

**FOCUSED
ON YOUR
SUCCESS.**

DEPO

WERKZEUGMASCHINEN

Part of the GMTGroup



DE | EN

**MACHINE
OVERVIEW**

CONTENT

By drawing from an immense wealth of experience in **process and tool technology**, we develop machines that properly satisfy the **actual requirements** of our customers.

For instance, the machines in our XperV and XpertK series are characterized by their enormous configuration flexibility thanks to their unique modular design.

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GMTG - Strong Group,
strong partners

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Compact gantry
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Gantry machining centers
with 3, 5 or 6 axes

GMTG

German Machine Tool Group



FOCUSED ON YOUR SUCCESS.

FOCUSED ON YOU.

Our customers are more than just a number to us – we focus on you and your company. Whether drawing up the specifications of a custom machine just for you or creating a proactive service concept, we are always ready to actively support you as your partners.

Get in touch now! We would be happy to advise you about your options at GMTG.

- **You** – We will accompany you personally as your partners!
- **Your company** – Our objective: the most economically attractive solution for you!
- **Your productivity** – Our core competencies:
 - machine & process optimization!
- **Our quality** – All core components from the same source! Made in Germany!
- **Our service** – On site with you at the earliest opportunity!
- **Our prices** – Fairly priced machines and services!

OUR CLAIM? YOUR BENEFITS!

At GMTG you can order any of the products and services that you already know and love from DEPO and EDEL – from a single source – anywhere in the world! **With sales, services, and administration consolidated under the single roof of the German Machine Tool Group**, both companies are secure for the future. Stronger than ever, we are excited to deploy

our great innovative strength to become reliable and trustworthy partners for our customers. **Short sales and service response times and high spare parts availability** are our most important goals! In addition, our experts can actively support you with process and tool optimization. and tooling optimization.

STRONG GROUP – STRONG PARTNERS.

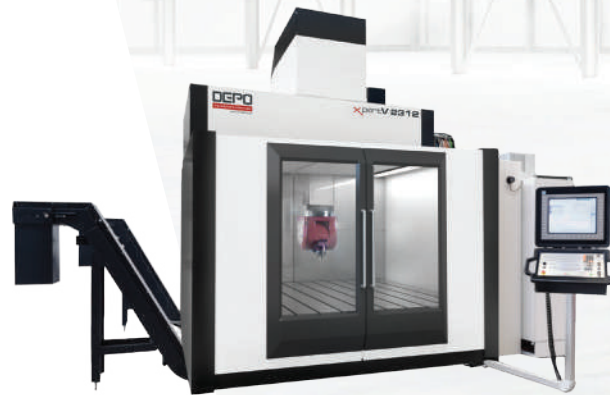
The German Machine Tool Group –
focused on your success.

The brand **German Machine Tool Group**, or **GMTG** for short, is nothing less than a top-performing association between the two family-owned German machine construction companies **EDEL Werkzeugmaschinen GmbH** and **DEPO Werkzeugmaschinen GmbH**.

Innovative **process and productivity know-how** meet more than 100 years of experience and highest-precision mechanical engineering – the product and service portfolios of DEPO Werkzeugmaschinen GmbH from Marienfeld in North Rhine-Westphalia and EDEL Werkzeugmaschinen GmbH from Pliezhausen in Baden-Württemberg complement one another perfectly. With almost **1,000 machines installed** at big-name customers with the highest quality standards from the **mould and die-making sector**, the **aerospace industry**, and the **automotive industry**, we draw from extensive experience across a diverse range of requirements.

High-productivity **vertical and horizontal 3/4** or universal **5/6-axis machining centers** to manufacture workpieces ranging from complex and delicate parts to heavy machining of high-strength materials are available from a single source. Our **modular machine design** gives customers maximum flexibility for their own individual configurations.

Thanks to a close technological partnership to develop core components such as milling heads, spindles, and rotary tables, we can now offer you **manufacturing solutions that are specially tailored to your requirements**, even beyond the usual standards. GMTG delivers machine tools whose components communicate perfectly, developed harmoniously.



DEPO

WERKZEUGMASCHINEN

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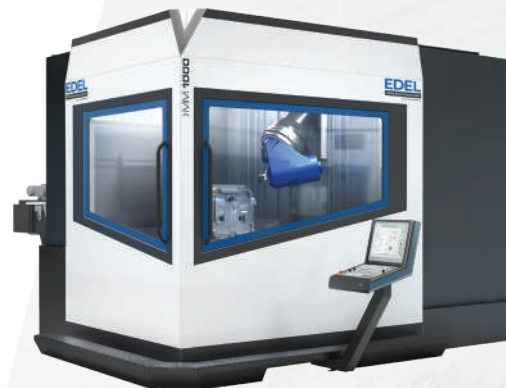
SHORT FACTS

- Family-owned company since **1989**
- **Automatic spindle change** available
- Strongly **modular machine design**
- New approaches to manufacturing technology
- **Vertical** and **horizontal** machining

EDEL

WERKZEUGMASCHINEN

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SHORT FACTS

- Family-owned company since **1896**
- **Crane hook machines:** rapid installation and machine relocation
- **Automatic head exchange** feature
- Extensions for **up to 7 axes**

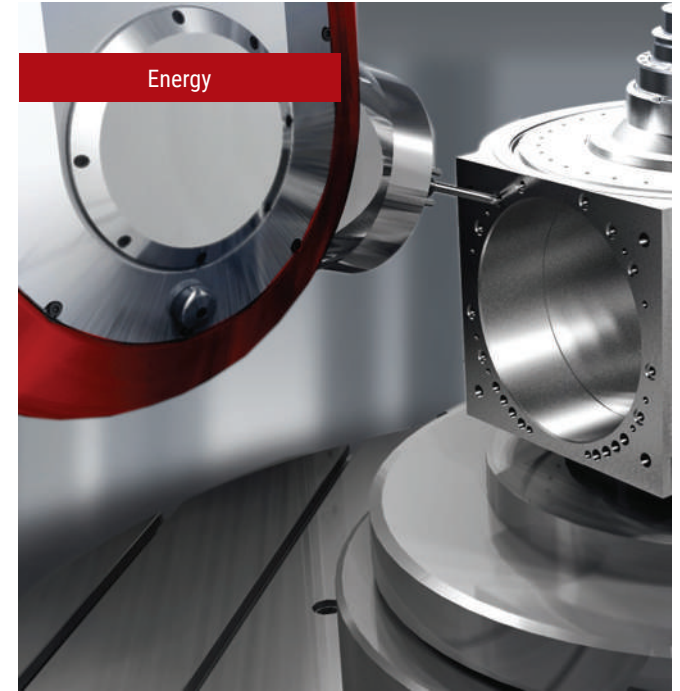
OUR INDUSTRY KNOW-HOW

DEPO is a family-owned company and well known for **tailor-made machine tools and process solutions**. Many industries in the metalworking industry trust in the experience and competence of DEPO Werkzeugmaschinen GmbH. Today DEPO is proud of **over 700 machines installed** worldwide. Our machines are particularly successful in the **Die & Mould** sector as well as in **Mechanical Engineering** and are used in the **Aerospace** industry.

Automotive



Energy



Machine construction



Aerospace



Die & Mould

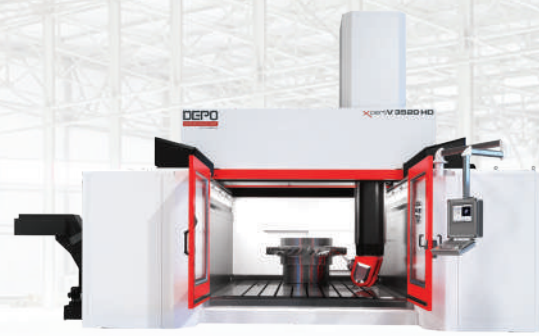


PRODUCT-PORTFOLIO

Most modern machining centers.

The **horizontal and vertical 3/5-axis machining centers** from DEPO impress with an enormously high degree of modularity. The flexibility of the machine specification brings along a high added value for our customers.

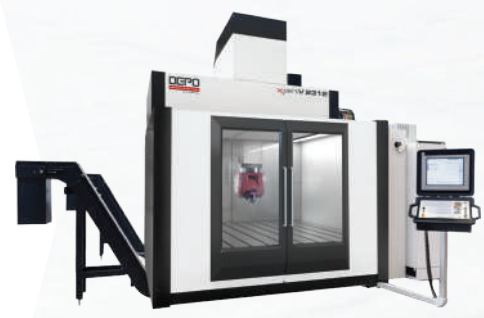
Together with our customers we equip the machines adapted exactly to their requirements and never lose the **most economical solution** out of sight.



XpertV 3520 HD
HD stands for heavy duty - that means 5-axis heavy duty cutting with high torque!



MCV series
Reliable vertical milling centers with up to 2,000 mm X-travel.



XpertV series
Modular 5-axis machining centers with gantry structure and up to 5,700 mm travel in X direction.



XpertK series
Horizontal 5-axis machining centers - specifications based on customer demand!



XpertCut series
Highly dynamic gantry machining center with up to 6 axes and 50 m/min rapid traverse.



HMC series
Horizontal machining centers with up to 5 axes and dual pallet changer.



Dynamic series
Compact gantry machining centers with up to 5 axes by rotary table or forke type milling head.

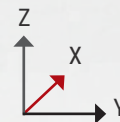
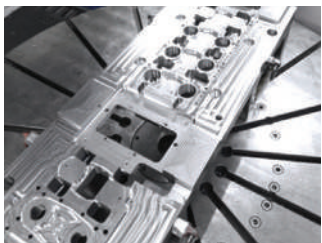
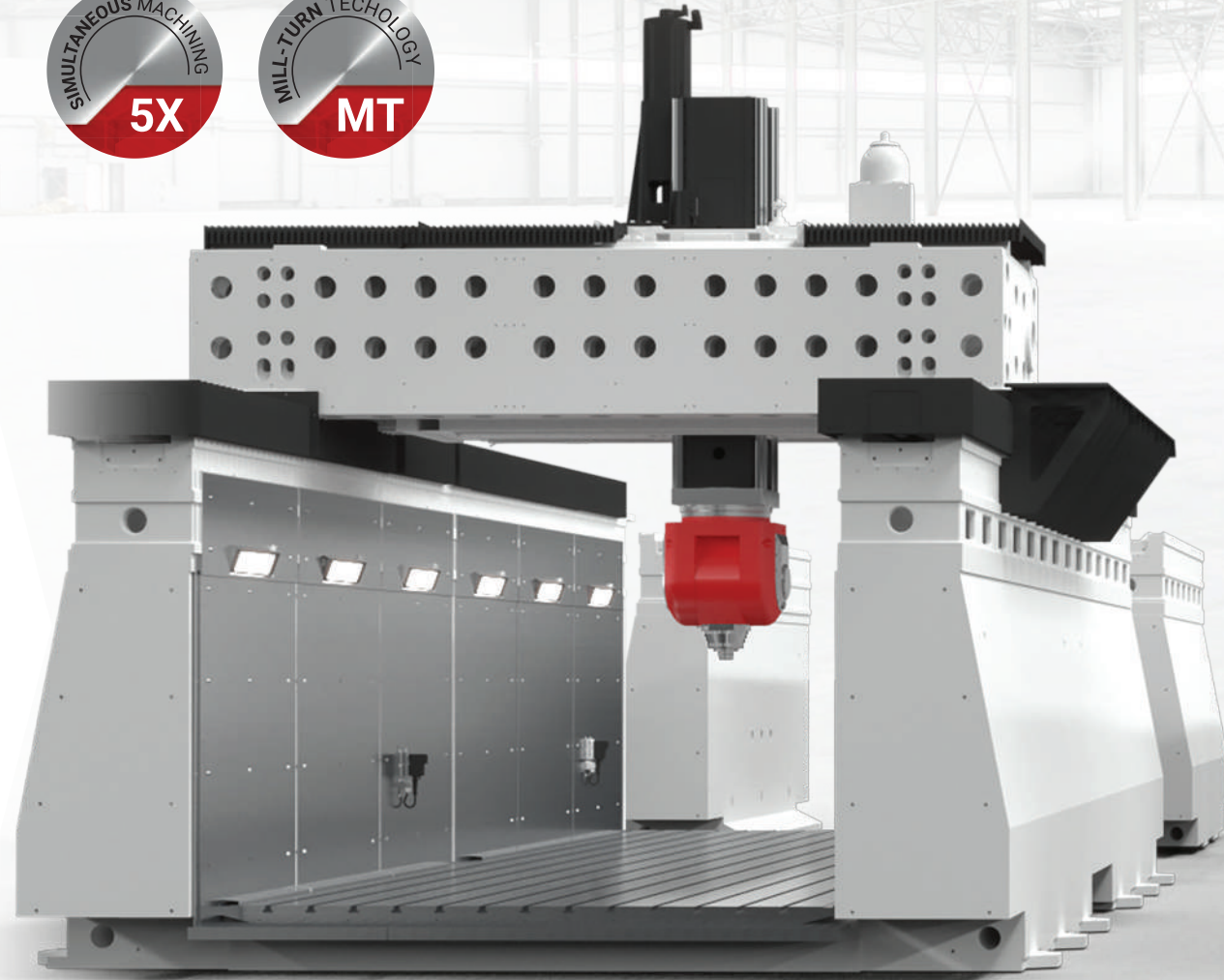
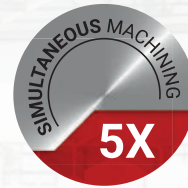
PURE PERFORMANCE

Added value –with modularity, flexibility and excellent process performance

xpertV

Our name is well known, not just for an ordinary machining center, but as a high-quality, modular and extremely flexible manufacturing solution. The XpertV offers real added value for all your challenging tasks.

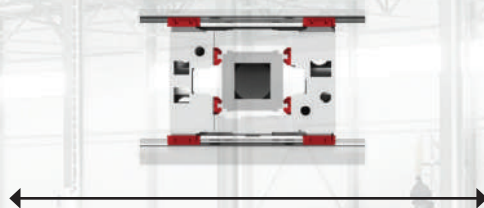
You can benefit from all the **individual equipment** options when customizing your machine with us. Whether extended travel paths, additional axes or **special solutions, tailored to your products** – we have countless possibilities at your disposal!



