



## DELIVERY FORMS

**LEARN MORE ABOUT  
OUR DELIVERY FORMS**





# DELIVERY FORMS OF OUR PRODUCTS

**PLASTIC GRANULES**

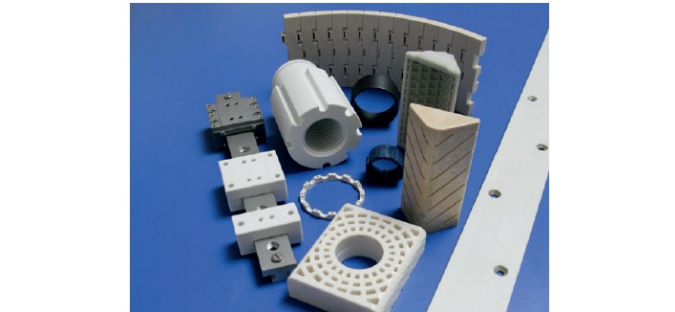


**SEMI-FINISHED PRODUCTS**



with tubes up to 75% savings possible

**COATING, COATED PARTS**



**CUSTOMER SPECIFIC PARTS**



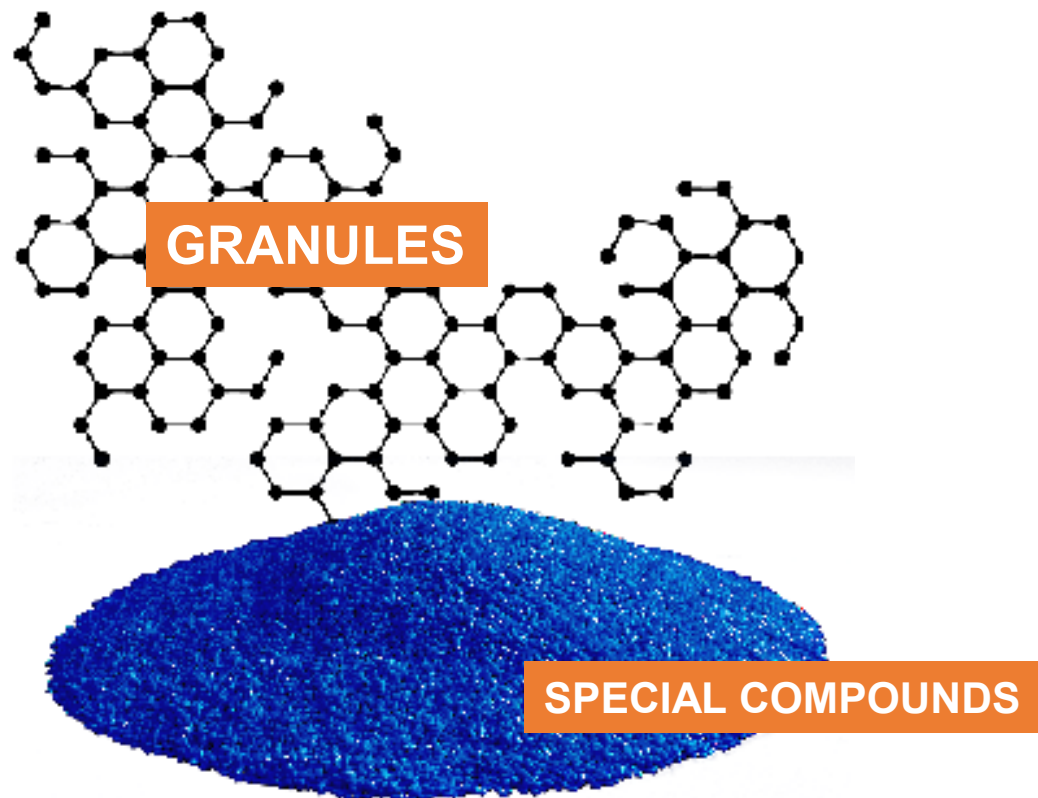
**STANDARDPARTS**



**3D PRINTING**



## SPECIALCOMPOUNDS



We develop the plastic with your required properties for you - specifically for your application.

If the required material properties are not known, we derive them from the application conditions of the planned component for you and create the formulation.



