DMG MORI

- CTX 350
- CTX 450
- CTX 550
- CTX 750 | 1250
- CTX 750 | 2000

UNIVERSAL TURNING

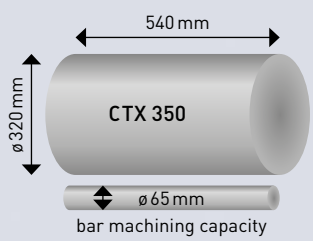
CTX 6th Generation

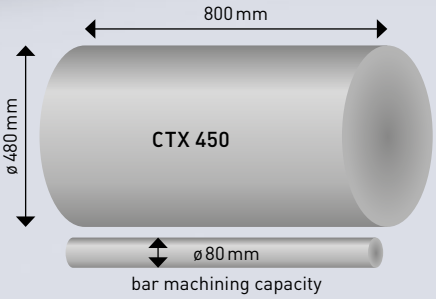
CTX 6th GEN. SERIES

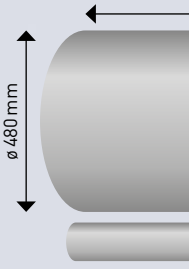
More than a lathe – The CTX 6th generation

The MX-transformation is clearly visible in the enhanced performance, precision, and energy efficiency of the CTX 6th Generation machines, marking a significant advancement in the field of universal machining. The new CTX series revolutionizes universal machining with its compact design and larger workspace in the same footprint. It features a larger cutting diameter and efficient chip removal. High-grade components ensure quick, precise, and reliable performance now available in all sizes.

WORKPIECE DIMENSIONS

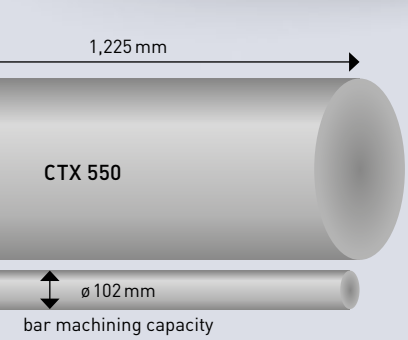


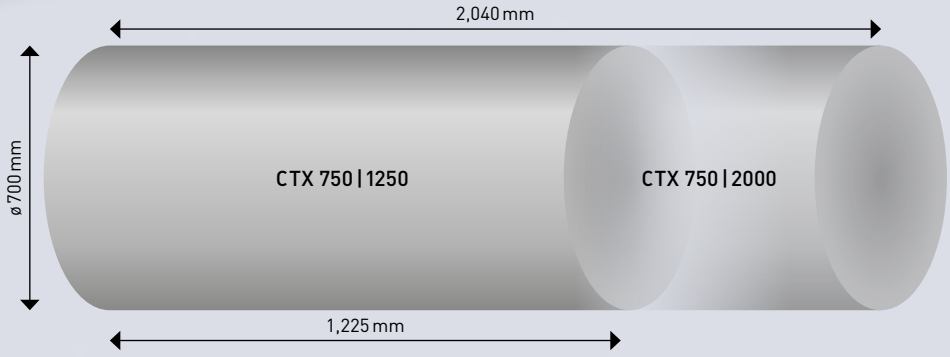




HIGHLIGHTS CTX 6th GENERATION

+ Turning diameter from 320 mm up to 700 mm and turning lenght from 540 mm up to 2,040 mm and max. bar capacity up to 127 mm
+ Y-axis with ±50 mm up to ±85 mm, the largest in its class
+ 6-sided complete machining with left spindle up to ISM127 and optonial right spindle up to ISM102
+ **12 positions VDI 30 / 40 / 50 Turret, up to 12,000 rpm fully ready for high pressure coolant (optionally 80 bar)**
+ **Best Energy Efficiency** due to **integrated spindle motors** with synchro technology and inverters for all motor pumps
+ **Long lasting accuracy** due to linear scale direct measuring system and liquid cooled spindle drives
+ **DMG MORI** multi-touch control panel with SIEMENS or touch panel for FANUC
+ **Steady rest for workpieces up to 430 mm** in diameter and optionally double steady rest (CTX 750)





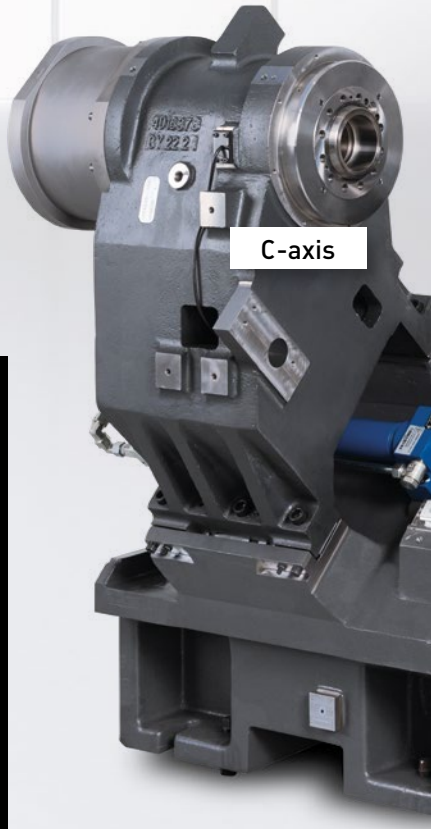
CTX 6th GEN. SERIES

Rigid cast iron bed with high quality ball screws and linear guideways mets high production standards

The CTX series is based on an FEM optimized High quality, compact and torsion-resistant cast iron bed, for the best stiffness and vibration dumping characteristics.

The four-guideway design allows collision-free movement of the Z-axis and tailstock or back-spindle. Metal covers in working area through inclination of 45° optimize chip fall and increases operational safety and machine service life.

Highest quality ball screws and width dimension linear guideways in the X/Y and Z-axes were combined to support heavy duty cutting, guarantee machine dynamics to meet the best standards in production.



C-axis

HIGHLIGHTS

+ **Highly dynamic spindle drives family**
  with up to 5,500 rpm or 31 kW / 1,975 Nm for left spindle
  and up to 5,500 rpm or 40 kW / 770 Nm for right spindle
+ **Dynamic and precise C-axis control**
  by using of the Magnescale measuring system on front bearing
+ **VDI 30, VDI 40 and VDI 50 interface turret,**
  with increased stiffness by large and unified footprint allows
  the machining of large range of workpieces
+ **Synchronization of the left spindleand counterspindle indexing**
  permits the machining of complex workpieces

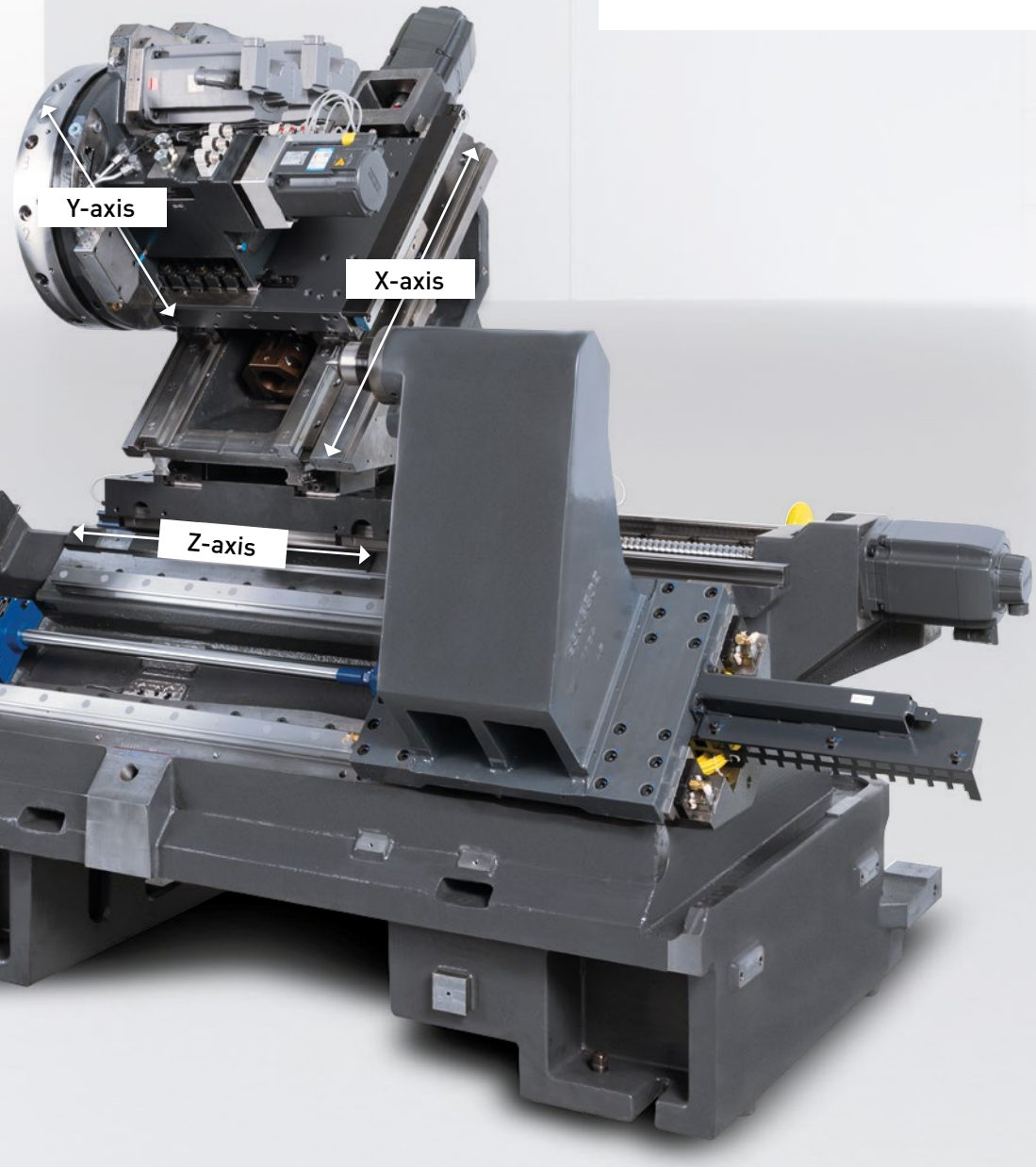
CONSTRUCTION AND DESIGN BENEFITS

The thermal stable headstock with long life lubricated high-quality bearings, ensures high rotational precision and long-lasting service.

The high-power synchro motors allows both dynamic and high torque machining, with a large bar capacity, improving productivity.

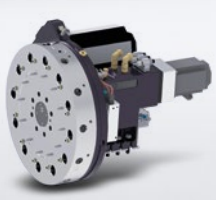
The low connected load, efficient power consumption and energy recovery ensure efficient use of energy.

The programmable tailstock guarantees flexibility and rapid processes in your production, from basic machine version while the counter-spindle increase the machine flexibility.



CTX 6th GEN. SERIES

Dedicated Turrets for any application



CTX 350	Disc type turret HPT Gear Drive VDI 30	Star type turret HPT Gear Drive VDI 30	Star type turretMASTER VDI 30*
Model	–	Y	SY
Power/torque (kW/Nm)	6.6/14	6.6/14	6.6/14
Rotary speed (rpm)	7,000 (8,000*)	6,000 (7,000*)	12,000
Machine Version	V3/V4 std	V6 std	V6 optional
Ready for 40 bar coolant pressure	•	•	80 bar
Air oil lubricated for 100 % duty cycle in milling	•	•	liquid cooled

• Standard *optional 12 or 16 folds

CTX 450, CTX 550	Disc type turret HPT Gear Drive VDI 40	Star type turret HPT Gear Drive VDI 40	Star type turretMASTER VDI 40*
Model	–	Y	SY
Power/torque (kW/Nm)	6.5 (12.5)/21 (27)	6.5 (12.5)/21 (27)	11/49
Rotary speed (rpm)	4,000 (7,000)	4,000 (6,000)	12,000
Machine Version	V4 std	V6 std	V6 optional
Ready for 40 bar coolant pressure	•	•	80 bar
Air oil lubricated for 100 % duty cycle in milling	•	•	liquid cooled

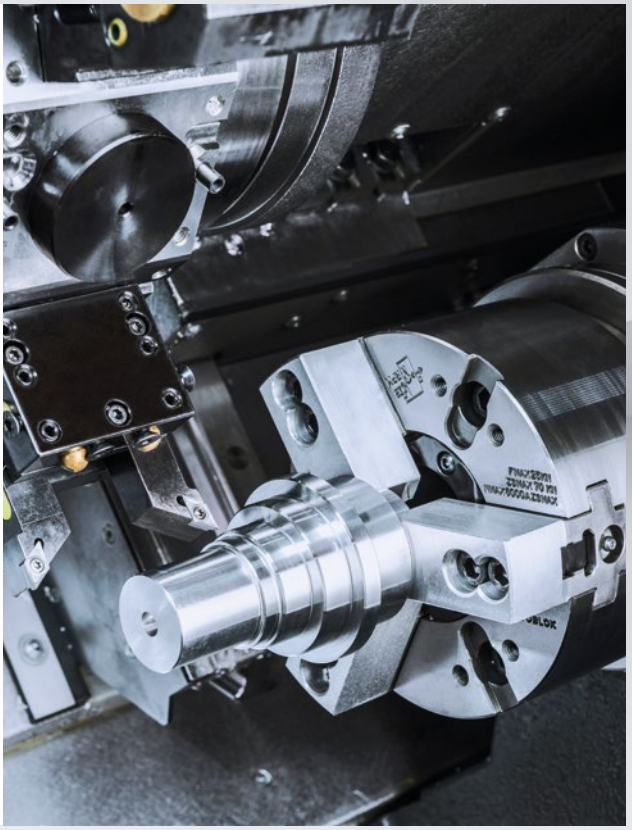
• Standard *optional 12 or 16 folds

CTX 750	Disc type turret HPT Gear Drive VDI 50		Star type turretMASTER VDI 50
Model	Y		SY
Power/torque (kW/Nm)	8 (9.5)/54 (50)	–	16/55
Rotary speed (rpm)	4,000 (6,000)	–	6,000
Machine Version	V3, V4 std	–	V6 standard
Ready for 40 bar coolant pressure	•	–	80 bar
Air oil lubricated for 100 % duty cycle in milling	•	–	liquid cooled

• Standard

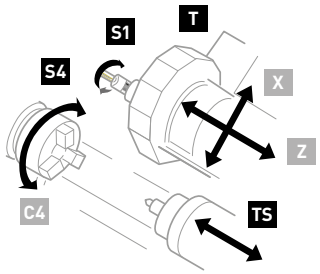
TRIFIX®: ACCURATE AND QUICK SET UP WITH VDI

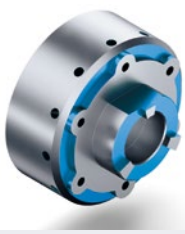
- \+ Common for all star turrets
- \+ Tool set-up time of < 30 seconds
- \+ Maximum stability and long-term precision: play-free and spring-loaded double centring and increased rigidity thanks to large interface with bolt hole pattern
- \+ < 6 µm repeatability (same tool, same position)
- \+ < 10 µm positioning accuracy from one station to the next
- \+ Fully aligned driven tools
- \+ VDI holders can be used
- \+ Up to 4 : 1 gear reduction tool holders for torque demanding milling
- \+ Faster turret tooling set up VS Block Tool System



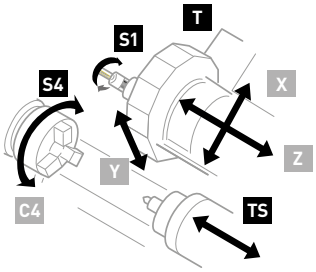
Assures high machine flexibility with more machine version

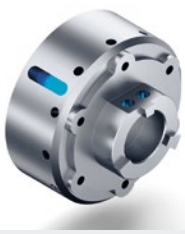
V3 version = turning + milling



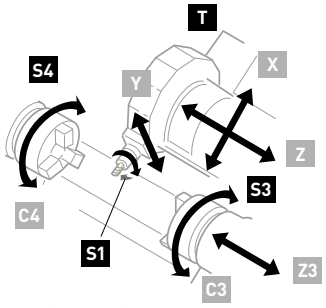


V4 version = turning + milling + Y-axis





V6 version = turning + milling + Y-axis + right spindle



S4 Left spindle **S3** Right spindle (auxiliary tailstock function as an option) **T** Turret **TS** Tailstock **S1** Driven tool
X X-axis **Y** Y-axis **Z** Z-axis **Z3** Travel of right spindle **C4** C-axis of left spindle **C3** Positioning of right spindle

DX – DIGITAL TRANSFORMATION

CELOS X – The future-proof solution for manufacturing

CELOS X platform offers a holistic solution for the digital transformation. Combined with the ERGO*line* X control panel, manufacturing companies will increase their competitiveness worldwide.

