



Hall 14 / Booth B19

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**Press release**

**Coperion at K 2016**

**Gentle dilute-phase conveying of plastic pellets**

*Stuttgart, October 2016* – Coperion GmbH, Weingarten/Germany, will be presenting its latest developments for gentle material conveying at its booth B19, Hall 14 at the K 2016. For the first time Coperion will be presenting the newly developed deflector elbow GAMMA-BEND NT, which prevents the formation of angel hair. In addition, Coperion will be showcasing its re-engineered and optimized ZV rotary valve for pellets. Further developments have allowed the throughput to be increased and noise emission significantly reduced. In addition, improvements to the rotary valve's housing have substantially lowered the gas leakage rate.

**GAMMA-BEND NT deflector elbow for the prevention of angel hair**

At K 2016 Coperion will be presenting for the first time its newly developed deflector elbow GAMMA-BEND NT for dilute-phase conveying of pellets. The deflector elbow effectively prevents the formation of angel hair, which would otherwise be generated particularly in critical, right-angled direction changes. The special geometric design of the bend keeps the pellets from sliding against the exterior wall, thus preventing the development of angel hair. Due to the deflector elbow's special design as a segmental bend, the pellet grains hit the elbow wall, ricochet, and are further conveyed directly in the bend. Minimal contact with the elbow wall also reduces the formation of dust significantly.

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The GAMMA-BEND NT can be used universally in conveying systems, as there is no buildup of product cushions and thus always consistently empties with no residue. This is of vital importance, particularly for product changes.

For the operation of a pneumatic conveying system it is important that the pressure drop at bends should be as low as possible. This is particularly important if several bends are used in a conveying system. In comparison to all other special deflector elbows in the market, the GAMMA-BEND NT has proven the lowest pressure drop, meaning that this bend is particularly energy efficient.

#### **Well tried and tested ZV rotary valve for pellets re-engineered and optimized**

Coperion will be presenting its re-engineered and optimized ZV rotary valve at K 2016. The inlet has been redesigned and the effective inlet area enlarged. As a result of this redesign, the maximum feeding capacity and throughput has been increased. An increase of up to 15% is possible, especially for smaller sizes. This increase in capacity is achieved with keeping consistently good operating conditions (minimum number of cut grains and smooth running).

Also the noise caused by leakage gas expansion, which is the main source of noise in high-pressure rotary valves (up to 3.5 bar differential pressure), has been reduced considerably by a new design of the expansion opening. Furthermore, the transformation of the elongated opening to a pipe connection was integrated in the cast. An additional consequence of the reduction in noise emission is that an adapter piece is no longer required. The ZV valve also now has a pipe connection that meets the standard.

The Finite Element Method (FEM) was used to calculate the cast housing, which optimized its rigidity while reducing the mass at the same time. This allows a narrow gap between the rotary valve and the housing, with the advantage of a low gas leakage rate when operating the new ZV pellet rotary valve.

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Coperion ([www.coperion.com](http://www.coperion.com)) is the international market and technology leader in compounding systems, feeding technology, bulk materials handling systems and services. Coperion designs, develops, manufactures and maintains systems, machines and components for the plastics, chemicals, pharmaceutical, food and minerals industries. Within its four divisions – Compounding & Extrusion, Equipment & Systems, Materials Handling and Service – Coperion has 2,500 employees and nearly 40 sales and service companies worldwide.



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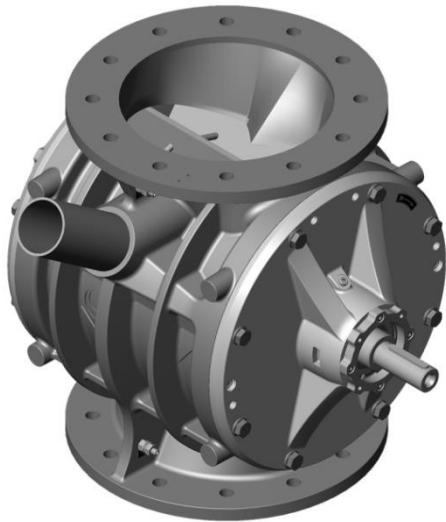
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*The special geometric design of the GAMMA-BEND NT deflector elbow keeps the pellets from sliding against the exterior wall, thus preventing the development of angel hair.*

*Image: Coperion, Weingarten*

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*The re-engineered ZV rotary valve has an increased feed-in power and significantly lowered noise emission, as well as reduced energy loss.*

*Image: Coperion, Weingarten*