## SPECIALCOMPOUNDS

**WE CAN MODIFY THE PROPERTIES OF THE BASE POLYMERS IN A TARGETED MANNER AND DETECT THE CHANGES THROUGH LABORATORY TESTS.**



Improve the friction and wear behavior



Increase the stiffness and strength especially at - high temperatures



Reduce the cost



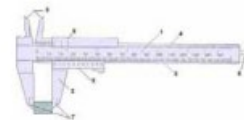
Achieve an antibacterial effect



Adjust the color



Increase the elasticity and mechanical damping



Increase precision by reducing the coefficient of thermal expansion



Improve diffusion tightness



Adjust thermal and / or electrical conductivity (antistatic equipment)

## SPECIAL COMPOUNDS

### ELECTRIC CONDUCTIVITY

Surface resistance from 70-160 kOhms at a measuring voltage of 100 V.

Example: ZX-530 >> ZX-530LR6



### COLOURFULNESS

The color was set accordingly to a customer specification in one RAL colour tone.

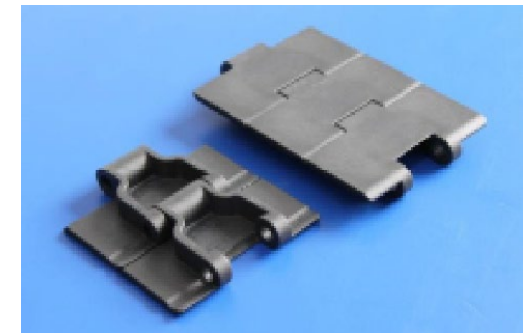
Example: ZX-324V2T >> ZX-324FDW2



### FRICTION

The basic type was modified so that the friction coefficient against PET-bottles was minimized.

Example: ZX-324 >> ZX-324AB





# ADVANTAGES

## BLUE DYED

- Good detectable
- Cost and weight reduction
- Food conformity (EU 10/2011 approval in preparation)

under the following conditions:

<b>Food types</b>	<b>All food types except foods containing 15% or more alcohol</b>
<b>Application</b>	<b>Repeated use only for articles</b>

- Very good tribological properties
- Can be sterilized

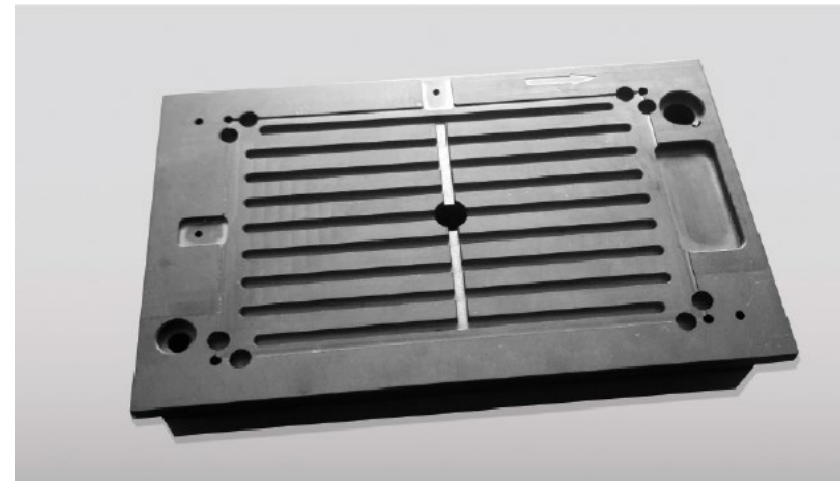
Inkuform MDTF is a POM-C with very good tribological properties. For better optical recognition it is dyed in blue RAL 5010. Fragments can be identified with the usual metal detection devices. Depending on the device, fragments, e.g. cube with an edge length up to 2 mm, are detected. The friction and wear values are very good and better than standard standard types up to 80°C. An EU 10/2011 authorization is possible.



