



DISSOLVING

MIXING

EMULSIFYING

HOMOGENIZING

SUSPENDING

DISPERSING

GASSING

YTRON
PROCESS TECHNOLOGY





Contents



		Dissolving / dispersing of "easy to wet" powders	Dissolving / dispersing of "difficult to wet" powders	Homogenous mixing of liquids	Pre-emulsifying	Emulsifying	Homogenising	In-line mixing / suspending	Batch mixing / suspending	Dispersing	Aerating	STRETCHING®
YTRON-Y	3	○	○	●	●	○	○	○	●	○		
YTRON-Y ByPass	9	●		●	●	○	○	○	●	○	●	
YTRON-XC	15	●	○		○	○	○	●	○	○		
YTRON-ZC	21	●	●		●	○	○	●	○	○		○
YTRON-PID	27	○	●					●	○	○		○
YTRON-Z	33			●	○	●	●			●	●	●

● Perfectly suitable

○ Suitable in most cases

YTRON - Y



The YTRON-Y Principle

YTRON-Y creates a pure axial jet stream. It rapidly and homogeneously mixes, without aeration, liquids and viscous products.

Vortex formation, normally associated with conventional agitators, is eliminated.

Disadvantages of Conventional Agitators

Advantages of YTRON-Y Jet Mixing Turbine

Radial flow pattern (rotational flow)	Axial flow pattern
Non-uniform and incomplete mixing	Homogenous mixing
Vortex formation, strong aeration, (Result: Oxidation, change of colour, problems with the heat transfer etc.)	No air entrainment
Sedimentation	No sedimentation
Floating	No floating of product on the surface
Incomplete mixing of the vessel contents	Rapid mixing of entire container contents
Dead zones around the area of the baffles	No baffles / flow deflectors required flow deflectors are integrated in stator
Local shear forces, long process times	Low shear due to short residence time in the YTRON-Y mixing head. Rotor in contact with the flowing product only. Rapid process time.
Side entry: Product contacts the seal directly	Side entry: Air cushion prevents product from contacting the mechanical seal surfaces at the top of the shaft.



Advantages of YTRON -Y Jet Mixing Turbine

- The YTRON-Y mixing head creates a directed jet stream, without rotation, into the body of the product, without creating a vortex
- The rotor-stator principle, in combination with the integrated flow deflectors, prevents any rotational stream being formed
- The robust construction means that it does not require bearings or seals in the immersed part and therefore involves no hygienic risk
- The sealing of the shaft is selected according to the requirements. A radial seal ring, single or double acting mechanical seal (-1 to 10 bar) or an aseptic mechanical seal, flushed with condensate, are available
- Drive motor from 0,25 to 55 kW are available in the standard motor program
- The modular system allows the choice of the best mixing technology for each individual application

Conventional agitator

with shaft turning freely, without stator and stator tube.

1

At start-up, the solids are initially lifted from the bottom of the container.



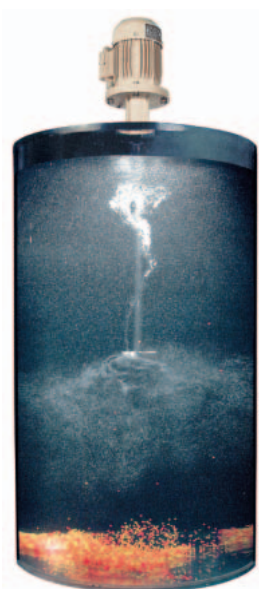
2

The predominantly radial forces are unable to keep the solids in suspension. Within a short time, the first vortex reaches the rotor blade.



3

The radial flow causes the components to separate. Because of this design, homogenous mixing without air entrainment is impossible.

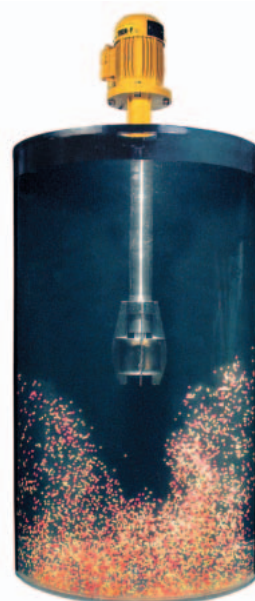


YTRON-Y Jet Mixing Turbine

with integrated flow deflectors.

1

Instantly after the starting the YTRON Y, the solids are lifted off the bottom of the container by the jet stream directed towards the bottom of the container.



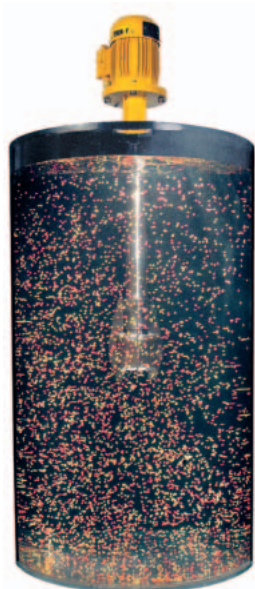
2

The solid particles are homogeneously suspended in full within seconds, with no sedimentation and without air entrainment.

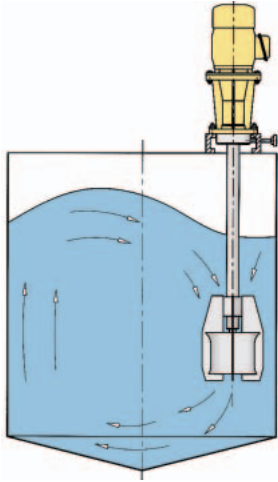


3

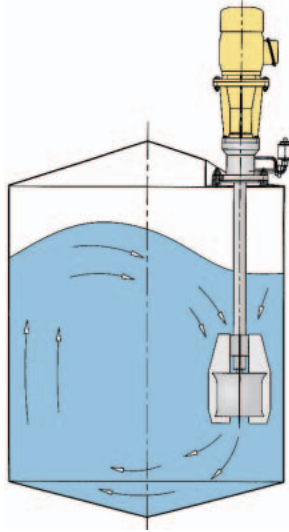
The stator, with integrated flow deflectors, creates a long, directed jet stream, without rotation, to the bottom of the container. The jet stream ensures that the product is completely homogenous.



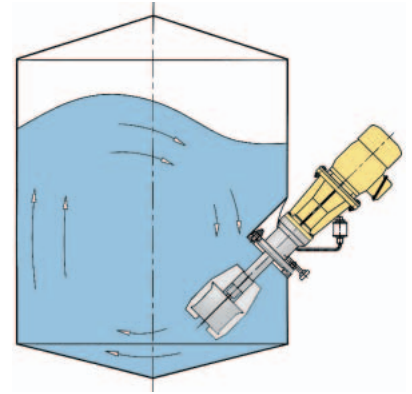
YTRON-Y Installation Possibilities



Vertical installation in an open vessel.
CIP option available



Vertical installation in a closed vessel
Design with tank flange.
CIP and SIP options available



Side-entry in closed vessel.
Design with tank flange.
CIP and SIP option available

The vertical installation into a mixing vessel is normally positioned off-centre. This ensures liquids are mixed within seconds without air entrainment.

A side entry installation below the liquid level makes the YTRON-Y suitable for vertical cylindrical tanks with more than 10 metres height. Even in this case an additional bearing in the immersed section is not required.

Apart from the standard types of installation shown above, the YTRON-Y is also available as a portable unit. For example:
Laboratory model with a desk top stand, a production unit on mobile hoist or an installation with a static hoist.





YTRON-Y in an Open Vessel
Application: Ceramic Glazes



YTRON -Y installed on mating Flange
of an Open Container
Application: Suspension of Abrasive Polish

YTRON-Y in Tank-flange Construction,
installed in a Closed Vessel
Application: Shampoos and Shower Gel
and similar Toiletry Products

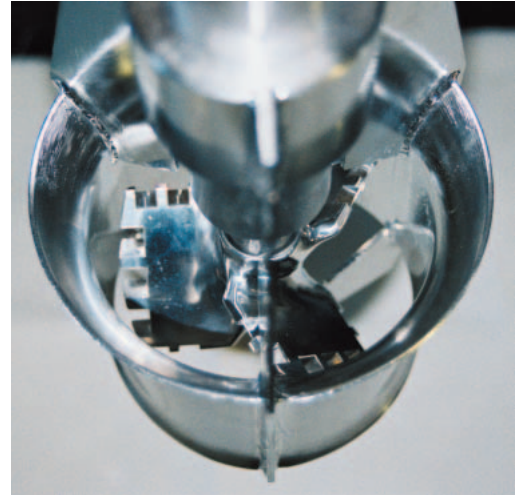


YTRON -Y in Side Entry Tank-flange
execution below Liquid Level
Application: Fermented Milk for Fromage
Frais Production (100.000 litres capacity)



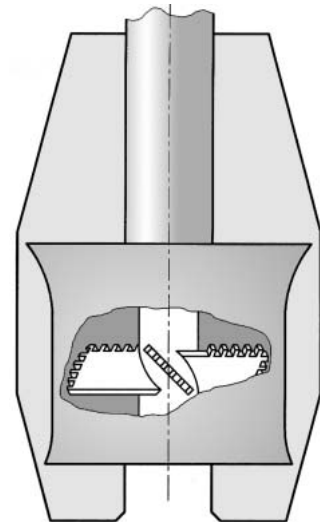
The YTRON-Y HS Principle

With the HS rotor, products are sheared in a defined way in a batch. The effect is comparable to one of a conventional high shear unit with the added advantages of YTRON-Y directed jet.



