



**ROMI**®

CNC LATHE



**Romi C 420**

**Romi C 510**

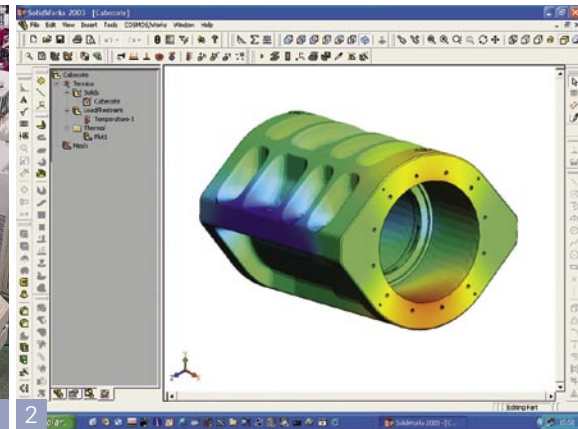
**Providing versatility and assured productivity at multiple levels of application**

The Romi C 420 and Romi C 510 CNC Lathes are truly versatile machines that can handle many different types of workpieces. High power cuts, rapid tool positioning and precision are attributes of which you can be assured.

The high performance and reliable hardware of the Siemens Sinumerik 802D sl-Plus CNC Control offers multiple means of programming and operating, including a Graphic module for machining simulation.

These machines can be equipped with RMMP - Romi Manual Machining Package (optional) that allows simple operations to be completed without any type of programming. It is as simple to use as an Engine Lathe but with the added capability and productivity of a CNC Lathe.

CNC lathes for **multiple operations** with several chuck and toolholder configurations



**Examples of machined parts**





3



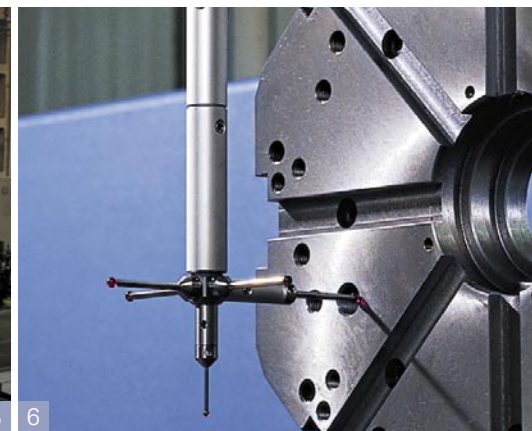
Illustrative image  
Equipped with optional



4



5



6

- 1 CNC Lathes Production Line
- 2 Finite element analysis (FEA) guarantees a high quality design, right from the start
- 3 High precision equipment for measuring roundness
- 4 Laser cutting machine for sheetmetal: high precision and productivity
- 5 Romi machine tools are finish machined using large capacity and high quality equipment
- 6 CNC Coordinate Measuring Machine (CMM) used to inspect complex machined parts



Illustrative image  
Equipped with optional



Structure designed specifically for a CNC Lathe. It provides **great finishes** on the workpiece, **durability** of the machine, and **long lasting** cutting tools

### 1 Headstock

Driven by a high tech AC motor through pulleys and poly-V belt, Spindle speed range is continuous and infinitely variable.

The main spindle is supported by high precision bearings permanently lubricated.

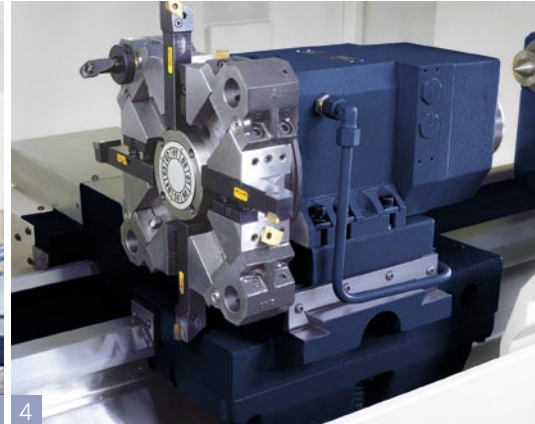
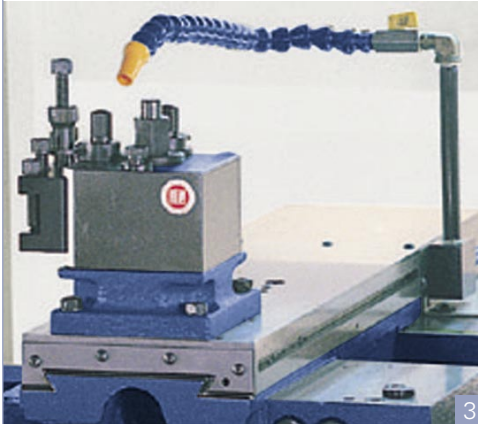
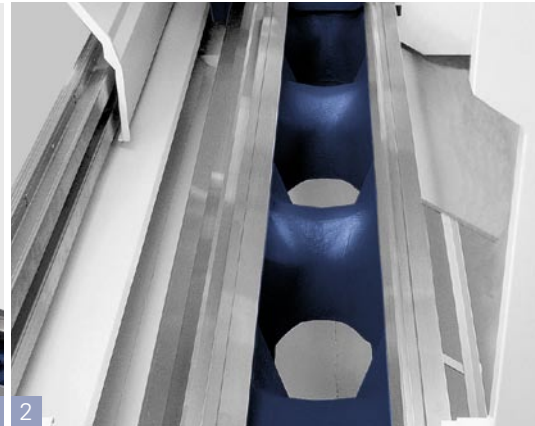
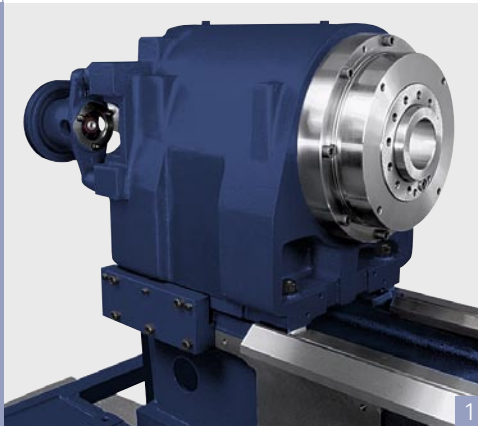
These high load capacity bearings combined with a heavy cast iron housing, provide rigidity and high vibration absorption, under the most severe cutting conditions, therefore, obtaining excellent-precision parts.

### 2 Bed

Supported by internally ribbed cast iron columns, providing great vibration absorption over a wide range of machining conditions.

The Induction-hardened and ground prismatic and plane guideways (Vee and Flat) constitute a self adjusting system assuring permanent saddle contact on the bed.

These features offer rigidity, stability and accuracy, throughout the entire range of power output of the machine.



