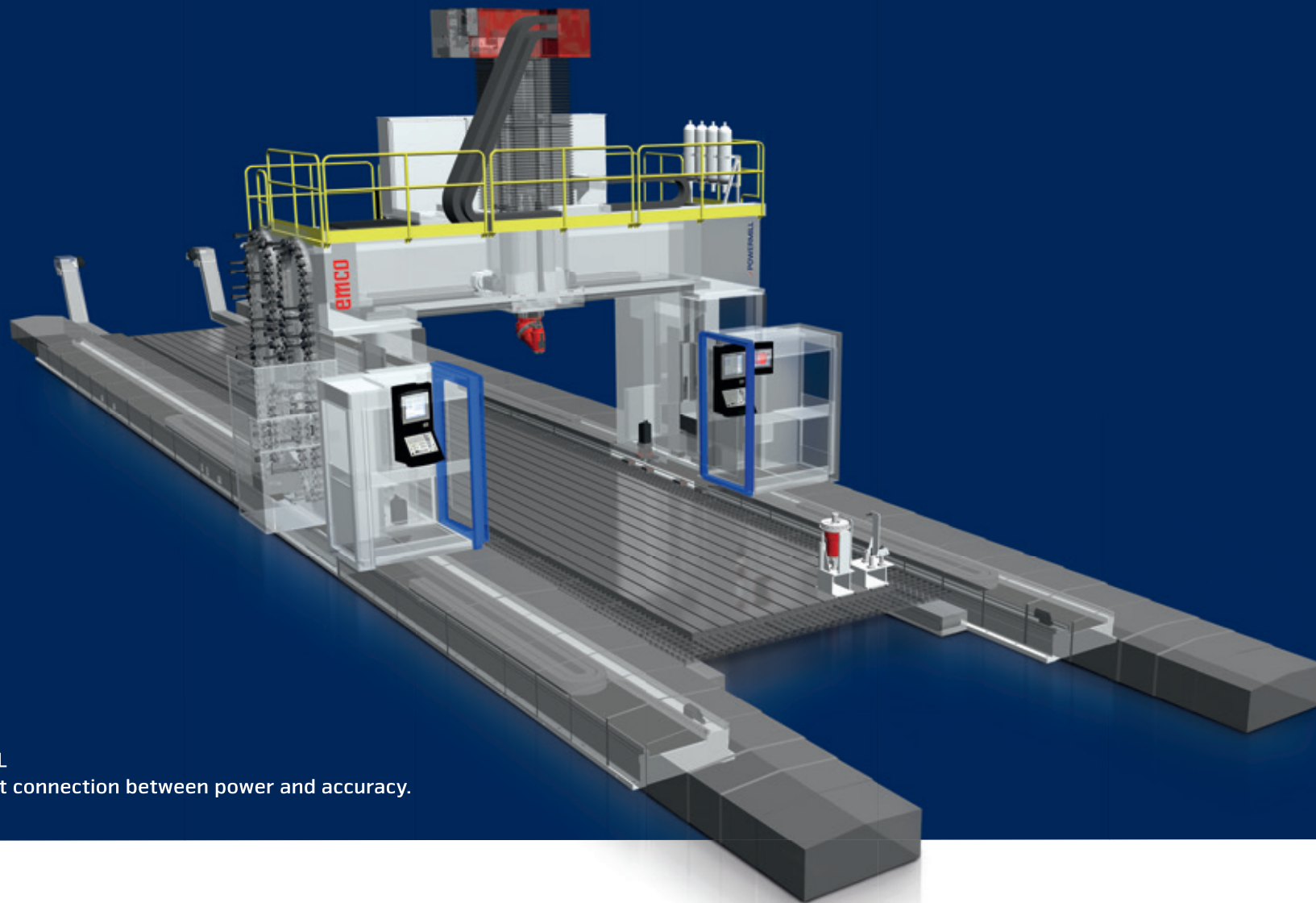


**emco**

/ PRODUCTIVE LARGE-SCALE MACHINING



POWERMILL  
The perfect connection between power and accuracy.

