YOKEŞ®

Wet Grinding and Dispersion

www.yokes.com.tr

YOKEŞ® was first established in 1943 in Izmir / TURKEY as one of the first manufacturing companies, producing machinery and spare parts for the agricultural industries such as cotton gins and vegetable oil extraction industries.

In 1972, YOKEŞ®'s field of interest moved to "Paint and Chemical Industry" and has started spare-parts production for the paint factories in Izmir. With such relations and experiences gained in this sector, YOKEŞ® has produced the first machine as a "PM-Series, Vertical Type / Open Screen Agitator Bead-Mill (Pearl-Mill)"

In 1984, the factory has been moved to the first industrial zone, 1.Sanayi Sitesi, in Izmir.

In time, YOKEŞ® has improved the production range continuously with the experiences achieved from the related sectors and with research & development studies.

Today, YOKEŞ® is the the leading manufacturer in Turkey in this field and can fulfill all the machinery demands of the companies working in Paint & Dyestuff, Printing Inks, Pharmaceutical, Agricultural and similar industries.

Demands from the customers all over the world increased rapidly in a short time, thanks to YOKEŞ®'s high production quality, precise manufacturing and customer satisfaction.

This pushed YOKEŞ® to accelerate the investments to increase the production capacity, so the manufacturing plant has moved to the the new factory building at ITOB Industrial Zone at the beginning of 2015.

YOKEŞ® always aims the "Maximum Quality" for the machinery to be manufactured and achieves this by using top quality materials supplied from all over the world. Combined with rigid&reliable machine constructions, research & development studies, precise manufacturing and competitive prices, today YOKEŞ® can easily compete with all other competitors on the global market.

YOKEŞ® has a wide customer portfolio covering Turkish, Middle East, Far East, African, Europian and Asian markets in the related sector and over 75% of total sales is currently overseas.

This portfolio expands day by day with the help of exhibitions / coating shows, overseas distributors and internet.

YOKEŞ® is specialized in:

Pilot and production scale machinery manufacturing for the Chemical, Paint&Dyestuff, Printing Inks, Pharmaceutical, Agricultural and Cosmetic industries for:

- Mixing
- Dispersing
- Micro Wet Grinding processes.

Gear Type Feeding & Transfer Pumps

Filtering Systems

Engineering studies

WET GRINDING MACHINERY

DISSOLVERS AND DISPERSERS

MIXERS AND HOMOGENIZERS

LABORATORY AND PILOT PLANT

AUXILIARY EQUIPMENT

YOKES®
Wet Grinding and Dispersion

WET GRINDING MACHINERY

YOKES®
Wet Grinding and Dispersion

4th Generation

POWERMILL PERFORMA®

High Efficiency Agitator Bead Mill

POWERMILL - PERFORMA® stands for "High Efficiency" and fully continuous micro/nano wet grinding of low to medium viscosity pumpable products. It is employed in a horizontal grinding chamber, using grinding beads of specific types and sizes, including reliable usage of extremely small grinding media. This results as achieving the required product quality with high production output and low specific energy consumption.

• They may both run on circulation process or on "pass" process, from tank to tank. Necessary energy and movement are given to the grinding beads via specially designed **ROTOR - PIN SYSTEM**, for high efficiency wet grinding.

• Special design of the grinding chamber and the rotor-pin system provides the narrowest particle size distribution in shorter times, when compared to conventional agitator bead mills.

• Special design of the grinding chamber, front cover, rotor and pins provide the most uniform flow for milling, while cleaning the outlet sieve during the process. Crushing effect of the grinding beads is much higher when compared to conventional agitator bead mills, which results as shorter process times and higher efficiency. Due to more uniform movement inside the grinding chamber, lifetime of the grinding beads increases.

• All the machine parts that are used inside the grinding chamber are manufactured from upmost quality materials to resist against the agressive grinding effect of the zirconium beads. According to the product to be processed, specific hardened steels, zirconium oxide, silicon carbide and special stainless steel materials, etc. are used.

• Grinding beads separation is done by **"YOKEŞ®-WDG System High Flow Cylindrical Sieve Separator"**, to achieve the highest flowrate. Sieve surface area is designed to be at maximum within the construction parameters of the grinding chamber. During the process, separator sieve is continuously cleaned by the rotor disc. Also, if there is a blockage in the sieve during the process, inner side of the sieve can easily be cleaned from the front cover, without the necessity to empty and open the grinding chamber.

• All sizes of grinding beads **(min. 0,1mm)** can reliably be used in the machine, thanks to the special design of the grinding chamber and the separator sieve. Ultra fine grinding values can be achieved with **POWERMILL-PERFORMA®**.

• Cooling jacket of the grinding chamber is designed to maximize the heat transfer from the product to the cooling water system.

• All process parameters can be observed, adjusted and interfered by the machine operator by means of the sophisticated PLC control system of the machine. Main shaft is driven by Variable Speed Control System with frequency converter. With this feature, most efficient milling results can be achieved. Also, rinsing and cleaning of the machine can be done easily at low rpm values.

ADVANTAGES

• Better and faster results can be achieved with smaller grinding chamber volume and small quantity of grinding beads.

• With the compact construction and special design of the grinding chamber, cleaning and maintenance times are much shorter.

• Shaft sealing is done by a cartridge type Double Mechanical Seal, specially designed for YOKES. Maintenance or changing of the seal are very easy and can be handeled by the machine operator. Rinsing of the mechanical seal is controlled by a closed circuit rinsing system, which is also water cooled. Mechanical seals of **POWERMILL - PERFORMA®** mills have a long lifetime.

• Heat sensitive products can easily be processed in **POWERMILL - PERFORMA®** mills, thanks to the compact construction and highly efficient cooling system.

• Production and maintenance costs of the **POWERMILL - PERFORMA®** mills are lower when compared to conventional bead mills.

• With their modular construction and flexibility, **POWERMILL - PERFORMA®** Mills have a very wide range of usage. They are commonly used in the production of all types of paints, flexo & rotogravur inks, water & solvent based inkjet inks, agricultural products, cosmetics, etc.

OPTIONS

- Complete Ex-Proof design for Zone 1 [ATEX IIG IIB T4 Gb - 2014 / 34 / EU / Clause 13.1.b(ii)]
- Grinding beads of various sizes and materials
- Zirconium Oxide agitator parts
- Tungsten Carbide pins
- Silicon carbide inner cylinder for grinding chamber

MODEL	PERFORMA® - 10	PERFORMA® - 25	PERFORMA® - 60
MAIN DRIVE POWER	22 KW	45-55 KW	75 KW
GRINDING CHAMBER NET VOLUME	10 LT	25 LT	60 LT
BATCH CAPACITY	100 - 1000 LT	1000 - 2000 LT	> 2000 LT
PERIPHERAL SPEED	VARIABLE Up to.16 m/sn	VARIABLE Up to.16 m/sn	VARIABLE Up to.16 m/sn

YOKES®
Wet Grinding and Dispersion

4th Generation

POWERMILL CONVECTA®

High Flow Agitator Bead Mill

POWERMILL - CONVECTA® is latest generation and most sophisticated model of the “Convectional Agitator Bead Mills”, which YOKEŞ® has been manufacturing for over 25 years.

The efficiency of the machine is determined by the energy input to the grinding chamber and the optimal exploitation of this energy for the grinding process. Thanks to its optimal grinding chamber geometry, powerful design of the agitator disc and special separation system, **POWERMILL - CONVECTA®** mills achieves a high degree of efficiency. They are categorized as “High Flow Agitator Bead Mills”.

FEATURES

• The grinding chamber has an optimal length/ diameter ratio. Specially designed shapes of the agitator discs guarantees the most energy efficient use and prevents compaction of the grinding beads.

• Grinding beads separation is done by "YOKEŞ® - WDG System High Flow Cylindrical Sieve Separator", to achieve the highest flowrate. Sieve surface area is designed to be at maximum within the construction parameters of the grinding chamber. During the process, separator sieve is continuously cleaned by the rotor disc. Also, if there is a blockage in the sieve during the process, inner side of the sieve can easily be cleaned from the front cover, without the necessity to empty and open the grinding chamber.