### 3/4 Quick Change Toolholder and 8-Station Disk Type Automatic Turret (optional)

The Romi C 420 and Romi C 510 lathes can be equipped with different types of toolholder systems, depending on the machining

requirements: Quick Change Tool Post, Rear Toolholder, Gang Tool Top Plate, 8-Station Disk Type Automatic Turret, electrically driven.

## RMMP - Romi Manual Machining Package (optional)

This application allows the user to operate the machine in both manual and auto mode. There are three levels of operation according to the operator skill:

### Manual Mode

The operator machines the part as on a conventional lathe using Control Apron. In this mode, manual operations such as Parallel Turning, Taper Turning, Radius Turning, Drilling and Groove can be performed.

### Cycles Mode

In this mode the machinist operates the machine in semi automatic mode. He fills in the conversational screen fields for feed, speed and cycle data, then moves the tool to a safe starting point using the Control Apron and then presses the Cycle Start button to perform the cycle.



Control Apron (optional)

Cycles as Drilling, Tapping, Groove / Parting, Thread and Roughing / Finishing Turning can also be performed. There are fixed cycles and free form for turning. The filling in of the cycles fields are aided by a graphic screen.

### Teach In Mode

In this mode the operator saves the operations step by step as he is machining the first part. The operator can then save these into a program for use on later parts. Both manual operations and cycles operations can be saved together into the same program and the programs can then be saved in the CNC memory or a compact flash card.

Note: There are also conversational screens for measuring tools and setting work offsets.

Technical Specifications		Romi C 420	Romi C 510
<b>Capacity</b>			
Height of centers	mm (in)	215 (8.46)	260 (10.23)
Distance between centers	m (in)	0.5 / 1.0 (19.68 / 39.37)	1.5 (59.05)
Swing over bed	mm (in)	430 (16.92)	520 (20.47)
Swing over cross slide	mm (in)	200 (7.87)	255 (10.03)
Swing over saddle wings	mm (in)	400 (15.74)	450 (17.71)
Travel (X axis)	mm (in)	220 (8.66)	280 (11.02)
Travel (Z Axis)	mm (in)	565 / 1,065 (22.24 / 41.92)	1,555 (61.22)
<b>Bed</b>			
Width	mm (in)	305 (12.00)	340 (13.38)
Height	mm (in)	350 (13.77)	336 (13.22)
<b>Headstock</b>			
Spindle nose	ASA	A2-5" A2-6"	A2-6" A2-8"
Spindle hole diameter	mm (in)	53 (2.08) 65 (2.55)	65 (2.55) 80 (3.15)
Speed range	rpm	4 ~ 4,000 3 ~ 3,000	3 ~ 3,000 2 ~ 2,200
<b>Feeds</b>			
Rapid traverse (Z axis)	m/min (ipm)	10 (393.70)	10 (393.70)
Rapid traverse (X axis)	m/min (ipm)	10 (393.70)	10 (393.70)
<b>Manual tailstock</b>			
Body positioning		manual	manual (std) or by cross slide (optional)
Quill drive		manual (std) pneumatic or hydraulic (optional)	manual (std) pneumatic or hydraulic (optional)
Maximum quill stroke	mm (in)	120 (4.72)	130 (5.12)
Quill diameter	mm (in)	60 (2.36)	80 (3.15)
Quill taper hole	MT	4	4
<b>Quick change toolholder (optional)</b>			
Holders		2 or 3	3
Toolholder size:			
	Square mm (in)	25 x 25 (1 x 1)	25 x 25 (1 x 1)
	Bar (diameter) mm (in)	25 (1)	25 (1)
<b>Rear toolholder (optional)</b>			
Toolholder size:			
	Square mm (in)	20 x 20 (1 x 1)	25 x 25 (1 x 1)
	Bar (diameter) mm (in)	25 (1)	32 (1 1/4)
<b>Toolholder type gang tools (optional)</b>			
Toolholder size:			
	Square mm (in)	20 x 20 (1 x 1)	-
	Bar (diameter) mm (in)	25 (1)	-
<b>WTO Toolholder (VDI-50 Toolholder / DIN 69880-50) (optional)</b>			
Axial Live tool holder	DIN 6499	-	ER-40 (Ø 4 - Ø 26 mm)
Radial Live tool holder	DIN 6499	-	ER-40 (Ø 4 - Ø 26 mm)
Toolholder size:			
	Square mm (in)	-	32 x 32 (1 1/4 x 1 1/4)
	Bar (diameter) mm (in)	-	40 (1 1/2)
<b>8-position Manual Square Turret (optional)</b>			
Toolholder size:			
	Square mm (in)	25 x 25 (1 x 1)	-
	Bar (diameter) mm (in)	25 (1)	-
<b>8-position Disk Type Automatic Turret (optional)</b>			
Number of stations / tools		8 / 8	8 / 8
Station-to-station indexing time	s	0.6	0.6
Turret indexing time 180°	s	1.5	1.5
Toolholder size:			
	Square mm (in)	25 x 25 (1 x 1)	25 x 25 (1 x 1)
	Bar (diameter) mm (in)	25 (1)	32 (1 1/4)
<b>Installed power</b>			
AC Main motor (30 min)	hp / kW	10 / 7.5	15 / 11
Total installed power	kVA	15	20
<b>Floor space required (front x side) (*)</b>			
0.5 m between centers	m (in)	2.60 x 1.24 (102.36 x 48.82)	-
1.0 m between centers	m (in)	3.10 x 1.24 (122.04 x 48.82)	-
1.5 m between centers	m (in)	-	3.75 x 1.68 (147.64 x 66.14)
<b>Net weight (approx.)</b>			
0.5 m between centers	kg (lbs)	2,100 (4,630)	-
1.0 m between centers	kg (lbs)	2,500 (5,512)	-
1.5 m between centers	kg (lbs)	-	3,750 (8,268)

(\*) Without chip conveyor

## Standard Equipment

- ASA A2-5" or ASA A2-6" spindle nose (Romi C 420)
- ASA A2-6" or ASA A2-8" spindle nose (Romi C 510)
- Automatic centralized lubricating system with line filter and oil level sensor
- CE safety regulation compliance (for Europe Community only)
- Complete coolant system with reservoir and pump (10 l/min, 2 bar, 0.56 kW motor pump)
- Complete electrical installation for 200 ~ 250 Vca, 50 / 60 Hz (USA and other markets)
- Complete electrical installation for 400 Vca, 50 / 60 Hz (CE market)
- Fully enclosed splash guard, additional door with safety window interlocked by electrical safety switch
- Removable chip box
- Sealed worklight
- Set of leveling screws and nuts
- Set of operating, maintenance, programming, installation and parts manuals
- Set of wrenches for machine operation
- Siemens Control 802D sl - Plus, with 10.4" LCD color monitor
- Standard colors: Texturized epoxy enamel Munsell Blue 10B-3/4 and Texturized Epoxy Gray RAL 7035
- Tailstock with manual body positioning manually operated quill (dry tip) MT-4