## ADVANTAGES

### PROPERTIES ZX-324ESD

- electrostatically dissipative
- high temperature resistance
- high strength and dimensional stability
- high chemical resistance
- settings of the surface electric resistance to electric conductivity are possible



# Production of high-performance plastics chemical bonded With PTFE

to achieve exceptional mechanical and tribological properties

## GOAL

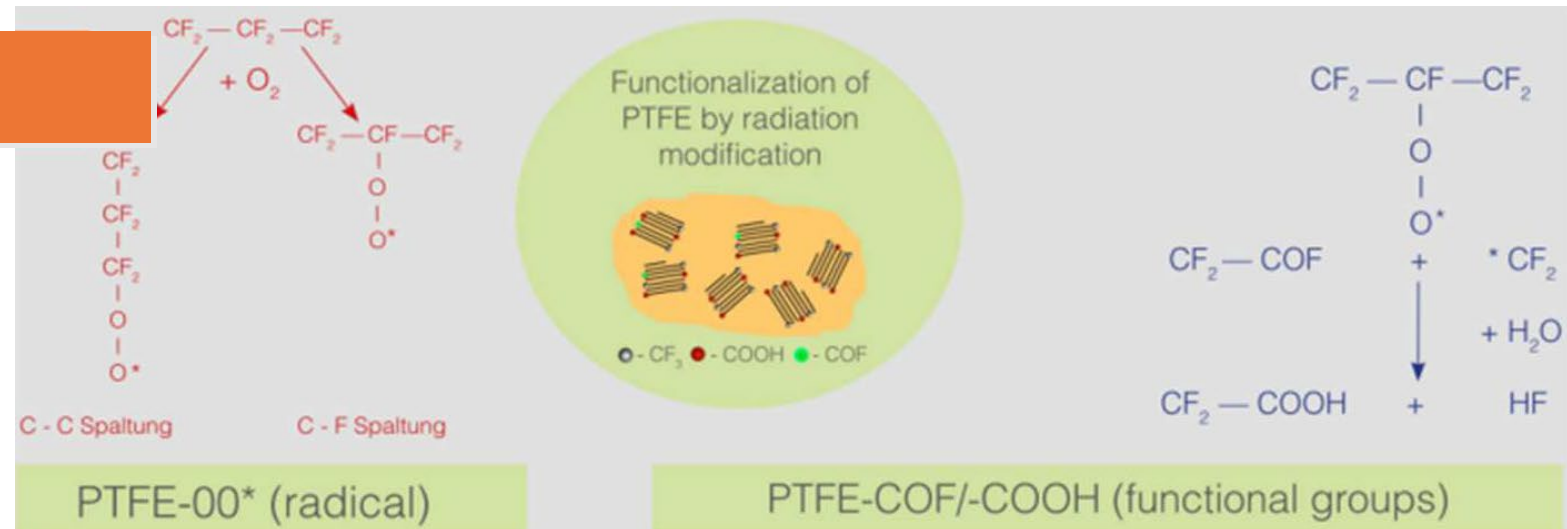
expensive irradiation of the ptfе is required for the chemical bond. this is to be replaced by commercially available inexpensive products

## CURRENT STATUS

matching types found. tests still have to be carried out

## LAUNCH: Q3 / 2023

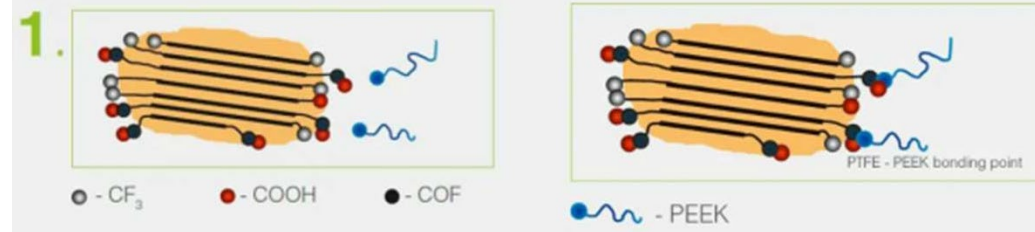
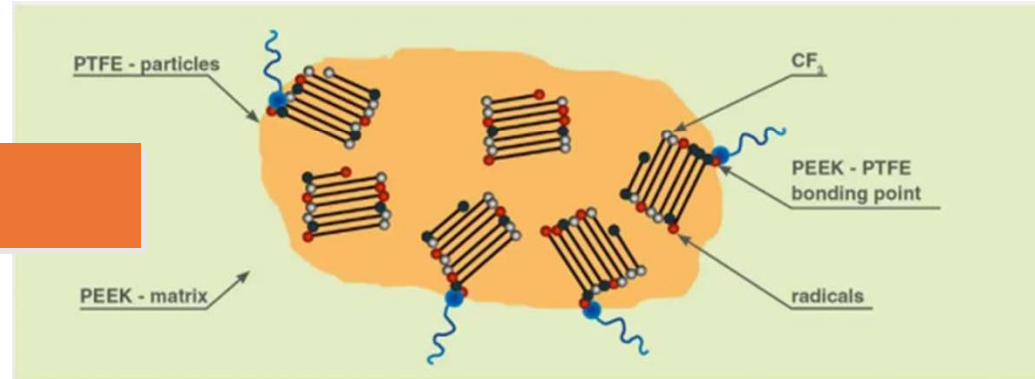
## PROCEDURE







