manufacturing practice.
11	Finish	Product contact parts internally finished to minor. Externally finished to dull matt.
12	Electrical rating	Non FLP, 2.2 Kw, 415V, 50 Hz, 3-phase
13	Impeller Type	Single speed, Crompton / Hindustan or std. make.
14	Impeller Motor	2HP / 1440 RPM
15	Seal of Main Impeller	Mechanical seal with Air Purging
16	Impeller Gear Box	Ration 10:1 Make - Standard Make.
17	Mounting	Inverted outshaft, Projecting upward.
18	Chopper type	Single speed Crompton / Hindustan or std. make.
19	Chopper motor	2880 RPM/ 0.75 HP
20	Sealing of chopper	Gland seal with air purging
21	Mounting	Flange Mounted
22	Bearing Housing	The bearing housing of the main shaft connected to gearbox. Chopper blade assembly consists of a separate bearing housing coupled to motor with telescopic universal joint
23	Mixing Bowl	The mixing bowl is cylindrical with a large diameter and flat base. The top portion of the bowl is conical in shape to assist circulation of cohesive powders. The bowl is fabricated from SS316 Quality stainless steel with all internal and external surfaces polished to mirror finish.

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24	Lid lifting system	Manual open able type, lid consists of charging hole with ball valve manually operated, air filter and special type of silicon gasket.
25	Impeller Mixing blade	Impeller mixing blade consisting of three nos. specially designed for intense mixing. The angles of the blades are such that the continuous action of this with different ingredient immensely mixes thoroughly with homogeneously. Mixing blade assembly is mounted on main shaft with separate bearing housing which fully eliminate any chance of cross contamination of product with any lubricants. The upper portion of the housing contains specially designed Teflon seal along with air purging facility. Lower stage housing contains bearing along with oil seals that make it completely leak proof.
26	Granulator / Chopper Blade	A high speed granulator is inserted horizontally through the wall of the bowl to assist blending of powder and to break the lumps of the products in to granules of required sizes. These lumps are formed while wet mixing. Following chopper profile can be offered as option. Knife edged, 2/4 bladed ( depending on bowl Capacity) impeller.
27	Discharge Valve	Machine has a side discharge outlet with pneumatically operated or manual. The discharge valve is exactly machine the profile of the intervene bowl with perfect sealing arrangement. Pneumatic cylinder housing is specially designed with swivel type arrangement, which helps for easy cleaning. Safety interlocks are provided to discharge valve as well as top lid with limit switch. Machine will not operate if discharge is open at hing.
28	Discharge Size	As per drawing.
29	Discharge Height	As per drawing.
30	Discharge Length	As per drawing.
31	Main Base Stand	Rigid Machine base frame made from S.S. material designed to accommodate the mixing bowl and the control panel. The motor direct connected to reduction gear box drive inside and machine base. Removable SS cover finished matt finish on all side of the machine base frame.
32	Electrical Control System.	SS304, PLCcontrolled with HMI or Standard Manual Control
33	Electrical Function	<ul style="list-style-type: none"> <li>● Main Motor On/Off</li> <li>● Chopper Motor On/off</li> <li>● Emergency stop</li> <li>● Ampere Display of Main and chopper Motor</li> <li>● Process Time auto/Manual switch for main Impeller.</li> </ul>
34	Location	Ergonomically mounted on stand.

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35	Pneumatic System	The machine is supplied with duly required pneumatic systems of Standard make. The customer has to ensure, supply of oil free compressed air, also free from any other impurity which may contaminate the product. Air Filter and Air water separator are also provided with the machine. Pressure regulator is provided to regulate the desired air pressure. The systems are suitable to accept an input air pressure of 5kg/cm <sup>2</sup> to be terminated at 1/4" BSP" terminal. Air lubricator is provided to lubricate solenoid valve and Pneumatic Cylinder is incorporated in the system.
36	Electrical	All Major switch gears like contractors, Relay, Motor protection breaches are from Standard make only.
37	Utility Requirement	<ul style="list-style-type: none"> <li>● Power Consumption 3Kw @415 V, 3 Phase, 50Hz.</li> <li>● Filtered, Dry, Oil Free compressed Air</li> </ul>
38	Safety Features	<ul style="list-style-type: none"> <li>● Enclosed moving parts.</li> <li>● Machine will not start with open lid.</li> <li>● Machine will not start with open discharge valve from T/C clamping.</li> <li>● Rapid Mixer Granulator is designed to achieve excellent mixing and consistent granules at lower operating cost along with higher productivity. Better mixing and closed control of granule size leads to faster tableting speeds with improved quality and least rejections.</li> </ul>
39	Documentation	Design Qualification, Installation Qualification & Operation Qualification documents. Material test certificate for contact parts. Installation & maintenance manual spare part lit. Warranty certificate of machine Certificates, Manual for Brought out items. Electrical Circuit Diagram Schematic Diagram of machine showing overall GA & PID Diagram.
40	Quantity	1
41	Dimension with pan	800 mm (L) X 500 mm (W) X 1100 mm (H)
42	Weight	110 Kg (Approximate) 200 kg with packing (Approximate)

**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

## Some of Our Other Instruments.

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

<p><b>TDP &amp; ODF Table Top Machine (Lab Scale)</b></p> 	<p><b>TDP &amp; ODF MACHINE (PILOT SCALE)</b></p> 
<p><b>Fluidized Bed Dryer (Lab scale)</b></p> 	<p><b>R &amp; D Tablet Coater (Lab Scale)</b></p> 
<p><b>Extruder &amp; Spheronizer</b></p> 	<p><b>FLUIDIZED BED PROCESSOR (Lab Scale)</b></p> 
<p><b>ALL PURPOSE MACHINE (Lab Scale)</b></p> 	<p><b>Die Roller Extruder</b></p> 
<p><b>DIGITAL PLETHYSMOMETER</b></p> 	<p><b>MAZES &amp; VIDEO TRACKING SOFTWARE</b></p> 

# Technical Specifications



## International Clients



## Industrial Clients



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