## Accessories

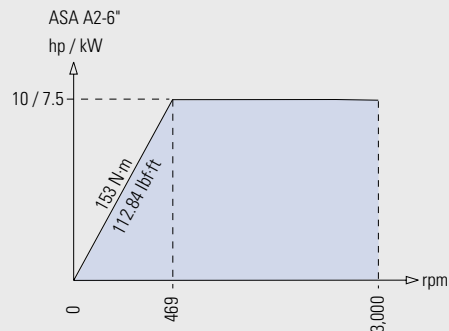
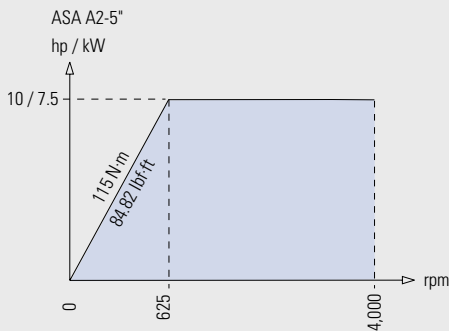
- Air conditioning for electrical cabinet
- Air operated tailstock quill with MT- 4 live center, in place of standard (pneumatics and foot switch included)
- Adaptation for electrical installation for 380 Vca, or for 390 ~ 480 Vca, 50 / 60 Hz (USA market)
- Chip conveyor interface
- Chip conveyor hinged belt (TCE) transverse
- Chip conveyor scraper (TCA) transverse (Romi C 420)
- Compact flash Sandisk 1 GB
- D1-6" spindle cartridge, with  $\varnothing$  53 mm (2.09") hole dia through spindle (3,000 rpm max) (in place of std) (Romi C 420)
- D1-8" spindle cartridge, with  $\varnothing$  80 mm (3.15") hole dia through spindle (2,200 rpm max) (Romi C 510)
- Generic interface with miscellaneous functions (4 M codes)
- High pressure coolant system (10 lpm @ 7 bar, 1.5 kw / 2 hp) in place of standard (Romi C 510)

- Hydraulic operated tailstock quill with MT-4 live center in place of standard (hydraulics and foot switch included) (A)
- Hydraulic power unit
- Individual adapter plate Parat RD - 2 (Romi C 420) or Parat RD - 3 (Romi C 510)
- Live center MT 4
- Mechanical bar puller cap.  $\varnothing$  8 to 50 mm (5/16 to 2") - 20 x 20 mm (3/4 x 3/4"), without built-in cut-off tool holder, or with built-in cut-off tool holder (Romi C 420)
- Mechanical bar puller cap.  $\varnothing$  8 to 50 mm (5/16 to 2") - 25 x 25 mm (1" x 1"), without built-in cut-off tool holder, or with built-in cut-off tool holder
- $\varnothing$  160 mm ( $\varnothing$  6.3") universal chuck, with set of three hard jaws (ASA A2-5" - 3,600 rpm) (Romi C 420)
- $\varnothing$  160 mm ( $\varnothing$  6.3") universal chuck, with set of three reversible jaws (ASA A2-5" - 4,500 rpm) (Romi C 420)
- $\varnothing$  200 mm ( $\varnothing$  7.9") universal chuck, with set of three hard jaws (ASA A2-6" - 3,000 rpm)
- $\varnothing$  200 mm ( $\varnothing$  7.9") universal chuck, with set of three reversible jaws (ASA A2-6" - 4,000 rpm)
- $\varnothing$  250 mm ( $\varnothing$  9.8") universal chuck, with set of three reversible jaws (ASA A2-6" - 3,500 rpm) (Romi C 510)
- $\varnothing$  165 mm (6.5") (ASA A2-5") hydraulically operated chuck, bar capacity  $\varnothing$  42 mm and hydraulic cylinder (Romi C 420) (A)
- $\varnothing$  210 mm (8") (ASA A2-5") hydraulically operated chuck, bar capacity  $\varnothing$  42 mm and hydraulic cylinder (Romi C 420) (A)
- $\varnothing$  210 mm (8") (ASA A2-6") hydraulically operated chuck, bar capacity  $\varnothing$  42 mm and hydraulic cylinder (Romi C 420) (A)
- $\varnothing$  210 mm (8") (ASA A2-6") hydraulically operated chuck, bar capacity  $\varnothing$  51 mm and hydraulic cylinder (Romi C 510) (A)
- $\varnothing$  254 mm (10") (ASA A2-6") hydraulically operated chuck, bar capacity  $\varnothing$  51 mm and hydraulic cylinder (Romi C 510) (A)
- $\varnothing$  254 mm (10") (ASA A2-8") hydraulically operated chuck, bar capacity  $\varnothing$  64 mm and hydraulic cylinder (Romi C 510) (A)
- Additional set of jaws
- T- Slotted Face Plate with 6 T-slots  $\varnothing$  400 mm (15.7") - 375 rpm
- Oil skimmer
- 8-Station disk type automatic turret, electrically driven, standard disk with eight tool tighten block, one facing tool holder (25 x 25 mm or 1 x 1"), two boring tool holder ( $\varnothing$  25 mm or 1"), five reduction sleeves:  $\varnothing$  8, 10, 12, 16, and 20 mm or  $\varnothing$  5/16, 3/8, 1/2, 5/8, 3/4" and one sleeve MT-1 (Romi C 420)
- 8-Station disk type automatic turret, electrically driven standard disk with eight tool tighten block, one facing tool holder (25 x 25 mm or 1 x 1"), two boring tool holder ( $\varnothing$  32 mm or  $\varnothing$  1 1/4"), five reduction sleeves:  $\varnothing$  10, 12, 16, 20 e 25 or  $\varnothing$  3/8, 1/2, 5/8, 3/4, 1" and one sleeve MT-1 (Romi C 510)
- 8-Station manual square head turret (Romi C 420)
- Quick change toolholder base (2 faces), with one boring bar holder ( $\varnothing$  25 mm or 1") and one turning tool holder (25 x 25 mm or 1" x 1") (Romi C 420)
- Quick change toolholder base (3 faces), with one boring bar holder ( $\varnothing$  25 mm or 1") and two turning tool holder (25 x 25 mm or 1" x 1") (Romi C 420 / C 510)
- Rear tool holder, with a T-slot base, one turning tool holder (20 x 20 mm or 3/4 x 3/4") and one boring bar holder ( $\varnothing$  1" or  $\varnothing$  25 mm) (Romi C 420)
- Rear tool holder, with a T-slot base, one turning tool holder (25 x 25 mm or 1 x 1") and one boring bar holder ( $\varnothing$  32 mm or  $\varnothing$  1 1/4") (Romi C 510)
- Gang-tooling plate, with 1 turning tool holder (20 x 20 mm or 3/4 x 3/4"), 2 facing tool holder (20 x 20 mm or 3/4 x 3/4"), 2 boring bar holder ( $\varnothing$  1" or  $\varnothing$  25 mm) and 3 reduction sleeves ( $\varnothing$  12, 16, 20 mm or  $\varnothing$  1/2, 5/8, 3/4") and drill socket MT-1 (Romi C 420)
- WTO tool holder, for VDI - 50 tool holders, for static tools and driven tools (Romi C 510)
- Remote diagnosis interface
- Romi Manual Machining Package - RMMP, configured by control apron with two electronic handwheels for both X and Z axes, joystick switches and an user friendly siemens software "Manual Machine Plus"
- Separated toolholders and sleeves
- Steady rest (open) with bronze tips,  $\varnothing$  8 to  $\varnothing$  80 mm ( $\varnothing$  5/16" to  $\varnothing$  3 1/8") capacity
  - Additional set of bronze tips  $\varnothing$  8 to 80 mm
- Steady rest (closed) with bronze tips,  $\varnothing$  8 to  $\varnothing$  80 mm ( $\varnothing$  5/16" to  $\varnothing$  3 1/8") capacity
  - Additional set of bronze tips  $\varnothing$  80 to  $\varnothing$  152 mm ( $\varnothing$  3 1/8" to  $\varnothing$  6") capacity
  - Additional set of rollers  $\varnothing$  8 to  $\varnothing$  80 mm ( $\varnothing$  5/16" to  $\varnothing$  3 1/8") capacity
  - Additional set of rollers  $\varnothing$  80 to  $\varnothing$  152 mm ( $\varnothing$  3 1/8" to  $\varnothing$  6") capacity
- Steady rest (U Type) with rollers,  $\varnothing$  101.6 to  $\varnothing$  203.2 mm ( $\varnothing$  4" to  $\varnothing$  8") capacity (Romi C 420)
  - Additional set of rollers  $\varnothing$  50.8 to  $\varnothing$  177.8 mm ( $\varnothing$  2" to  $\varnothing$  7") capacity
- Follow rest with rollers, 12 to  $\varnothing$  50 mm ( $\varnothing$  1/2" to  $\varnothing$  2") capacity (Romi C 420), or  $\varnothing$  15 to 80 mm (5/8 to 3 1/8") capacity (Romi C 510)
- VDI - 20 axial disk (Romi C 420) or VDI - 30 axial disk (Romi C 510), in place of standard (no VDI toolholders included)
- Wash Gun with additional pump

