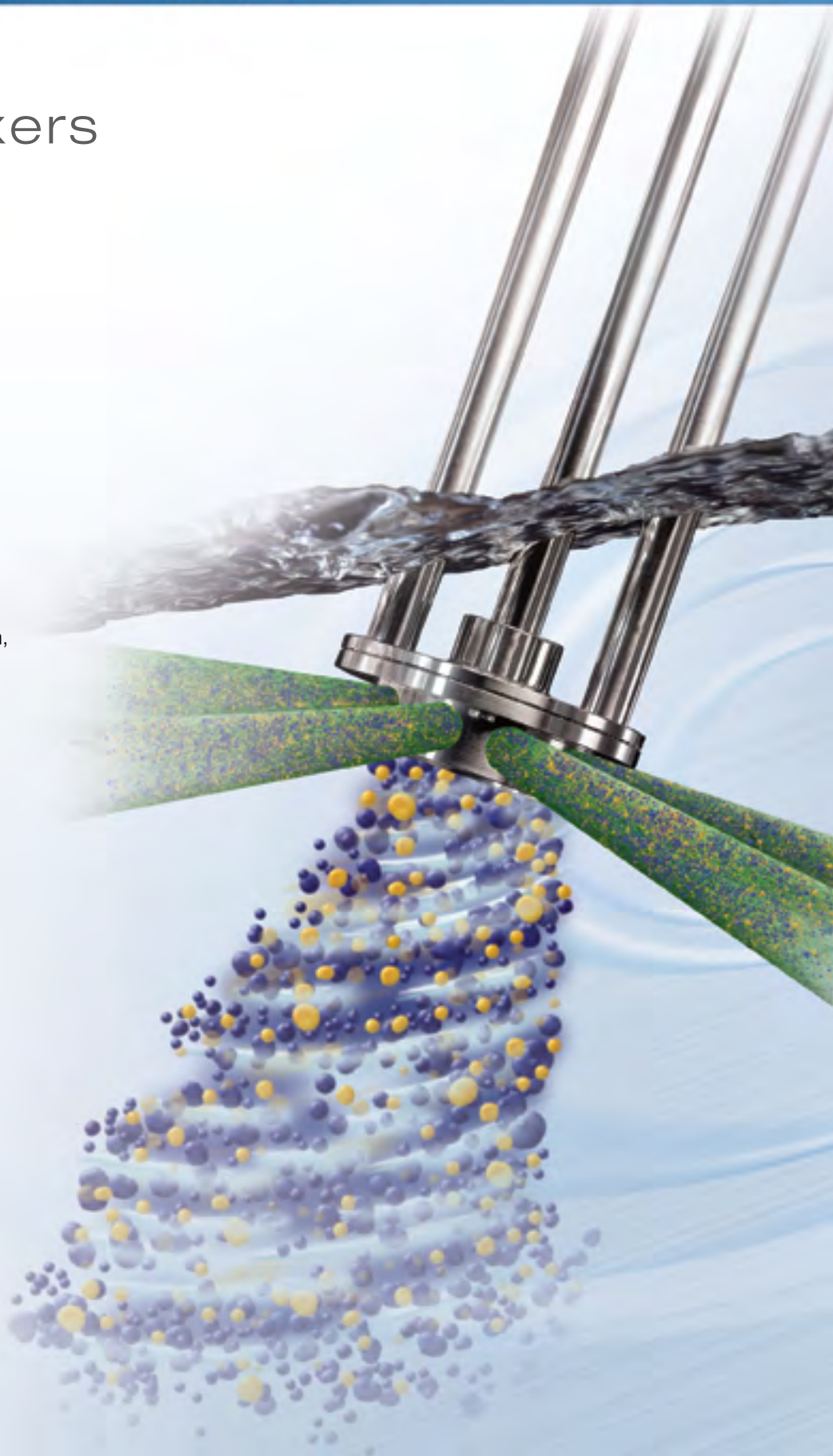


Batch mixers

Silverson offers a complete range of multipurpose batch mixers. The machines are able to perform the widest variety of applications - mixing, emulsifying, homogenising, disintegrating, dissolving - with an efficiency and flexibility unmatched by other machines. Capacities from 5 to 30,000 litres.

The Silverson range of High Shear Batch mixers are of robust and simple construction, which ensures that cleaning and maintenance is kept to an absolute minimum. The range can be divided into two distinct categories – medium range and large range models.



Medium range – Models BX to GX20

Each machine employs the special “interchangeable” Silverson rotor/stator mixing head, which allows it to be used on a wide variety of different products.

Any machine in this range from the 0.75kW BX to the 15kW GX20 can be used on a mobile hydraulic floor stand (local safety regulations permitting). This option greatly increases the flexibility of these mixers, allowing them to be moved from vessel to vessel and to be raised and lowered during operation, if required, in order to give the optimum mixing position at varying stages of the process.



