



AVON PHARMA MACHINES PVT. LTD.

Engineers to Chemical, Pharmaceuticals and Allied Industries



ABOUT US

"Quality which is never ending"



AVON PHARMA MACHINES PVT. LTD. (APM) formed in year 1986 and is one of the leading manufacturer of pharmaceutical formulation machines. Our mission is to meet challenges in industry with solutions made by innovation, ability & experience. This has been perfected, over time, through our products & the varied range of machinery manufactured. We cover the machinery required by pharmaceutical formulation, bulk drug and API companies, namely for tableting /powder, liquid oral, ointment & injectable section.

APM has a well-trained team of professionally qualified engineers & are supported by in-house, hardware, CAD design tools & specifically designed production support software. Our factories are well equipped with machine shop, fabrication shop, assembly section, buffing & polishing section. Our quality assurance department is fully equipped with latest required testing facility & standards. The flexibility & innovation in production gives us additional coverage for immediate response, cost effectiveness, reliability & quick delivery.

We provide cGMP exhaustive documents of each and every machine manufactured, as per latest standards. required to sought regulatory approval by customer of U.S.FDA, MCA, MCC & WHO.

APM customer-support, team of qualified & experienced engineers is fully geared up for round the clock after sales services.



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CONTAINMENT GRANULATION SYSTEM





This Granulation system is a complete unit with a common SCADA operation system & single screen operation.

It comprises a High Shear Mixer with a charging and sampling port & a positioning system with Alpha Beta Split butterfly valves. A wet milling Co-mill leads granules to the Fluid Bed Dryer with a flow sieve thereby enabling motion of fluidisation while ensuring uniform drying. Dried products are discharged by Bottom Discharge Method into Blender bin and the product is milled and sieved by Co-mill provided and fed to the Blender Bin with passive Split Butterfly Valves. The Blender Bin comes with a Pneumatic lifting Device that makes for easy docking in the Blender.

The complete system is flame-proof. The entire system adheres to 21 CFR part 11 as well as cGMP guidelines. Sensors measure process endpoints but also endpoints for cleaning and validation.

SYSTEM HIGHLIGHTS:

1. Leak-proof High Shear mixer and Fluid Bed dryer to maintain the highest levels of containment.
2. Specially designed sampling valves as well as cleaning nozzles to ensure the validation of system is perfect.
3. All containment equipment filters incorporate for hassle-free filter changing procedures.

Note: Design & Specification are subject to change without notice.

INTEGRATED GRANULATION LINE



AVON's INTEGRATED GRANULATION SUITE is a concept designed, which is manufactured and supplied keeping in mind the criticality of handling potent drugs, cytotoxic drugs and similar products. This is done as to not create adverse effects on operators and the environment, when exposed directly.

AVON's IGS facilitates in having a single wall design from sifting to blending process. Thereby, encompassing the complete process in a closed loop to avoid exposure.

This unique design is positioned ergonomically and aesthetically for a new look and feel. The design is such that commercial scalability is very well kept in mind for end users commercial batches as well.

AVON'S IGS is available in 5 kg, 10 kg, 15 kg and 20 kg design based on the end user batch capacities.



RAPID MIXER GRANULATOR



SPECIAL FEATURES

- Unit is designed to meet requirements of cGMP.
- Contact Parts can be S.S. 316/316L quality.
- Mechanical seals can be provided for main & chopper shafts.
- Pneumatic lifting of blades is provided for bigger models.
- Specially designed control panel with display system and microprocessor.
- Bowl, lid mixing agitator, discharge housing and all other contact parts will be of S.S. 316/316L quality.
- Components of the machine are having easy accessibility for cleaning.
- All electrical & pneumatic parts are pre-wired to simplify installation.
- Proxy sensor is provided on main lid and discharge valve for safe operation.
- Discharge can be provided on either side to suit clients requirement.