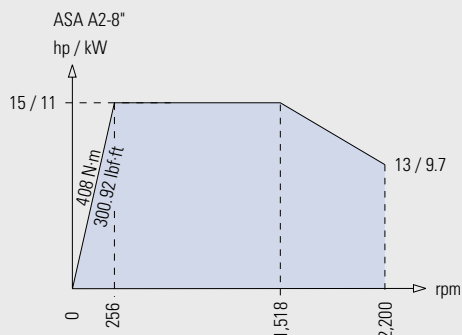
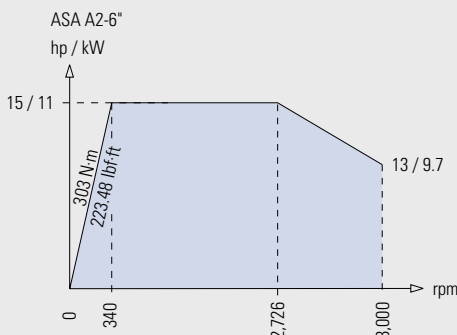
(A) Requires the accessory "hydraulic power unit"

## Power graphs - 30 min rating

### Romi C 420



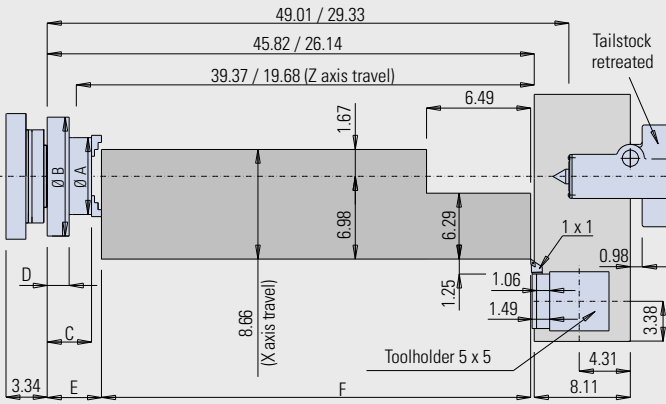
### Romi C 510



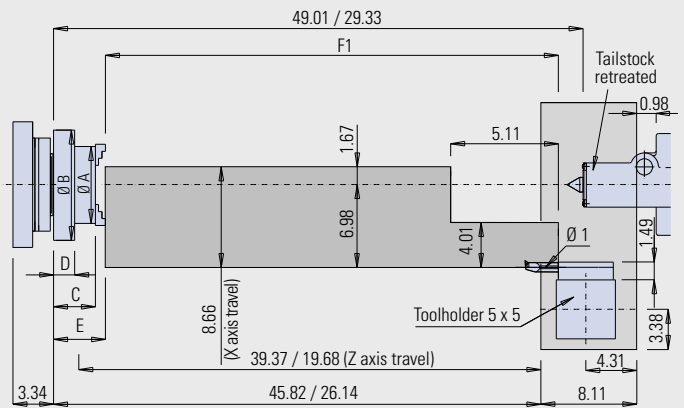
Romi C 420

Quick change tool holder

Turning

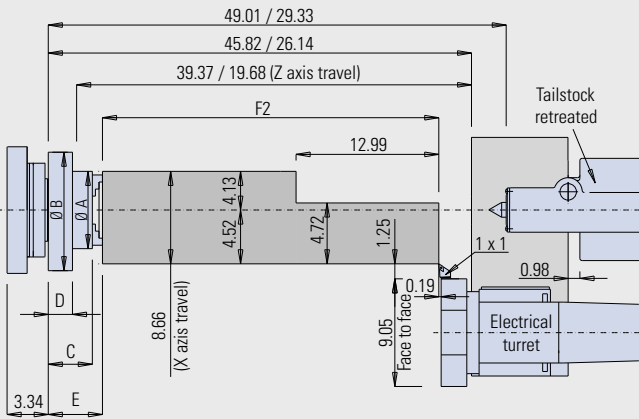


Boring

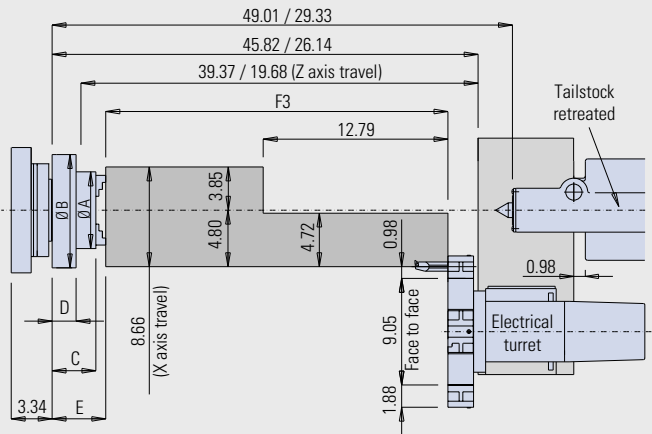


8-Station disk type automatic turret

Turning



Boring



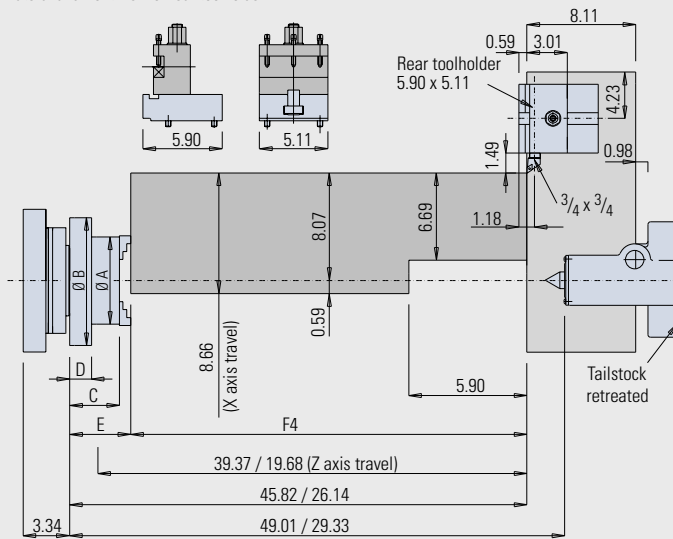
Chuck model		A	B	C	D	E	F	F1	F2	F3
ASA A2-5"	3 jaw universal - Ø 160 mm (*)	6.30	-	3.36	-	5.06	40.33 / 20.65	42.20 / 22.52	38.01 / 18.33	38.21 / 18.52
	3 jaw universal - Ø 200 mm (*)	7.87	-	4.11	-	5.88	39.50 / 19.82	41.38 / 21.69	37.18 / 17.50	37.38 / 17.70
	Hydraulic operated chuck - Ø 165 mm	6.50	-	3.70	-	5.43	40 / 20.31	41.83 / 22.14	37.63 / 17.95	37.83 / 18.15
	Hydraulic operated chuck - Ø 210 mm	8.26	-	4.37	-	6.30	39.13 / 19.45	40.96 / 21.28	36.77 / 17.08	36.97 / 17.28
ASA A2-6"	3 jaw universal - Ø 200 mm (*)	7.87	-	4.09	-	5.87	39.53 / 19.84	41.40 / 21.71	37.20 / 17.52	37.40 / 17.72
	Hydraulic operated chuck - Ø 210 mm	8.27	-	4.09	-	6.02	39.40 / 19.72	41.24 / 21.55	37.05 / 17.36	37.24 / 17.56