Large range – Models 700X to MX



Silverson is the world leader in the specialised design and manufacture of large scale rotor/stator mixers with a capacity of up to 30,000 litres. All these machines are individually built to order and constructed specifically to suit each customer's requirements.

The large scale mixers possess all the qualities and flexibility of Silverson's medium range models and include a number of additional and unique features.

Each mixer is designed and built to the highest possible engineering standards. From the specially balanced motors to the fitting of precision ground shafts, which are finish turned in-house to ensure critical vibration free running, no aspect of manufacture escapes our rigorous inspection.

These machines are designed to be maintained and serviced in-situ wherever possible. Quick release shaft couplings, split two-part downthrust propeller and hard-surfaced sacrificial shaft journal sleeves are just a few of the features designed to keep maintenance and downtime to a minimum.

In every case Silverson's technical staff will ensure that the customer's needs are precisely catered for.

Technical specifications

Materials of construction

All wetted parts in 316L stainless steel. Special materials on request.

Bush material

The bush will normally be bronze alloy or reinforced PTFE depending on the application.

Motors

TEFV (Totally Enclosed Fan Ventilated) and ATEX approved Flameproof motors are available as standard. Inverter rated, stainless steel and other motors are available as optional extras.

Mounting

Models BX up to GX can be mounted on mobile hydraulic floor stands. Alternatively they can be supplied with either a rectangular or circular flange for mounting on the vessel.

Tri-clamp mounting is also available. Larger machines (Model 700X and above) require vessel mounting.

Sealing

All Silverson Batch mixers are designed for operation in open vessels. Single and double mechanical shaft sealing for operation under vacuum and/or positive pressure is available for most machines.

Cleaning

The machines are in most cases self-cleaning, a short run between successive operations in water, detergent or an appropriate solvent being all that is necessary. For more thorough cleaning, dismantling is easy and downtime minimal.



General purpose disintegrating head



Slotted disintegrating head



Square hole high shear screen™



Standard emulsor head and emulsor screen

Duplex disintegrator dissolver

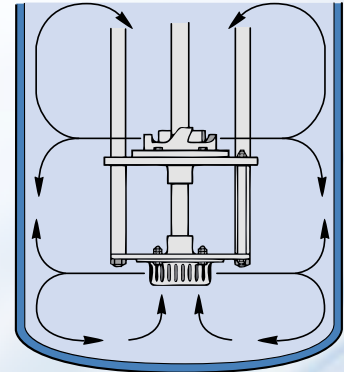
The Duplex was specifically developed for the disintegration and solubilisation of solid rubbers and polymers for the lubeoil and adhesive industries, but its success has now seen its introduction into all fields of mixing, whether chemical, pharmaceutical or food.

The Duplex differs from the standard multipurpose batch mixers in having two workheads facing in opposite directions; the upper head pulls material down from the surface of the mix, while the lower head draws material up from the base of the vessel.

The combined use of two workheads makes the Duplex ideal for applications where light or buoyant material (powders, rubbers and polymers, etc.) needs to be drawn down from the surface of a mix and rapidly dispersed. Because of the added movement afforded by the two workheads, the Duplex is also ideal for use on high viscosity materials.

Typical applications

- Rapid solution of rubbers and polymers into lubricating oils, solvents and bitumen for the production of lubeoils, adhesives and bituminous compounds
- Disintegration and dissolving of solid resin for the production of varnish
- Vegetable and meat purée/slurries
- Recovery of waste confectionery



Specialised mixers

Abramix RBX

No immersed bearing

With the standard Silverson mixer a highly abrasive product can cause excessive wear on the bush and the shaft. In the Abramix RBX, the bush has been completely eliminated by the use of a heavy-duty shaft, which is firmly supported by two precision roller bearings, situated above the level of the product being mixed. Minimum maintenance is a key feature of the design.

Dry running

Dry running in non-flammable products is possible, allowing mixing to continue uninterrupted while emptying the mixing vessel.

Typical applications

- Liquid Glazes: Preparation and redispersion including incorporation of Pigments, Wetting Agents, Hardeners, etc.
- Ceramic slips - Clays and Silicas - Texture Paints
- Foundry Compounds

Tubular mixers

Silverson tubular mixers are designed for operation in sealed vessels where a product-lubricated mechanical shaft seal is required.

Tubular mixers are suitable for operation under atmospheric or positive pressures and are ideal for mixing products where sealant fluids need to be avoided.

The mixer shaft is sealed at its lower end by a conventional mechanical shaft seal, which is lubricated and cooled by the product being mixed.

As with all Silverson rotor/stator mixers, interchangeable stators are available to adapt the machine for varying processes.

The tubular design also allows the machine to fit through relatively small diameter vessel openings.

Each mixer is designed to suit individual process requirements.

Typical applications

- Active ingredients into inhalants
- Injectables
- Vaccines

