

Engineering Success



Mixing & Milling Technology



Profile

Engineering is the demand of society. In the present technological era, nothing can proceed without the help of engineering processes. Contributing effectively in this technologically advanced society, we at TPCO Engineering India are manufacturers and suppliers of machineries required in industries related to chemicals, processing, paints, pharmaceuticals, food, etc. The machineries provided by us are made to pass a benchmark in terms of quality so that the client doesn't face any difficulty while operating them.

TPCO Engineering India laid its foundation stone back in 1985 and since then, has been working and meeting the demands of the clients. Our exceptional services and the promise of client satisfaction make us reach the top of the charts. The reputation of the entrepreneurial company has seen an up-rise ever since its creation. The experience of manufacturing and production techniques that we hold in our hands is the key to providing such customer satisfaction.

The various services that we provide includes manufacturing of a wide range of mixers, grinders, milling machines, dispensers, drying and separating equipment, etc. Most of the work is done in-house and is made to pass through the many quality check stations. There are experienced quality engineers along with their subordinates at each station, which keep an eye on each product going outside the production line. Testing of each machine is done and any discrepancy, if found, is sent for rectification. In the case of a major drawback in the machinery, the product is rejected and recycled. Compromising on quality is not our cup of tea.

Due to the expertise in the field, we inform our clients about the difficulties that they can face in the course of time while setting up an industry. The problems that can occur in the machines with the due course of time are also known to us and are informed to the client. The rectification methods, along with the process manufacturing techniques are taught to the clients.

Each machine has a different way of operation. If mishandled, the machine may start giving strange problems and noises, which can be cured only by the experts. So, proper handling needs to be done. Although the machines manufactured by us are made to go through 100% quality inspection, and are manufactured keeping in mind the factor of safety, still, we take precautions in case of any unseen circumstances. So, a proper user guide is provided. The spare parts for the machines are also easily available due to the use of standard parts in the machine assembly.

Our catalogue consists of a large number of printing machines, chemical machines, food machines, adhesive machines, pharmaceutical machinery, etc. This catalogue sees the current facet after going through strict scrutiny and improvements in the production process by us.



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DISPENSER & MIXING SERIES

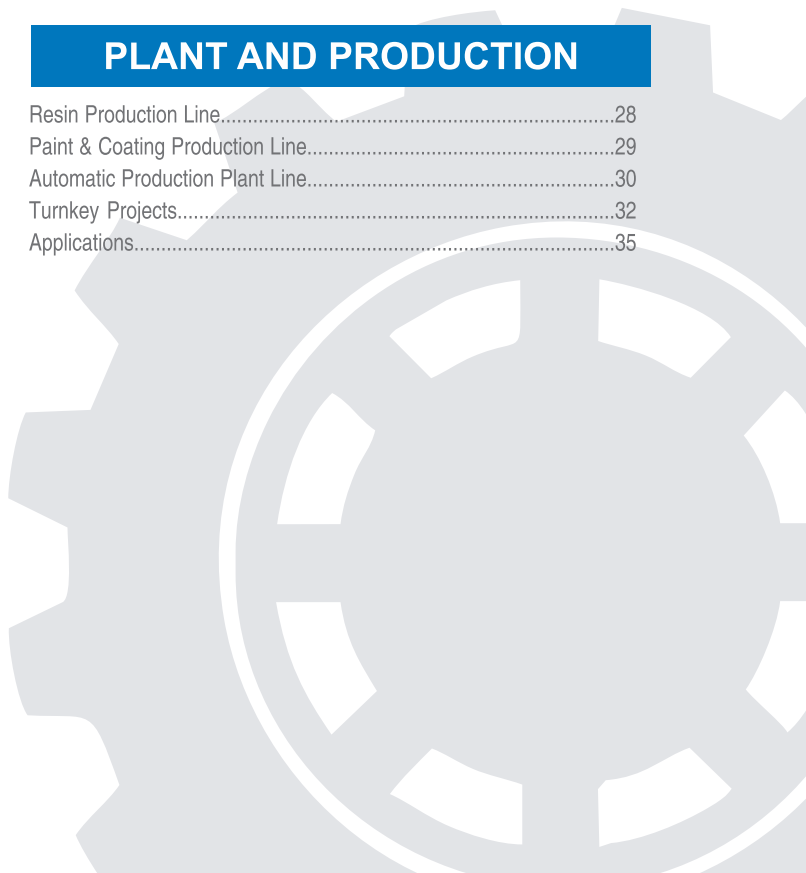
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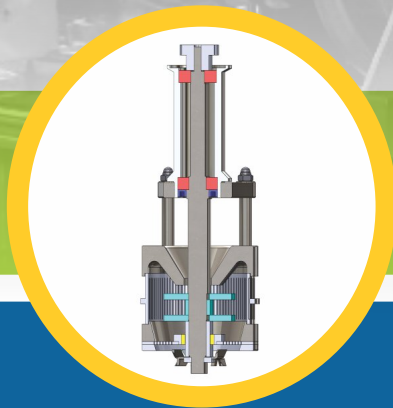


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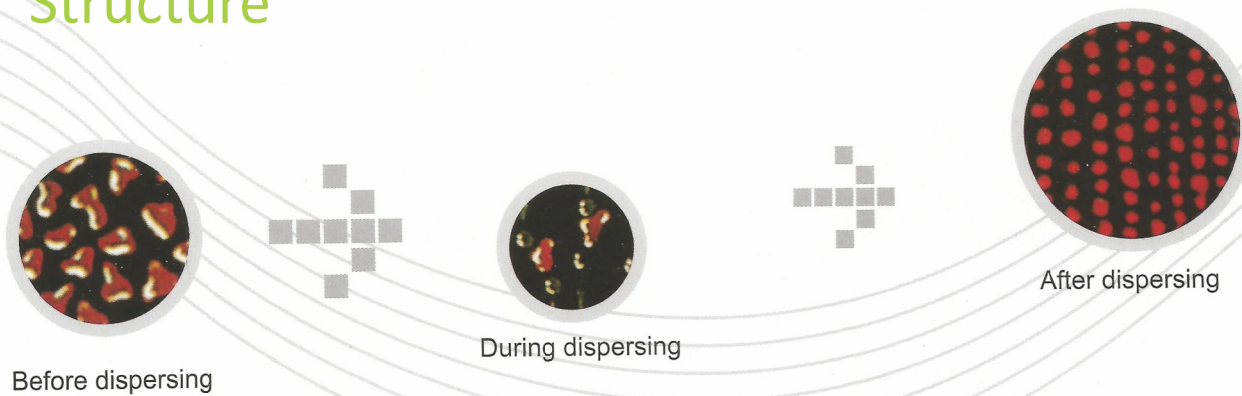
MILL SERIES

Quality and Innovation beyond Comparison



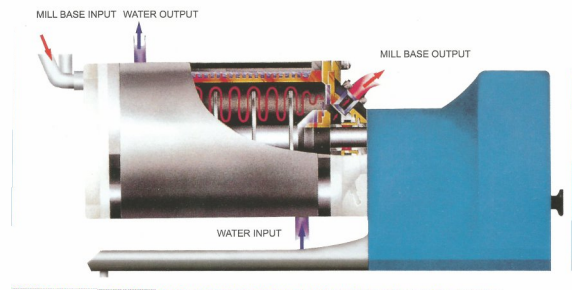
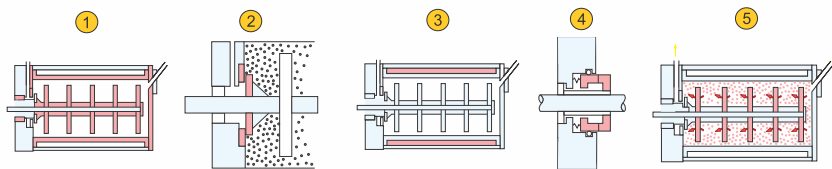
Horizontal Bead Mill - THM Series
Bead Mill-SUPERFLOW C-series
Nano Mill
Attritor Mill
Ball Mill
Batch Type Bead Mill - BM Series
Vertical Bead Mill
Basket Mill

Structure



Operation Principle

Wet process milling equipment which can produce continuously, the working principle is the power delivered from high-speed rotor to milling medium and liquid material, through mutual colliding and laminating, ultrafine result can be achieved.



HORIZONTAL BEAD MILL - THM SERIES

TIPCO Bead Mill - THM is an agitator bead mill with a horizontal grinding container for dispersion and finest wet grinding in a completely enclosed system. The Bead mill is appropriate for a wide range of items from low to exceptionally good pumpable items. Uniquely composed instigator circles, mounted symmetrically on a pole, exchange the vitality required for scattering and wet granulating to the round crushing globules. An outside pump feeds the product into the mill.

Bead mills are available in different designs and sizes, from small laboratory models up to huge factories for creation plants, offering the ideal size for each application. The mill equipment, material, and grinding bead separation system can be adapted to the individual needs of each application.

TIPCO Range starts from 2l to 60 L capacity.

Application : Ink, Paint, Coating, Resin Industries.