CELOS X consists of the two components **CELOS X*change*,** the open, secure and scalable data platform, and **CELOS X*perience*,** which gives access to all applications and systems within the CELOS X ecosystem. This enables a comprehensive and seamless digital experience for the user with the goal of easy machine operation, extended spindle hours while maximizing energy efficiency. CELOS X is therefore the centerpiece of the digital transformation (DX) and a significant contribution to DMG MORI's Machining Transformation (MX) strategy.

Further information on CELOS X can be found at:
https://celos.dmgmori.com

HIGHLIGHT APPS

Operator Workbook
Optimal order processing in the office and throughout the shopfloor.

Application Connector
Operate IT-systems directly on the control panel.

Monitoring
Increase planning reliability and productivity through digital transparency.

Tool Master
Manage tools directly on the machine.

Energy Saving
Optimize the machine's carbon footprint by managing and reducing energy consumption.

Energy Monitoring
Track and monitor the energy consumption of the machine.

ALL YOUR DATA IN

CELOS Xchange

POWERED BY DMG MORI CONNECTIVITY

ALL APPS IN

CELOS Xperience

EASY OPERATION

In the manufacturing industry, the userfriendliness and ease of operation of machine tools plays a decisive role for the efficiency and productivity.

ADDED VALUE

+ Faster programming
+ Reduction of errors
+ Increased efficiency

EXTENDED SPINDLE HOURS

In addition to easy operation, productivity is another crucial parameter, which requires a holistic view across all production processes.

ADDED VALUE

+ Optimization of set-up processes & capacity planning
+ Shorter processing times and order changes
+ Increased machine availability

ENERGY EFFICIENCY

The energy efficiency of machine tools is of utmost importance to DMG MORI and CELOS X makes a valuable contribution to this, adding direct value to the customer.

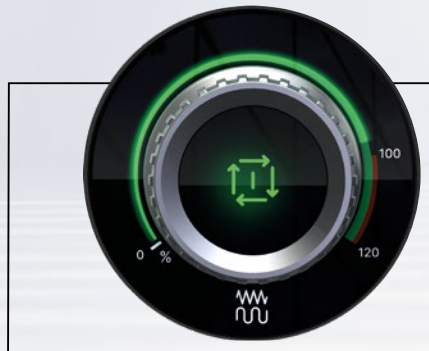
ADDED VALUE

+ Real-time monitoring of energy consumption
+ Automated adaptation of energy requirements to machining processes
+ Optimized & demand-driven air and cooling lubricant supply

CONTROL TECHNOLOGY

ERGO*line* X – Innovative control panel for easy operation

The ERGO*line* X control panel provides the machine operator with an even more intuitive user experience, whereby the ergonomics and the functionality in particular have been optimized. The ERGO*line* X control panel gives the user access to CELOS X*perience* and the native NC controller.



24" ERGO*line* X Panel
with Sinumerik ONE and CELOS X

SMART*ride*

+ Integrated panic function to instantly reduce the feed rate/rapid traverse to 0
+ Integrated haptic feedback to recognize 0 % & 100 %
+ Feed rate, rapid traverse & NC-start combined in one control element

CONNECTIVITY by DMG MORI

+ Standard connectivity thanks to integrated IoT*connector*
+ MDE (Machine Data Recording) possible
+ Automatic output of at least 17 standardized production status signals
+ Openness to third-party products
+ Communication in accordance with standard protocols:

OPC UA MTConnect MQTT

SMART*key*

+ Compact credit card format
+ Personalized access rights depending on user level
+ Independently customizable SMART*key*s

SIEMENS SINUMERIK ONE

+ Maximum speed and shorter non-productive times
+ Familiar SIEMENS control interface
+ 3D Shofloor Programming exclusively for DMG MORI
+ Feature-based programming in
+ Store Mill/Turn directly at the machine
+ Compatibility with SIEMENS 840D Solutionline and 828D

HIGHLIGHT APPS

Operator Workbook

CELOS APP for optimal order processing in the office and on the shop floor.

Application Connector

Display and operate customer IT systems directly on the panel of the machine.

OP Workbench

Simple design and process optimization of NC programs.

MACHINE SIGNALS VIA OPC-UA, MTCONNECT AND MQTT

MACHINE DATA

1. Serial number of the machine
2. Operating hours
3. Machine on hours

MACHINE STATUS

4. Status display
5. Number of alarms
6. Messages, alarms, warnings
7. Control mode
8. Machine version status

PRODUCTIVITY

9. Workpiece counter, current
10. Workpiece counter, total
11. Target quantity
12. Current program runtime

PROCESS DATA

13. Spindle speed correction
14. Fast speed correction
15. Infeed correction
16. Active tool
17. Name of the current NC program

ADDITIONAL MACHINE SIGNALS

Machine-specific signals, e. g. spindle speed, coolant status etc.

DMG MORI TECHNOLOGY CYCLES

Exclusiv Technology Cycles – Complex machining easily realized!

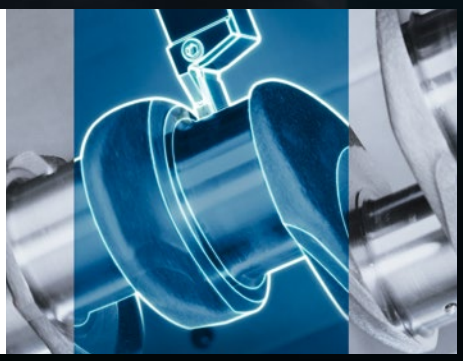
DMG MORI exclusive technology cycles are the true assistants of the production-orientedprogramming to increase productivity and safety as well as to extend machine capability.

+ Proper program structure
+ Program up to 60 % faster
+ Error minimization by dialog-guided programming
+ Technology know-how stored in the program

EXCENTRIC TURNING AND MILLING

Eccentric geometries easy to manufacture

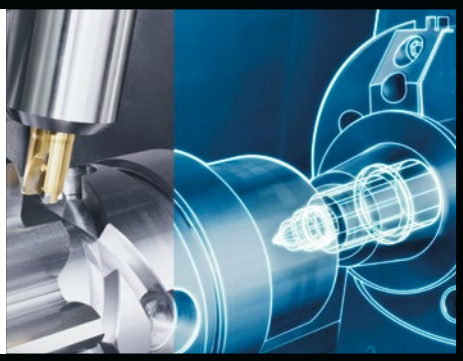
+ Superposition of the turning movement by additional X- and Y-traverses
+ Applicable for turning and milling
+ Exact axis coupling and synchronization in the background



RIGHT SPINDLE TIP

Perfect combination of 6-sided complete machining and tailstock function

+ Automatically load and unload a tailstock centre into the chuck of the left spindle or right spindle via the milling spindle and into the magazine
+ Support of long and slender workpieces on the left spindlethanks to the synchronous right spindle tip
+ Higher component accuracy due to automatic change without opening the door (heat flow constant)



POLYGON TURNING

Highly productive without milling the individual surfaces

+ Machining also on machines without Y-axis
+ Dialog-guided programming thanks to the technology cycle
+ Productivity, especially with small components
+ Chamfering possible in the same process
+ Simple and fast programming minimizes errors

ALTERNATING SPEED

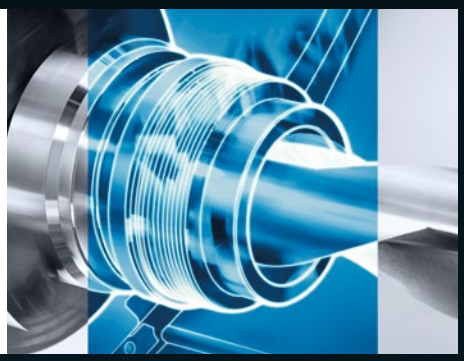
Avoiding vibrations of tools by means adaptation of the speed

+ Easy to operate through three parameters and without additional sensors
+ No manual intervention by the operator
+ Identical repeatability for all components
+ Increased process safety for special applications by avoiding vibrations

EASY TOOL MONITOR 2.0

Drive load monitoring of the tools during the machining process
to prevent damage to the machine and equipment

+ Save the monitoring limits for each tool and every cutting edge in the program
+ NEW: User interface on CELOS SideScreen
+ NEW: Powerful algorithm for efficient monitoring after the first workpiece



MULTI THREADING 2.0

Trapezoidal, buttress and knuckle thread easily programmable at the machine

+ Screw conveyor with any profile geometry
+ Free definition of contours, pitches and number of starts possible
+ NEW: On-Point Threading – Position oriented thread production

Y-AXIS PARTING

The new highly productive Y-axis parting method is amazingly easy to
use with the technology cycle

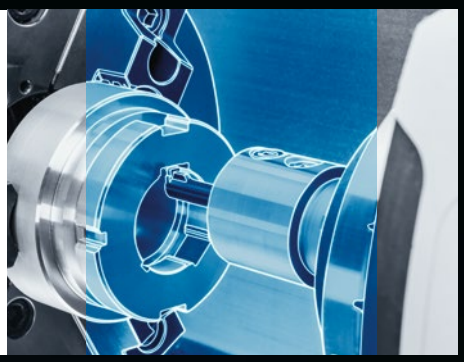
+ Compatible with the standard cycle CYCLE92 (Part off cycle),
  so that the operator can program as usual (ShopTurn and DIN/ISO)
+ Up to three times higher productivity possible (3× feed) with simultaneously
  improved chip control

KEYWAY BROACHING

High flexibility in creating grooves according to DIN6885 or DIN138, inside or
outside, narrow or wide, short or long with standard tools on standard machines

+ Structured input parameters for the groove geometry,
  the tool and the machining strategy
+ Advantages of rigid machine guidance for better groove quality

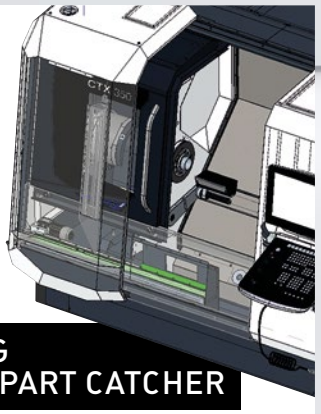
MORE TECHNOLOGY CYCLES ARE AVAILABLE!



CTX 6th GEN. SERIES

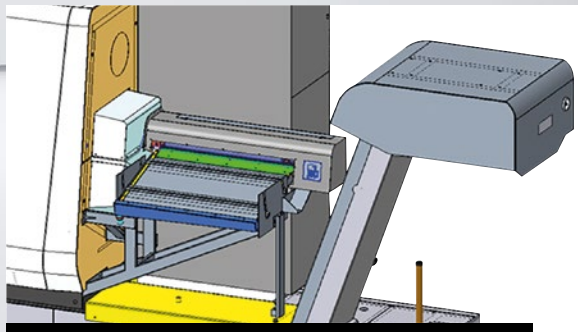
Increase efficiency of the machine with tailor-made automation solutions

Basic incorporated automation options for loading and unloading



BAR MACHINING PACKAGE WITH PART CATCHER

+ Handling of the bars up to 65 mm
+ DMG MORI standard interface getting along with the magiority bar loaders / bar loading magazines avaliable in the market
+ Workpiece unloading device integrated in the machine with pneumatic part catcher for workpiece up to 80 × 200 mm, 4 kg



INTEGRATED SHAFT UNLOADING DEVICE THROUGH COUNTERSPINDLE

+ **Long shaft** parts with machining at both ends (for example shock dampers)
+ Parts dimension up to ø 40 mm and 500 mm length
+ **Compact** solution for small diameter shaft unloading
+ Shafts are unloaded in a frontal tray
+ For CTX 350 and CTX 450 only

Integrated automation with 6-axis robot

PLUG AND PLAY CELL TO HANDLE THE PART FROM START TO FINISH

The automation device integrated in the machine allows quick and easy loading / unloading of the machine without opening loading hatches or doors.

+ For workpieces ø 100 × 125 mm
+ Customized workpiece tray
+ Personalized grippers

CUSTOMER BENEFITS:

+ Quick loading and unloading
+ Small space requirement

DMG MORI flexible workpiece loading and unloading systems for all CTX sizes

READY FOR DMG MORI AUTOMATION SOLUTIONS

+ Interface for Robo2Go:
  Handling of shafts ø 20 – 170 mm
  and chuck parts ø 20 – 175 mm
+ Interface for Matris Light:
  Workpieces up to 5 kg or 2 × 2 kg
  with double gripper
+ Interface for Robo2Go Max.
  handling of shafts ø 200 – 1,200 mm
  and chuck parts ø 400 – 400 mm

Robo2Go MAX

Robo2Go

MATRIS Light

ENERGY EFFICIENCY

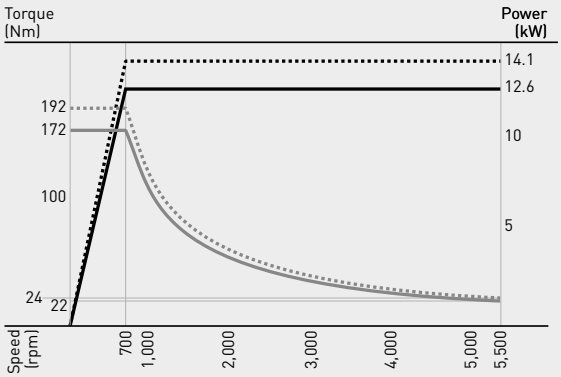
+ Low friction guideways
+ Low consumption lubrication system
+ Synchron motor technology
+ LED workspace lighting
+ Hydraulic unit with inverter technology
+ Frequency controlled coolant pumps motors
+ Clocked chip conveyor
+ Energy recovery from brake energy
+ 3-Phase motors class IE3
+ Energy efficient cooling of electrical cabinet
+ Linear scales without pressurization
+ DMG MORI Autoshutdown in standard
+ Energy certificates for all CTX machines
+ Specific CELOS APP's (for SIEMENS control)