• Cooling jacket of the grinding chamber is designed to maximize the heat transfer from the product to the cooling water system.

• Shape and number of the agitator discs can easily be adapted to the product to be processed

• All sizes of grinding beads (min. 0,2mm) can reliably be used in the machine, thanks to the special design of the grinding chamber and the separator sieve. Ultra fine grinding values can be achieved with **POWERMILL - CONVECTA®**.

• All the machine parts that are used inside the grinding chamber are manufactured from upmost quality materials to resist against the aggressive grinding effect of the zirconium beads. According to the product to be processed, specific hardened steels, zirconium oxide, silicon carbide and special stainless steel materials, etc. are used.

• Shaft sealing is done by a cartridge type Double Mechanical Seal, specially designed for YOKES. Maintenance or changing of the seal are very easy and can be handeled by the machine operator. Rinsing of the mechanical seal is controlled by a closed circuit rinsing system, which is also water cooled. Mechanical seals of **POWERMILL - CONVECTA®** mills have a long lifetime.

• Variable feeding pump speed control system is also controlled by a with frequency converter. Diaphgram type air pumps and monopumps can also be used.

• All process parameters can be observed, adjusted and be interfered by the machine operator by means of the sophisticated PLC control system. Main shaft is driven by Variable Speed Control System with frequency converter. With this feature, most efficient milling results can be achieved. Also, rinsing and cleaning of the machine can be done easily at low rpm values.

• Easy opening rail system of the grinding chamber provides easy and detailed cleaning - maintenance of the grinding chamber components.

OPTIONS

- Complete Ex-Proof design for Zone 1 [ATEX IIG IIB T4 Gb - 2014 / 34 / EU / Clause 13.1.b(ii)]
- Grinding beads of various sizes and materials
- Zirconium Oxide agitator parts
- Silicon carbide inner cylinder for grinding chamber

MODEL	CONVECTA® - 25	CONVECTA® - 45	CONVECTA® - 60
MAIN DRIVE POWER	22 KW	45 KW	55 KW
GRINDING CHAMBER NET VOLUME	25 LT	45 LT	60 LT
BATCH CAPACITY	100 - 1000 LT	1000 - 2000 LT	> 2000 LT
PERIPHERAL SPEED	VARIABLE Up to.16 m/sn	VARIABLE Up to.16 m/sn	VARIABLE Up to.16 m/sn

YOKES®
Wet Grinding and Dispersion

4th Generation

POWERMILL CONVECTA® "G"

High Viscosity Bead Mill

“ High viscosity was NEVER an issue for us....”

POWERMILL-CONVECTA®/G is the most advanced model of the initial “Conventional Agitator Bead Mill” with **Dynamic GAP Seperation**, which YOKEŞ® has been manufacturing for over 25 years. POWERMILL Series Bead Mills have already started their process life with **Dynamic GAP Seperation System**, when they were initially designed in 1998.

Although we have many more Bead Mill models with more advanced sieve seperation systems today, Dynamic GAP Seperation system is still indispensable for us, due to their highly reliable seperation capability especially when dealing with high / ultra high viscosity products.

Tungsten Carbide GAP Seperators of the mill have a rotor-stator action, which prevents blockage at the mill outlet and forces the machine to be able run non-stop, 7/24.

The efficiency of the machine is determined by the energy input to the grinding chamber and the optimal exploitation of this energy for the grinding process. Thanks to its optimal grinding chamber geometry, powerful design of the agitator disc and special separation system, **POWERMILL - CONVECTA®/G** mills achieves a high degree of efficiency.

FEATURES

• The grinding chamber has an optimal length/ diameter ratio. Specially designed shapes of the agitator discs guarantees the most energy efficient use and prevents compaction of the grinding beads.

• Cooling jacket of the grinding chamber is designed to maximize the heat transfer from the product to the cooling water system.

• Shape and number of the agitator discs can easily be adapted to the product to be processed

• All types of grinding beads (min. 0,6mm) can reliably be used in the machine, thanks to the special design of the grinding chamber and the Dynamic Seperation System. Ultra fine grinding values can be achieved with **POWERMILL - CONVECTA® / G**

• All the machine parts that are used inside the grinding chamber are manufactured from upmost quality materials to resist against the aggressive grinding effect of the zirconium beads. According to the product to be processed, specific hardened steels, zirconium oxide, silicon carbide and special stainless steel materials, etc. are used.

• Shaft sealing is done by a reliable cartridge type Double Mechanical Seal. Maintenance or changing of the seal are very easy and can be handeled by the machine operator. Rinsing of the mechanical seal is controlled by a closed circuit rinsing system, which is also water cooled. Mechanical seals of **POWERMILL - CONVECTA® / G** mills have a long lifetime.

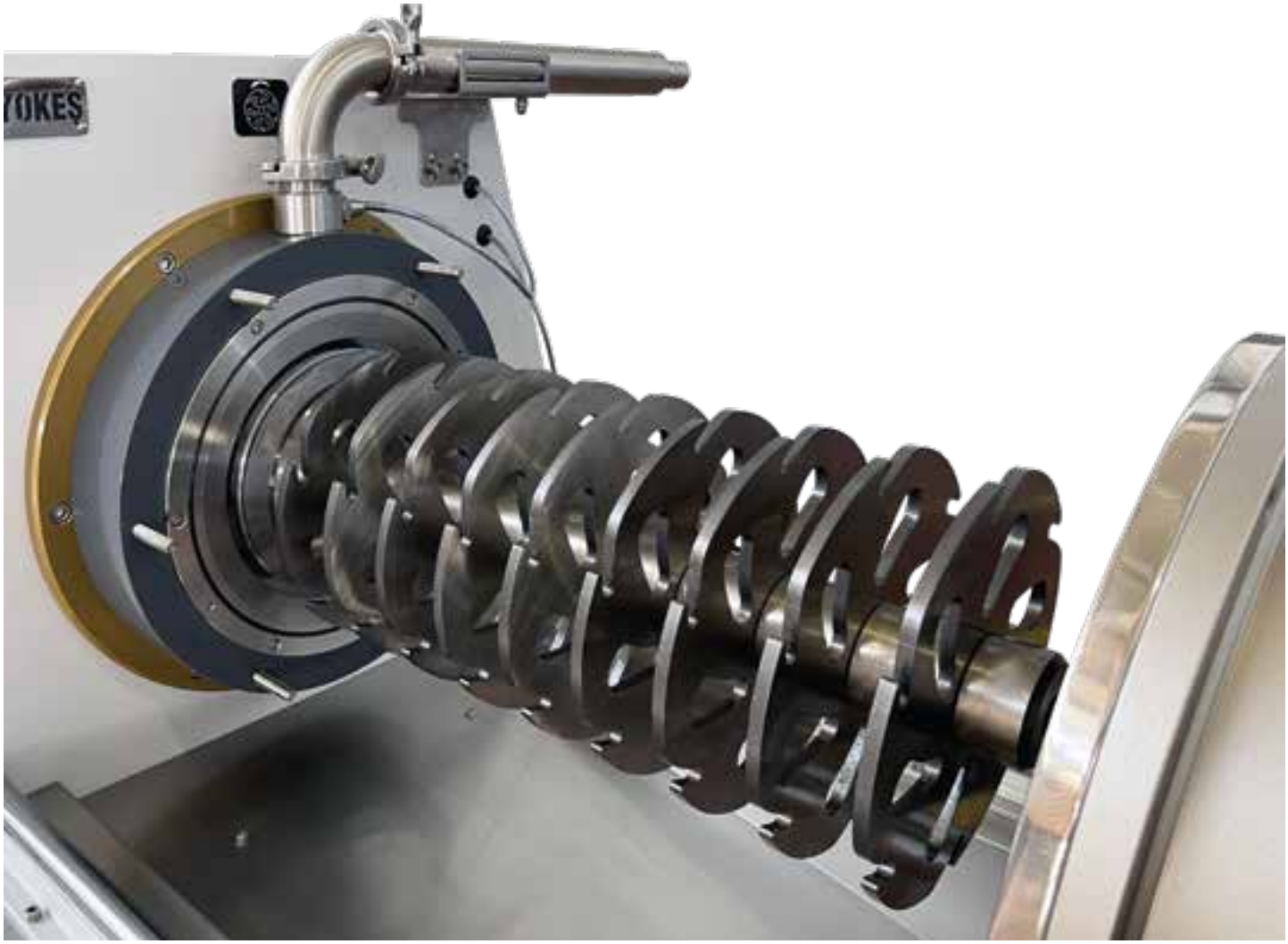
• Variable feeding pump speed control system is also controlled by a with frequency converter. Diaphgram type air pumps and monopumps are used for high viscosity products.