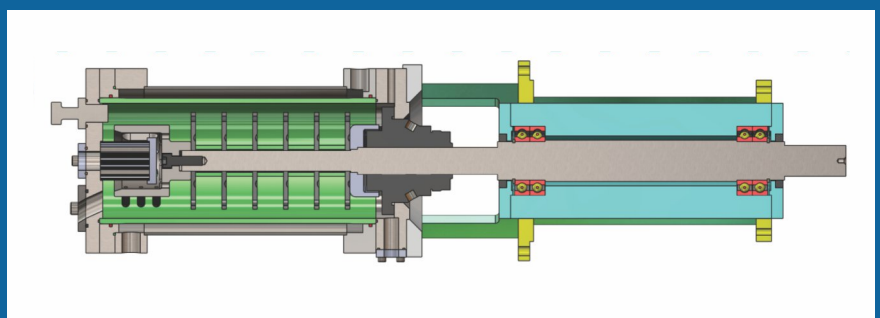
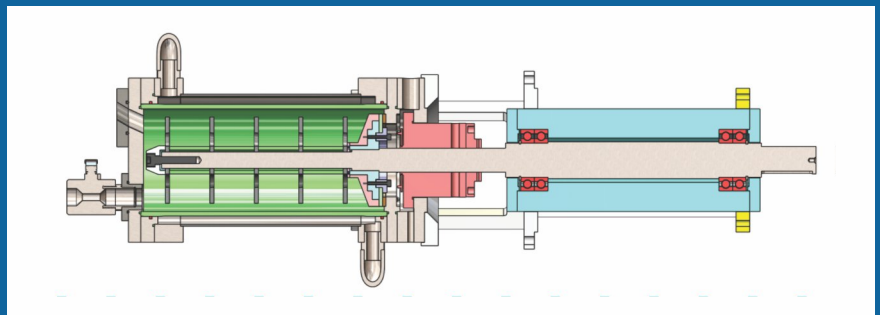
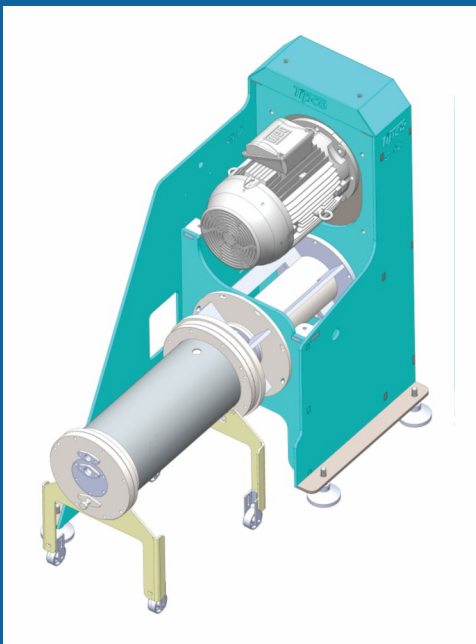
	THM-10	THM-15	THM-25
Motor Power:	10	15	25
Motor RPM:	1440	1440	1440
Material Capacity:(PM)	1.5 Ltr (1 min.)	3.5/4 ltr (1 min)	5/6 Ltr (1 min.)
Output Capacity:(PM)	1.5 Ltr (1 min.)	3.5/4 ltr (1 min)	5/6 Ltr (1 min.)
Chamber Volume:	6.5L	14.5	25
2ed Motor Power:	1	1	1
2ed Motor RPM:	1440	1440	1440
Power Supply	440 volt	440 volt	440 volt
AC 3 or 2 Phase	3 ph	3 ph	3 ph

BEAD MILL-SUPERFLOW C-SERIES

Horizontal Bead Mill is suitable for grinding, milling, and dispersion of liquid-phase particulate materials such as surface coating, dyes, pigments, printing ink, pesticides, Agro chemicals , paper chemicals , Speciality chemicals. The machinery is designed for continuous production with effective grinding and dispersing, suitable for low middle viscosity materials. The grinding mechanism is totally enclosed and solvent loss is cut down to a minimum specifically designed to incorporate rotating disc type agitation.



	C-20	C-100
Motor Power:	30	75
Motor RPM:	1440	1440
Material Capacity:(PM)	5/6 Ltr (1 min.)	35 Ltr (1 Min)
Output Capacity:(PM)	5/6 Ltr (1 min.)	35 Ltr (1 Min)
Chamber Volume:	30	100
Power Supply	440 volt	440 volt
AC 3 or 2 Phase	3 ph	3 ph

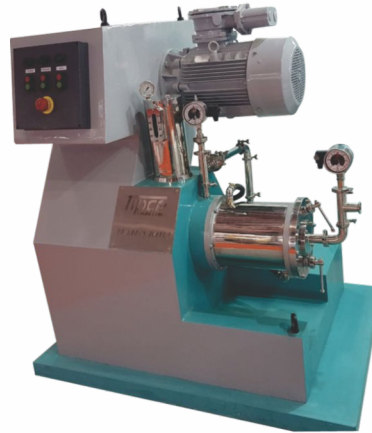


NANO MILL →

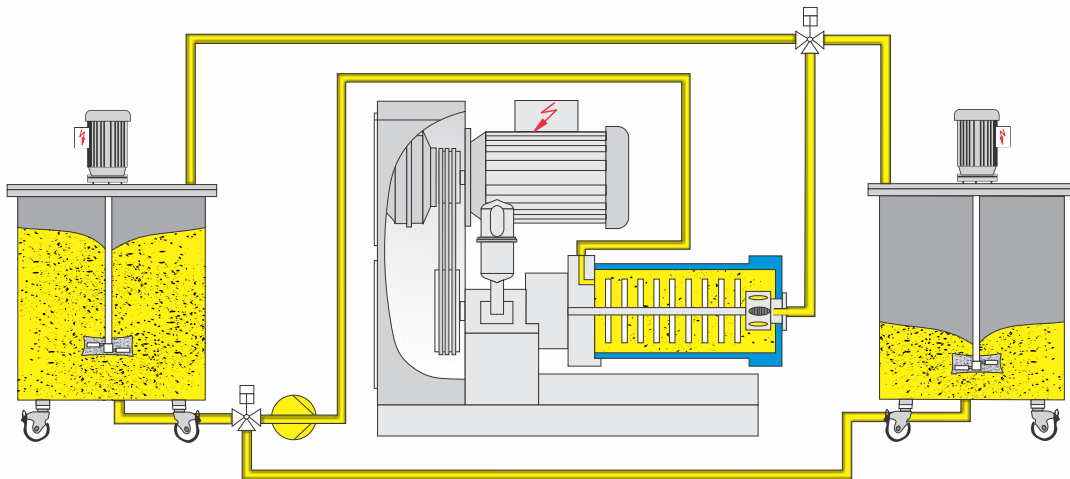


Features

TIPCO Nano Mill is designed for nano grinding applications, with the innovative design of separate blades, the arrangement allows high shearing force for wet grinding and dispersion in various realms, achieving the required fineness quickly. Tipco Horizontal Nano Mill is most applicable to nano class milling with a unique design interface that allows easy operation, supreme wear resistance and exceptionally low wear and tear. A compressive cooling system gives better heat dissipation and improves the lowering of the temperature.



Working Process



Various MOC



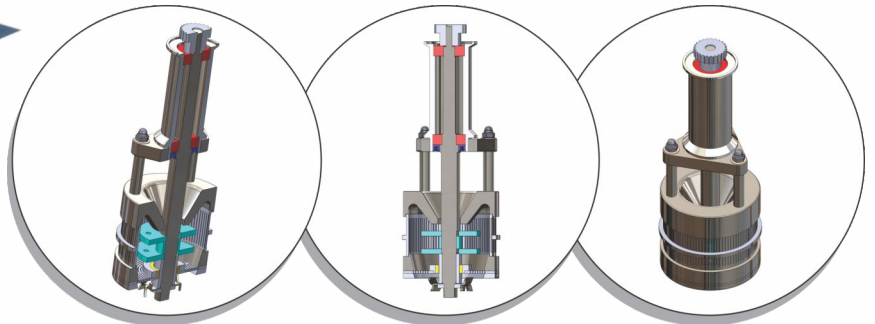
BASKET MILL →



CHARACTERISTICS OF BASKETMILL

- Predispersion with a dissolver disc and grinding with a milling basket in one machine and one container
- No pumps, piping, valves, additional containers etc. are required.
- Easy cleaning and minimum product loss when changing the product
- Little grinding media required
- Double walled milling basket and double walled container for cooling an heating
- High circulation rates even with highly viscous products due to the dissolver disc and pump wheel
- Excellent grinding results
- Particularly high throughput rates
- Low energy requirement
- No dead areas due to effective millbase circulation
- Specially designed construction of basket and rotor ensure non metal pollution for the material.
- Design of blocking spare parts make it much more convenient to disassemble, maintain and overhaul, there is little need of professional maintainer

The milling basket containing the grinding sand is lowered into the mill base, the fast circulation of the mill base within the milling basket is generated by the dissolver disc and integrated pump wheel, a very narrow particle size distribution can be achieved very quickly.



We Customise Solutions

as per Customer Needs

*High Circulation rates even with highly viscous products due to the dissolver disc and pump wheel.
Excellent grinding results.
Particularly high through out rates.
Low energy requirements.
Specially designed construction of basket and rotor ensure non metal pollution for the material.*

High speed rotation pump wheel at the top of the basket generates vortex flow, which adsorbs materials into the basket.



BASKET MILL

ATTRITOR MILL →

Tipco's Attritor Mill Machine is used for high output fine grinding, These machines employ the well-known principle of grinding & dispersing with agitated balls. The materials take a shorter grinding time in our Attritor Mill.

We are one of the foremost Manufacturers and Suppliers of Fluid & Powder Machinery used in various industries. The wide range that we offer includes Ball Mill, Basket Mill, Drum Filter, and many more. In addition to this, our products are stringently tested on various parameters to make sure that we always deliver high-quality products to our customers..

Attrition Mills is also known as Stirred Ball Mill and our machine is Fast, Powerful and use Efficient Method of operations for grinding, blending and milling in both wet as well as dry. Most important advantage of Attrition Mill, ensures that all the grinding media are in action all time. That's the reason this results in much faster action.