CTX 350

Power / Torque Diagrams

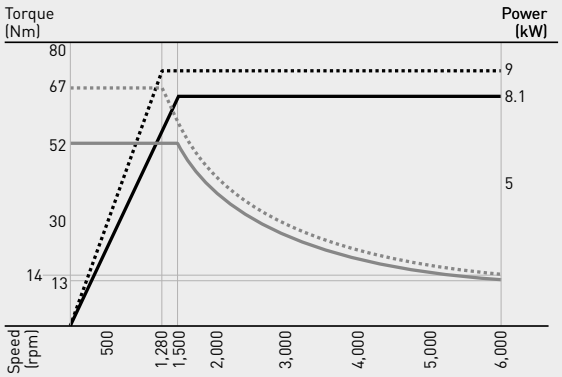
Left spindle

ISM 65



Right spindle

ISM 50



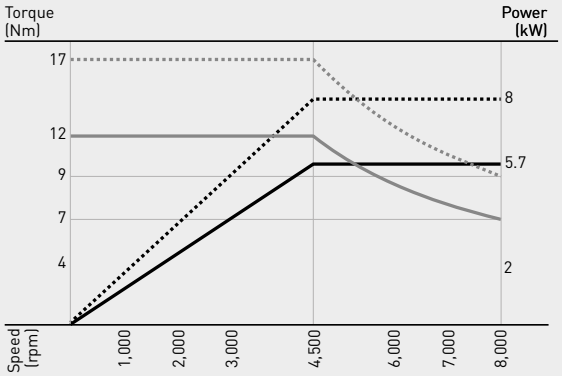
Turrets

Gear drive 6,000 rpm

standard

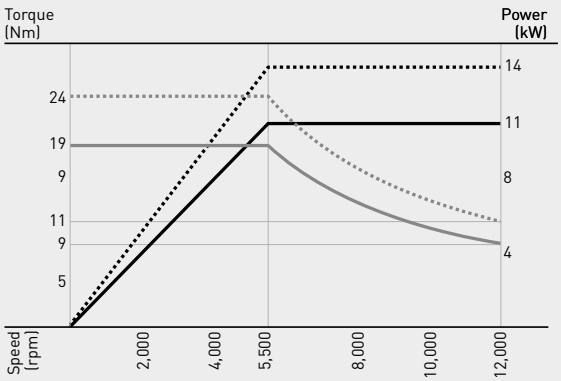
Gear drive (8,000 rpm) increased speed

option



turretMASTER 12,000 rpm

option



1 **2**

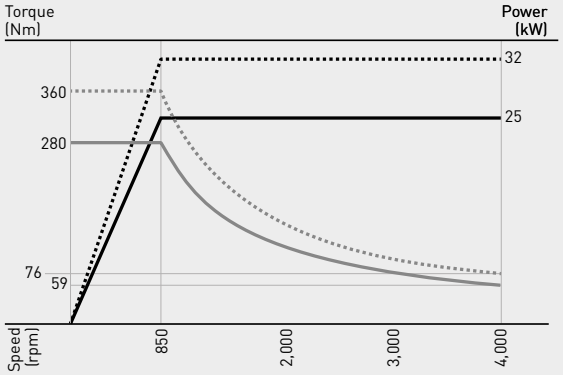
Key:
1. radial
2. axial

Power (kW) Torque (Nm)
40 % DC (S6) 100 % DC (S1)

Power / Torque Diagrams

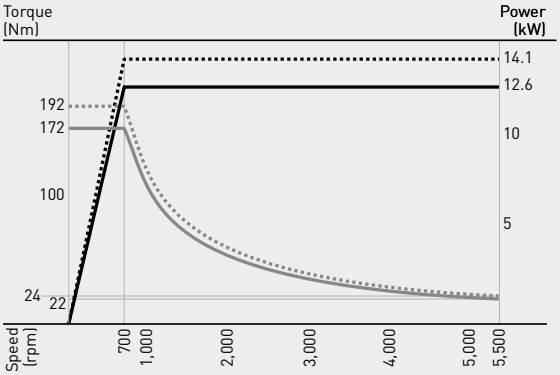
Left spindle

ISM 80



Right spindle

ISM 65



Turrets

Gear drive 4,000 rpm

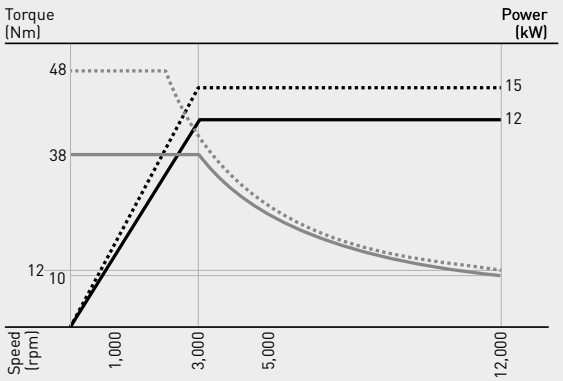
standard

Gear drive (7,000 rpm) increased speed

option

turretMASTER 12,000 rpm

option



1 **2**

Key:
1. radial
2. axial

Power (kW) Torque (Nm)
40 % DC (S6) 100 % DC (S1)

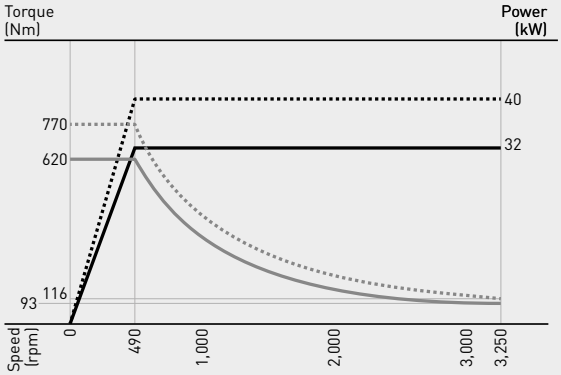
CTX 550

Power / Torque Diagrams

Power (kW) Torque (Nm)
40 % DC (S6) 100 % DC (S1)

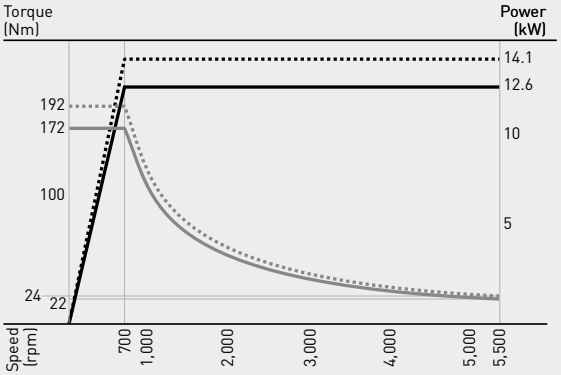
Left spindle

ISM 102



Right spindle

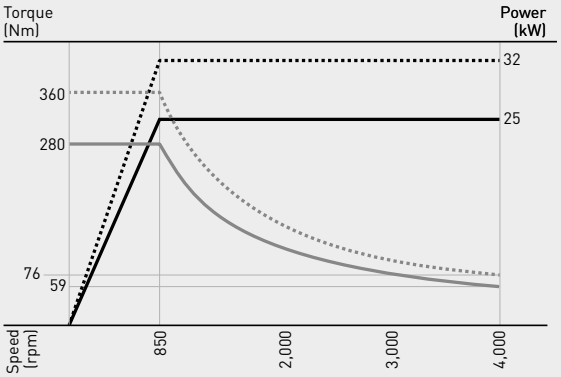
ISM 65



Key:
1. radial
2. axial

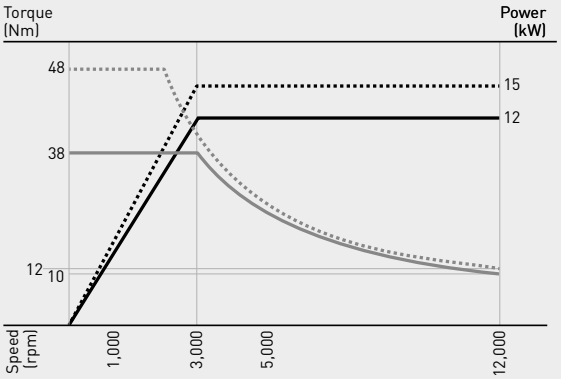
Right spindle

ISM 80 (option)



turretMASTER 12,000 rpm

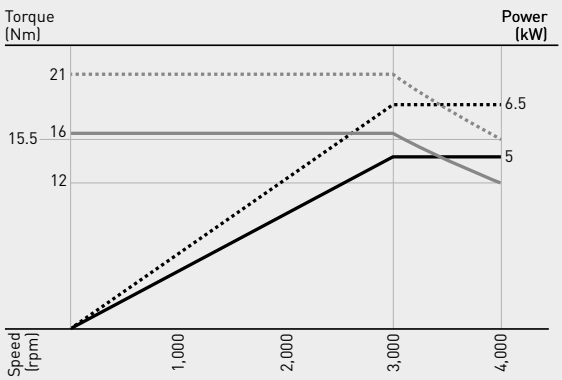
option



Turrets

Gear drive 4,000 rpm

standard



Gear drive (7,000 rpm) increased speed

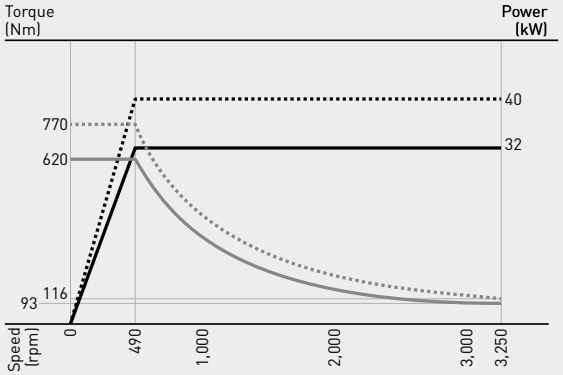
option

Power / Torque Diagrams

Power (kW) Torque (Nm)
40 % DC (S6) 100 % DC (S1)

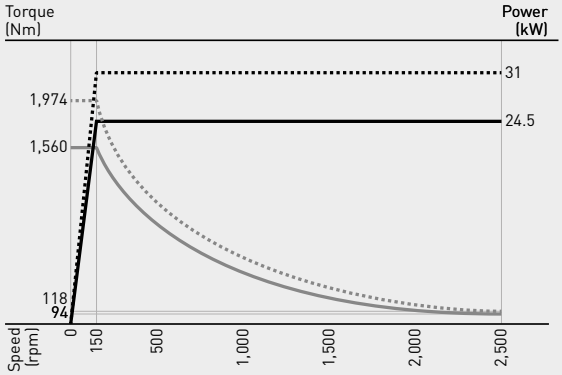
Left spindle / Right spindle (option)

ISM 102



Left spindle

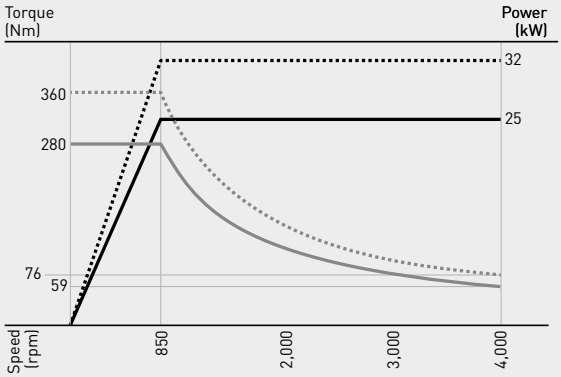
ISM 127 (option)



Key:
1. radial
2. axial

Right spindle

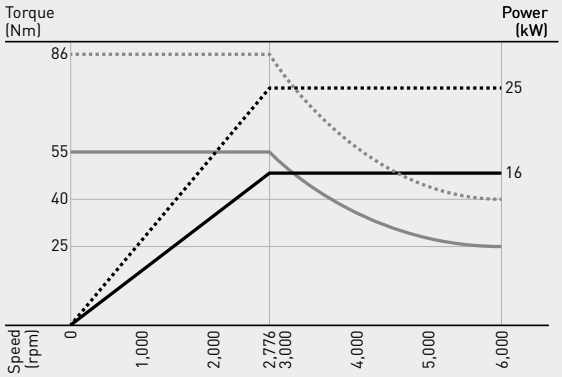
ISM 80 (option)



turretMASTER 6,000 rpm

1 2

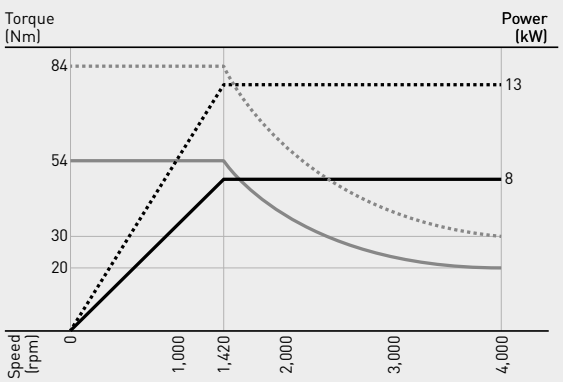
option



Turrets

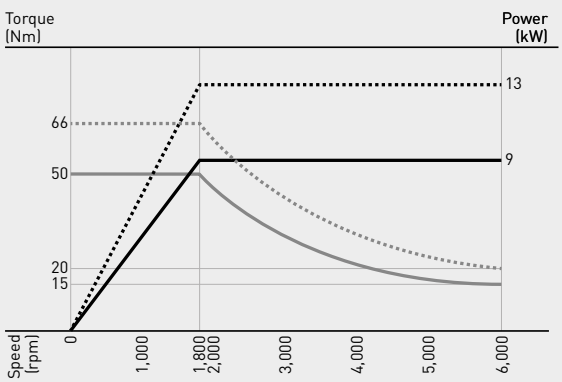
Gear drive 4,000 rpm

standard 2



Gear drive (6,000 rpm) increased speed

option 2

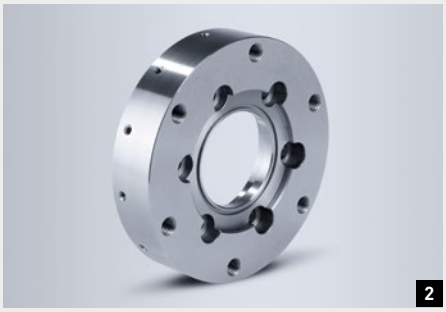


MACHINING PARAMETER*

		CTX 350	CTX 450	CTX 550	CTX 750 | 1250	CTX 750 | 2000
Rough turning						
Cutting speed Vc	m/min	250	250	250	250	250
Feed	mm/rev	0.4	0.4	0.5	0.4	0.6
Cutting depth ap	mm	3.5	4.5	5	8	6
Tapping (w. std. turret)						
Thread diam. Max		M16	M20	M20	M24	M24
Cutting speed Vc	m/min	15/20	15/20	15/20	15/20	15/20
Feed	mm/rev	1.5	1.5	1.5	3	3
Drilling						
Tool diam. Max	mm	55	65	65	90	90
Feed	mm/rev	0.14	0.16	0.16	0.18	0.18
Cutting speed Vc	m/min	140	140	140	140	140

*Material C45


1


2


3


4


5


6

1: Chain Wheel
Industry: Machinery
Material: Steel 15CrNi6
Dimensions: ø 100 × 115 mm
Machining time: 14.5 min