**PROCEDURE**



Optical appearance		
Competitive product A	Competitive product B	TRIBOFÉ PEEK 1/TFcg20
PEEK + 20% PTFE	PEEK + 10% PTFE	PEEK + 20% PTFE
physical mixture (ph)	physical mixture (ph)	chemical bonding (cg)
		
PTFE particles are visible	PTFE particles are visible	PTFE particles are not visible



## DELIVERY FORMS

**ZEDEX®** Semi-finished products are available from stock in a wide range of dimensions.

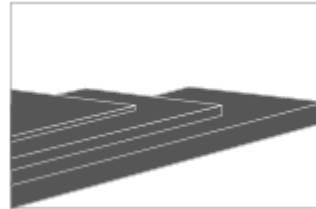
Semi-finished products

Sheets

Rods & Tubes

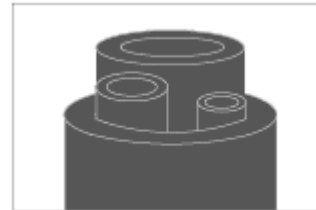


## SEMI-FINISHED PRODUCTS



### PLATES

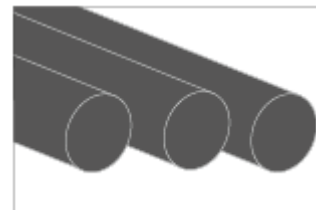
Thickness from 6 up to 105 (mm)  
width up to 1 meters  
length up to 3 meters



### HOLLOW RODS

Outer diameter  
from 30 up to 380 (mm)

Inner diameter  
from 18 up to 300 (mm)  
Standard length 1 or 2 (m)



### RODS

Diameter from 6 to 210 (mm)



**Worldwide delivery**  
Anywhere you need it.



**Short delivery times**  
You need your components quickly? No problem for us.

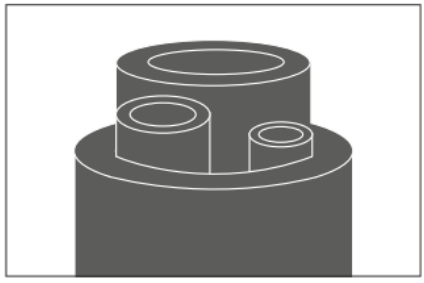
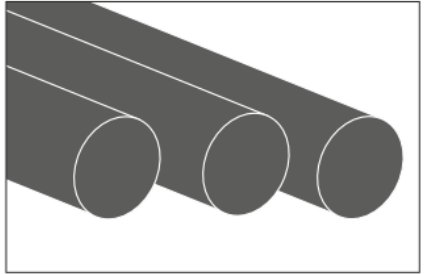