### Customer requirements and realisation

- ✓ Increasing tendency towards machining of larger parts
- ✓ Reduction of unproductive downtimes
- ✓ Two independent work zones
- ✓ Availability of spare parts incl. replacement heads

### Long-Standing Cooperation

In fact, Agrostroj and Emco Intos have been cooperating for decades. EMCO's first CNC machines, which were Agrostroj's very first CNC machines too, were two smaller lathes acquired around 1987.

„Another request arose as a result of satisfaction with the machines,” Robert Koziak recalls. „Back then, we supplied similar technologies to several companies in the Pelhřimov region, and it was because of the great experience that the management of Agrostroj fell back on EMCO. They knew that they have two Emco machines that work without any problems all the time. Thus, the enquiry was made and four lathes were delivered between 2012 and 2013, including a four-metre CNC centre lathe with Sinumerik control.”

In 2017, Emco Intos employees were invited by Agrostroj's management to take part in another project, the outcome of which was the purchase of a Powermill. Investing in this machine was a logical step towards digitised production. Miloš Hořejší emphasises that there is an ever-growing demand for higher quality and increased precision. What is more, there is an increasing tendency towards the machining of larger parts.

The machine the company used to work with was one with an 8-metre table from TOS Kuřim. However, the efficiency of the machining process needed to be increased. „This was because the handling of 6-metre welded parts or the retooling of the clamping fixtures resulted in unproductive setting efforts and a standstill of the machine's milling spindle,” outlines Miloš Hořejší.