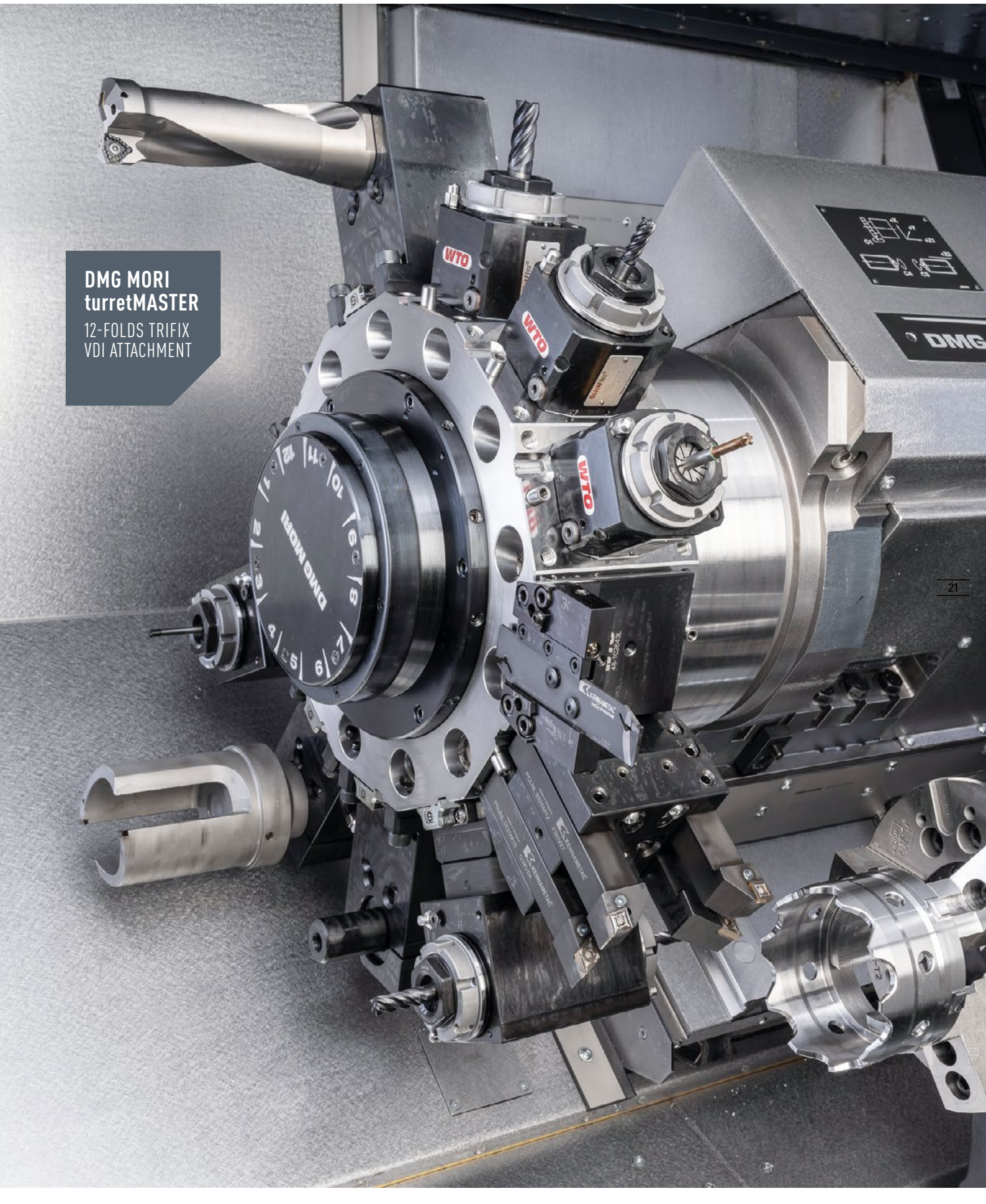
2: Balancing flange adapter
Industry: Machinery
Material: Steel C45
Dimensions: ø 160 × 70 mm
Machining time: 30 min

3: V-Pulley
Industry: Machinery
Material: Steel ETG88
Dimensions: ø 150 × 150 mm
Machining time: 23 min

4: Chuck adapter
Industry: Machinery
Material: Steel C45
Dimensions: ø 260 × 60 mm
Machining time: 35 min

5: Nozzle
Industry: Engineering
Material: Steel 1.4305
Dimensions: ø 36 × 35 mm
Machining time: 25 min

6: Connector
Industry: Automotive
Material: Steel C45
Dimensions: ø 80 × 95 mm
Machining time: 9 min



DMG MORI turretMASTER

12-FOLDS TRIFIX VDI ATTACHMENT

CTX 350

Technical data

		CTX 350
Bed		
Bed inclination		45°
Bed material		Cast iron
Number of guideways		3 (4 op. Y)
Working area		
Swing diameter over bed	mm	650
Swing diameter over cross slide	mm	370
Max. turning diameter	mm	320
Recommended Turning diameter	mm	200
Distance between centers V3-V4 (between spindle noses V6)	mm	715
Max. turning length (V3-V4) (V6)	mm	540 (485)
Travel X-axis (V3-V4) (V6)	mm	250 (185)
Travel Y-axis (V4-V6)	mm	100 (± 50)
Travel Z1-axis (V3-V4) (V6)	mm	550 (520)
Travel Z3-axis (V3-V4)	mm	550
Spindle axis height from ground	mm	1,017 (987 + 30)
Left spindleISM65		
Spindle nose	type	A2-6″
Chuck (diameter)	mm	ø 210 / 250
Max. bar diameter	mm	65
Spindle hole diameter	mm	73
Frontbearing diameter inside	mm	120
Power, max.100 % ED (40 % ED)	kW	12.6 (14.1)
Speed range	rpm	5,500
Rated speed	rpm	0 – 700
Torque 100 % ED (40 % ED)	Nm	172 (192)
Type of motor		ISM65 syn.
Speed range C1-Axis	rpm	0 – 700
Torque of C1-Axis	Nm	192
Max. weight between centers	kg	250
Max. overhanging weight	kg	50 / 80
Center of gravity distance from chuck face	mm	120
Right spindle (V6) ISM50		
Distance between centers between the 2 spindle noses	mm	800
Travel Z3-axis	mm	570
Max. turning length	mm	485
Spindle nose	type	A2-5″
Right spindle chuck diameter	mm	170
Bar diameter (partial hole)	mm	50
Front bearing diameter inside	mm	100
Power, max. 100 % ED / 40 % ED	kW	8.1 / 9
Speed range	rpm	6,000
Rated speed 100 % / 40 %	rpm	1,500 / 1,280
Torque 100 % ED / 40 % ED	Nm	52 / 67
Speed range C2-axis	rpm	0 – 1,280
Torque of C2-axis	Nm	57
Rapid travers Z3	m/min	30
Max. overhanging weight	kg	20
Max. center of gravity distance from spindle nose	mm	100

Slide		
Rapid travers X/Y/Z	m/min	30/22.5/36
Feed force X/Y/Z 100 % ED	kN	3.5/3.5/6
Feed force X/Y/Z 40 % ED	kN	4.5/4.5/7.5
Measuring system X-axis		Absolute linear scale
Measuring system Y-axis		Absolute linear scale
Measuring system Z-axis (opt.)		Absolute rotary (absolute linear scale)
Ballscrew X/Y/Z-axis, D × pitch	mm	ø32 × 10
Turret		
Tool taper Standard	VDI (DIN 69880)	30
No. tools		12
Driven tools power at 4,500 rpm (opt.)	kW	6.6 (8) (14/5,500 rpm)
Driven tools torque 100 % ED (opt.)	Nm	11 (12) (19)
Driven tools torque 40 % ED (opt.)	Nm	14 (17) (24)
Speed range (opt.)	rpm	6,000 (7,000 – 8,000) [12,000]
Tailstock (Version V3-V4)		
Tailstock travel	mm	550
Max. tailstock thrust	daN	400
Morse taper	MK	4
Tailstock handling		Hydraulic
Rapid Z-axis	n/min	4

		V3/V4	**V6**
Chip conveyor			
Tank capacity	l	170	170
Pump power	kW	0.85 50 Hz	0.85 50 Hz
Pump capacity	l/min	20	20
Pump pressure	bar	5	5
Hydraulic unit			
Tank capacity	l	18	18
Pump power	kW	2.8	2.8
Max. working pressure	bar	55	55
Pump capacity	l/min	28.5	28.5
Pneumatic			
Pressure	bar	6	6
Consumption	m³/h	10 (max 30)	10 (max 30)
Axis Lubrication			
Lubrificant type		Grease 000	Grease 000
Tank capacity	l	2	2
Electric power			
Connection to the mains		L1, L2, L3, N, PE	L1, L2, L3, N, PE
Frequency	Hz	50/60	50/60
Nominal power	KVA	28	30
Accuracy			
According to ISO 230-2 (T = 20+/-2 °C)		–	–
Positioning accuracy A on X/Y/Z1	µm	6/8/10	6/8/10
Positioning accuracy A on C1/C2	arcsec	12	12/12
Machine dimensions			
Main dimensions for setup L/W/H without chip conveyor	mm	2,565 × 2,459 × 1,870	2,565 × 2,459 × 1,870
Main dimensions for setup L/W/H with chip conveyor	mm	3,963 × 2,459 × 1,870	3,963 × 2,459 × 1,870
Main dimensions for transport L/W/H (on wodden pallet)	mm	4,150 × 2,150 × 2,200	4,150 × 2,150 × 2,200
Weight of the machine incl. electrical cabinet	kg	4,600	4,600

CTX 450

Technical data

		CTX 450
Bed		
Bed inclination		45°
Bed material		Cast iron
Number of guideways		3 (4 op. Y)

Working area		
Swing diameter over bed	mm	700
Swing diameter over cross slide V3 (V4-V6 with travel Y-axis=0)	mm	510
Max. turning diameter V3 (V4) (V6)	mm	480 (425) (450)
Recommended Turning diameter	mm	320
Distance between centers V3-V4 (between two spindle noses V6)	mm	1,025 (1,075)
Max. turning length V3-V4 (V6)	mm	800 (717)
Travel X-axis V3-V4 (V6)	mm	307.5 (300)
Travel Y-axis V4-V6	mm	130 (±65)
Travel Z1-axis V3-V4 (V6)	mm	825 (765)
Spindle axis height from ground	mm	1,043.5 (1,013.5+30)

		ISM80	ISM102 (op.)
Left spindle			
Spindlenose	tipo	A2-8″	A2-8″
Chuck diameter	mm	ø250 (210 – 315)	ø315 (250 – 400)
Max. bar diameter	mm	80	102
Spindle hole diameter	mm	91	111
Frontbearing diameter inside	mm	140	160
Power, max.100 % ED (40 % ED)	kW	25 (32)	36.7 (40)
Speed range	rpm	4,000	3,250
Rated speed	rpm	0 – 850	0 – 560 (100 % ED) – 490 (40 % ED)
Torque 100 % ED (40 % ED)	Nm	280 (360)	620 (770)
Kind of voltage, no. of range		AC/1	AC/1
Speed range C1-axis	rpm	200	200
Torque of C1-Axis	Nm	360	770
Max. weight between centers	kg	500	650
Max. overhanging weight	kg	100 (70 – 100)	200 (140 – 250)
Center of gravity distance from chuck face	mm	120 (120 – 125)	140 (140 – 160)

		ISM65	ISM80 (op.)
Right spindle (V6)			
Travel Z3-axis	mm	775	775
Spindlenose	type	A2-6″	A2-8″
Right spindle chuck diameter	mm	ø210 (250)	ø250 (210)
Bar diameter (partial hole)	mm	65	80
Front bearing diameter inside	mm	120	140
Power, max. 100% ED/40% ED	kW	13 (14)	25 (32)
Speed range	rpm	5,500	4,000
Rated speed	rpm	0 – 700	0 – 850
Torque 100% ED/40% ED	Nm	171 (192)	280 (360)
Speed range C2-axis	rpm	0 – 200	0 – 200
Torque of C2-Axis	Nm	192	360
Rapid travers Z3	m/min	30	30
Max. overhanging weight	kg	50 (80)	100 (70)
Center of gravity distance from chuck face	mm	100	120

Slide		
Rapid travers X/Y/Z	m/min	30/22.5/30
Feed force X/Y/Z 100% ED	kN	4.5/4.5/7.5
Feed force X/Y/Z 40% ED	kN	6/6/9.5
Measuring system X-axis		Absolute linear scale
Measuring system Y-axis		Absolute linear scale
Measuring system Z-axis (opt.)		Absolute rotary (absolute linear scale)
Ballscrew X/Y/Z-axis, D x h	mm	ø40×10

Turret V3-V4		
Tool taper Standard	VDI (DIN 69880)	40
No. of tools		12 (6 block tools)
Driven tool power 100% ED (opt.)*	kW	5 (9.5/4,500 rpm)
Driven tool power 40% ED (opt.)*	kW	6.5 (12.5/4,500 rpm)
Torque 100% ED driven tools (opt.)*	Nm	16 (20)
Torque 40% ED driven tools (opt.)*	Nm	21 (27)
Speed range driven tools (opt.)	rpm	4,000 (7,000)

*with SIEMENS CNC

CTX 450

Technical data

Turret V6		
Tool taper Standard	VDI (DIN 69880)	40
No. of tools		12
Toolsize DIN 69880	mm × mm	25 × 25
No. of driven tools		12
Power max. 3,000 rpm 100 % ED (opt.)	kW	5 (9.5 / 4,500 rpm) (10.29)
Power max. 3,000 rpm 40 % ED (opt.)	kW	6.5 (12.5 / 4,500 rpm) (11 / 2,200 rpm)
Torque 100 % ED driven tools (opt.)	Nm	16 (20) (33)
Torque 40 % ED driven tools (opt.)	Nm	21 (27) (49)
Speed range driven tools (opt.)	rpm	4,000 (6,000) (10,000)

Tailstock (Version V3-V4)		
Tailstock travel	mm	800
Max. tailstock thrust	daN	800
Morse taper	MK	5
Tailstock handling		Hydraulic
Rapid Z3-axis	m/min	4

Steady rest		
Steady rest handling (opt.)		Connection to the Z-slide (NC)
Rapid Z-axis (opt.)	m/min	4 (8)
Work range ø	mm	20 ÷ 270 (RX 3)
Min.distance between centers V3-V4(V6 between two spindle noses)	mm	355 (400)

Chip conveyor		
Tank capacity	l	202
Pump power 50Hz	kW	0.85
Pump capacity	l/min	20
Pump pressure	bar	5

Coolant tank (option)			
Type		Paper filter	Paper filter
Tank capacity	l	600	980
Pump standard power	kW	2.8 (50Hz) – 2.94 (60Hz)	2.2 (60Hz) – 5.5 (50 / 60 Hz)
Pump pressure	bar	8 – 40	8 – 80
Pump capacity	l/min	20 – 23	80 – 20
Filter capacity	µm	40	40
Cooling capacity for option with refrigerator	kW	/	/

Hydraulic unit		
Tank capacity	l	18
Pump power	kW	2.8
Max. working pressure	bar	70
Pump capacity	l/min	28.5

Pneumatic		
Pressure	bar	6
Consumption	m³/h	10 (max 75)

Axis Lubrication / Steady rest		
Lubrificant type		Grease 000
Tank capacity	l	2

		(V3) (V4)	**(V6)**
Electric power			
Connection to the mains		L1, L2, L3, N, PE	L1, L2, L3, N, PE
Frequency	Hz	50 / 60	50 / 60
Nominal power	KVA	60	62

Accuracy		
According to ISO 230-2 (T= 20 ± 2 °C)		
Position accuracy A on X / Y / Z1	µm	6 / 8 / 12
Position accuracy A on C	arcsec	12

Machine dimensions		
Main dimensions for setup L / B / H without chip conveyor	mm	3,387 × 2,662 × 1,956
Main dimensions for setup L / B / H with chip conveyor	mm	4,604 × 2,662 × 1,956
Main dimensions for transport L / B / H (on wodden pallet)	mm	4,975 × 2,240 × 2,256
Weight of the machine incl. electrical cabinet	kg	6,500

CTX 550

Technical data

		CTX 550
Bed		
Bed inclination		45°
Bed material		Cast iron
Number of guideways		3 (4 op. Y)

