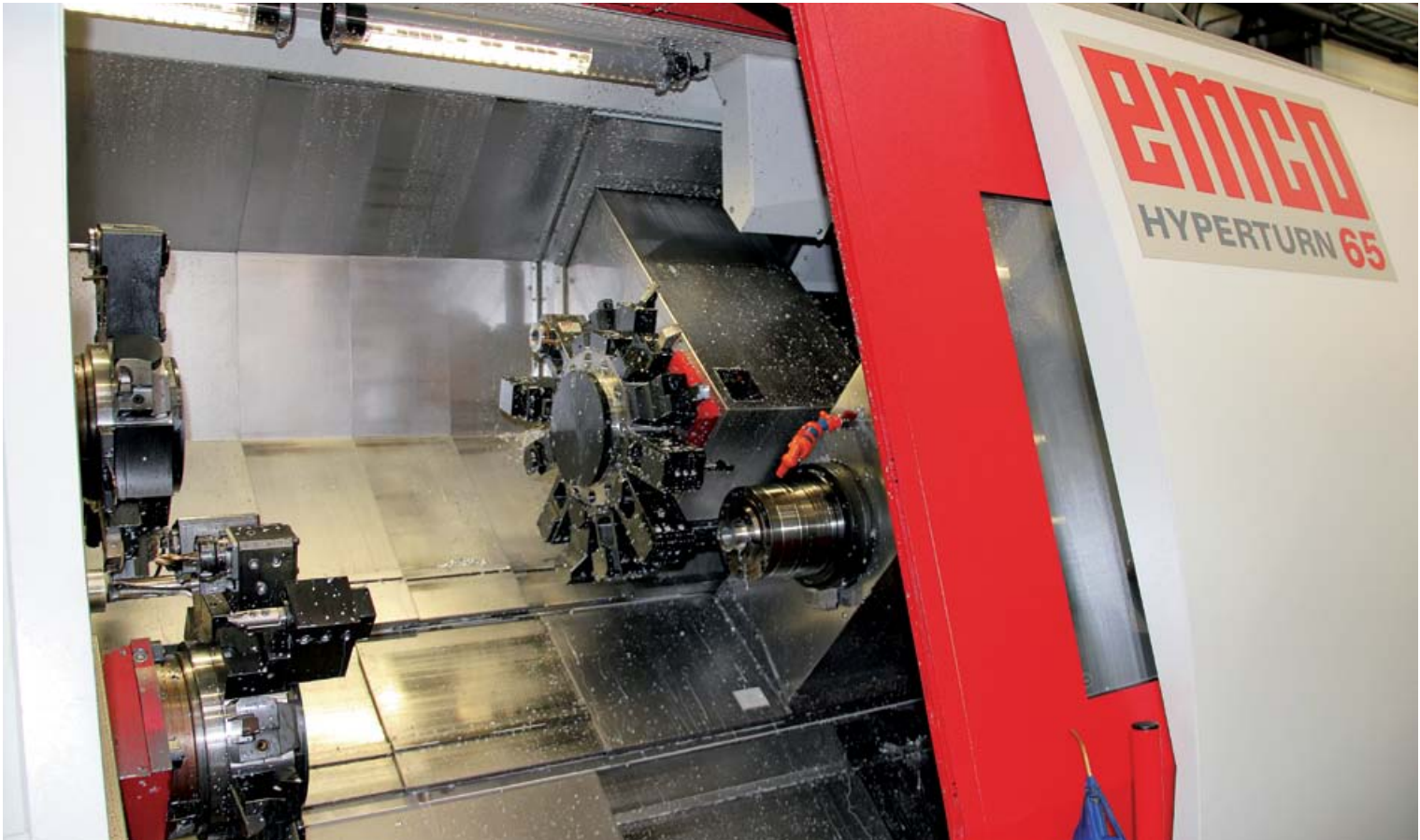


[All good things
come in threes]



A generous work area, with a 1300 mm spindle distance, enables a job with three turrets without any risk of collision.

