

## PROCESSING

### MIXING

A Jetstream mixer is the ideal tool for homogeneous mixing and suspending. The rotor creates a flow of liquid within a stator directed to the bottom of the tank. When the "Jet" hits the bottom, the flow divides into two streams that are deflected upwards to vertically mix the whole batch. Mixing the product does not induct air, neither by a Vortex nor by the mixing shaft itself. All vessel contents, whether high or low viscosity, are mixed homogeneously. Product transfer occurs over all liquid strata in the vessel.

### MIXING AND DISPERSING

Similar to the Jetstream mixer, the Dispermix stator together with a high speed rotor creates a liquid stream. Due to the patented construction of the Dispermix stator, the stream is separated into two directions. A partial vertical stream is directed to the bottom of the vessel where it is deflected and - similar to the Jetstream mixer - causes strong turbulence in the vessel. The second partial stream is redirected horizontally and forced to pass through the dispersing zone of the Dispermix head.

### DISPERSING

Dispersing machines work according to the principle of a rotor-stator-system. With a narrow gap between rotor and stator it produces a continuous horizontal pulsing flow of liquid with high turbulence. The inner rotor ring accelerates the product to maximum speed. The stator reduces the speed of the product to zero and then it is again accelerated by the next rotor ring. This results in a very effective particle size reduction and a homogeneous distribution of the particles in the liquid product. The tool is perfect for the production of agglomerate-free pigment suspensions or emulsions with a very narrow droplet spectrum.

### POWDER WETTING

TDS induction mixers induct powders into liquids while simultaneously mixing and suspending the whole contents of the vessel. The powder is inducted through an induction hose and comes finely distributed into the liquid below liquid level and is immediately and completely wetted. The vacuum required for the induction is produced by the mixing head itself according to the Venturi principle. The machine comes with a two speed drive, high speed for induction and low speed for mixing and suspending after the powder induction. No dust - dangerous to health - is formed during the induction of the powder from a bag and it facilitates and accelerates the process considerably.

X50  
X100-X200  
X150  
X200

X100-X200

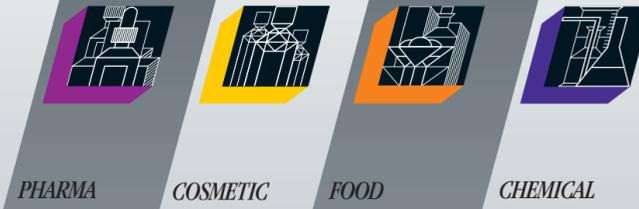
X150

X200

X100-X200

X150

X200



	PHARMA	COSMETIC	FOOD	CHEMICAL
<b>MIXING</b>	Syrup Reactive suspension Reactive solution	Lotion Shampoo	Dessert Fruit concentrate Yoghurt Mixed milk drinks	Printing ink Ceramic glaze
<b>MIXING &amp; DISPERSING</b>	Gelatine solution Carbopol solution Tylose solution	Carbopol solution Oil/water emulsion Water/oil emulsion	Dessert Fruit concentrate Yoghurt Mixed milk drinks	Methyl cellulose solution Suspension Separating emulsion
<b>DISPERSING</b>	Dragee lacquer Pigment grinding Reactive suspension	Lipstick mass Oil/water emulsion Water/oil emulsion	Vegetable puree Fruit puree Mustard slurry Sauce Stabiliser solution	Resin solutions Pigment suspension Photo emulsion Separating emulsion Wax emulsion
<b>EMULSIFYING</b>	Creames Reactive emulsion	Oil/water emulsion Water/oil emulsion	Dough Sauce Soup	Micro capsula mass Cleaning agent Cleaning emulsion Separating emulsion
<b>HOMO-GENISING</b>	Creames Paste Suspension	Creames	Sauce Soup	Detergent Suspension
<b>POWDER WETTING</b>	Activated carbon suspension Iodine suspension Reactive suspension	Pigment suspension	Hardening of nutrient fat	Aerosil suspension Activated carbon suspension Aeration Colour pigments suspension