• All process parameters can be observed, adjusted and be interfered by the machine operator by means of the sophisticated PLC control system. Main shaft is driven by Variable Speed Control System with frequency converter. With this feature, most efficient milling results can be achieved. Also, rinsing and cleaning of the machine can be done easily at low rpm values.

• Easy opening rail system of the grinding chamber provides easy and detailed cleaning - maintenance of the grinding chamber components.

OPTIONS

- Complete Ex-Proof design for Zone 1 [ATEX IIG IIB T4 Gb - 2014 / 34 / EU / Clause 13.1.b(ii)]
- Grinding beads of various sizes and materials
- Zirconium Oxide agitator parts
- Silicon carbide inner cylinder for grinding chamber



MODEL	CONVECTA® - 25 G	CONVECTA® - 45 G	CONVECTA® - 60 G
MAIN DRIVE POWER	22 KW	45 KW	55 KW
GRINDING CHAMBER NET VOLUME	25 LT	45 LT	60 LT
BATCH CAPACITY	100 - 1000 LT	1000 - 2000 LT	> 2000 LT
PERIPHERAL SPEED	VARIABLE Up to.16 m/sn	VARIABLE Up to.16 m/sn	VARIABLE Up to.16 m/sn

YOKES
Wet Grinding and Dispersion

4th Generation

DBM SERIES

Basket Mill

DBM Series BASKET MILL are designed to fulfill the needs of modern wet grinding technology. When compared to conventional agitator bead mills; major objective with the basket mill system is to simplify the milling process, eliminate the needs for additional hard to clean tanks, hoses, etc. and to achieve an optimum particle size distribution and stronger results in a shorter time.

WORKING PRINCIPLE

• The rotating disc below the basket sucks the product through the rim on the top of the basket into the grinding chamber, where the wet grinding takes place. Additional agitator discs accelerate the grinding media inside the grinding chamber to ground the passing product with slipping and rolling action of the beads. The product then passes through a large-dimensioned slotted sieve which seperates the media from the batch and keeps the grinding beads inside the grinding chamber. With the centrifugal force generated by the rotating disc below, ground product is sent back into the batch to re-enter the grinding chamber from the top of the basket.

• Instead of one or two passes through a conventional agitator bead mill with reduced throughput, it is more effective to increase the number of passes with higher output. DBM Series BASKET MILL works by this principle, ensuring that all of the base product inside the vessel passes through the grinding chamber many times during the operation. This results as more uniform and progressively ground finished material with narrow fineness spectrum and colour strength.

ADVANTAGES

• When compared to the conventional agitator bead mills, DBM Series Basket Mills have many advantages. They allow greater amount of material to pass through the grinding chamber in a certain time and this results as greatly reduced grinding times and decreased energy costs. By the unique design and construction parameters of the grinding chamber and agitator parts, high grinding power is achieved.

• Products are processed in the same container from start to finish, additional tanks, pumps and piping systems are eliminated, premixing operation is reduced to minimum.

• The grinding chamber and the grinding vessel of the DBM Series Basket Mill are both water cooled with an efficient cooling system. This helps to remove the heat build-up that was generated from the product passing through the grinding chamber. Temperature of the processing product decreases efficiently during the operation and optimum temperature control can be obtained.

• If the structure of the product changes during the operation, binder, solvent or other desired additives can be added to the mill base without stopping the process.

• Cleaning of the whole grinding chamber and the grinding media are very simple and quick.

FEATURES

• Stainless steel, specific hardened steel and hard materials for all parts coming into contact with the grinding media, for minimum wear.

• Fast moving parts are manufactured from high resistance materials.

• Complete microfinished stainless steel construction of the machine parts which interfere with the product directly, including the basket, main shaft, supporting shafts and the rotating disc, for reducing the cleaning time to minimum.

• Electro - hydraulically controlled upper body lifting.

• Effective variable speed control system with frequency converter.

• Powerful and reliable, electro-hydraulically controlled vessel clamping system. (Standard feature for DBM Series basket mills.)

• Vessel centering plate which ensures that the vessel is pivoted according to the shaft axis as it is approached to the machine.

• Standard pneaumatically controlled vessel closing system with durable aluminium or SS lid, illumination, manhole and ventilation flange.

• Standard electrical safety system arranged by electrical switches and equipment for maximum working safety.

• On-board, functional control panel with push-button controls and digital indicators for controlling the process parameters.

• Sophisticated PLC control system (DSBM Control System with TFT-LCD coloured touch panel) with data input option, to control the process parameters within a wider range.

• Option to use all kinds of various grinding media for optimum wet grinding results.

OPTIONS

- Complete Ex-Proof design for ATEX Zone 1 and Zone 2
- Grinding beads of various sizes and materials.
- Complete vacuum design.
- Stainless steel, special design shape product vessel for maximum product circulation, with cooling jacket

MODEL	DBM 300	DBM 300 L	DBM 500	DBM 500 L	DBM 1000	DBM 1000 L	DBM 1500	DBM 1500 L
MAIN DRIVE POWER	15 KW	18,5 KW	22 KW	30 KW	37 KW	45 KW	55 KW	75-90 KW
BATCH CAPACITY	130-200 LT	130-200 LT	250-400 LT	250-400 LT	450-800 LT	450-800 LT	700-1200 LT	700-1200 LT
GRINDING CHAMBER NET VOLUME	10 LT	10 LT	20 LT	20 LT	35 LT	35 LT	55 LT	55 LT

YOKES®
Wet Grinding and Dispersion

DISSOLVERS AND DISPERSERS

YOKES
Wet Grinding and Dispersion

DSV SERIES

Floor Mounted
High Speed Dissolver

DSV Series Dissolvers are designed for all kinds of pre-mixing, dispersion, ready mixing and dissolving processes in mobile containers, within a wide viscosity range of products.

They are highly efficient, powerful and reliable machines with the most appropriate construction parameters and various motor powers , optimized for the tasks specified.

With all the offered standard and optional equipment, demands like high performance, stability, working safety, etc. are easily achieved.

• Vibration free running of the main shaft even in an empty container, thanks to rigid body constrution, unique design and precise manufacturing.

• Fast moving parts manufactured from high resistance materials.

• Electro – hydraulically controlled upper body lifting.

• Rigid guiding shaft for upper body guiding.

• Effective speed control system with frequency converter.

• **Powerful and reliable vessel clamping system. Electro – hydraulically controlled clamping system is standard on DSV - Series dissolvers.**

• Adjustable vessel centring plate, which ensures that the vessel is pivoted according to the shaft axis as it is approached to the machine.

• Complete electrical safety system arranged by electrical switches and equipment for maximum working safety.

• On board, functional analogue control panel with push – button controls and TFT-LCD screen.

• All machine parts which interfere with the product directly are manufactured from high grade stainless steel.

OPTIONS

• Complete Ex-Proof design for Zone 1 [ATEX IIG IIB T4 Gb - 2014 / 34 / EU / Clause 13.1.b(ii)]

• Pneaumatically controlled, flat aluminium “Dust Lid” to avoid emmisions, with large manhole, ventilation and illumination.

• Pneaumatically controlled, “Completely Sealed” stainless steel lid with manhole and illumination.

• “Self-aligning” vessel side scraper system for high viscosity products.

• PLC control system with temperature control, process time control and data input option.

