4-axis machining centres

H

HELLER

HELLER solutions: **Knowing how it’s done.**

Tailor-made off the peg

The perfect 4-axis machining centre must be capable of being configured to your requirements, produce reliably even under extreme loads and offer a fair price/performance ratio. Our solution: HELLER H series 4-axis machining centres. Components that have been reliably used in mass production for years coupled with a high dynamic guarantee you robust processes – even at their limits, seven days a week in 3-shift operations.

All information available at:
www.heller.biz/en/h

Key facts

_ horizontal 4-axis machining centres with pallet changer as standard

_ designed for highly stable processes and highly resilient even at its limits

_ highly standardised and Individually configurable

_ high productivity through efficient performance and short idle times

_ short chip-to-chip times thanks to the quick tool changer and high axis dynamic

_ robust and reliable technology for high availability and longevity

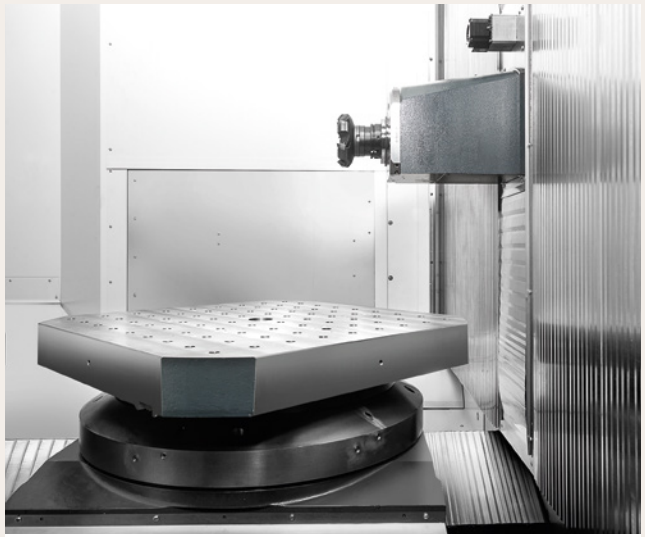
_ can be used for a wide range of different parts and materials

_ ideal solution for the series production of small to medium batch sizes

_ easy to automate with workpiece or pallet automation

_ broad range of sizes suitable for almost any workpiece

At a glance



Machine concept

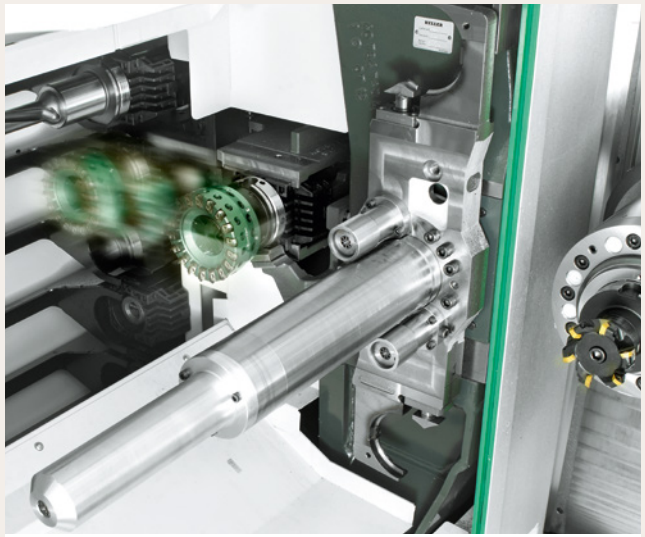
The rigid design and topology-optimised structural components are the basis from which the H series achieves its high cutting performance and accuracy. You can also rely on top quality – with high productivity.

_ horizontal 4-axis machining centres
_ the table executes the feed movement, the column traverses in the X-direction and carries the spindle unit
_ high stability and damping in the force flow through topology-optimised structural components from cast iron
_ linear axes with stable roll guides for high feed forces driven by ball screws
_ direct, absolute measuring systems (glass scales) for optimised precision
_ rotary axis B executed as an NC-rotary feed table with gear drive for high circular milling torque and damping
_ pallet changer as standard

Machining units

Spindles "Made by HELLER" are among the highlights of our H series. Thanks to in-house production expertise, they guarantee you the highest possible machining quality and, above all, process stability and optimised performance in operation.