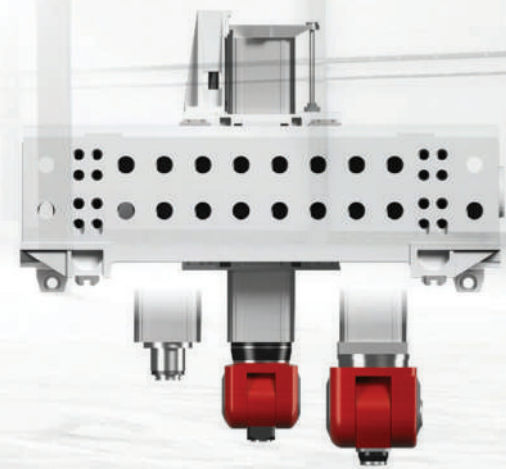
Selectable travel path in X:
2,300 / 3,900 / 5,700 mm

Selectable travel path in Y:
1,200 / 1,600 / 2,000 / 2,400 mm

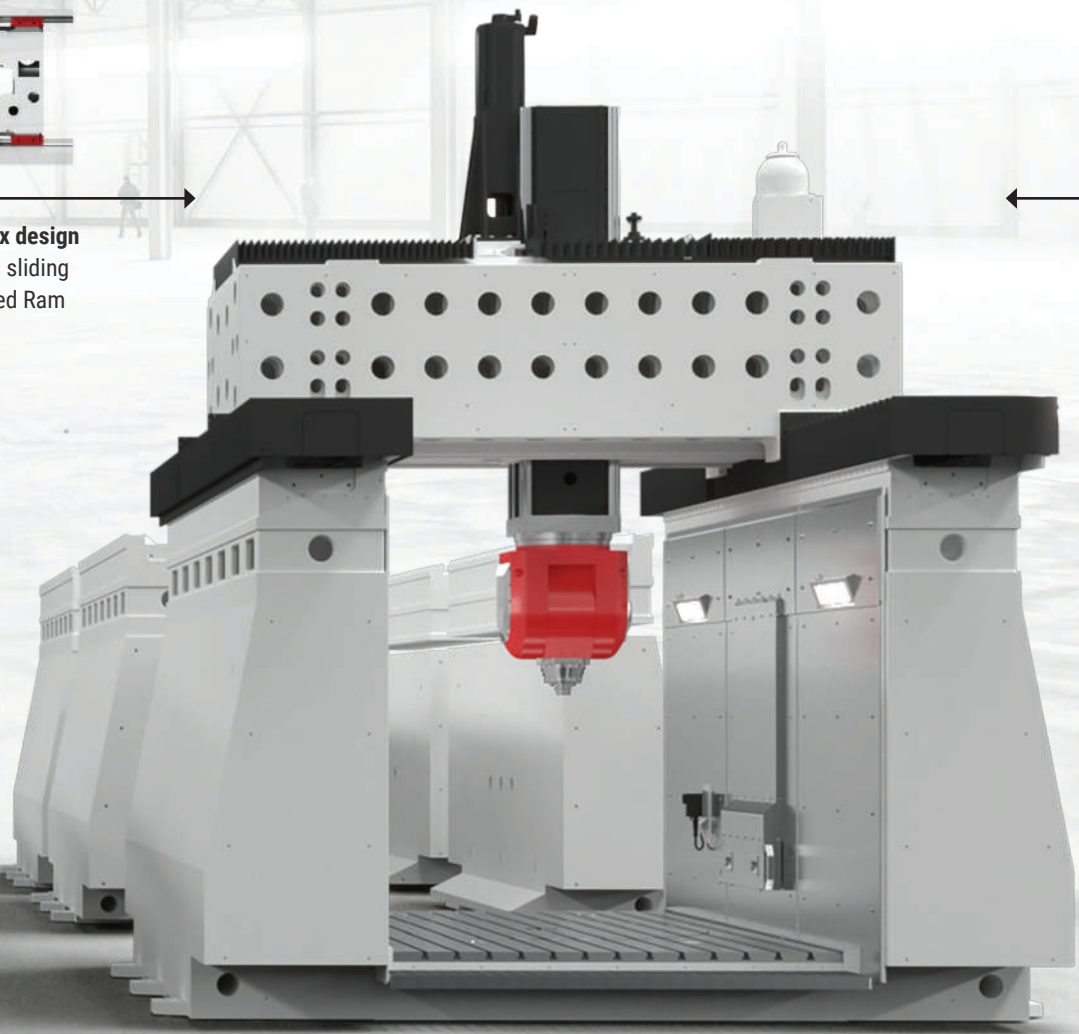
Selectable travel path in Z:
800 – 1,000 mm



Unique box-in-box design
with 4-way cross sliding
and 4-way guided Ram



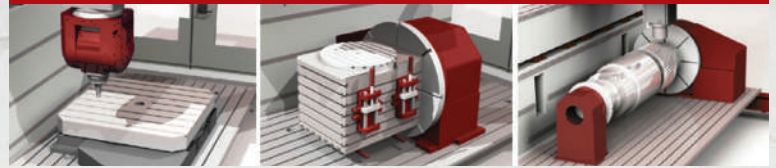
Wide range of available (fork-type) milling heads
with one or two axes and motor spindles



1,300 mm 1,650 mm 2,050 mm

Optimum height adjustment thanks to stable
side walls in three different sizes

Versatile positioning and rotary table selection for maximum flexibility



Integrated rotary tables in the tabletop
(Positioning or Turn-Mill)
available as an option.

xpertV

The portal machining centers in the gantry design of the XpertV series are characterized by a particularly **high degree of modularity and flexibility**. The milling centers can be individually customized to meet the requirements of our customers and offer a wide range of options. **Reliability and process stability** are paramount without any compromises. The design value is rounded out with excellent machining results. Highly dynamic axle drives, a thermo-symmetrical configuration and the box-in-box design of the Z-slide make this possible.

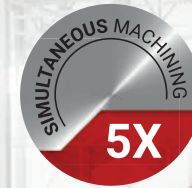
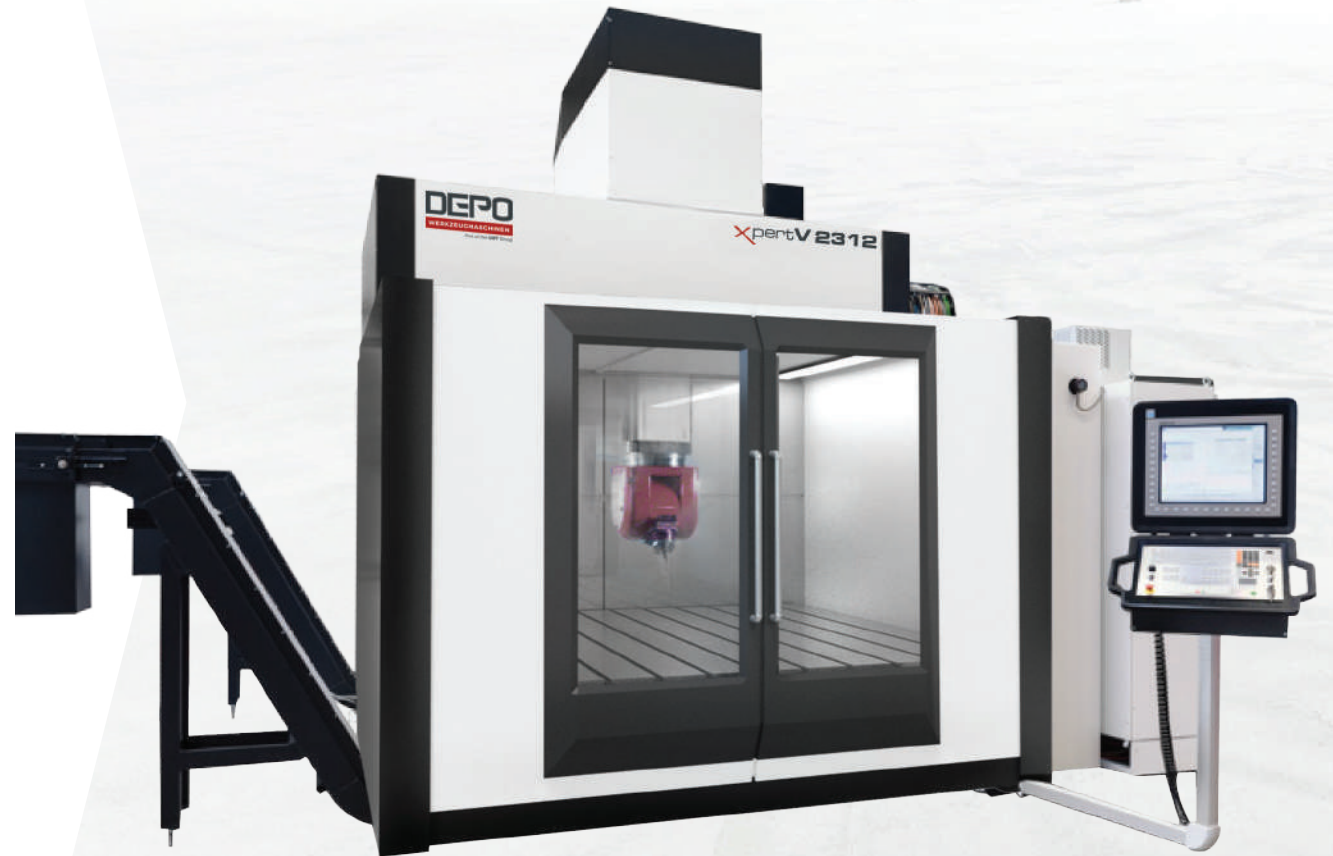
The XpertV series machines can be configured for a wide variety of requirements. We listed the most common models for you below.

EQUIPMENT VARIANTS

- 3-axis with rigid machine table and vertical spindle
- 5-axis simultaneously with 2-axis S-SERIES fork type milling head
- 5-axis simultaneously with 1-axis S-SERIES fork type milling head and rotary table
- 5-axis simultaneously with 2-axis M-SERIES fork type milling head**
- 5-axis simultaneously with 1-axis M-SERIES fork type milling head and rotary table
- Column height can be selected individually
- X and Y travel paths can be selected individually
- Z travel path: 800 mm, optional 1,000 mm*

* *If selected, the X travel path is reduced by 300 mm

** Only for models with Y travel from 2,000 mm



TECHNICAL SPECS

- 1) If selected, the X travel path is reduced by 300 mm
 2) If extended Z travel path is selected: Increase by 680 mm
 3) DRH: Distance between Ram and spindle in horizontal orientation;

- DRV: Distance between Ram and head in vertical orientation;
 SN: Spindle nose dimension
 4) with column increase: 1,300: 1,840 / 1,650: 2,190 / 2,050: 2,590 mm

		XPERTV 2312	XPERTV 2316	XPERTV 2320	XPERTV 3912	XPERTV 3916	XPERTV 3920	XPERTV 3924	XPERTV 5712	XPERTV 5716	XPERTV 5720	XPERTV 5724
WORKING AREA												
Travel path X-Axis	mm	2,300	2,300	2,300	3,900	3,900	3,900	3,900	5,700	5,700	5,700	5,700
Travel path Y-Axis	mm	1,200	1,600	2,000	1,200	1,600	2,000	2,400	1,200	1,600	2,000	2,400
Travel path Z-Axis	mm						800					
Travel path Z-Axis (optional) ¹⁾	mm	-	-	1,000	-	-	1,000	1,000	-	-	1,000	1,000
Rapid traverse X / Y / Z	m/min						40					
Acceleration X / Y / Z	m/s ²						3					
Feed	kN						20					
Clamping surface Machine table X	mm	3,080	3,080	3,080	4,680	4,680	4,680	4,680	6,480	6,480	6,480	6,480
Clamping surface Machine table Y	mm	1,700	2,100	2,500	1,700	2,100	2,500	2,900	1,700	2,100	2,500	2,900
Workpiece weight, max.	t	20	24	30	34	38	46	54	44	54	64	74
Distance Ram – Machine table (DRT)	mm	Depending on column height: 1,300: 1,675 / 1,650: 2,025 / 2,050: 2,425										
Distance Ram – Machine table (DRT) at Z-travel 1,000 mm	mm	-	-	1,840 ⁵⁾	-	-	1,840 ⁵⁾	1,840 ⁵⁾	-	-	1,840 ⁵⁾	1,840 ⁵⁾
Distance tilting axis head – Machine table	mm	compare technical data milling heads on pages 22 - 27: [DRT minus DRH ³⁾]										
Distance spindle nose – Machine table	mm	compare technical data milling heads on pages 22 - 27: [DRT minus DRV minus SN ⁴⁾]										
CONTROL												
Standard		HEIDENHAIN TNC 640 with 19" (24") Touchscreen										
Optional		SIEMENS SINUMERIK 840D sl with 24" Touchscreen										
OPTIONS FOR SEVERAL AXES												
Vertical Spindle Orientation	mm						●					
1-Axis-Fork-Type-Milling Head S-SERIES with A-Axis (with rotary table)	mm						●					
2-Axis-Fork-Type-Milling Head S-SERIES with A- and C-Axis	mm						●					
1-Axis-Fork-Type-Milling Head M-SERIES (with rotary table)	mm						●					
2-Axis-Fork-Type-Milling Head M-SERIES with A- and C-Axis	mm			●			●	●		●	●	
Choice of spindles	mm	compare spindle range of selectable milling heads on pages 22-29										
ROTARY TABLES												
Up to diameter	mm	1,700	2,100	2,500	1,700	2,100	2,500	2,900	1,700	2,100	2,500	2,900
Mill-Turn-functionality (optional)							●					
ACCURACIES												
Positioning accuracy X / Y / Z P max. by nach VDI/DGQ 3441	mm	0.012 (optional: 0.010)										
TOOL MAGAZINES												
with HSK-A63 Tool Taper		up to 320 tools										
with HSK-A100 Tool Taper		up to 280 tools										
INSTALLATION DATA												
Length (X)	mm	5,350	5,350	5,350	8,650	8,650	8,650	8,650	9,150	9,150	9,150	9,150
Width (Y)	mm	5,970	6,370	6,770	5,970	6,370	6,770	7,170	5,970	6,370	6,770	7,170
Height (Z), column height 1,300 mm ²⁾	mm	3,950	3,950	3,950	3,950	3,950	3,950	3,950	3,950	3,950	3,950	3,950
Height (Z), column height 1,650 mm ²⁾	mm	4,270	4,270	4,270	4,270	4,270	4,270	4,270	4,270	4,270	4,270	4,270
Height (Z), column height 2,050 mm ²⁾	mm	4,670	4,670	4,670	4,670	4,670	4,670	4,670	4,670	4,670	4,670	4,670
Total weight	ca. kg	50,000	52,000	54,000	60,000	62,000	64,000	66,000	70,000	72,000	74,000	76,000
Electricity demand	A	125										
Main connection	V	3 x 400 / 50/60 Hz										
Pneumatic supply	bar	6										