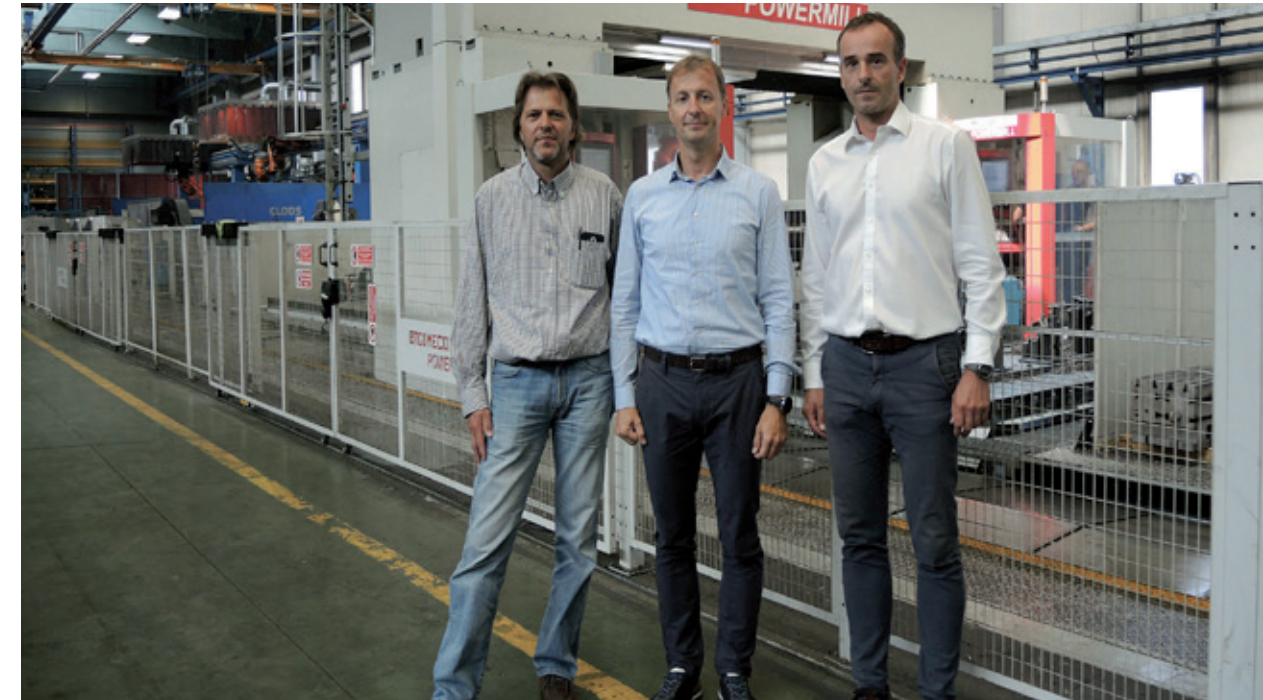


### The Powermill

Hence, the company decided to double the travel distance from eight to 16 metres. The aim was to have two independent work zones which would allow retooling the clamping fixtures or picking up other parts while the machine was running. Agrostroj opted for the Powermill, a gantry milling machine characterised by extraordinary rigidity, precision and motion dynamics. The gantry bridge comes in a box-in-box design, which allows for the efficient machining of large workpieces with high accuracy requirements. The Powermill is able to efficiently machine all types of mechanical components, without ever compromising on the maximum quality and precision it offers. However, flexibility and dynamics are not the only advantages offered by this new gantry milling machine. The production and planning processes in both work zones are supported by the machine's precision and new EMCOConnect-based 4.0 information technology. As a matter of course, precision and dynamics are advantages which are essential to any new investment. What should also be taken into account is the new machine's energy efficiency, for EMCO MECOF fulfils all European criteria for funding.

### Focus on the Construction

Characterised by extensive experience in the machining and handling of large parts, EMCO MECOF machines are always designed with the assistance of experienced personnel and project managers. The customer always receives support and counselling with regard to every aspect surrounding the machine (e.g. the planning and construction of the foundation). Reliable rack-and-pinion drives, which are moved by electronically pre-tensioned gears with extremely high precision and without free play, create the high dynamics in the axes. „This turned out to be one of the reasons that ultimately confirmed our choice,” says Miloš Křenek. „Many manufacturers offer the type of construction that comes with the machine bed built into the foundation and the gantry put atop. However, only MECOF offers a box-in-box (twin-bridge) solution that allows controlling the headstock in a fourfold way, which in turn increases both the rigidity and the guide quality. Thus, it is also possible to implement travels in Z of up to 2,500 mm. „All these are design aspects that you have to take into account when choosing a machine.” Managing director



Milos Krenek, Managing Director Agrostroj (picture middle), with Robert Koziak (left), Zdenek Pilecky (right) in front of Agrostroj's Powermill

Miloš Křenek concludes. „Customers of companies such as Volvo, DAF and Scania receive our deliveries just in time, which is why we cannot afford the slightest delay due to design faults in the machine. In addition to the sales price, the after-sales service and support from the technology supplier must also be taken into account. All replacement parts are delivered within 24 hours, and for more complex assemblies – such as

the universal milling head in our case – EMCO Mecof offers the possibility to borrow replacement heads.’ By the way, the management of Agrostroj is currently considering the purchase of another EMCO turning machine. So, there are exciting times ahead for EMCO!



2,500 employees, 230,000 m<sup>2</sup> of space with production halls and high-precision machines: these are the key figures of Czech agricultural machinery manufacturer and component supplier Agrostroj Pelhřimov. The most recent addition to the company's machine park is a Powermill, a gantry milling machine manufactured by Emco Mecof.

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# TECHNICAL DATA

## Linear axes

Longitudinal axis travel	6000 and more (in parts of 2000 mm)
Cross axis travel	4000 - 5000 - 6000 - 7000 mm
Vertical axis travel	1500 - 2000 - 2500 mm
Feedrate	30 m/min

## Vertical slide RAM

Section	550 x 640 mm
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## CNC-control

