



Components for the food industry. [Reliable technology and sanitary design.](#)

# ➤➤ Bulk material components for conveying and discharging foodstuffs must satisfy very high demands with regard to sanitation and reliability. Coperion is the right partner for all such applications.

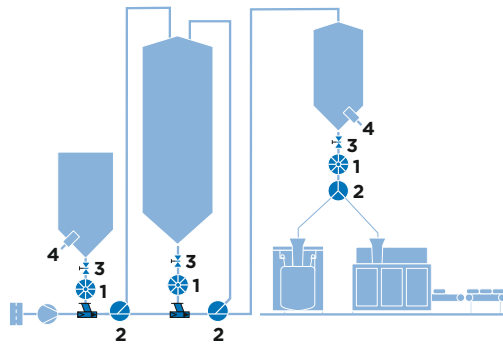
Coperion is the worldwide leading manufacturer of bulk material components, and is familiar with the properties and behaviour of more than 10,000 different bulk materials. Parameters such as particle size, cohesion and adhesion influence the flow properties and therefore the correct design and layout of bulk material components. Our intensive research and the

development of new technologies has resulted in innovative and easy-to-clean process components produced on our own premises which set standards in the industry. This means that your products are handled as sanitary and gently as possible in keeping with the very latest technical standards.

## EXAMPLE APPLICATIONS FOR OUR COMPONENTS

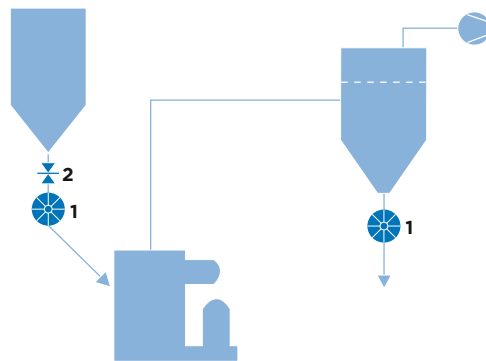
### ➤ LOGISTICS SYSTEM

- 1 Rotary valve
- 2 Diverter valve
- 3 Slide gate valve
- 4 Sampler



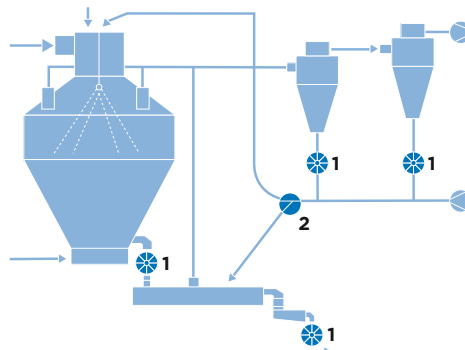
### ➤ MILL WITH EXPLOSION PROTECTION

- 1 Rotary valve as ATEX protection system
- 2 Slide gate valve



### ➤ SPRAY-DRYING SYSTEM

- 1 Rotary valve for CIP application
- 2 Diverter valve for CIP application



## EXAMPLES OF CONVEYED PRODUCTS:

### Dairy products

- Milk powder
- Whey powder
- Lactose
- Babyfood
- Casein
- ...

### Starch

- Maize starch
- Potato starch
- Wheat starch
- Modified starch
- Dextrine
- ...

### Basic materials and additives

- Sugar
- Flour
- Coffee beans and ground coffee
- Malt
- Cocoa beans and powder
- Salt
- Rice
- Tea
- Tobacco
- Soya beans
- Nuts
- Herbs
- Pectin
- Gelatine
- ...

### Convenience products

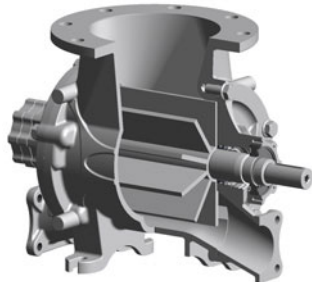
- Cake mixes and baking powder
- Soups
- Instant potato
- Instant products
- Breadcrumbs
- Spices and mixed spices
- Cereals
- Pet food
- ...

## PERFECT CONVEYING AND DISCHARGE: COPERION ROTARY VALVES

### BLOW-THROUGH VALVE

#### ZXD FOR POWDER

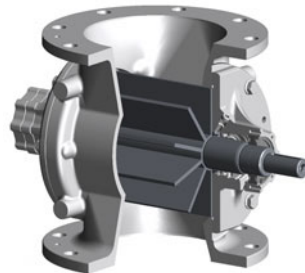
- › Optimum chamber emptying with specially designed blow-through channel, ideal for products with poor flow properties
- › Extra-large inlet for high throughputs
- › Can be used without leakage gas collector



### DISCHARGE AND CONVEYING VALVE

#### ZRD FOR POWDER

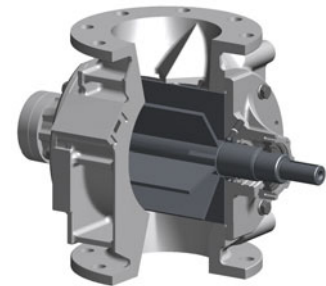
- › Smooth surfaces
- › Outside bearings, gas-purged
- › With pick-up tee for pneumatic conveying systems up to +1.5 bar (g)