(\*) With overlapped reversible jaws

**Rear tool holder**

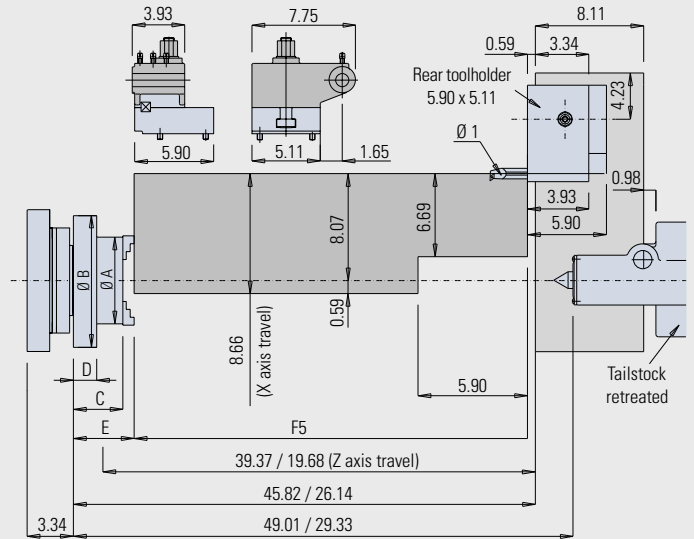
Turning

Lateral and front view of rear toolholder



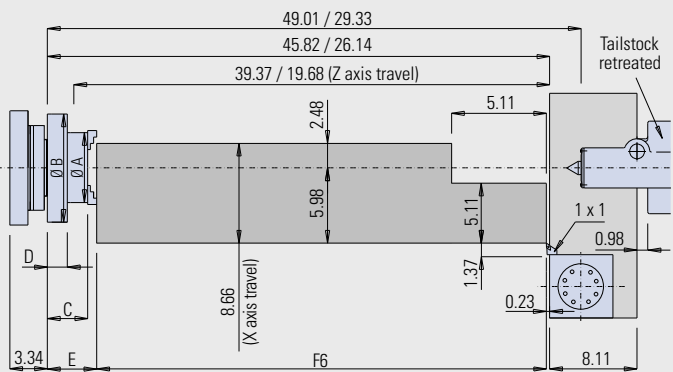
Boring

Lateral and front view of rear toolholder

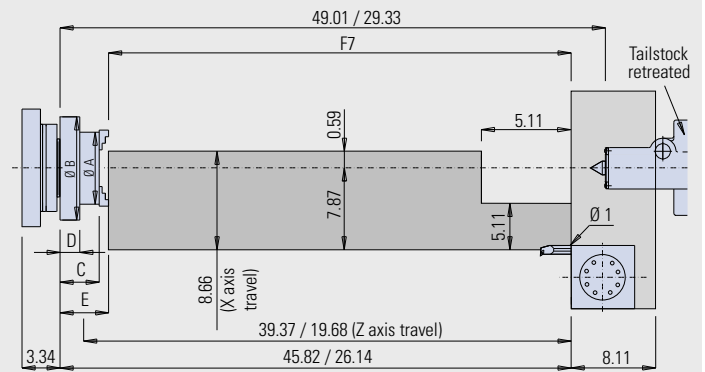


**8-Station manual square turret**

Turning



Boring



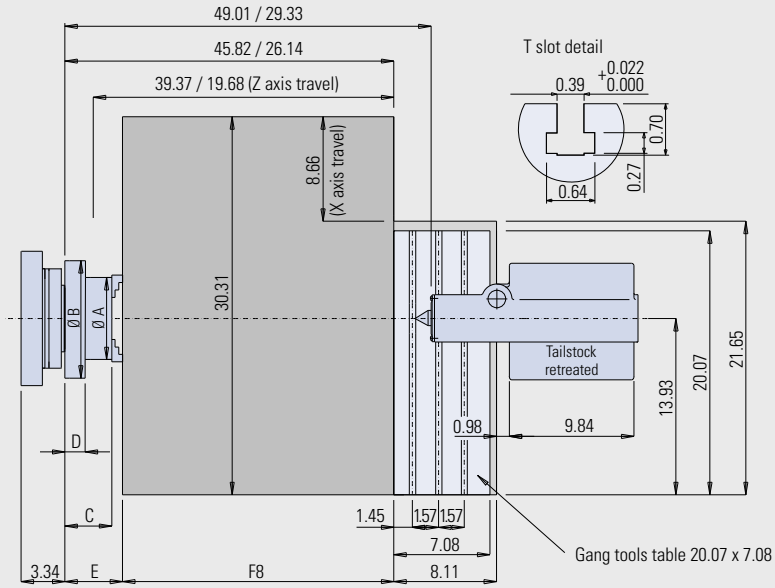
Chuck model		A	B	C	D	E	F4	F5	F6	F7
ASA A2-5"	3 jaw universal - Ø 160 mm (*)	6.30	-	3.36	-	5.06	38.20 / 18.52	40.77 / 21.08	40.53 / 20.84	40.77 / 21.08
	3 jaw universal - Ø 200 mm (*)	7.87	-	4.11	-	5.88	37.38 / 17.70	39.94 / 20.25	39.70 / 20.02	39.94 / 20.26
	Hydraulic operated chuck - Ø 165 mm	6.50	-	3.70	-	8.07	40.39 / 20.71	39.80 / 20.12	23.35 / 17.83	37.76 / 18.07
	Hydraulic operated chuck - Ø 210 mm	8.26	-	4.37	-	9.50	39.53 / 19.84	39.52 / 19.84	36.10 / 16.42	36.34 / 16.65
ASA A2-6"	3 jaw universal - Ø 200 mm (*)	7.87	-	4.09	-	5.87	37.40 / 17.71	37.40 / 17.71	39.72 / 20.04	39.96 / 20.27
	Hydraulic operated chuck - Ø 210 mm	8.27	-	4.09	-	9.21	39.80 / 20.12	39.80 / 20.12	36.38 / 16.70	36.61 / 19.93

(\*) With overlapped reversible jaws



**Work layout - Dimensions in inches**

**Gang tool system**



	<b>Chuck model</b>	<b>A</b>	<b>B</b>	<b>C</b>	<b>D</b>	<b>E</b>	<b>F8</b>
ASA A2-5"	3 jaw universal - Ø 160 mm (*)	6.30	-	3.37	-	5.06	40.76 / 21.10
	3 jaw universal - Ø 200 mm (*)	7.87	-	4.11	-	5.88	39.94 / 20.26
	Hydraulic operated chuck - Ø 165 mm	6.50	-	3.35	-	8.07	40.39 / 20.71
	Hydraulic operated chuck - Ø 210 mm	8.26	-	4.37	-	9.49	39.52 / 19.84
ASA A2-6"	3 jaw universal - Ø 200 mm (*)	7.87	-	4.10	-	5.87	39.96 / 20.27
	Hydraulic operated chuck - Ø 210 mm	8.27	-	4.10	-	9.21	39.80 / 20.12

(\*) With overlapped reversible jaws

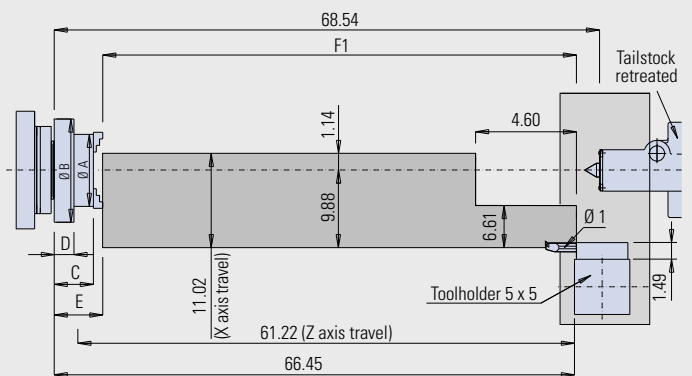
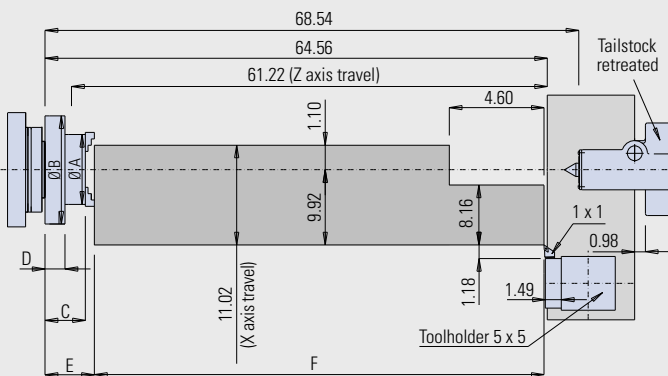
**Work layout - Dimensions in inches**

