



# Competences compact

Products, solutions and services.  
For sustainably productive processes.

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# Strong group. Strong brands.

To be a long-term strong and reliable partner: This goal characterizes our acting, is the guiding principle for the CHIRON Group with the four brands CHIRON, STAMA, FACTORY5, CMS and GREIDENWEIS. With innovative products and services, we facilitate precise, productive and flexible machining in many different industries, all over the world. We continuously strengthen our leading position in the market, acquire new fields of expertise and thus secure you the decisive competitive edge beyond today.

**chiron**

Machining centers and turnkey solutions from the quality brand CHIRON facilitate high-speed manufacturing and CNC machining with maximum productivity and ultimate precision at minimal unit costs. From standard machines to fully automated complete solutions.

**STAMA**

STAMA is a pioneering brand for turnkey milling-turning centers for complete machining. The brand's focus is on customized manufacturing solutions with optimized dynamics and unit costs for extremely productive machining.

# COMPETENT SMART INNOVATIVE SUSTAINABLE

## CMS

The refurbishment specialist CMS refurbishes and modernizes CHIRON and STAMA branded CNC machining centers. Using expertise from the manufacturer, refurbished machines are given a productivity boost and a new, sustainable lease of life.

## FACTORY<sup>5</sup>

The compact machining centers of the FACTORY5 brand are ideal for the high-precision manufacture of micro-technical components. They combine the ultimate precision with maximum efficiency, can be automated, and – for networked production – can be integrated into a digital production platform of any scale.

## Greidenweis

The end-to-end, innovative automation solutions from GREIDENWEIS facilitate highly efficient machining, assembly and production processes. The brand is also known for its custom-built edge folding, joining and bonding machines and laminators and for its specialist automotive expertise.

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# Microprocessing. The smart way.



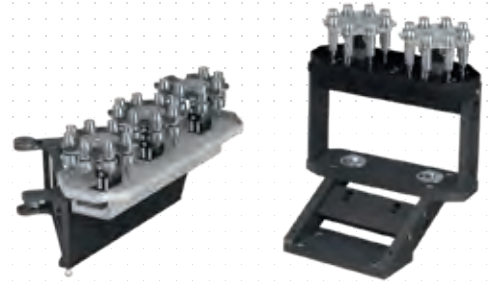
A



B



C



D

**Pallets**

A 4 pallets

B 6 pallets

**Tool magazines**

C 24 tools

D 40 tools



E





## Micro5

Where small parts require dynamic and high-precision machining, the Micro5 has caused a mini revolution. The FACTORY5 machining center with 4 or 5 axes is extremely compact and can be set up very quickly almost anywhere – in the production area or directly right at the work station. The 5 in the name stands for the ideal 5:1 ratio of machine size to workpiece, for five times lower weight and for maximum efficiency: Energy consumption is 50 times lower in comparison to conventional systems, in the latest machine generation a double-torque spindle ensures further reduced machining times.

## Process advantages

|                                      |                           |
|--------------------------------------|---------------------------|
| – Travel X – Y – Z max.              | 78 – 56 – 50 mm           |
| – Spindle speed min. – max.          | 12,000 rpm – 80,000 rpm   |
| – Torque max.                        | 6.4 (10.9 max.) Ncm       |
| – Tool options                       | 8 – 40 pieces with ATC 15 |
| – Tool length max.                   | 42 mm                     |
| – Interference circle Ø 1 face plate | Ø 85 mm                   |
| – More information                   |                           |



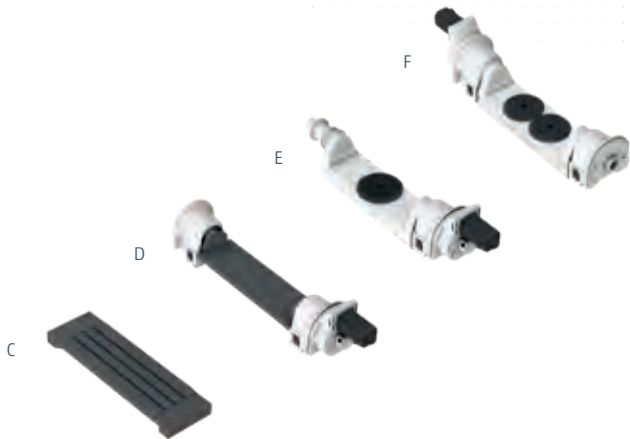
### Configurations

- E Work bench
- F Handling system Feed5



**Spindles**

- A Single-spindle
- B Double-spindle

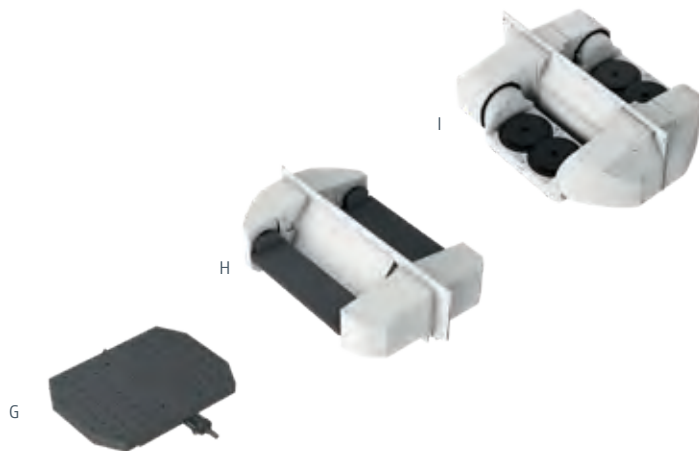


**Fixed table**

- C 3-axis

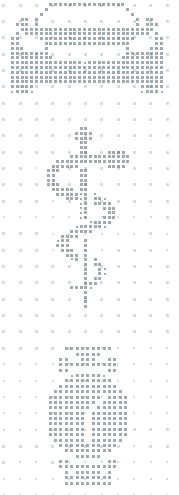
**Tilt rotary tables**

- D 4-axis
- E 5-axis, one face plate
- F 5-axis, two face plates



**Workpiece changing devices**

- G 3-axis
- H 4-axis
- I 5-axis, two face plates



# Process stability and versatility. Within the smallest space.

## 08 Series

Minimum tolerances of a few  $\mu\text{m}$  and top surface quality: You can meet these requirements with the versatile machining centers of the CHIRON 08 Series. All models represent high performance in a compact design. They can be set up quickly, are easy to operate, very stable, highly dynamic and low-maintenance. Thanks to the modular structure, there are numerous configuration possibilities. Any 08 Series basic machine can be assembled into an individual solution that fits perfectly to your production tasks.

## Process advantages

|   |                           |
|---|---------------------------|
| – Travel X – Y – Z max.                           | 450 – 270 – 360 mm        |
| – Spindle speed min. – max.                       | 15,000 rpm – 54,000 rpm   |
| – Torque max.                                     | 2 – 23 Nm                 |
| – Spindle distance DZ                             | 200 mm                    |
| – Tool options                                    | 24 – 96   2 x 12 – 2 x 48 |
| – Tool length max.                                | 42 mm                     |
| – Interference circle $\varnothing$ 1 face plate  | $\varnothing$ 500 mm      |
| – Interference circle $\varnothing$ 2 face plates | $\varnothing$ 199 mm      |
| – More information                                |                           |



# Highly efficient and multifunctional. For the lowest cost per piece.

## 12 Series

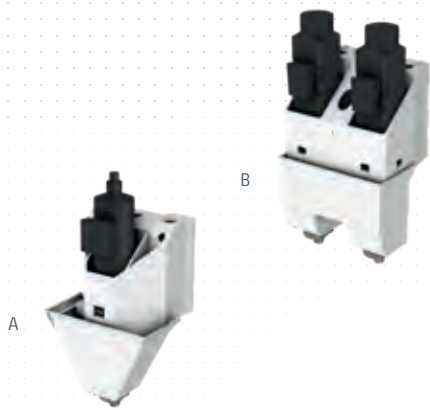
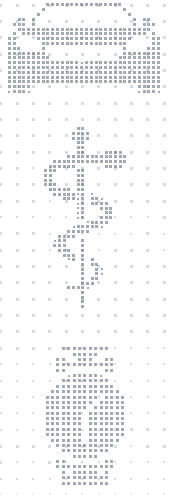
So you want synchronized production quality at low cost per unit? The machining centers of the CHIRON 12 Series combine these stipulations and are ranked the best in their class in terms of speed, compact design and versatility. On the FZ 12 S five axis in proven travel column design, workpieces with high surface quality can be manufactured in one clamping arrangement. The double-spindle DZ 12 S five axis performs five axis simultaneous operations using high-performance control options.