Important advantages of YTRON-Y HS

- Construction without bearings or seals in the product area
- Pure axial flow jet stream
- No sedimentation, no vortexing
- Homogenous mixing
- Uniform flow pattern over the entire surface of the container
- Shaft protected by the stator tube, the rotor covered by the stator. This means the operator is not exposed to rotating parts



One important point: The HS-rotor is available as a spare part for existing YTRON-Y units. Please let us have your machine number to receive a quote.



YTRON -Y HS in Tank-flange Construction
Application:
Suspending of
Thickener Compounds



YTRON - Y HS on a Lift
over an open Container
Application:
Dissolving of a Mix of various
Minerals including Stabilizers

YTRON -Y ByPass

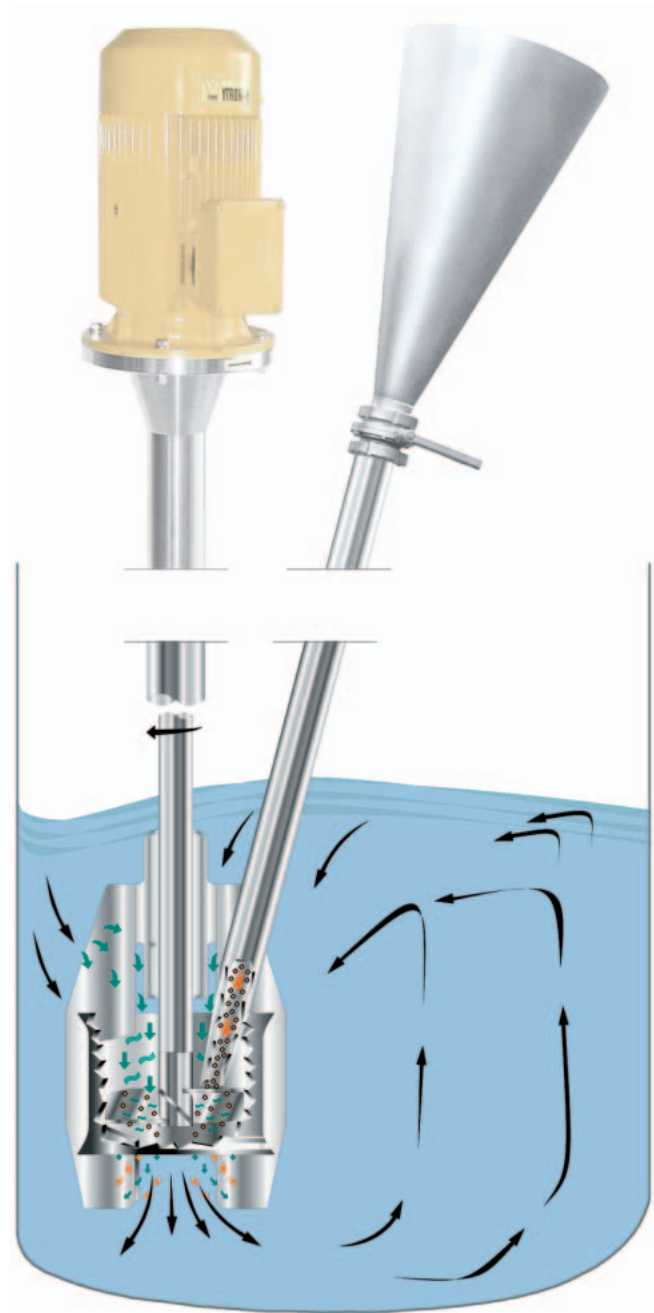


The YTRON - Y ByPass Principle

Free flowing without a tendency to stick or form lumps such as, Silica, Active Carbon, HPMC, Cocoa, Flour, Carbon Black, can be drawn in below liquid level by the negative pressure created by the rotor/stator system. They are instantly wetted, suspended or dissolved without the formation of lumps

High viscosity products and those that are difficult to dissolve can be injected directly into the YTRON ByPass. This way an instantaneous dissolution or suspension is achieved.

The directed jet stream homogeneously mixes the product into the entire batch.



Process Order

Once the powder is in the ByPass hopper, silo or BigBag, the YTRON-Y is switched on. The powder valve is opened and the negative pressure created at the YTRON-Y head draws the powder in dispersing it instantly and homogeneously into the liquid. It is not possible for the powder to float on the surface or lay as a sediment on the bottom of the vessel. In order to avoid air entrainment or liquid rising up the ByPass tube, the powder valve is closed once all powder has been sucked in. Once the valve is closed the YTRON-Y can be switched off.

Certain powders with a low bulk density can be sucked directly and dust-free from a bag or other container. In this case, a small amount of air is required to ensure fluidisation of the powder.

YTRON - Y in tank-flange construction with ByPass, installed vertically into a closed vessel
Application: Micro-suspending of Agrochemicals



Dust-free incorporation directly from the bag with YTRON-Y ByPass
Application: Suspending of Silica for Paints and Colours.

YTRON-Y with ByPass installed in open container
Application: Dust-free incorporation and suspending of Cocoa Powder into Glucose Syrup



YTRON-Y in tank-flange construction
Installation in closed reactor
Application: InLine Emulsification of Detergents.

YTRON-Y with ByPass
on a Mobile Hoist



YTRON-Y with ByPass
in Laboratory Design

YTRON-Y

Model	0	II	III
Power (kW)	0.25	0.55...2.20	0.75...9.00
Rotor Ø (mm)	25...50	70...140	80...240
Rotor speed (1/min)	1,000...5,000	500...3,000	500...3,000
Process	Batch	Batch/Conti	Batch/Conti
ByPass Ø max. (mm)	25	40	80

Model	IV	V
Power (kW)	2.20...22.00	5.50...55.00
Rotor Ø (mm)	100...330	130...370
Rotor speed (1/min)	500...3,000	500...3,000
Process	Batch/Conti	Batch/Conti
ByPass Ø max. (mm)	100	100

According to the application, special construction deviating from standard are available.

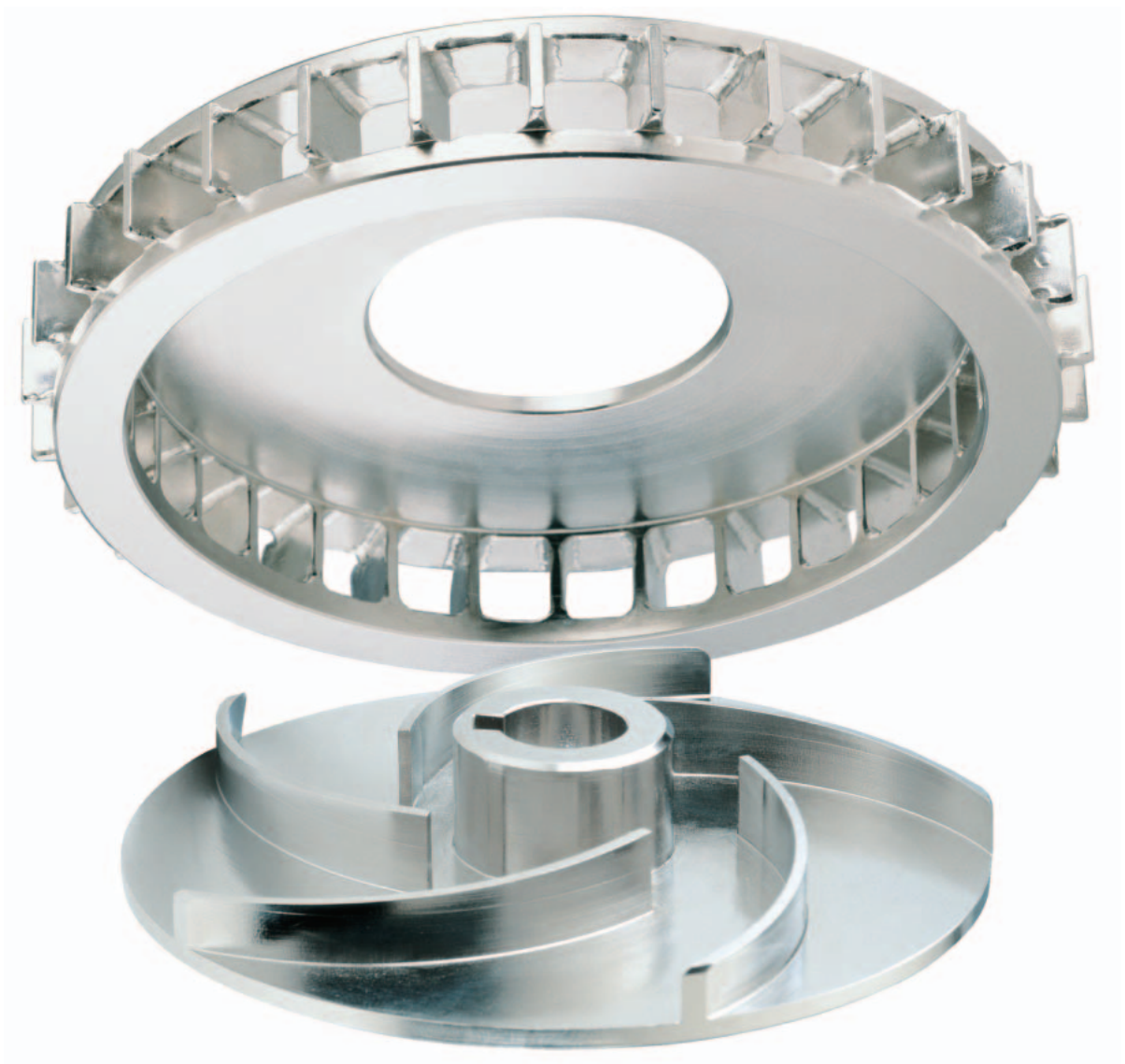


YTRON-Y in the Pharmaceutical Industry
Application: Tablet Coating Solutions

YTRON-Y ByPass in the Brewing Industry
Application: Suspending of Diatomaceous Earth
CO₂ inerting for a Continuous Discharge
of the Product.