Working area		
Swing diameter over bed	mm	700
Swing diameter over cross slide V3 (V4-V6 with travel Y-axis=0)	mm	510
Swing diameter over cross slide V4-V6 with travel Y-axis=65)	mm	360
Max. turning diameter V3 (V4) (V6)	mm	480 (425) (450)
Recommended Turning diameter	mm	320
Distance between centers V3-V4 (between two spindle noses V6)	mm	1,450 (1,500)
Max. turning length V3-V4 (V6)	mm	1,225 (1,140)
Travel X-axis V3-V4 (V6)	mm	307.5 (300)
Travel Y-axis V4-V6	mm	130 (±65)
Travel Z1-axis V3-V4 (V6)	mm	1,240 (1,180)
Spindle axis height from ground	mm	1,043.5 (1,013.5+30)

		ISM 80	ISM 102
Left spindle			
Spindlenose	tipo	A2-8″	A2-8″
Chuck diameter	mm	ø315 (250 – 400)	ø250 (210 – 315)
Bar diameter	mm	102/80	80
Spindle hole diameter	mm	111	91
Clamping pipe diameter	mm	103/81	81
Frontbearing diameter inside	mm	160	140
Lubrication of spindle bearings	tipo	feet	feet
Power, max.100% ED (40% ED)	kW	36.7 (40)	25 (32)
Speed range 100% ED	rpm	3,250	4,000
Speed range 40% ED	rpm	3,250	4,000
Rated speed	rpm	0 – 560 (100% ED) – 490 (40% ED)	0 – 850
Torque, max. 100% ED (40% ED)	Nm	620 (770)	280 (360)
Kind of voltage, no. of range		AC/1	AC/1
Kind of motor		ISM102 syn.	ISM80 syn.
Speed range C1-axis	rpm	200	200
Torque of C1-Axis	Nm	770	360
Least input increment C1-Axis	°	0.001	0.001
Max. weight between the centers	kg	650	500
Max. overhanging weight	kg	200 (140 – 250)	100 (70 – 100)
Center of gravity distance from chuck face	mm	140 (140 – 160)	120 (120 – 125)

		ISM65	ISM80 (op.)
Right spindle (V6)			
Travel Z3-axis	mm	775	775
Spindlenose	type	A2-6″	A2-8″
Right spindle chuck diameter	mm	ø210 (250)	ø250 (210)
Bar diameter (partial hole)	mm	65	80
Front bearing diameter inside	mm	120	140
Power, max. 100% ED/40% ED	kW	13 (14)	25 (32)
Speed range	rpm	5,500	4,000
Rated speed	rpm	0 – 700	0 – 850
Torque 100% ED/40% ED	Nm	171 (192)	280 (360)
Speed range C2-axis	rpm	0 – 200	0 – 200
Torque of C2-Axis	Nm	192	360
Rapid travers Z3	m/min	30	30
Max. overhanging weight	kg	50 (80)	100 (70)
Center of gravity distance from chuck face	mm	100	120

Slide		
Rapid travers X/Y/Z	m/min	30/22.5/30
Feed force X/Y/Z 100% ED	kN	4.5/4.5/7.5
Feed force X/Y/Z 40% ED	kN	6/6/9.5
Measuring system X-axis		Absolute linear scale
Measuring system Y-axis		Absolute linear scale
Measuring system Z-axis (opt.)		Absolute rotary (absolute linear scale)
Ballscrew X/Y/Z-axis, D×h	mm	ø40×10

Turret V3-V4		
Tool taper Standard	VDI (DIN 69880)	40
No. of tools		12 (6 block tools)
Driven tool power 100% ED (opt.)*	kW	5 (9.5/4,500 rpm)
Driven tool power 40% ED (opt.)*	kW	6.5 (12.5/4,500 rpm)
Torque 100% ED driven tools (opt.)*	Nm	16 (20)
Torque 40% ED driven tools (opt.)*	Nm	21 (27)
Speed range driven tools (opt.)	rpm	4,000 (7,000)

*with SIEMENS CNC

CTX 550

Technical data

Turret V6		
Tool taper Standard	VDI (DIN 69880)	40
No. of tools		12
Toolsize DIN 69880	mm × mm	25 × 25
No. of driven tools		12
Power max. 3,000 rpm 100 % ED (opt.)	kW	5 (9.5 / 4,500 rpm) (10.29)
Power max. 3,000 rpm 40 % ED (opt.)	kW	6.5 (12.5 / 4,500 rpm) (11 / 2,200 rpm)
Torque 100 % ED driven tools (opt.)	Nm	16 (20) (33)
Torque 40 % ED driven tools (opt.)	Nm	21 (27) (49)
Speed range driven tools (opt.)	rpm	4,000 (6,000) (10,000)

Tailstock (Version V3-V4)		
Tailstock travel	mm	1,200
Max. tailstock thrust	daN	1,200
Morse taper	MK	5
Tailstock handling		Hydraulic
Rapid Z3-axis	m/min	4

Steady rest		
Steady rest handling (opt.)		Connection to the Z-slide (NC)
Rapid Z-axis (opt.)	m/min	4 (8)
Working range max.	mm	20 ÷ 270
Min.distance between centers V3-V4(V6 between two spindle noses)	mm	355 (400)

Chip conveyor		
Tank capacity	l	202
Pump power 50Hz	kW	0.85
Pump capacity	l/min	20
Pump pressure	bar	5

Coolant tank (option)			
Type		Paper filter	Paper filter
Tank capacity	l	600	980
Pump standard power	kW	2.8 (50Hz) – 2.94 (60Hz)	2.2 (60Hz) – 5.5 (50/60 Hz)
Pump pressure	bar	8 – 40	8 – 80
Pump capacity	l/min	20 – 23	80 – 20
Filter capacity	µm	40	40
Cooling capacity for option with refrigerator	kW	/	/

Hydraulic unit		
Tank capacity	l	18
Pump power	kW	2.8
Max. working pressure	bar	70
Pump capacity	l/min	28.5

Pneumatic		
Pressure	bar	6
Consumption	m^3/h	10 (max 75)

Axis Lubrication / Steady rest		
Lubrificant type		Grease 000
Tank capacity	l	2

		(V3) (V4)	**(V6)**
Electric power			
Connection to the mains		L1, L2, L3, N, PE	L1, L2, L3, N, PE
Frequency	Hz	50/60	50/60
Nominal power	KVA	60	62

Accuracy		
According to ISO 230-2 (T= 20 ± 2 °C)		
Position accuracy A on X/Y/Z1	µm	6/8/14
Position accuracy A on C	arcsec	12

Machine dimensions		
Main dimensions for setup L/B/H without chip conveyor	mm	3,912 × 2,662 × 1,956
Main dimensions for setup L/B/H with chip conveyor	mm	5,129 × 2,662 × 1,956
Main dimensions for transport L/B/H (on wodden pallet)	mm	5,510 × 2,230 × 2,316
Weight of the machine incl. electrical cabinet	kg	7,500

CTX 750 | 1250

Technical data

		CTX 750	1250	CTX 750	2000
Bed					
Bed inclination		45°		45°	
Bed material		Cast iron		Cast iron	
Number of guideways		3 (4 op. Y)		3 (4 op. Y)	
Working area					
Swing diameter over bed	mm	950		950	
Swing diameter over cross slide V3 (V4-V6 with travel Y-axis=0)	mm	660		660	
Swing diameter over cross slide V4-V6 with travel Y-axis=85	mm	480 (425) (450)		490	
Max. turning diameter V3 (V4) (V6)	mm	700 (640) (560)		700 (640) (560)	
Recommended Turning diameter	mm	400		400	
Distance between centers V3-V4 (between two spindle noses V6)	mm	1,500 (1,590)		2,240 (2,340)	
Max. turning length V3-V4 (V6)	mm	1,290 (1,215)		2,040 (1,965)	
Travel X-axis V3-V4 (V6)	mm	435 (395)		435 (395)	
Travel Y-axis V4-V6	mm	170 (± 85)		170 (± 85)	
Travel Z1-axis V3-V4 (V6)	mm	1,300 (1,300)		2,050 (2,050)	
Spindle axis height from ground	mm	1,170 (1,140+30)		1,170 (1,140+30)	

		ISM127	ISM102 (op.)	ISM102	ISM127 (op.)
Left spindle					
Spindelnose	tipo	A2-11″	A2-8″	A2-8″	A2-11″
Chuck diameter	mm	ø400 (315 – 500)	ø315 (250 – 400)	ø315 (250 – 400)	ø400 (315 – 500)
Bar diameter	mm	127	102	102	127
Spindel hole diameter	mm	141	111	111	141
Clamping pipe diameter	mm	127.5	103	103	127.5
Frontbearing diameter inside	mm	200	160	160	200
Lubrication of spindle bearings	tipo	Grease	Grease	Grease	Grease
Power, max.100 % ED (40 % ED)	kW	24.5 (31)	32 (40)	32 (40)	24.5 (31)
Speed range 100 % ED	rpm	2,500	3,250	3,250	2,500
Speed range 40 % ED	rpm	2,500	3,250	3,250	2,500
Rated speed	rpm	0-150	0-490	0 – 490	0 – 150
Torque, max. 100 % ED (40 % ED)	Nm	1,560 (1,975)	620 (770)	620 (770)	1,560 (1,975)
Kind of voltage, no. of range		AC/1	AC/1	AC/1	AC/1
Kind of motor		ISM127 syn.	ISM102 syn.	ISM102 syn.	ISM127 syn.
Speed range C1-axis	rpm	200	200	200	200
Torque of C1-Axis	Nm	1,975	770	770	1,975
Least input increment C1-Axis	°	0.001	0.001	0.001	0.001
Max. weight between the centers	kg	1,500	650	650	1,500
Max. overhanging weight	kg	600 (300 – 600)	200 (140 – 250)	200 (140 – 250)	600 (300 – 600)
Max. barycenter distance from spindle nose	mm	250 (200 – 250)	140 (140 – 160)	140 (140 – 160)	250 (200 – 250)

		CTX 750 | 1250		CTX 750 | 2000	
		ISM80	**ISM102 (op.)**	**ISM80**	**ISM102 (op.)**
Right spindle (V6)					
Travel Z3-axis	mm	1,220	1,220	1,970	1,970
Spindelnose	type	A2-8″	A2-8″	A2-8″	A2-8″
Right spindle chuck diameter	mm	ø250 (210)	ø315 (250)	ø250 (210)	ø315 (250)
Bar diameter	mm	80	102	80	102
Spindel hole diameter	mm	91	111	91	111
Clamping pipe diameter	mm	81	103	81	103
Frontbearing diameter inside	mm	140	160	140	160
Lubrication of spindle bearings	type	Grease	Grease	Grease	Grease
Power, max. 100 % ED / 40 % ED	kW	25 (32)	32 (40)	25 (32)	32 (40)
Speed range 100 % ED	rpm	4,000	3,250	4,000	3,250
Speed range 40 % ED	rpm	4,000	3,250	4,000	3,250
Rated speed	rpm	0 – 850	0 – 490	0 – 850	0 – 490
Torque, max. 100 % ED / 40 % ED	Nm	280 (360)	620 (770)	280 (360)	620 (770)
Kind of voltage, no. of range		AC/1	AC/1	AC/1	AC/1
Kind of motor		ISM80 syn.	ISM102 syn.	ISM80 syn.	ISM102 syn.
Speed range C2-axis	rpm	200	200	200	200
Torque of C2-Axis	Nm	360	770	360	770
Least input increment C2-Axis	°	0.001	0.001	0.001	0.001
Rapid travers Z3	m/min	30	30	30	30
Max. overhanging weight	kg	100 (70)	200 (140)	100 (70)	200 (140)
Max. barycenter distance from spindle nose	mm	120	120	120	120
Slide					
Rapid travers X/Y/Z	m/min	30 / 22.5 / 30		30 / 22.5 / 30	
Feed force X/Y/Z 100 % ED	kN	8 / 7.5 / 13		8 / 7.5 / 13	
Feed force X/Y/Z 40 % ED	kN	9.5 / 8.5 / 15.5		9.5 / 8.5 / 15.5	
Least input increment X/Y/Z	mm	0.001		0.001	
Measuring system X-axis		Absolute linear scale		Absolute linear scale	
Measuring system Y-axis		Absolute linear scale		Absolute linear scale	
Measuring system Z-axis (opt.)		Absolute rotary (absolute linear scale)		Absolute rotary (absolute linear scale)	
Ballscrew X-axis, d × h	mm	ø50 × 10		ø50 × 10	
Ballscrew Y-axis, d × h	mm	ø50 × 10		ø50 × 10	
Ballscrew Z-axis, d × h	mm	ø50 × 10		ø50 × 10	
Turret V3-V4					
Tool taper Standard	VDI (DIN 69880)	50		50	
No. of tools		12 + 6 block tools		12 + 6 block tools	
Toolsize DIN 69880	mm × mm	32 × 32		32 × 32	
No. of driven tools		12		12	
Power max. 1,420 rpm 100 % ED (opt.)	kW	8 (9.5 / 1,800 rpm)		8 (9.5 / 1,800 rpm)	
Power max. 1,420 rpm 40 % ED (opt.)	kW	13 (12.5 / 1,800 rpm)		13 (12.5 / 1,800 rpm)	
Torque 100 % ED driven tools (opt.)	Nm	54 (50)		54 (50)	
Torque 40 % ED driven tools (opt.)	Nm	84 (66)		84 (66)	
Speed range driven tools (opt.)	rpm	4,000 (6,000)		4,000 (6,000)	
Indexing time 30 / 180 Grad	s	0.46 / 0.86		0.46 / 0.86	
Max. weight (tools + disc)	kg	200		200	

CTX 750 | 1250

Technical data

		CTX 750	1250	CTX 750	2000
Turret V6					
Tool taper Standard	VDI (DIN 69880)	50		50	
No. of tools		12		12	
Toolsize DIN 69880	mm × mm	32 × 32		32 × 32	
No. of driven tools		12		12	
Power max. 2,776 rpm 100 % ED	kW	16		16	
Power max. 2,776 rpm 40 % ED	kW	25		25	
Torque 100 % ED driven tools	Nm	55		55	
Torque 40 % ED driven tools	Nm	86		86	
Speed range driven tools	rpm	6,000		6,000	
Indexing time 30 / 180 Grad	s	0.4 / 0.65		0.4 / 0.65	
Max. weight on the disc	kg	200		200	
Tailstock (Version V3-V4)					
Tailstock travel	mm	1,200		1,970	
Max. tailstock thrust	daN	1,600		1,800	
Quill diameter	mm	–		120	
Quill stroke	mm	–		150	
Morse taper	MK	5		5	
Tailstock handling (opt.)		Hydraulic (NC)		Connection to the Z-slide (NC)	
Rapid Z3-axis (opt.)	m/min	4 (20)		4 (20)	
Steady rest					
Steady rest handling (opt.)		Connection to the Z-slide (NC)		Connection to the Z-slide (NC)	
Rapid Z-axis (opt.)	m/min	4 (8)		4 (8)	
Work range ø	mm	75 ÷ 430 (RX 5)		75 ÷ 430 (RX 5)	
Min.distance between centers V3-V4 (V6 between two spindle noses)	mm	300 (400)		330 (430)	
Cooling (V3-V4)					
Cooled units		Left spindle		Left spindle	
Cooling system		Heat exchanger		Heat exchanger	
Tank capacity	l	19.5		19.5	
Cooling capacity	kW	2.7		2.7	
Pump capacity	l/min	20		20	
Pressure	bar	0.7		0.7	
Viscosity cooling fluid	St.	1		1	
Cooling (V6 / option)					
Cooled units		Left spindle / Right spindle / turnMASTER turret		Left spindle / Right spindle / turnMASTER turret	
Cooling system		Active chiller		Active chiller	
Tank capacity	l	35		35	
Cooling capacity	kW	5		5	
Pump capacity	l/min	40		40	
Pressure	bar	5		5	
Viscosity cooling fluid	St.	1		1	
Chip conveyor					
Tank capacity	l	305		400	
Pump power 50Hz	kW	0.85 (2.2) (2.2)		0.85	
Pump capacity	l/min	20 (20) (22)		20	
Pump pressure	bar	5 (12) (5-20)		5	