Heidenhain	TNC 640 HSCI
Siemens	840D sl

## Motor spindle

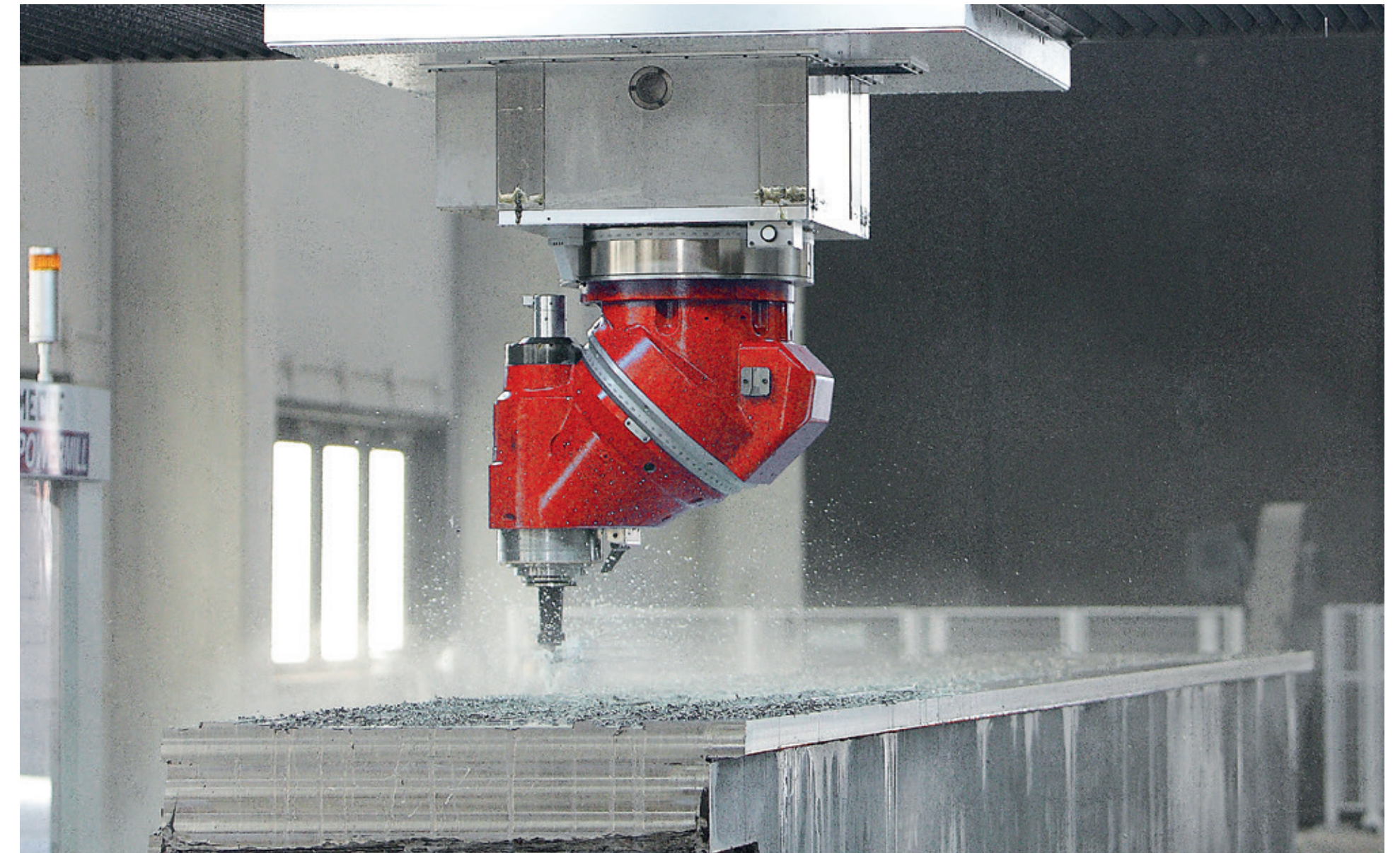
Standard	40 kW 1200 Nm
Option	50 kW 1500 Nm (S1) 61 kW 1800 Nm (S6)

## Workpiece/ tool cooling system

Low pressure	28 l/min, 6 bar
High pressure (through the spindle)	20 l/min; 20 / 40 / 60 bar

## Standard options

Full 5-axis universal milling head	6000 rpm
Milling head with offset spindle	3000 rpm
Universal milling head with torque-motor and High-speed spindle	12000 / 20000 / 24000 rpm
Full 5-axis fork-type milling head with torque motor and high-speed spindle	12000 / 15000 / 20000 / 24000 rpm
Automatic tool magazine	48 / 64 / 80 / 120 pockets
Automatic head magazine	2 / 3 pockets



beyond standard /

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