MODEL	DSV-20	DSV-30	DSV-50	DSV-60	DSV-75	DSV-100	DSV-125
MAIN DRIVE POWER	15 kW	22 kW	37 kW	45 kW	55 kW	75 kW	90 kW
MAIN SHAFT SPEED RANGE	0 - 2200 d/d	0 - 1500 d/d	0 - 1500 d/d	0 - 1200 d/d	0 - 1200 d/d	0 - 1200 d/d	0 - 1000 d/d
MAXIMUM BATCH CAPACITY	200 LT	500 LT	800 LT	1200 LT	1600 LT	2000 LT	2500 LT

YOKES
Wet Grinding and Dispersion

DSV (V) SERIES

High Speed Vacuum Dissolver

DSV (V) Series dissolvers are designed for the production of high-viscous products of up to 500,000 (cP), also where the removal of air from the product during the process is necessary.

Although the body structures seem similar to standard DSV series dissolvers, they are quite different models especially when the construction parameters, motor powers according to batch sizes, etc. are compared to conventional dissolvers.

DSV (V) vacuum dissolvers are offered as a complete package with minimum optional extras.

All of the standard equipment on the machine are presented to accomplish the toughest mixing and dispersion processes when dealing with very high-viscous products.

• Designed for moveable mixing containers, each machine is offered with standard double walled and completely stainless steel production vessel.

• Height-adjustable disperser disc under vacuum (within a certain limit) is a standard feature for DSV (V) series vacuum dissolvers.

• Production of extremely high-viscous products of up to 500,000 (cP) is possible.

• Powerful and reliable **hydraulic vessel clamping system** with safety arrangement.

• Vessel centering system, which ensures that the vacuum vessel is pivoted according to the shaft axis as it is approached to the machine.

• 6 / 8 mm stainless steel rigid vacuum lid, including manhole with sealed window, various connections for different connection options, vessel illumination, mechanical vacuum-meter, air-intake valve, etc. The lid is controlled by a pneaumatic system.

• Effective main shaft sealing system for keeping the vacuum inside the vessel during the process.

• Drainage system to protect the vacuum pump from the undesired materials sucked from the vessel.

• On board, functional control panel with push – button controls and TFT-LCD screen. PLC control system is standard for DSV (V) series vacuum dissolvers. Observed and adjusted parameters can be listed as the status of the machine motors, total and existing process time (process time set option to control the desired process time), product temperature control which can be adjusted to a desired maximum value, etc.

"Automatic Vacuum Control System" is a standard feature offered with DSV (V) dissolvers. Vacuum value can be set to a desired minimum and maximum, measured electronically. Control software of the machine holds the vacuum value within these limits by running and stopping the vacuum pump automatically. The vacuum inside the vessel is always kept at the same level, without the need of the intervention of the machine operator. This feature also saves energy because the vacuum pump is not always running during the whole process.

• "Self–aligning" vessel side scraper system that can be adjusted according to the vessel diameter to be incorporated, which also aligns itself according to the inner surface of the vessel.

• Complete electrical safety system arranged by electrical switches and equipment for maximum working safety.

• Fast moving parts manufactured from high resistance materials. All parts that interfere with the product directly are manufactured from stainless steel.

• Electro – hydraulically controlled upper body lifting.

• Effective speed control system with frequency converter.

OPTIONS

• Complete Ex-Proof design for Zone 1 [ATEX IIG IIB T4 Gb - 2014 / 34 / EU / Clause 13.1.b(ii)]

• Hydraulic discharge press for extremely high viscosity products.

MODEL	DSV-250V	DSV-500V	DSV-1000V	DSV-1500V
MAIN DRIVE POWER	18,5 - 22 kW	30 - 37 kW	45 - 55 kW	75 - 90 kW
NET BATCH CAPACITY	250 LT	500 LT	1000 LT	1500 LT
MAIN SHAFT SPEED RANGE	0 - 2200 rpm	0 - 1500 rpm	0 - 1500 rpm	0 - 1200 rpm

YOKES
Wet Grinding and Dispersion

DSV (P) SERIES

Platform Type
High Speed Dissolver

DSV(P) Serisi Platform Type Dissolvers are “Tailor Made” solutions , specially designed for the “Mass Production” requirements of our customers.

They are designed in accordance with the product to be processed, estimated production capacity and floorplan of the customer’s facility.

To achieve precise, most reliable and maximum capacity results, each unit are delivered as a complete package, with it’s own platform and production vessels

They can be manufactured to work in one, two or three vessels. Practically, platform dissolver batch capacity starts from 3000 Lt and above values.

Each machine order is projected completely spesific for the customer and it is initially designed at CAD environment for finishing all details. During the design phase, demands of our customers such as raw material storage, liquid & dust filling requirements are taken into consideration. Final design is manufactured a complete system , fully integrated with the customer’s facility.

FEATURES

• Rigid and reliable Dissolver body design, appropriate for mass production. (Machine body is placed in the center of the platform but vertical static load is delivered to the ground, not to the platform)

• Strong, rigid and vibration free steel construction platform, manufactured from HEB / HEA and various other steel profiles. (Completely unmountable, weld-free design)

• Completely stainless steel, water cooled production vessels. (Platform is designed to deliver the vertical static load of the vessels to the ground, instead of the platform)

• Pneaumatically controlled, completely stainless steel, torispheric, completely sealed lid. (With required DN standard connection flanges)

• Standard “Self - Aligning” vessel side scraper system.

• Electro-hydraulic controlled upper body rotating system.

• Appropriate design for loadcell weight measurement system. (Loadcell system is optional)

• Onboard control panel on platform. System is controlled by a sophisticated PLC control system, consisting of the controls for machine running parameters, product temperature, running time, etc. All controls are provided through an industrial TFT-LCD screen and analog panel.

• If the machine is equipped with loadcell weight measurement system, all adjustments and controls will be integrated to the machine’s PLC control system.

• If the machine is manufactured for vacuum, “Vacuum Automation System” is also availabe with the standard PLC control system.

OPTIONS

- Complete Ex-Proof design for Zone 1 [ATEX IIG IIB T4 Gb - 2014 / 34 / EU / Clause 13.1.b(ii)]
- Complete vacuum design.
- Loadcell weight measurement system.

MODEL	DSV-3000P	DSV-4000P	DSV-5000P
MAIN DRIVE POWER *(DEPENDENT ON VISCOSITY)*	55 - 90 kW	75 - 110 kW	> 90 - 110 kW
NET BATCH CAPACITY *(DIFFERENT VOLUME DESIGNS ARE AVAILABLE UPON REQUEST)*	3000 LT	4000 LT	> 5000 LT

YOKES
Wet Grinding and Dispersion

DSV (T) SERIES

Tank Top Mounted
High Speed Dissolver

DSV (T) Series Tank Top Mounted dissolvers are “Mass Production” machinery, specially designed in a wide range of batch capacities and product types.

They are developed for large batches of production and high concentration pre-dispersion processes of the mill-bases.

There are certain experienced standard models available, but they can also be designed to work on any type & size of production vessels, in accordance with customers’ demands.

FEATURES

• Machines are designed to be fixed on steel or concrete platforms.

• All are delivered with their own water cooled, completely stainless steel production vessels.

• They are powerful, rigid, reliable and “Fully Closed” systems which can be integrated to any type of automation for liquid / solid filling systems.

• “Self-aligning” vessel side scraper system is a standard feature.

• Upper body / disperser disc can be lifted up and down within a certain stroke, during the dispersion process. And this results as maximum efficiency.

• Each machine is delivered with sophisticated PLC control system, fully adaptable to every kind of filling and discharge systems.

• Machine running parameters, process parameters and changes in the product charactheristics can be odserved, adjsuted and be interfered during the process through the PLC control system.

• Main shaft speed is variable with frequency converter.

• “Complete vacuum system” (with vacuum automation) and “Loadcell weight measurement” system are optionally available for each machine.

OPTIONS

- Complete Ex-Proof design for Zone 1 [ATEX IIG IIB T4 Gb - 2014 / 34 / EU / Clause 13.1.b(ii)]
- Complete vacuum design.
- Loadcell weight measurement system.