## Process advantages

|                                       |                             |
|---------------------------------------|-----------------------------|
| — Travel X - Y - Z max.               | 550 - 400 - 400 mm          |
| — Spindle speed min. - max.           | 12,000 rpm - 30,000 rpm     |
| — Torque max.                         | 11 - 110 Nm                 |
| — Spindle distance DZ                 | 250 mm                      |
| — Tool options                        | 24 - 208   2 x 12 - 2 x 104 |
| — Tool length max.                    | 250 mm                      |
| — Interference circle Ø 1 face plate  | Ø 650 mm                    |
| — Interference circle Ø 2 face plates | Ø 249 mm                    |
| — More information                    |                             |

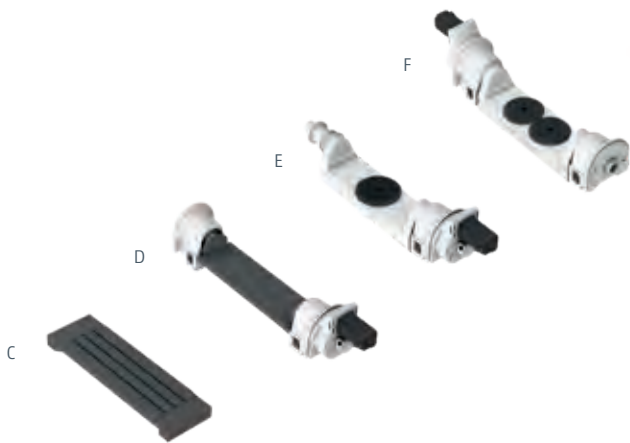
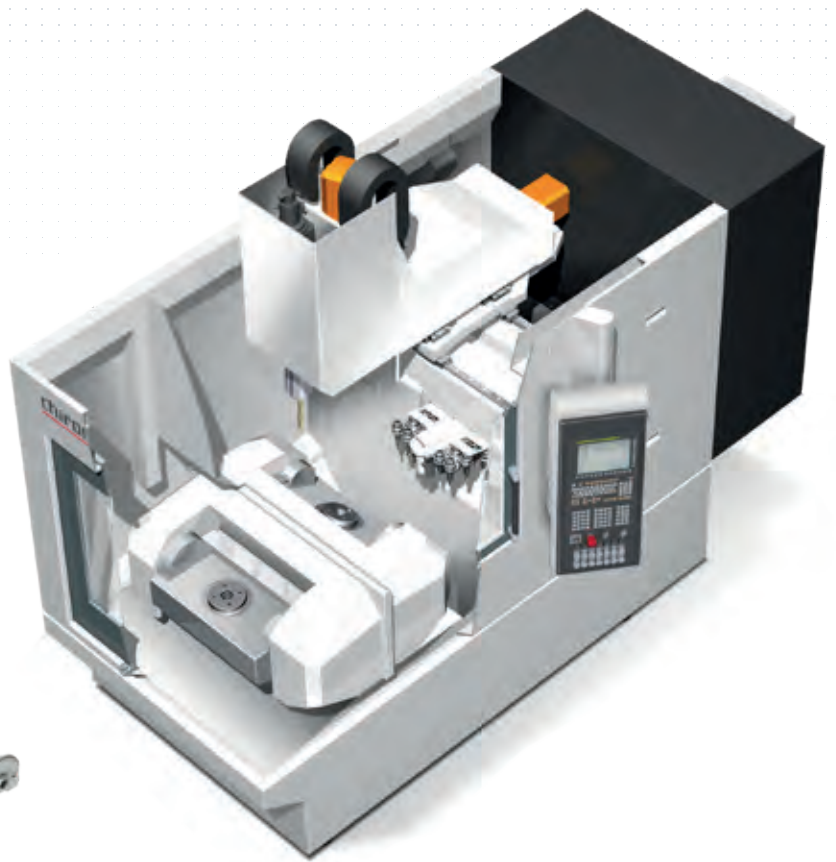






**Spindles**

- A Single-spindle
- B Double-spindle

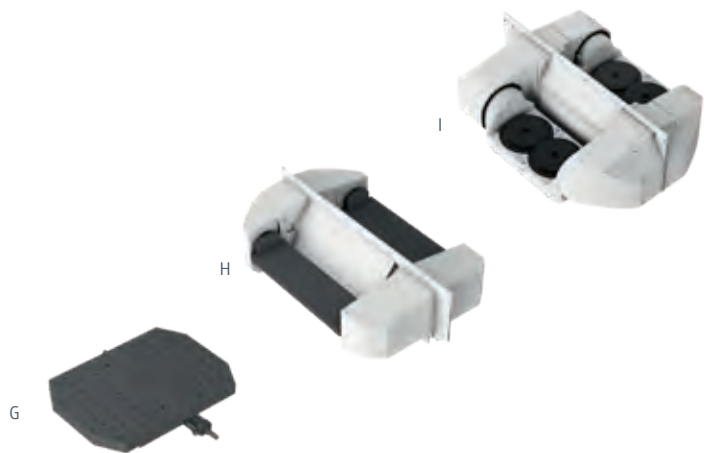


**Fixed table**

- C 3-axis

**Tilt rotary tables**

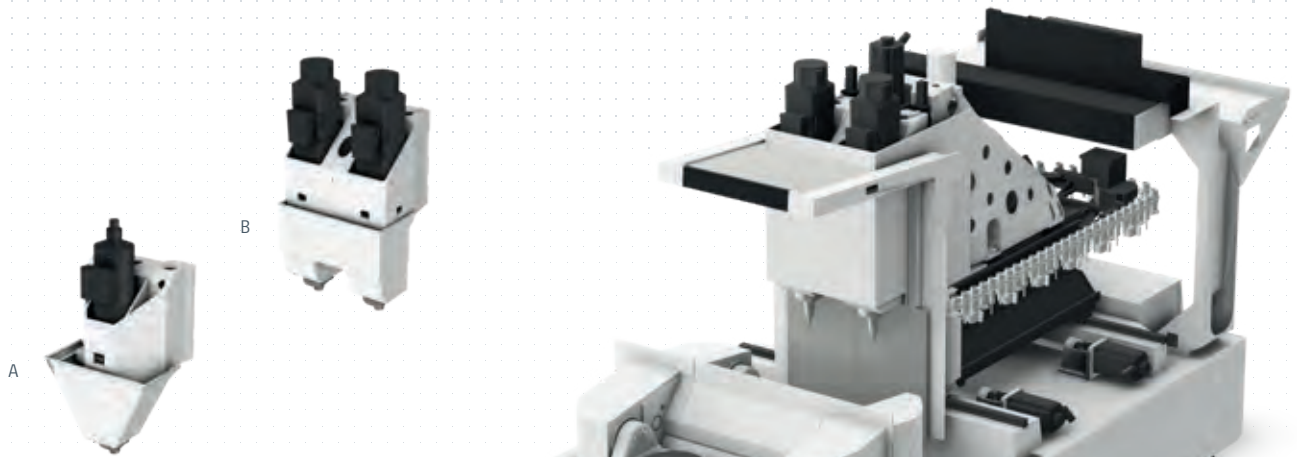
- D 4-axis
- E 5-axis, one face plate
- F 5-axis, two face plates