**Just-in-time**  
If something is not in stock, we produce it immediately.



# HOLLOW RODS / RODS DIMENSIONS

Inner-diameter [mm]	Outer diameter [mm]																																																						
	6	8	10	12	15	18	20	22	25	30	31	35	40	45	47	50	55	60	65	70	75	76	80	85	90	95	100	105	110	115	120	125	130	135	140	145		150	160	165	170	175	180	185	200	210	225	235	255	265	280	300	315	350	360
Rod																																																							
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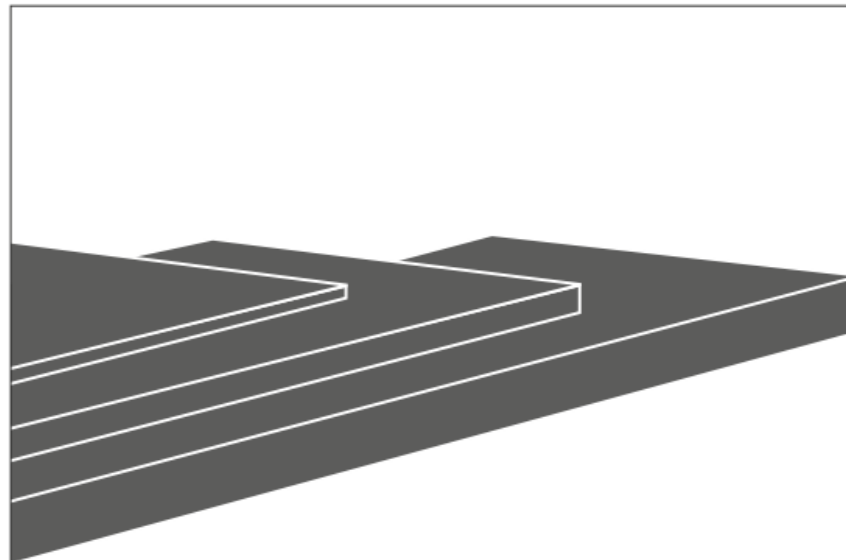




## SHEET DIMENSIONS

Thickness	Width	Length
[mm]	[mm]	[mm]
6	1000	2000
8	1000	2000
10	1000	2000
12	1000	2000
13	1000	2000
15	1000	2000
16	1000	2000
18	1000	2000
20	1000	2000
22	1000	2000
25	1000	2000
30	1000	2000
35	1000	2000
40	1000	2000
45	1000	2000
50	1000	2000
55	1000	2000
60	1000	2000
65	1000	2000
70	1000	2000
75	1000	2000
80	1000	2000
85	1000	2000
90	1000	2000
95	1000	2000
100	1000	2000
105	1000	2000

Thickness	Width	Length
[mm]	[mm]	[mm]
5	370	2000
6	370	2000
8	370	2000
12	370	2000
14	370	2000
17	370	2000
20	370	2000
25	370	2000
30	370	2000
32	370	2000



## MACHINING

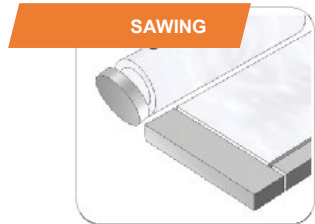


- Automatic, partially unmanned production
- From as little as 1 piece
- Up to Ø 60 can be produced economically at 5,000 pieces
- Economical due to large range of tubes with fine dia. Graduation
- Tolerances from ISO 6 possible.



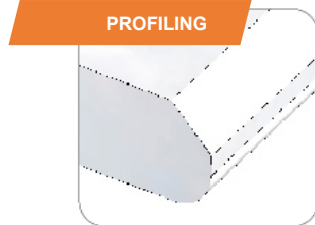
# PROCESSING METHOD

We manufacture for you low-cost end products made of ZEDEX® polymers, always with the optimal procedure in relation to the quantities required. In our production we use the following procedures:



SAWING

maximum Ø 600 mm  
maximum thickness 100 mm  
maximum width 1300 mm  
maximum length 3000 mm  
tolerance +5mm



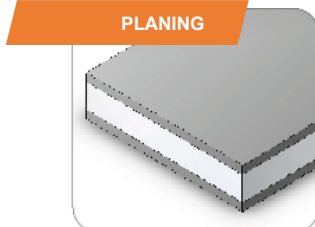
PROFILING

maximum thickness 100 mm  
maximum width 600 mm  
maximum length 800 mm  
tolerance ±0,05 mm