MODEL	DSV - 1000T	DSV - 2000T	DSV - 3000T	DSV - 5000T
MAIN DRIVE POWER *(SUBJECT TO CHANGE DEPENDING ON VISCOSITY AND DENSITY)*	37 - 45 kW	55 - 75 kW	75 - 90 kW	>110 kW
NET BATCH CAPACITY	1000 LT	2000 LT	3000 LT	>5000 LT

YOKES
Wet Grinding and Dispersion

DSV (B) SERIES

Butterfly Dissolver

DSV-B Series Butterfly Dissolvers, are used for mixing, dispersing and evacuating of Ultra High Viscosity, thixotrophic products.

All standard equipment on the machine are designed to deal with extreme mixing and dispersing conditions that can be encountered during these type of processes.

They can be used with mobile vessels, between 250 LT - 1500 LT net batch capacity.

Standard machine is composed of two mixing shafts. (Optionally, machine is also available in single shaft execution with only Butterfly shaft.)

Butterfly Impeller rotates in the center of the product vessel at low speed, scraping the sides of the vessel wall with three side scrapers. This provides effective mixing of the high viscosity product.

Dissolver / disperser shaft on the side of the vessel is used for adding solid materials and dispersing them at high speed for effective homogenizing / dissolving.

Both shafts are driven by modern frequency convrters and the speed are variable.

This is a completely closed and sealed system, where vacuum can be applied if required. (Vacuum design is optional)

Machines which are equipped with optional vacuum design have a sophisticated “Automatic Vacuum Control System”. Required vacuum value inside the mixing container is measured, controlled and electronically adjusted between a desired minimum and maximum vacuum value, by machines PLC control system. This provides maximum efficiency, minimum electrical consumption and labor, because the vacuum pump will not be running all the time during the process.

All machine parts that interfere with the product are manufactured from high grade stainless steel materials.

Each machine is delivered with a stainless steel, double walled-water cooled production vessel. Inner wall of the vessel is completely machined for effective discharge under a Hydraulic Discharge Press.

Upper body lifting and lifting of the stainless steel vessel lid / cover are provided by an electro-hydraulic system.

When the machine lid is closed during the process, butterfly impeller and the disperser disc can be lifted up to maximum level of the vessel for effective mixing and scraping.

Fixing of the production vessel to the machine is provided by “Pin & Lock Joint System” for maximum working safety at high viscosity. This system ensures that the vessel is centered automatically to the main shaft, as it is approached to the machine.

DSV-B Series machines have a standard PLC control system for controlling machine functions and setting working parameters such as load of the motors, process time, temperature control , energy consumption, etc. Optionally, recipe controlled, PC/PLC based YOKEŞ® BATCH CONTROL system is available.

“Complete Electrical Safety Arrangement” is a standard feature on any DSV-B series Butterfly dissolver.

OPTIONS

- Complete Ex-Proof design for Zone 1 [ATEX IIG IIB T4 Gb - 2014 / 34 / EU / Clause 13.1.b(ii)]
- Recipe controlled, PC/PLC based YOKEŞ®-BATCH CONTROL system.
- **"Hydraulic Discharge Press" (Click)** for emptying the production vessels.

MODEL	DSV-500B	DSV-800B	DSV-1000B	DSV-1500B
DISSOLVER MOTOR POWER	11 KW	18.5 KW	22 KW	30 - 45 KW
BUTTERFLY MOTOR POWER	37 KW	45 KW	55 KW	90 KW
DISSOLVER SPEED RANGE	120 - 3000 rpm	120 - 1500 rpm	120 -1500 rpm	120 - 1500 rpm
BUTTERFLY SPEED RANGE	0 - 175 rpm	0 - 150 rpm	0 - 150 rpm	0 - 125 rpm
NET PRODUCT VOLUME	500 LT	800 LT	1000 LT	1500 LT

YOKES
Wet Grinding and Dispersion

WTMH SERIES

Wall - Column Mounted Compact Dissolver

WTMH Series Dissolvers are designed for all kinds of pre-mixing, dispersion, ready mixing and dissolving processes in mobile containers, within a wide viscosity range of products.

They are designed to be a more economic, lightweight and compact alternative to DSV series dissolvers for small batches. With various types of disperser discs and mixing impellers, WTMH dissolvers can also be used for all types of mixing, homogenizing and colouring processes.

Although the batch capacities of WTMH dissolvers are small when compared to DSV series; they can be used effectively for many purposes up to 500 LT.

• Compact body construction for mounting the machine to a wall or a column for saving space inside the production area.

• Hydraulic lifting of the motor group, guided by side rails and wheels.

• Effective speed control system by means of a frequency converter.

• Powerful mechanical vessel clamping system.

• On-board control panel for process control. Control panel consists of push buttons for motor controls, potentiometer for speed control and TFT-LCD screen for the observation of the main drive values.

• Fast moving parts are manufactured from high resistance materials.

• Max. 500LT batch capacity.

• Self opening impellers for using the machine in vessels with narrow rims, such as IBC containers.

• All materials that comes in contact with the product are high resistant stainless steel.

MODEL	WTMH - 15	WTMH - 20	WTMH - 25
MAIN DRIVE POWER	11 kW	15 kW	18,5 kW
BATCH CAPACITY	100 - 500 LT	100 - 500 LT	100 - 500 LT
MAIN SHAFT SPEED RANGE	0 - 1500 rpm	0 - 1500 rpm	0 - 1500 rpm

OPTIONS

• Complete Ex-Proof design for Zone 1 [ATEX IIG IIB T4 Gb - 2014 / 34 / EU / Clause 13.1.b(ii)]

• Pneaumatically controlled, flat aluminium “Dust Lid” to avoid emmisions, with large manhole, ventilation and illumination.

• Pneaumatically controlled, “Completely Sealed” stainless steel lid with manhole and illumination.


150

YOKES®
Wet Grinding and Dispersion

MIXERS AND HOMOGENIZERS

YOKES®
Wet Grinding and Dispersion

SLV SERIES

Rotor Stator Type
“High Shear Mixer”

SLV Series High Shear Mixer / Homogenizer is not only a basic mixer but a very efficient machine which is used for the dispersion, homogenization, suspension and disintegration of solids in liquids and especially for the emultion of the liquids.

By the specially designed rotor-stator work head, it has been observed that the process time gets quite shorter, product consistency and process efficiency becomes 90% improved, as the machine is compared with the conventional mixers

The high speed rotation of the rotor blades within the special designed work head exerts a powerful suction, drawing liquid and solid materials upward from the bottom of the container and into the center of the workhead. Centrifugal force accelerates the materials towards the sides of the stator workhead. Between the rotor blades and the inner wall of the stator workhead, there becomes a powerful milling action. This is followed by the materials getting forced throughout the stator workhead at high velocity, and getting circulated into the main body of the mix. The materials expelled from the stator workhead are projected radially at high speed towards the sides of the mixing container. At the same time, new material is drawn into the workhead. The radial expulsion and suction into the workhead is for setting up a circulation which minimizes aeration caused by the disturbance of the liquid's surface. (No vortex observed)

• Effective speed control system with frequency converter.

• All parts that comes into contact with the product are manufactured from stainless steel.

• Hydraulic lifting system for the motor and mixer group on side rails, with wheels.

• On-board control panel with push buttons and digital indicators.

• Vibration free and reliable running of the mixer group, thanks to precisely manufactured fast moving parts.

• "Swing system" for the rotor-stator mixer group to increase its efficiency during the process.

• SLV Series mixers can also be offered as "only the mixer part", to have an economic solution for the production purposes. Since the mixing characteristics of the product during the process are very smooth and no vortex is observed, the mixing group can be runned freely inside the vessel just by hanging it with a crane. It swings inside the vessel by itself and creates a very effective mixing. Operator panel can be mounted to the wall.

OPTIONS

• Complete Ex-Proof design for Zone 1 [ATEX IIG IIB T4 Gb - 2014 / 34 / EU / Clause 13.1.b(ii)]

MODEL	SLV - 10	SLV - 15	SLV - 20	SLV - 50
MAIN DRIVE POWER	7,5 kW	11 kW	15 kW	37 kW
MAIN SHAFT SPEED RANGE	0 - 3000 rpm	0 - 3000 rpm	0 - 1500 rpm	0 - 1500 rpm
STATOR WORKHEAD	290 mm	350 mm	360 mm	430 mm

YOKES®
Wet Grinding and Dispersion

SPECIAL MIXERS

For Various Purposes

Various types of Mobile mixers and homogenizers are designed to meet the mixing and dispersion requirements of our customers, especially for different types of fixed vessels, drums and IBC tanks inside the production area.