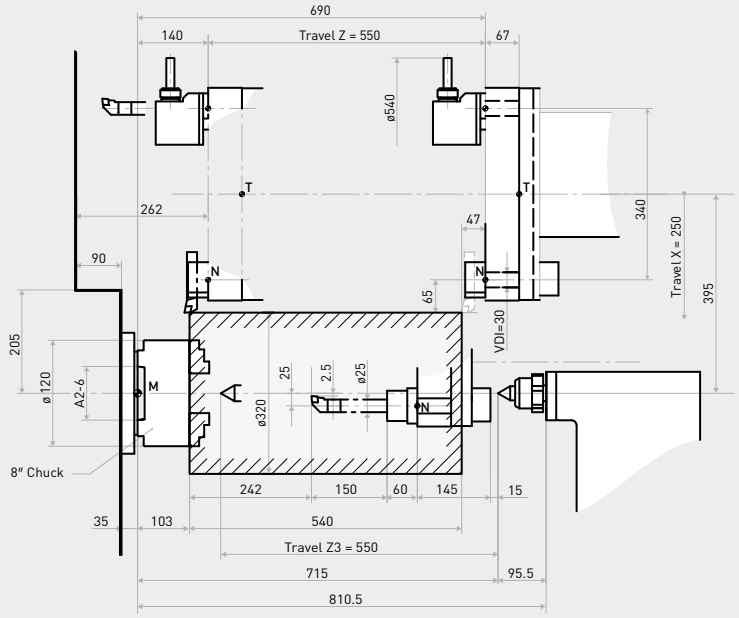
		CTX 750 | 1250		CTX 750 | 2000	
Coolant tank (option)					
Type		Paper filter	Paper filter	Paper filter	Paper filter
Tank capacity	l	600	980	600	980
Pump standard power	kW	0.75 (0.75/2.2) (0.75/3)	0.75 (0.75/2.2) (0.75/5.5)	2.8 (50Hz) – 2.94 (60Hz)	2.2 (60Hz) – 5.5 (50/60 Hz)
Pump pressure	bar	8 (8/20) (8/40)	8 (8/20) (8/80)	8 – 40	8 – 80
Pump capacity	l/min	20 (20/25) (20/22)	20 (20/25) (80/20)	20 – 23	80 – 20
Filter capacity	µm	40	40	40	40
Hydraulic unit					
Tank capacity	l	18		18	
Pump power	kW	2.8		2.8	
Max. working pressure	bar	55		55	
Pump capacity	l/min	28.5		28.5	
Pneumatic					
Pressure	bar	6		6	
Capacity	m³/h	10 (max 70)		10 (max 70)	
Lubrification axis / steady rest					
Lubrificant type		Grease 000		Grease 000	
Tank capacity	l	2		2	
Lubrification turret					
Lubrificant type		Air + Hydraulic oil ISO VG 68		Air + Hydraulic oil ISO VG 68	
Tank capacity	l	2		2	
		(V3) (V4)	**(V6)**	**(V3) (V4)**	**(V6)**
Electric power					
Connection to the mains		L1, L2, L3, N, PE	L1, L2, L3, N, PE	L1, L2, L3, N, PE	L1, L2, L3, N, PE
Frequency	Hz	50/60	50/60	50/60	50/60
Apparent nominal power	KVA	60	60	60	60
Maximum current	A	85	85	85	85
Short circuit current	kA	10	10	10	10
Thermal protection	A	90	90	90	90
Fuse protection	A	125	125	125	125
Connection cables	mm²	25	25	25	25
Accuracy					
According to ISO 230-2 (T= 20+/-2 °C)					
Tolerance of position A on X/Y/Z1	µm	6/8/14		6/8/14	
Tolerance of position A on C	arcsec	12		12	
Tolerance of position A on Z3	µm	16		16	
Machine dimensions					
Main dimensions for setup L/B/H with chip conveyor	mm	5,488 × 3,273 × 2,244		6,323 × 3,273 × 2,244	
Main dimensions for transport L/B/H (on wodden pallet)	mm	5,700 × 2,350 × 2,550		6,600 × 2,350 × 2,550	
Weight of the machine incl. electrical cabinet	kg	10,000		12,000	
Noise (DIN45635, ISO 3740-1980)	dB(A)	< 78		< 78	

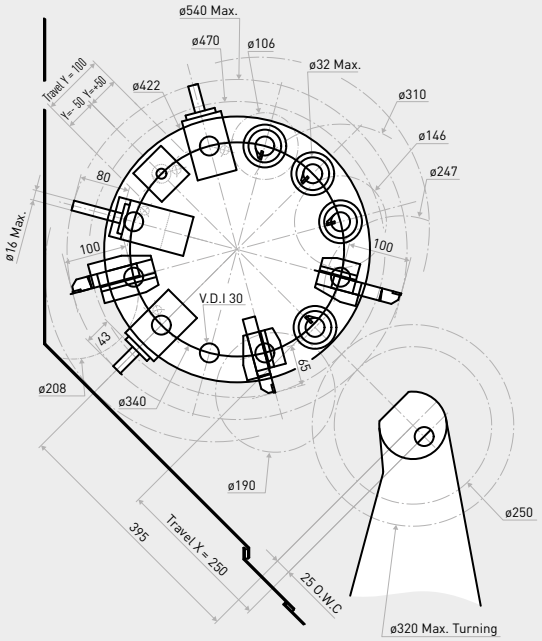
CTX 350

Working area

Tailstock version (V3-V4)

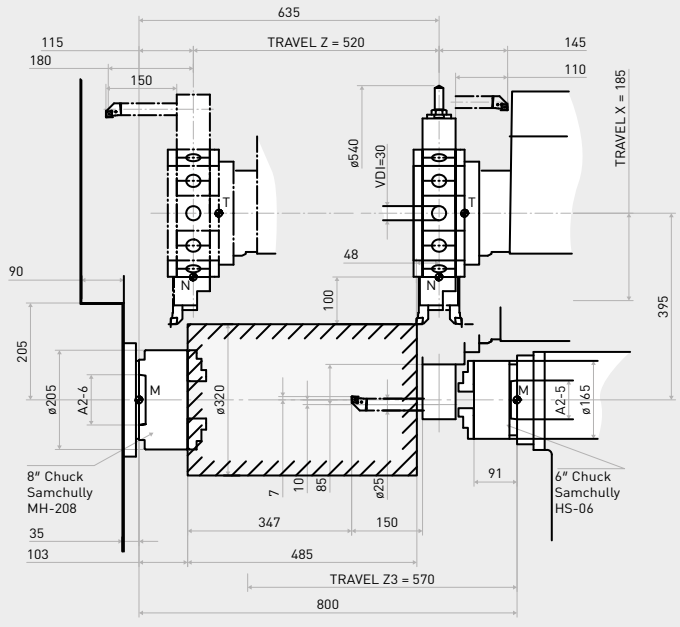
(mm)

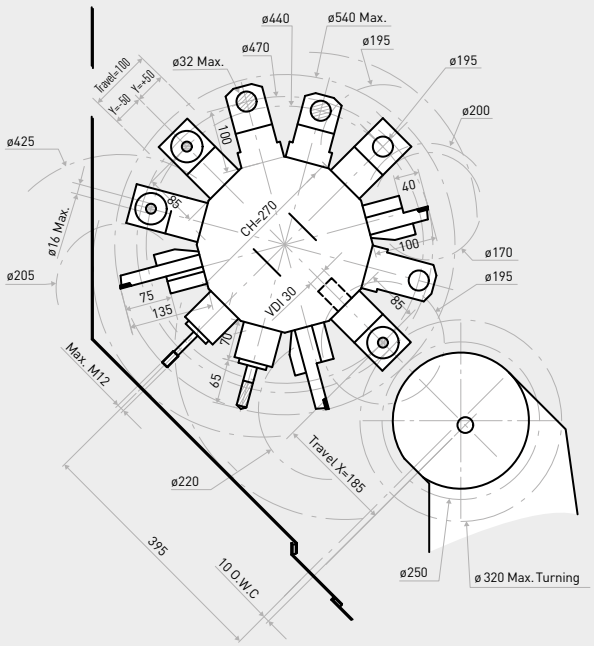




Right spindle version (V6)

(mm)



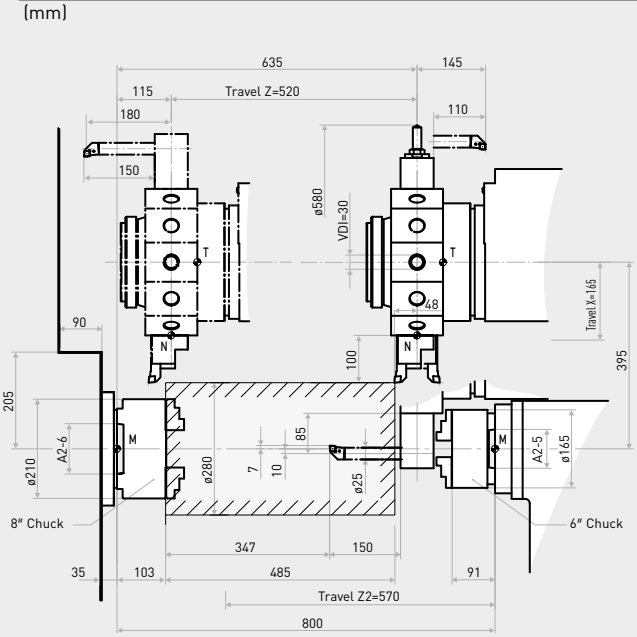


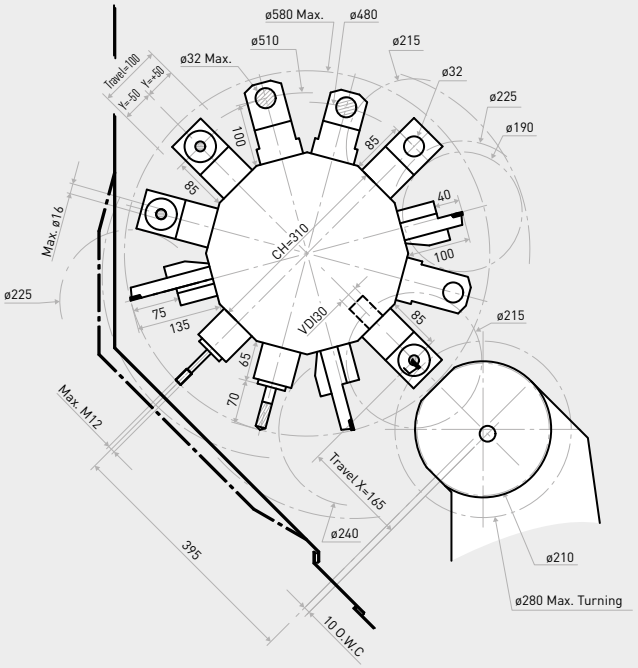
CTX 350

Working area

Right spindle version (V6) with turretMASTER

(mm)



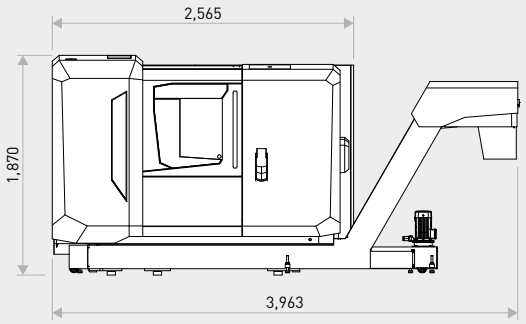


CTX 350

Floor Plans

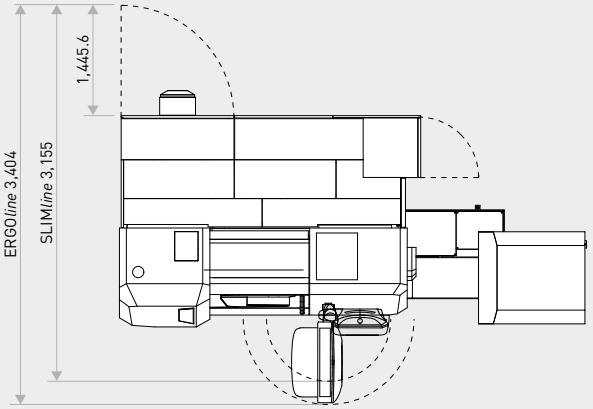
Front view

(mm)



Top view

(mm)

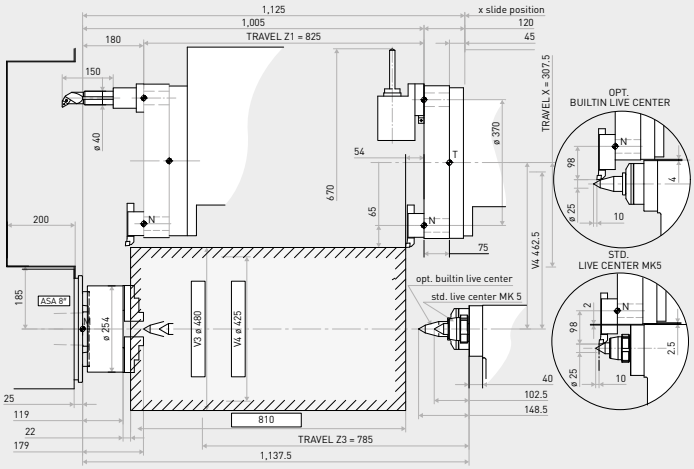


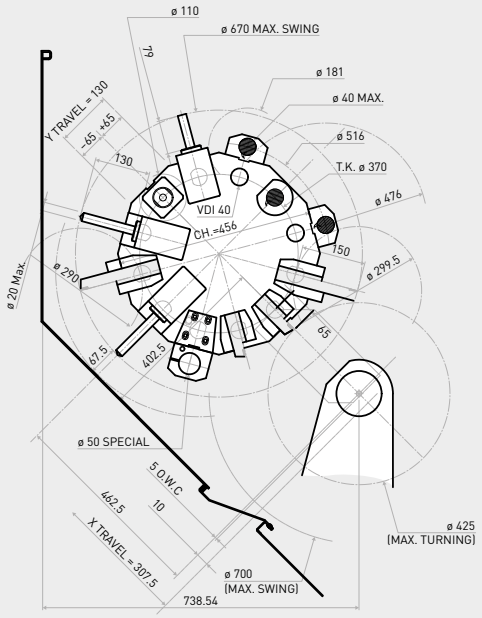
CTX 450

Working area

Tailstock version (V3-V4)