Technical Data

| Model | RMG-10 | RMG-25 | RMG-50 | RMG-100 | RMG-150 | RMG-250 | RMG-400 | RMG-600 | RMG- 1000 |
|-------------------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
| Gross Volume in (L) | 10 | 25 | 50 | 100 | 150 | 250 | 400 | 600 | 1000 |
| Working Volume in (L) | 8 | 20 | 40 | 80 | 120 | 200 | 320 | 480 | 800 |
| Main Motor in HP | 2/3 | 3/5 | 3/5 | 7.5/10 | 10/15 | 20/30 | 30/40 | 40/50 | 63/85 |
| RPM Dual speed (RPM) | 750 / 1500 | 750 / 1500 | 750 / 1500 | 750 / 1500 | 750 / 1500 | 750 / 1500 | 750 / 1500 | 750 / 1500 | 750 / 1500 |
| Mixing speed (RPM) | 75 / 150 | 75 / 150 | 75 / 150 | 75 / 150 | 75 / 150 | 75 / 150 | 75 / 150 | 75 / 150 | 75 / 150 |
| Chopper motor (HP) | 1/1.5 | 1/2 | 2/3 | 2/3 | 3/5 | 3/5 | 5/7.5 | 5/7.5 | 10/15 |
| RPM Dual speed | 1440 /2880 | 1440 /2880 | 1440 /2880 | 1440 /2880 | 1440 /2880 | 1440 /2880 | 1440 /2880 | 1440 /2880 | 1440 /2880 |
| Weight in Kg | 200 | 900 | 1000 | 1400 | 1500 | 1800 | 2000 | 2500 | 3500 |
| OVERALL DIMENSIONS (MM) | | | | | | | | | |
| Length | 1450 | 1440 | 1700 | 2350 | 2400 | 2550 | 2880 | 3100 | 3300 |
| Width | 600 | 1000 | 750 | 1100 | 1430 | 2350 | 2450 | 2690 | 3150 |
| Height | 950 | 1310 | 1400 | 1750 | 2185 | 2050 | 2275 | 2510 | 3035 |
| H-1 | 1060 | 1345 | 1600 | 1900 | 2280 | 2585 | 2960 | 3250 | 3765 |

FLUID BED DRYER



R & D model available

SPECIAL FEATURES

- Short Drying time
- Sturdy structure
- Uniform Drying at low temperature
- Intrinsically safe Earthing system
- Fan motor unit can be placed in remote areas
- 0.3 micron class 100 HEPA filter
- Minimum handling more Hygienic
- All contact parts are made out of S.S. 316/316L
- Heating Mode electrical / Steam / Thermic Fluid
- Inflatable gasket for container and filter-bag sealing
- PLC & HMI controlled panels available
- 2.5 kg to 500kg batch capacity

Technical Data

| | | | | | | | | |
|--------------------------------|-------|-------|-------|---------|---------|---------|---------|---------|
| Model in kgs. | 10 | 30 | 60 | 120 | 200 | 250 | 300 | 500 |
| Bowl Volume (L) | 35 | 110 | 200 | 425 | 625 | 780 | 925 | — |
| Batch Capacity (kg) | 10-15 | 30-40 | 60-75 | 120-150 | 200-240 | 250-290 | 300-325 | 500-600 |
| Motor HP | 2 | 5 | 10 | 15 | 20 | 25 | 30 | 50 |
| Heating Capacity - (kw) | 6 | 18 | 36 | 54* | * | * | * | * |
| Steam Consumption per/hr | 15 | 25 | 50 | 100 | 170 | 200 | 250 | 400 |
| Drying Temp (°C) | 50-80 | 50-80 | 50-80 | 50-80 | 50-80 | 50-80 | 50-80 | 50-80 |
| OVERALL DIMENSIONS (MM) | | | | | | | | |
| Height | 1500 | 2100 | 2550 | 3200 | 3500 | 3500 | 3600 | 4700 |
| Width | 700 | 1000 | 1250 | 1600 | 1900 | 1950 | 2050 | 2750 |
| Length | 600 | 1400 | 1600 | 2000 | 2200 | 2750 | 2750 | 2450 |

* Steam heating is advisable

BLENDERS



Blending Machine is one of the most important equipment in Pharma Industry. As a Drug is manufactured by mixing of number of chemicals. These mixing procedures are done in the Blending Machine. The mixing is required in either dry or wet state depending upon chemical composition and the reaction allowed.