These mixers are offered in accordance with the dimensions of the vessel / tank to be incorporated, as well as product charactheristics.

OPTIONS

• Complete Ex-Proof design for Zone 1 [ATEX IIG IIB T4 Gb - 2014 / 34 / EU / Clause 13.1.b(ii)]


100

YOKES®
Wet Grinding and Dispersion

LABORATORY AND PILOT PLANT

YOKES
Wet Grinding and Dispersion

4th Generation

VBR SERIES

Laboratory Type Dissolver - Basket Mill

VBR Series Dispersers are actually **Multi-Purpose** machinery, designed for all kinds of pre-mixing, ready mixing, dispersion/dissolving, homogenizing and milling processes for laboratory scale, within a wide viscosity range of products. The machine can be used as a laboratory scale **Dissolver, Basket Mill** and **Rotor - Stator High Shear Mixer** with its interchangeable workheads.

With its powerful motor, wide speed range, effective control system and rich hardware, VBR series are very efficient machines for the high speed dispersion, fine milling and homogenizing processes for small batch volumes at research laboratories.

With its compact construction and basic energy requirement (220 V, 50Hz, monophase), it can be settled on a rigid table or working bench to start processing in minutes.

Machine parameters are precisely optimized to obtain one-to-one simulations of the production processes achieved by production scale machinery.

With easily changeable workheads, it is very easy to switch between different types of operations. All processes in production scale can be achieved in laboratory with one single machine.

Machine operator can run the machine and observe / adjust the process parameters through a TFT-LCD touch panel on the machine body, by means of a sophisticated PLC control system

FEATURES

• Effective speed control with frequency converter.

• Electronic lifting of the motor group.

• All parts that interefere with the product, including the clamp arms and base plate, are manufactured from micro finish stainless steel for easy cleaning.

• Reliable clamp system which centers the vessel to the shaft axis after a single adjustment.

• Suitable to use with stainless steel double walled / water cooled “Sand-Cups”.

• Temperature control system, process parameter controls and safety arrangement.

• Completely stainless steel Basket Mill workhead with internal cooling jacket and turbine type suction disc. Feasibility to use the machine with various types grinding media and to obtain a perfect simulation of a milling process when compared to a process type basket mill.

• Completely stainless steel Rotor Stator workhead with various types (Drilled, slotted, with sieve, etc.) according to the product to be processed.

• Option to use a standard VBR model as a **Vacuum Dissolver, Vacuum Type Basket Mill** and **Vacuum Type Rotor Stator Mixer**, by means of easily exchangeable vacuum workheads. Required vacuum is also provided by a safe, pneaumatic vacuum pump.

OPTIONS

• Standard machine is delivered with Dissolver workhead and four sizes of disperser discs.

• Other workheads including vacuum types, vacuum devices and sandcups, which are mentioned in general features, are optional extra accessories.

• Complete Ex-Proof design for Zone 1 [ATEX IIG IIB T4 Gb - 2014 / 34 / EU / Clause 13.1.b(ii)]

MODEL	VBR - 12	VBR - 6000	VBR - 6000 EX (Exd-Zone-1)	VBR-6000 L
MOTOR POWER	0,75 kW	1,5 kW	1,1 kW	2,2 kW
SPEED RANGE	0 - 12000 rpm	0 - 6000 rpm	0 - 6000 rpm	0 - 6000 rpm
BATCH CAPACITY (DISSOLVER)	0,5 - 3 LT	1 - 15 LT	1 - 15 LT	3 - 21 LT
BATCH CAPACITY (BASKET MILL)	1 - 3 LT	1 - 10 LT	1 - 10 LT	3 - 21 LT
BATCH CAPACITY (ROTOR-STATOR MIXER)	1 - 3 LT	1 - 10 LT	1 - 10 LT	3 -21 LT
DISPERSER DİSCS	ø30..... ø70mm	ø40 .... ø130 mm	ø40 .... ø130 mm	ø50 .... ø150mm
SANDCUP VOLUMES	0,5 LT - 3 LT	1 LT - 10 LT	1 LT - 10 LT	3 LT - 21 LT
DIMENSIONS / WEIGHT APPX.	300mm x 550mm x H:1000mm / 60 KG	400mm x 600mm x H: 1100mm / 80 KG	400mm x 600mm x H: 1100mm / 80 KG	400mm x 600mm x H: 1200mm / 120 KG

YOKEŞ
Wet Grinding and Dispersion

4th Generation

YOKEŞ POWER-LAB®

Laboratory Type Bead Mill

YOKEŞ® / Power-Lab® is the smallest model of the Power-Mill series. It is designed to fulfill the wet grinding demands for the laboratory scale and pilot plant productions. All of the mechanical parameters to execute the wet grinding processes are optimized for **Power-Lab®**. It also has the forceful grinding ability and efficiency when compared to the large production scale models.

The efficiency of the machine is determined by the energy input to the grinding chamber and the optimal exploitation of this energy for the wet grinding process. Thanks to its optimal grinding chamber geometry and components, **Power-Lab®** achieves a high degree of efficiency.

The output capacity totally depends on the product to be processed, disperse formulation, required fineness, pigment quality, product viscosity, product feeding flow rate, etc. Therefore, optimum results may be achieved when processing.

• Machine can be used with **THREE DIFFERENT VOLUME GRINDING CHAMBERS**, thanks to easily exchangeable grinding chamber and main shaft desgn

• Double walled and efficiently cooled grinding chamber with forced spiral flow of water. Exchangeable inner cylinder of AISI-304 stainless steel (Optional Silicon Carbide inner cylinder upon request)

• Double cartridge design mechanical seal for effective shaft sealing.

• Independent closed circuit mechanical seal rinsing system with glycerine flow, also water cooled.

• Electronically adjustable, variable main shaft speed. (By frequency converter.)

• Gear type product feeding pump with variable speed / flow rate control. (By frequency converter.)

• Necessary energy and movement are given to the grinding beads via specially designed **Rotor - Pin System** or **Conventional Disc System**, for high efficiency wet grinding. (In accordance with product to be processed and customer demands)

• Grinding beads separation is done by **“YOKEŞ® - WDG System High Flow Cylindrical Sieve Separator”**, to achieve the highest flowrate. Sieve surface area is designed to be at maximum within the construction parameters of the grinding chamber. During the process, separator sieve is continuously cleaned by the rotor disc. Also, if there is a blockage in the sieve during the process, inner side of the sieve can easily be cleaned from the front cover, without the necessity to empty and open the grinding chamber.

• On board, functional TFT-LCD touch panel control and full PLC Control. Parameters to be adjusted and controlled are product output temperature, grinding chamber inner pressure, main drive current, main drive torque, feeding pump speed, etc. (**YOKEŞ ® PLB Control System**)

• Various material options according to the customer demands for the grinding group parts, which interfere with the product directly. (Specific hardened steel, high grade stainless steel, Zirconium Oxide, Tungsten Carbide, etc.)

• Compact - User Friendly design and cleaning tray for easy detailed cleaning and maintenance of the grinding chamber.

OPTIONS

• Complete Ex-Proof design for Zone 1 [ATEX IIG IIB T4 Gb - 2014 / 34 / EU / Clause 13.1.b(ii)]

• Grinding beads of various sizes and materials

• Zirconium Oxide agitator parts

• Tungsten Carbide pins

• Silicon carbide inner cylinder for grinding chamber

MODEL	YOKEŞ® - Power-Lab®
MAIN MOTOR POWER	4 KW
GRINDING CHAMBER NET VOLUMES	0,25 LT / 0,5 LT / 1 LT
PRODUCT - BEADS SEPARATION	**YOKEŞ® - WDG System** High Flow Cylindrical Sieve Separator (Standard)
MAIN SHAFT SPEED	VARIABLE WITH FREQUENCY CONVERTER (0-4000 RPM)
MINIMUM BATCH CAPACITY	Depending on the grinding chamber volume
MAXIMUM BATCH CAPACITY	50 LT
DIMENSIONS - WEIGHT APPX.	1350 X 625 X H: 700 mm / 235 KG

YOKES
Wet Grinding and Dispersion

DSV-RS

Pilot Type Dissolver
(50 -100 LT batch)

DSV-RS / Pilot Type Dissolver stands right between the laboratory scale machinery and the production scale machinery.