[Gebert GmbH & Co. KG]

Richard Gebert founded his company in 1992 and started it as a one man operation with high-volume productions of angle and ball joints, ball and rivet pins, splint pins and fork heads. Thanks to great dedication to service, it is today a modern 30-man operation that serves customers in the automotive, machine, agricultural machinery, electrical devices and ventilation industries. In 1999, the company became a "GmbH & Co. KG". The modern machine park consists of rotary transfer machines, CNC lathes and single spindle and multi spindle automatic lathes. The original motto of the company, "Our customers' success is also our success", still motivates the attitudes and actions of its employees. Another component in the company's success is the willingness to continuously learn, exemplified by company owner Richard Gebert and his sons, Jens and Kai.



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[Requirements]

- Suited for short, medium and prototype production
- Complete processing and manufacturing of different lot sizes
- Reduced cycle times coupled with high flexibility
- Convenient workshop programming with ShopTurn - Multichannel
- 3D simulation of the chip-removal



If you want to use a story to explain what “entrepreneurship” is, then the history of Gebert is good material. Company founder, Richard Gebert, took the path to independence to realize his ideas and conceptions. And he succeeded - initially as a one man operation - his idea was to implement an improved production tool with a machine he built himself. In the early years, it was classic high-volume production of angle and ball joints, ball and rivet pins, clevis pins, fork heads, and joints. Soon it was clear that the quality standards required by Richard Gebert were best achieved if he worked autonomously as much as possible. A few years later, he thus invested in several single-spindle automatic lathes.

Jens Gebert explains his business development philosophy: “We produce around 10 million parts per year and work almost exclusively with “off the shelf” solutions. At the same time, we have designed our machinery so that we can supply all kinds of parts in any quantity by ourselves. We are largely independent of suppliers. Thus, quality and reliability are absolutely under control.” The problem until now has always been the short runs, because there wasn’t a really good solution



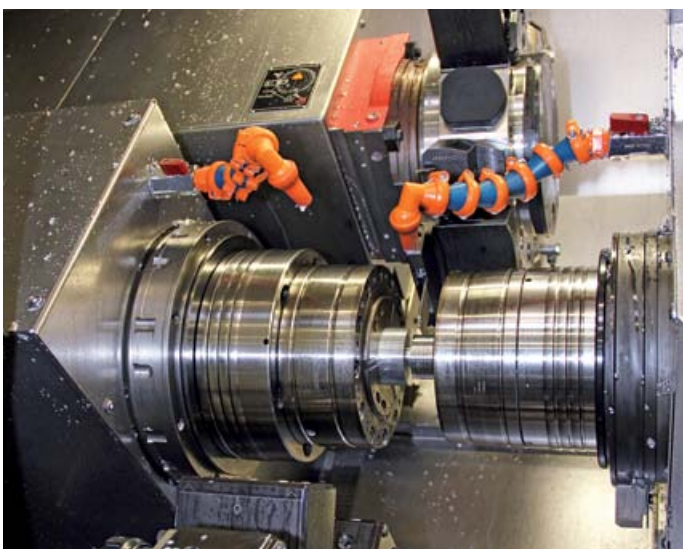
Examples of work pieces, made with the HYPERTURN 65-TRIPLETURN

on the market with the existing machines with single and multi-spindle machines.

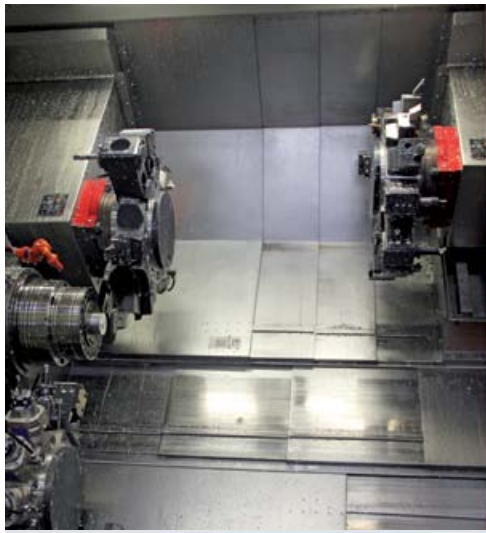
Accordingly, Gebert was looking for a machine that can produce a wide variety of lot sizes with attractive production time.