HEAVY DUTY

5-axis gantry machining center

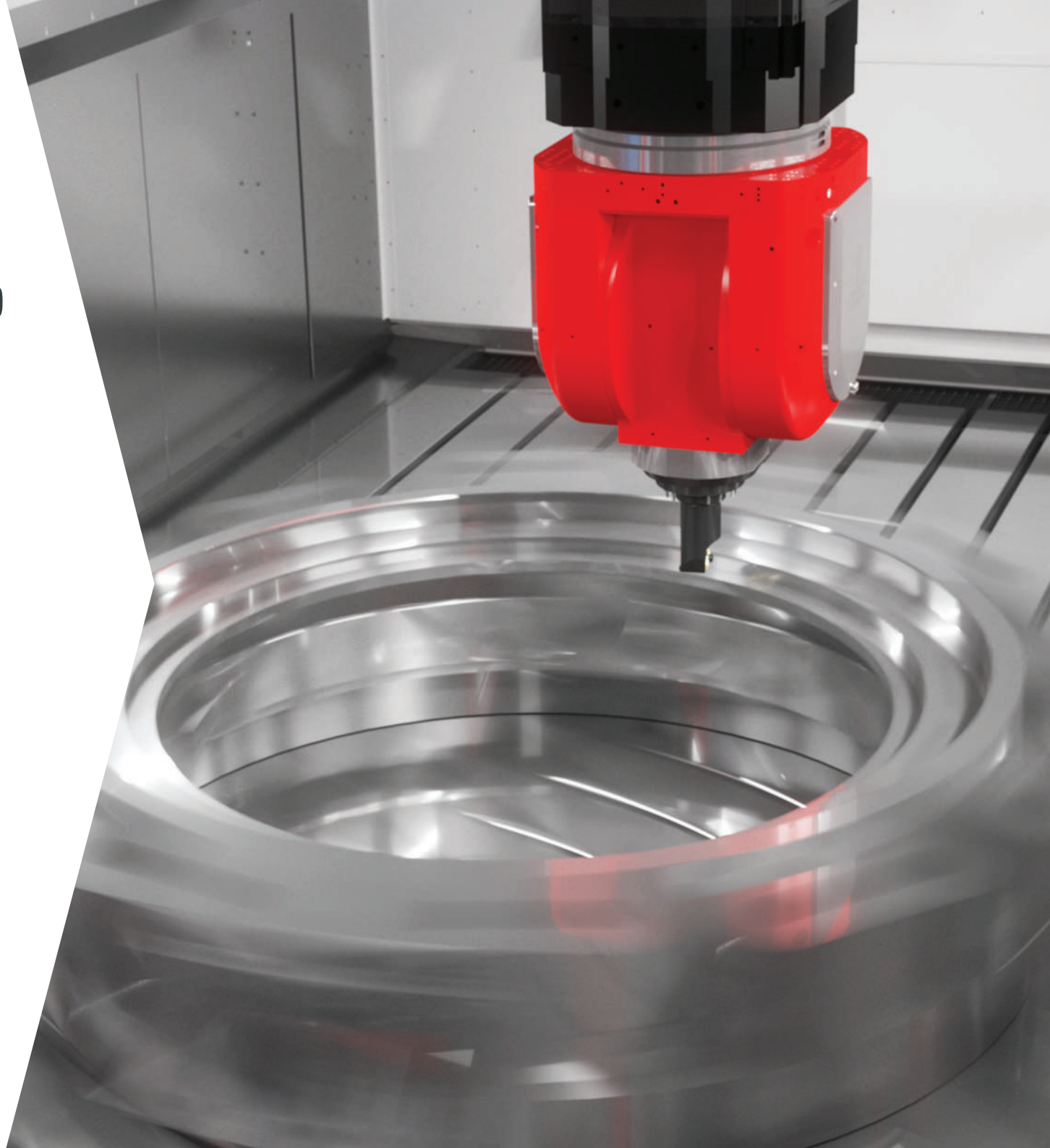
xpertV 3520 HD

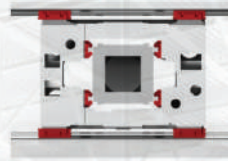
The XpertV 3520 HD portal machining center in gantry design impresses with its special properties in terms of **stability and rigidity**. By using our largest fork type milling heads, this machine operates with 5 axes and a spindle torque of well over 1,000 Nm – we call it **Heavy Duty!**

Reliability and process stability are paramount without compromise. This is rounded off with excellent machining results. Highly dynamic axle drives, a thermo-symmetrical design and the **box-in-box construction** of the slide feed unit make this possible. The machine convinces with great flexibility and options like „**automatic milling head change**“ and „**automatic spindle change**“. The roughing option with a high-torque milling spindle as well as finishing processes with high speed will make your productivity grow immensely!

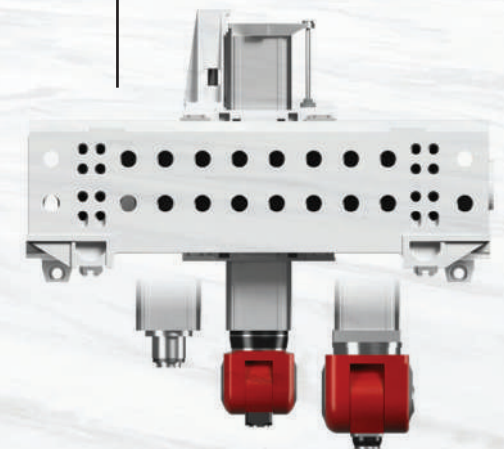
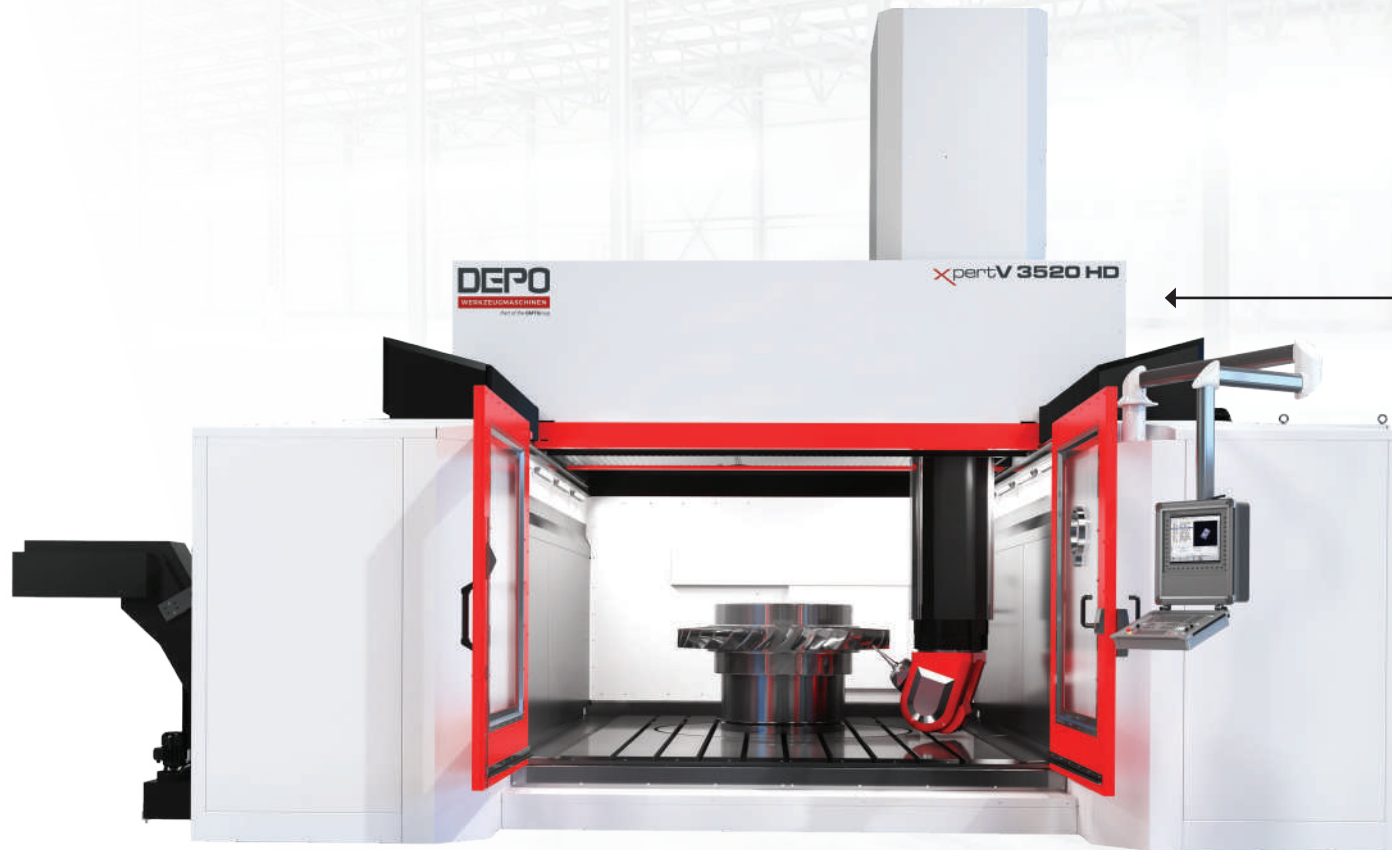
Highlights:

- Highly dynamic **5-axis simultaneous machining** with fork-type milling head
- **Mill-Turn machining** using integrated rotary tables with up to Ø 2,500 mm (option)
- **Gantry design** and **box-in-box** construction for highest accuracy in large components and greatest stability in all axes
- **Reinforced wall construction** for even greater process reliability even during rough machining
- **Roughing and finishing** on one machine by changing attachments using automatic milling heads or replacement spindles (option)





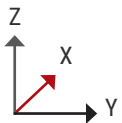
Unique box-in-box design
with 4-way guided cross slide
and 4-way guided Ram



Wide range of available fork-type milling heads
and motor spindles

Travel path X / Y / Z:
3,500 mm / 2,000 mm / 1,000 mm
(optional 1,200 mm)

Table size X / Y:
4,200 mm / 2,700 mm

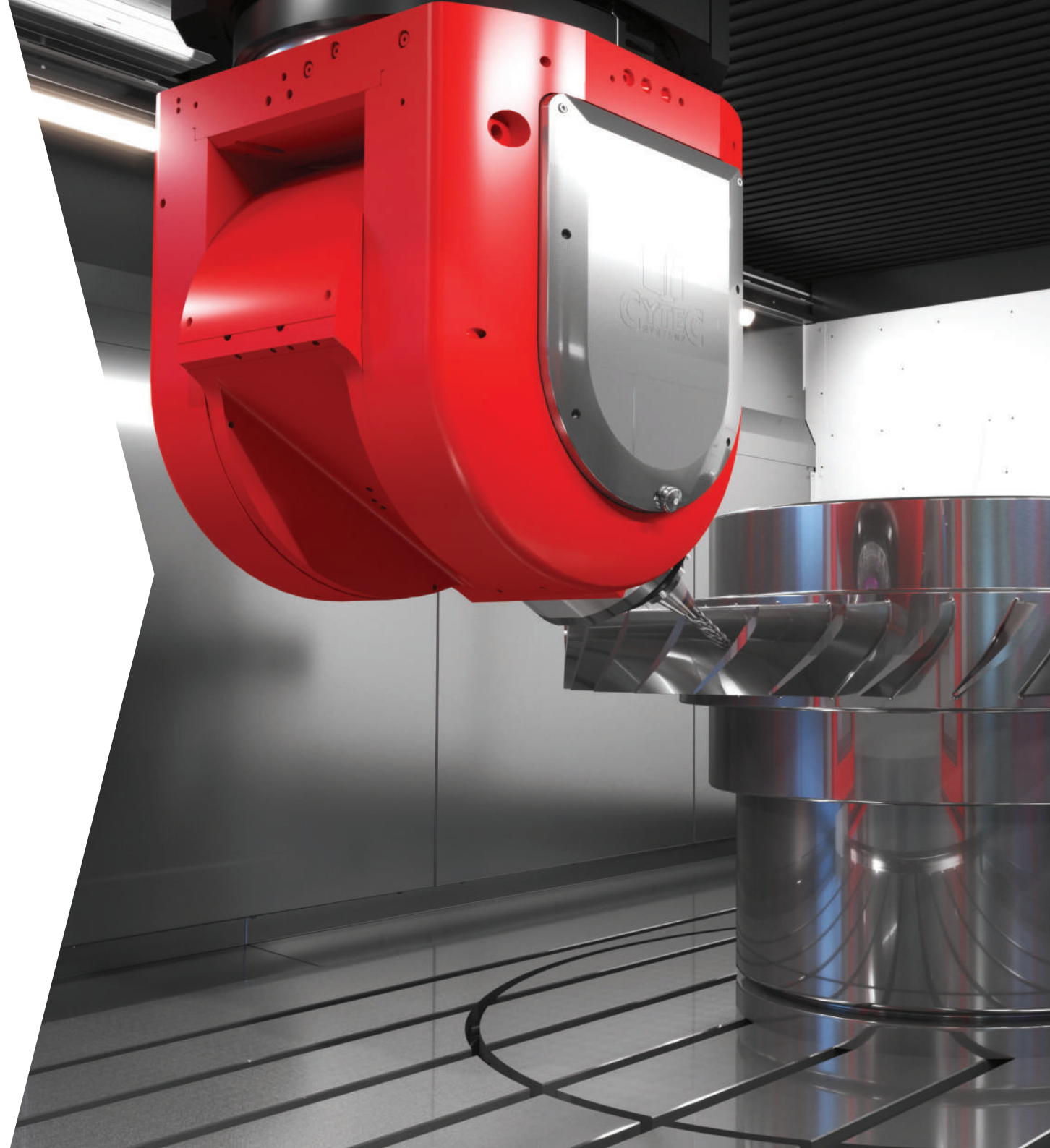


WIDE RANGE OF OPTIONS

- SIEMENS 840 sl
- Powerful milling spindles from high speed to high torque
- State-of-the-art spindle sensors
- Wide selection of milling heads
- Integrated rotary tables with diameters of up to 2,500 mm
- Mill-Turn machining variant when using an integrated rotary table
- Head changing station
- Spindle changing station (G-SERIES only)
- Coolant systems
- Tool magazines with up to 320 slots
- Tool measuring systems
- Workpiece measuring systems
- Software options
- Collision monitoring systems



Better productivity is not possible! With the „Automatic spindle change“ option, two spindles are available – fully automatic – in one machine, when using the G-SERIES milling head. The option of roughing with a high-torque milling spindle as well as finishing with increased speed is possible with the shortest of changeover times.