**Romi C 510**

**Quick change tool holder**

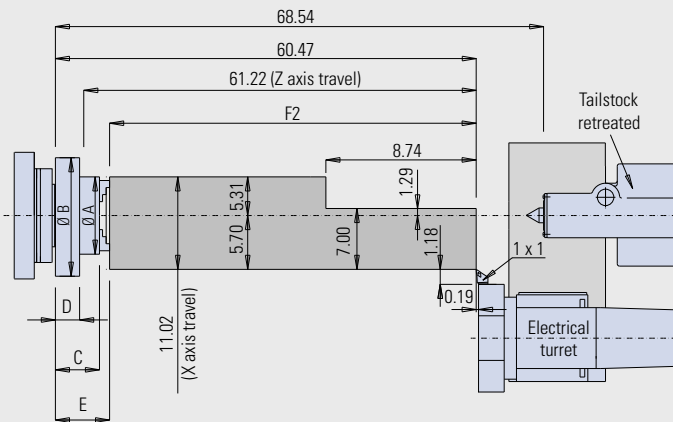
Turning

Boring

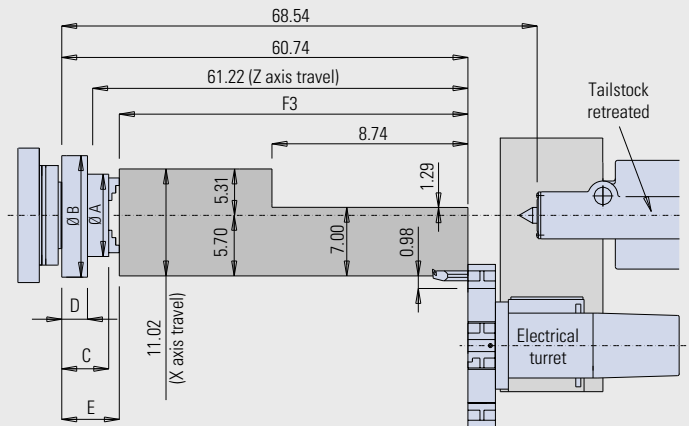


### 8-Station disk type automatic turret

Turning



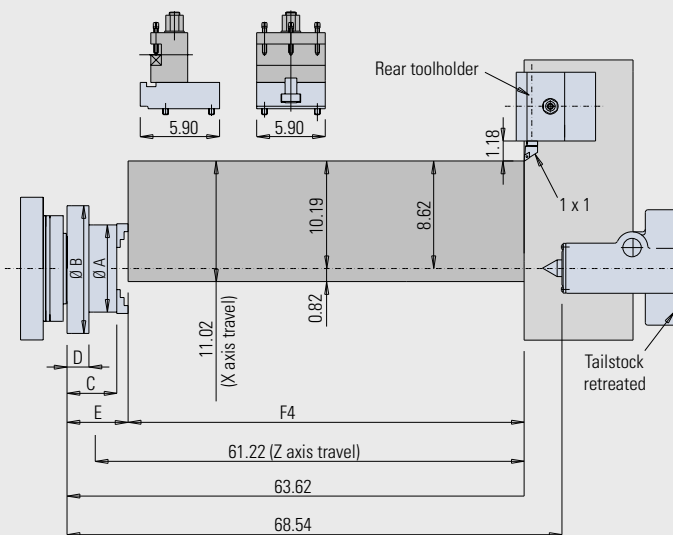
Boring



### Rear tool holder

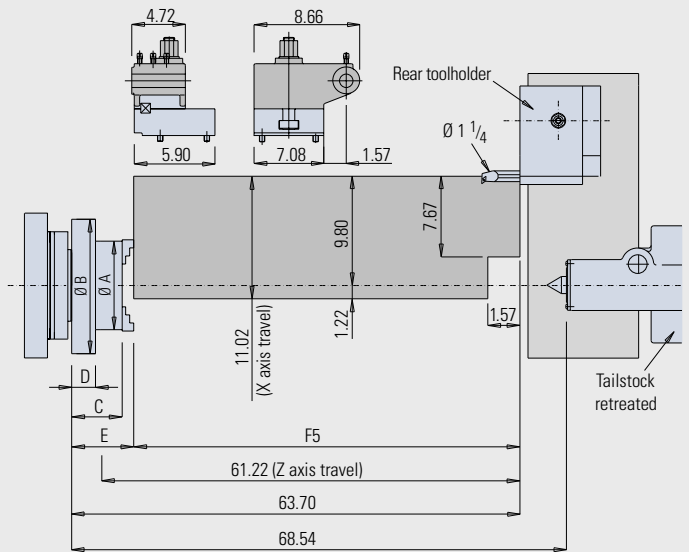
Turning

Lateral and front view of rear tool holder



Boring

Lateral and front view of rear tool holder



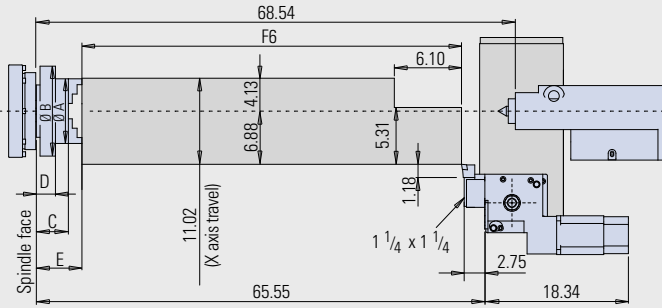
Chuck model		A	B	C	D	E	F	F1	F2	F3	F4	F5
ASA A2-6"	Hydraulic operated chuck - Ø 210 mm	8.27	-	4.09	-	6.02	58.54	60.43	54.45	54.72	57.60	57.68
	Hydraulic operated chuck - Ø 254 mm	10	-	4.88	-	7.24	57.32	59.21	53.23	53.50	56.38	56.45
	3 jaw universal - Ø 200 mm (*)	7.87	-	4.43	-	6.20	58.37	60.26	54.27	54.55	57.42	57.50
