

## Press Release

### INDEX SpeedLine C42 / C65

#### **Innovative plate-type slide system gets thumbs up from the market Increased tool lives of up to 30 percent**

Esslingen. Already introduced to the market two years ago, the innovative production lathe SpeedLine C42 / C65 from INDEX-Werke GmbH & Co. KG has been given two thumbs up by the market. It is a CNC bar automatic in two spindle sizes, trained to perform uncompromising bar work. The technological highlights of this development have since proven to be a trend-setter. Its effective benefit to the customer in the form of high economy and productivity is paying off for the user in pure cash.

The innovative plate-type kinematics is setting standards in terms of damping and rigidity. The turret slides do not travel on the traditional linear slideways, but rather on flat, highly innovative sliding guides in the X and Z directions. The base plates of the turrets slide directly on the machine bed. The sliding pair consists of a hardened guide plate and ceramic-coated steel rails. Unlike the conventional multi-axis slideway systems, this design provides excellent damping properties and a multiple increase in rigidity. Even after one year of running continuously, no measurable wear could be detected on any component.

The advantages of this innovative solution are increased economy and productivity, resulting not least in an increase in tool life of 30% - determined by hard-turning experiments on the material 90MnCrV8. The plate-type slide system comprises glass scales in all axes and a direct linear encoder system. The traveling movements of the slides are effected by rod-kinematical drives on the rear of the cast iron machine bed.

The working area is a model of clear organization: Three tool systems on two work spindles of identical design allow shorter cycle times of up to 30 percent compared to two tool turrets, a maximum of 36 tool stations (all driven) and, if desired, two Y-axes for 3 turrets on two work spindles. In addition to that, the clearly organized working area allows simultaneous machining on three turrets and two work spindles.

The counter spindle has one Z-axis and one X-axis, which can be coupled electronically to the third turret. This means that by virtue of the synchronization with

the bottom slideway, which carries the third turret at the rear, three tools can be used simultaneously.

An additional feature of the C42 / C65 is its polygon generating capability. In this case, the counter spindle operates as a polygon turning unit, with the cutting head mounted directly on the face of the chuck and no additional equipment being required. The very high momentum of inertia and the stiffness of the counter spindle assure vibration-free cuts and long tool lives, even on high-alloy steels.

Wherever speed and short production times are essential, i.e., in the area of production lathe and automatic lathe machines, the INDEX SpeedLine C42 / C65 has proven to be extremely economical since its introduction to the market. Its main and counter spindles feature a bar capacity of 42 mm (or 65 mm with same machine size), a maximum speed of 6300 rpm (5500 rpm), a drive power of 20 kW and a torque of 105 Nm (at 100% duty cycle). Turret slides and counter spindles have rapid traverse rates of 25 m/min (50 m/min) in both the X and Y directions.

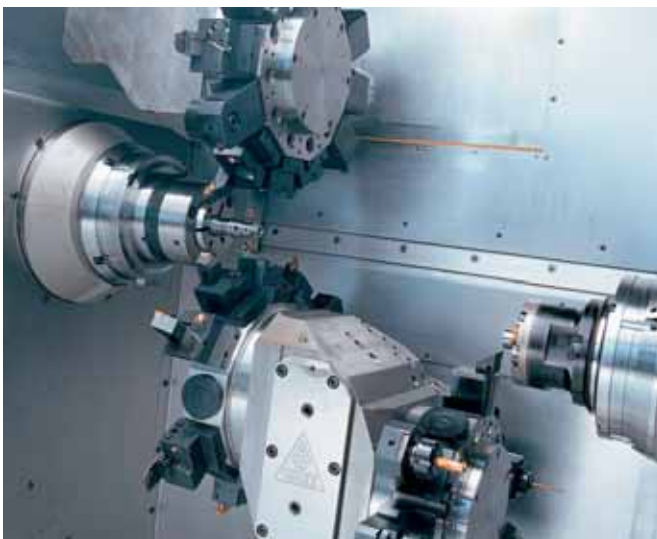
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# INDEX

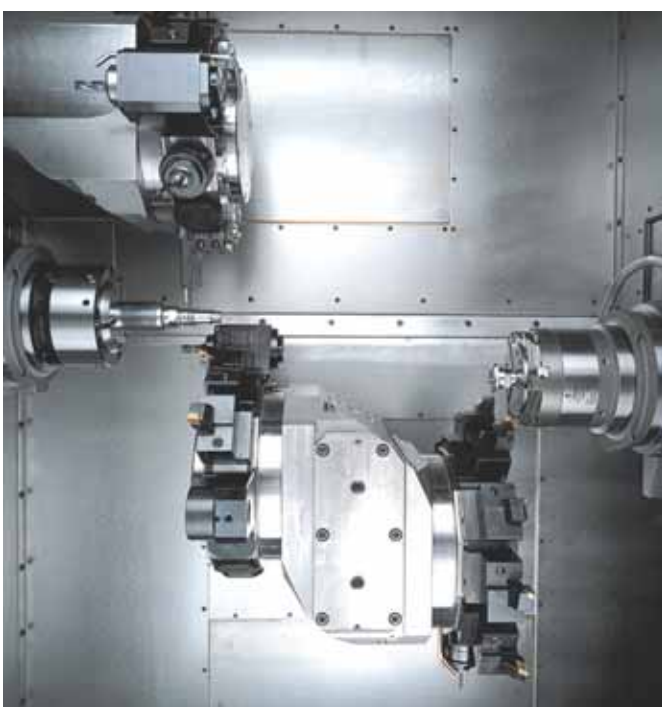
Press release 06/06  
C42 / C65



**Pic 1:** INDEX C65



**Pic 2:** Work area



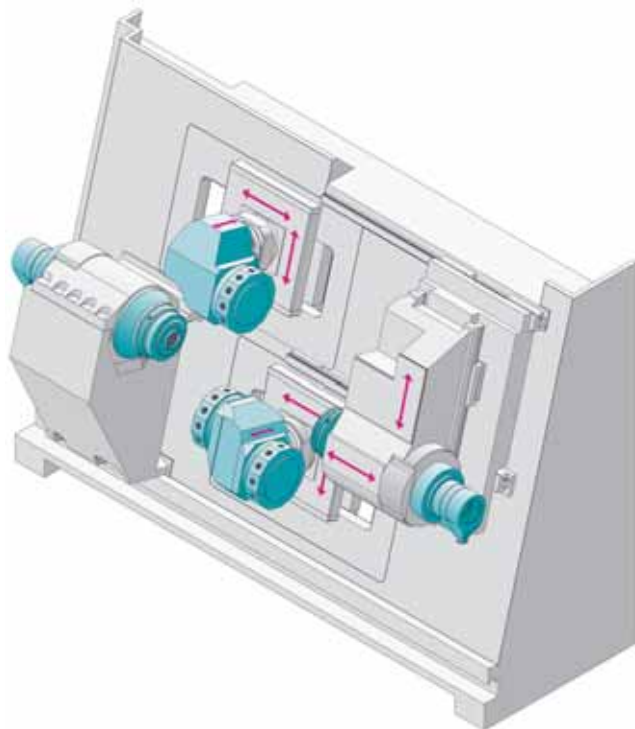
**Pic 3:** 3 turrets in action

# INDEX

Press release 06/06  
C42 / C65



**Pic 4:** Polygon milling with counter spindle



**Pic 5:** Kinematics