With its compact construction, powerful motor, wide speed range, effective control system and hardware, it is a very efficient machine for the high speed dispersion and homogenizing processes for **50 - 100 LT batch volumes**.

Optionally, DSV-RS can be used as a **50 LT Batch Capacity Basket Mill**, with easily exchangeable workhead.

Machine parameters are precisely optimized to obtain one-to-one simulations of the production processes achieved by production scale machinery.

FEATURES

• Effective speed control with frequency converter.

• Push button controlled electro-mechanic lifting of the motor group.

• All parts that interefere with the product are manufactured from micro finish stainless steel for easy cleaning.

• Reliable clamp system which centers the vessel to the shaft axis after a single adjustment.

• Suitable to use with various types and sizes of mixing containers.

• Temperature control system.

• Full system PLC control to control the machine running parameters and product charactheristics.

OPTIONS

• Complete Ex-Proof design for Zone 1 [ATEX IIG IIB T4 Gb - 2014 / 34 / EU / Clause 13.1.b(ii)]

• Mechanical lifting, flat aluminium “Dust Lid” to avoid emmisions, with large manhole, ventilation and illumination.

• Optional Vacuum System

MODEL	DSV-RS
MAIN DRIVE POWER	7,5 kW
SPEED RANGE	0 - 3000 d/d
DISSOLVER / DISPERSER / ROTOR-STATOR MIXER BATCH CAPACITY	50 -100 LT
BASKET MILL BATCH CAPACITY	50 LT

YOKES®
Wet Grinding and Dispersion

DBM-P

Pilot Size Basket Mill
(50-100 LT Capacity)

DBM-P Pilot Size Basket Mill, stands right between the laboratory scale machinery and the production scale Basket Mills.

With its compact construction, powerful motor, wide speed range, effective control system and hardware, DBM-100 is a very efficient machine for thewet grinding processes for **50 - 100 LT batch volumes**.

DBM-P is designed to fulfill the needs of modern wet grinding technology. When compared to conventional agitator bead mills; major objective with the basket mill system is to simplify the milling process, eliminate the needs for additional hard to clean tanks, hoses, etc. and to achieve an optimum particle size distribution and stronger results in a shorter time.

WORKING PRINCIPLE

The rotating disc below the basket sucks the product through the rim on the top of the basket into the grinding chamber, where the wet grinding takes place. Additional agitator discs accelerate the grinding media inside the grinding chamber to ground the passing product with slipping and rolling action of the beads. The product then passes through a large-dimensioned slotted sieve which seperates the media from the batch and keeps the grinding beads inside the grinding chamber. With the centrifugal force generated by the rotating disc below, ground product is sent back into the batch to re-enter the grinding chamber from the top of the basket.

Instead of one or two passes through a conventional agitator bead mill with reduced throughput, it is more effective to increase the number of passes with higher output. **DBM-P** works by this principle, ensuring that all of the base product inside the vessel passes through the grinding chamber many times during the operation. This results as more uniform and progressively ground finished material with narrow fineness spectrum and colour strength.

ADVANTAGES

• When compared to the conventional agitator bead mills, **DBM-P** have many advantages. It allows greater amount of material to pass through the grinding chamber in a certain time and this results as greatly reduced grinding times and decreased energy costs. By the unique design and construction parameters of the grinding chamber and agitator parts, high grinding power is achieved.

• Products are processed in the same container from start to finish, additional tanks, pumps and piping systems are eliminated, premixing operation is reduced to minimum.

• The grinding chamber and the grinding vessel of the **DBM-P** are both water cooled with an efficient cooling system. This helps to remove the heat build-up that was generated from the product passing through the grinding chamber. Temperature of the processing product decreases efficiently during the operation and optimum temperature control can be obtained.

• If the structure of the product changes during the operation, binder, solvent or other desired additives can be added to the mill base without stopping the process.

• Cleaning of the whole grinding chamber and the grinding media are very simple and quick.

FEATURES

• Stainless steel, specific hardened steel and hard materials for all parts coming into contact with the grinding media, for minimum wear.

• Fast moving parts manufactured from high resistance materials.

• Complete microfinished stainless steel construction of the machine parts which interfere with the product directly, including the basket, main shaft, supporting shafts and the rotating disc, for reducing the cleaning time to minimum.

• Electro – hydraulically controlled upper body lifting.

• Effective variable speed control system with frequency converter.

• Powerful and reliable mechanical vessel clamping system.

• Vessel centering plate which ensures that the vessel is pivoted according to the shaft axis as it is approached to the machine.

• Standard pneaumatically controlled vessel closing system with durable aluminium lid, illumination, manhole and ventilation flange.

• Standard electrical safety system arranged by electrical switches and equipment for maximum working safety.

• On-board, functional control panel with push-button controls and digital indicators for controlling the process parameters.

• Sophisticated PLC control system (DSBM Control System with 3,5" TFT-LCD coloured touch panel) with data input option, to control the process parameters within a wider range.

• Option to use all kinds of various grinding media for optimum wet grinding results.

OPTIONS

- Complete Ex-Proof design for Zone 1 [ATEX IIG IIB T4 Gb - 2014 / 34 / EU / Clause 13.1.b(ii)]
- Grinding beads of various sizes and materials.m

MODEL	DBM - P
MAIN DRIVE POWER	7,5-11 kW
BATCH CAPACITY	50 - 100 lt
GRINDING CHAMBER NET VOLUME	3 LT


14

AUXILIARY EQUIPMENT

YOKEŞ
Wet Grinding and Dispersion

DP SERIES

Hydraulic Discharge Press

Hydraulic discharge presses are designed for discharging the high viscosity - non flowing products from the vessels that they are prepared in.

Presses are commonly used as an auxiliary equipment for DSV-V Vacuum Dissolvers, DSV-B Butterfly Dissolvers and PMX Series Planetary mixers.

FEATURES

• Press base plate is buried to the ground, flat with ground surface.

• Vessel to be discharged is taken into the press and placed on the elevator mechanism.

• Hydraulic system first lifts the vessel up to avoid any damage to the vessel wheels during discharge.

• Locking system of the press secures the vessel as lifted up and placed on the bottom surface.

• Hydraulic press plate with side sealing goes down into the vessel for the discharge, then goes up again to lift the vessel back.

• Discharged vessel is taken back to ground and removed from the press.

OPTIONS

• Complete Ex-Proof design for Zone 1 [ATEX IIG IIB T4 Gb - 2014 / 34 / EU / Clause 13.1.b(ii)]

TECHNICAL DATA

• Hydraulic discharge presses are fully designed for the vessel to be incorporated and product to be interfered.