The mixing of chemicals and powders entails high demands on safety and hygiene in the pharmaceutical production process. For the production of pharmaceutical solids, the homogeneity of the produced mixture is a crucial process step. An even distribution of all components in the mixture is the goal of this process to attain good mixing coefficient. Avon can also provide an automated system where user can configure mixing time and speed. For this we have used PLC, HMI and VFD. In HMI, we can set the time and speed of the VFD to control the motor of the Blending Machine.

MULTI-MILL



SPECIAL FEATURES

- All contact parts S.S. 316 / 316L quality Machine rated for continuous operation.
- High output with process uniformity.
- Direction of blade rotation by reversing switch. Various combinations of screens / speeds/ number of blades / direction of rotation blade, can be selected.
- High screen opening area for higher throughput. All contact parts can easily be dismantled and cleaned for change of product. Wide range of SS perforated and wire knitted screen available. Dust free operation.
- Additional perforated screen is provided at the bottom of the pulverizing chamber to eliminate higher percentage of fineness, control granule size more effectively and obtain higher outputs.
- Machine portable on castor wheels.

Technical Data

| | |
|----------------------|--|
| Motor | 3 HP 1440 rpm / 415V/3PH/50 CS AC (FLP Optional) |
| Starter | Reversible DOL |
| Rotor Speed | 750 - 1500 - 2100 - 3000 RPM (Approx.) |
| Blades | 12 HALFSWING KNIFE and IMPACT EDGES (FULL SWING optional) with 2 scrapper Blades. |
| Screen Sizes | 0.5 to 25 mm S.S. Perforated 4 to 100 wire knitted mesh with backup frame. |
| Product Charging Ht. | 1525 mm (approx) from ground |
| Net Wt. | 250 Kg. (approx.) |
| Gross Wt. | 400 Kg. (approx.) |
| Overall Dimensions | 900mm x 800mm x 1700mm |

VIBRO SIFTER



SPECIAL FEATURES

- Available in standard and GMP models with contact parts in S.S. 316/316L quality.
- Portable unit with higher output.
- Double and triple deck units with different screens can be provided easy to dismantle for cleaning screens.
- Noiseless, maintenance-free unit.
- Model Available : 20", 30", 48", 60"

Technical Data

| Model | 12" Lab Model | 20" | 30" |
|--------------------------|---|-------------------------------|-------------------------------|
| Screen | Stainless steel 304/316 quality & of different mesh size as per requirement | | |
| Screen dia | 340 mm | 500 mm | 760 mm |
| Charging Height | 850 mm | 730 mm | 730 mm |
| Discharging Height | 480 mm | 520 mm | 520 mm |
| Electrical motor | 0.18 HP | 0.5 HP, 415 V, 3 Phase, 50 Hz | 0.5 HP, 415 V. 3 phase, 50 Hz |
| Overall dimensions in mm | 380 (w) X 380 (d) x 850 (h) | 600 (w) X 600 (d) x 800 (h) | 770 (w) X 770 (d) x 800 (h) |
| Net Weight | 55 Kg | 125 Kg | 175 Kg |
| Capacity / hour | 5 to 50 kg | 20 to 200 kg | 30 to 300 kg |

Note :Output of machine depends on bulk density and moisture content in the product.

AVON COATER



SPECIAL FEATURES

- Design Confirms to meet cGMP standards
- All contact parts will be made from S.S. 316/316L.
- All seals are made from silicon/viton (food grade).
- Perforated coating pan with antisliding baffles.
- Rabbit ears type baffles.
- Flexible Spray arm for adjustment of spraying nozzle for uniform coating.
- Spray Guns with automated automating controls
- Insulated Air Handling system with HEPA filters, heat exchanger and de-humidification system.
- PLC Controls with Touch Screen Operator interface process.