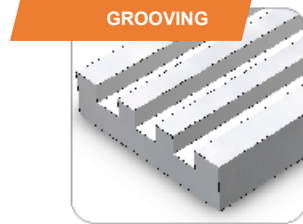
CONTOUR MILLING

maximum thickness 100 mm  
maximum width 600 mm  
tolerance ±0,05 mm



PLANING

minimum length 400 mm  
maximum thickness 100 mm  
maximum width 600 mm  
tolerance ±0,1 mm



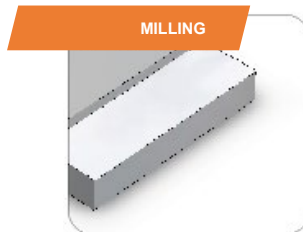
GROOVING

maximum thickness 100 mm  
maximum width 600 mm  
maximum length 800 mm  
tolerance ±0,05 mm



GRINDING

centerless grinding from Ø 6 mm  
to max. Ø 60 mm  
tolerance range 0,06 mm



MILLING

4 axes:  
1270 x 510 x 635 mm  
5-Side-machining:  
800 x 500 x 600 mm  
5 axes:  
320 x 300 x 320 mm



LATHE TURNING

Ø < 75 mm Machined  
from bars with bar loader  
und high-powered tools  
Ø 60 – Ø 265 mm  
Turning step inner Ø < 1,0 m  
Turning step outer Ø < 1,8 m  
Turning conventional < Ø 585 mm  
Turning length < 500 mm



ROUGHENING  
(pre-treatment)

Width < 1000 mm  
Thickness < 100 mm



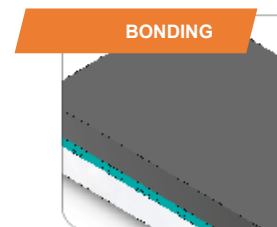
THREADS

All standard and special threads,  
as well as threaded inserts  
(ENSAT/HeliCoil)



MARKING

Engraving from 2,5 mm,  
Silk-screen print from 5 mm,  
Inkjet from 10 mm



BONDING

Dosage: one or  
two-components adhesives



## 3D TRIBOFILAMENTS







# PRINTED TRIBO PARTS

## 3D-PRINTING WITH ZX-100

Printing speed: 50mm / s  
Temperature: 280°C  
Layer height: 0.2mm

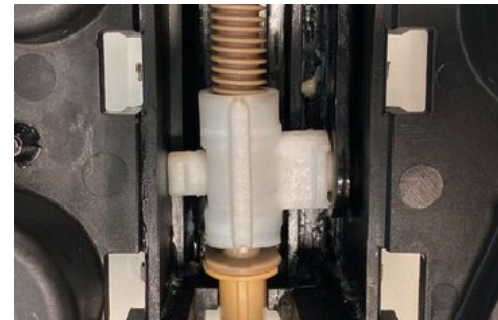
In the future, parts made of high-temperature plastics such as ZX-324, ZX-530, ZX-750 can be printed.



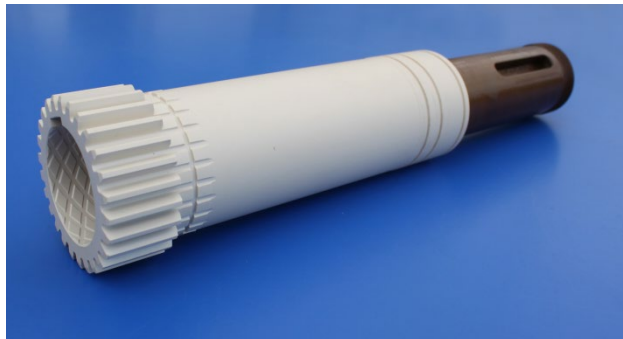
Filament Ø 1,75mm,  
Tolerance +/- 0,03mm



