

# chiron

CNC Machining Centres



**Series 08**

**Seconds  
ahead**

## Series 08: High speed machining centre for small workpieces

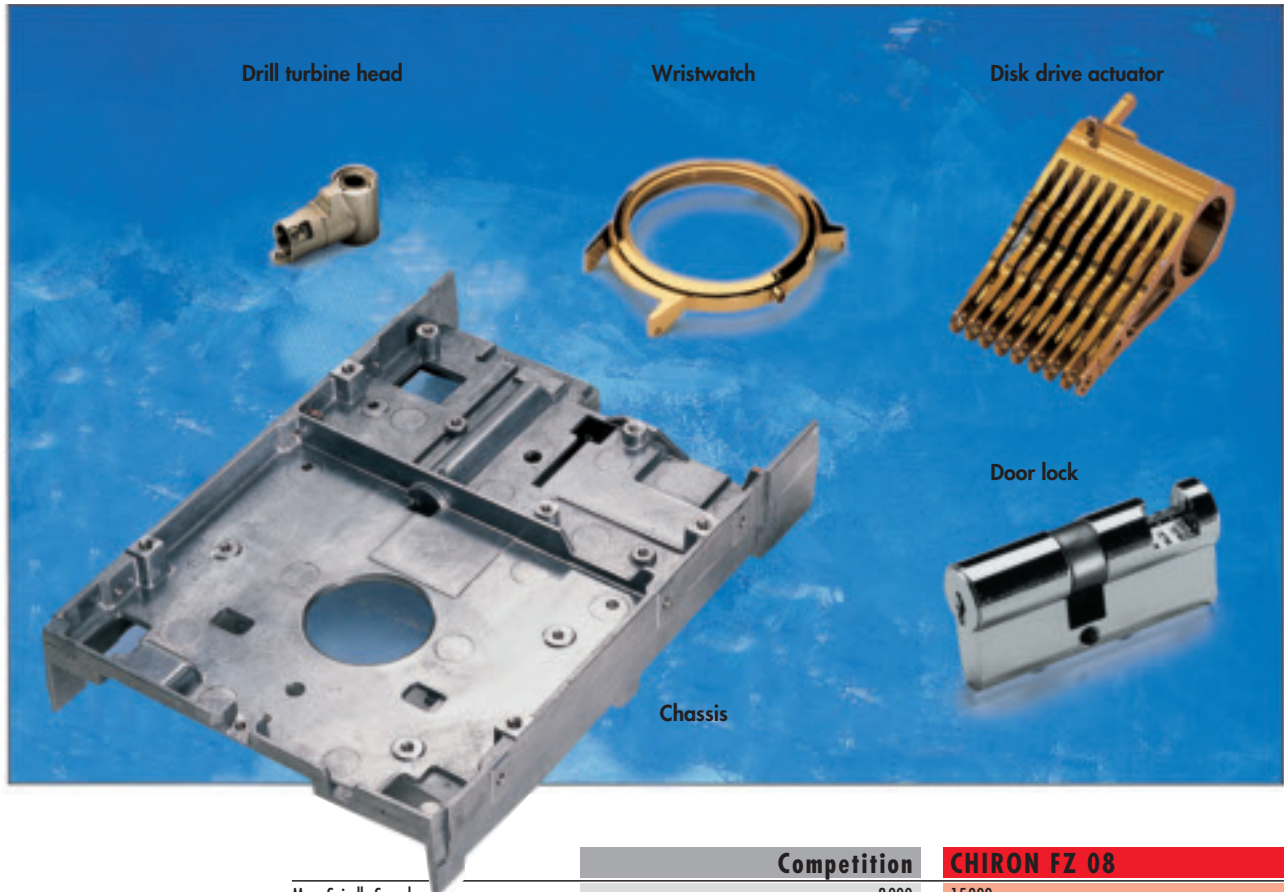
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### **FZ 08 S**

A fixed table travelling column machine for complete machining. Simple changeover, good handling and easy to operate.