Technical Data

| | | | | | |
|---------------------------------|-------------|-------------|-------------|---------------|---------------|
| MODEL (INCHES) | 12" | 24" | 36" | 48" | 60" |
| WORKING CAPACITY | 3 to 5 kg | 10 to 12 kg | 60 to 80 kg | 125 to 150 kg | 300 to 350 kg |
| PAN DIAMETER (mm) | 355 | 600 | 900 | 1200 | 1500 |
| MOUTH DIAMETER (mm) | 125 | 300 | 400 | 450 | 520 |
| PAN SPEED (vfd) | 1 to 30 RPM | 1 to 12 RPM | 1 to 12 RPM | 1 to 12 RPM | 1 to 12 RPM |
| MAIN MOTOR | 1 HP | 1 HP | 2 HP | 3 HP | 5 HP |
| GEAR BOX RATIO | 72:1 | 120:1 | 123.9:1 | 156:1 | 153.7:1 |
| INLET BLOWER | 1 HP | 2 HP | 3 HP | 5 HP | 7.5 HP |
| INLET BLOWER (CFM) | 150 | 350 | 1300 | 1700 | 4200 |
| EXHAUST BLOWER | 2 HP | 5 HP | 7.5 HP | 15 HP | 20 HP |
| EXHAUST BLOWER (CFM) | 300 | 600 | 2000 | 2500 | 6000 |
| FLOOR SPACE (mm) | 1100 X 1100 | 1100 X 1100 | 1400 X 1400 | 2200 X 2200 | 2600 X 2600 |
| HEIGHT OF MAIN PAN CABINET (mm) | 1400 | 1700 | 1900 | 2400 | 2800 |
| WET SCRUBBER | OPTIONAL | MOBILE BED | MOBILE BED | MOBILE BED | MOBILE BED |
| WIP PUMP | 1HP | 1HP | 1HP | 1HP | 1.5HP |

CONVENTIONAL COATING PAN



SPECIAL FEATURES

- Pan fabricated from S.S. 316/316L quality with adequate mouth opening and depth.
- Easy mounting arrangement for changeover from coating pan to polishing pan.
- Compact hot air blower with inlet air damping arrangement through filter.
- It needs no foundation and can be installed on a pre-levelled floor.
- Flameproof construction is optional.
- HEPA Filter Optional

Technical Data

| Models | CP-450 | CP-900 | CP-1200 | CP-1500 |
|---|-------------|-----------------|-------------|-------------|
| Loading capacity (kg) | 15 | 60 | 150 | 200 |
| Drive Motor HP 3 PH 50 C S 415 V AC | 0.50 | 1.00 | 3.00 | 5.00 |
| RPM of Pan | 24 / 72 | 12 / 36 | 10 / 30 | 8 / 24 |
| Hot air blower motor HP 3 PH 50 C/S 415 V AC line | 0.25 | 0.50 | 1.00 | 2.00 |
| Blower capacity Maximum CFM | 100 | 200 | 500 | 750 |
| Heater (kw) | 1 KW | 2 KW | 8 KW | 12 KW |
| Pan Mounting | Fixed Angle | Fixed / Varying | Fixed Angle | Fixed Angle |

DUST COLLECTOR



Technical Data

| | |
|-----------------|---|
| Model | APM - 100 |
| Vacuum Flow | 100 CFM |
| Maxim Vacuum | 500 mm water |
| Impeller | Made out of Aluminium casting |
| Fan Assembly | Made out of Aluminium casting |
| Body | Stainless Steel 304 Quality |
| Dust Capacity | 45 - 60 Ltr. |
| Electric Supply | Motor - 1.5kW/2HP supply - 415V, 3 Phase, 50 HzAC |
| Weight | 125 kgs. Approx. |

OSCILLATING GRANULATOR



SPECIAL FEATURES

- Sturdy
- Durable
- Better Productivity and easy to clean
- Screen holding - simpler - with Tensioning device

Technical Data

| | |
|----------------|----------------------|
| Model | APM 200 |
| Stirrer Dia. | 8" (200 mm) |
| Stirrer Motion | Oscillating |
| Output * | 220 kgs/Hr |
| Electric Motor | 2Hp/1440RPM/50Hz/3PH |

TRAY DRYER



SPECIAL FEATURES

All stainless steel 304/ 316/ 316L construction for pharmaceutical applications or external mild steel with SS internal contact parts. Electric / Steam/ Thermic fluid heating. Control panel board with process timer. (A circular chart recorder can be provided on demand at extra cost). Sturdy trolleys with castor wheels. Air filter at inlet. (A HEPA filter can be provided on demand at extra cost). Easy accessibility of the impeller for cleaning. The exhaust duct, blower & air inlet filters can be custom built to keep out of the production area with suitable ducting.

