RAFAMET

Heavy-duty Vertical Turning Lathes

At the begining

of the twentieth century, the foundry shops of the time have served to meet the diverse needs of the metalworking industry. Since then, RAFAMET has become a global company and the most recognizable brand in the market of special purpose machine tools. Our company is a widely respected supplier of heavy-duty special purpose machine tools for railway, machine-building, energy, shipbuilding, metallurgical, aerospace and arms industry.

Now, just as back then, we are convinced that comprehesive solutions, advanced technologies and efficient productivity are obvious requirements the right equipment supplier is expected to meet in order to help various industries to be successful. That is why we are constatly adapting and continuing our efforts aimed at satisfying and serving customers' needs. We would like to invite you to take advantage of RAFAMET's many years of competence.

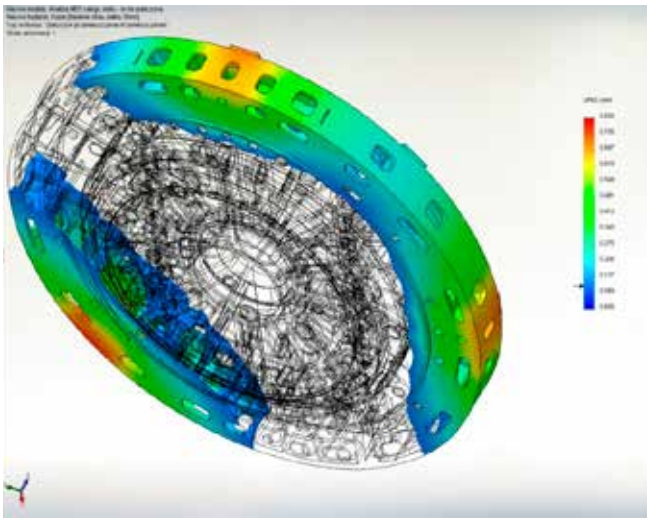
RAFAMET Group

RAFAMET S.A.

Is one of the worldwide leading companies in the field of designing and manufacturing medium and large size heavy-duty machine tools.

Engineering & programming

Thanks to Company's own, highly-qualified engineering & programming task force, equipped with Solid Edge, EdgeCAM, AutoCAD and Simatic Step 7 software, as well as our extensive knowledge and hands-on experience in applications, we offer the best engineering solutions to our customers. As a result, we continue to develop new product lines to meet specific needs of wide variety of metalworking industries. Living this value is done through understating, that changing and adapting is a must to face the new technological challenges. Furthermore, for our company innovation processes are often based on a close collaboration with customers. Such a development, in recent years, has helped RAFAMET to be able to enter new manufacturing fields, i.e. bridge type milling machines, horizontal lathes, special machines, modular machining centres etc.



High quality

Total commitment to customer satisfaction has become a daily routine for the entire RAFAMET's staff and production process. Sales of products and services of quality that meets the expectations of customers while maintaining safe working conditions and respect for the natural environment are the main goals for our Company. In this context, it should be noted that the Company undertakes development tasks in the area of increasing the science & research potential, including "Industry 4.0" projects. Moreover RAFAMET has been working in the ISO 9001 Quality Assurance/Management Standard environment since 1996.

Service & technical support

From the concept, through production, to the maintenance phase – RAFAMET makes every effort to keep machine in peak operating condition. Therefore, we provide professional training and technical service. During installation, operators and maintenance staff receive specific training on how to use and maintain the machine in order to ensure its best performance and fault-free operations. The English / German / Russian speaking servicemen possesing great skills in CNC machine tools are ready to assist our customers in case of any need. RAFAMET machine tools users have at their disposal dedicated remote diagnostics facility able to communicate with the machines control systems for immediate fault recognition and reporting.

KCM 150 N

The KCM 150 N heavy-duty single-column Vertical Turning Lathe is intended for turning and boring of cylindrical, conic and curved surfaces, as well as complex shaped large-size workpieces.