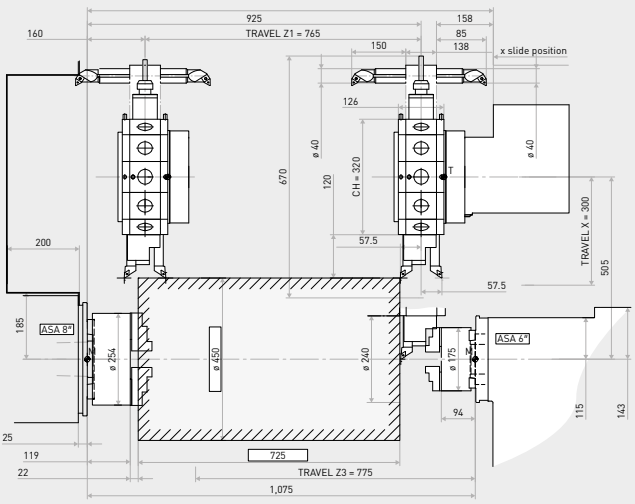
(mm)

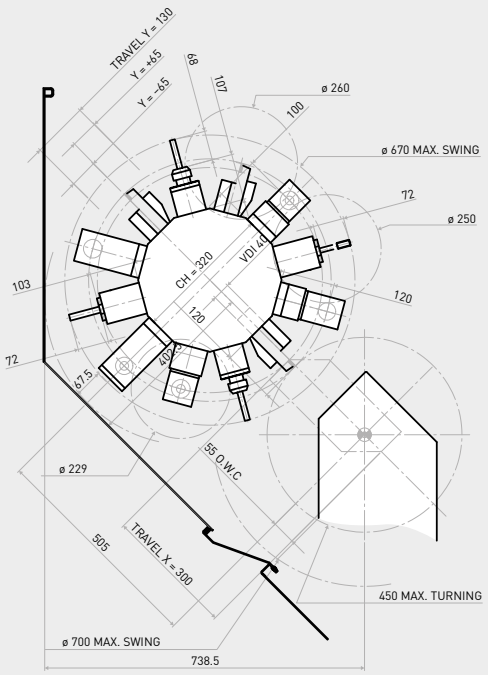




Right spindle 65 version (V6)

(mm)



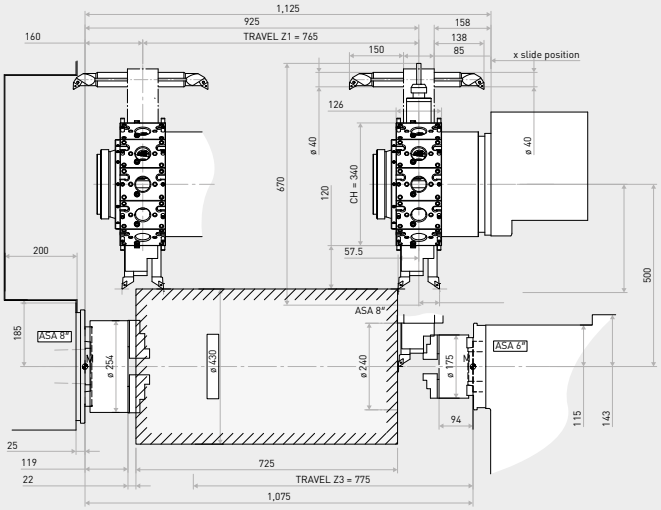


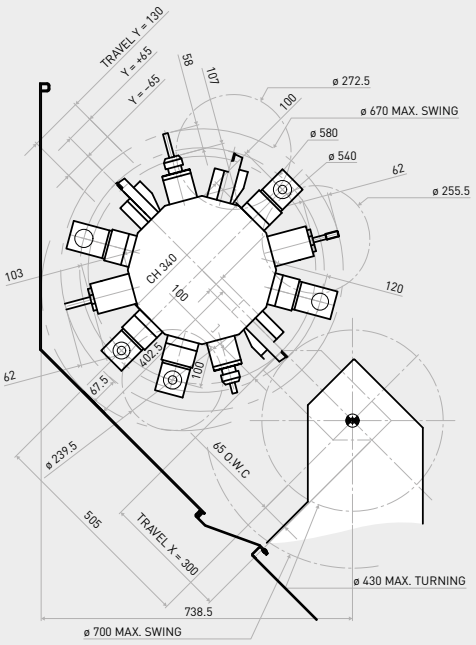
CTX 450

Working area

Right spindle 65 version (V6) with turretMASTER

(mm)



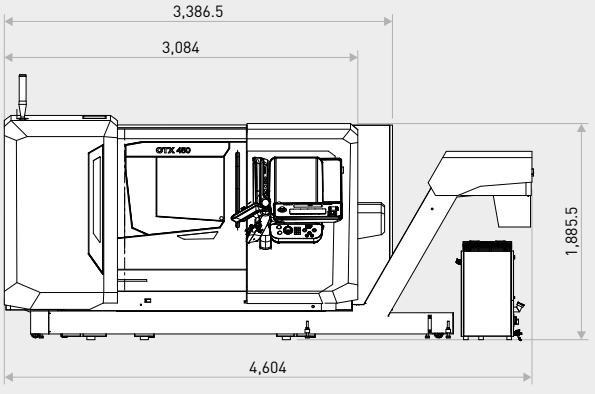


CTX 450

Floor Plans

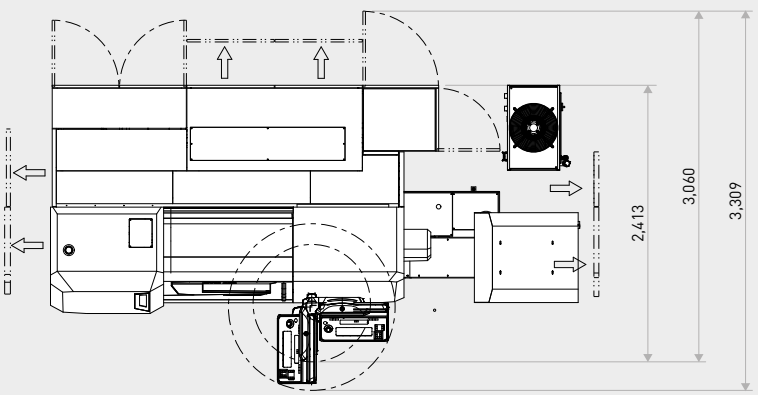
Front view

(mm)



Top view

(mm)

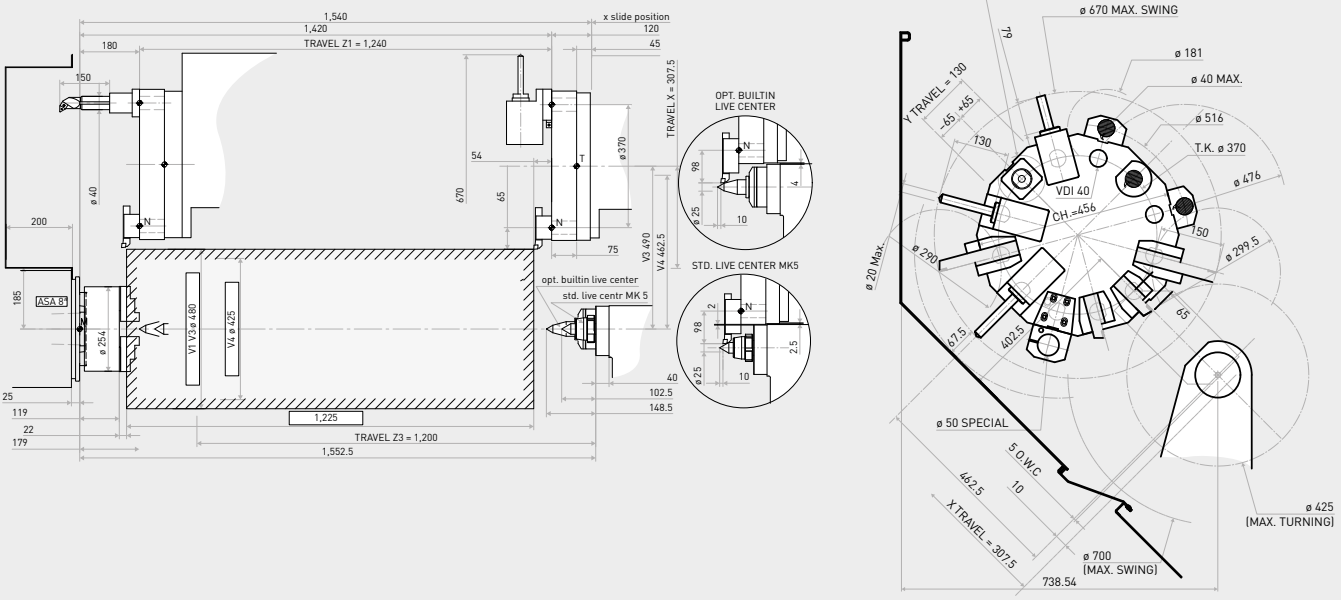


CTX 550

Working area

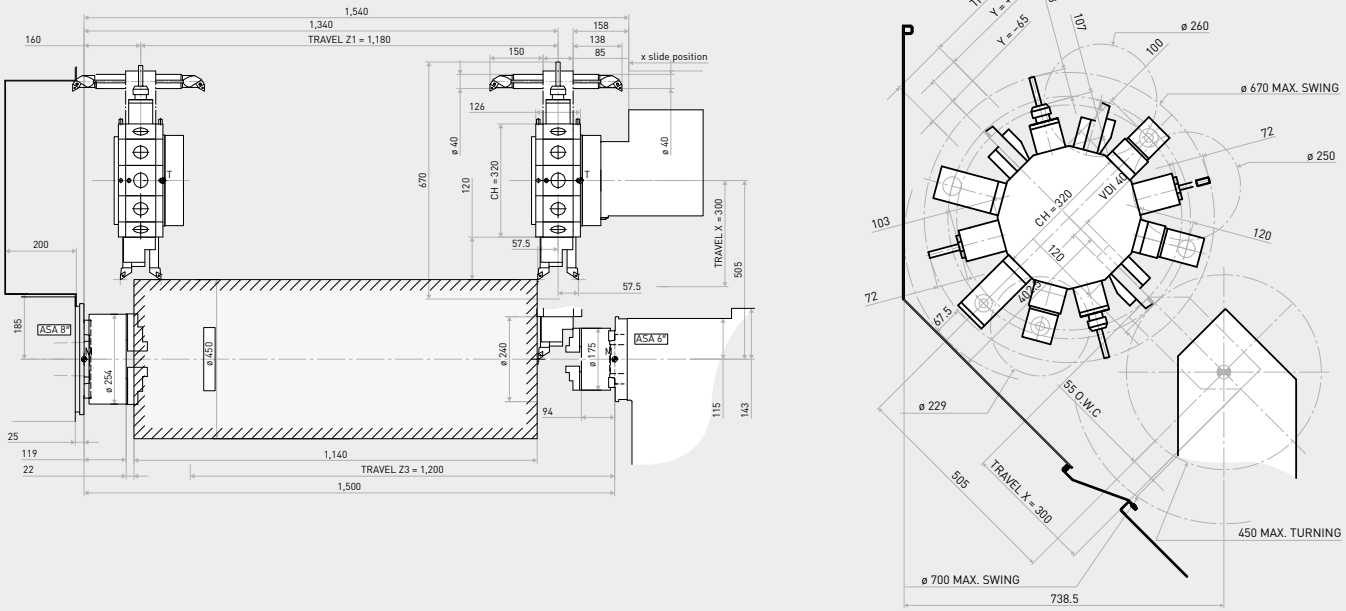
Tailstock version (V3-V4)

(mm)



Right spindle 65 version (V6)

(mm)

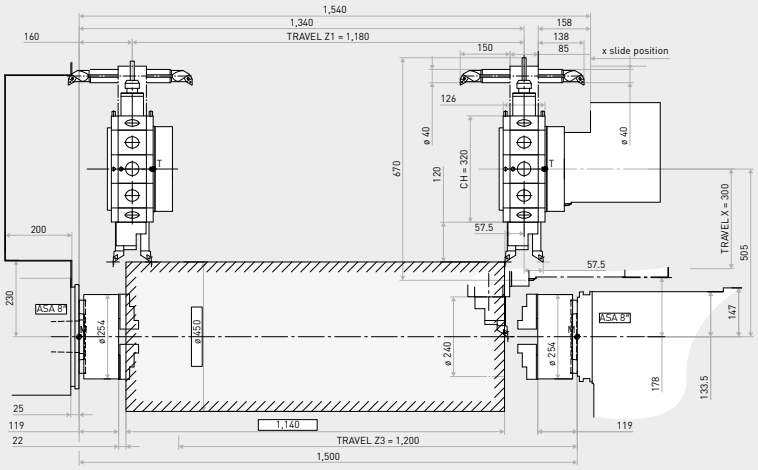


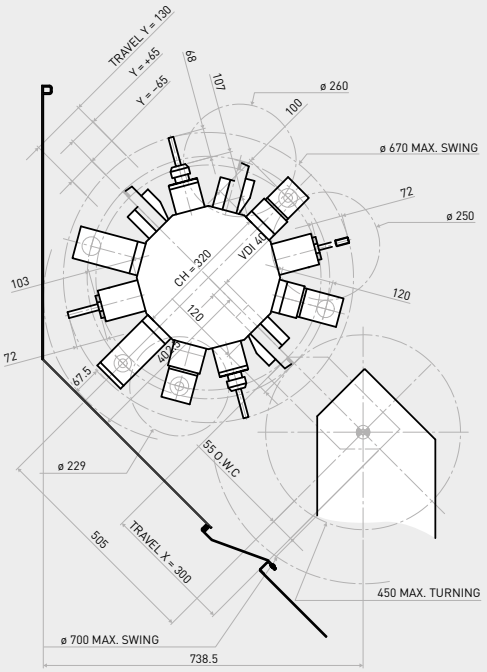
CTX 550

Working area

Right spindle 80 version (V6)

(mm)



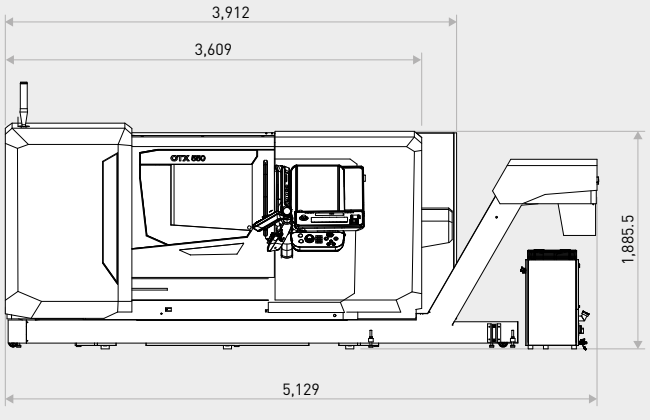


CTX 550

Floor Plans

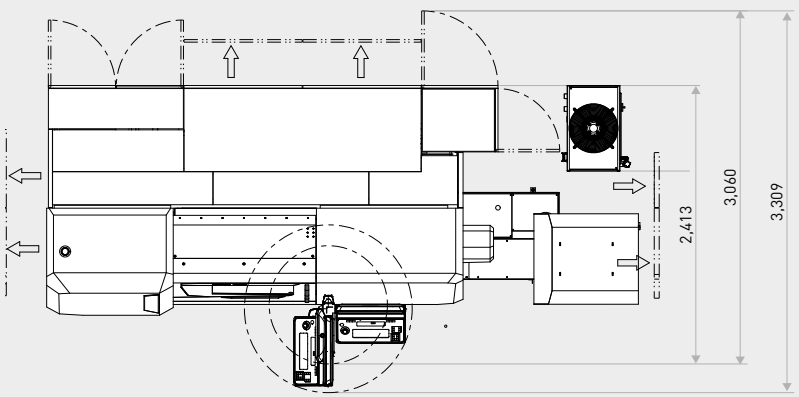
Front view

(mm)