	3 jaw universal - Ø 250 mm (*)	9.84	-	4.29	-	6.38	58.19	60.08	54.09	54.37	57.24	57.32
ASA A2-8"	Hydraulic operated chuck - Ø 254 mm	10	-	4.68	-	7.04	57.52	59.41	53.42	53.70	56.57	56.65
	3 jaw universal - Ø 250 mm (*)	10	-	4.52	-	6.61	57.95	59.84	53.86	54.13	57.00	57.08

(\*) With overlapped reversible jaws

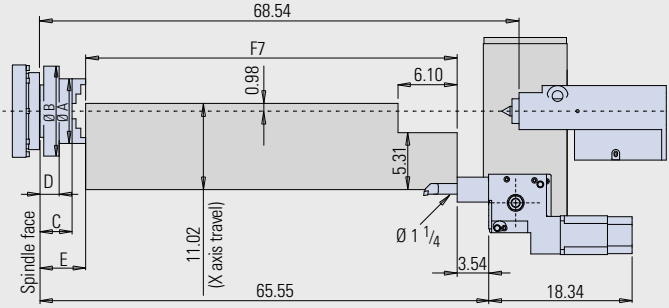
## Work layout - Dimensions in inches

### WTO tool holder, for static and driven tools (VDI-50)

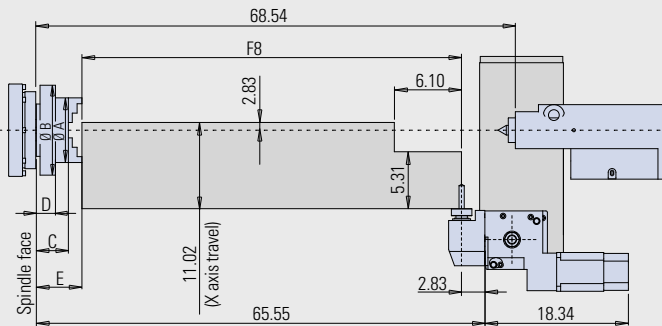
Turning



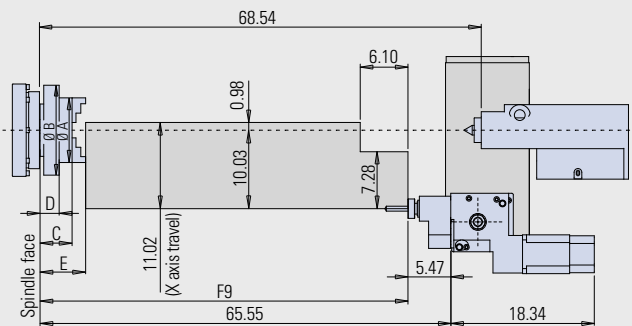
Boring



Radial live tool



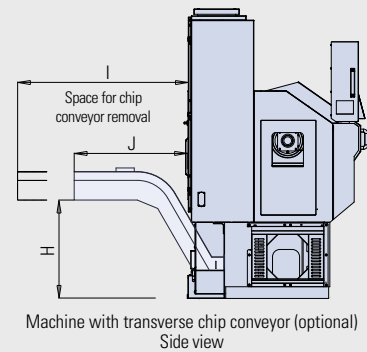
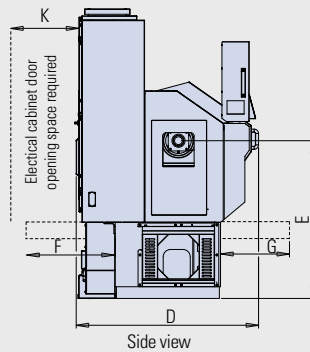
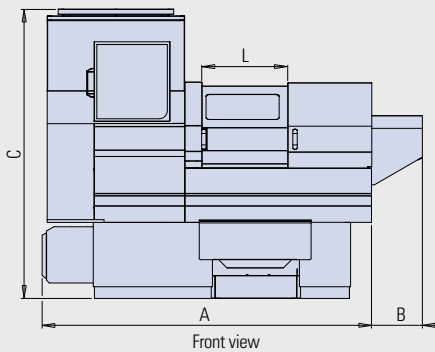
Axial live tool