### DISCHARGE AND CONVEYING VALVE

#### ZVD FOR POWDERS AND COARSE PRODUCTS

- › Product-gentle inlet geometry
- › Start-up from a stationary product column
- › Integrated leakage gas venting



- › Materials available: stainless steel, aluminium, grey cast iron, chrome-plated grey cast iron, nickel-plated grey cast iron
- › Option: surfaces with wear protection or Teflon coating
- › Hygienic series: polished surfaces ( $R_a \leq 0,8 \mu\text{m}$ )
- › All rotary valves suitable for pneumatic conveying up to 1.5 bar (g)

## OPTIONS:

### QUICK-CLEANING

- Fast and simple cleaning:
- › Rotor with quick coupling
- › FullAccessSystem FXS-1 hinge extraction device
- › Removable rotor
- › Hinged drive side plate FXS-2
- › Cleaning cover

### CERTIFIED ROTARY VALVES ESPECIALLY FOR CLEANING IN PLACE

- › Ideal for the highest sanitary and product quality demands
- › For fully automatic wet cleaning without dismantling the valve
- › For frequent cleaning – saves time and money
- › EHEDG approved and certified (EL Class I)

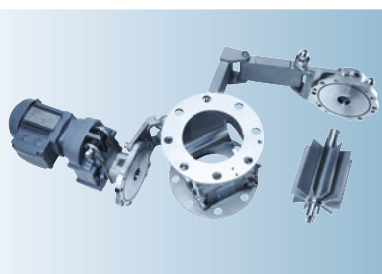
### ACCESSORIES

- › Chamfered rotor blades
- › Rotor with scraper blades for caking products
- › Rotor with reduced volume
- › Wear-protected versions
- › RotorCheck: electronic contact monitoring of rotor and housing

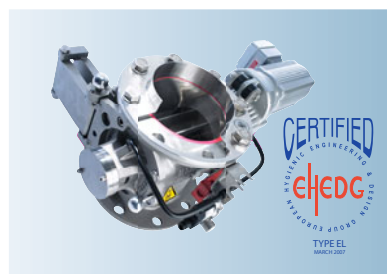
### ATEX-CERTIFIED VERSIONS

- › Inside: zone 0/20 (II1GD), Outside: zone 1/21 (II1GD), or zone 2/22 (II3GD)
- › ATEX protection system: pressure surge-proof up to +10 bar and flame surge-proof St1 and St2

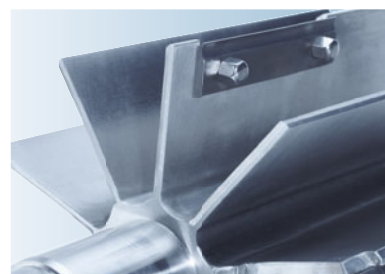
› QUICK-CLEANING



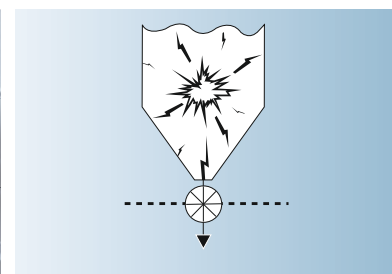
› CLEANING IN PLACE



› ACCESSORIES



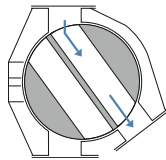
› ATEX



## GIVING THE RIGHT DIRECTION: COPERION DIVERTER VALVES

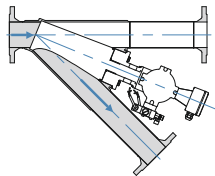
### TWO-WAY DIVERTER VALVE WZK

- › Parts in contact with product made of stainless steel, aluminium housing
- › DN 50 (2") to DN 265 (10")
- › For pneumatic conveying systems up to +5 bar
- › Smooth, easy-to-clean surfaces



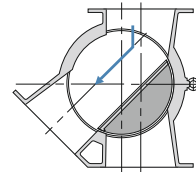
### TWO-WAY DIVERTER VALVE WYK

- › Made entirely of stainless steel
- › DN 65 (2.5") to DN 125 (5")
- › For pneumatic conveying systems up to +5 bar
- › Also available as WYK-CIP for cleaning in place!



### TWO-WAY DIVERTER VALVE WHK

- › Made entirely of stainless steel
- › DN 150 (6") to DN 350 (14")
- › For gravity pipes or pneumatic conveying systems up to +3 bar



### QUICK-CLEANING AS STANDARD FEATURE:

The cover can be opened quickly and easily and the rotary element can be removed, making cleaning and inspection fast and simple.