Top view

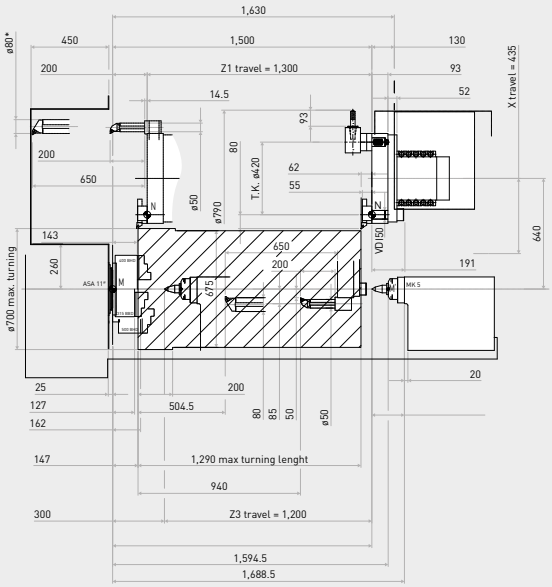
(mm)

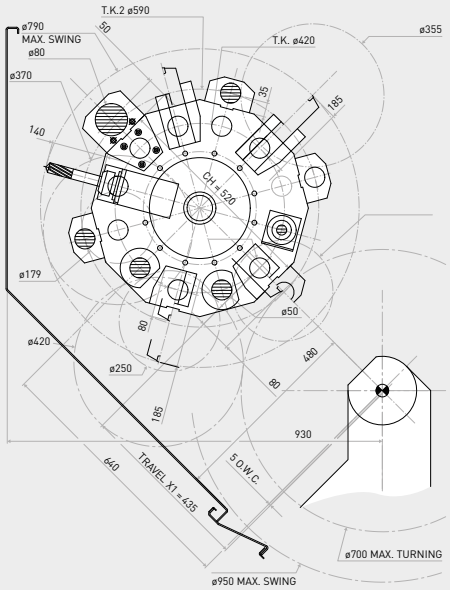


CTX 750 | 1250

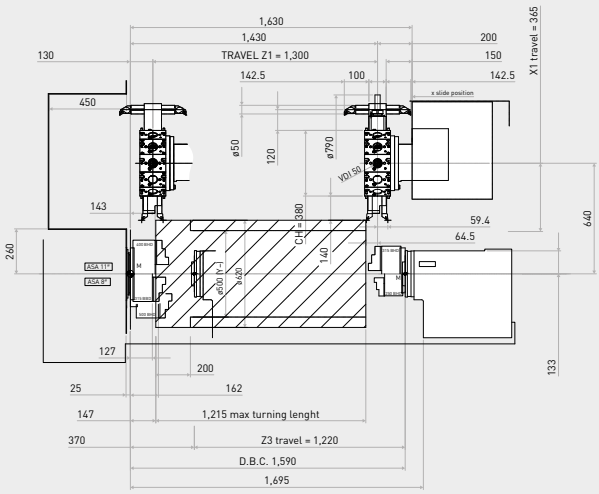
Working area

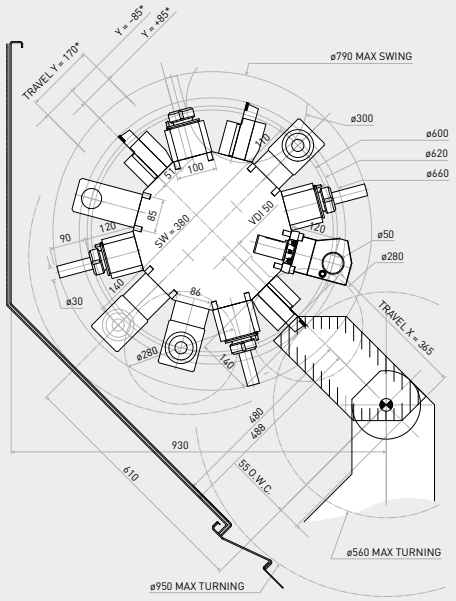
Tailstock version (V3)
(mm)





Right spindle 80 version (V6) with standard turretMASTER
(mm)

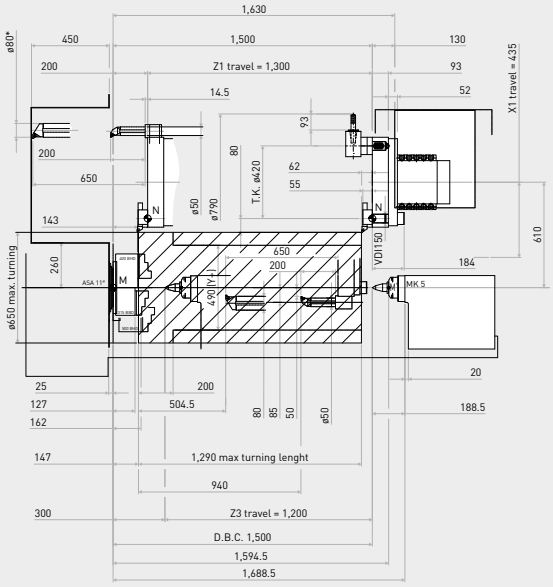


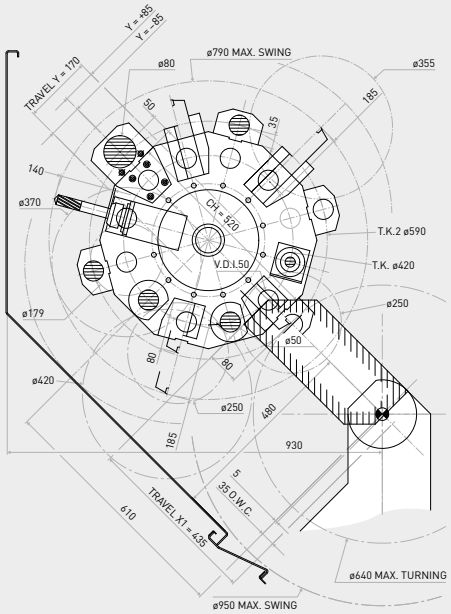


Working area

Tailstock version (V4)

(mm)

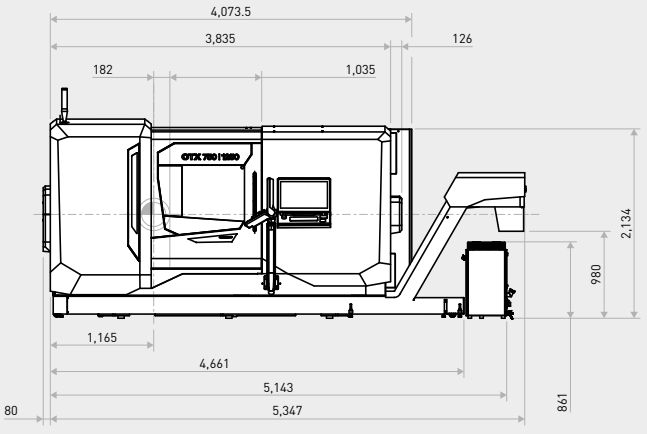




Floor Plans

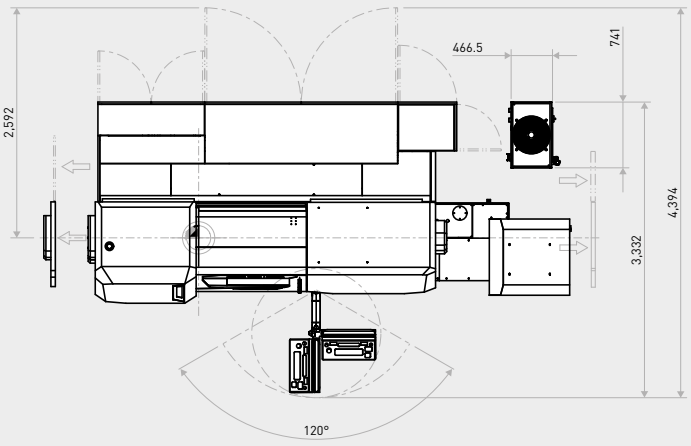
Front view

(mm)



Top view

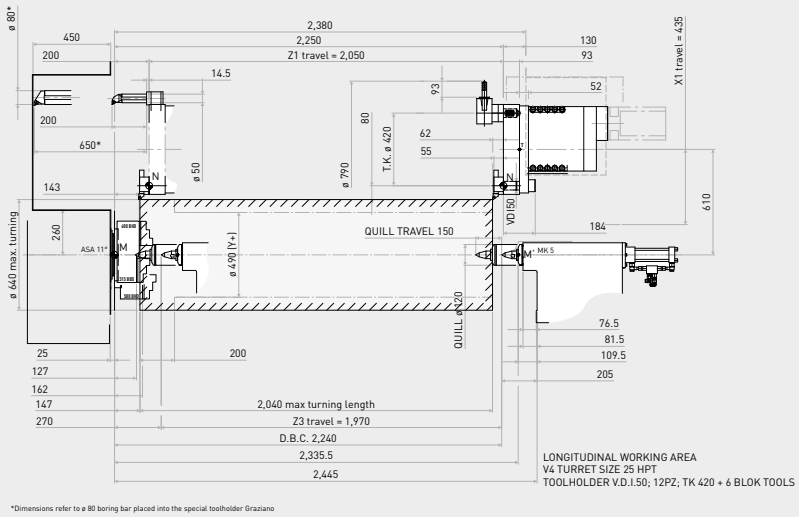
(mm)



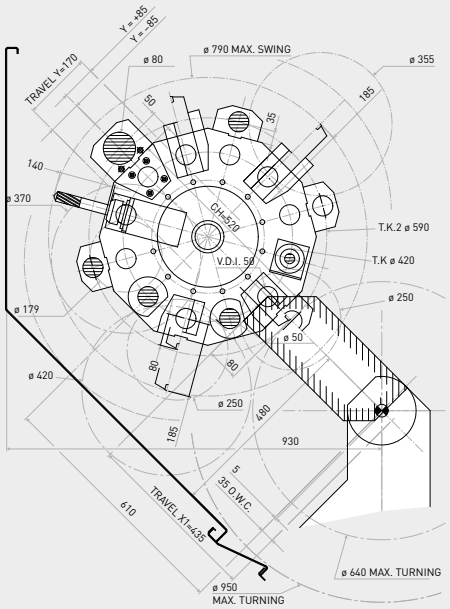
CTX 750 | 2000

Working area

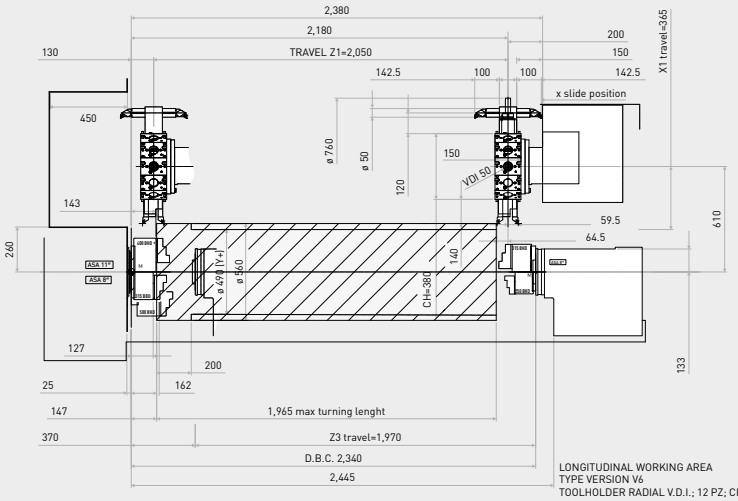
Tailstock version (V3)
(mm)

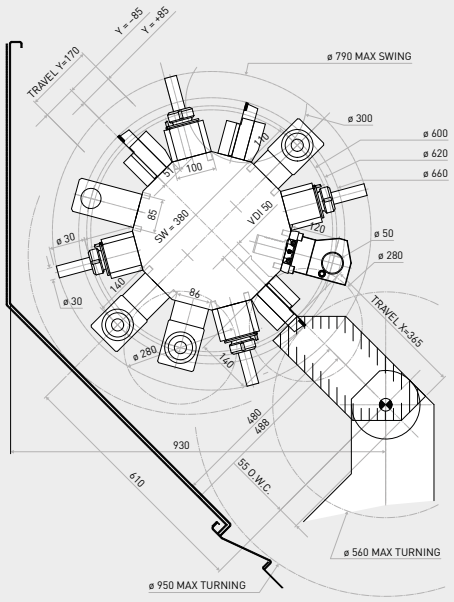


*Dimensions refer to ø 80 boring bar placed into the special toolholder Graziano



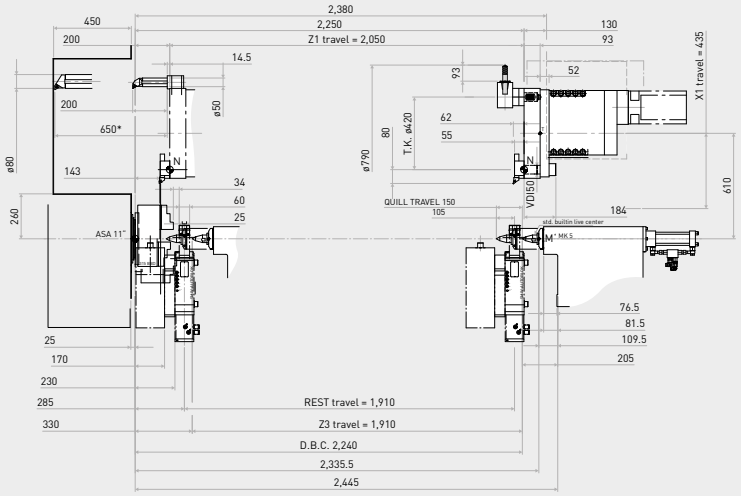
Right spindle 80 version (V6) with standard turretMASTER
(mm)





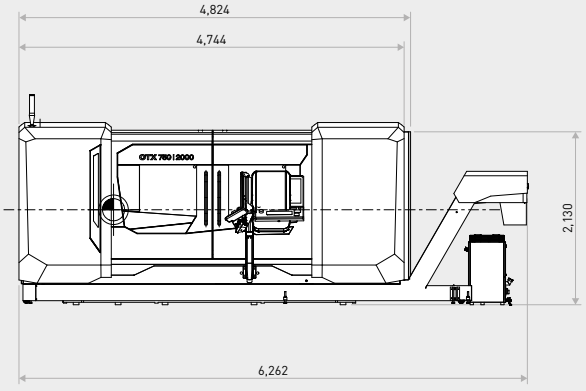
Working area

Tailstock version (V3-V4) with steady rest SLU X4
(mm)

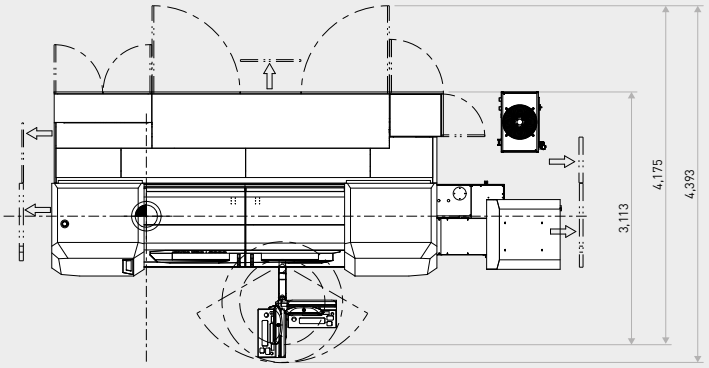


Floor Plans

Front view
(mm)



Top view
(mm)



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