**Workpiece changing devices**

- G 3-axis
- H 4-axis
- I 5-axis, two face plates

# Precise and powerful machining. With compact, cutting edge technology.



## Spindles

- A Single-spindle
- B Double-spindle



## Fixed table

- C 3-axis

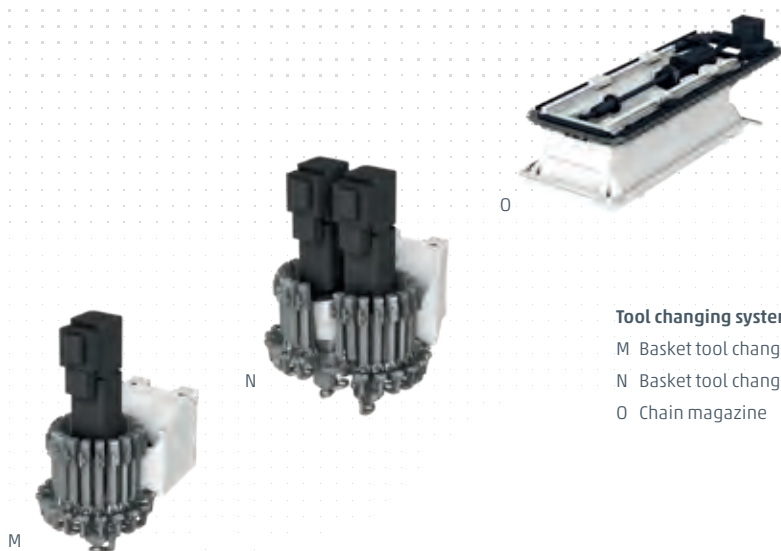
## Tilt rotary tables

- D 4-axis
- E 5-axis, one face plate
- F 5-axis, one face plate
- G 5-axis, two face plates

## Workpiece changing devices

- H 3-axis
- I 4-axis
- J<sup>°</sup> 5-axis, one face plate
- K<sup>°</sup> 5-axis, two face plates
- L 5-axis, wheel

<sup>°</sup> Face plates optional one-sided



#### Tool changing systems

- M Basket tool changer single-spindle
- N Basket tool changer double-spindle
- O Chain magazine

## 15 and 18 Series

The machining centers of the 15 and 18 Series are one of the best machine tools of its class in terms of speed, compact design, stability and reliability. They feature enormous performance reserves for powerful CNC milling and, thanks to their modular design, can be assembled to your perfect individual solution. With, for example, the appropriate spindle and table variant, with fast basket tool changer or pick-up tool magazine, with integrated workpiece changing device 0°/180° for loading and unloading during machining. Providing always powerful cutting, precision and high availability at low unit costs.

### Process advantages

### 15/18 Series

|                                     |  |
|-------------------------------------|--|
| Travel X - Y - Z max.               | 730 - 400 - 425 mm (15)<br>830 - 550 - 630 mm (18) |
| Spindle speed min. - max.           | 10,500 rpm - 20,000 rpm                            |
| Torque max.                         | 70 - 180 Nm  |
| Spindle distance DZ                 | 250/320/400 mm                                     |
| Tool options                        | 12 - 158   2 x 35                                  |
| Tool length max.                    | 200 mm   |
| Interference circle Ø 1 face plate  | Ø 800 mm   |
| Interference circle Ø 2 face plates | Ø 570 mm   |