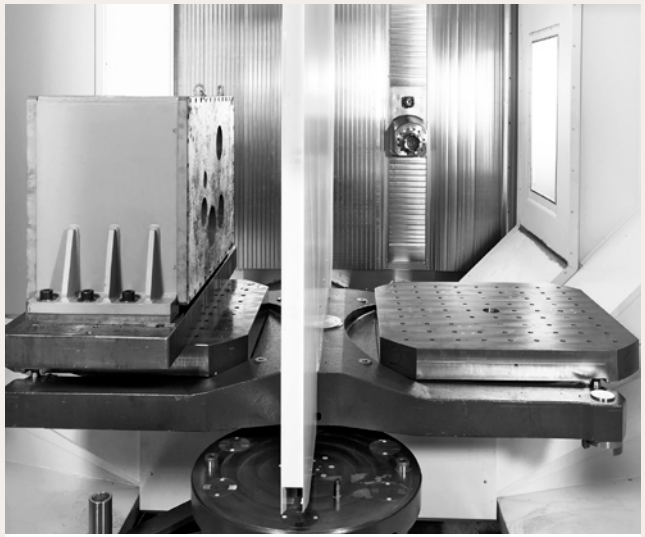
_ 3 spindle units with directly driven spindles for machines with HSK-A 63 suitable for all applications
_ 5 spindle units for machines with HSK-A 100, including 3 with gear units for extreme torque requirements
_ rigid cast iron guide slide with high dynamic stiffness and damping
_ high precision through compact overall dimensions and spindle neck cooling
_ HELLER zero spindle system for fast and simple spindle replacement



Tool management

Short tooling times and short non-productive times – what you can rightly expect from the H series. The tool changer with two NC-axes achieves maximum precision and optimum movement sequence for short tool change times. The result, in combination with a high axis dynamic, is short chip-to-chip times.

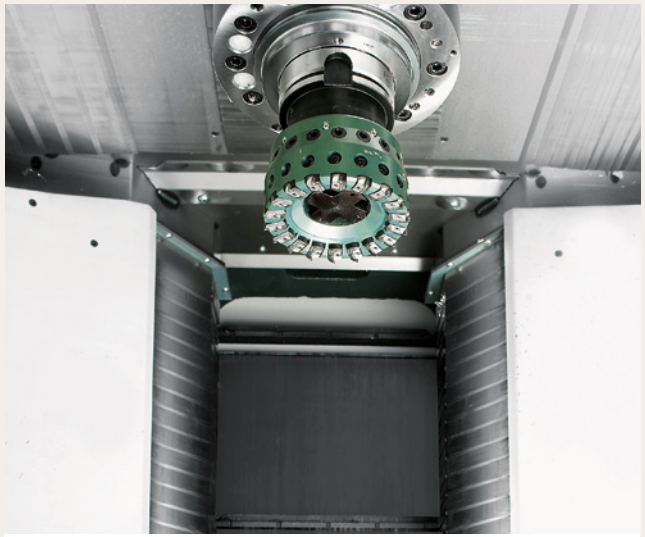
_ chain-type magazines with up to 240 places for machines with HSK-A 63 (SK/BT 40) or up to 150 places for machines with HSK-A 100 (SK/BT 50)
_ always precise tool provision during machining through traverse attachment between chain and tool changer
_ rack-type magazines with 409 places for machines with HSK-A 63 or up to 425 places for machines with HSK-A 100 (SK 50)
_ tool changer with two NC-axes and high dynamic for short chip-to-chip times



Workpiece management

The H series knows no bounds when it comes to workpiece size and weight. The machine's pallet changer concept permits a total payload of up to 16 t. The H series works to a high degree of precision even with this workpiece weight.

_ pallet changer with (CP) with lift/swivel principle and a total payload of up to 8 t (16 t for H 16000 with push/swivel principle)
_ NC-rotary feed table with gear drive for high tangential and circular milling torque
_ YRT bearing for high rigidity and highly reliable tilting moments thanks to compact design
_ infinitely rotating, manual workpiece setting station, lockable at 90° indexing with foot unlocking
_ optionally with media interface for hydraulic workpiece clamping
_ automatic workpiece loading by robot or pallet automation



Supply and disposal

Extremely resilient and reliable machining centres, the H series machines are made for production. To keep your results precise at all times, we have an efficient solution for disposal wherever chips accumulate.

