

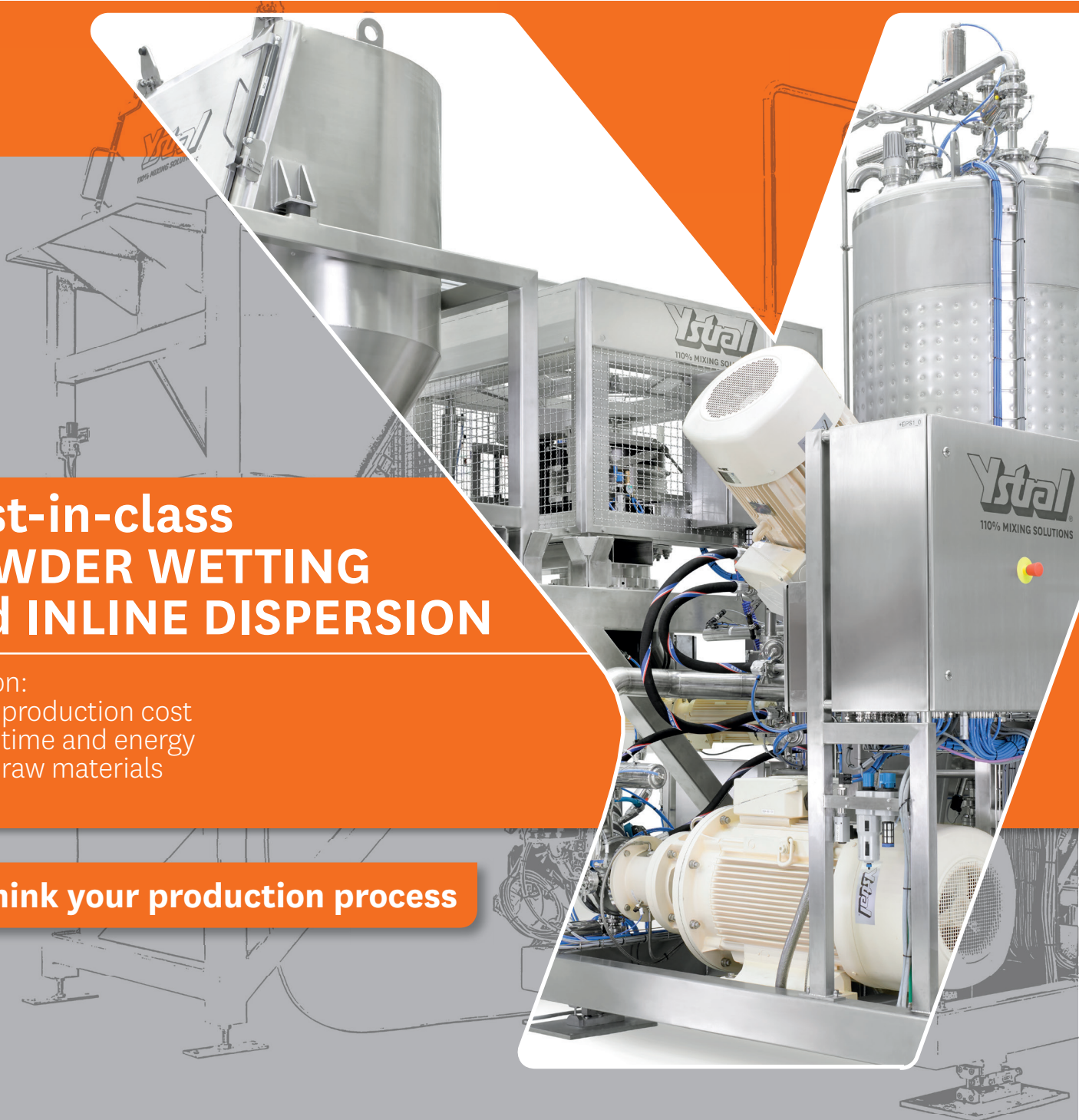
COATINGS PRODUCTION

Best-in-class POWDER WETTING and INLINE DISPERSION

Save on:

- ▶ production cost
- ▶ time and energy
- ▶ raw materials

Rethink your production process



YSTRAL CONTI-TDS

INLINE DISPERSING MACHINE

For all coating formulations and production processes

During the manufacture of paints, coatings, lacquers, inks or adhesives, large amounts of powders need to be dispersed into liquids. ystral manufactures process systems that generate significant and proven savings in process time, floor space, labour & energy consumption.

Powder handling, wetting and dispersion made easy.