	AT-50	AT-100	AT-200	AT-500
Motor Power:	3/5	7.5	15	25
Motor RPM:	1440	1440	1440	1440
Working Capacity (MAX.)	30 kg	70 kg	140 kg	240 kg
Shell volume	50 L	100 L	200 L	500 L
Gear Box	3 NUV	4 NUV	5 NUV	6 NUV
Power Supply	440 volt	440 volt	440 volt	440 volt
AC 3 or 2 Phase	3 ph	3 ph	3 ph	3 ph

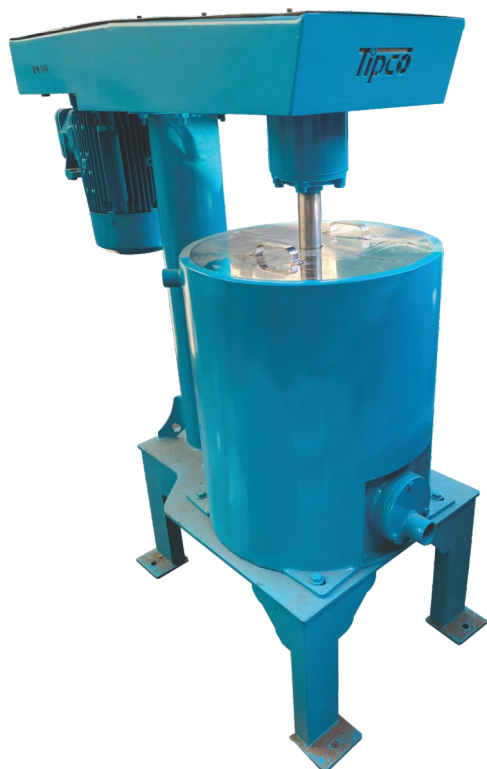
BALL MILL →

Ball Mill is the most used machine for specially dry grinding and also for wet grinding. The shell is made of mild steel with ends welded or bolted to it. Shafts welded are connected to Plummer block with bearing that allows the complete shell to rotate at a particular RPM for a product like a pigment that can be easily ground within the shell after running for numerous hours. Products that require no contamination are made in a ball mill which is lined with either steatite or alumina lining. The ball used in this machine can be either steatite/ alumina/ steel balls. Water circulation is given to the jacket for cooling the product. Discharge is done through a manhole cover having holes and connected to the ball valve.



	BA-3X3	BA-4X4	BA-5X5	BA-6X6
Motor Power:	3/5	7.5	10	20
Motor RPM:	1440	1440	1440	1440
Chamber Volume:	500	700	1000	1200
Power Supply	440 volt	440 volt	440 volt	440 volt
AC 3 or 2 Phase	3 ph	3 ph	3 ph	3 ph

BATCH TYPE BEAD MILL - BM SERIES



Tipco Bead Mill uses a batch-type grinding method and is suitable for wet grinding with three related operations of premixing, grinding and Dispersing can be made on this machine simultaneously. That is, grinding the pigment this machine has instant dispersing in batches. The glass beads are used for grinding purposes so you can find good brightness of pigments.

	BM-50	BM-100	BM-200	BM-500
Motor Power:	3/5	7.5	15	25
Motor RPM:	1440	1440	1440	1440
Working Capacity (MAX.)	30 kg	70 kg	140 kg	240 kg
Chamber Volume:	50 L	100 L	200 L	500 L
Power Supply	440 volt	440 volt	440 volt	440 volt
AC 3 or 2 Phase	3 ph	3 ph	3 ph	3 ph

VERTICAL BEAD MILL →

Vertical Bead mills are dispersion processing machines that reduce the size of solid particles (pigments, fillers) and finely scatter them in a liquid condition. Small ceramic, glass, or metal beads are moved inside the mill chamber to help reduce particle size through impact, and energy input when grinding is pumped through the mill.

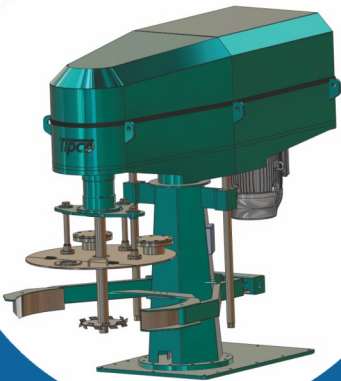
Bead grinding is the most effective method for processing microscopic particles in the sub-micron or even nanometer size range. A variety of designs exists to match the grinding of different viscosities, physical properties, and targeted particle sizes. Depending on the design of the machine, the machine can operate in separate passes or continuous operation.

Vertical Bead Mill is a small laboratory as well as industrial machine that is perfect for grinding and dispersing materials into small particles. The mill uses a batch type grinding method, so it is best suited for wet grinding with three corresponding sentences of premixing. Grinding and dispersing can be done simultaneously on this machine.



	TVM-10	TVM-15	TVM-25	TVM-50
Motor Power:	10	15	25	50
Motor RPM:	1440	1440	1440	1440
Flow rate	1-3 Ltr	2-5 Ltr	3-7 Ltr	7-9 Ltr
Chamber Volume:	6.5	14.5	25	50
Power Supply	440 Volt	440 Volt	440 Volt	440 Volt
AC 3 or 2 Phase	3 ph	3 ph	3 ph	3 ph

DISPERSER & MIXING SERIES



Simple Disperser Machine
Twin Shaft Disperser
Twin Shaft High Disperser Machine
Vacuum High Speed Disperser
Various Agitators
High Shear Homogenizing and Emulsifier
Inline High Shear Emulsifier
Kneader Mixer (Sigma Mixer)
Horizontal Plough Shear Mixer
Ribbon Blender or Pug Mixer Machine

SIMPLE DISPERSER MACHINE →



Single Shaft High-Speed Disperser Machine is commonly used in many industries for mixing and distribution with variable frequency speed adjustment. TIPCO machines are used for the mixing & dispersing of the two or more different liquids as well as powder in liquid to get the best result from the mixing process. Currently this is available for customers to choose from the ordinary or the explosion-proof models and items of this equipment with blade distributor are designed on request with variable specifications of power. Tipco machine comes with a hydraulic lift system with an easy to operate control system, where the machine operator can lift up and down and center distance between the base and the scattered axles.

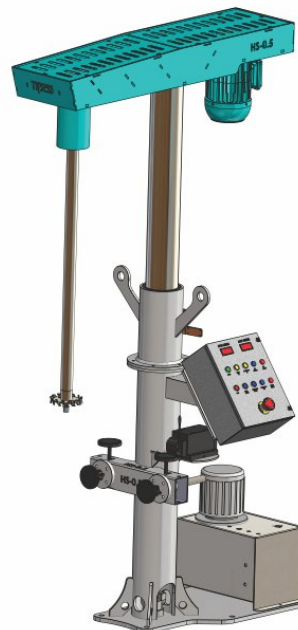
***If required, a User-friendly hydraulic lift system of 180° rotation is available, it is easily operated**

Major Feature:

Application:

Paint, Printing Ink, Coating, Pigment, Resin, any Chemical Mixing

	HS-0.5	HS-1	HS-2	HS-2.1
Motor Power	5	10	15/10	25/30
Motor RPM	1440	1440	1440	1440
Hydraulic Lifting	900mm	1100mm	1200mm	1400mm
Shaft	45mm	60mm	65/70mm	75/80mm
Blade	8"	10"	12"	14"
Hydraulic Motor	1	1	2	2
Hydraulic RPM	1440	1440	1440	1440
AC 3 or 2 Phase	3 ph	3 ph	3 ph	3 ph