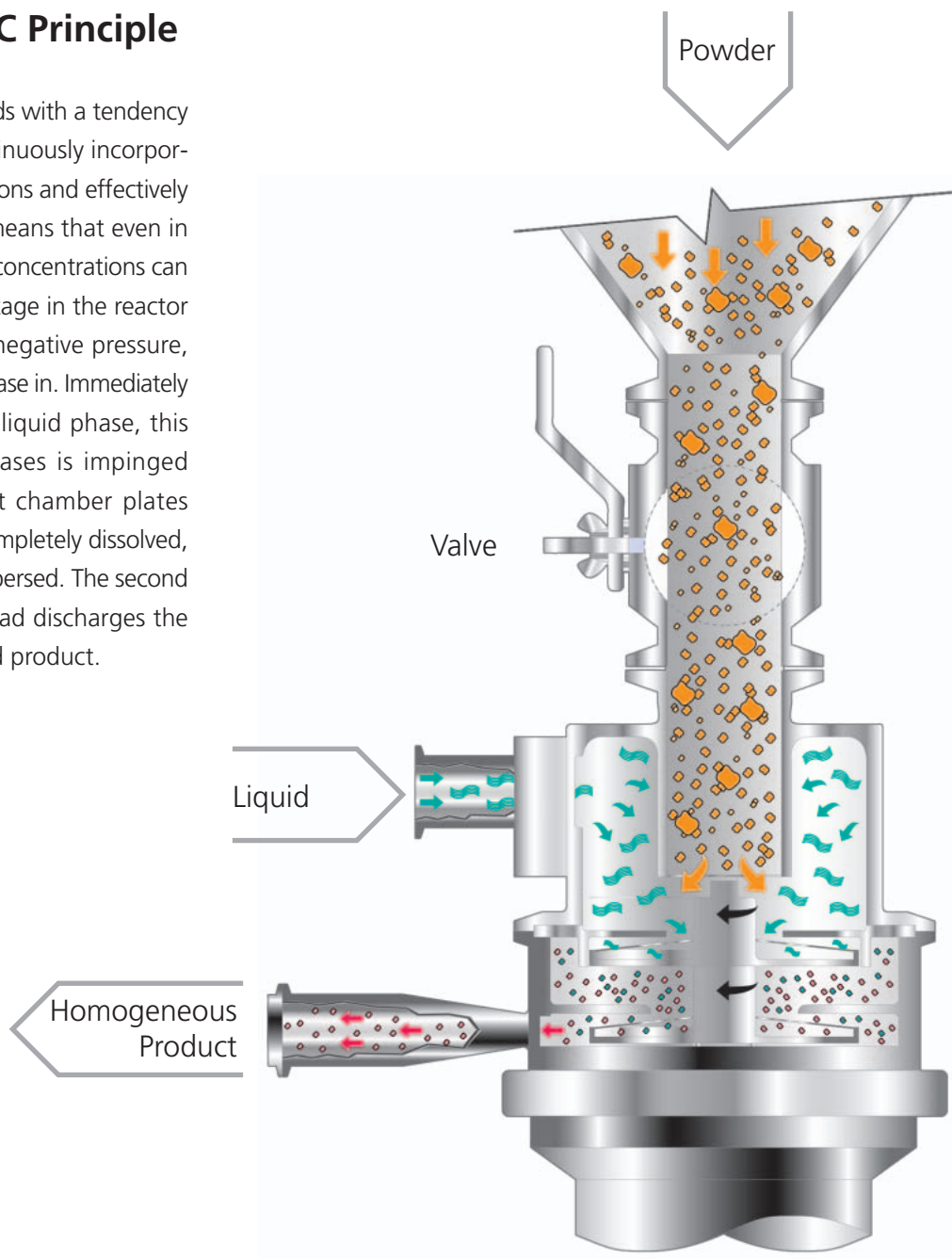


YTRON-XC



The YTRON-XC Principle

Powders and compounds with a tendency to form lumps are continuously incorporated in high concentrations and effectively dispersed inLine. This means that even in a single pass, very high concentrations can be achieved. The first stage in the reactor head creates a strong negative pressure, which sucks the solid phase in. Immediately after contact with the liquid phase, this premix of the two phases is impinged against the XC impact chamber plates where the powder is completely dissolved, de-agglomerated or dispersed. The second stage of the reactor head discharges the homogeneously wetted product.



Important Advantages of YTRON-XC

- Complete wetting out of even the most difficult to wet powders in a single pass
- Concentrations of up to 40 % are possible in a single pass
- No air entrainment other than the occluded air in the powder phase
- Batch time reduced to the minimum
- Higher product yield due to the intensive wetting of the powders
- High capacity at low energy consumption
- Significant savings due to intensive dispersing of the powders
- Low intensity mixing due to high impact frequency instead of high shear
- Feeding from BigBag or silo is also possible
- CIP and SIP options

YTRON-XC
manually fed with powders,
centrifugal liquid phase
feed pump installed



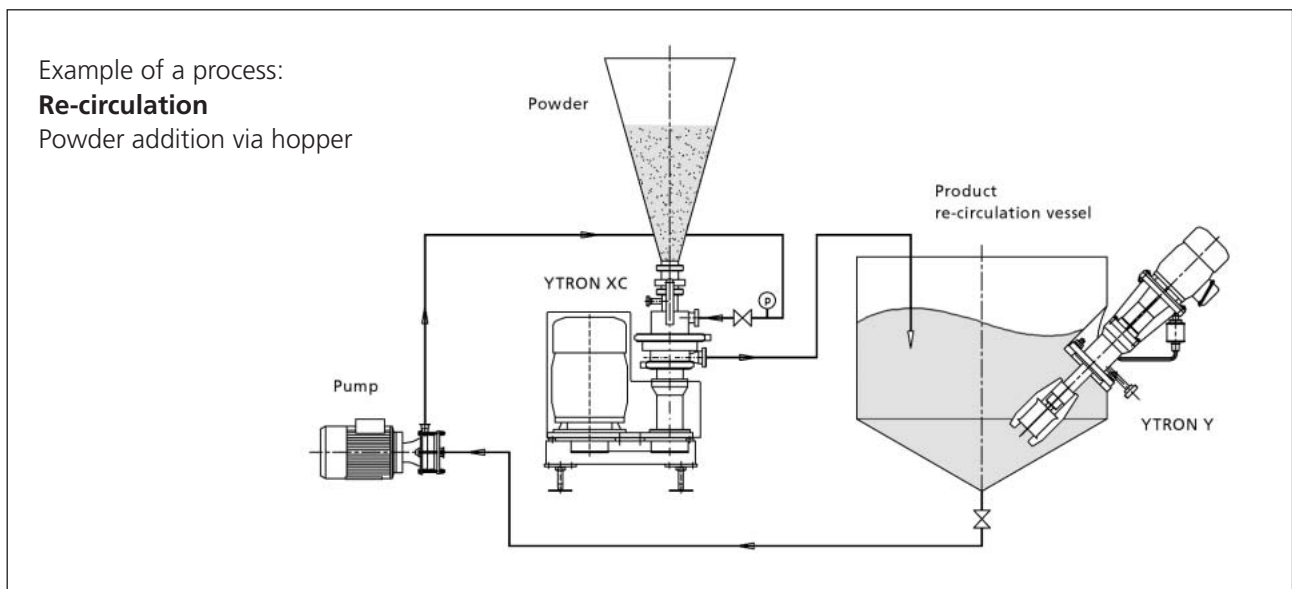
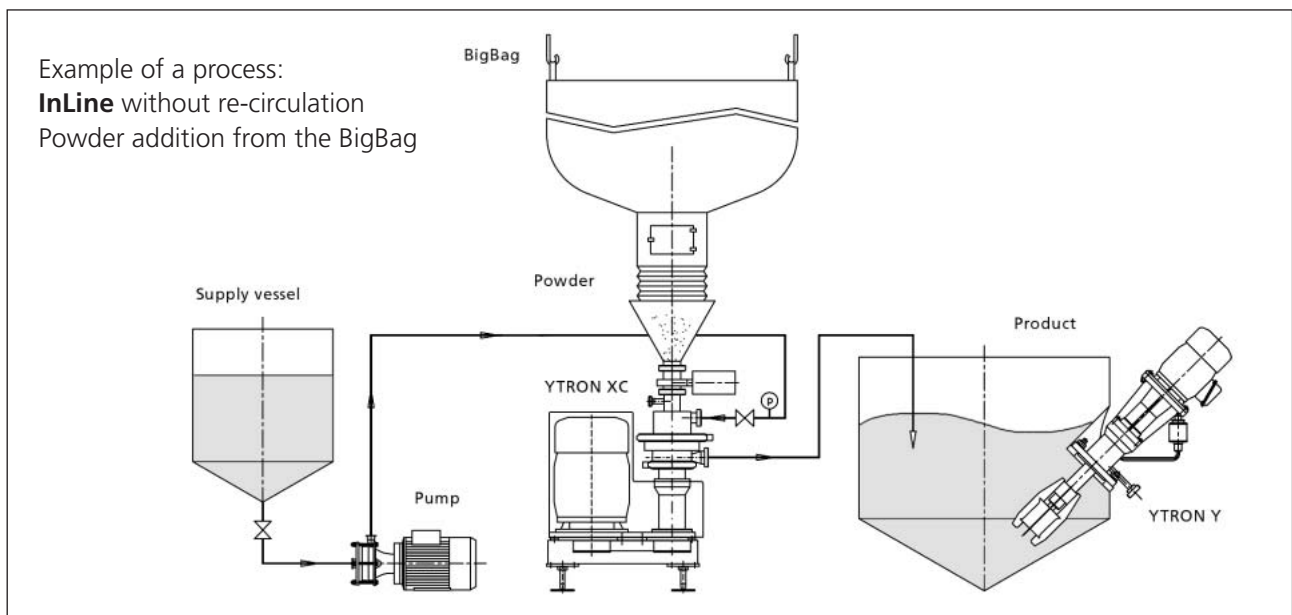
YTRON-XC with
bag-emptying station
Application: Production
of Concentrates prior to
Spray Drying