_ central media supply area at the rear
_ coolant units (optional) with paper band filter technology or vacuum rotation filter technology with high tank volume
_ internal coolant supply at 50 bar (70 bar as an option)
_ work area shower with numerous adjustable nozzles flushes the workpiece and the fixture
_ free chip fall and central chip conveyor for quick disposal to the rear (H 2000 - H 6000)
_ chip disposal with spiral conveyors to the rear to a transverse conveyor (H 8000 - H 16000)
_ steep side walls, concertina covers with self-cleaning effect, continuous flushing of the machine bed accelerates chip disposal

Operation, maintenance and control

No matter whether on the workpiece setting station, during tool setting, programming or maintenance – your comfort and safety and, above all, the productivity of your manufacturing facility is paramount at all times.

_ clear operating concept and good accessibility to all work areas
_ smooth-running doors and optimally arranged controls
_ supply units and maintenance points concentrated at just a few locations
_ all maintenance-relevant components can be accessed quickly and easily
_ Siemens SINUMERIK 840D sl and Fanuc 31i-B state-of-the-art machine controllers
_ optional: HELLER Operation Interface with practical additional functions, and also main operating unit designed as a console with 24" multi-touch screen (only with Siemens)

Technical data

		H 2000	H 4000
Positioning range X/Y/Z	mm	630/630/630	800/800/800
Tool shank SK/BT for selected units available as alternative	Size	HSK-A 63	HSK-A 63
Clamping surface Nominal size	mm	400 x 500	500 x 630
Clamping load Power (Speed)	kg	800 (500)	1,400 (800)
		H 5000	**H 6000**
Positioning range X/Y/Z	mm	800/800/800	1,000/1,000/1,000
Tool shank SK/BT for selected units available as alternative	Size	HSK-A 100	HSK-A 100
Clamping surface Nominal size	mm	630 x 630	630 x 630
Clamping load Power (Speed)	kg	1,400 (1,000)	1,400 (1,000)
		H 10000	**H 14000**
Positioning range X/Y/Z	mm	1,600/1,400/1,300	2,400/1,600/1,600
Tool shank SK/BT for selected units available as alternative	Size	HSK-A 100	HSK-A 100
Clamping surface Nominal size	mm	1,000 x 1,000	1,000 x 1,000
Clamping load Power (Speed)	kg	4,000	4,000

[ ] = optional values

Productivity over the full spectrum

4-axis machining centres

H

Tailor-made off the peg: Flexibly configurable 4-axis machining centres with unbeatable productivity for unique capacity

5-axis machining centres

HF

Productivity in 5 axes: 5-axis machining centres with the fifth axis in the workpiece for dynamic and productive machining

5-axis machining centres

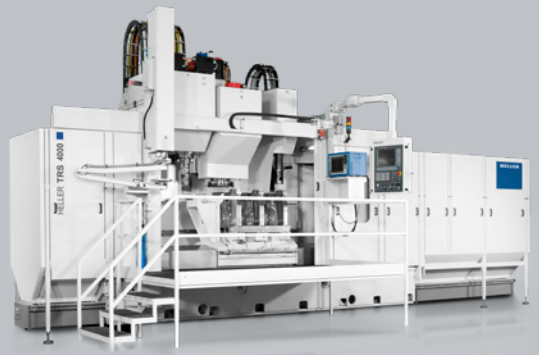
F

The benchmark in 5 axes: 5-sided and simultaneous 5-axis machining with the fifth axis in the tool

5-axis milling/turning machining centres

C

Complete machining at its best: Combined milling/turning jobs on one machine



Flexible manufacturing systems

Highly-productive series production of light duty to heavy duty automotive components

Americas

Brazil
Belo Horizonte, Joinville, Porto Alegre, Sorocaba ⚙

Mexico
Querétaro

USA
Troy ⚙

Europe

Germany
Goslar, Hattingen, Nuremberg, Nürtingen ⚙, Rosenheim, Saarbrücken, Salem

England
Redditch ⚙

France
Paris

Italy
Verona

Poland
Poznan

Russia
Moscow

Slovakia
Vráble

Spain
Barcelona

Sweden
Värnamo

Switzerland
Appenzell

Asia

China
Beijing, Changzhou ⚙, Chongqing, Jinan, Shanghai

India
Pune

Singapore
Singapore

Thailand
Bangkok

⚙ Production ○ Sales and Service

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