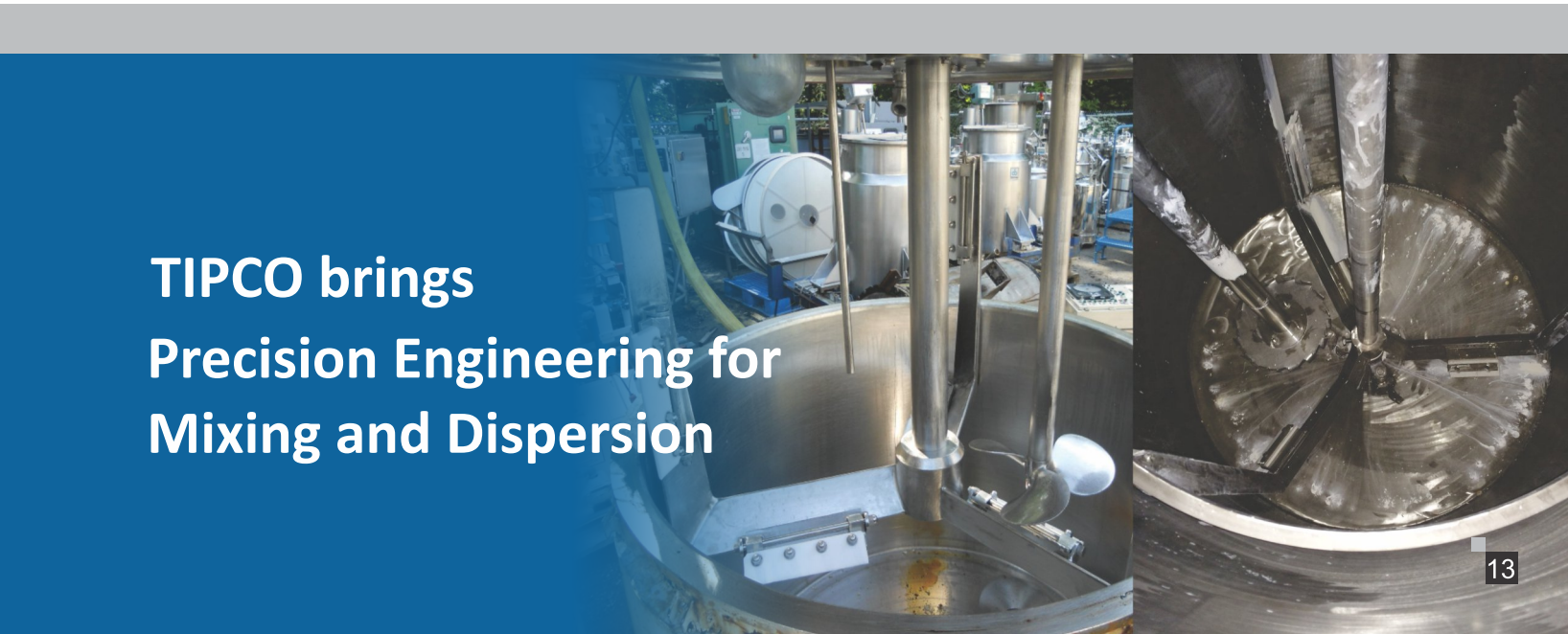


TWIN SHAFT DISPERSER →

Twin Shaft Disperser is integrated with low-speed strong mixer and high-Speed Disperser into one machine and especially suitable for mid and high viscous materials and thixotropic materials. Dispersing and mixing can go at the same time and result in an ideal effect. Suitable for stirring and mixing high viscosity materials in paint, coating and printing ink industries. The frame stirring device makes the material be mixed and prevents wall sticking. The high-speed dispersion makes the materials be mixed and dispersed adequately and the product can reach the requirement in a short time. Dispersing and mixing can go at the same time and result in an ideal effect. Various agitator types: Anchor agitator with scraper, three-blade, high-speed dispersion disc, high shear emulsifier, screw agitator, multi-layers impellers ect. The agitator can be designed according to the property of the materials and the requirements of different production technology.



	THSD-500	THSD-1000	THSD-2000
High Speed Motor	10	15/20	40/50
High Speed RPM	1440	1440	1440
Slow Speed Motor	5	5/7.5	7.5/10
Slow Speed RPM	1440	1440	1440
Phase	3 ph	3 ph	3 ph
High Speed Shaft	60	70	80
Slow Speed Shaft	70	80	90
Capacity	500	1000	2000
Hydraulic Lifting	1100	1200	1400
Hydraulic Motor	1	1	1



**TIPCO brings
Precision Engineering for
Mixing and Dispersion**

TWIN SHAFT HIGH DISPERSER MACHINE →

TIPCO has been doing this job since 1985 and offers different types of Fixed Twin Shaft High Disperser machines to its customers with different types of materials that can enhance the capacities and capabilities of their plants. These are made in such a way that while one vessel is wheeled away for remote release and cleaning, another wheel starts mixing the batch as soon as possible. Today we beat all others in both production and reliability of the material of the High-Speed Disperser Machine. With no packing glands or bearings in the product zone, contamination is virtually eliminated. Our Disperser Machine is controlled by the AC drives, these products are widely used for mixing purposes. The epitome of this mixer is the blending and unification of the materials having a different range of consistencies, viscosities, densities, shapes, and proportions.



	TSD-500	TSD-1000	TSD-2000	TDS-5000
High Speed Motor	10	15/20	40/50	75/100
High Speed RPM	1440	1440	1440	1440
Slow Speed Motor	5	5/7.5	7.5/10	15/20
Slow Speed RPM	1440	1440	1440	1440
Phase	3 ph	3 ph	3 ph	3 ph
High Speed Shaft	60	70	80	90
Slow Speed Shaft	70	80	90	100
Capacity	500	1000	2000	5000



Mixing Engineering at its best

high efficiency, high uniformity, high load factor, low energy consumption, low pollution and little destruction to frangible material.



VACUUM HIGH SPEED Disperser →



Closed design to prevent solvent volatilization.
Can be vacuumized to remove bubbles generated during production and to realize materials charging through VACUUM, easier and more convenient operation.
With removable tank (Inside and outside mirror polish) easy to clean, without residue.
With brake wheels, can remove easily.

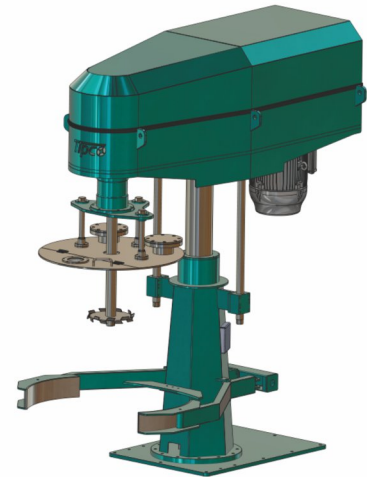


Fixed Single Shaft Disperser



Fixed Double - Shaft Disperser

NHSD Disperser



TIPCO Engineering
Expert in Mixing and
Milling Technology



VARIOUS AGITATORS →

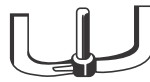
We are able to design and manufacture hundreds of agitators (Axial Flow and Tangential flow.) Following are some widely used agitators. Three blade propeller, Three pitched blade turbine, four pitched blade turbine, six pitched blade turbine, six curved blade disc turbine Frame type, six curved blade disc turbine Anchor type, double helix type, screw type, three retreat blade agitator etc. And we also provide design and manufacture various kinds of combined agitators.



TEW-01



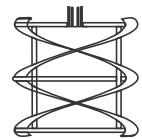
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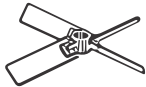
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TEW-04



TEW-05



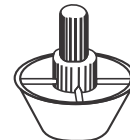
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TEW-07



TEW-08



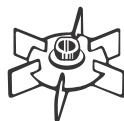
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TEW-10



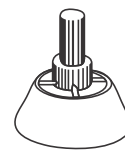
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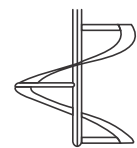
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TEW-13



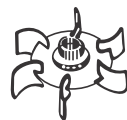
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TEW-15



TEW-16



TEW-17



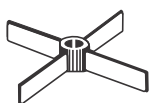
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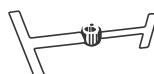
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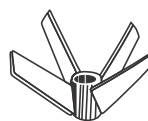
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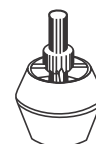
TEW-21



TEW-22



TEW-23



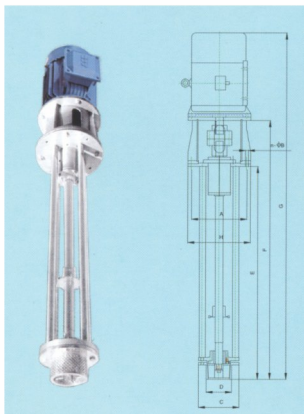
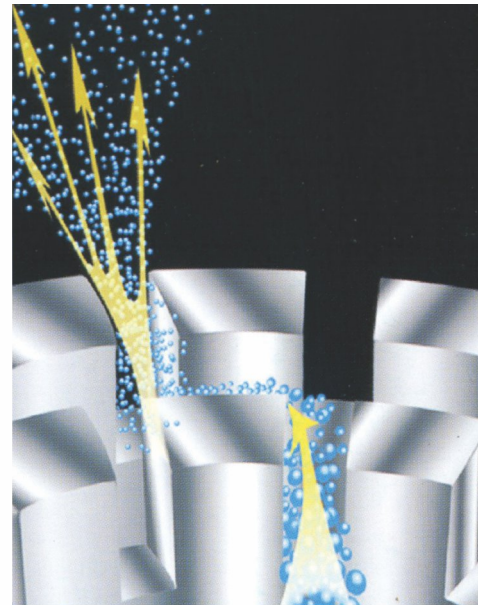
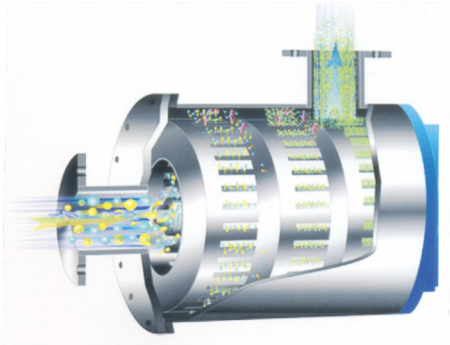
TEW-24



TEW-25

High Shear Homogenizing and Emulsifier →

High Shear Dispensing Machine a compound machine which combines the function of mixing, dispersing, fining, homogenizing, and emulsifying. Its invention is a revolution in mixing industry. It solves the problem that carried with the traditional machines, enhances the productivity and is applied intensively in chemical engineering food and pharmacy industries. Applicable medium Liquor and Liquor, Liquor and Solid.



Mesh Stator

Mesh stator, which is applied for mixing low-viscosity liquid, possesses ultra cutting speed; it is optimum for the preparation of latex and crushing and dissolving tiny granule in liquid.



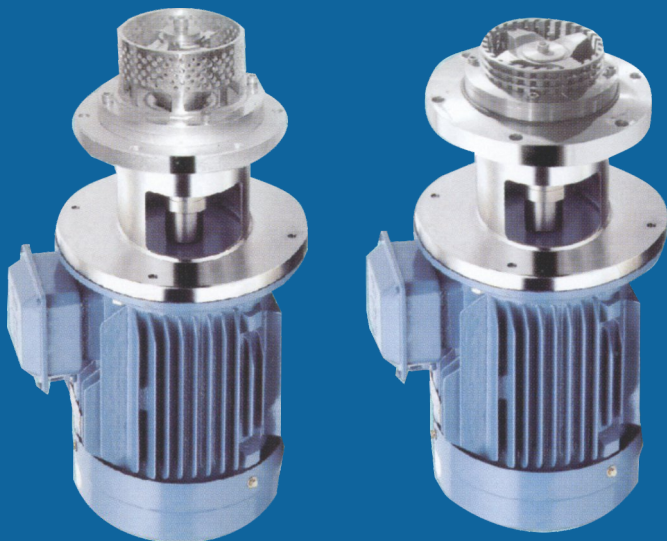
Long-hole stator

Long-hole stator is applicable for rapidly crushing medium-size solid granule and the blending with liquid with medium viscosity; it provides the maximum area of cutting surface and good circulation.