The use of the latest Siemens SINUMERIK 840D CNC and digital drive technology guarantee maximum performance and the complete compatibility of all drive and control components.

The KCM 150 N Vertical Turning Lathe along with a wide array of optional equipment are customized to meet the Customer's individual requirements.

Heavy – Duty Vertical Turning Lathe

Main features:

- Compact design adjusted to machining requirements
- High rigidity and accuracy of machining
- Complex machining of workpiece in one setup
- Railhead for turning, milling and drilling operations
- Feed drives of X and Z axes through precise ball-screw transmissions
- Tool / toolhead magazines
- ISO/BT, CAPTO, KM or any other tooling system
- Heidenhain high-resolution linear scales
- Main drive and C-axis drive
- Cooling system for cutting tools

The machine tool body system consists of base with table and one wide column mechanically connected what forms a rigid and stable structure.

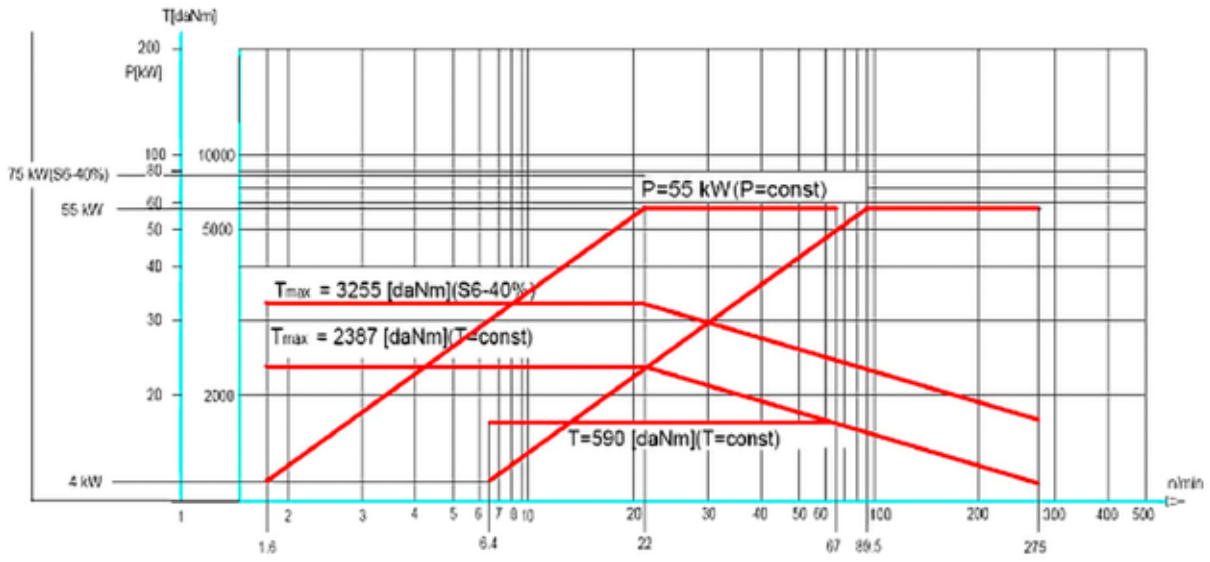
All the machine tool major members are made as high grade iron castings.

This ensures both high geometrical stability and excellent vibration-damping, better than those of the fabricated structures.

TECHNICAL SPECIFICATIONS		KCM 150 N
Table		
Table diameter	mm	1500
Max. turning diameter	mm	1800
Max. table load	×10 kN	15
Max. continuously variable rotation rates:		
• Cast iron table: – Rolling bearing	rpm	250
• Steel table: – Rolling bearing	rpm	400 (1)
Power of main drive	kW	55
Cross – rail (fixed)		
Max. height of turning	mm	1600
Railhead		
Ram travel	mm	1000
Ram cross-section	mm	250 × 250
Max. cutting force	×10 kN	4
Milling spindle		
Max. rotation rate	rpm	3000
Power for milling	kW	22
Machine tool overall dimensions and weight		
Machine tool overall dimensions: (2)		
• Length	mm	5850
• Width	mm	6000
• Height	mm	6000
Approximate weight of machine tool (2)	×10 kN	29

(1) – Optional execution.
(2) – For standard execution of machine tool.

