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compounding & extrusion
materials handling
service

Coperion on K 2010
Hall 14, Booth B33

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Press Release

Coperion at K 2010 – Highlight: Die plate with an external diameter of 1.5 m

Pelletizers and Melt Pumps for High Capacity Plants

Stuttgart, August 2010. – Right on time for this year's K show (Oct. 27 to Nov. 3. 2010 in Düsseldorf, Germany) Coperion GmbH, Stuttgart, formerly Werner & Pfleiderer, will be presenting new machine sizes in their UG underwater pelletizer and MP melt pump series for high capacity polyolefin compounding plants.

Underwater Pelletizers: Breaking the 100 t/h barrier

An eye catcher on the Coperion booth B33 in Hall 14 will be the die plate from a UG 1.250, the largest underwater pelletizer in the world. It boasts a range of superlatives: The average cutting diameter is 1250 mm and it can have up to 11,000 die holes. Manufacturing the die plate, its wear protection as well as the uniform distribution of the melt onto the cutting ring present particular challenges. The new UG 1.250 allows throughputs in excess of 100 t/h for polyethylene and water flow rates of up to 1,500 m³/h. The hydraulic control elements and the drive system are based on technology that has proven itself in long term operation on other machine sizes. The first UG 1.250 will go into operation soon. A slightly smaller but similarly constructed UG 925 for polypropylene has been in operation since the middle of 2009.

Coperion also builds exceptionally large underwater pelletizers for thermoplastic elastomers. An example of this is a UG 750 which will go into operation at the beginning of 2011. The design and method of operation reflect the fact that TPE pellets tend to be very sticky. The axial water flow along the knife shaft into the cutting chamber and the radial water flow along the pelletizing

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knives towards the water chamber exit minimize turbulences in the cutting chamber. This results in fewer collisions between the freshly cut, tacky pellets, which prevents agglomeration.

Melt Pumps for up to 65 t/h of Polyolefins

Coperion presented in-house manufactured melt pumps for the first time at K 2007. Following successful installation and trouble free operation, in various cases for more than three years, the next model size, the MP 450 melt pump, will achieve a target throughput of up to 65 t/h. An MP 450 melt pump is currently in the final stages of installation. When processing polypropylene it will cover a throughput range from 30 to 50 t/h. Two further melt pumps of the same type with throughputs between 40 and 50 t/h for polyethylene are close to delivery to the client.

Coperion uses a well proven design for their melt pumps: A pair of involute gears run on hydrodynamic plain bearings lubricated by the polymer melt. These components are built into the housing that is sealed to the outside on both sides by a cover containing a contact-free threaded shaft seal. The detailed process dependent design factors, for example the type of cooling and the size of the operating clearance, are calculated and specified for each project and product. The melt pumps have single or twin shaft drive options.

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Dear Colleagues,
an MS-WORD file of this press release in English and German and
a printable-grade copy of the enclosed images are available for download at
http://www.coperion.com/technicalpress

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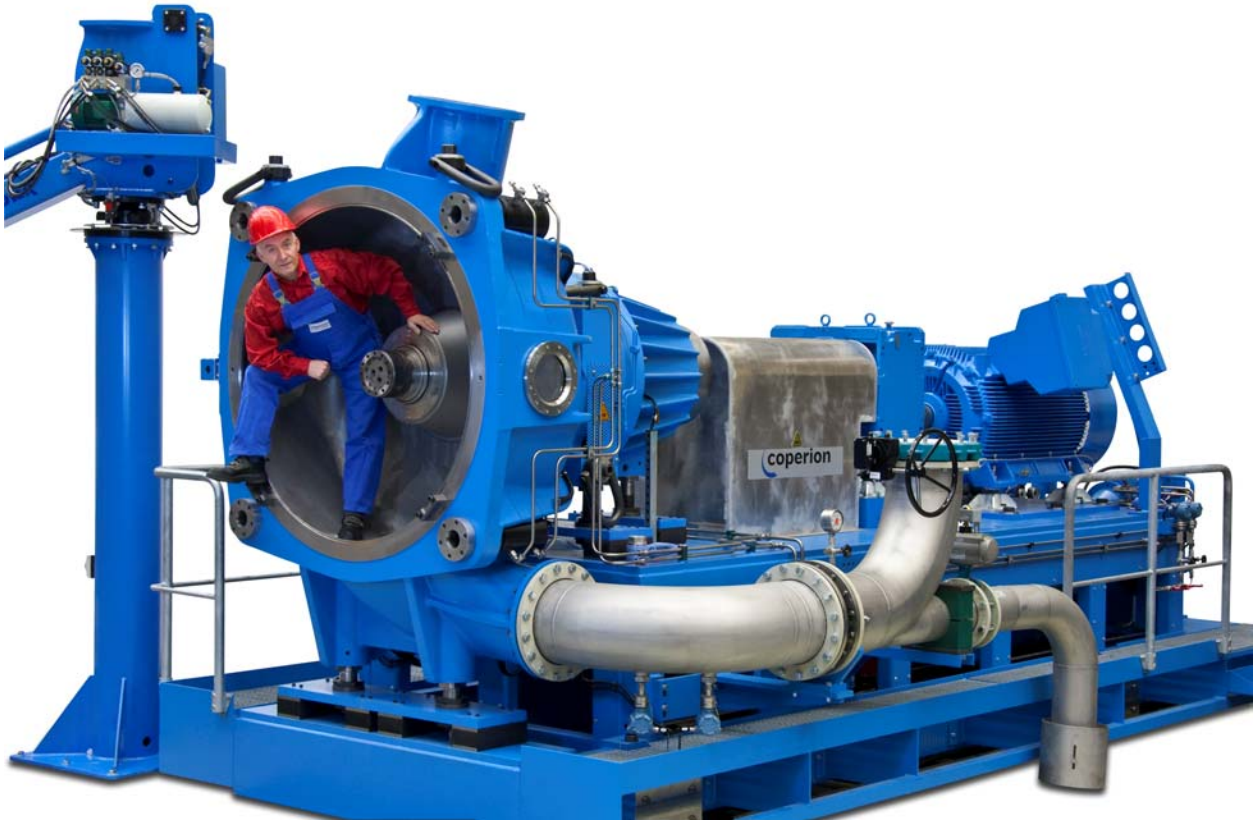