YSTRAL CONTI-TDS inline dispersing solutions are displacing traditional production within the coatings, paint & printing ink industries. At the heart lies YSTRAL Conti-TDS technology, which enables powders to be inducted dust-free, wetted and dispersed under vacuum in a single process step. Systems built on this platform allow massive process simplifications and improvements in efficiency over conventional systems due in part to its high process flexibility and ability to mix diverse materials.

BENEFITS

- ▶ Lower energy costs and time consumption per ton of product produced
- ▶ Reduction of raw material consumption
- ▶ Reduction of bead mill processing time by 30- 70%
- ▶ High output on small footprint
- ▶ Alternating double tank continuous system
- ▶ Fully integrated processing systems with CIP capability
- ▶ Constant production parameters – reproducible product quality



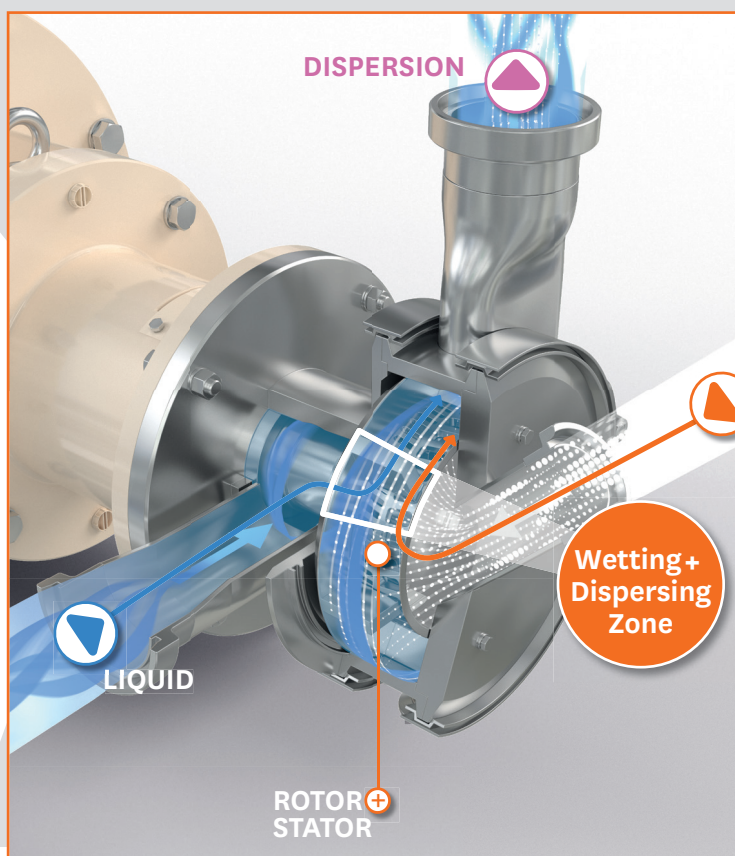
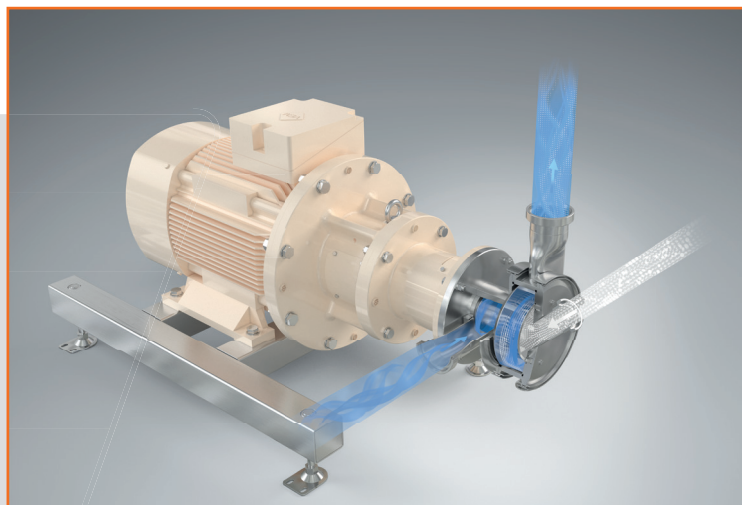
CUSTOMIZED SOLUTIONS

Modular components, mixers, complete turn-key systems as well as associated process engineering and design consulting services.