CUSTOMIZED CONFIGURATION

This XpertV model for heavy duty tasks is also very modular. In addition to our standard XpertV 3520 HD model, we will work with you to configure specifications that are tailored exactly to your needs. For example, the following requirements can be considered:

- Extension of the traversing paths in X/Y/Z
- Special designs, milling head and spindle
- Special construction of rotary table
- Zero-point clamping systems
- Extended software integration
- Special model tool changers
- Integration of special tools
- Integration of special suction, filter and cleaning systems



TECHNICAL SPECS

WORKING AREA

Travel path X-Axis	mm	3,500
Travel path Y-Axis	mm	2,000
Travel path Z-Axis	mm	1,000
Travel path Z-Axis (optional)	mm	1,200
Rapid traverse X / Y / Z	m/min	30
Acceleration X / Y / Z	m/s ²	3
Feed force	kN	20
Clamping surface Machine table X	mm	4,200
Clamping surface Machine table Y	mm	2,700
Workpiece weight, max.	kg	20,000
Distance Ram – Machine table (DRT)	mm	1,750
Distance Ram – Machine table (DRT) with Z- Travel path 1,200 mm	mm	1,950
Distance head tilting axis – Machine table	mm	compare technical data milling heads on pages 22 - 27: [DRT minus DRH ²]
Distance Spindlenose – Machine table	mm	compare technical data milling heads on pages 22 - 27: [DRT minus DRV minus SN ²]

CONTROL

Standard	HEIDENHAIN TNC 640 with 19" (24") Touchscreen
Optional	SIEMENS SINUMERIK 840D sl with 24" Touchscreen

OPTIONS FOR SEVERAL AXES

Verticale Spindle Orientation	•
1-Axis-Fork-Type-Milling Head M-SERIES (with rotary table)	•
2-Axis-Fork-Type-Milling Head M-SERIES with A- and C-Axis	•
1-Axis-Fork-Type-Milling Head G-SERIES with A-Axis (with rotary table)	•
Choice of spindles	compare spindle range of selectable milling heads on pages 22-29

ROTARY TABLES

Up to diameter	mm	2,500
Mill-Turn-functionality (optional)		•

TOOL MAGAZINES

with HSK-A63 Tool Taper	up to 320 tools
with HSK-A100 Tool Taper	up to 280 tools

INSTALLATION DATA

Length (X)	mm	8,000
Width (Y)	mm	7,100
Height (Z)	mm	5,100
Total weight	ca. kg	60,000
Electricity demand	A	125
Main connection	V	3 x 400 / 50/60 Hz
Compressed air	bar	6

PURE PERFORMANCE

Horizontal processing – customized to your wishes.

xpertK

The horizontal machining centers of the XpertK series are arguably unsurpassed in terms of modularity. Choose from **a wide range of table variants and combine them with the matching milling head**. The package is rounded out with our large spindle selection. Our XpertK machines are used wherever off-the-shelf machines are no longer sufficient. **Individuality and flexibility** in relation to your specific machining requirements are recognized as most important!

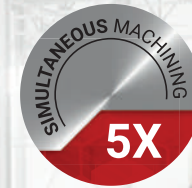
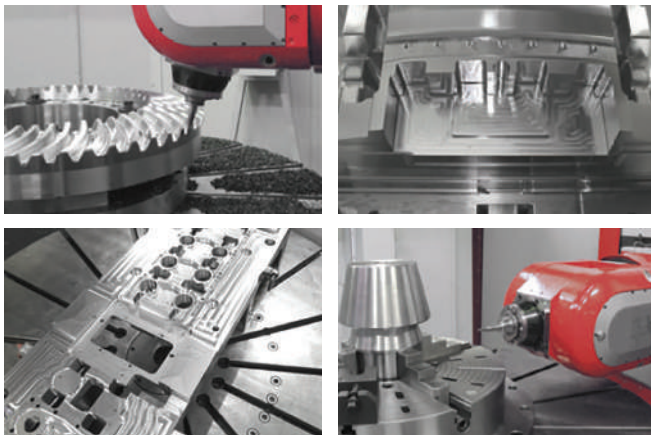
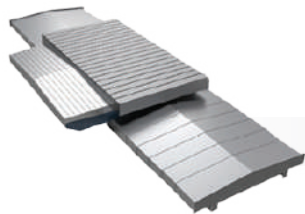


TABLE VARIANTS

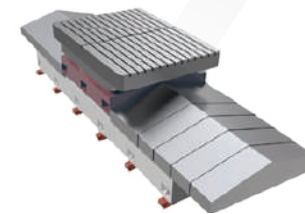
Fully modular design, which allows an application-specific, optimal selection of three different table variants:



Slide table (X-axis)



Cross sliding table (X and W axis)



Rotary table (X and C axis)

Sliding table

The standard variant of the machine table can be moved linearly in the X direction for most applications plus had the option of adding another axis.

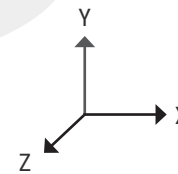
Cross sliding table

The machine table can be moved in the X and W directions.

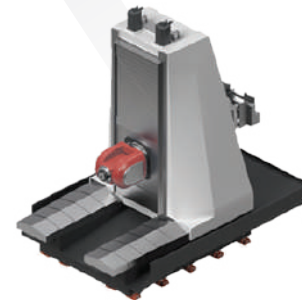
Rotary table

The machine table equipped with an C rotary axis and a linear X axis. Also available in a Mill-Turn machining version.

xpertK



Movable work unit



Fixed Unit

WORK UNIT VARIANTS (MILLING TOWER)

High-quality work unit, extremely solid and with stable column/cross sliding table and ram-slide construction, as well as the option of two different bases.

Fixed Unit

Standard variant with vertical Y axis and sliding axis in the Z direction.

Movable work unit

Work unit that can be moved in the Z direction for optimized stable machining due to shortest possible cantilevers or long cantilever option for machining lower-level areas of the workpiece.

Milling head and spindle selection

The complete milling head and spindle portfolio on pages 22-28 is available for the XpertK series. **Give us a call!**

CLAMPING SURFACE

Length (X)	mm	2,000 - 6,000
Width (Z)	mm	to 2,500

TABLE AXIS

Rapid speed	m/min	30
Acceleration	m/s ²	3
Feed force	kN	20
Travel path (X)	mm	6,000
Travel path (W) optional	mm	1,200

TRAVEL PATHS

Y-Axis (vertical)	mm	1,200 - 1,600
Z-Axis (Ram)	mm	1,000
W-Axis (optional)	mm	1,250

WORK UNIT (TOWER)

Rapid speed	m/min	30
Acceleration	m/s ²	3
Feed force	kN	20

AUTOMOTIVE INDUSTRY

Application example with pallet storage

xpertK

Equipped with two independent processing towers, this system offers one of our automotive customers enormous productivity benefits for machining large molds.

Specification

- Work tower 1: Rough machining with 2-axis fork-type milling head and high-torque spindle
- Work tower 2: Finish with 2-axis fork-type milling head and 18,000 rpm spindle
- Both work towers can be traversed linearly and generate additional Z travel as W axis
- 2 in X direction (2,300 mm travel path each) linear moving rotary tables with rectangular pallets
- Integrated column tool magazine for both towers
- Integrated pallet storage for 5 pallets in the system including a setup station
- Cleaning system



AEROSPACE

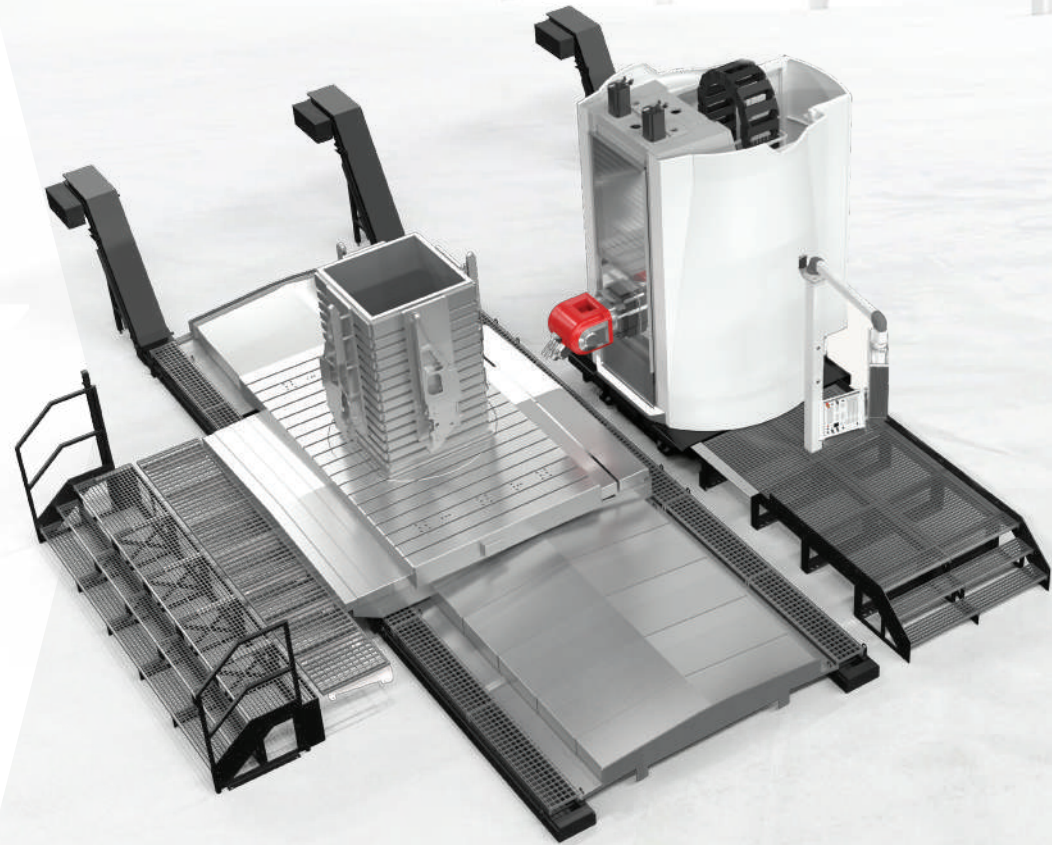
Application example:
structural component

xpertK

The integration of a W-axis and a rotary table enables all-around machining. This customer uses a cube for clamping of 4 components.

Specification

- Work tower with 2-axis fork-type milling head
- Linearly movable in the X-direction (travel: 4,000 mm) machine table (clamping surface: 4,200 mm x 2,300 mm) with integrated rotary table (Ø 2,000 mm)
- Additional W-axis (travel: 1,200 mm) in the machine table for optimum positioning
- Optimum access and view into the working area through operator platform
- Total of 2 chip conveyors in the system



MILLING HEADS

Our decades of experience in the development of **milling heads with torque motors** offer an immense **advantage in performance and dynamics**. Excellent acceleration values and highly accurate positioning capability provide the best conditions for optimum machining results. The effective **cooling concept in the swivel axes** as well as the powerful hydraulic clamping ensure a **long service life even under high demand** in heavy-duty machining.



Milling heads in different configurations

- matched to the selected machine type
- single and multi-axis systems

Maximum precision

- radial/axial roller bearings pre-tensioned without clearance **3**
- state-of-the-art **measuring systems**
- high torsional stiffness

Built-in safety package

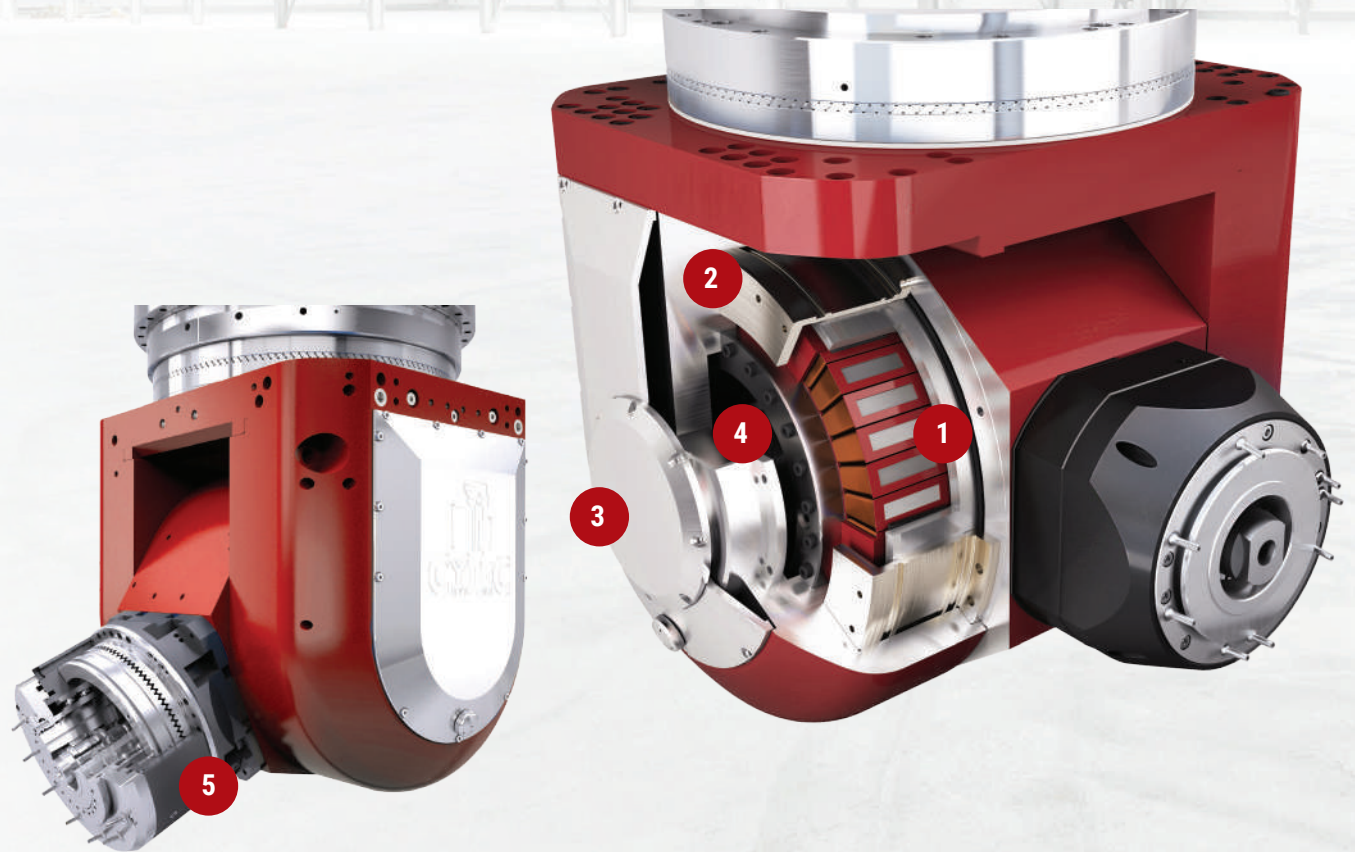
in the form of overall sensor technology for monitoring all function values throughout the machining process.

High flexural system stiffness as a result of thorough FEM calculations

- **Simulation of different demand situations** through different loads and machining processes
- optimized, **weight-reduced construction**

Water-cooled UltraHighTorque direct drives **1**

- for maximized performance and dynamics
- effective **cooling concepts** in A- /C-axis **4**
- powerful **hydraulic clamping** **2**



Full-featured simultaneous machining

Sealed axle housings

and sealing hoods on the axial sections provide reliable protection against harmful environmental influences and dirt

Intelligent supply / data transmission concept

- through a sophisticated internal arrangement with flexible wiring/ piping
- **Direct measuring measuring systems** (rotary encoders) in all axes
- **Water cooling** 4

High-precision sensor technology for maximum accuracy

- Spindle growth (SGS)
- Vibration (SVS)
- Temperature (STS)
- etc.