Some of the above data can be altered to meet the Customer requirements.
Above data are subject to change due to product development, without prior notice.



Characteristics – power and torque diagrams

KCI Series KDC Series

The KCI Series / KDC Series heavy-duty double-column Vertical Turning Lathes are intended for turning and boring of cylindrical, conic and curved surfaces, as well as complex-shaped large-size workpieces.

The use of the latest Siemens SINUMERIK 840D CNC and digital drive technology guarantees maximum performance and the complete compatibility of all drive and control components.

The KCI Series / KDC Series Vertical Turning Lathes along with a wide array of optional equipment are customized to meet the Customer's individual requirements.

KDC Series

Main features:

- Compact design adjusted to machining requirements
- High rigidity and accuracy of machining
- Complex machining of workpiece in one setup
- Railhead(s) for turning, milling and drilling operations
- Feed drives of X and Z axes through precise ballscrew transmissions
- Tool / toolhead magazines
- ISO/BT, CAPTO, KM or any other tooling system
- Heidenhain high-resolution linear scales
- Available table travel drive (Y-axis)
- Twin main drive with C-axis
- Cooling system for cutting tools – working pressure up to 350 Bar (KCI Series)

The machine tool major members as base, table, columns, cross-rail and railhead are made as high grade iron castings.

This ensures both high geometrical stability and excellent vibration-damping, better than those of the fabricated structures.

TECHNICAL SPECIFICATIONS		KCI 250 N		KCI 320 N			KCI 500 N			KDC 700 N		
Version		B-1		B-2			B-3			C-1		
Table												
Table diameter	mm	2270	2500	3200	3600	4000	4500	5000	6000	6300	7000	8000
Max. turning diameter	mm	3000		4000 - 5000			5500 - 8000			16000		
Max. table load	×10 kN	30		50			150			350	350	400
Max. continuously variable rotation rates:												
• Cast iron table: – Rolling / Hydrostatic bearing	rpm	170 / 140	150 / 140	120 / 80	110 / 80	95 / 80	80 / 55	63 / 55	60 / 55	50 / 35	45 / 35	45 / 35
• Steel table: – Rolling bearing	rpm	250	190	160	150	140	–	–	–	–	–	–
Power of main drive	kW	2 × 81		2 × 81			2 × 81 / 2 × 125 (1)			2 × 100 / 2 × 125 (1)		
Cross – rail												
Max. height of turning	mm	2500		4000			4500			7000		
Railhead												
Ram travel	mm	1500 / 1800 (1) / 2100 (1) / 2500 (1) / 3000 (1)								2500 (1) / 3000 (1) / 4000 (1)		
Ram cross-section	mm	320 × 320 / 350 × 350 (1)								350 × 420 / 500 × 500 (1) 600 × 600 (1)		
Max. cutting force	×10 kN	7		7 / 8			8 / 10			12		
Milling spindle												
Max. rotation rate	rpm	3000								3000		
Power for milling:												
• Ram live tool spindle • Electro spindle (1)	kW kW	20.5 / 31 (1) / 44 (1) 35 / 60 (1)								31 / 44 (1) / 60 (1) 35 / 60 (1) / 75 (1)		
Machine tool overall dimensions and weight												
Machine tool overall dimensions: (2)												
• Length • Width • Height	mm mm mm	5200 7800 7500		7200 9000 7500			9000 10800 9700			12500 10200 10400		
Approx. weight of machine tool (2)	×10 kN	110		130			180			490		

(1) – Optional execution.
(2) – For standard execution of machine tool.

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KCI Series

RAFAMET Machine Tools

Staszica 1
47-420 Kuźnia Raciborska, Poland
Tel. +48 327 213 300

E-mail: rafamet@rafamet.com.pl

www.rafamet.com