YSTRAL CONTI-TDS TECHNOLOGY

CONTI-TDS TECHNOLOGY

- ▶ Dust- and loss-free powder induction using the vacuum created inside the mixing chamber.
- ▶ Powder induction via suction hose / lance, bag tipping table / station, big-bag emptying station, receiving hopper, silo or silo truck.
- ▶ Easy treatment of sticky, spontaneously swelling and strongly foaming powders as well as powders that are difficult to wet.
- ▶ Powder wetting and dispersing under vacuum.
- ▶ Complete deagglomeration of the raw materials leads to higher quality products.



INSIDE THE MIXING CHAMBER

Unlike other mixers, the YSTRAL CONTI-TDS has been designed from the ground up for powder induction into liquids, keeping powder and liquid separate until they are brought together in the turbulent region of the dispersing zone.

This maximizes the surface area for wetting and - with the ability to tailor the extent of shear, independent of viscosity - enables gentle but efficient separation of agglomerates under the ideal amount of required shear, thus enabling real-time powder dispersion.

Combined with the ability to handle a wide range of viscosities, the net effect is an energy-saving dispersion process with extraordinary quality and speed.

POWDER

YSTRAL Technology has been used to mix some of the most challenging products across many industries, including food, cosmetics, pharma, chemicals, coatings and electronics from 2 to 100,000 liters at a time.

YSTRAL Conti-TDS machines are available in several classes to meet R&D, formulation, process screening, scale-up and **production needs of any volume.**

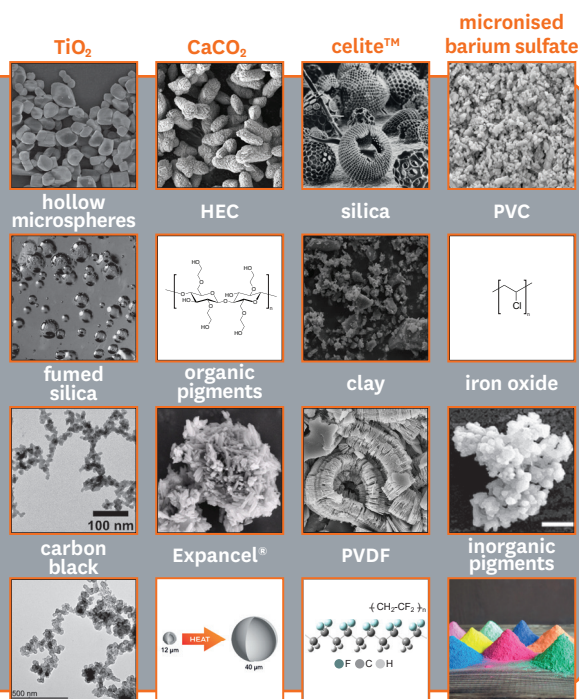
We have a solution for you.

Contact us to find out how **YSTRAL** Technology can simplify your process.

✉ ystral@ystral.com

YSTRAL CONTI-TDS

MATERIAL POWDERS



For a complete list of powders: ystral.com/powders

MATERIAL BENEFITS

► Greatly reduced production costs

case studies - 92 % savings

water-borne automotive coating,
coil & can coating.

case studies - 95 % savings

solvent-borne NC-flexo printing ink,
industrial primers & fillers for wood.

► Production time reduced by more than 60%

Dramatic reduction in process
variability and improvement in
batch-to-batch consistency.

► Energy costs reduced by more than 60%

An ystral system replaces 3 to 5
conventional systems, as confirmed by
10+ global companies.

► Reduction of TiO2 without loss of quality

For more information

ystral.com/coatings/titanium_dioxide

STRAIGHTFORWARD AND RELIABLE SCALING

YSTRAL CONTI-TDS		Pilotec	TDS 3	TDS 5	TDS 8
power (kw)		4 - 7.5	15 - 30	37 - 90	200 - 250
max speed (rpm)		8,000	3,000 (3,600)		
induction rate (kg/min)	bag	1	2 - 20	4 - 50	
	big bag, containers, hopper, silo	1 - 4	6 - 200	10 - 500	≤ 1,000
max (concentration) of insoluble solids		60 %	70 %	80 %	
max viscosity (mPa)	normal operation	2,000	4,000	6,000	8,000
	additional pump		50,000	100,000	
max inlet pressure (bar)			0.1 - 0.4	0.1 - 0.9	
max counter pressure (bar)	during powder induction	0.1	0.4	0.9	1.5
	during dispersion or pumping	12	3.0 (4.5)	5.0 (8.0)	
flow rate (m³/h)	max for water	14	48	95	180
	during powder induction		20 - 30	35 - 60	80 - 100
max working temp (°C)		70°C for water as basic liquid. Liquids with higher boiling point upon request			

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Ystral
110% MIXING SOLUTIONS