Standard and optional main spindles for a wide range of requirements

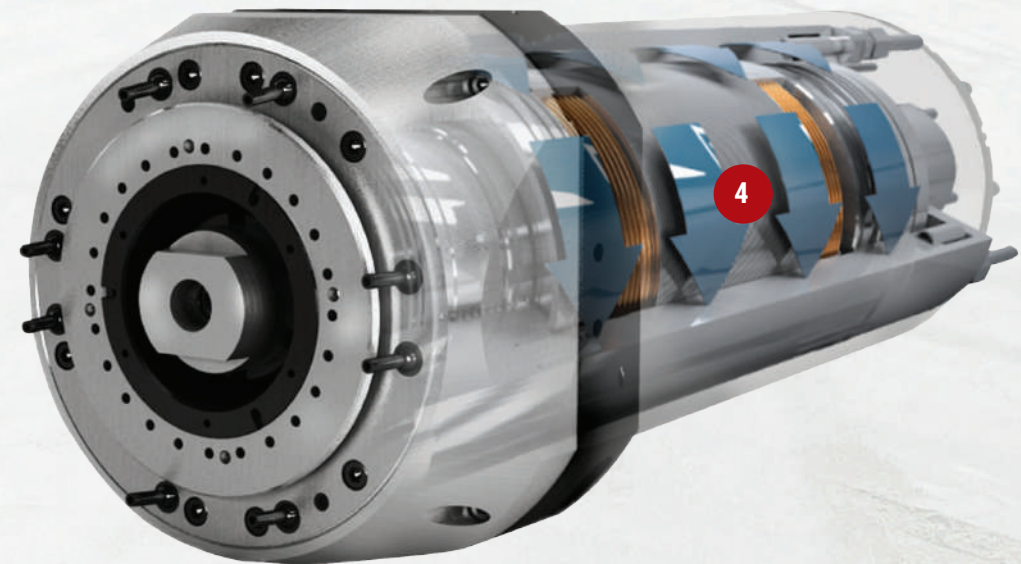
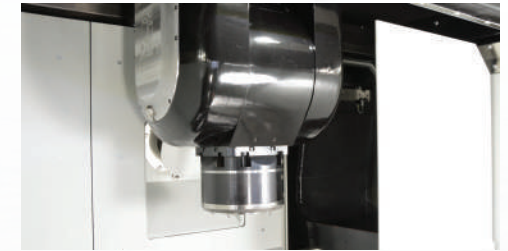
- **Direct drive** via integrated torque motor
- **Water Cooling**
- Various **tool interfaces** can be selected
- **Internal coolant supply** optional
- External coolant supply via **spray nozzles** on spindle nose

Mill-Turn functionality with Hirth clamping

- Hydraulic clamping of the spindle shaft with Hirth lock 5
- no pressure on sensitive spindle components

The machines of the XpertV series become integral production centers with the optional **automatic head change station**. A total of **three M21 size milling heads can be accommodated within the machine**. Changing the head takes less than a minute. This enables you to optimally meet the

requirements of the respective processing. Our tool magazines can be adapted accordingly and are also available as dual systems (e.g. HSK-T100 and HSK-A63).



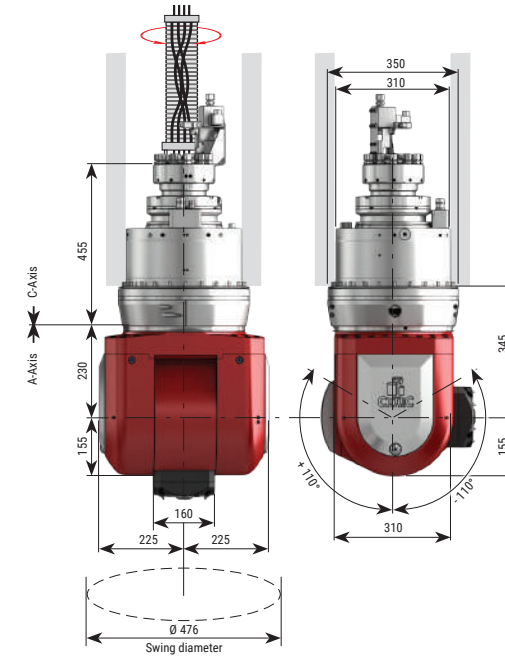
FORK-TYPE MILLING HEAD S-SERIES

and choice of spindles size 135



Technical Data

	A-AXIS	C-AXIS
Nominal Torque [Nm]	400	430
Max. Nominal Torque [Nm]	770	820
Clamping moment 60 bar [Nm]	1,500	1,400
Swivel range [°]	±110	±360
Measuring System	absolute	absolute
Positioning Accuracy [°]	±5	±2
DRH* [mm]		345
DRV* [mm]		500



SPINDLE SERIES:

Power S1/S6 [kW]:

Rated Speed [min⁻¹]:

Nominal Torque S1/S6 [Nm]:

Max. Rated Speed [rpm]:

Tool taper:

Spindle nose (SN) [mm]:



CS-18-135-S

18/23

3,000

56/72

18,000

HSK-A63

79



CS-20-135-A

20/26

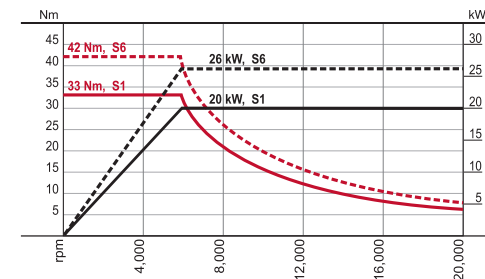
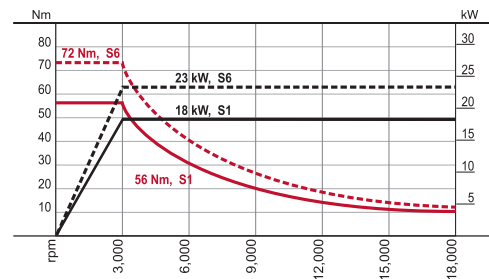
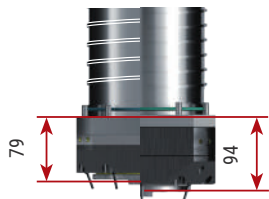
6,000

33/42

24,000

HSK-A63

79



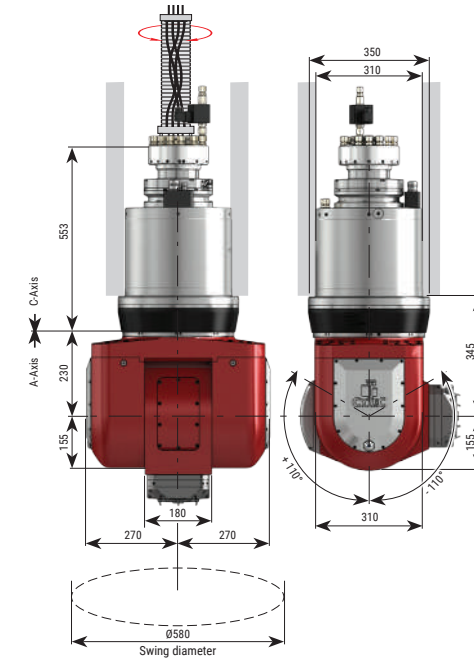
*) DRH: Distance Ram - spindle in horizontal direction (tilting axis); DRV: Distance Ram - bottom side of milling head (without spindle); SN: Size spindle nose

FORK-TYPE MILLING HEAD S-SERIES HD

and choice of spindle size 160

Technical Data

	A-AXIS	C-AXIS
Nominal Torque [Nm]	630	670
Max. Nominal Torque [Nm]	1,190	1,320
Clamping moment 60 bar [Nm]	2,400	2,400
Swivel range [°]	±110	±360
Measuring System	absolut	absolut
Positioning Accuracy [°]	±5	±2
ASH* [mm]		345
ASV* [mm]		500



MILLSPINDLE SERIES:

Power S1/S6 [kW]:

Rated Speed [min⁻¹]:

Nominal Torque S1/S6 [Nm]:

Max. Rated Speed [min⁻¹]:

WZ-Tool taper:

Spindlenose (SN) [mm]:



CS-40-160-S

40/51

5,700

67/85

24,000

HSK-A100

94



CS-45-160-S

45/54

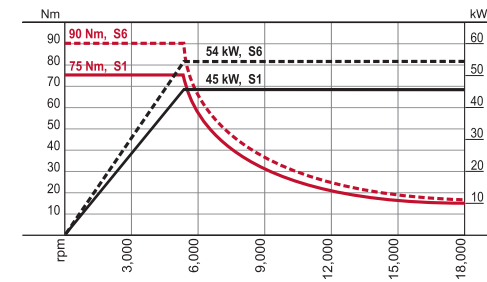
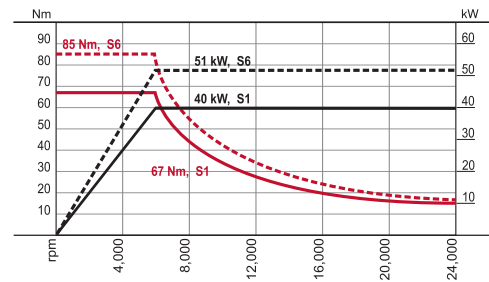
5,700

75/90

18,000

HSK-A63

94



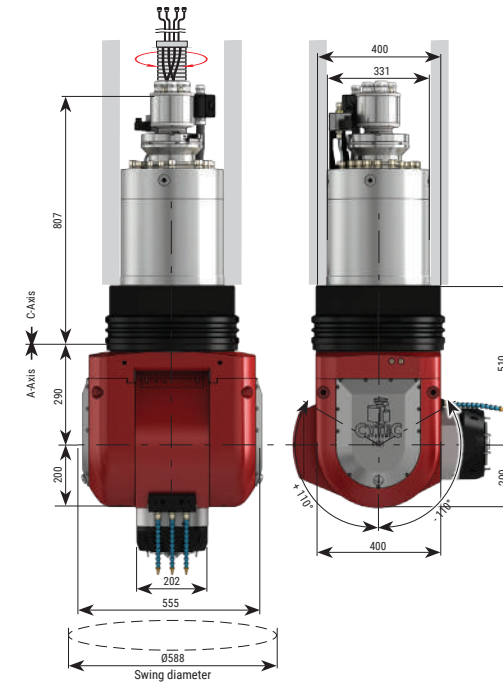
FORK-TYPE MILLING HEAD M-SERIES

and choice of spindles size 180



Technical Data

	A-AXIS	C-AXIS
Nominal Torque [Nm]	840	1,020
Max. Nominal Torque [Nm]	1,340	1,960
Clamping moment 60 bar [Nm]	4,000	4,000
Swivel range [°]	±115	±360
Measuring System	absolut	absolut
Positioning Accuracy [°]	±5	±2
ASH* [mm]		510
ASV* [mm]		710



MILLSPINDLE SERIES:

Power S1/S6 [kW]:

Rated Speed [min⁻¹]:

Nominal Torque S1/S6 [Nm]:

Max. Rated Speed [min⁻¹]:

WZ-Tool taper:

Spindlenose (SN) [mm]:



CS-34-180-S

34/43

2,000

170/220

12,000

HSK-A100

185



CS-40-180-S

40/51

5,700

67/85

24,000

HSK-A63

110



CS-42-180-S

42/53

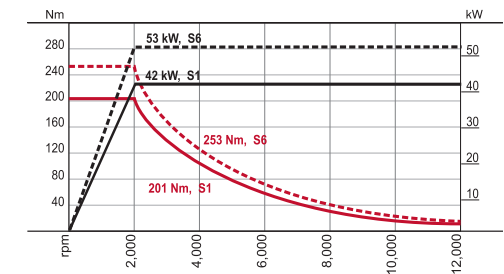
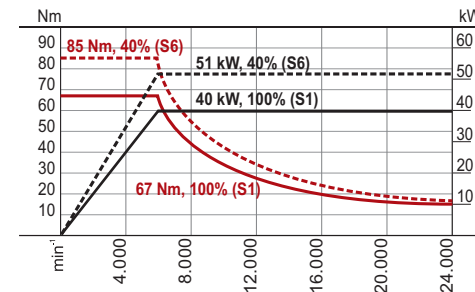
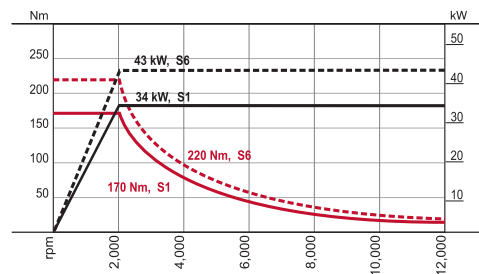
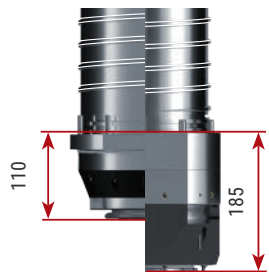
2,000

201/253

12000

HSK-A100

185



MILLSPINDLE SERIES:

Power S1/S6 [kW]:

Rated Speed [min⁻¹]:

Nominal Torque S1/S6 [Nm]:

Max. Rated Speed [min⁻¹]:

WZ-Tool taper:

Spindlenose (SN) [mm]:

**CS-27-180-S**

27/32

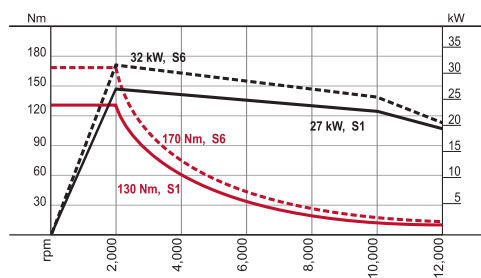
2,000

130/170

12,000

HSK-A100

110

**MILLSPINDLE SERIES:**

Power S1/S6 [kW]:

Rated Speed [min⁻¹]:

Nominal Torque S1/S6 [Nm]:

Max. Rated Speed [min⁻¹]:

WZ-Tool taper:

Spindlenose (SN) [mm]:

**CS-21-180-A**

21/27

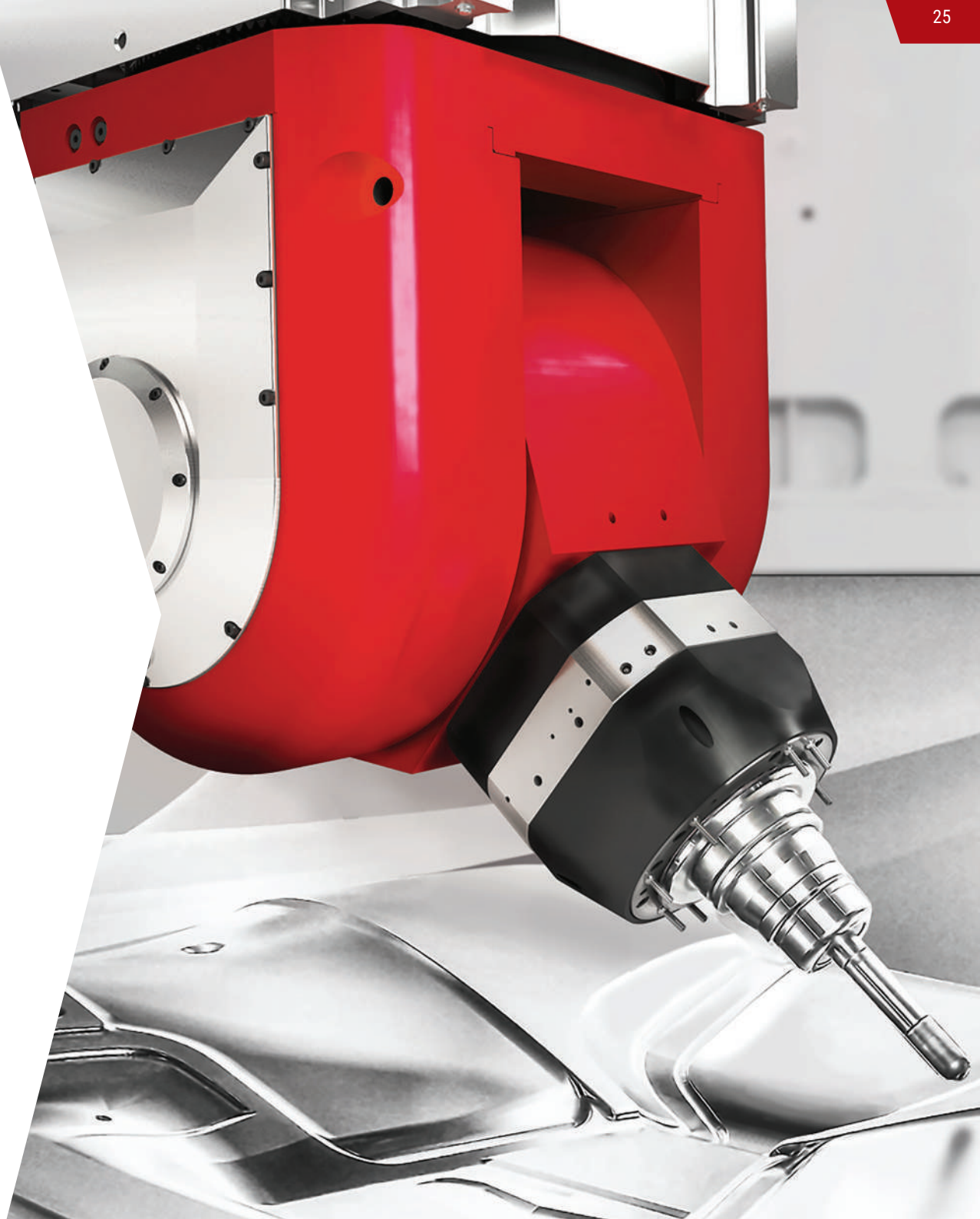
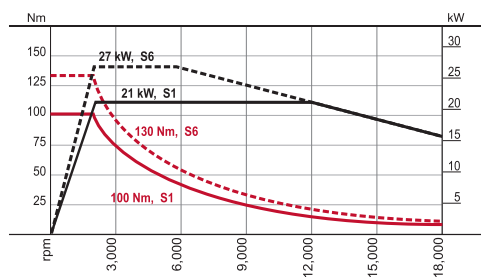
2,000

100/130

18,000

HSK-A63

110



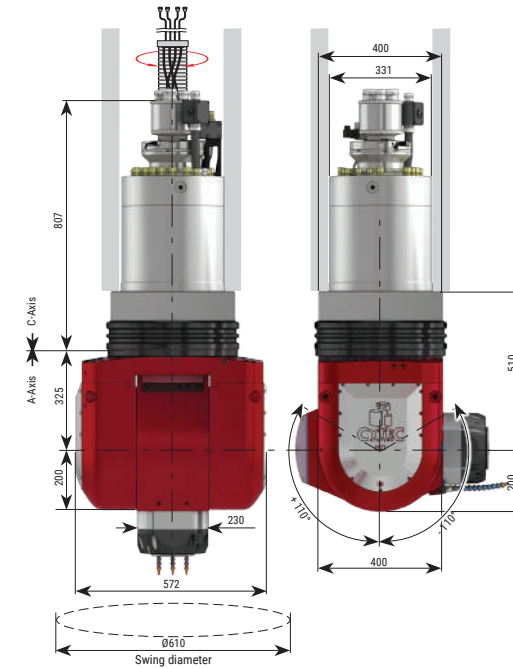
FORK-TYPE MILLING HEAD M-SERIES HD

and choice of spindles size 200



Technical Data

	A-AXIS	C-AXIS
Nominal Torque [Nm]	840	1,020
Max. Nominal Torque [Nm]	1,340	1,960
Clamping moment 60 bar [Nm]	4,000	4,000
Swivel range [°]	±110	±360
Measuring System	absolut	absolut
Positioning Accuracy [°]	±5	±2
ASH* [mm]		510
ASV* [mm]		710



MILLSPINDLE SERIES:

Power S1/S6 [kW]:

Rated Speed [min⁻¹]:

Nominal Torque S1/S6 [Nm]:

Max. Rated Speed [min⁻¹]:

WZ-Tool taper:

Spindlenose (SN) [mm]:



CS-40-200-S

40/50

2,400

160/200

15,000

HSK-A100

150



CS-50-200-S

50/64

2,000

240/300

8,000

HSK-A100

150



CS-70-200-S

70/90

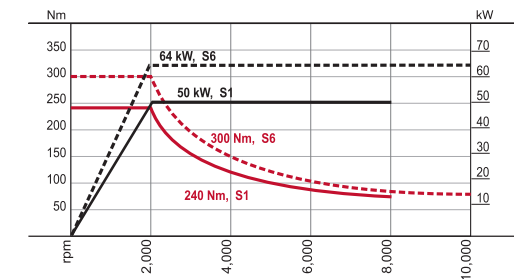
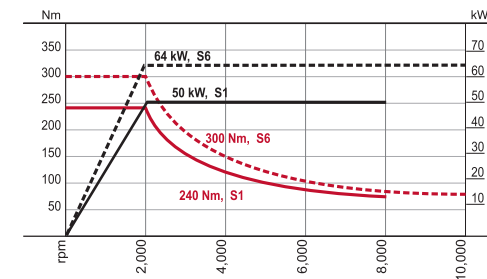
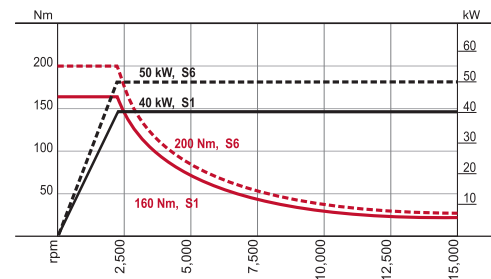
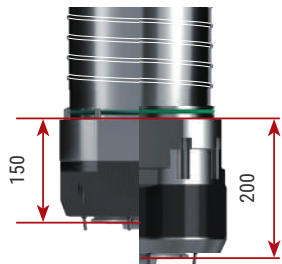
8,000

85/105

24,000

HSK-A63

200



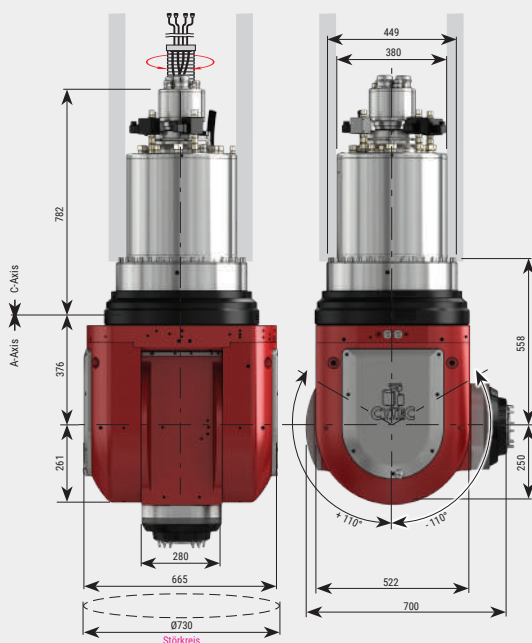
*) DRH: Distance Ram - spindle in horizontal direction (tilting axis); DRV: Distance Ram - bottom side of milling head (without spindle); SN: Size spindle nose

FORK-TYPE MILLING HEAD G-SERIES

and choice of spindles size 238 and 260

Technische Daten

A-ACHSE	
NennNominal Torque [Nm]	2,000
Max. Nominal Torque [Nm]	3,700
Clamping moment 60 bar [Nm]	7,000
Swivel range [°]	±110
Measuring System	absolut
Positioning Accuracy [°]	±2,5
ASH* [mm]	558
ASV* [mm]	808



MILLSPINDELE SERIES:

Power S1/S6 [kW]:

Rated Speed [min⁻¹]:

Nominal Torque S1/S6 [Nm]:

Max. Rated Speed [min⁻¹]:

WZ-Tool taper:

Spindlenose (SN) [mm]:



CS-40-238-A

40/48

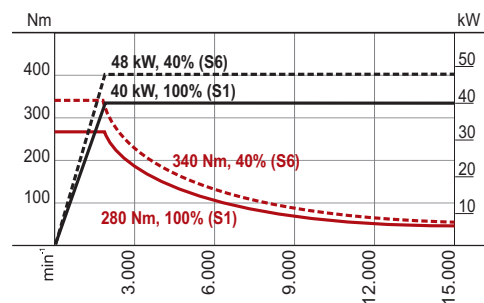
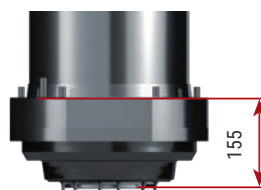
1,350

280/340

15,000

HSK-A100

155



CS-42-238-S

42/55

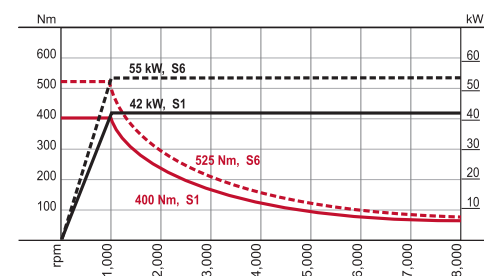
1,000

400/525

8,000

HSK-A100

155



MILLSPINDELE SERIES:

Power S1/S6 [kW]:

Rated Speed [min⁻¹]:

Nominal Torque S1/S6 [Nm]:

Max. Rated Speed [min⁻¹]:

WZ-Tool taper:

Spindlenose (SN) [mm]:



CS-75-260-A

75/94

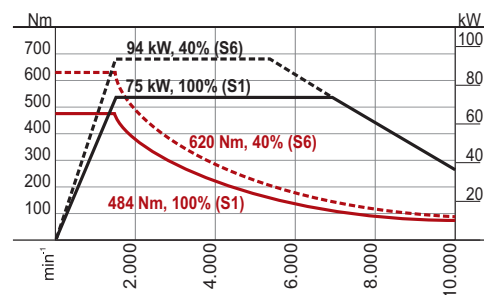
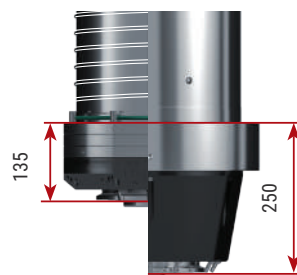
1,600

484/620

10,000

HSK-A100 / SK50

780



CS-115-260-S

115/138

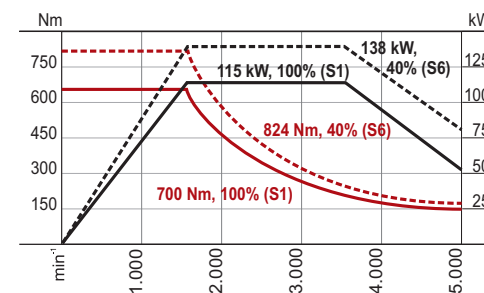
1,600

700/824

5,000

HSK-A100 / SK50

780

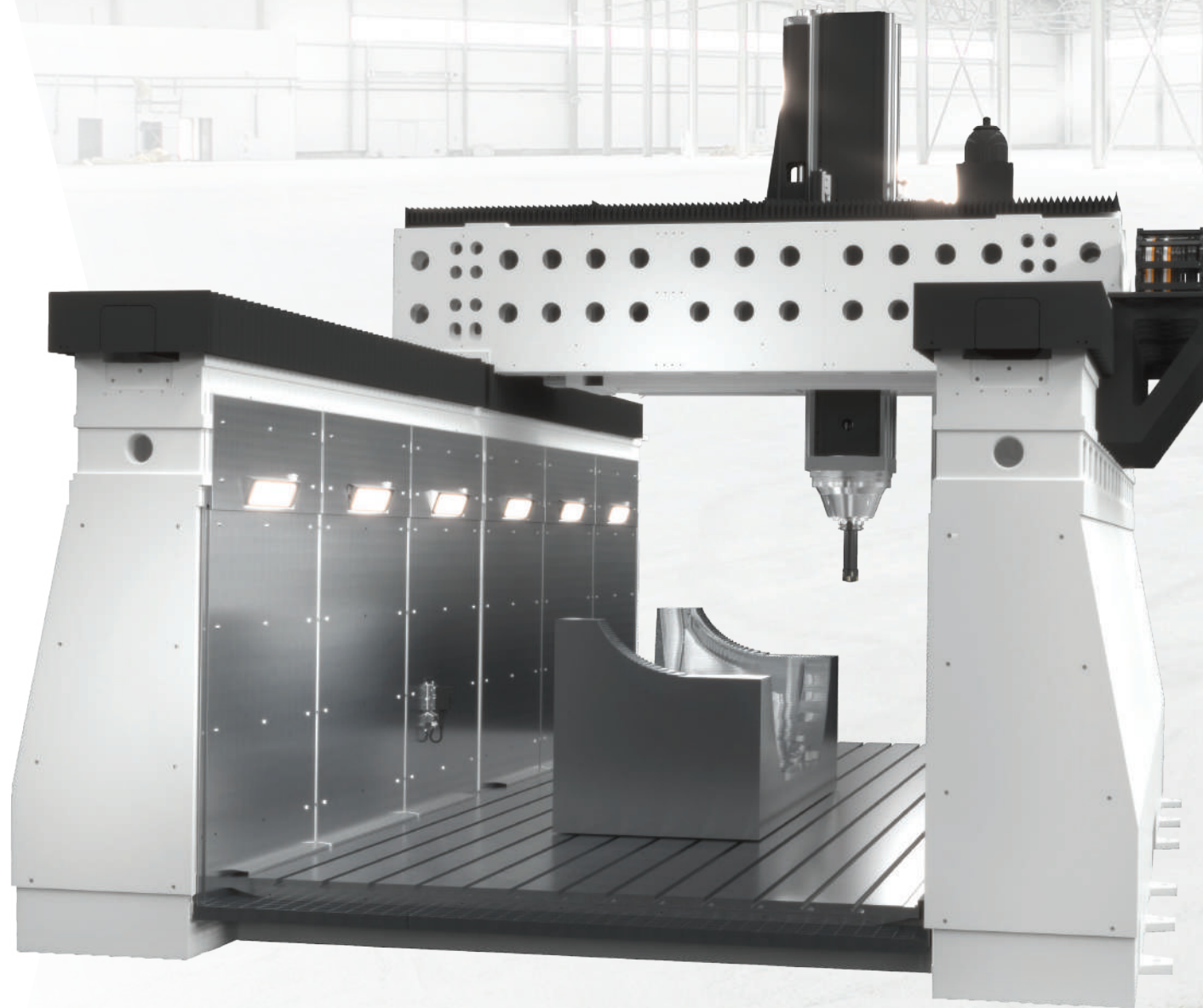


GEARED SPINDLES

Application example

xpertV 3920

with geared spindles in tool and mold construction: Pre-roughing of a large object for a passenger car spoiler



GEARED SPINDLES

For some of our machine series, the following geared spindles with torques of up to 1,512 Nm are available for vertical use.