More information

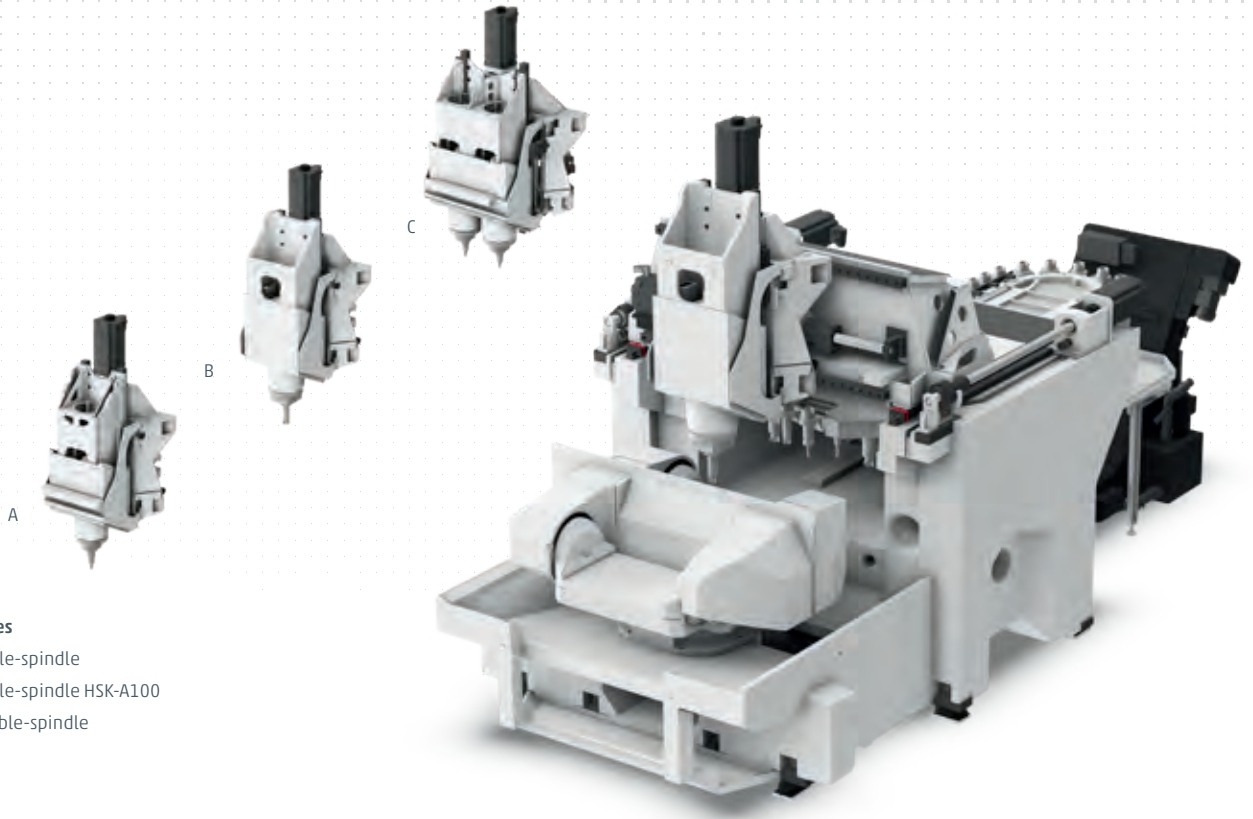


15



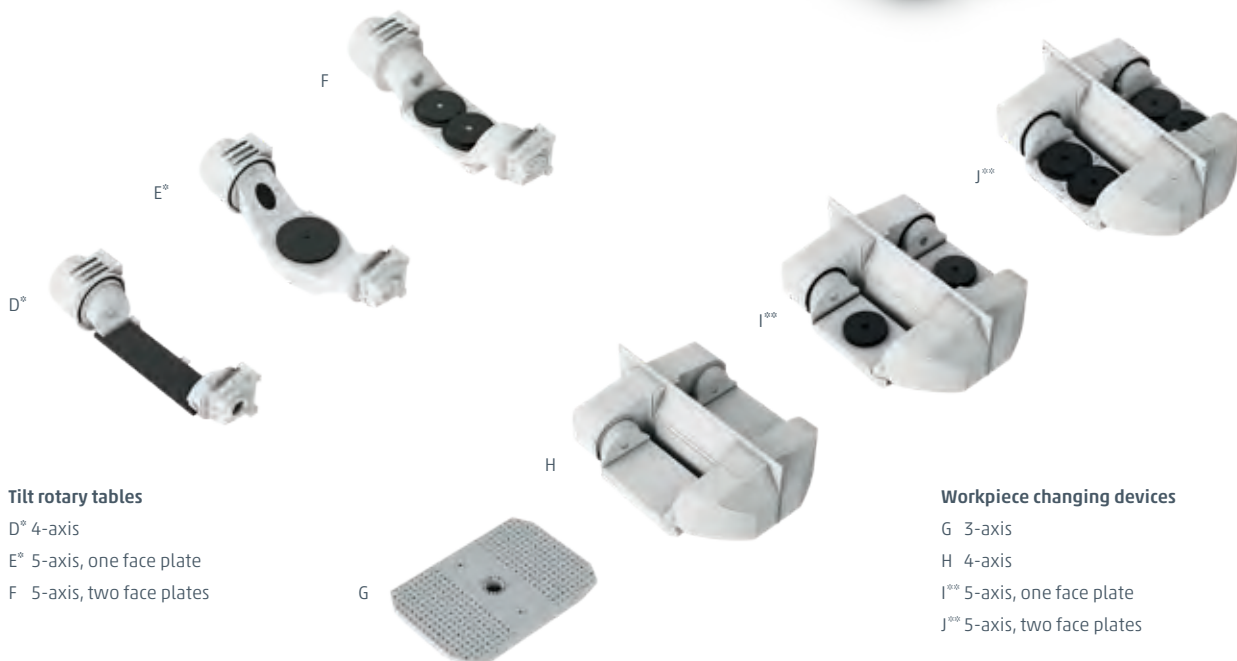
18

# Strong performance, high dynamics. For complex work pieces.



## Spindles

- A Single-spindle
- B Single-spindle HSK-A100
- C Double-spindle



## Tilt rotary tables

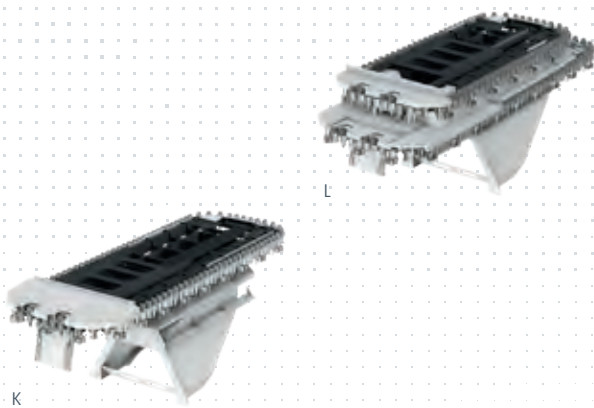
- D° 4-axis
- E° 5-axis, one face plate
- F 5-axis, two face plates

## Workpiece changing devices

- G 3-axis
- H 4-axis
- I°° 5-axis, one face plate
- J°° 5-axis, two face plates

° Only for 16 Series

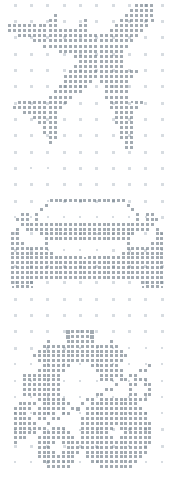
°° Face plates optional one-sided



#### Tool magazines

K · 1-chain magazine

L · 2-chain magazine



## 16 and 22 Series

Whether CHIRON FZ / DZ 16 or DZ 22 – both series convincingly answer your requirements regarding high precision, dynamics and best surface quality for larger, increasingly complex workpieces. Basis for this is a fundamentally new machining platform with mobile gantry design. Thus, the rigidity is significantly increased, resulting in even more precise machining. The single-spindle FZ 16 S five axis is designed for special precision requirements in 5-axis machining, the double spindle DZ 16 W is the specialist for larger quantities. With its 600 mm spindle distance, the DZ 22 is the ideal solution for complete machining of large-volume components in the automotive industry.

### Process advantages

|                                       |  |
|---------------------------------------|--|
| – Travel X – Y – Z max.               | 660 – 660 – 400 mm (FZ 16)<br>620 – 650 – 600 mm (DZ 22) |
| – Spindle speed min. – max.           | 10,000 rpm – 20,000 rpm                                  |
| – Torque max.                         | 200 – 408 Nm   |
| – Spindle distance DZ                 | 320 / 600 mm   |
| – Tool options                        | 42 – 162   2 x 28 – 2 x 80                               |
| – Tool length max.                    | 450 mm   |
| – Interference circle Ø 1 face plate  | Ø 660 mm   |
| – Interference circle Ø 2 face plates | Ø 319 mm   |
| – More information                    |  |



16



22

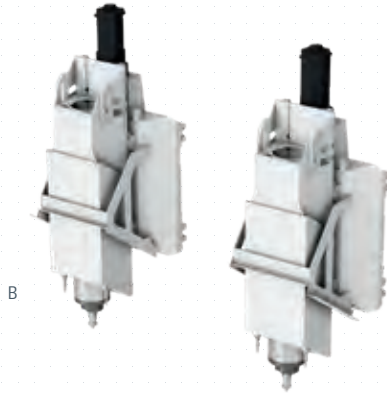
The perfect combination.  
Of dynamics, precision, productivity.

#### Spindles

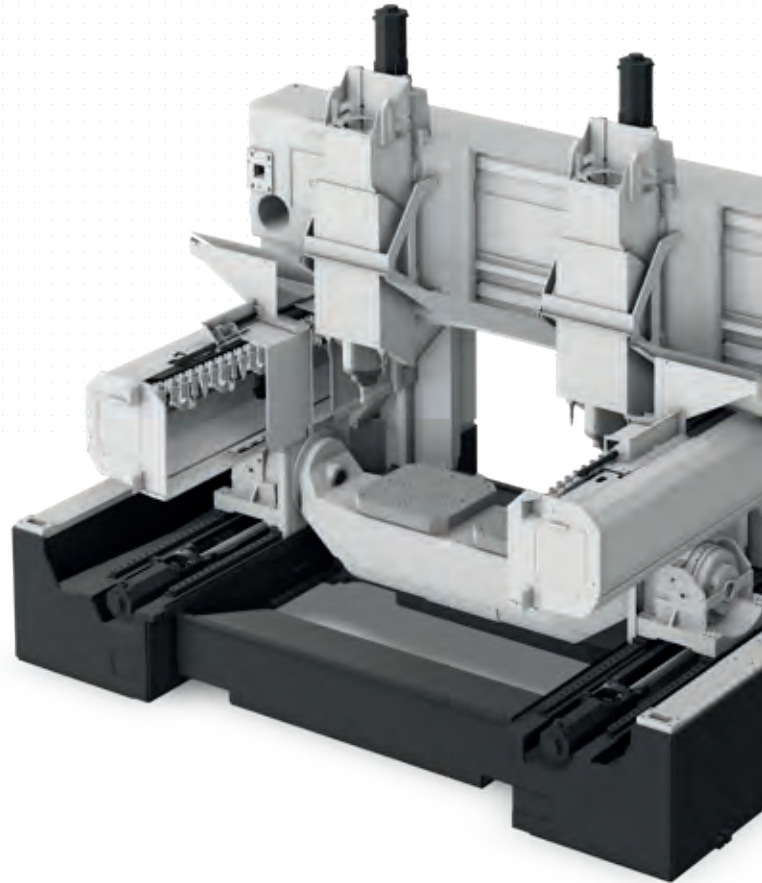
- A Single-spindle
- B Double-spindle



A



B



C



D

#### Tilt rotary tables

- C 5-axis, one pallet
- D 5-axis, two pallets

#### Workpiece changing device

- E Pallet changer



E





## 25 and 28 Series

The CHIRON 25 and 28 Series are designed for machining complex, large-volume components. With large spindle distances of 800 or 1,200 mm, DZ 25 and DZ 28 enable the double-spindle production of aluminum components for the automotive and aerospace industries – in a perfect combination of productivity, precision and dynamics. A compact, flexible machine layout, spindles that can traverse independently in X and Z directions and simple automation with robot or gantry are additional advantages for your manufacturing practice. Operating and loading take place on separate sides, for best access to the work area and good visibility into the process.