As well as mature, high performance technology the UG 1.250 underwater pelletizer has impressive dimensions.
Photo: Coperion, Stuttgart

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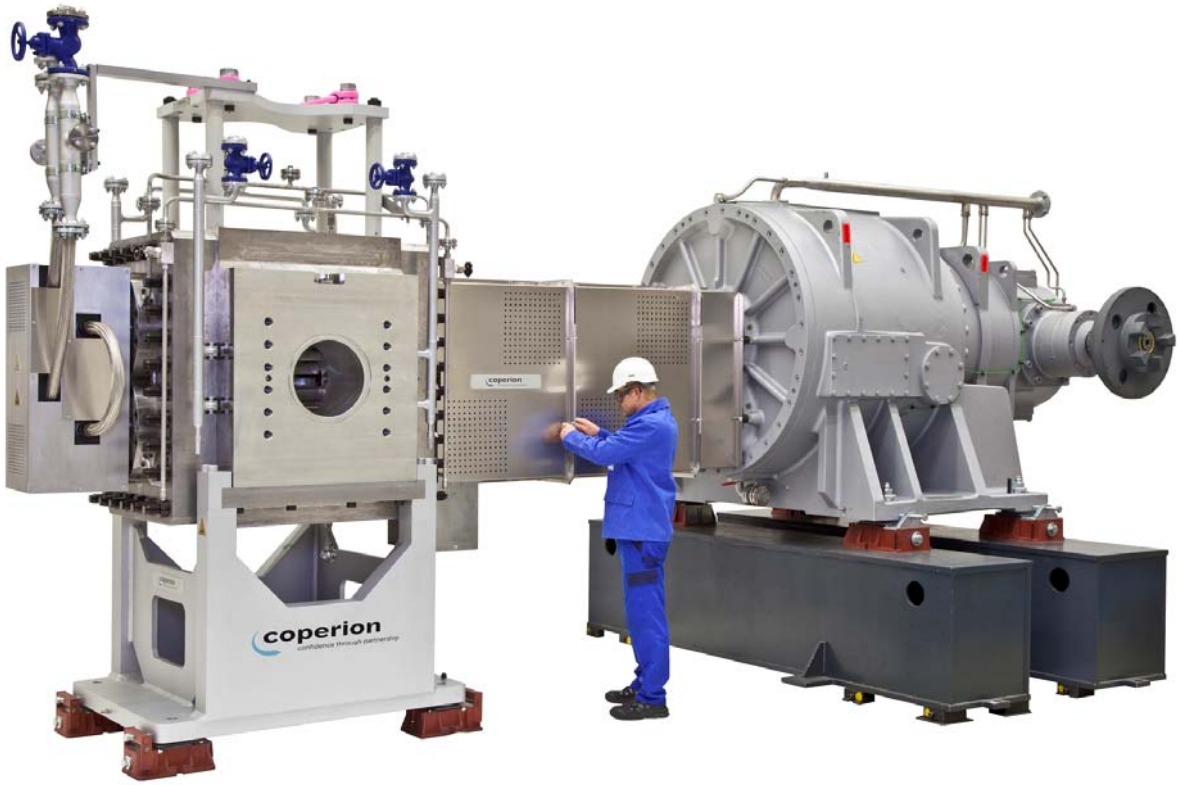

The MP 450, the so far largest melt pump size from Coperion's in-house production, can reach 65 t/h throughput with polyolefins.
Photo: Coperion, Stuttgart