YTRON-XC - Typical Applications

- Baby Food
- Concentrates and addition of additives
- Enrichment with solids
- Fermentation broth
- Fruit drinks, Soft Drinks
- Ice cream base
- Production of liquid base for the confectionery industry
- Pudding base
- Yoghurt base

Typical Products

- Ca- and Na-Caseinate
- Cellulose based thickeners
- Cocoa Powder
- Egg powders
- Gelatin
- Gum Acacia
- Lactose
- Maltodextrin
- Methyl-cellulose types
- Milk powder
- Organic thickeners
- Pectin
- Silica
- Soy flour
- Soy protein
- Starch
- Sugar
- Tobacco powder
- ... and many more





YTRON-XC in use in the Pharmaceutical Industry



YTRON-XC with special hopper for connection to a powder feeding system
Application: Production of Baby Food



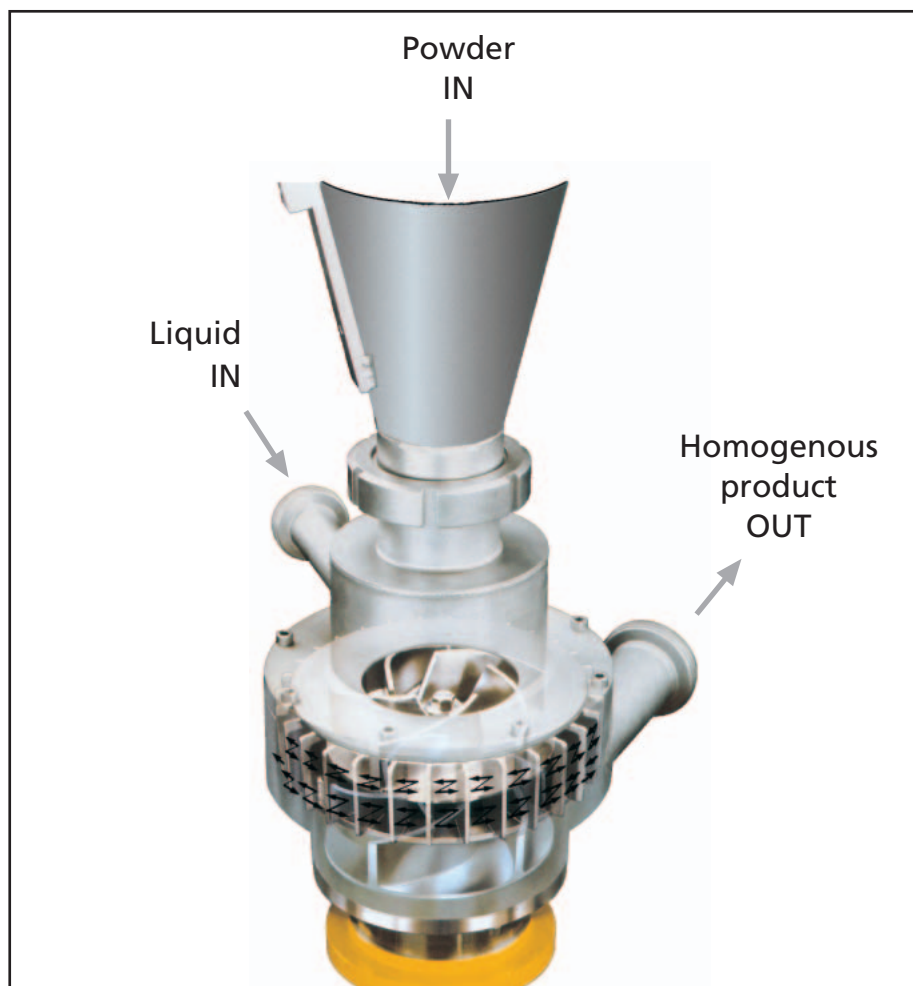
YTRON-XC
Application: White base production
in the Dairy Industry

YTRON-XC

Model	YTRON-XC 1	YTRON-XC 3 / XC 215
Water/Liquid flow rate (l/h)	9,000 ... 16,000	26,000 ... 45,000
Powder capacity (kg/h) max.	4,000	11,000
RPM (1/min)	5,400	3,000
Drive power (kW)	5.50	15.0
Single acting mechanical seal	Yes	Option
Double acting mechanical seal	Option	Yes
Liquid inlet	DN 40	DN 50
Liquid outlet	DN 50	DN 80
Powder inlet	DN 50	DN 80
Standard dimensions approx. LxWxH (mm)	925x455x710*	1,020 x 770 x 1,090*

According to the application, special construction deviating from standard are available.