### OPTIONAL: CIP-CERTIFIED DIVERTER VALVE WYK

- › For the highest sanitary and quality requirements
- › CIP design and CIP drive permit fully-automatic wet cleaning without dismantling the valve
- › Certified for CIP by the EHEDG (EL Class I)

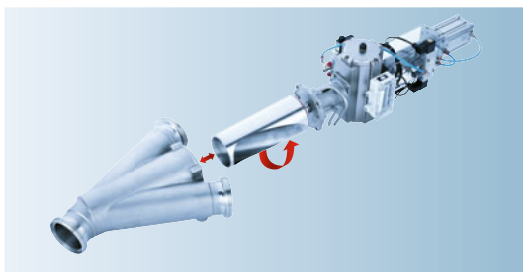
### EXAMINE PRODUCT QUALITY: SAMPLER PN 80

- › For regular extraction of product samples from the silo cone or gravity pipe
- › Material: aluminium or stainless steel
- › Option: quick cleaning

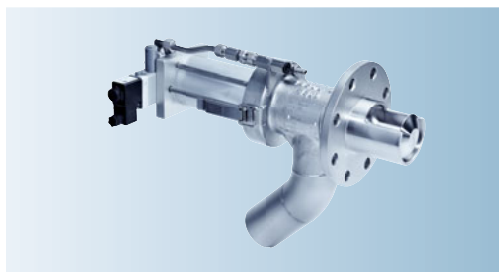
### SHUTTING OFF PRODUCT FLOW: SLIDE GATE VALVE FUS

- › Basic shut-off slide valve for silos and hoppers
- › DN 100 (4") to DN 600 (24")
- › Made of stainless steel

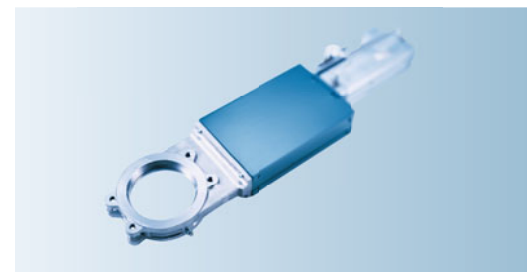
› WYK-CIP (DISMANTLED)



› SAMPLER



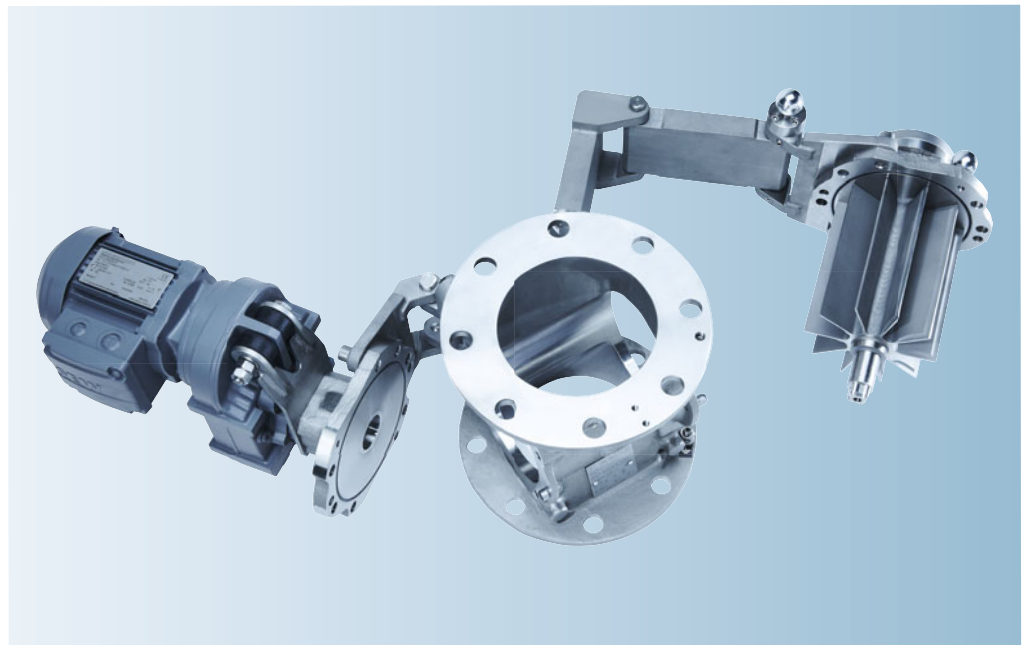
› SLIDE GATE VALVE



➤➤ Innovative technology for optimum operational safety: Coperion components for the food industry. With our many years of experience and all-around process know-how we are able to supply individual and efficient solutions for your production which are operationally safe and reliable, sanitary and easy to clean.

**YOUR BENEFITS:**

- Sanitary product design
- Operational reliability and durability
- Easy to clean: fast, efficient cleaning and inspection due to optimum accessibility
- Certified CIP versions (cleaning in place)



**EHEDG AND USDA COMPLIANT AND CERTIFIED VERSIONS AVAILABLE**

Coperion is an active member of the European Hygienic Engineering & Design Group. The latest developments and directives are therefore directly incorporated into the development of all components.

The USDA (United States Department of Agriculture) Dairy Grading Branch certifies components on the basis of stringent regulations regarding sanitary and easy-clean design.



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