Chuck model		A	B	C	D	E	F6	F7	F8	F9
ASA A2-6"	Hydraulic operated chuck - Ø 210 mm	8.27	-	4.09	-	6.02	56.77	55.98	56.69	54.05
	Hydraulic operated chuck - Ø 254 mm	10	-	4.88	-	7.24	55.55	54.76	55.47	52.83
	3 jaw universal - Ø 200 mm (*)	7.87	-	4.53	-	6.20	56.59	55.81	56.51	53.88
	3 jaw universal - Ø 250 mm (*)	9.84	-	4.29	-	6.38	56.42	55.63	56.34	53.70
ASA A2-8"	Hydraulic operated chuck - Ø 254 mm	10	-	4.68	-	7.04	55.75	54.96	55.67	53.03
	3 jaw universal - Ø 250 mm (*)	10	-	4.52	-	6.61	56.18	55.39	56.10	53.46

(\*) With overlapped reversible jaws

## Machine dimensions - Dimensions in mm (in)



		A	B	C	D	E	F	G	H	I	J	L
Romi C 420	mm	2,255 (0,5 m - 19,68") 2,755 (1,0 m - 39,37")	345	1,980	1,240	1,100	730	730	1,190	1,130	2,200	935
	in	88.78 (0,5 m - 19,68") 108.46 (1,0 m - 39,37")	13.58	77.95	48.82	43.31	28.74	28.74	46.85	44.49	86.61	36.81
Romi C 510	mm	3,615	132	2,010	1,675	1,650	900	900	670	775	1,525	995
	in	142.32	5.20	79.13	65.94	64.96	35.43	35.43	26.38	30.51	60.04	39.17

The drawings are not to scale

## CNC features

### Siemens 802D sl-PLUS



The Siemens Sinumerik 802D sl CNC presents high-technology hardware and software.

Provided with 10.4" LCD color monitor with 16 softkeys for selecting and enabling functions and fields on operation screen.

Its panel is provided with navigation keys, RS232 and Compact Flash Card interfaces, offering to the user more flexibility for loading programs and parameters.

#### Programming

##### Program Creation / Edition

- Program and subprogram name
- Subprogram call
- Program block search
- Program edit during machining (background edit)
- Allocated memory for programs = 1 Mbyte
- Program files in the memory = 150 max. (divided among the different 5 types of file extensions: mpf, spf, cma, cst and cus; and the amount of each type cannot exceed 100 files)

##### Reference Functions

- Axes reference positioning up to 4 machine reference positions (G28, G30 P2-P4)

##### Coordinate System

- Workpiece coordinate local system (G52)
- Machine coordinate system (G53)
- Work coordinate system (G54-G59)
- Work coordinate system preset (G92)
- Workpiece coordinate system preset

##### Coordinate Values and Dimensions

- Absolute (G90) or incremental (G91) programming modes
- Measuring system: metric (G21) or inches (G20)
- Programming with decimal point
- Radius or diameter programming
- Programmable data input
- Axes Interpolation Functions
- Multi-quadrant circular interpolation (G02, G03)
- Linear interpolation (G00, G01)

##### Threading Functions

- Single constant pitch, multiple leads and sequential threads (G33)

##### Feed Functions

- Feedrate in mm/min or in/min (G94)
- Feedrate in mm/rev or in/rev (G95)
- Dwell (G04)

#### Spindle Functions

- Constant spindle speed (G96) and rpm limits (G92)
- Spindle speed in RPM (G97)

#### Program Simplification Functions

##### Canned cycles

- External and internal turning cycle (G77)
- Threading cycle (G78)
- Facing cycle (G79)

##### Multiple repetitive cycles

- Finishing cycle (G70)
- Material removal cycle for turning (G71)
- Material removal cycle for facing (G72)
- Contour machining (G73)
- End face peck drilling cycle (G74)
- Multiple thread cutting cycle (G76)

##### Fixed Cycles

- Drilling cycles (G83, G85)

##### Tool Functions

- 64-pair geometry and tool wear off sets
- Tool radius compensation (G40, G41 e G42)

##### Macro Program

- Macro program call (G65, G66, G67)

##### Program Control

- Subprogram (M98/M99)

##### G Codes System Selection

- G code family A, B and C

#### Operation

##### Operational Devices

- CNC calculator
- Drive for Compact Flash memory card for data transfer (programs and parameters loading)
- Serial RS-232 interface for data transferring (programs and parameters loading)
- Data protection

#### Manual Operations

- Setup (Siemens mode)
- User Parameters Setting for jog, rpm, dry run and thread
- Axes manual movement through electronic handwheel (mpg)
- Axes manual movement through jog
- Axes homing
- Override
- Rpm Control
- Tool repositioning after program stop

#### Execution Operations

- MDA operation
- Automatic operation
- Single block operation
- Feed hold
- Optional stop (M01)
- Block delete (/)
- Program restart
- External program running

#### Test Operations

- Program test
- Dry run function

#### Alarm and Diagnosis Functions

- Emergency functions
- Alarm messages
- Alarms history
- Operations history
- Diagnosis screen
- Help system

#### Graphic Function

- Machining simulation

#### Data Display

- Axes position
- Spindle speed (rpm)
- Spindle feed
- Programmed codes (G, T, S, M, F)
- Machining time
- Parts counter

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**ROMI**®

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**Indústrias Romi SA**  
Av Pérola Byington 56  
Santa Bárbara d'Oeste SP  
13453 900 Brazil  
Phone +55 (19) 3455 9199  
Fax +55 (19) 3455 1030  
[export-mf@romi.com.br](mailto:export-mf@romi.com.br)  
[www.romi.com.br](http://www.romi.com.br)

**Romi Machine Tools, Ltd**  
1845 Airport Exchange Blvd  
Erlanger KY  
41018 USA  
Phone +1 (859) 647 7566  
Fax +1 (859) 647 9122  
[sales@romiusa.com](mailto:sales@romiusa.com)  
[www.romiusa.com](http://www.romiusa.com)

**Romi Europa GmbH**  
Wasserweg 19  
D 64521 Gross Gerau  
Germany  
Phone +49 (6152) 8055 0  
Fax +49 (6152) 8055 50  
[sales@romi-europa.de](mailto:sales@romi-europa.de)



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