### Process advantages

### 25/28 Series

|                                       |  |
|---------------------------------------|--|
| – Travel X – Y – Z max.               | 800 – 1,100 – 800 mm (25)<br>1,200 – 1,100 – 800 mm (28) |
| – Spindle speed min. – max.           | 12,500 rpm – 20,000 rpm                                  |
| – Torque max.                         | 200 Nm   |
| – Spindle distance DZ                 | 800 / 1,200 mm   |
| – Tool options                        | 36 / 60   2 x 36 / 60                                    |
| – Tool length max.                    | 450 mm   |
| – Interference circle Ø 1 face plate  | Ø 1,199 mm   |
| – Interference circle Ø 2 face plates | Ø 799 mm   |
| – More information                    |  |



25



28



# Highly productive cutting. Generous traverse paths in X.



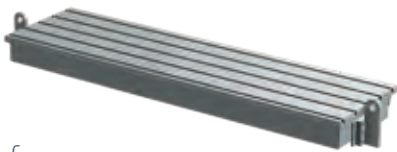
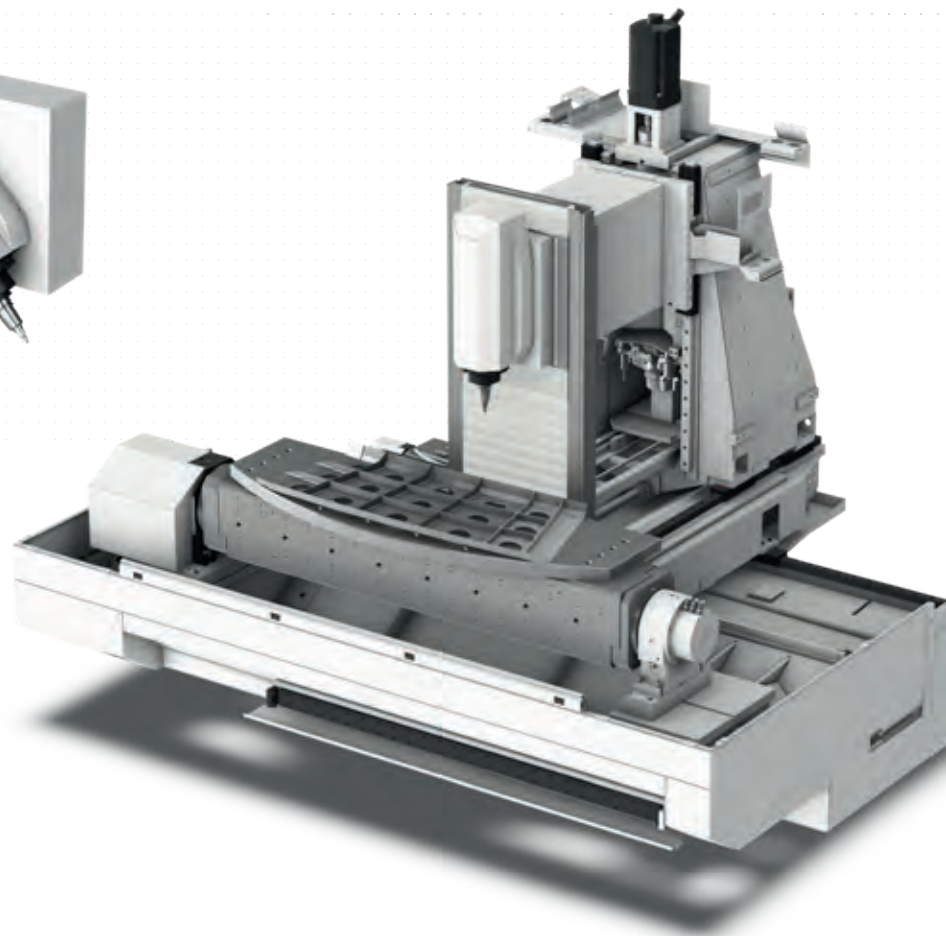
A



B

## Spindles

- A Fixed spindle
- B Swivel head



C



D

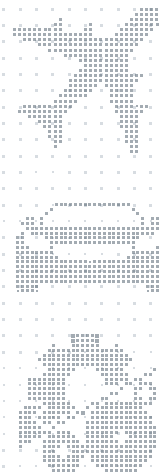
## Fixed table

- C 3-axis
- D 3-axis with rotary table
- E 3-axis with central splash guard



E






## MILL Series

From small parts to large workpieces: The machining centers of the CHIRON MILL Series offer you optimal preconditions for highly productive cutting and precise machining results with the lowest costs per piece. All models of this series are distinguished by their high performance in CNC Milling and by traverse paths in X up to 6,000 mm. Large and flexible work areas, high dynamics and powerful drives, fast set-up and simple operation are further benefits, whether in flexible single-unit production or in manufacturing small and medium quantities.

## Process advantages

|                                    |   |
|------------------------------------|---|
| Travel X - Y - Z max.              | 6,000 - 915 - 715 mm  |
| Spindle speed min. - max.          | 12,000 rpm - 30,000 rpm   |
| Torque max.                        | 180 Nm  |
| Tool options                       | 24 - 170  |
| Tool length max.                   | 370 mm  |
| Interference circle Ø 1 face plate | Ø 1,010 mm  |
| More information                   |  |



F



G



H

### Table options

F Swivel plate

G Clamping cube

### Swivel rotary table

H 5-axis, one face plate

# Complete six-side machining. Efficient, from the bar.

## Process advantages

- Travel X - Y - Z max.
- Spindle speed milling spindle max.
- Torque milling spindle max.
- Tool options
- Tool length max.
- Counter turning spindle torque and speed
- Main turning spindle torque and speed
- Main / counter spindle outlet max.
- More information

## MT mill turn and MP multi profile Series

Milling off the bar: The CHIRON Group covers the complete manufacturing spectrum and offers the appropriate machine solution for every workpiece

dimension, every batch size and every specific requirement. The compact CHIRON FZ 08 S mill turn precision\* for multifunctional machining of small and medium bars.

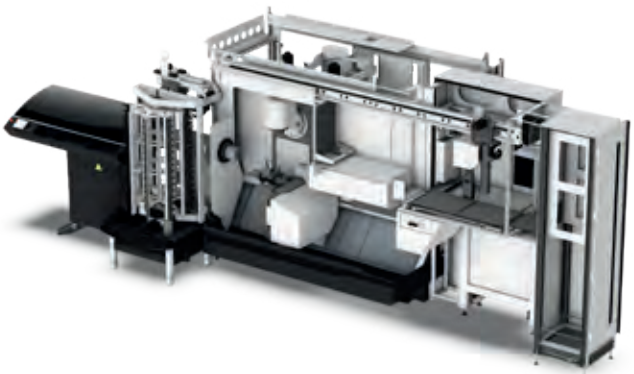
### FZ 08 S mill turn precision\*



A



B\*\*



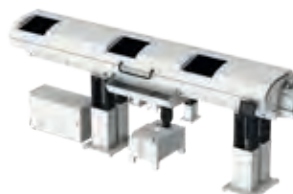
### MT 715



C\*



D



E\*



F

**MT 08**

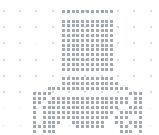
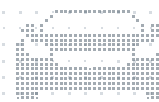
210 - 200 - 360 mm  
 54,000 rpm  
 20 Nm  
 40 - 96  
 200 mm  
 8,000 rpm  
 6,000 rpm - 8,000 rpm  
 65 mm

**MT 715**

1,000 - 210 - 480 mm  
 20,000 rpm  
 100 Nm  
 64 - 128  
 250 mm  
 4,800 rpm, 27 kW  
 4,800 rpm, 27 kW  
 65 mm