The main reasons behind investing in the Hyperturn 65 were to achieve more flexibility and efficiency in the production of batches of 500-2000. The attractive unit time and the relatively high removal rates, which are achieved with the third turret, facilitated the decision since it was capable of handling all customer workloads. Richard Gebert Sr. and his sons, Jens and Kai Gebert, were right, and they had extended the company’s production capabilities.

Jens Gebert clarified the requirements: “We were looking for an easy and quick to set up machine that was also equipped with a Shop Turn”“. The Siemens CNC with Shop Turn allows rapid and efficient program generation of production cycles and tool management. As Jens Gebert added: “This is an invaluable asset; especially for short range production.”“



Parts are taken up to the spindle with grooving system. Both spindles run in synchronised speed and position.



3 turrets with up to 36 fixed or driven tools. Three Y-axes provide maximum flexibility.

’ The gain in flexibility is certainly a great advantage, at the same time we can significantly reduce cycle times with the third turret, so the Hyperturn is also fitted for volume production.



Jens Gebert, Director Gebert GmbH & Co. KG



Pivotable and extendible control unit for optimum ergonomics for programming and running the machine.

Other highlights include 36 driven tools, all of which operate at speeds up to 5,000 rpm. The Y-axis traverse is 100 mm. In combination with the high standard main and counter spindles (max. 29 kW and 5,000 min⁻¹), this offers the user gets

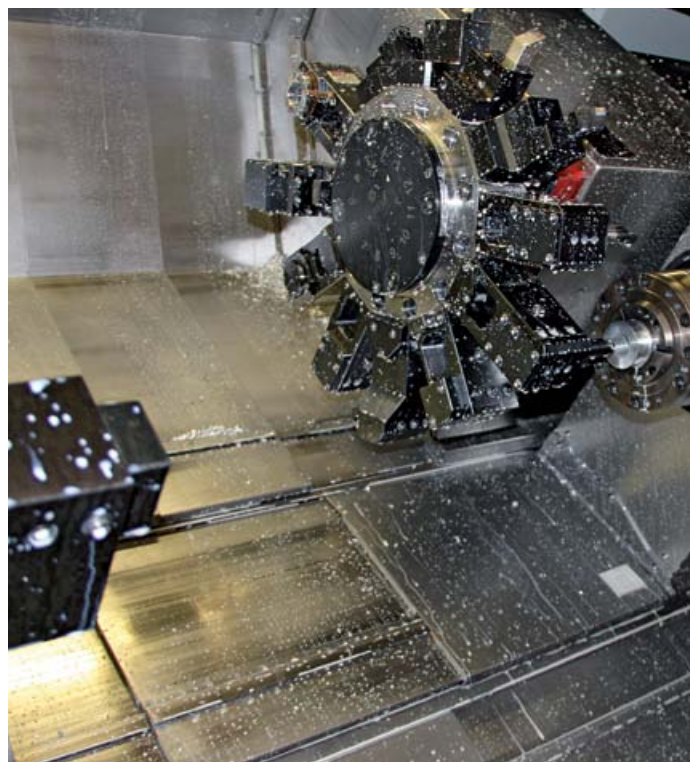
best in class technical possibilities and economic benefits. This increases the spindle distance to 1,300 mm and offers a larger working space. Specifically, it means greater freedom of movement and less risk of collision when working with three tools simultaneously. The identical spindles with 65 mm bore allow the loading and unloading of bars or long workpieces (optionally up to a diameter of 77 mm). Gerhard Meisl, Head of Product Management at EMCO: “The Hyperturn 65 is based on a modular system, from which the customer can configure “their own” machine in line with their exact specifications to match production runs and their manufacturing philosophy”.