* mobile, without pump or powder hopper

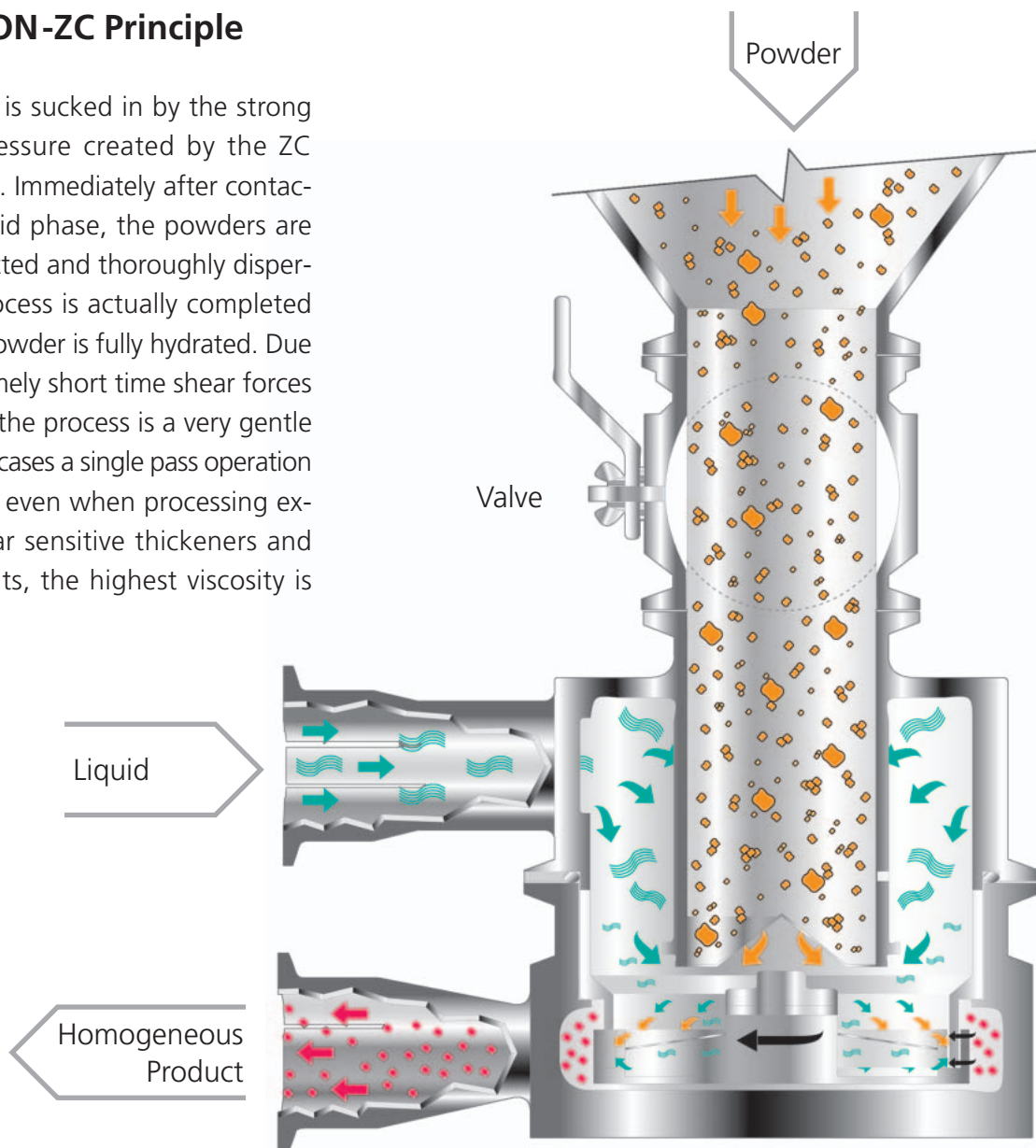


YTRON-ZC



The YTRON-ZC Principle

The powder is sucked in by the strong negative pressure created by the ZC reactor head. Immediately after contacting the liquid phase, the powders are instantly wetted and thoroughly dispersed. This process is actually completed before the powder is fully hydrated. Due to the extremely short time shear forces are applied, the process is a very gentle one. In most cases a single pass operation ensures that even when processing extremely shear sensitive thickeners and gelling agents, the highest viscosity is achieved.



Important Advantages of YTRON-ZC

- Extremely difficult to wet out powders are processed in a single pass
- The defined application of shear forces results in a STRETCHING® effect of the molecular chain which therefore leads to an increase in viscosity
- Selection of rotor/stator slot width according to the application
- No air entrainment other than the occluded air in the powder phase
- Batch time reduced to the minimum
- High dispersion capabilities at low energy consumption
- Significantly higher yield due to an intensive wetting out of the powders
- Feeding from BigBag or silo is also possible
- Perfectly wetted-out products are achieved in the shortest time
- CIP and SIP available



Product example: Carbopol -
Concentration approx. 12%



YTRON-ZC in the Dairy Industry
Application: Dispersing of a Protein Hydrolysate



YTRON-ZC ViscoTron
for high viscosities
and/or high solids ratio

Use of YTRON-ZC Example Carbopol

The Problem

When in contact with water, individual particles of the hydrophilic polymer immediately begin to swell. The surfaces of these gradually swelling particles cross-link to form a tough outer skin which prevents the completion of the hydration process.

The result is an agglomeration of particles, which are wetted on the outside only. These appear at best as small transparent "fisheyes", but more normally as lumps of varying sizes.

The viscosity of the finished product is thereby reduced, and standardisation or consistent reproduction of results is difficult to achieve.

Should one attempt to achieve an homogeneous dispersion by smoothing out the lumps by means of high shear methods, the polymer molecular chain may be broken. This will effect the end result considerably by altering the desired characteristics of the finished product.

Keeping the dispersing capabilities and efficient pumping separate makes the dispersing reproducible and efficient.

- The power introduced via YTRON-ZC is used only to a limited degree to creating a pumping pressure. The main part of it is used to effectively disperse or wet out, the dry matter in the liquid phase.

- In combination with the appropriate pump selected for the relevant liquid phase, an extremely high pumping efficiency is achieved. For low viscosity, centrifugal pumps are used, for intermediate and high viscosity, positive displacement pumps are recommended.

- In the high viscosity range, 80 % or more of the energy can be saved in comparison to conventional processes. This means: No heating of the product due to mechanical energy input above the minimum during dispersion.

- Reproducible results are normally achieved in a single pass.

- The product is subject to a homogenous, uniform dispersing or shearing effect as it passes through the reactor head. There is no portion of the flow required to bypass the shear head for pumping the liquid in a loop.

The Solution

YTRON-ZC facilitates a perfect dispersion of hydrophilic polymers, even providing an increase in the viscosity, by STRETCHING® of the molecular chains.

Each polymer particle is instantly wetted out after just one pass through the YTRON-ZC. The special rotor/stator dispersion reactor effects a STRETCHING® of molecular chains, which results in a considerable increase in viscosity. When compared to other traditional processing methods, the increase can amount up to 180 % of the normal value.

Due to the adjustable powder/liquid ratios, concentrations ranging from 0.5 - 10 % can be achieved.

YTRON -ZC
Application: Dispersing of
Acrylic Acid Polymers
for Shampoo Production



YTRON-ZC 3 with switchboard and powder hopper
for manual powder addition



YTRON-ZC with powder addition via silo
Application: Suspending of Spices

YTRON-ZC

Model	ZC-0	ZC 95.6V	ZC-1
Water/liquid flow rate (l/h)	700... 2,400	4,000... 6,000	4,000 ...10,000
Powder capacity (kg/h) max.	500	1,500	2,000
Rotation (1/min)	6,000	3,000	6,500
Drive power (kW)	2.20	2.20	5.50
Mechanical seal, single acting	Yes	Yes	Yes
Mechanical seal, double acting	Yes (Option)	No	Yes (Option)
Liquid inlet	DN 10	DN 25	DN 25
Liquid outlet	DN 25	DN 40	DN 40
Powder inlet	DN 25	DN 50	DN 50
Standard dimensions approx.*	410x255x470	830x450x870	925x455x660

Model	ZC-3	ZC-5
Water/liquid flow rate (l/h)	9,000...18,000	30,000... 90,000
Powder capacity (kg/h) max.	4,500	28,000
Rotation (1/min)	5,000	2,300
Drive power (kW)	15.00	55.00
Mechanical seal, single acting	Yes	No
Mechanical seal, double acting	Yes (Option)	Yes
Liquid inlet	DN 50	DN 80
Liquid outlet	DN 65	DN 100
Powder inlet	DN 65	DN 150
Standard dimensions approx.*	925x455x730	1.120 x 700 x 1.150

According to the application, special construction deviating from standard are available.

* L x W x H (mm), without pump or powder hopper

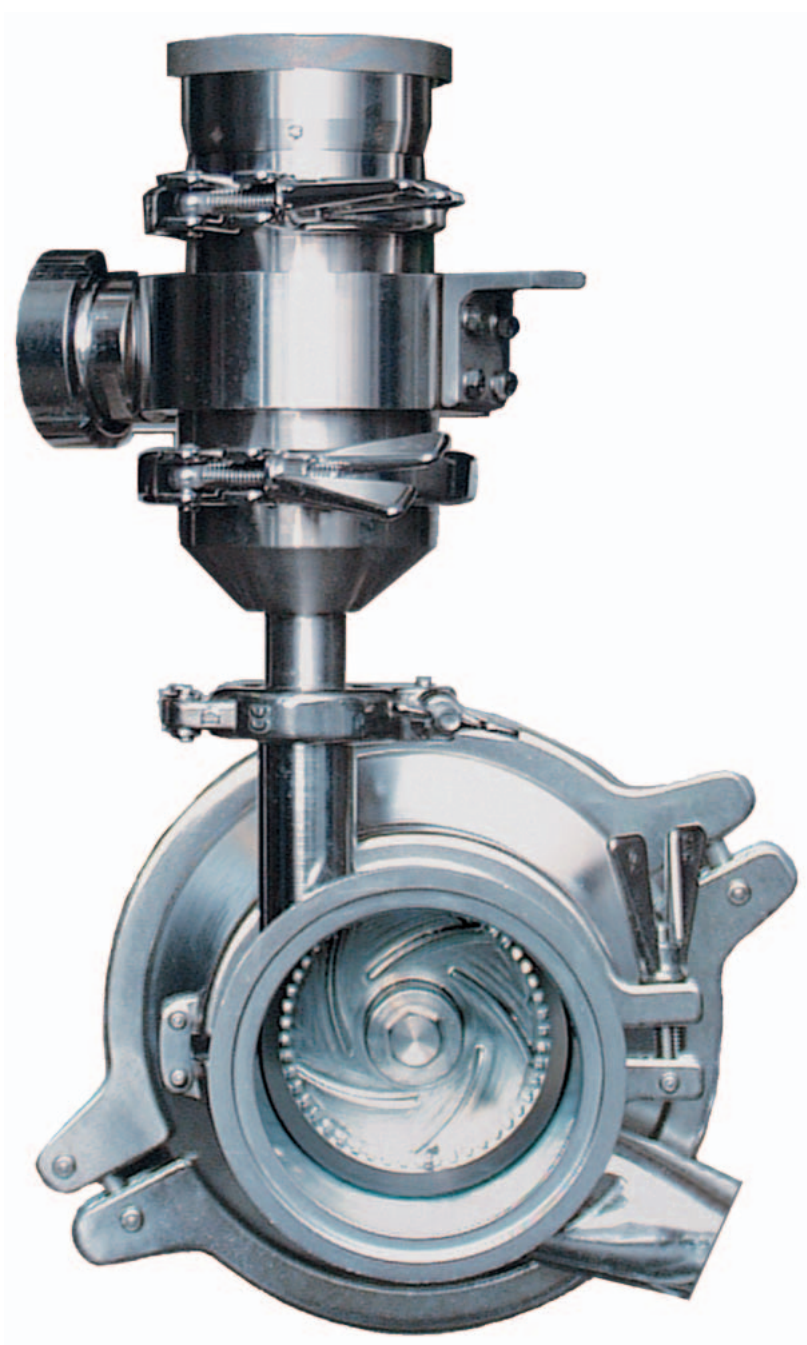
Typical application examples

Difficult to wet out thickeners and gums (binders), stabilizing and gelling agents, e.g. MC, CMC, HPMC, Guar Gum, Locust Bean Gum, Pectin, Agar-Agar, Alginate, Starches, Carrageenan, Xanthan Gum, Milk and Whey based Proteins as well as Polymers with a tendency to stick and form lumps (Poly-acrylic Acids, Carbopol etc.).