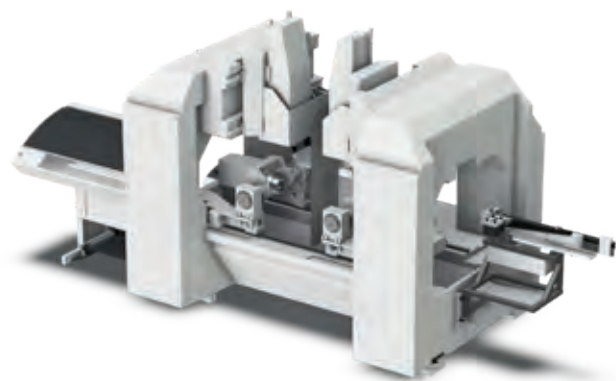
**MT 733**

615 (915) - 290 - 500 mm  
 20,000 rpm  
 200 Nm  
 36 - 304 | 2 x 36 - 184  
 300 mm  
 4,200 rpm, 102 kW  
 4,200 rpm, 102 kW  
 102 mm



The CHIRON MT 715 with a wide range of options for individual configuration and high autonomy. The milling-turning centers of the STAMA MT 733 Series

with integrated automation, for flexible series production from a batch size of one.

**MT 733**

G



H



I



J

**FZ 08 S mill turn precision\***

A Swivel head  
 B\*\* Bar loader short

**MT 715**

C° Main and counter spindle mill turn  
 D Machining unit tool revolver  
 E° Bar loader  
 F Pallet storage

**MT 733**

G Linear portal  
 H Linear portal with conveyor  
 I Handling base  
 J X-axis linear slide unit with rotary swivel unit with main and counter turning spindle

\* For 08 and 715

\*\* For all machines

# Complete six-side machining. Efficient, in all sizes.

## Process advantages

- Travel X – Y – Z max.
- Spindle speed milling spindle max.
- Torque milling spindle max.
- Tool options
- Tool length max.
- Spindle distance milling spindle
- Spindle speed turning spindle max.
- Torque turning spindle max.

## System 8 SINGLE

- 780 – 400 – 400 mm
- 10,000 – 15,000 rpm with 140 Nm
- 140/170 Nm
- 70
- 300 mm
- 
- 4,200 rpm
- 180 Nm

## System 8 TWIN

- 700 – 400 – 400 mm
- 10,000 – 15,000 rpm with 140 Nm
- 2 x 140/70 Nm
- 2 x 35
- 300 mm
- 400 mm
- 4,200 rpm
- 2 x 180 Nm



## System 8



### Variant 1

- Work space fitted with
- One milling spindle
  - One turning spindle
  - One clamping point/torque axis

Concept

- Prototypes and low volume

- Two clamping positions
- OP10 sides 1 to 5 milling and turning
  - OP20 sides 2 to 6 milling



### Variant 2

- Work space fitted with
- One milling spindle
  - Two turning spindles

Concept

- Prototypes and low volume

- Two clamping positions
- OP10 sides 1 to 5 milling and turning
  - OP20 sides 2 to 6 milling and turning



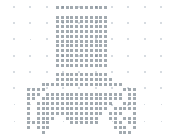
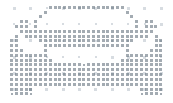
### Variant 3

- Work space fitted with
- Two milling spindles
  - Two turning spindles

Concept

- High-volume production

- Two clamping positions
- OP10 sides 1 to 5 milling and turning
  - 2 x OP10 sides 1 to 5 on twin machine



## MP multi profile Series

Milling from profile: The CHIRON Group offers solutions for profile machining with the FZ 08 S multi profile and MP 715 machines. The advantage here is that the clamping elements can be exchanged in a very short time,

which makes it much easier to change over the machines. Here, too, the large number of options offers individual configuration and thus a high degree of autonomy.

### Process advantages

- Travel X - Y - Z max.
- Spindle speed milling spindle max.
- Torque milling spindle max.
- Tool options
- Tool length max.
- Opening max.
- More information

### MP 08

210 - 200 - 360 mm  
 40,000 rpm  
 23 Nm  
 40  
 200 mm  
 95 x 95 mm



### MP 715

1.000 - 210 - 480 mm  
 20,000 rpm  
 100 Nm  
 64 - 128  
 250 mm  
 150 x 150 mm

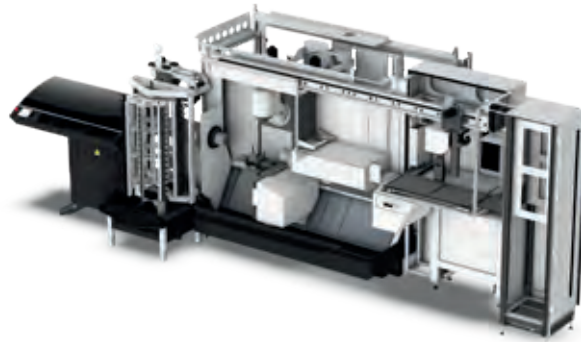


### FZ 08 S profile system



A

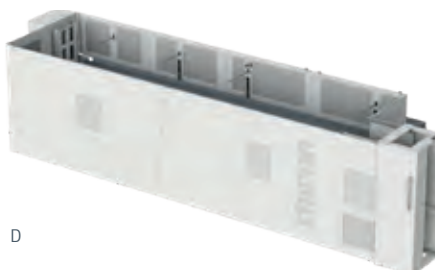
### MP 715



C



B\*



D

### FZ 08 S profile system

- A Swivel head
- B\* Main and counter spindle profile

### MP 715

- C Automatic saw
- D Profile loader

\* For 08 and 715

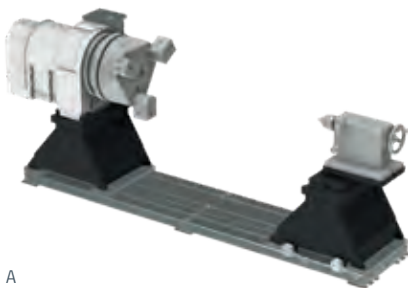
# Additive Manufacturing of a new kind. Multifunctional and easy to use.

## Highlights AM Cube

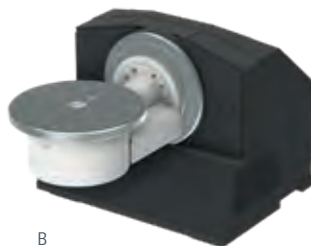
- Coating, repair, 3D printing
- Automatic deposition-head changing
- Wire or powder feedstock material
- Modular design 3-axis, 4-axis, 5-axis
- Innovative user interface with TouchLine
- Programming in a cartesian coordinate system in DIN ISO or CAM
- Well-known Siemens control system components
- Comprehensive quality monitoring with DataLine AM and VisioLine AM

## Process advantages

- |                             |   |
|-----------------------------|---|
| — Workpiece dimensions max. | 3-axis: 1,000 – 500 – 600 mm<br>4-axis: Ø 650 – 1,000 mm (L)<br>5-axis: Ø 500 – 500 mm (H),<br>Ø 1,000 – 700 mm (H) |
| — Power solid state laser   | Optionally 2 / 4 / 6 kW   |
| — Beam quality              | NA 0.1  |
| — Focus diameter            | 1.2 – 4.0 mm, depending on deposition head  |
| — Control                   | Siemens SINUMERIK ONE   |
| — Swivel area               | 4-axis: A-axis 360°<br>5-axis: B-axis +/- 100°,<br>C-axis 360°  |
| — Permissible load max.     | 3-axis: 1,000 kg<br>4-axis: 400 kg<br>5-axis: 400 kg / 1,000 kg   |
| — Footprint                 | 2,650 – 2,650 mm, plus periphery  |



A



B

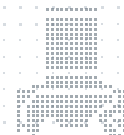


C

### Axis configuration

- A 4-axis with movable tailstock
- B 5-axis rotary table
- C C-axis rotary table





D

## AM Cube 3D metal printer

Manufacturing larger and complex components, coating or repairing components, near-net-shape production of semi-finished products: The **AM Cube** is an innovative, future-proof combination solution for laser metal deposition with wire and powder in one system. A distinctive feature is the automatic change of the deposition head during an active process. This allows you to realize different requirements – a high-quality surface finish, a high deposition volume, as well as the deposition of wire and powder. The process data can be documented via DataLine AM, and the welding process can be recorded in real time with VisioLine AM.