• Press plate that goes down into the vessel has an effective side sealing ring to avoid any leakages during the discharge process. (Vessel should also be machined in the inside)

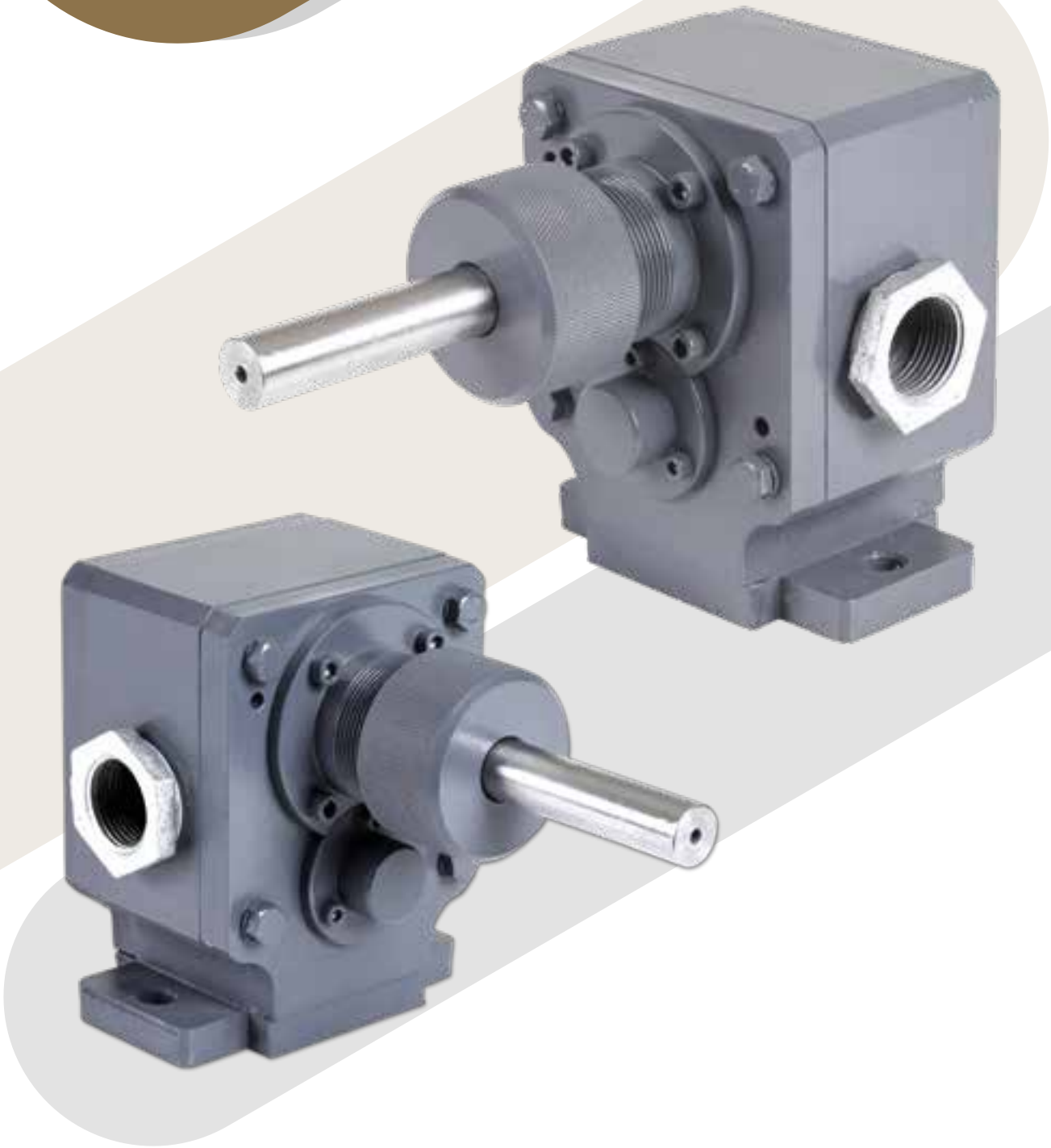
• Motor power, hydraulic system pressure, hydraulic cylinder dimensions, machine dimensions, etc. are completely calculated according to the vessel to be incorporated and product to be interfered.

• Practically, YOKES manufactures Hydraulic Discharge Press for every type and dimensions of production vessels in accordance with global standards.

YOKES
Wet Grinding and Dispersion

GTP SERIES

Gear Type Feeding and Transfer Pumps



GTP Series gear type pumps are designed for the transfer purposes of liquids in a wide range of viscosity. They are also used as product feeding pump for bead mills.Thanks to their special design and precise manufacturing, a high level flow rate can be obtained.

Pumps can be used as single units or they can be mounted on a stationary or mobile chasis, coupled to a reduction type motor. They can be used with fixed speed or with steplessly variable speed control by a frequency converter.

• Teflon seals are used for shaft sealing to increase the pump life, especially in hazardous environment. (Solvent vapour, etc.)

• GTP Series pumps are manufactured in four different models. GTP-1 and GTP-2 are designed for product feeding and transfer purposes. Pump bodies and internal gears are manufactured from cast iron and steel in standard production for these two models. (Body construction and gears from different materials are available, e.g completely stainless steel, cast steel with hardened gears etc.)

• Shaft housings are provided by high resistance bronze material. (Propeller shaft for GTP-2 has also a bearing housing.)

• GTP ¼ and GTP ½ models are generally used as a rinsing pump for agitator bead mills and product feeding pump with low flowrate values for pilot plant machinery. Steel pump body and specific hardened steel gears are standard for these models. Shaft housings are also provided by high resistance bronze material.

• If some leakage is observed from shaft seal after a certain working period, it can easily be eliminated by simply tightening the seal nut, until the shaft seal fulfills its life.

• Pumping capacities totally depend on the motor speed, product viscosity and product type. (Experimental values for different product types can be supplied upon request.)

• Galvanized or epoxy painted rigid chasis manufactured from sheet steel or NPU profile is available for all models.

• Variable Speed Control System with frequency converter for all models with chasis. (GTPS)

• Funnel system to remove air from the pipes when the pump is used for product feeding to an agitator bead mill.

OPTIONS

• Complete Ex-Proof design for Zone 1 [ATEX IIG IIB T4 Gb - 2014 / 34 / EU / Clause 13.1.b(ii)]

MODEL	GTPS-3/8	GTPS-1/2	GTPS-1	GTPS-2
INLET / OUTLET	3/8"	1/2"	1" or 1-1/4"	2"
SHAFT AXIS H.	78 mm	78 mm	117 mm	175 mm
SHAFT DIA.	14 mm	14 mm	20 mm	24 mm
BASE DIMENSIONS	74 x 95 mm	140 X70 mm	131 x 56 mm	180 x 102 mm
DRIVE MOTOR	0,18kW	0,37 Kw	1,5 kW	2,2 kW
SPEED RANGE	0-300 rpm	0-300 rpm	0-500 rpm	0-500 rpm

YOKES
Wet Grinding and Dispersion

GTF SERIES

Mobile Type Filtering Unit

GTF-2 Mobile filtering group is designed for the filtering purposes of various pumpable fluids, especially for Paint & Dyestuff Industries.

They can be manufactured with single or double filtering units, mounted on a mobile chasis. The advantage of double filtering units is the opportunity to by-pass the product flow to the other unit, if there is a clogging in the processing one. While the flow continues on the second filtering unit, maintenance and cleaning operations can be handeled for the clogged unit without stopping the process.

FEATURES

• Continuous and pressurized product flow with adjustable flow rate control, by means of a gear type pump coupled to a reduction type motor with steplessly variable speed control. (With frequency converter)

• Electronically controlled, adjustable system pressure for maximum working safety.

• Various filter bags of silk material with different micron sizes, for different products.

• High resistance stainless steel filter cartridges to avoid damage to the silk filter bags under high pressure.

• Easy maintenance for the filtering units just by unscrewing four eyebolts.

• Quick by-passing from one unit to the other during the process without stopping the flow.

• On-board, functional control panel with push – button controls and digital indicators for “System Pressure” and “ Pump Speed”.

• All machine components which interfere with the product directly are manufactured from high grade stainless steel.

OPTIONS

• Complete Ex-Proof design for Zone 1 [ATEX IIG IIB T4 Gb - 2014 / 34 / EU / Clause 13.1.b(ii)]

• Silk filter bags with various micron sizes.

MODEL	YOKEŞ® - GTF SERIES
FEEDING PUMP MOTOR POWER	2,2 KW
FEEDING PUMP	2” / GEAR TYPE
PUMP SPEED	0 - 300 rpm
APPX. FLOWRATE AT MAXIMUM SPEED (PAINT)	1500 LT / H
FILTER UNIT VOLUME	8 LT

Notes:

YOKEŞ®
Wet Grinding and Dispersion

YOKEŞ MAKİNA SAN. VE TİC. LTD. ŞTİ.
İTOB Organize Sanayi Bölgesi 10005 sokak No:46,
Tekeli - Menderes, İZMİR / TÜRKİYE
Tel : +90 232 799 04 58 (PBX)
Fax: +90 232 799 04 60
info@yokes.com.tr • www.yokes.com.tr