In a special configuration, YTRON-ZC is also suitable for very high solids contents in a single pass. Example: Silicates and binders in high viscosity liquids such as sugar syrup and chocolate mass.

Please note: In a single pass, the application is particularly gentle for shear sensitive products. Even on multiple passes, the shear rate is reproducible.

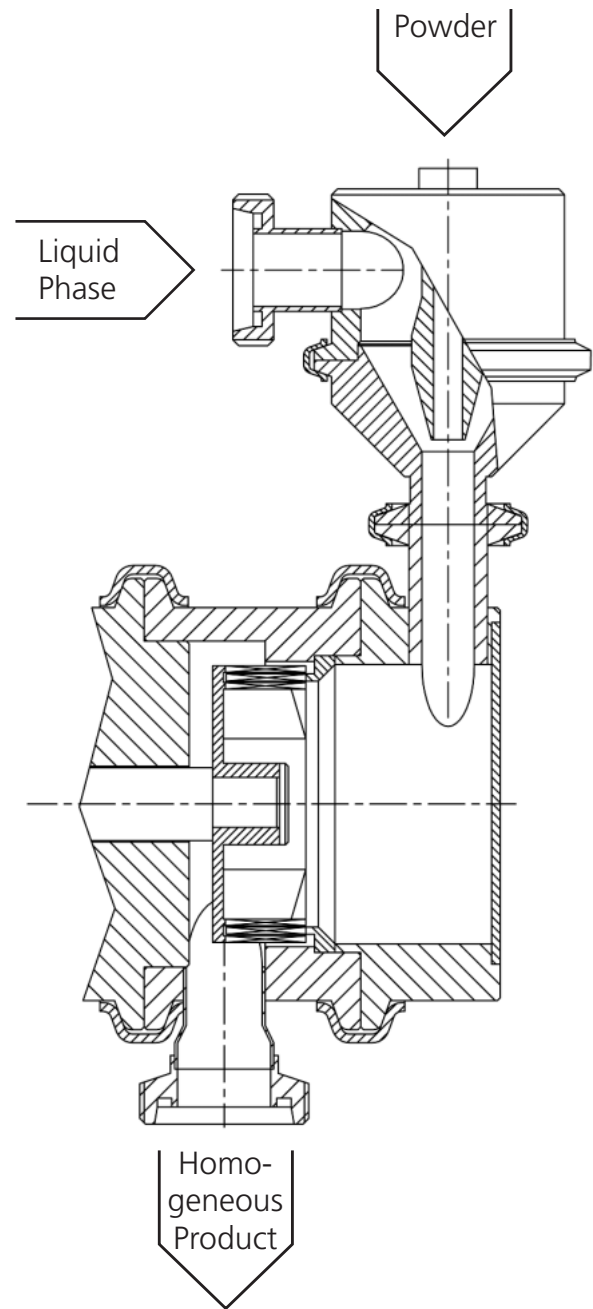
YTRON-PID



The YTRON-PID Principle

Powder-Inject-Dispersing

The thickener or gelling agent is sucked out of a hopper, BigBag or a silo into an injection chamber where it is pre-wetted by the liquid phase. This pre-wetting process is designed to occur without product hold-up. The forced passage through the rotor/stator system ensures a perfectly wetted out product. A pump installed downstream achieves a controlled discharge of the product. The tendency of powders to stick or form lumps on the contact surfaces of the powder/liquid injection chamber is totally eliminated during either continuous or short process intervals.



Important Advantages of YTRON-PID:

- Extremely difficult to wet-out powders are processed without any problems
- Free flowing powders ensure that reproducible results can be achieved
- Concentrations of over 20% can be achieved in a single pass
- Sticking, clogging or lump formation in the contact areas liquid/powder is totally avoided
- Free flowing powders mean that a metered, continuous operation can be achieved without problems
- The required concentration is achieved by appropriate adjustment in the injection chamber
- Powder consumption can be significantly reduced by the intense wetting out of the product
- STRETCHING® of the molecular chain achieves a higher viscosity and therefore higher yields
- Cleaning, even between short process intervals and after a product change, is unnecessary



YTRON-PID in a mobile construction Application: Dust-free incorporation of an Acrylic Polymer from a bag to produce a Cosmetic Product



YTRON-PID
Powder addition via hopper or from BigBag or silo
Application: InLine-dissolution of Poly-Vinyl Alcohol (PVA)

The Problem

When in contact with water, individual particles of the hydrophilic polymer immediately begin to swell. The surfaces of these gradually swelling particles cross-link to form a tough outer skin which prevents the completion of the hydration process.

The result is an agglomeration of particles which are wetted on the outside only. These appear at best as small transparent 'fisheyes' but more normally as lumps of varying sizes.

Should one attempt to achieve an homogeneous dispersion by smoothing out the lumps by means of high shear methods, the polymer molecular chain may be broken. This will effect the end result considerably by altering the desired characteristics of the finished product.

Special properties

- Pre-wetting of the powders in the injection chamber without sticking.
- No damage of the product during passing through the rotor/stator system, as the contact time takes only a fraction of a second.
- A pump installed downstream achieves the discharge of the uniform product even at high concentrations and viscosity.
- Sticking powders, deposits or lump formations are totally eliminated on both the contact surfaces of the 'powder/liquid' injection chamber and in the dispersing reactor. Therefore, cleaning, even between short process intervals, is totally unnecessary.
- The required concentration is achieved by the appropriate adjustment of the injection chamber.

The Solution

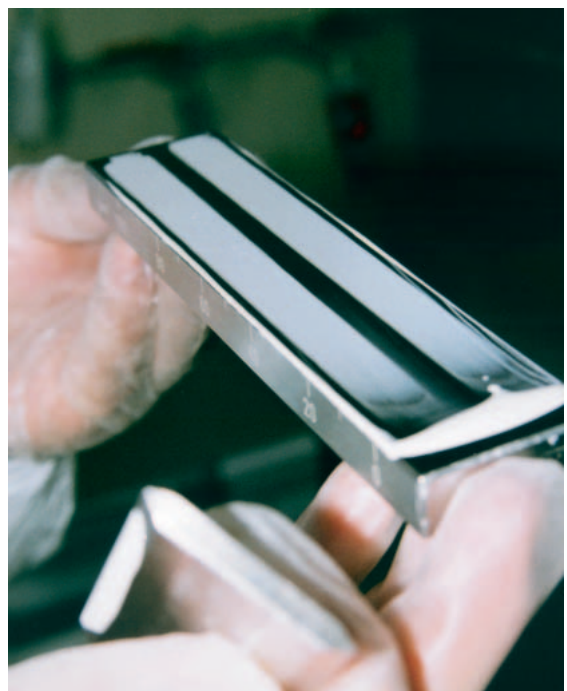
YTRON-PID avoids any sticking, clogging or lump formation in the liquid/powder contact area. This ensures a trouble free operation with reproducible results every time.

YTRON-PID ensures that a metered, continuous operation can be achieved without problems.

YTRON-PID avoids air incorporation, other than occluded air.

YTRON-PID provides a higher viscosity and therefore higher yields for a given solids amount compared to conventional methods due to the STRETCHING[®] of the molecular chain.

Finest dispersions are achieved in a single pass





Carbopol: up to over 10 % concentration



Xanthan: virtually "sausage like" extrusion

Product examples for YTRON-PID



Neutragel: up to 5% concentration



CMC: virtually "sausage like" extrusion

Polyox: up to 7 % concentration



Blanose: up to over 15 % concentration

YTRON-PID

Model	PID 1	PID 3
Water/Liquid-flow rate (l/h)	4,000 ... 12,000	12,000 ... 30,000
Powder capacity (kg/h) max.	2,000	5,000
Speed (1/min)	3,000	3,000
Power (kW) approx.	11.0	21.0
Mechanical seal, single acting	yes	yes
Liquid inlet	DN 50	DN 50
Liquid outlet	DN 50	DN 80
Powder inlet	DN 25	DN 50
Standard-dimensions approx. LxWxH (mm)	900x1,120x1,250*	100x1,250x1,250*

Other executions deviating from the standard are available, according to the application

* mobile, without pump or powder hopper

YTRON -PID
Application: Production of thickener Base
for the Textile Printing Industry

Typical applications

Difficult to wet-out thickeners and gums, stabilizers and gelling agents. For example MC, CMC, HPMC, Guar, Locust Bean Gum, Pectin, Agar-Agar, Alginates, Starches, Carrageenan, Xanthan Gum, Milk and Whey proteins as well as swelling polymers with a tendency to stick (Hydrophilic Polymers, Carbopol etc.)