E

Also designed to meet the highest requirements is **AM Coating**, a system for applying extremely hard coatings to brake discs or rotationally symmetrical components. With the AM Coating SINGLE you develop process parameters or produce small batches, with the fully automated AM Coating TWIN large batches.



F



### Deposition heads

D Wire

E Powder

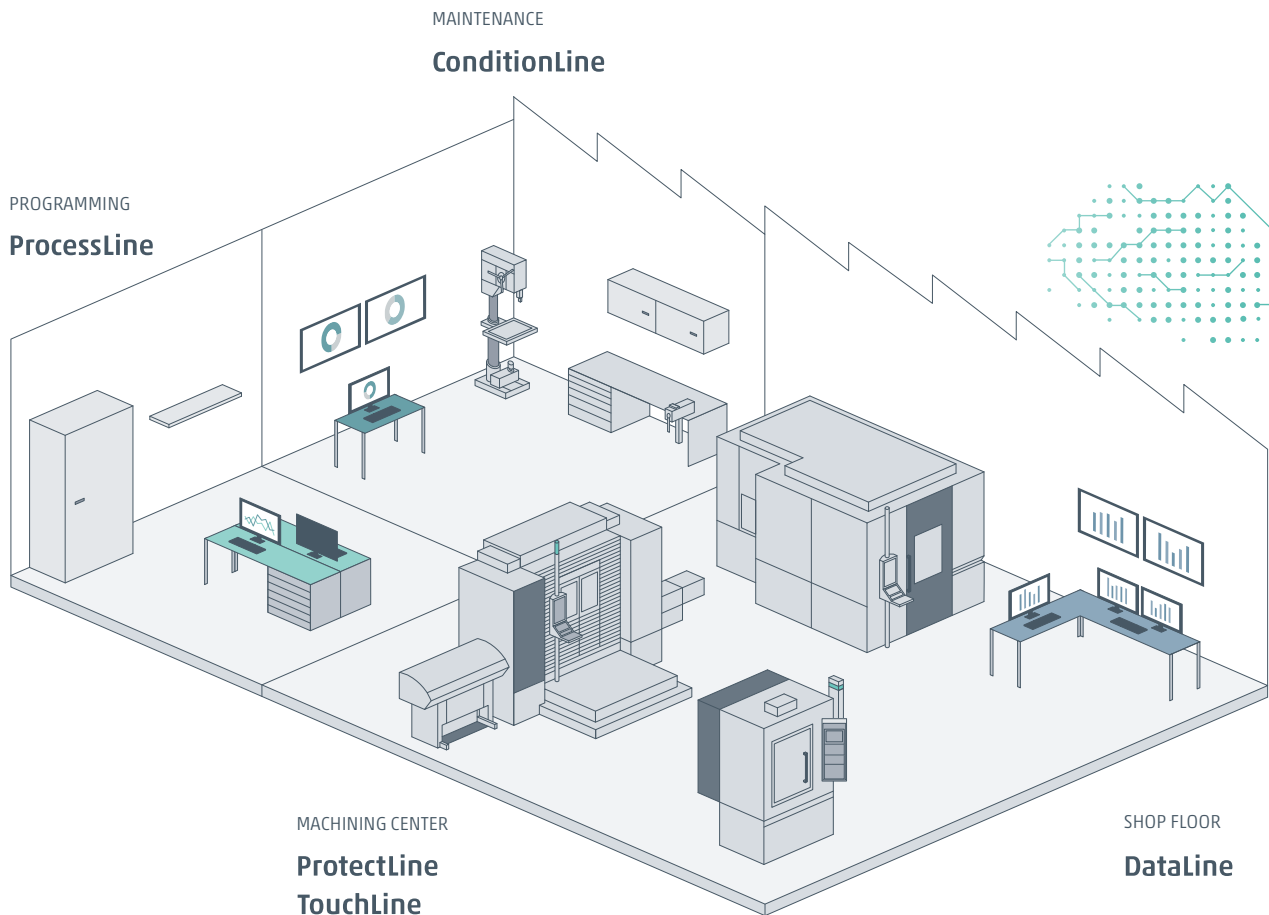
F Powder for internal coating

# Digital Systems. Real added value.

## SmartLine

Whether you operate in the automotive industry, mechanical engineering, aerospace, medical or precision engineering: The digitalization of your production facilitates greater efficiency, higher availability and increased productivity. SmartLine – a modular portfolio of digital systems from the CHIRON Group – harnesses this potential and adds real, lasting value to your machining centers, in terms of both production and the wider business.

All SmartLine modules can be integrated either as a standalone or in combination with others, with each digital system adding value to a specific area. Their individual functions and strengths combine to create an impressive package, providing extra efficiency, availability and productivity.





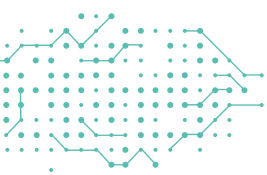
# Intelligent manufacturing solutions. From planning to series production.

## Turnkey

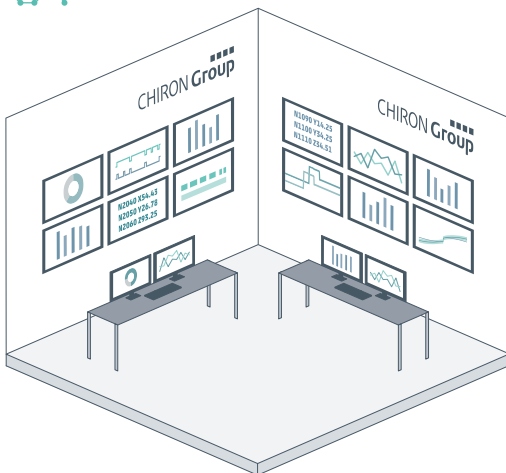
As a user, you can expect a manufacturing solution that is as individual as it is intelligent. A solution that uses the quantity structure and framework conditions to transfer your concrete machining task into a Turnkey process specific to your workpiece. To do so, the engineers and technicians of the Application division contribute their expertise for all phases from planning to series production readiness and deliver a production-ready overall solution of machining centers, tools, clamping devices and automation. Completed with the appropriate services over the entire lifecycle.

## The process

- Comprehensive process design
- Engineering and project management
- Validation of statistical process capability
- Assurance of target productivity
- Customized automation
- Production support during the start-up phase
- Trainings for optimal use of the solution
- Tailored services



CHIRON Group  
**RemoteLine**



## Modules for increased efficiency, availability and productivity

- ConditionLine: Automatic condition monitoring
- DataLine: Integrated machine and process diagnostics
- ProcessLine: Machining simulated and optimized in advance
- ProtectLine: Preventive machine protection in every mode of operation
- RemoteLine: Remote diagnostics and remote maintenance
- TouchLine: Reliable and intuitive operation

# The right services. At the right time.

## SmartServices

Real added value is also offered by SmartServices, digital services based on software solutions from the SmartLine portfolio. Regardless of location or distance from your machinery, SmartServices are on-hand to help you convert the potential of your manufacturing processes into increased profitability.



## LifetimeSolutions

High machine availability, low operating costs, and the highest workpiece quality at minimum cost per part. This is the CHIRON Group commitment delivered with each machining center from CHIRON, STAMA, FACTORY5 and the refurbishments from CMS. An integral part of this commitment is the highly efficient CHIRON Group service. Nearly 500 service professionals in 26 countries provide comprehensive support, as trusted partners throughout the entire lifecycle of your machine with traditional on-site services and other services such as maintenance, repair, optimization and modernization.