# es and lowest piece-part cost



Aluminium Volve body

		Competition					CHIRON FZ 08				
Max. Spindle Speed	rpm	8000					15000				
Chip to Chip time/n=1800	s	3.5					1.5				
Chip to Chip time/n=max.	s	6					2				
Rapid travel X-Y	m/min	24					40				
Rapid travel Z	m/min	24					60				
Acceleration in X,Y	m/s <sup>2</sup>	2.5					7				
Acceleration in Z	m/s <sup>2</sup>	2.5					10				
WZ		Cut time	Position time	Ramp time	Chip to Chip	Total time	Cut time	Position time	Ramp time	Chip to Chip	Total time
Part Loading											
T 01	1 x Milling Surface A	5.1	2.4	2.5	3.5	13.5	2.7	1.4	0.5	1.5	6.1
T 02	2 x Drilling Ø 6.8	9.7	4.6	1.9	3.5	19.7	9.7	2.5	0.1	1.5	13.8
T 03	1 x Drilling Ø 3.2	0.8	2.5	2.5	3.5	9.2	0.4	1.5	0.5	1.5	3.8
T 04	1 x Drilling Ø 2.8	0.9	2.4	2.5	3.5	9.3	0.5	1.4	0.5	1.5	3.8
T 05	2 x Pilot Drilling Ø 3.1	3.0	4.5	2.5	3.5	13.6	1.6	2.5	0.5	1.5	6.1
T 06	2 x Ream Ø 3.2	3.0	4.5	0.6	3.5	11.7	3.0	2.5	0.0	1.5	7.1
T 07	2 x Deep Hole Drilling Ø 3.2	9.0	4.6	2.5	3.5	19.7	4.8	2.6	0.5	1.5	9.4
T 08	2 x Tapping M8	8.0	4.6	0.1	3.5	16.1	8.0	2.5	0.0	1.5	12.1
T 09	2 x Drilling Ø 10	8.4	4.8	0.9	3.5	17.6	8.4	2.6	0.1	1.5	12.6
T 10	2 x Circular Milling	7.9	4.7	2.5	3.5	18.6	6.3	2.6	0.2	1.5	10.6
T 12	1 x Finish Milling	9.6	2.4	2.5	3.5	18.1	5.1	1.4	0.5	1.5	8.5
Part unloading											
<b>Time for 2 Pieces</b>		<b>65.4</b>	<b>42.2</b>	<b>21.0</b>	<b>38.5</b>	<b>167.1</b>	<b>50.6</b>	<b>23.4</b>	<b>3.4</b>	<b>16.5</b>	<b>93.9</b>
Cycle time per piece at 100% eff.	s	83.6					46.9				
Part production	parts/h	43.1					<b>76.7 78.0% more parts produced!</b>				
Machine hourly rate	EUR/h	51.00					56.00				
<b>Cost per part</b>	<b>EUR</b>	<b>1.19</b>					<b>0.73 38,2% lower cost per part produced!</b>				

**High Speed Machining** is often described as a machining process which reduces in-the-cut time by utilizing high spindle speeds and rapid feed rates. But when machine tool manufacturers apply this technologies there are often associated problems with reliability and up time.

CHIRON's concept of **High Speed Manufacturing** goes far beyond the focus on high spindle speeds, to concentrate on all factors which effectively reduce cycle time and dramatically increase in-the-cut time as a proportion of floor to floor time.

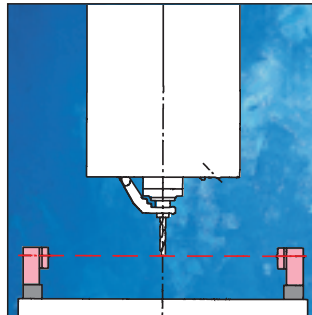


**Simplified Process**

Small, compact standard machine equipped with 12 tools for complete machining. Simple to operate, quick changeover time and the machine is easily transportable around the factory floor thanks to integral rollers.

**Benefit**

Part production can be made with the lowest capital investment for the required production.

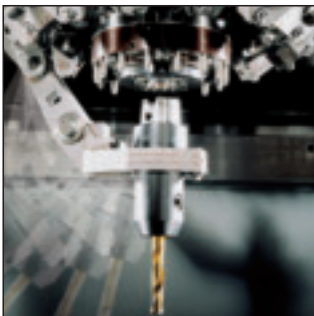


**Improved Process Management**

Automated tool monitoring and tool management with CHIRON Process Control technology. CHIRON Laser Control for tool measurement. Spindle mounted probe for automated fixture and part location.