Round-hole stator

Round-hole stator is applicable for normal mixing or crushing big-size granule, the round holes in this stator provide the ultra circulation among all stator types, applicable for processing material of high viscosity.



Applications of HOMONEGIER :

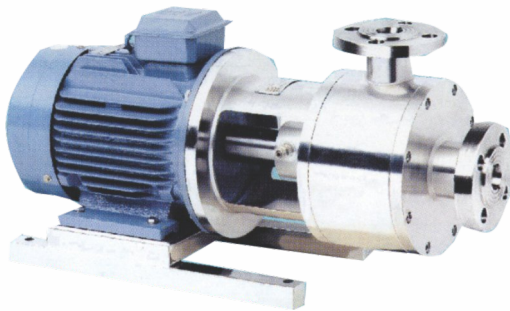
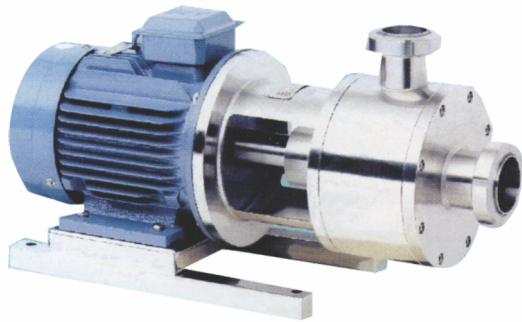
Cosmetics, Face Creams,
Personal care, Gels,
Body Lotions

FOOD :

Mayonnaise, Tomato Ketchup,
Chilly Paste

Pigments, Oil Emulsions,
Petrochemical Blending
Agro-Sc Formulation/
WDG Adhesives Etc

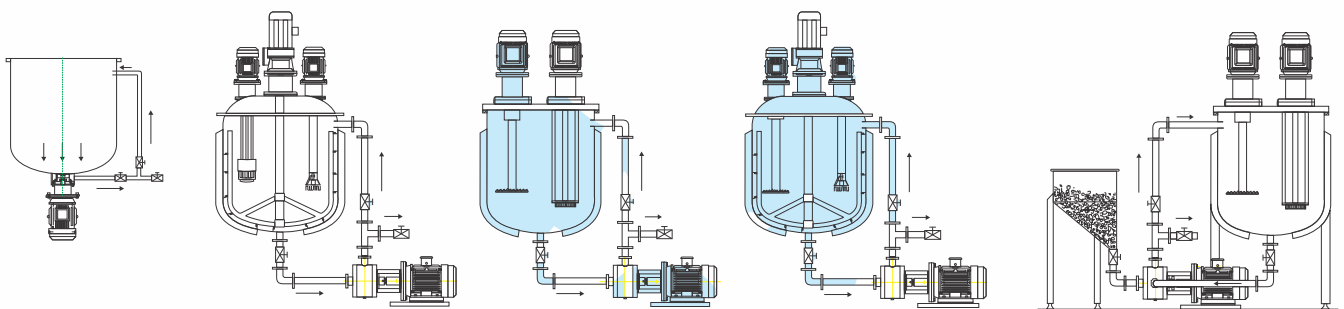
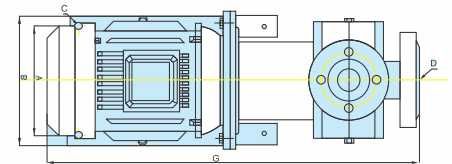
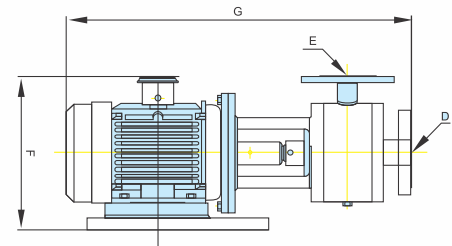
INLINE HIGH SHEAR EMULSIFIER →



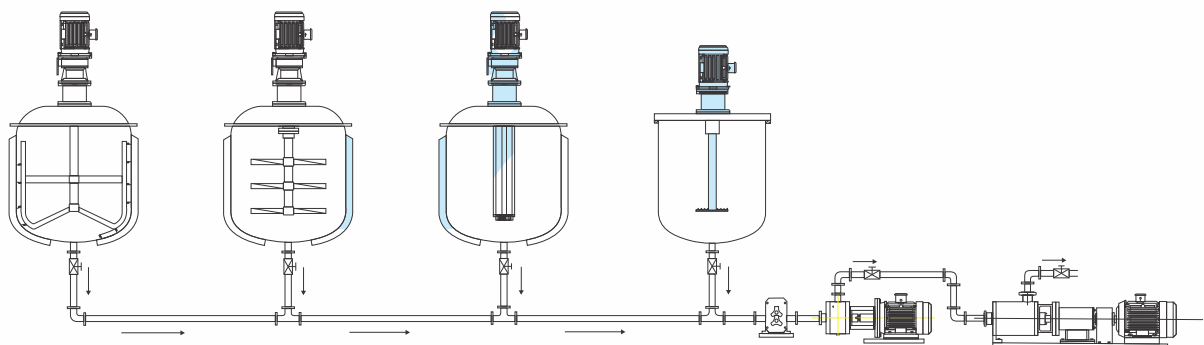
- Select the international famous-brand motor and superior materials, with lower noise and more stable operation to ensure the high quality of the whole machine;
- Reasonable design, convenient for cleaning;
- Mechanical seal can be chosen: single end face, double end face;
- Suitable for VACUUM and pressure operating modes;
- Application temperature <math><160\text{ }^\circ\text{C}</math>; The higher temperature is available to be customized upon request;
- The high-quality scattering, emulsification, homogeneity, dissolving and reaction etc. Process can be fully realized, making you easily realize online production.

There is a set of stator and rotor installed in the working space, while the transmission shaft in the space would be cantilevered shaft type. The transmission shaft is linked with the motor directly. Normally mechanical air-proof method would be adopted.

This is applicable for the medium and small batch of circulatory treatment production craft, it's recommended to use it together with the intermittent high shear dispersion & emulsification machine, which would demonstrate better effect.



Powder-absorbing



Complete set installation

KNEADER MIXER (SIGMA MIXER) →

Kneader mixer has two mixing blades rotate towards each other at differential speeds inside a W-shaped trough. Each blade moves the material in opposite direction thereby providing excellent cross mixing of all raw materials. The blades pass the through walls and each other at close clearances resulting in good mixing. The close clearance produces a shearing action that is beneficial to the size reduction of solids. This mixer is most suitable for highly viscous material and dough like masses. Selection of appropriate blade shape and speeds result in excellent mixing. On completion of the mix cycle, the trough of the mixer is tilted and the product is discharged. The mixer is also available with a bottom opening design for discharge.



Sample applications of Sigma mixers

Adhesives
Biscuits doughs
rubber
Carbon pastes
Ceramics
Chemicals
Crayon and pencil lead
Inks and pigment products
Explosives
Fiberglass resin doughs
Food and confectionery products
Gaskets and gland packings
Grinding wheel preparations
Hot-melts
Marzipan

Putties
Mastics
Metal powders
Moulding preparations
Pencil erasers
Pharmaceuticals
Plastics
Refractories
Sealing compounds
Silicone rubber
Soaps and detergents
Solid propellants
Sugar pastes
Viscous rubber solutions
Chewing gum



Trusted Globally

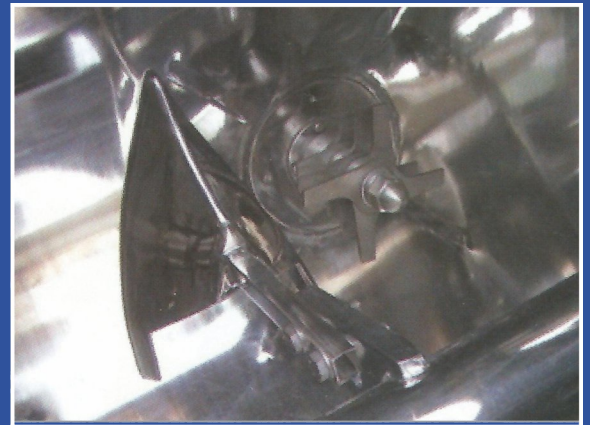
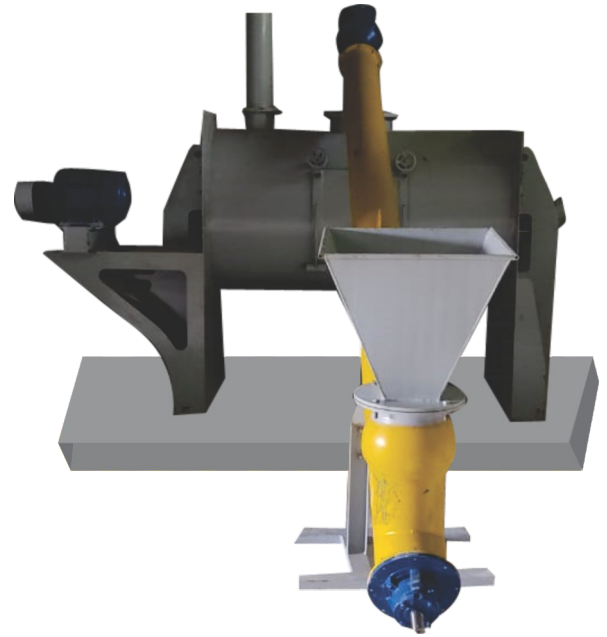
TIPCO

HORIZONTAL PLOUGH SHEAR MIXER →

It is widely use for mixing powder and powder and powder and liquid, powder and granule. When mixing solid with liquid, liquid spraying or aerosol spraying system is optional.