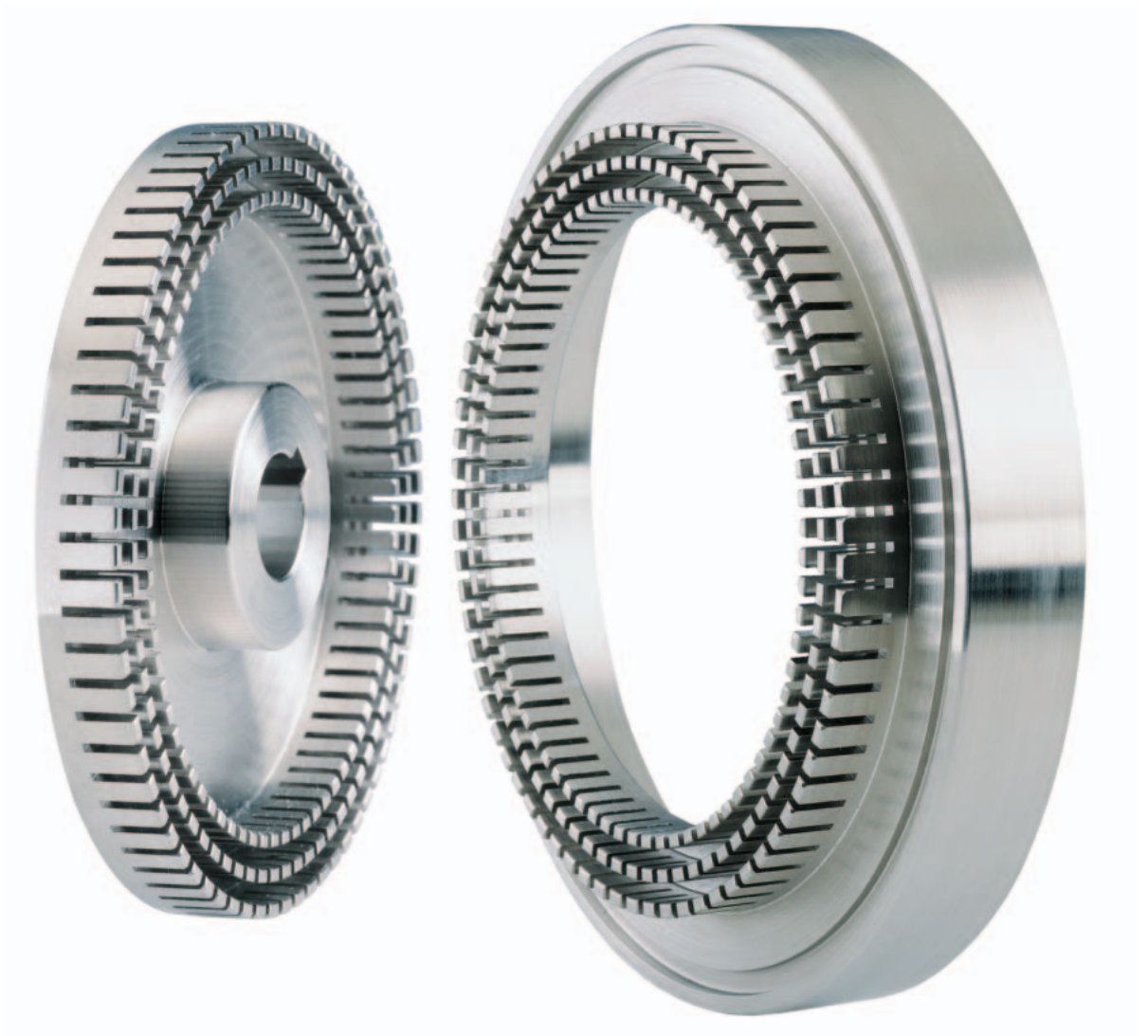
A special configuration allows for very high solid contents in a single pass

Specialty: No product sticking in the contact area of the powder and liquid

Especially gentle treatment suitable for very shear sensitive products

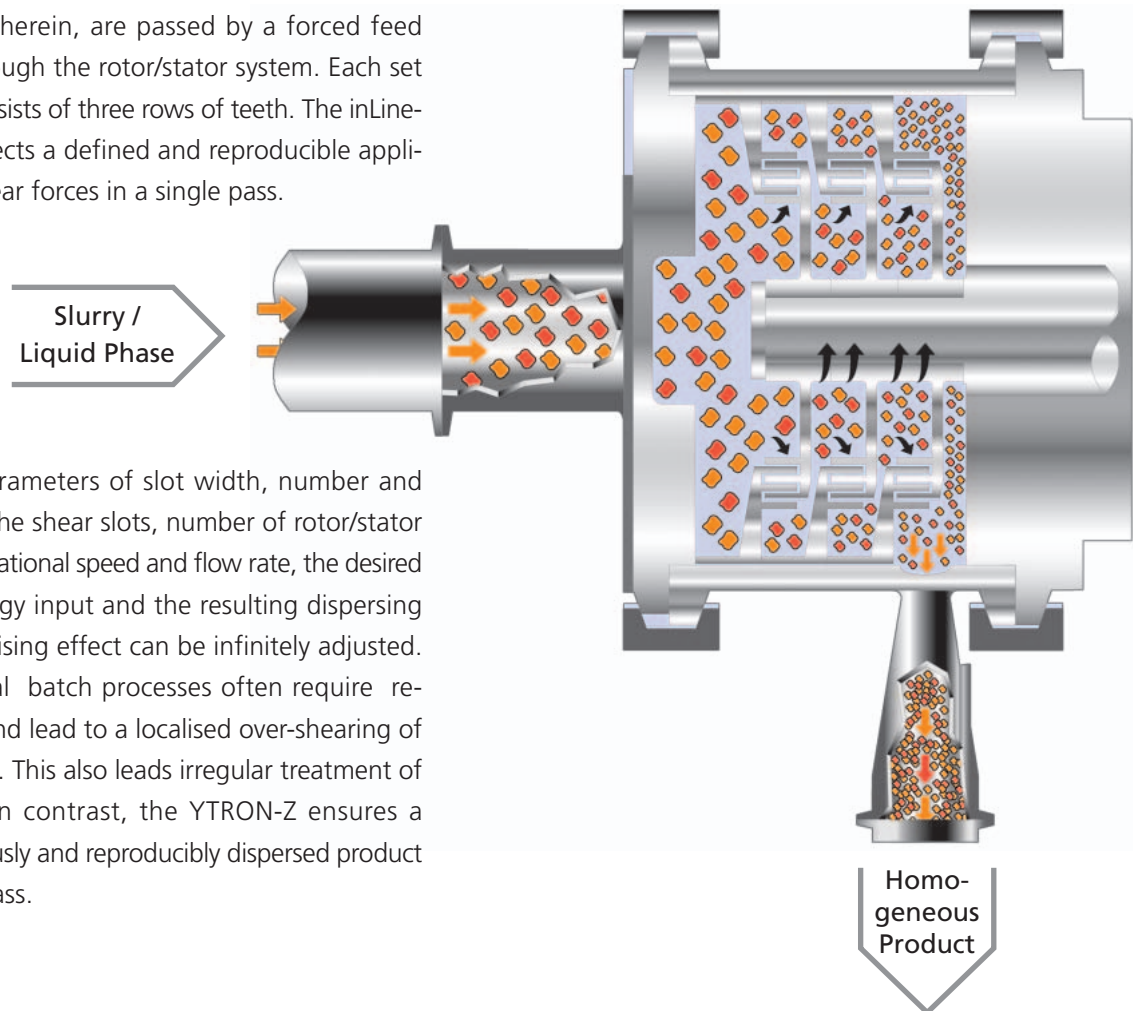


YTRON-Z



The YTRON-Z Principle

The reactor head of YTRON-Z houses up to three rotor/stator sets with extremely fine radial tolerances. One or more liquid phases, as well as particles suspended therein, are passed by a forced feed passage through the rotor/stator system. Each set normally consists of three rows of teeth. The inLine-principle effects a defined and reproducible application of shear forces in a single pass.



With the parameters of slot width, number and distance of the shear slots, number of rotor/stator sets used, rotational speed and flow rate, the desired specific energy input and the resulting dispersing or homogenising effect can be infinitely adjusted. Conventional batch processes often require recirculation and lead to a localised over-shearing of the products. This also leads irregular treatment of the batch. In contrast, the YTRON-Z ensures a homogeneously and reproducibly dispersed product in a single pass.