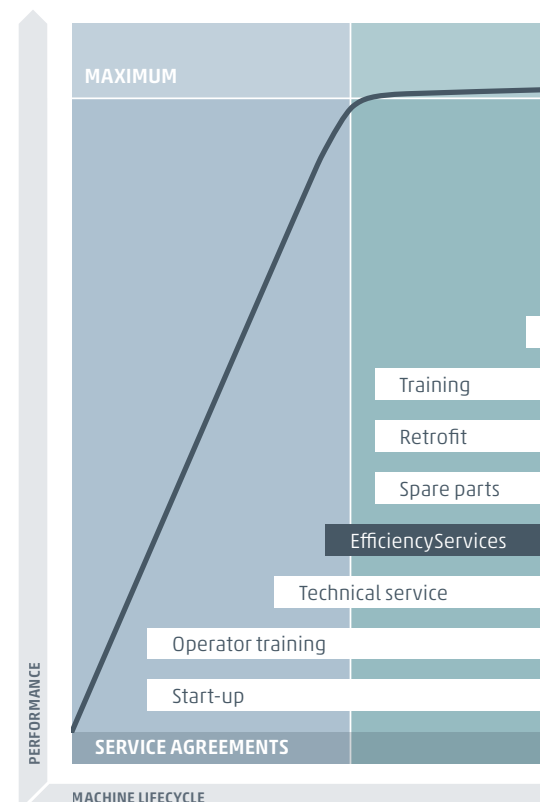
However, in today's manufacturing, professional service encompasses much more. It is targeted response, with the right services, at the right time. This is exactly what LifetimeSolutions provides: Based on the various phases of the machine lifecycle, as well as your specific needs, and your specific needs, the CHIRON Group service specialists assemble a complete package of tailored services. With clear added value: More time for machining, lower operating costs.

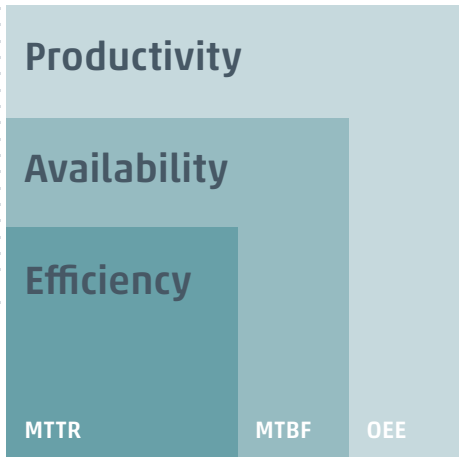


## TAKE OFF

## PRODUCE

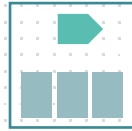
ENSURE PRODUCTION





**ProductivityServices**

Analyzing and optimizing the entire value chain for increased OEE



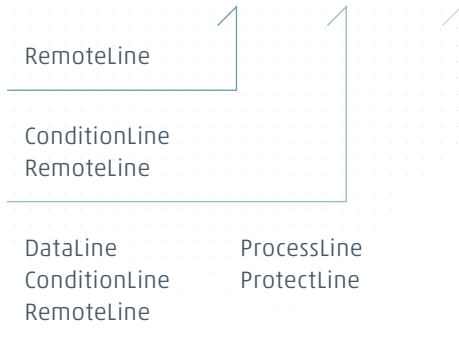
**ConditionServices**

Condition-based, individual maintenance management for increased availability at predictable costs



**EfficiencyServices**

Optimized reactive maintenance with tailored support for reduced downtime



**MTRR**

Mean Time To Repair

**MTBF**

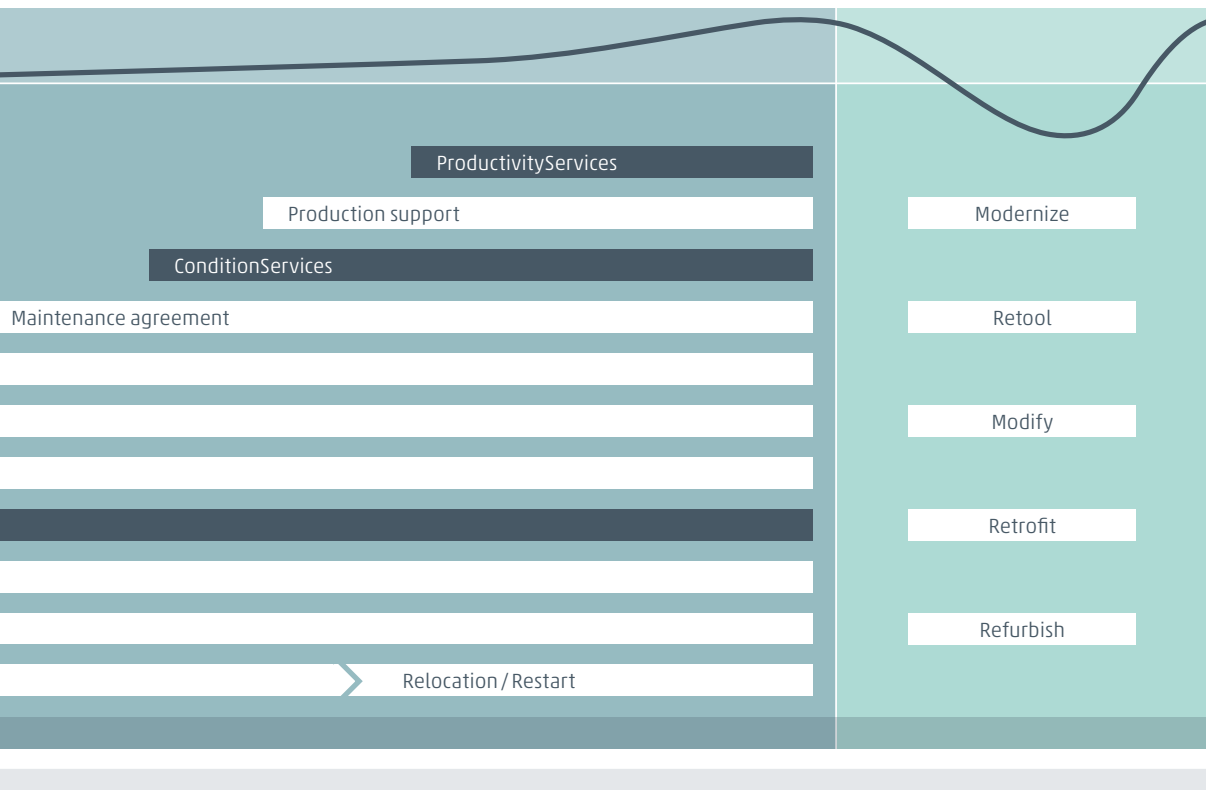
Mean Time Between Failures

**OEE**

Overall Equipment Effectiveness

**MODERNIZE**

ENHANCE PRODUCTIVITY



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# An original. Of the sustainable kind.

## Refurbishment

A CHIRON Group machining center is an investment in high-quality machine technology and thus in sustainability. In permanently high production rates, short process times, consistently high quality. Advantages that pay off even longer with a refurbishment by the CMS product section. Thus the lifecycle of existing machines can be increased – and not only that: During a complete refurbishment, the specialists renew all important elements such as drives and main spindles and, if necessary, modernize the control system. The systems manufacture 30 to 40 percent faster than before. At the same time, the energy requirements decrease, the environmental footprint is getting smaller.

In addition to the aspect of sustainability, a refurbishment is also an interesting option in other respects: Low investment costs and short delivery times for a CHIRON or STAMA machining center facilitate the entry into quality production. An individual refurbishment, if desired also as a turnkey solution, prepares your machine for new tasks. In addition, CMS has a pool of machines from different series, ready for a customer-specific refurbishment.



We turn **OLD** → into **NEW**