FRÄSSPINDEL BAUREIHE:

Power S1/S6 [kW]: Rated

Speed [min⁻¹]: Nominal

Torque S1/S6 [Nm]:

Max. Rated Speed [min⁻¹]:

WZ-Tool taper:

Spindlenose (SN) [mm]:



CSG-50-300-S

50/65

1,800

265/334 (i=1), 795/1.022 (i=3)

7,000

HSK-A100

250



CSG-76-300-S

76/95

1,800

400/504 (i=1), 1.200/1.512 (i=3)

7,000

HSK-A100

250

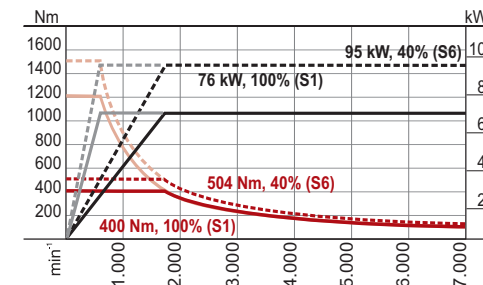
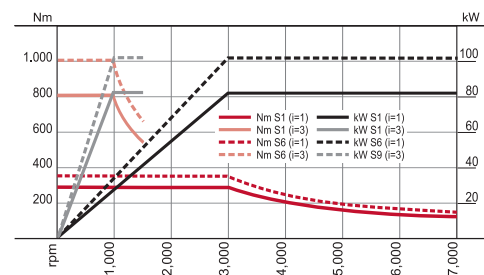
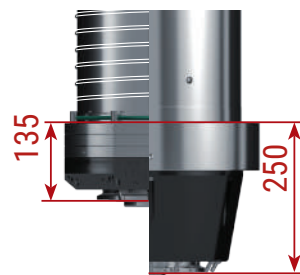


TABLE DESIGN

Some machines can be equipped with just rotating or swivel rotary tables. This provides our customers with additional flexibility and another option to **configure their machines individually**.

Our rotary tables can be designed either as **table-top tables** or as **integrated into the table top**. Full **5-axis simultaneous machining** can be realized by using a 1-axis fork type milling head in combination with one of our rotary tables.

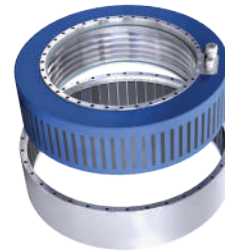
The portfolio of our highly dynamic rotary tables ranges from small to **diameters of up to 3,000 mm** for the XpertK series. Many of our tables can be used for turning machining work. **At speeds of up to 1,200 rpm** you can turn your milling machine into a full-fledged **Mill-Turn machining center**.

- 1 Non-wearing, gearless **direct drives** with torque motors
- 2 **Integrated clamping function** thanks to hydraulically operated expansion clamping sleeves, e.g., for rough cutting tasks
- 3 **High bearing rigidity** of the work holding chuck due to no-play pre-tensioned axial radial bearings
- 4 **Integrated water cooling**



TECHNICAL HIGHLIGHTS

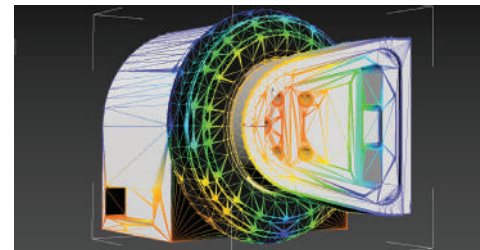
- Highly dynamic torque drives enable high acceleration and extremely fast positioning
- For larger diameters, we alternatively use conventional drives
- Intelligent **water cooling**
- **Mill-Turn** technology with up to **1,200 rpm** as an option
- High **workpiece weights**
- Integrated hydraulic clamping device for **heavy-duty machining**
- Up to **3,000 mm diameter**
- **Direct position measuring systems** with absolute encoders
- Optional **zero-point clamping system** integrated into the tabletop
- Custom groove and hole pattern to suit customer requirements



Powerful torque motors



Integrated monitoring / safety package



FEM-optimized overall structure



Option: Integrated zero-point / pallet clamps

HMC SERIES

Dual Horizontal machining centers with dual pallet changer

- > HMC 630
- > HMC 800
- > HMC 1000

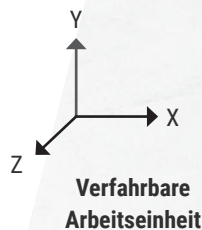
Take your milling productivity to a whole new level with the HMC series. The FEM-optimized design of our HMC series horizontal machining centers **with dual pallet changer** ensures maximum precision and continuous accuracy. The large distance between the linear guides and large ball screw drives ensures **maximum stability**. The horizontal design facilitates excellent chip flow during machining of a wide variety of geometries and materials. **You can reduce your off-peak times to a minimum** by using our optional zero-point clamping system on the second pallet, making parallel setup during production possible.

Highlights:

- Control range: HEIDENHAIN, SIEMENS, FANUC
- Travel paths X / Y / Z up to: 1,400 / 1,050 / 1,200 mm
- Pallet sizes: 630 / 800 / 1,000 mm
- Dual pallet changer
- Direct measuring systems in all axes
- Tool magazines with up to 246 pockets
- Large selection of high-performance HSK-A63 / HSK-A100 milling spindles

Machine kinematics:

The highly stable machine structure results from a movable column (X axis) on which the spindle moves in the vertical direction (Y axis). Movement in the Z axis is carried out with the workpiece and the rotary table (B axis). The optional 5-axis capability is realized by using a rotary swivel table.



EQUIPMENT & OPTION

Our HMC series is already in its standard version equipped with everything you need for a quick start into horizontal machining. Of course, you can still add a great number of options.

Standard equipment

- SIEMENS 840 sl
- Direct measuring system in all axes
- CYTEC spindle with 15,000 rpm 40/48 kW, 280/340 Nm (S1/S6) HSK-A100
- Sliding doors for easy accessibility to the workpiece
- Dual pallet changer
- HSK-A100 automatic tool changer and 56 pockets
- Thermal compensation for best stability
- Full enclosure
- Signal light
- Flushing gun and coolant tank
- Chip conveyor

Example options

- 5-axis version
- Internal coolant supply 50/70 bar
- HEIDENHAIN TNC 640, FANUC
- Rotary table with torque motor
- Remote Service
- Selection of various types of spindles
- Vibration analysis
- Air through spindle center
- Tool changer with 76, 96 and 246 tools
- Workpiece probe
- Work space flushing
- Oil and emulsion mist extraction

TECHNICAL DATA

		HMC 630	HMC 800	HMC 1000
WORKING AREA				
Travel path X-Axis	mm	750	1,000	1,400
Travel path Y-Axis	mm	700	1,050	1,250
Travel path Z-Axis	mm	770	1,200	1,200
Rapid traverse	m/min	50		
Acceleration	m/s ²	5		
Choice of spindles		compare milling spindles on pages 24 - 27: Sizes 180 to 238		
PALLET CHANGER				
Number of pallets		2		
Pallet change time	sec	10	20	20
Pallet size	mm	630 x 630	800 x 800	1,000 x 1,000
Pallet load 4 Axis max.	kg	800	2,500	2,500
max. workpiece dim. ØxH	mm	750 x 800	1,100 x 1,300	1,400 x 1,300
CONTROL				
Standard		SIEMENS 840sl		
Optional		HEIDENHAIN TNC 640 / FANUC 31i		
ACCURACY BY VDI / DGQ 3441				
Positioning accuracy X/ Y/ Z	mm	0.008		
Positioning accuracy B-Axis	"	7		
Repeatability X / Y / Z	mm	0.005		
Repeatability B-Axis	"	3		
TOOL MAGAZINE				
No of pockets		56		
Optional no of pockets		76 / 96 / 246		
max. tool diameter	mm	125 / 250 (with free adjacent pockets)		
max. tool length	mm	450	650	
max. tool weight	kg	25	30	
max. tool change time	sec	3	3.5	
ROTARY-TILTING TABLE (OPTIONAL)				
Pallet size	mm	630 x 630 (Ø 800)		800 x 800 (Ø 940)
Swivel range	°	A-Axis: ±105, C-Axis: 360		
Max. pallet load	kg	1,000		1,500

MCV SERIES

High-performance vertical machining centers.

- > MCV 1060
- > MCV 1260
- > MCV 1680
- > MCV 2080

The vertical machining centers of the MCV series are able to convince **with their highest performance and accuracy** as well as special reliability and durability. The mechanical stability of the machines is characterized by their robust column design with cross-ribbing for reinforcement. The design of the work head stock and its cooling circuit ensures thermal stability. This means that the robust machines of the MCV series are well equipped with everything necessary for **rough machining of heavy workpieces** as well as **for finish machining**. The ball screws and linear guides used meet the highest demands for accuracy and enable a high dynamic response of the machine even at **rapid speeds of 40 m/min**. Manual rasping of the contact surfaces on the machine bed and column meet highest quality standards.

Highlights:

- Control range: SIEMENS 840D, HEIDENHAIN TNC 640, FANUC 31i
- Travel paths X / Y / Z up to: 2,030 / 810 / 810 mm
- Pallet changer as an option
- Direct measuring systems in all axes
- Tool magazines with up to 60 pockets
- Large selection of high-performance HSK-A63 / HSK-A100 milling spindles



EQUIPMENT & OPTION

The MCV series offers a large working range in the area of 3-axis machining and many spindles available for heavy machining or finishing operations..

Standard equipment

- HEIDENHAIN TNC 640
- Direct measuring system in all axes
- CYTEC-spindle with 15,000 rpm 40/48 kW, 280/340 Nm (S1/S6) HSK-A100
- Double sliding doors for optimum accessibility to the workpiece
- Tool magazine with automatic tool changer and 24 slots
- Signal light
- Chip conveyor

Example options

- Automatic pallet changer for 1060 and 1260 series
- SIEMENS 840 D, FANUC
- Geared spindles with up to 458 Nm (SK 50)
- Internal coolant supply 50/70 bar
- additional rotary swivel table with 4th and 5th axis
- Workpiece probe
- Automatic tool changer
- Tool magazines with up to 60 pockets
- Tool measuring system
- Work space flushing
- Oil and emulsion mist extraction
- Vibration analysis
- Remote maintenance

TECHNICAL DATA

		MCV 1060	MCV 1260	MCV 1680	MCV 2080
WORKING AREA					
Travel path X-axis	mm	1.050	1.300	1.650	2.030
Travel path Y-axis	mm	640	640	810	810
Travel path Z-axis	mm	800	800	810	810
Rapid speed X/Y/Z	m/min	40		30	
Acceleration	m/s ²	5		3,5	
Clamping surface machine table X	mm	1.320	1.500	1.800	2.200
Clamping surface machine table Y	mm	620	620	780	780
Workpiece weight, max.	kg	1.350	1.350	2.500	3.000
No T-slots x width x distance	mm	5 × 18 × 125		5 × 18 × 160	
Choice of spindles		compare milling spindles on pages 24 - 27: Sizes 180 to 238			
CONTROL					
Standard		HEIDENHAIN TNC 640 with 19" Touchscreen			
Optional		SIEMENS 840 sl / FANUC 31i			
ACCURACY NACH VDI / DGQ 3441					
Measuring System		direct (glass scales)			
Positioning accuracy X/ Y/ Z	mm	0.008		0.009	
Repeatability X / Y / Z	mm	0.005		0.005	
TOOL MAGAZINE					
No. of pockets		30 (HSK-A63) / 24 (HSK-A100)		30 (HSK-A63) / 24 (HSK-A100)	
max. tool diameter	mm	80/160 (with free adjacent pockets)		110/180 (with free adjacent pockets)	
max. tool length	mm	300 (HSK-A63) / 350 (HSK-A100)			
max. tool weight	kg	6.5 (HSK-A63) / 15 (HSK-A100)			
max. tool change time	sec	2.9 (HSK-A63) / 4.5 (HSK-A100)			

MCV 1060 / 1260 WITH PALLET CHANGER

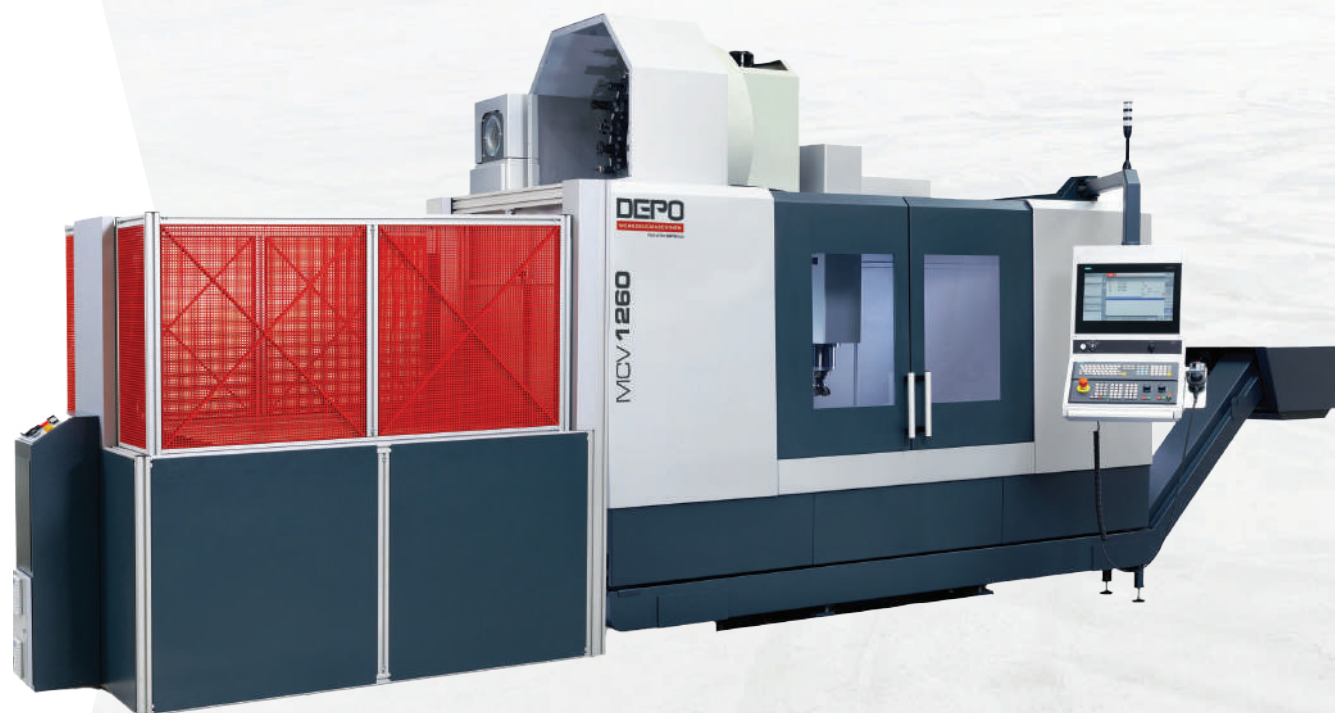
Increase Your Productivity!