CAPACITY

- 6, 12, 24, 48, 96, 192 trays. Standard & GMP models available.
- S.S. 316/316L internals & S.S. 304 externals
- Stainless steel tray in S.S. 316/316L quality.

Technical Data

| Capacity | 12 | 24 | 48 | 96 | 192 |
|-------------------|---|-----------|-----------|---------------|---------------|
| Tray Size | 16" (Length) x 32" (Width) x 1.25" (Height) in SS 304/316 | | | | |
| Motor HP | 0.5 | 1 | 1 | 1 HP x 2 Nos. | 1 HP x 4 Nos. |
| No. of Trolley | Nil | Nil/1 | 1 | 2 | 4 |
| Heating Load KW | | | | | |
| 100° C | 3 | 6 | 9 | 18 | 36 |
| 200° C | 6 | 9 | 15 | 24 | 42 |
| 300° C | 9 | 12 | 21 | 30 | 48 |
| Steam Consumption | 25 Lbs/hr | 45 Lbs/hr | 60 Lbs/hr | 80 Lbs/hr | 120 Lbs/hr |

FILTER PRESS



Standard Model

SPECIAL FEATURES

The range of Horizontal Plate type Zero Hold filter press made of a special design that guarantees the right filtration requirement for each application. These filter press are available in wide range of output capacities with suitable pumps to meet customers exact needs. The Machine is useful for pharmaceutical, Chemical Beverages, Distillery & Oil Industries.

MODELS AVAILABLE

- 8", 14", 18", 24" & 33"
- Trial facility available at our end

Technical Data

| Dia. of Plates | No. Of Plates | Filtering Area m ² | Cake holding Cap. (Ltrs) | Flow Rate/Hrs | Size of Pump | Motor HP |
|----------------|---------------|-------------------------------|--------------------------|---------------|--------------|----------|
| 8" | 6 Plates | 0.217 | 4.9 | 600 | ½" | 1 HP |
| | 8 Plates | 0.279 | 6.3 | 800 | ½" | 1 HP |
| 14" | 8 Plates | 0.819 | 24.75 | 1500 | 1" | 2 HP |
| | 10 Plates | 1.001 | 30.25 | 1700 | 1" | 2 HP |
| | 12 Plates | 1.183 | 37.75 | 1900 | 1" | 2 HP |
| 18" | 10 Plates | 1.65 | 55 | 4000 | 1 ½" | 3 HP |
| | 12 Plates | 1.95 | 65 | 4600 | 1 ½" | 3 HP |
| | 15 Plates | 2.40 | 80 | 5500 | 1 ½" | 3 HP |
| | 24 Plates | 3.75 | 125 | 8200 | 1 ½"- | 3 HP |
| 24" | 10 Plates | 2.88 | 99 | 7000 | 2" | 5 HP |
| | 12 Plates | 3.4 | 117 | 7000 | 2" | 5 HP |
| | 15 Plates | 4.192 | 144 | 7000 | 2" | 5 HP |
| | 18 Plates | 5.035 | 171 | 8500 | 2" | 5 HP |
| | 24 Plates | 6.625 | 225 | 12500 | 2"- | 5 HP |
| 33" | 14 Plates | 11.65 | 221.25 | 13500 | 2.5" | 7.5 HP |
| | 16 Plates | 13.31 | 252.25 | 17000 | 2.5" | 7.5 HP |
| | 18 Plates | 14.97 | 284.46 | 17000 | 2.5" | 7.5 HP |
| | 22 Plates | 16.63 | 316.06 | 17000 | 2.5" | 7.5 HP |

COLLOID MILL

SPECIAL FEATURES

- Simple construction permits the ease of cleaning. Normally, flushing of water or suitable solvent cleans the mill. If required. The operating parts can be easily dismantled through cleaning or sterilization.
- Feed Hopper, recirculating pipe and mouth hopper are supplied as standard with Colloid Mill.
- Colloid Mill is available in water Jacketed model also. This version is recommended for processing materials, which generates a lot of heat during milling operations and are sensitive to heat.
- All contact parts of the mill are made up of S.S. 316/316L.
- Model with flameproof electrical fitting is available on request.



PHARMA METAL DETECTOR

A detector used to identify and remove tiny metal contaminants from tablets and capsules during the pharmaceutical manufacturing process.