3D printed bushing ZX-100



## COATINGS ZEDEX<sup>®</sup> TRIBOCOAT



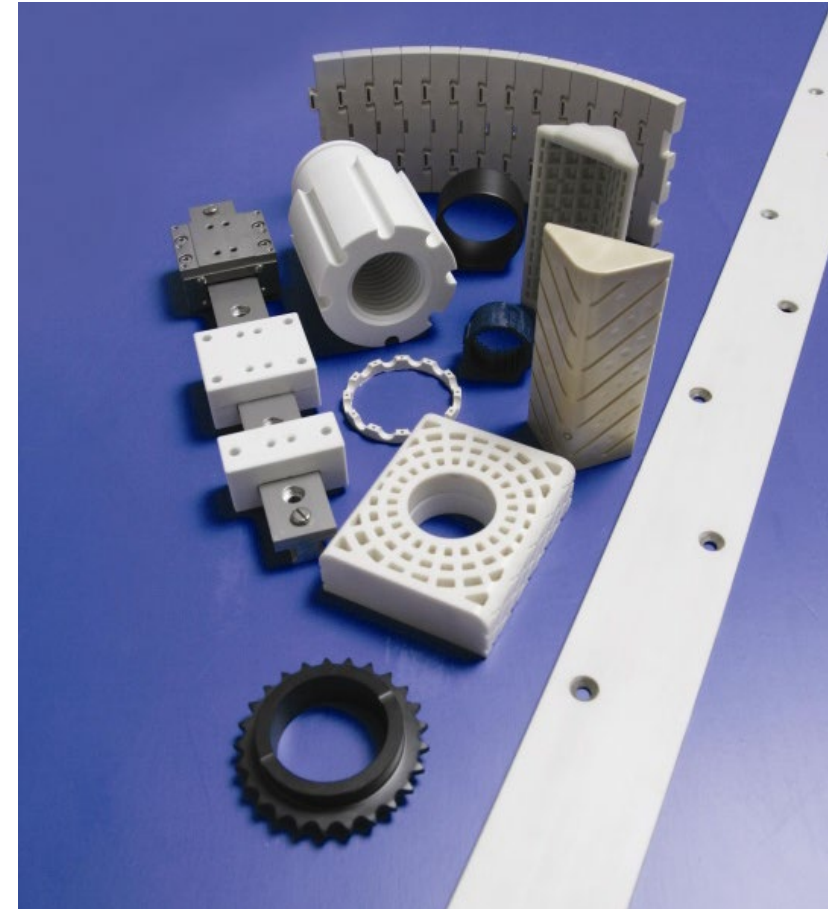
**For coating metal parts using the airbrush method or powder coating for the:**

- Improvement of tribological properties and Reduction of adhesion (bond) to metal
- Corrosion protection
- Electrical and thermal insulation
- Encapsulation of the base body against product and media contact
- Improvement of the appearance of metal parts
- Cost reduction, new process eliminates the need for overmolding or bonding
- FDA compliant

## CUSTOMER SPECIFIC PARTS

### ACCORDING TO CUSTOMER REQUIREMENT AND / OR DRAWING

- Plain bearings (also hydrodynamic)
- Movement nuts (also special profiles)
- Slideway linings
- Gears
- Track rollers
- Sliding rails
- Bearing shells
- Wipers
- Metal-plastic composite parts
- Plastic sheathing
- general wear and insulation parts





## PRECISION PLAIN BEARINGS



**CYLINDRICAL BUSHINGS**



**COLLAR BUSHINGS**

The dimensions of our plain bearings comply with following DIN standards.

- DIN 1850 - solid bushings as press-fit bushings in housings
- DIN 1552 - for press-fit onto journals
- DIN 1494 - rolled bushes as press-fit bushes
- DIN 1498 - much thicker-walled than press-fit bushings