**Benefit**

Higher degree of utilization of machine and tools.

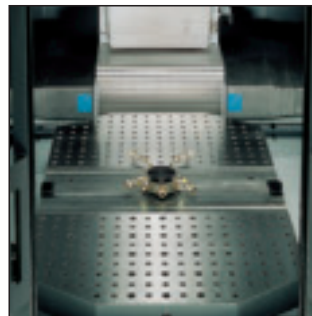


**Maximized Spindle Utilization**

0.5 s tool change while positioning of spindle at 60 m/min.

**Benefit**

Near zero time loss for change of machining operations resulting in more output and revenue.



**Integral Workpiece Changer**

Pallet change (0°/180°) in 1.9 s, including centre partition for simultaneous safe loading/unloading on one side while machining on the other. Two 550 x 300 mm<sup>2</sup> clamping surfaces with grid clamping locations.

**Benefit**

Loading and unloading while machining.

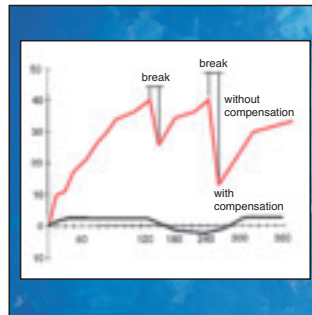


**Improved Spindle Efficiency**

Spindle speed up to 10 500 rpm within 0.4 s.  
Option: 15 000 rpm within in 0.6 s, 27 000 rpm within in 1.9 s.  
Rigid Tapping up to 8 000 rpm.  
Main spindle drive 7.4 kW.

**Benefit**

High Speed Machining without loss of machine efficiency.



**Better Quality**

Standard machining unit designed for high quality and reliability. CHIRON Thermo Control compensates for effects of thermal variations.

**Benefit**

Built-in high quality.

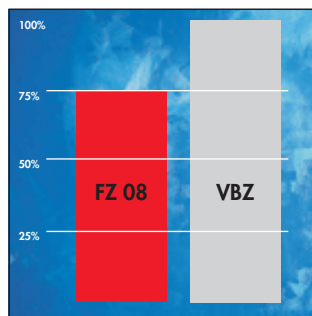


**Improved Part Handling**

Fully enclosed moving column machine with fixed table. Fixed table is ideal for power actuated fixtures and computer controlled rotary tables for machining of multiple part surfaces from one clamping position.

**Benefit**

Operator friendly part handling and improved part quality.



**Low cost per part produced**

Small, compact machining unit with low price. Minimal maintenance due to long life grease packs. High productivity and utilization rate. Residual market value.

**Benefit**

More competitive and profitable business.

## lowest piece-part cost

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### **FZ 08 W**

A compact machine with integral workpiece changer allowing loading/unloading within the machining cycle. Fast, efficient, and safe!

**Series 08  
Options**

NC-rotary table
2-axes NC rotary table
15 000 rpm
27 000 rpm
Tool changeable speeder head 90 000 rpm
Bar machining
Electrical interface for loader
Automatic doors
Chip conveyor
CHIRON Laser Control
CHIRON Thermo Control
Tool life management
Probe
Extraction

**Basic series**

**08 Series**  
High-speed centre for small workpieces

**12 Series**  
High-speed manufacturing for low piece costs

**15 Series**  
Quicker milling in medium and large batch production

**18 Series**  
High-speed machining and heavy cutting

**28 Series**  
High-performance machining in small and medium batch production

**MILL Series**  
Profitable small and medium batch production

**Flexible production systems**

**FLEXLINE**  
Manufacture a variety of batches without retooling

**FLEXCELL DUO**  
Robot-automated 6-sided complete machining on 2 machining centres

**QUATTROCELL**  
Robot-automated multi-spindle machining with tool change in 0.0 s

**You can request further brochures on the following technological topics:**

- Multi-spindle machining
- Multi-side machining
- Bar machining
- Wheel machining
- MPS profile machining
- CHIRON TURNKEY

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