With its modular design, the Hyperturn 65 exactly matches the Gebert philosophy. Richard Gebert said: “Our philosophy is to complete bar turning in the shortest possible time. To help us do this, the third turret is very welcome”.

Source: “Dreifach ist einfach gut”, CR Helmut Angeli, NCF May, 2012



Finished parts container



Free chip removal due to the slant bed design.

[Technical data]

HYPERTURN 65

Work area	
Swing over bed	660 mm (25.0")
Swing over cross slide	540 mm (21.3")
Distance between spindle noses	1300 mm (51.2")
Maximum turning diameter	500 mm (19.7")
Max. part length	1000 mm (39.4")
Max. bar-stock diameter	65 (76.2) mm ((2.6") (3.0"))
Travel	
Traverse path X1 / X2 (HT65 DUOTURN)	260 / 210 mm (10.2 / 8.3")
Traverse path X1 / X2 / X3 (HT65 TRIPLETURN)	260 / 260 / 210 mm (10.2 / 10.2 / 8.3")
Traverse path Z1 / Z2 (HT65 DUOTURN)	1050 / 1050 mm (18.1 / 18.1")
Traverse path Z1 / Z2 / Z3 (HT65 TRIPLETURN)	460 / 460 / 1050 mm (18.1 / 18.1 / 41.3")
Traverse path Y1 / Y2 / Y3	100 (+ / -50) mm (3.9" (+ / -2.0"))
Main spindle	
Speed range (infinitely variable)	0 – 5000 rpm
Maximum torque	250 Nm (184.4 ft/lbs)
Spindle nose DIN 55026	A2-6 (A2-8)
Spindle bearing (inside diameter)	105 (130) mm (4.1" (5.1"))
Spindle bore (excluding draw-back rod)	73 (86) mm dia. (2.8" (3.4")) dia.
Counter spindle	
Speed range (infinitely variable)	0 – 5000 rpm
Maximum torque	250 Nm (184.4ft/lbs)
Spindle nose DIN 55026	A2-6
Spindle bearing (inside diameter)	Ø 105 mm (4.1")
C-axes	
Resolution	0.001°
Rapid traverse	1000 rpm
Drive power	
Main spindle (AC integrated-spindle motor)	29 kW (38.9 hp)
Counter spindle (AC integrated-spindle motor)	29 kW (38.9 hp)

Tool turrets top and bottom	
Number of tool stations	3 x 12
VDI shaft (DIN 69880)	30 (40) mm (1.2" (1.6"))
Tool cross-section for square-shank tools	20 x 20 (25 x 25) mm (0.8 x 0.8" (1.0 x 1.0"))
Shank diameter for boring bars	32 mm (1.2")
Tool indexing time	0.7 sec
Driven tools	
Speed range	0 – 5000 (4500) rpm
Torque	25 Nm (18.4 ft/lbs)
Drive power	6.7 kW (9.0 hp)
Driven tools	3 x 12
Feed drives	
Rapid speed X1 / X2 / X3	30 m/min (1.2"/min)
Rapid speed Z1 / Z2 / Z3	30 m/min (1.2"/min)
Rapid speed Y1 / Y2 / Y3	12 m/min (0.5"/min)
Feed force X1 / X2 / X3	5000 N
Feed force Z1 / Z2 / Z3	8000 N
Coolant system	
Tank capacity	350 l (77 gal)
Pump capacity	3 x 2.2 kW (4.0 x 2.9 hp)
Power consumption	
Connected load	46 kVA
Compressed air	6 bar (87 PSI)
Dimensions	
Height of center above floor	1300 mm (51.2")
Overall height	2340 mm (92.1")
Required space L x D (without chip conveyor)	3950 x 2400 mm (155.5 x 94.5")
Total weight	approx. 9500 kg (20943.9 lb)
Safety devices	
	CE compliant