High speed rotating cutter can enhance mixing efficiency to break the cacked materials quickly. For materials with smaller partical size, we adopt double sealing (air sealing + packing sealing) to ensure excellent airtightness (Good airtightness, sealing part will be more durable)

Online sampling, heating cooling, vacuum, de - dusting desig are optional. For diff. materials diferent industries. It can also be used for sanitary and food grade if required.

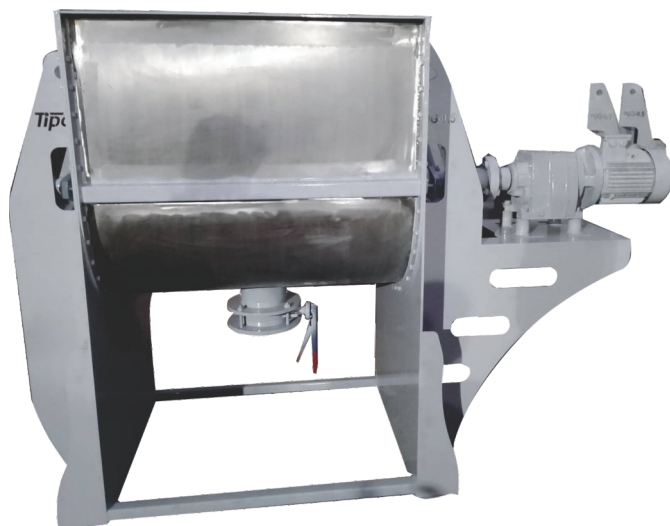


	PM-500	PM-1000	PM-2000	PM-3000
Motor Power	7.5	15	25	40
Motor RPM	1440	1440	1440	1440
Working Capacity (Max.)	300 kg	800 kg	1700 kg	2600 kg
Chamber Volume	500	1000	2000	3000
Batch timing	10-20 Min.	10-20 Min.	10-20 Min.	10-20 Min.
Power Supply	440 volt	440 volt	440 volt	440 volt
AC 3 or 2 Phase	3 ph	3 ph	3 ph	3 ph

RIBBON BLENDER OR PUG MIXER MACHINE →

Horizontal Ribbon Mixer is a new type of mixing equipment with high efficiency, high uniformity, high load factor, low energy consumption, low pollution and little destruction to frangible material.

It is widely used to mix powder powder and powder liquid especially materials that are paste, viscous or wit big specific gravity such as puty, stone coatings, metal powders etc. It is currently applied in industries of pharmacy, food, pesticides, dyes, chemicals, plastics, ceramics, paint, putty, mortar etc.



Single Shaft Ribbon Blender



Double Shaft Ribbon Blender



Paddle Type Ribbon Blender



	PG-500	PG-1000	PG-2000
Motor Power	5	10	20
Motor RPM	1440	1440	1440
Working Capacity (Max.)	300 kg	800 kg	1700 kg
Chamber Volume	500	1000	2000
Power Supply	440 volt	440 volt	440 volt
AC 3 or 2 Phase	3 ph	3 ph	3 ph



LABORATORY SERIES



- Lab Bead Mill - LBM
- Lab Basket Mill - LBM
- Lab Multi Shaft - LMS
- Lab Attritor Mill - LAM
- Lab Horizontal Bead Mill - LDM
- Lab Twin Shaft Dispenser - LTSD
- Lab Mixer - LM
- Lab Sigma Mixer - LSM

LAB BEAD MILL - LBM →

Tipco Lab Bead Mill Machine uses a batch-type grinding method suitable for wet grinding with three related operations of premixing, Grinding, Dispensing and Mixing can be made on this machine simultaneously. Normally this machine is used for R&D, small industrial production, and laboratory use. The glass beads are used for the grinding purpose so you can find good brightness of Pigments after grinding the pigment machine has instant dispersing in batches.

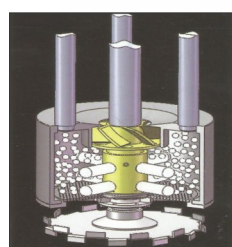
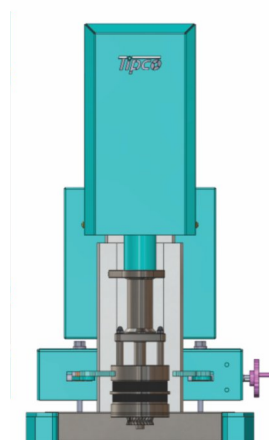
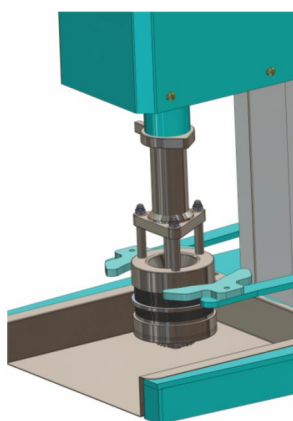
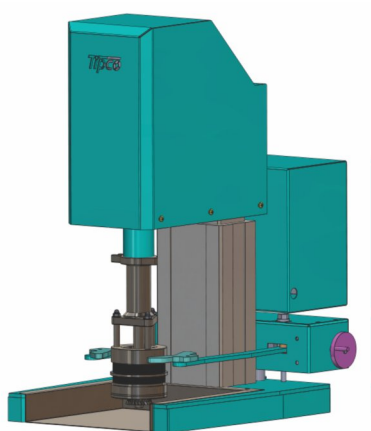


Motor Power	Motor RPM	Phase	Shaft	Disc
1hp	1440	3 ph	20mm	4"

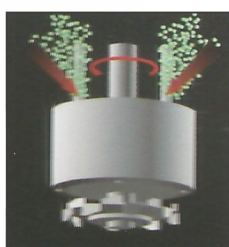
LAB BASKET MILL - LBM →

Basket Mill, a wet milling equipment is widely used in industries having high fineness requirements such as coating, printing ink, dyes, colour paste, cosmetics, pesticides etc.. Basket Mill technology has changed traditional production processing from two working procedures(Dispersing and Basic Grinding) to one procedure, which decreases production procedure effectively. No need for pump nor valve. One machine and one container is enough to finish materials dispersion and grinding. It enhances production efficiency and reduces waste obviously. Easy to clean and to change colors or product category.

TIPCO Basket Mill is with full specification from small batch lab one, mid batch one to industrial one. Capacity range 1 - 3000 L to meet requirements of different customers.



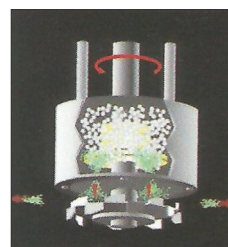
Basket Mill Working Process



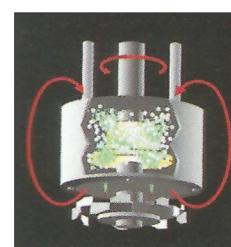
Material Suction



Superfine Grinding



Circulation



Grinding System

LAB MULTI SHAFT - LMS →



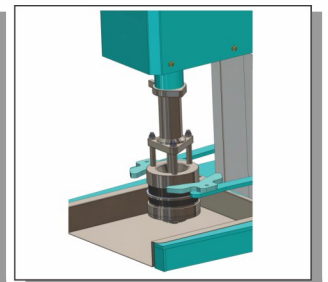
Our Lab Multi Shaft machine is used for the small scale operation in many industries. High shear homogenizers operate at a high velocity to pull, push and break apart a sample. Thus, they generate substantially smaller particles and are an especially good option for the following applications: Particle Size Reduction/Sub-Micron Homogenization/ better mixing/blending. High Shear forces are key in rotor-stator homogenization. In this process, a metal shaft (rotor) rotates inside a stationary casing (stator). The sample is drawn into the narrow space between the rotor and stator.



Simple Disperser



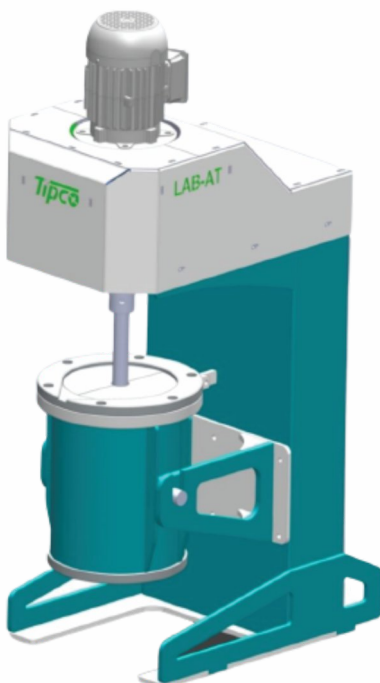
Homogenizer



Basket Mill

Motor Power	Motor RPM	Phase	Shaft	Blade	Hydraulic Lifting	Power Supply
1hp	1440	3 ph	20mm	4"	720mm	440 Volt

LAB ATTRITOR MILL - LAM →



Tipco Lab Attritor is used for high output fine grinding, employing the well-known principle of grinding & dispersing with agitated balls. The materials take a shorter grinding time in our Lab Attritor Mill and we are one of the foremost Manufacturers and Suppliers of Fluid & Powder Machinery used in various industries. This Machine comes with a 1Hp motor that allows the machine operator to control the speed of the machine between 0-1440. In addition, our products are stringently tested on various parameters to make sure that we are maintaining our high-quality standard.