KEY FEATURES AND BENEFITS

- High-quality construction: Made with SS 304 and SS 316, ensuring durability and compliance with CGMPs.
- Food-grade materials: Non-metallic parts are made of food-grade materials for safety.
- Easy maintenance: De-attachable reject mechanism allows for easy cleaning.
- High throughput: Capable of processing 5000–7000 tablets or capsules per minute.
- Flexibility: Adjustable height and 360° rotation for easy installation.
- User-friendly interface: LCD display, audio/visual indicators and touch keypad for intuitive operation.
- Data management: Built-in software for product records and validation.
- Security: Three levels of security code for access control.
- Sensitivity and validation: Adjustable sensitivity, product effect compensation and auto validation features.
- Hygiene : Food-grade white chute for easy cleaning and hygiene.
- Compliance: Comprehensive manual and validation kits are provided.
- Comprehensive manual with DQ/ IQ/ OQ/ PQ and validated test calibration kits with certificates for validation test: Provides detailed documentation and necessary tools for validation and verification.



LIQUID MANUFACTURING PLANT



SPECIAL FEATURES

- MOC S.S. 316/316L
- We can Manufacture as per customer design / requirement. Electric heating also possible for smaller capacity
- Bottom mounting stirrer / homogenizer.
- Inline homogenizer/colloid mill.
- PLC based fully automated plant also available
- cGMP with documentation

SINGLE VESSEL MANUFACTURING





CREAM / OINTMENT MANUFACTURING PLANT



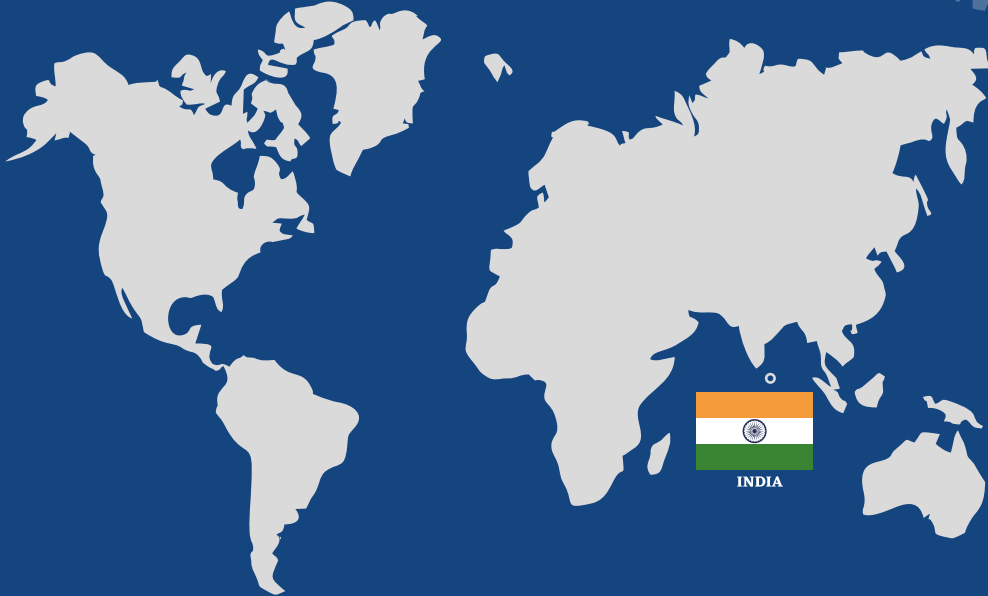
MODELS AVAILABLE
From 5kg - 1000kg

SPECIAL FEATURES

- Capacity from 5kg to 1000kg.
- Online colloidal mill / micronizer.
- Hydraulic lid lifting of mfg vessel.
- Dual anchor agitator.
- Equipped with CIP & SIP facility.
- MOC S.S .316/316L.
- Bottom Homogenizer.
- Fully / Semi automatic operation.



OUR GLOBAL PRESENCE



INDIA



AFGHANISTAN



BANGLADESH



EGYPT



JORDAN



NAIROBI



NEPAL



PALESTINE



PHILIPPINES



SRILANKA



SAUDI ARABIA



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YEMEN

Many more to join.....



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