## STANDARD PARTS

### HIGH PRECISION BEARINGS

for dry running, oil, water lubrication  
diameter 2 to 250 mm



### MOVEMENT NUTS

with trapezoidal thread DIN 103



### SLIDEWAY COVERINGS

with and without metal support

### GEAR WHEELS

### TRACK ROLLERS

### FOIL BEARINGS



## SLIDEWAY COVERINGS

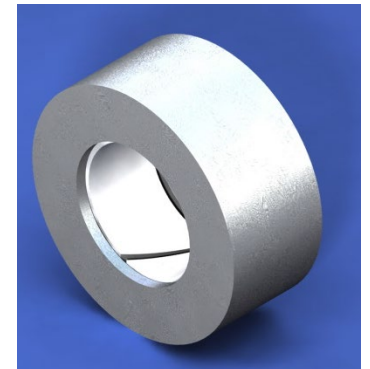
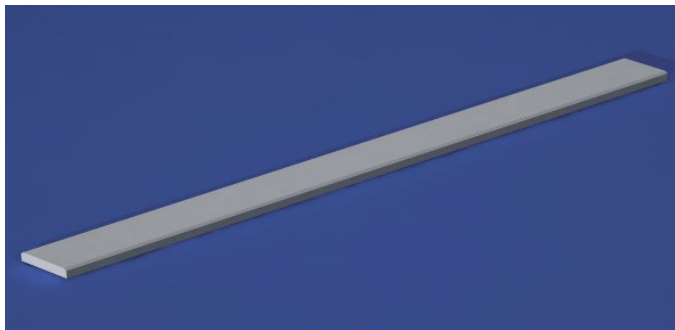


- Available in thicknesses from 1.5mm and formats
- Adhesive surface pretreated
- Optionally the suitable adhesive is available

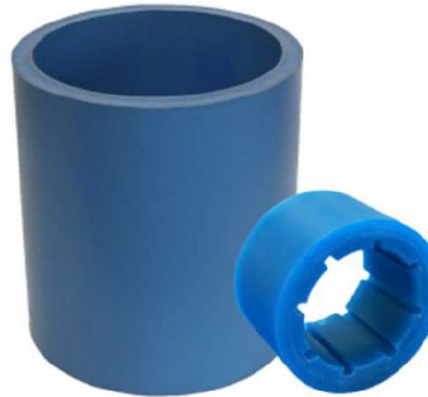
## FOIL BEARINGS

### FOR PLAIN BEARING BUSHES WITH LARGE DIAMETERS

- By cold forming of plate strips made of ZX-100K
- For large diameters with low wall thickness
- Cost effective solution
  
- For low operating bearing clearance, even with high temperature fluctuations and / or
- Simple mounting
- Axial fixation necessary



## SPECIAL MATERIAL FOR LARGE BEARINGS – PU CASTING



### ZEDEX® Blue Water

- Shore hardness D 68
- For applications under Water and With abrasive particles
- for predominant contact With water, max. 60 °C
- available as semi-finished products With outer diameters up to max. 725mm, 70kg
- in future up to Ø 1200mm.



### ZEDEX® Dirty Water

- hard/soft-Composite, Dirty Water ist the inner side component
- Shore D hardness 30
- high wear resistance against abrasive particles for applications
- With continuous water contact up to max. 60 °C
- With or without axial grooves available

### PU-PARTS FOR NON-WATER APPLICATIONS

for parts up to 2000 mm, 40kg

- Track rollers
- Reals
- Bushings
- Linings
- Coatings
- cam wheels
- Anti-adhesive lining panels for rubble





## APPLICABLE IN MANY SECTORS

**SHIPBUILDING,  
PORT, OFFSHORE**



**AGRICULTURE**



**CRANE AND BRIDGE  
CONSTRUCTION**



**OIL AND GAS INDUSTRY**



**FOOD INDUSTRY**



**CHEMICAL INDUSTRY**



**PROCESSING MACHINES**



... and many other  
specific industries.



# ALWAYS REACHABLE, EVEN ABROAD

### Sale, prices



Fon: 02273 - 9749 - 13  
Fax: 02237 - 9749 - 43  
E-Mail: sales1@zedex.de

### Application technology. Consulting



Fon: 02237 - 9749 - 26  
Fax: 02237 - 9749 - 45  
E-Mail: app@zedex.de

### Laboratory



Fon: 02237 - 9749 - 17  
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### Quality assurance



Fon: 02237 - 9749 - 63  
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### Shipment, delivery



Fon: 02273 - 9749 - 16  
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E-Mail: export@zedex.de

### Construction & Consulting



Fon: 02237 - 9749 - 39  
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E-Mail: design@zedex.de

## Would you like more information?

Then contact us by phone or in writing.  
We will be happy to send you material free of charge, such as  
e.g. material samples, various Reports and catalogs and much more.

## ZEDEX® Worldwide

Contact details are also available for our  
representatives abroad.  
**Please contact us for a list.**



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