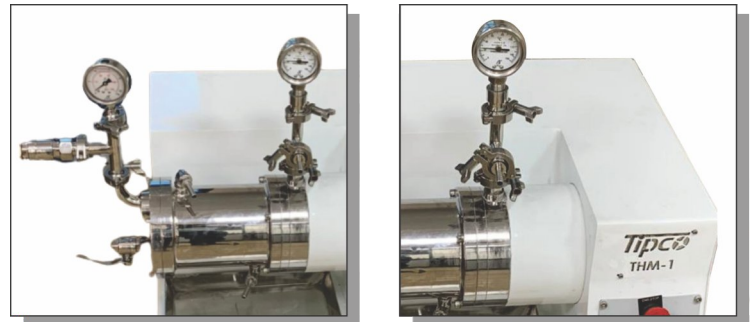


Motor Power	Motor RPM	Phase	Shaft	Rod	Thickness of Tank	Power Supply
1hp	1440	3 ph	25mm	6	3mm/4mm	440 Volt

LAB HORIZONTAL BEAD MILL - LDM →



Lab Horizontal Bead Mill is an agitator bead mill with a horizontal grinding container for dispersion and the finest wet grinding in a completely enclosed system. Tipco mill is appropriate for a wide range of items from low to exceptionally good pumpable items. Uniquely composed instigator circles mounted symmetrically on a pole, exchanging the vitality required for scattering and wet granulating to the round crushing globules. An outside pump feeds the product into the mill.



Motor Power	Motor RPM	Phase	Power Supply	Flow Rate Outlet
5hp	1440	3 ph	440 Volt	200gm Per Min. Adjustable

LAB TWIN SHAFT DISPENSER - LTSD →



Lab Twin Shaft Dispenser Machine is integrated low-speed strong mixer and high-Speed Dispenser into one machine. It is especially suitable for mid and high viscous materials and thixotropic materials. Dispensing and mixing can go at the same time and result in an ideal effect. Various agitator types: Anchor agitator with scraper, three-blade, high-speed dispersion disc, high shear emulsifier, screw agitator, multi-layers impellers, etc. The agitator can be designed according to the property of the materials and the requirements of different production technology.



LAB MIXER - LM →

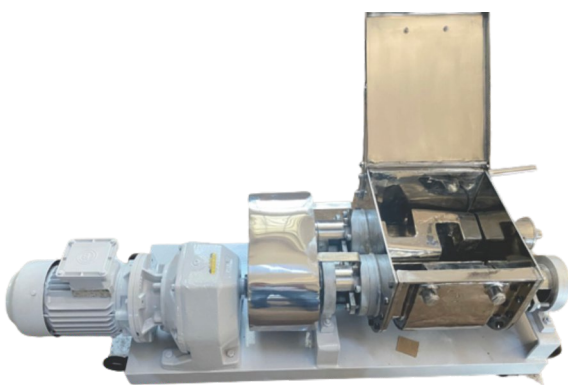


Lab Sigma Mixer Machine is used for managing very viscous materials and essential to support both tangential and oblique motion of the substance. The geometry and profile of the sigma blade are intended such that the glutinous mass of a substance is pulled, shear, dense, knead, and folded by the exploit of the blade next to the walls of the mixer trough. The amount to which this happens depends on the exploit of the blades - peripheral or overlap and the ratio of the speed of replacement of the blades. The twist angle of the blade can be customized depending on the necessary shearing.



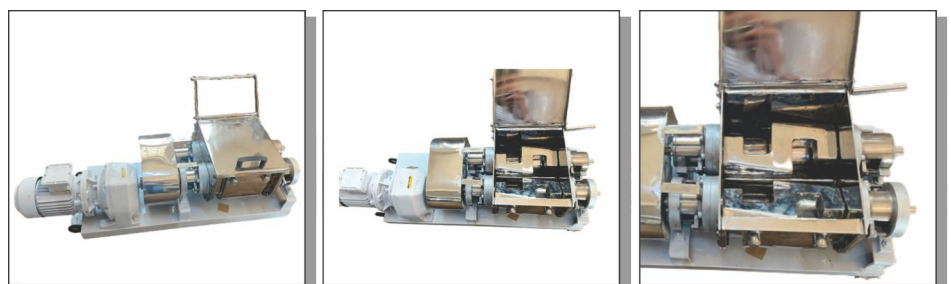
Motor Power	Motor RPM	Phase	Shaft	Blade	Hydraulic Lifting	Power Supply
1 hp	1440	3 ph	25mm	4"	720mm	440 Volt

LAB SIGMA MIXER - LSM →



Tipco Engineering Lab Mixer Machine is used for high output fine grinding machines employing the well-known principle of grinding & dispersing with agitated balls. The materials take a shorter grinding time in our Lab Mixer.


We are one of the foremost Manufacturers and Suppliers of Fluid & Powder Machinery used in various industries. In addition to this, our products are stringently tested on various parameters to make sure that we are maintaining our high-quality standard.



Motor Power	Motor RPM	Phase	Jacket	Power Supply
1 hp	1440	3 ph	2.5-3mm	440 Volt



Plant and Production

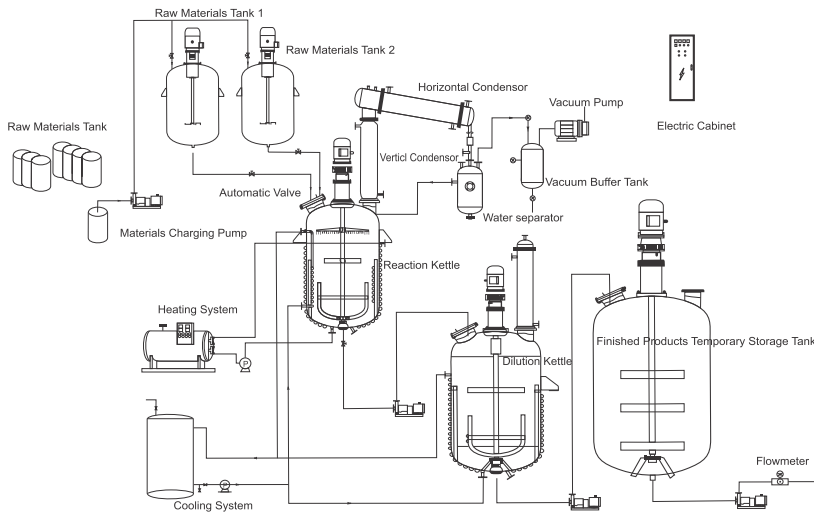


Resin Production Line
Automatic Production Plant Line
Turnkey Projects
Applications
Paint & Coating Production Line

RESIN PRODUCTION LINE →

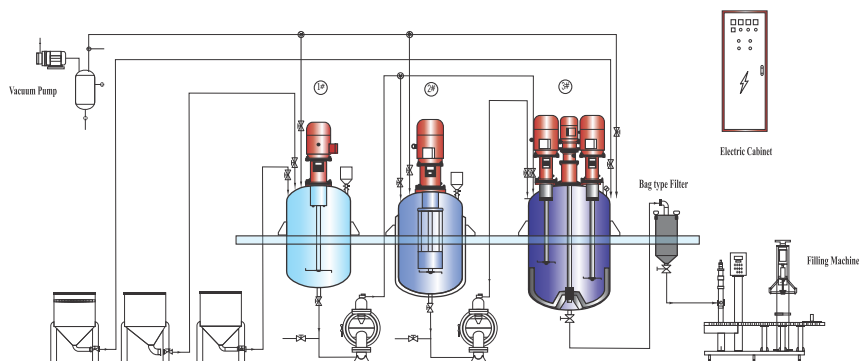
Summary:

TIPCO provides various Resin Procution Lines for different resins such as unsaturated polyester resin, phenolic resin, epoxy resin, ABS resin etc. It production line can be also used for producing adhesives, white glues, emulsions etc.



System Components	Technical Specification
Main Reactor	Optional materials: Carbon Steel, SS304, SS316L.
	Environment requirement: Exproof/ Non Exproof Exproof can be customized
	Jacket: Two -layer jacket, limpet coil jacket
	Agitator type: Blade type, anchor type, frame type, turbine type, de -foam type
	Sealing type: Packing Seal, Mechanical Seal.
Condensing and reflux device	Distillation column
	Vertical Condenser
	Horizontal Condenser
	Water separator and reflux pipeline
Dilution Kettle	SS304, SS316L, Q235 are available for option.
Heating/Cooling System	Heating medium: Steam heating, Thermo oil heating, Hot water heating
	Heating method: Direct heating, circulation heating
	Cooling: Tap water cooling/ Chilling water cooling
Electric Control System	Manual, Semi-auto, Automatic control

Paint & Coating Production Line



STL - 1000T Water - based Paint Production Line

System	Equipment	Technical Parameter	Qty.
Materials feeding system	Powder feeding tank	300L, SS304, inside and outside mirror polished	1
	Liquid feeding tank	150L, SS304, inside and outside mirror polished	1
	Latex feeding tank	50L, SS304, inside and outside mirror polished	1
	Additive feeding tank	5L, SS304, inside and outside mirror polished	3
	Vacuum pump and Vacuum buffer tank	4KW Water Vane Vacuum Pump with 15L stainless steel buffer tank.	1
Grinding system for paste making	600L Dispersing vessel	600L, SS304, with top and bottom dished end, inside and outside mirror polished	1
	Dispenser	15KW, Frequency Inverter, speed 0 -1440rpm	1
	600L Grinding vessel	600L, SS304, with top and bottom dished end , inside and outside mirror polished	1
	Basket Mill	22KW, Frequency Inverter, speed 0 -1440 rpm Mechanical Seal	1
Tinting system	Multi -function Tinting Vessel	1200L, SS304, with top and bottom dished end, inside and outside mirror polished	1
	Low -speed mixer	4KW, Speed: 41rpm, Anchor Mixer, Packing Seal.	1
	High- speed disperser	15KW, Frequency Inverter, speed 0- 1440rpm Mechanical Seal	2
Discharging and filtration system	diaphragm pump	Nozzle DN25, Ingersoll Rand	2
	Bag Type filter	SS304, inside and outside mirror polished Filtration Area 25m ²	1
Filling system	Filling system	160 -300 Pails/h, cover - clamping or cover - pressing device is optional	1
Control system	Control system	Subassembly	1
Operation platform	Operation platform	Carbon steel frame coated with anti-rust paint, Stainless Steel Handrail, paved with 3mm aluminium diamond plate	1
Pipeline System	Pipeline accessories	Include all vales,quick joint, stainless steel pipeline	1

Note: The production line configuration can be adjusted as per customers' actual condition. (Can be customized)

Automatic Production Plant Line

TIPCO industry provides design and manufacturing of ink complete production line including water-based ink, UV ink, inkjet etc., Ink production line adopts new raw materials automatic charging ,metering system, dispersing and milling system (Basket Mill/ Horizontal Bead Mill / Tri Roller mill), Mixing system, Cleaning system, Automatic control system, automatic Filling machine etc, advanced manufacturing method.