- > MCV 1060 PW
- > MCV 1260 PW

The MCV 1060 and MCV 1260 machines can be equipped with an automatic pallet changer. This convinces with a fast pallet changing time of just 39 seconds. The maximum loading weight is 900 kg and also allows for the automatic change of heavy workpieces.

Highlights:

- 2 pallets of size 1,320 x 620 mm
- Changeover time: 39 seconds
- Load capacity: 900 kg
- Fully automatic, plug-and-play
- Upgradeable



EQUIPMENT & OPTION

The MCV series offers a large working range in the area of 3-axis machining and many spindles suitable for heavy machining, and it can handle high-speed feed rates. The machine can optionally be mechanized with the automatic pallet changer.

Standard equipment

- SIEMENS 840 sl or HEIDENHAIN TNC 640
- Direct measuring system in all axes
- Pallet changer with up to 900 kg load capacity and 1,320 x 620 mm clamping surface
- 39 s pallet change time
- CYTEC-spindle with 15,000 rpm 40/48 kW, 280/340 Nm (S1/S6)
- Tool cooling with internal coolant supply
- Double sliding doors for optimum accessibility to the workpiece
- Tool magazine with automatic tool changer and 24 pockets
- Signal light
- Chip conveyor

Example options

- SIEMENS 840 D, FANUC
- Geared spindles with up to 458 Nm (SK 50)
- Internal coolant supply 50/70 bar
- additional rotary swivel table with 4th and 5th axis
- Workpiece probe
- Automatic tool changer
- Tool magazines with up to 60 pockets
- Tool measuring system
- Work space flushing
- Oil and emulsion mist extraction
- Vibration analysis
- Remote maintenance

TECHNICAL DATA

		MCV 1060	MCV 1260
WORKING AREA			
Travel path X-Axis	mm	1,050	1,300
Travel path Y-Axis	mm	640	640
Travel path Z-Axis	mm	800	800
Rapid speed X/Y/Z	m/min	40	
Acceleration	m/s ²	5	
Choice of spindles		compare milling spindles on pages 22 - 26	
PALLET CHANGER			
No of pallets		2	
Pallet change time	sec	39	
Pallet size	mm	1,250 x 590	
Pallet load	kg	900	
CONTROL			
Standard		HEIDENHAIN TNC 640 with 19" Touchscreen	
Optional		SIEMENS 840 sl / FANUC 31i	
ACCURACY BY VDI / DGQ 3441			
Measuring system		direct	
Positioning accuracy X/ Y/ Z	mm	0.008	
Repeatability X / Y / Z	mm	0.005	
TOOL MAGAZINE			
No of pockets		30 (HSK-A63) / 24 (HSK-A100)	30 (HSK-A63) / 24 (HSK-A100)
max. tool diameter	mm	80/160 (bei freien Nebenplätzen)	110/180 (bei freien Nebenplätzen)
max. tool length	mm	300 (HSK-A63) / 350 (HSK-A100)	
max. tool weight	kg	6,5 (HSK-A63) / 15 (HSK-A100)	
max. tool change time	sec	2,9 (HSK-A63) / 4,5 (HSK-A100)	



DEPO DYNAMIC 1008

Compact gantry machining centers

The vertical DYNAMIC series convinces with its high performance and accuracy as well as special reliability and durability. The mechanical stability of the machines is characterized by their **robust gantry design** with cross-ribbing for reinforcement. **The versatile expansion possibilities with rotary swivel tables and fork type milling heads enable complete machining of your workpieces using 5-axis simultaneous machining.** The dynamic positioning accuracy of 8 μm and repeatability of 5 μm is achieved with high-class ball screw spindles and linear guides.

Highlights:

- Dynamic gantry machining centers for 3- and 5-axis machining
- Range of controls: SIEMENS 840 sl, HEIDENHAIN TNC 640, FANUC 31i
- Travel ranges X/ Y/ Z: 1,000 / 800 / 600 mm
- Rotary swivel table or swivel milling head as option for 5-axis machining
- Direct measuring systems in all axes
- Tool magazines with up to 130 pockets
- Large selection of high-performance milling spindles



DYNAMIC 1008 3-axis

Table surface X/ Y:
1,200 / 1,000 mm



DYNAMIC 1008 5-axis with swivel rotary table

Rotary tables diameter: 600 / 800 mm
available as Mill-Turn versions



DYNAMIC 1008 5-axis with fork-type milling head

S-SERIES fork-type milling head with matching
milling spindle – see pages 22-23

EQUIPMENT & OPTION

The DYNAMIC series, with its milling heads and rotary tables, is equipped with everything you need for 5-axis machining. Rotary swivel tables are optionally available for a Mill-Turn machining version.

Standard equipment

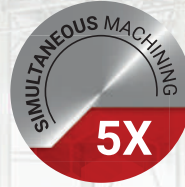
- HEIDENHAIN TNC 640
- Direct measuring system in all axes
- Double sliding doors for optimum accessibility to the workpiece
- Tool magazine with 30 tools
- Chip conveyor

Example options

- Additional 2-axis rotary swivel table at Ø 600 or 800 mm
- SIEMENS 840 sl, FANUC
- Internal coolant supply 50/70 bar
- Large spindle selection
- CYTEC S-SERIES fork type milling head for 5-axis simultaneous machining
- Extension of travel paths in the Z direction
- Table height reduction
- Workpiece probe
- Automatic tool changer
- Tool magazines with up to 130 pockets
- Tool measuring system
- Vibration analysis
- Remote maintenance

TECHNICAL DATA

		DYNAMIC 1008		
		3-AXIS	5-AXIS BY FORK-TYPE-MILLING HEAD	5-AXIS BY RSWIVEL ROTARY-TABLE
WORKING AREA				
Travel path X-Axis	mm		1,000	
Travel path Y-Axis	mm		800	
Travel path Z-Axis	mm		600	
Rapid speed X/Y/Z	m/min		40	
Feed	m/min		40	
Acceleration	m/s ²		5	
Measuring System			direct	
Clamping surface machine table	mm	X/Y: 1,200/1,000		Ø 600 / 800
Max. workpiece weight	kg	3,000		560
CONTROL				
Standard		HEIDENHAIN TNC 640 with 19" Touchscreen		
Optional		SIEMENS 840 sl / FANUC 31i		
OPTIONS FOR SEVERAL AXES				
2-Axis-Fork-Type-Milling Head S-SERIES with A- and C-Axis			●	
2-axis swivel rotary table				●
Choice of spindles		size 180-238	see pages 22-23	size 180-238
ACCURACY BY VDI / DGQ 3441				
Positioning accuracy X/ Y/ Z	mm		0.008	
Repeatability X / Y / Z	mm		0.005	
TOOL MAGAZINE (HSK-A63)				
No of pockets			30	
max. tool diameter	mm		80/115 (with free adjacent pockets)	
max. tool length	mm		250	
max. tool weight	kg		6.5	
max. tool change time	sec		3.5	



DEPO DYNAMIC 1018

Compact gantry machining centers with double Y travel path

The vertical DYNAMIC series convinces with its high performance and accuracy as well as special reliability and durability. The mechanical stability of the machines is characterized by their **robust Gantry design** with cross-ribbing for reinforcement. **The versatile expansion possibilities with rotary swivel tables and fork type milling heads enable complete machining of your workpieces using 5-axis simultaneous machining.** With its ball screw spindles and linear guides, the machine meets highest demands for accuracy and achieves the highest dynamic response with **rapid speeds of 40 m/min.** The dynamic positioning accuracy of 8 μm and repeatability of 5 μm is achieved with high-class ball screw spindles and linear guides.

Highlights:

- Dynamic Gantry machining centers for 3- and 5-axis machining
- Range of controls: SIEMENS 840D, HEIDENHAIN TNC 640, FANUC 31i
- Travel ranges X/ Y/ Z: 1,000 / 1,800 / 600 mm
- Rotary swivel table or swivel milling head as option for 5-axis machining
- Direct measuring systems in all axes
- Tool magazines with up to 130 pockets
- Large selection of high-performance milling spindles



DYNAMIC 1018 3-axis
Table surface X/ Y:
1,200 / 2,000 mm



DYNAMIC 1018 5-axis with rotary swivel table
Rotary tables diameter: 600 / 800 mm
available as Mill-Turn versions
Rear part of machine with fixed
table 1,200/1,000



DYNAMIC 1018 5-Achs with fork-type milling head
S-SERIES fork type milling head with matching
milling spindle – see on pages 22-23

EQUIPMENT & OPTION

The DYNAMIC series, with its milling heads and rotary tables, is equipped with everything you need for 5-axis machining. Rotary swivel tables are optionally available for a Mill-Turn machining version.

Standard equipment

- HEIDENHAIN TNC 640
- Direct measuring system in all axes
- Double sliding doors for optimum accessibility to the workpiece
- Tool magazine with 30 tools
- Chip conveyor

Options

- Additional 2-axis rotary swivel table at Ø 600 or 800 mm
- SIEMENS 840 sl, FANUC
- Internal coolant supply 50/70 bar
- Large spindle selection
- CYTEC S-SERIES fork-type milling head for 5-axis simultaneous machining
- Extension of traversing paths in the Z direction
- Table height reduction
- Workpiece probe
- Automatic tool changer
- Tool magazines with up to 130 pockets
- Tool measuring system
- Vibration analysis
- Remote maintenance

TECHNICAL SPECS

		DYNAMIC 1018		
		3-AXIS	5-AXIS BY FORK-TYPE-MILLING HEAD	5-AXIS BY SWIVEL-ROTARY-TABLE
WORKING AREA				
Travel path X-Axis	mm		1,000	
Travel path Y-Axis	mm		1,800	
Travel path Z-Axis	mm		600	
Rapid speed X/Y/Z	m/min		40	
Feed	m/min		40	
Acceleration	m/s ²		5	
Measuring System			direct	
Clamping surface machine table	mm		X/Y: 1,200 / 2,000	Ø 600 / 800
Max. workpiece weight	kg		6,000	560
CONTROL				
Standard			HEIDENHAIN TNC 640 with 19" Touchscreen	
Optional			SIEMENS 840 sl / FANUC 31i	
OPTIONS FOR SEVERAL AXES				
2-Axis-Fork-Type-Milling Head S-SERIES with A- and C-Axis			●	
2-axis swivel rotary table				●
Choice of spindles		size 180-238	see p. 22-23	size 180-238
ACCURACY BY VDI / DGQ 3441				
Positioning accuracy X/ Y/ Z	mm		0.008	
Repeatability X / Y / Z	mm		0.005	
TOOL MAGAZINE (HSK-A63)				
No. of pockets			30	
max. tool diameter	mm		80/115 (with free adjacent pockets)	
max. tool length	mm		250	
max. tool weight	kg		6.5	
max. tool change time	sec		3.5	

XPERT CUT SERIES

Gantry machining centers with 3, 5
or 6 axes.

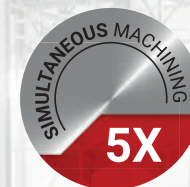
› Xpert Cut **2314**

› Xpert Cut **2315**

The Xpert cut series impresses with **the best ratio between work space and footprint**. A wide range of equipment variants make this machine an absolute all-rounder. Thanks to the box-in-box guide system of the Z-slide, this machine is suitable not only **for machining complex geometries but also for heavy machining of high-strength materials**.

Highlights:

- Dynamic Gantry machining centers for machining with 6 axes using rotary table and fork-type milling head
- Selecting controls: SIEMENS 840D, HEIDENHAIN TNC 640, FANUC
- Travel ranges X/ Y/ Z: 2,300 / 1,500 or 1,400 / 1,050 mm
- High-speed rapid traverse at 50 m/min
- Direct measuring systems in all axes
- Tool magazines with up to 130 pockets
- Large selection of high-performance milling spindles



EQUIPMENT & OPTION

The XpertCut impresses with its optimized ratio between work space and footprint. The machine moves with highly dynamic traverse speed of 50 m/min and machines components with high productivity using up to 6 axes.

Standard equipment

- Powerful milling spindle
- Dual chip conveyor
- Air through spindle center
- Full enclosure
- Automatic tool changer with 50 pockets
- Vibration analysis
- Tool outside cooling

Example options


- Spindle with Hirth clamping for turning and machining
- Large rotary table selection for Mill-Turn machining
- Internal coolant supply 50/70 bar
- Workpiece measuring system
- Tool measuring system
- Oil mist separator
- Tool magazine with 130 pockets
- Flushing gun
- Remote diagnosis

TECHNICAL DATA

		Xpert Cut 2314/2315		
		3-ACHS	5-AXIS WITH FORK-TYPE-MILLING HEAD AND ROUND TABLE	6-AXIS WITH FORK-TYPE-MILLING HEAD AND ROUND TABLE
WORKING AREA				
Travel path X-Axis	mm	2,300	2,300	2,300
Travel path Y-Axis	mm	1,500	1,400	1,400
Travel path Z-Axis	mm	1,050	1,050	1,050
Rapid traverse	m/min		50	
Feed	m/min		50	
Acceleration	m/s ²		5	
Clamping surface machine table X	mm	2,520	-	-
Clamping surface machine table Y	mm	1,600	-	-
Workpiece weight, max.	kg	15,000	-	-
CONTROL				
Standard		HEIDENHAIN TNC 640 with 19" Touchscreen		
Optional		SIEMENS 840 sl / FANUC 31i		
OPTIONS FOR SEVERAL AXES				
1-Axis-Fork-Type-Milling Head M-SERIES (with round table)		-	●	-
2-Axis-Fork-Type-Milling Head M-SERIES with A- and C-Axis		-	-	●
Choice of spindles		size 180-238	see pages 24-26	Ssee pages 24-26
ROUND TABLE ONLY POSITIONING				
Diameter	mm	-		Ø 1,800
Workpiece weight, max.	kg	-		10,000
Rated Speed		-		50
ROUND TABLE MILL-TURN				
Diameter	mm	-		Ø 1,800
Workpiece weight, max.	kg	-		5,000
Rated Speed		-		250
ACCURACY BY VDI / DGQ 3441				
Positioning accuracy X/ Y/ Z	mm			0.008
Repeatability X / Y / Z	mm			0.006
TOOL MAGAZINE (HSK-A100)				
No. of pockets				50
max. tool diameter	mm			160
max. tool length	mm			380
max. tool weight	kg			15
max. tool change time	sec			3.5

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