

# PiloTec PiloTec-Plant

Proven Process-Technology  
in Laboratory Scale



# ***Ystral***

Application is the focus



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For more than 40 years, **ystral** has been the innovative and reliable leader in the field of manufacturing for high shear mixing, machinery, processing systems and process engineering. The newest generation in the **ystral** range is the multi-functional **ystral** PiloTec processing system, which now offers the possibility to use established production processes in a laboratory scale. Based on our proven Conti-TDS technology powder is dust- and loss-free inducted, wetted under vacuum and dispersed – all in one passage. A simple exchange of mixing tools then allows the machine to be operated as our innovative Multi-Z- or Z-Inline-process with highly precise multi stage shear ring systems.

Pharmaceutical, Cosmetics, Chemical, Food – what is your field of application?

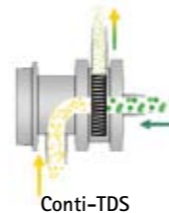
- Active agent solutions, coating for pharmaceuticals
- Emulsions, Carbomer solutions
- Pigment suspensions, additive solutions
- Protein solutions, hydro colloid solutions



## Benefit from our long standing experience in industrial processes

Advantages of the Conti-TDS-Technology are:

- Dust- and loss-free powder induction using the vacuum created inside the mixing chamber
- Powder induction via an induction tube directly from any container
- Induction of liquids for the production of emulsions
- Easy treatment of sticky, spontaneous swelling, strongly foaming and difficult to wet powders
- Colloidal wetting and dispersing under vacuum
- Complete desagglomeration of the raw materials – higher quality products



## Stay flexible and simply change from Conti-TDS to Multi-Z- or Z-Inline-operation

Advantages of the Multi-Z- and Z-Inline-Technology are:

- Inline dispersing inside the Conti-TDS-Chamber (Multi-Z)
- Multi stage shear rings with different shear gradients
- Perfect and reproducible dispersing results independent from viscosity in batch or Inline processes
- Shear speed up to max. 60 m/s
- Ideally suited for wet grinding



Ideal for research and development, Scale-up and small scale production

Established processes and a specific energy input independent from the batch size guarantees outstanding and reliable results. These can be transferred to the production scale without any problem – a safe Scale-up to the **ystral** industrial processing systems.

- Dust- and loss-free induction of powders
- Colloidal wetting under vacuum
- Dispersing
- Emulsifying
- Homogenising
- Wet grinding
- Mixing – even without applying shear energy

Technical data	
Power	3 and 4 KW, adjustable via frequency converter
Voltage	400 V/50 Hz, special voltages available
Variable speed	up to 12.000 RPM
Highest shear speeds	up to 60 m/s
Materials	1.4404 (AISI 316 L)
Batch sizes	flexible from 1,5 l up to 100 l
Liquid Flow rate	from 2.000 up to 10.000 l/h (H <sub>2</sub> O)
Powder Induction rate	up to 15 kg/min
Configuration of seals depending on the application	

The modular set-up provides the ability to upgrade to a PiloTec-Plant processing system including **ystral** mixing systems, powder and liquid handling systems, incorporating measuring and weighing technology, lifting devices and other modular components.

- Working in batch or Inline operation with the highest possible flexibility, even with existing vessels
- Easy to handle exchangeable tools
- No additional pumps required
- ATEX-conform
- CIP/SIP possible
- 3A-certified
- Hygienic Design
- IQ and OQ



## Range of products

Jetstream mixers

DISPERMIX mixing and dispersing

Batch dispersing machines

TDS powder wetting machines

Inline dispersing machines



## Processing systems – Turnkey Solutions

All systems available in industrial  
and laboratory scale



[www.ystral.de](http://www.ystral.de)

Consulting

Planning

Projecting

Engineering

Processing systems

Start-up

Service

# Ystral

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