New & Proven

ALPHA conviences users

Moenchengladbach

Machining centres of the ALPHA series are able to do the splits between New and Proven: Their concept is still new, but this innovative concept and its implementation has already been proven by the first machines in hard continuous operation. This is how Hosokawa Alpine Aktiengesellschaft, Augsburg, support their investment made in 2001 today. At that time, the internationally leading manufacturer of special machines such as plants for powder and particle processing and blown film processing ordered from Dörries Scharmann Technologie GmbH (DST) a "tailor-made" ALPHA. Since 2003, the five-axis machining centre at Hosokawa is used to machine heavy and large workpieces made from cast iron, CrNi and quenched steel: "Time savings are tremendous. On average, they amount to 60 percent. With some components we even achieve 80 percent", says Siegfried Wolf, the responsible department manager.

ALPHA machining center: highest productivity due to setup locations

At Hosokawa's, production area is a bit on the short side. That is why they were convinced by the small space requirement of the ALPHA including the tool magazine. The machining centre only needs app. 75 square metres in spite of traversing paths of 2,000 mm in the tree main axes and a maximum workpiece width of 1,820 mm. This already includes the area for the second pallet station for setting-up the next workpieces during the main machining time. Various workpieces make different demands on the machining centre, e.g. wet and alternate dry machining. In the case of cast or welded housings for powder and particle processing plants, heavy chip removal is top priority; five-axis-machining with complex freeform geometry, sophisticated boring operations and reaming is required for the heads of film blowing extruders.

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These requirements, e.g. inclined boring operations, are especially met by the NC tilting spindle. It saves additional clamping procedures, i.e. it saves time. Furthermore, the machining accuracy in only one clamping position is increased by its flexibility. The authorized signatory and engineering graduate Siegfried Wolf very positively judges the remote diagnosis function: "The direct access of DST service staff reduces site visits of engineers to a minimum and increases the availability and the productivity of the machining centre." In the meantime, the ALPHA has replaced two boring mills and has a greater performance than those mills.

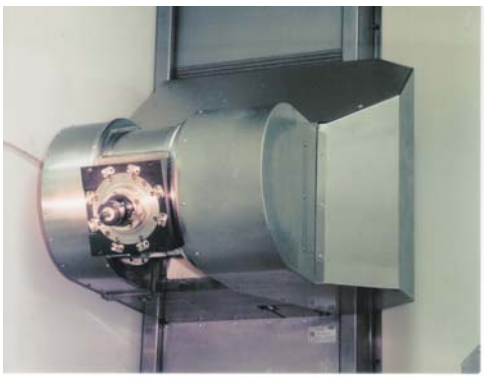
The technical data of the only three-year-old machining centre is still up-to-date: 35 kW power at 100 % continuous duty with 12 to 6,000 revolutions of the work spindle, maximum feed force of 25,000 Nm, pallet size of 1,000 x 1,250 mm, traversing speed in the axes X, Y and Z of up to 30 m/min and an acceleration of up to 4 m/s².

Number of Charakters: ca. 2.600

Underline:

1: The second pallet station increases the productivity of the five-axis machining centre ALPHA with traversing paths of 2,000 mm in all axes and presently contributes savings of 60 % on average.

2: Milling of freeform geometries or difficult inclined boring operations are part of the standard processes for the tilting spindle of the five-axis machining centre ALPHA – no matter whether wet or dry machining is concerned.



Tilting spindle of of the five-axis machining centre

For further information:

Dörries Scharmann Technologie GmbH
Public Relations/Marketing
Michael Schedler
Hugo-Junkers-Str. 12-32
D – 41236 Mönchengladbach
Tel.: +49(0) 2166 454 238
Fax: +49(0) 2166 454 477
E-Mail: information@ds-technologie.de
Internet: www.ds-technologie.de
oder:
Redaktionsbüro rgt, Gerd Trommer
Johannishofweg 7
D - 64579 Gernsheim
Tel.: +49(0) 6258/ 9320-30
Fax: +49(0) 6258/ 9320-32
E-Mail: rgt@mukomm.de

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Dörries
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