

# PRODUCT UNSCRABLERS: EFFICIENT PRODUCT SINGULATION AND ORIENTING FOR PICK AND PLACE SYSTEMS

**Compact vibratory section**  
for product singulation and transport



**Pick and place robot**  
(not a part of the Cremer product unscramblers)

**Separate outfeed conveyor**  
available in many custom-tailored models

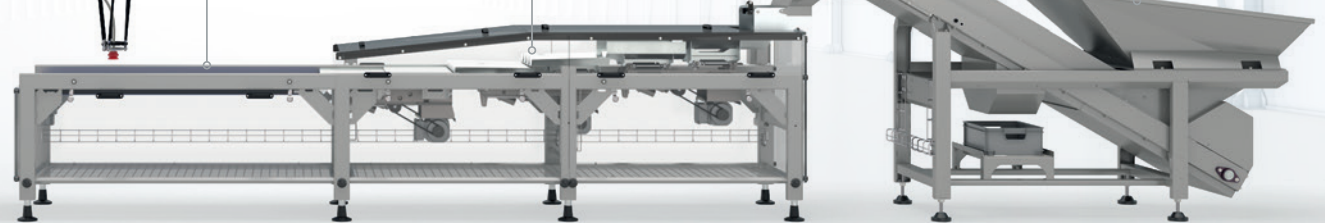


**Outfeed conveyor**  
for presenting the products to the pick and place system

**Extended vibratory section**  
for product singulation, transport and orienting

**Dosing conveyor**  
for efficient product transport and dosing

**Infeed hopper**  
for loading the bulk product



## STANDARD OR FULLY CUSTOMISED PRODUCT UNSCRABLERS FOR PICK AND PLACE APPLICATIONS

Basic system concept: PU-series product unscramblers use multiple linear vibratory plates for singulating and orienting all sorts of products for a wide range of applications and industries. The singulated and correctly oriented products are presented on an optional outfeed conveyor from which a pick and place robot can grab each product.

- Optimal singulation
- Minimal changeover parts
- Relatively small footprint
- Suitable for both food and non-food products
- Tool-free disassembling
- Low noise emission
- Can be used as a stand-alone unscrambler but can also be integrated into larger automated packaging lines
- More than 70 years of experience in product handling, separation, singulation and counting.

### Cremer product unscramblers at a glance:

<b>Number of vibratory plates</b>	4 or 6
<b>Number of product lanes</b>	4, 6, 8, 12 or 16
<b>Nominal frame size</b>	400 mm, 600 mm or 800 mm
<b>Frame execution</b>	Stainless steel or painted steel

All product unscramblers can be supplied with or without an optional dosing conveyor or outfeed conveyor.

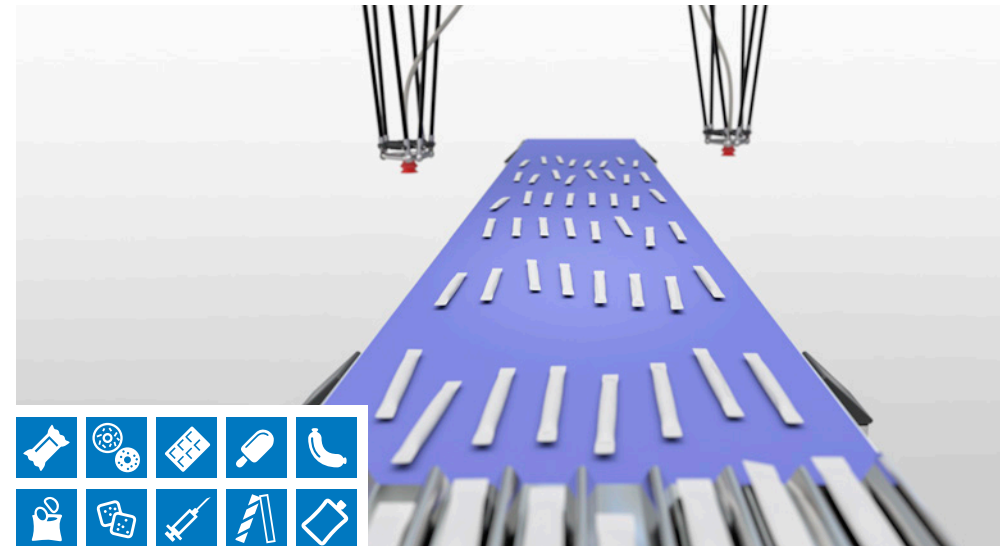
# SOLUTIONS BEYOND COUNTING. MAXIMISING YOUR PRODUCTION EFFICIENCY THROUGH OUR EXPERIENCE, TECHNOLOGY AND DEDICATION.



IF IT'S SEPARATION THAT COUNTS: RELY ON OUR EXPERIENCE

Pick and place robots are being increasingly used for a wide range of applications. When used in assembly, inspection or packaging lines the product or workpiece is grabbed from the incoming conveyor belt and then placed on another conveyor system or placed directly into any case or package. The robots' vision system scans the individual products to be picked up which makes it essential that the products are correctly presented on the incoming conveyor belt. They must be sufficiently singulated and preferably oriented in the proper direction.

Cremer product unscramblers use multiple cascading vibratory plates for the separation and singulation of jumbled and clustered products. The bulk product is first loaded into a hopper or collector chute with a dosing conveyor that transports the clustered products in smaller portions to the vibratory section. Depending on the required output -often determined by the number of pick and place robots or their picking speed- the number of product lanes can vary from 4 to 16.



Unscrambling, product singulation and orienting are the three basic requirements for all pick and place systems. The mechanical concept of Cremer unscramblers has been applied and proven to be very efficient for many applications, such as:

- Automotive industry (hardware)
- Medical devices (syringes, lancets, etc.)
- Stick packs such as sugar, coffee, etc.
- Confectionery and biscuits
- All sorts of sachets and pouches
- And many more...

Technology and innovation are our core competences and are key to consolidating our global market position. We seek to develop top solutions which will inspire the market and allow us to stay ahead of the technology curve. Our customers range from small family businesses and medium-sized production facilities to leading multinational companies all over the world. Our daily effort is to ensure that companies can count and package their products in a 100% accurate, fast and profitable way.