Important Advantages of YTRON-Z:

- Dispersing, de-agglomerating, emulsifying in one pass
- The forced feed passage allows reproducible results
- Gentle treatment of shear sensitive products, e.g. STRECHTING® of yoghurt, direct curd products, fromage frais and cream cheese at low speed
- Homogenising of aromatic oils in liquid systems using medium speeds
- High speed operation to effect a continuous emulsification reaching a droplet size as low as 1µm for various emulsions (o/w and w/o) and dispersions
- Up to three slotted rows of teeth with variable slot widths and finest distance of the slots in each rotor/stator set
- Reactor chamber houses up to three rotor/stator-sets
- Hygienic execution available for use in the food, cosmetic and pharmaceutical industry
- In many applications they are a replacement for a high pressure homogenizer which requires high capital outlay and subsequent maintenance costs



YTRON-Z with flameproof motor
Application: Variable use in the Laboratory



YTRON-Z with integrated frequency control
Application: Continuous production of base thickeners in the Textile Printing Industry



YTRON-Z in a mobile construction with frequency converter and YTRON Thermo Unit for seal lubrication

YTRON-Z in hygienic construction and flameproof motor



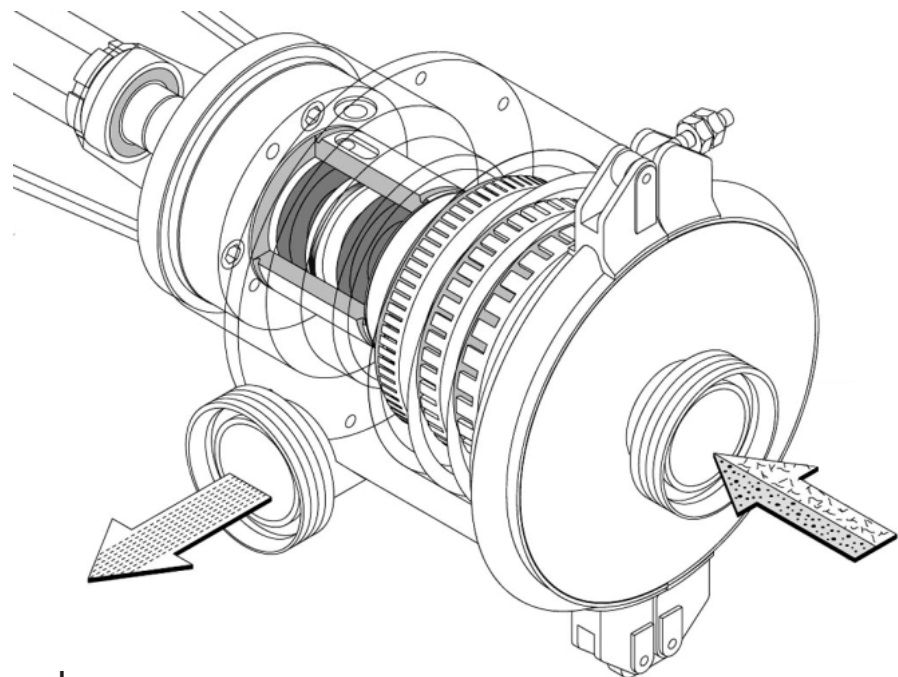
Typical Applications:

- Foaming, Aerating
- De-agglomerating
- Emulsifying
- Chemical reaction
- Homogenising
- Wet milling
- STRETCHING®
- Modification of texture and adjustment of viscosity

Application Examples

- Bitumen
- Tomato Ketchup (cold and hot break)
- Creams and lotions
- Fruit juices
- Soft drinks
- Mayonnaise
- Medical solutions and dispersions
- O/W and W/O emulsions
- Perfume oil and aromatic products
- Pesticides
- S.L.E.S. (continuous dissolving)
- Salad dressing
- Melted cheese and similar products
- Shampoo (continuous production)
- STRETCHING® of yoghurt and fromage frais
- STRETCHING® of thickener slurries
- Soups and sauces

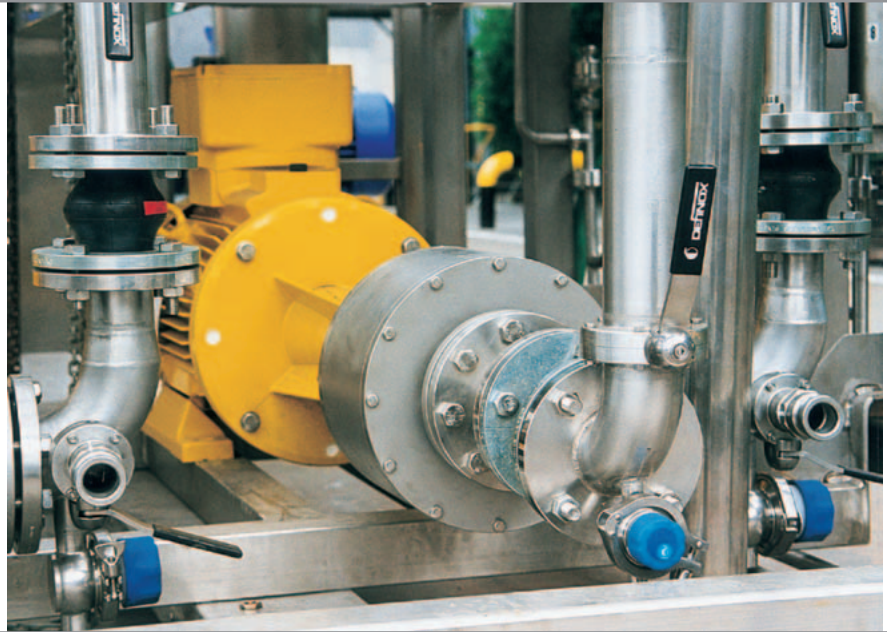
and many more...



Some Advantages of YTRON-Z using Examples of Food Applications

- Improved product quality and shelf life stability
- Reduced production times due to a single pass operation
- Reproducibility of results
- Savings of energy, materials and process time when compared to batch procedures and conventional processes
- Flexibility due to interchangeable dispersion tooling
- Improved rheological properties, mouth-feel and texture

YTRON-Z in flameproof execution
 Application: Production of
 Emulsions in the Chemical Industry



YTRON-Z in the
 Chemical Industry
 Application:
 Homogenising of
 Liquid Detergent
 Emulsions

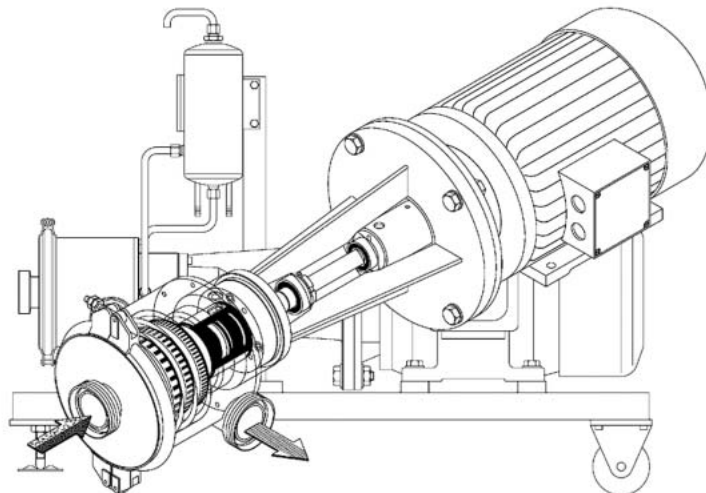
YTRON-Z

Model	Z-Lab (Z 0)	Z 60.2V	Z 60.3V
Power (kW)	1.50 ... 2.20	3.00	5.50
Capacity (l/h)max.	800	2,500	2,500
Hygienic Version	Yes	Yes	No
Single acting mechanical seal	Yes	Yes	Optional
Double acting mechanical seal	No	No	Yes
Pressure (bar)	0 ... 10	0 ... 10	0 ... 10
Fittings (Standard)	DN 25	DN 25	DN 40
Dimensions* LxBxH (mm)	520x200x200	520x200x260	1,600x400x1.100

Model	Z-80 (Z 1)	Z-130 (Z3)	Z 250 (Z5)
Power (kW)	3.00 ... 7.50	5.50 ... 18.50	7.50 ... 45.00
Capacity (l/h)max.	4,000	18,000	50,000
Hygienic Version	Yes	Yes	Yes
Single acting mechanical seal	optional	optional	optional
Double acting mechanical seal	Yes	Yes	Yes
Pressure (bar)	0 ... 10	0 ... 10	0 ... 10
Fittings (Standard)	DN 40	DN 50	DN 80
Dimensions* LxBxH (mm)	1,600x425x980	1,200x425x980	1,200x450x980

According to the application, other additional executions, deviating from the standard, are available.

* In the standard execution





The YTRON® range is not mass produced

YTRON® equipment and systems are carefully selected for your individual application. We therefore kindly ask you to provide as detailed as possible a description of your application containing for example:

- Components to be processed
- Viscosity at the beginning and at the end of the process
- The specific gravity (bulk density when adding powders)
- Overall dimensions and shape of the mixing vessel
- Minimum and maximum filling levels of products to be processed
- Working temperature
- Other details that may be relevant

The capacities indicated in this brochure are related to certain applications under standardised conditions. They are not necessarily valid for all products or processes.

The standard materials for the product contact parts are:

- Material 1.4301 / AISI 304
- Material 1.4571 / AISI 316 Ti
- Material 1.4435 und 1.4404 / AISI316 L

Special materials such as 1.4539, Hastelloy etc. are available on request

Fittings can be delivered various types such as
DIN 11851, DIN 11864, SMS, DS, RJT, Clamp, Flange etc.

We reserve the right to alter the design without previous notice in the interest of development.



YTRON

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