The completely automatic production process reduces workloads and avoids quality problems caused by human factors and here in, improves the production quality and efficiency to large extent.

- Water Based Ink , Solvent based Ink
- Viscosity : upto 200000 cps
- Capacity : 1T to 10T /year
- Suitable for inks , according to solvent: water based ink , UV ink , according to plate type offset print , relief block lithographic plate , screen printing , Inkjet etc.

FEATURES & ADVANTAGES →

GOOD FINENESS AND HIGH QUALITY :

basket mills, Horizontal Bead Mill, emulsifiers, tri –roller mill etc high fineness milling machine are applied in production lines according to production process and product characteristics (materials viscosity) to mill and thin raw materials. Ground materials show products with good fineness, High stability, small chromatism and less pollution.

ENVIRONMENTALLY FRIENDLY AND EASY OPERATION :

The entire plant including storage of raw material, metering, addition, medium products and final products transmission and filling are closed and automatic, which is environmental friendly and easy to operate.

WORKING PRINCIPLE →

RAW MATERIAL CHARGING :

Liquid batching adopts pumps. Flow meters, powder and additive are batch by weighting system automatically.

DISPERSING :

Ink pre-dispersing, multiply of specification are optional from Lab equipment to plant equipment including disperser with scraper, vacuumed disperser, dual-shaft disperser (butterfly agitator + dispersing disc), platform type disperser etc to meet all kinds of requirements of different working conditions.

BASKET MILL :

Ink milling machines combining original dispersing and beads milling into one step, which reduce production process, lack of pump and valves reduces the cost of raw materials and is easy to clean. It is suitable to multiply of products.

HORIZONTAL BEAD MILLS:

Wet milling equipment, for high fineness requirement of ink products, with good grinding fineness, high efficiency is one of the most popular milling machine. It is divided into disc beads mill and all round beads mill.

TRI-ROLLER MILL :

wet milling equipment for high viscosity ink products , divided into common type and hydraulic type is an ideal ink milling machine.

INK –MIXER :

Multiply of specification mixer are optional according to production process and characteristics (viscosity, specific gravity, etc.) including vacuum type ex-proof, single shaft, dual shaft tri-shaft, planet mixer for high viscosity ink etc.

INK FILLING MACHINE :

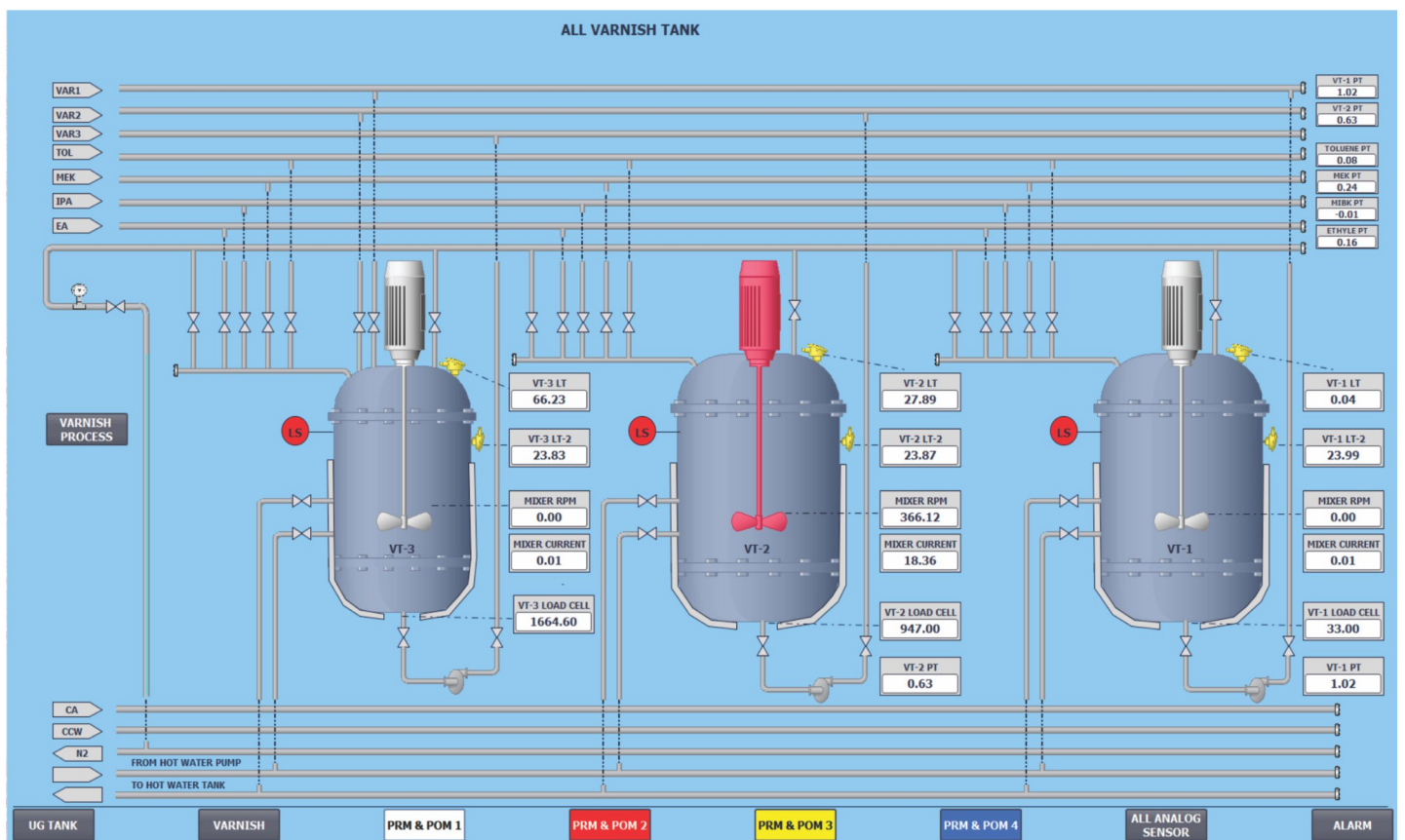
Specification ranges from 10g to 20 Kg in semi-auto and automatic type, filling container is normally plastic and iron bucket . It can be customized according to customers requirements.



FLOW CHART OF INK PRODUCTION LINE →

INPUTS	PROCESSING STEPS	POLLUTION SOURCES
<i>Paste Inks</i>		
Pigments Binder (Oil / Resin)	Mixing	Spent Solvent (Mixers Cleaning)
Cooling Water	Grinding	Spent Solvent (Open or Closed Circuit)
Intermediate Storage	Filtration & Packaging	
Packages		
<i>Black Inks</i>		
Carbon Black Binder (Oil/Resin) Plasticizer	Mixing	Spent Solvent (Mixer Cleaning)
Cooling Water	Grinding	Spent Cooling Water
Intermediate Storage	Filtration & Packaging	
Packages		
<i>Liquid Inks</i>		
Carbon Black Binder (Oil/Resin) Plasticizer	Mixing	Spent Cooling (Mixers Cleaning) Carbon Black Particulates (work place)
Cooling Water	Grinding	Spent Cooling Water
Intermediate Storage	Finishing	Spent Solvent (Vessels Cleaning)
Additives (Adhesives. heat resistant)		
Packages	Filtration & Packaging	
Liquid Inks ↓		

TURNKEY PROJECTS →



APPLICATIONS →

TIPCO Industry is specialized in technology application and product development of dispersing, milling, emulsifying, mixing. We provide extensive service for industries such as coating, paints, printing inks, resin, pigments, adhesives, daily cosmetic, food, medicine, building materials, metallurgy, pesticides, detergents, modified asphalt emulsion paper making and paper chemicals, lubricants, dyeing and textile auxiliaries etc.



Resin



Ink



Dyes And Pigment



Coating



Paint



Adhesive



Plastic



Food Additives



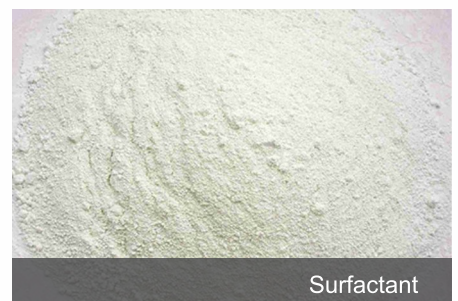
Medicine



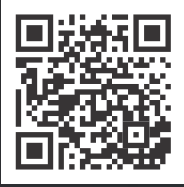
Essence



Papermaking Chemicals




Surfactant



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Manufacturer of Grinding Mills, Dispersers
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