# Ystral



# Ystral

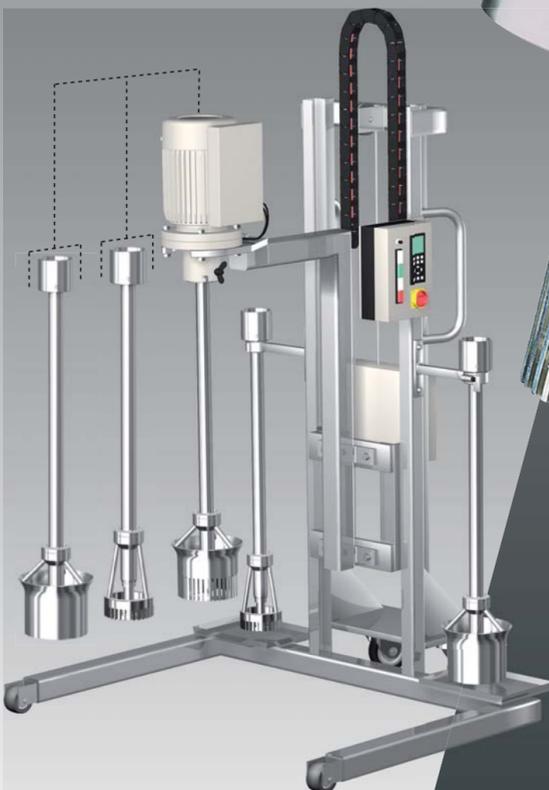
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**MULTIPURPOSE**  
**X50**  
**X100-X200**

Multipurpose machine with exchangeable mixing shaft for pilot plant and production

# X100-X200

With the X50, X100 and X200 systems the advantages given by machines with exchangeable mixing and dispersing tools now are available as well for batch sizes up to 2.000 litres. With a few actions the mixing shaft can be separated from the drive for cleaning purpose while a second shaft can be used for continuation of the production. With only one machine, different processing tasks and volumes can be treated with the appropriate tool. Following the requirement for sterile and pharmaceutical applications, all connections are sealed according to the GMP standard. A variety of drives and stands are available for the system.



## X100-X200

### DRIVE

3 phases  
380-480 V 50/60 Hz  
Special voltages  
X100: 2,2 kW and 4,0 kW  
X200: 5,5 kW and 7,5 kW  
Also available in Ex  
Speed changeable  
1.500/3.000 min<sup>-1</sup>  
or stepless up to 3.000 min<sup>-1</sup>  
with separate or integrated frequency converter

### SHAFT

Shaft with bearings and mechanical seal separated from motor, coupling for connection to drive  
Immersion depth with mixing tool  
LDT-2/100 approx. 1.000 mm  
LDT-3/200 approx. 1.100 mm

### TOOLS

Jetstream mixer  
Dispersing mixer  
Batch disperser  
Powder wetting TDS  
Dissolver  
Stirrer

### STANDS

Moveable or stationary in a variety of executions



30-2000 l 1-10.000 mPas	2-100 l 1-10.000 mPas
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30-2000 l 1-10.000 mPas	2-100 l 1-10.000 mPas
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10-750 l 1-5.000 mPas	2-50 l 1-5.000 mPas
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30-2000 l 1-10.000 mPas	2-100 l 1-10.000 mPas
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## X50

### DRIVE

3 phases  
230/380-480 V 50/60 Hz  
Special voltages  
X50: 1,5 kW and 2,2 kW  
Also available in Ex  
Speed changeable  
1.500/3.000 min<sup>-1</sup> or  
stepless up to 6.000 min<sup>-1</sup>  
via separate or integrated frequency converter

### SHAFT

Shaft with bearings and mechanical seal separated from motor, coupling for connection to drive.  
Shaft LDT-1, LDT-1/S  
Bearing and seal submersed in liquid  
Immersion depth with mixing tool  
LDT-1: approx. 400 mm  
LDT-1/S: approx. 600 mm

Hygienic execution  
LDT-1H and LDT-1H/S  
Bearing and seal submersed in liquid  
Immersion depth with mixing tool  
LDT-1H: approx. 400 mm  
LDT-1H/S: approx. 600 mm

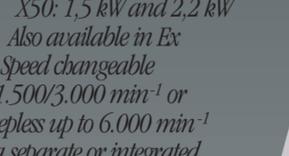
Shaft Y-MD, Y-MD/S  
No bearing and seal immersed in the liquid  
Immersion depth with mixing tool  
Y-MD: approx. 380 mm  
Y-MD/S: approx. 620 mm

### TOOLS

Jetstream mixer  
Dispersing mixer  
Batch disperser  
Dissolver  
Stirrer

### STANDS

Moveable or stationary in a variety of executions



## TOOLS

**Jetstream mixer:**  
Homogeneous mixing and suspending without changing the property of the product

**Dispermix:**  
Homogeneous mixing, dispersing, homogenising and breaking of agglomerates

**Dispermix-SaS:**  
With stator on struts for applications in the food sector. Homogenising, breaking of agglomerates, foot bearing in the submersed part

**Disperser:**  
Desagglomeration, emulsifying, homogenising, dispersing and dissolving with particle size reduction effect

**Stirrer/Mixer:**  
For simple mixing tasks in low viscosity products. Mixing without changing the property of the product

**Dissolver:**  
Toothed disc disperser for dispersing tasks in the production of paint and lacquers and high viscosity products. Dispersing and particle size reduction effect

Multipurpose machine with exchangeable mixing shaft for laboratory and pilot plant

# X50

