

L 440 / L 460

The **OPTIMUM PREMIUM** high performance CNC cycle lathes.

SIEMENS SINUMERIK 828D BASIC

- High-precision machine with the latest SIEMENS control and SIEMENS servo drives
- Compact spindle stock design
- High-speed spindle 4 500 rpm with high-precision and generously dimensioned taper roller bearings
- Shifting between the two gears occurs pneumatically via a compressed air cylinder
- Spindle stock design guarantees minimal noise development
- Wide machine bed with double-square guide rails, also for roughing work
- Bed rails tempered and polished
- Generously dimensioned tailstock and easily positionable with quick clamping mechanism
- Two separately movable sliding doors with integrated view windows at front
- Microswitch prevents starting the machine if the door is not fully closed
- RJ45 plug-in connection, USB connection and 230 V power connection
- Mobile control panel
- Two electronic hand wheels for manual control of the X and Z axis
- Automatic spindle stock lubrication
- Automatic lubrication of longitudinal and transverse slides
- Halogen work lamp
- Closed switch cabinet with integrated heat exchanger ensures an optimal temperature even in case of high ambient temperatures, and prevents dirt particle penetration
- Hard and soft block jaws
- Tailstock end cover
- Six machine feet
- Heat exchanger
- EMC Electromagnetic compatibility
- Including two years of SIEMENS warranty
- Information on „Warranty extension“ on page 113
- Information on „Maintenance contracts“ on page 175



TECHNICAL DATA

Model	L 440	L 460
Article no.	3514410	3514420
Machine data		
Electrical connection	400 V / 3 Ph ~ 50 Hz	
Total connected load	25 kVA	
Spindle		
Drive motor S1 operation	11 kW	
Torque drive motor S1 operation	70 Nm	
Drive motor S6 30% operation	23 kW	
Torque drive motor S6 30% operation	148 Nm	
Spindle seat	DIN ISO 702-1 No. 6	
Spindle bore	Ø 65 mm*	
Chuck passage	Ø 52 mm	
Hydraulic lathe chuck	Ø 200 mm	
Cooling lubricant system		
Coolant pump motor	375 W	
Tank capacity	170 litres	
Hydraulic system		
Motor - hydraulic pump	750 W	
Tank capacity	50 litres	
Machine data		
Centre height	235 mm	
Centre width	1 000 mm	1 500 mm
Swing over cross slide	Ø 240 mm	
Swing diameter over machine bed	Ø 475 mm	
Swing in the bed bridge	Ø 710 mm	
Speed range		
Speeds 1st gear / 2nd gear	100 - 950 rpm / 900 - 4 500 rpm	
Torque stage 1/stage 2	525 Nm / 382 Nm	
Tool turret		
Hydraulic type	LS 160 VDI 40	
Number of tool slots	8 tools	
Max. chuck height, width square	25 x 25 mm	
Max. chuck diameter drilling rod	Ø 32 mm	
Option: Baruffaldi tool turret	(Article no.: 351441012)	(Article no.: 351442012)
Number of tool slots	8 tools	
Type (hydraulic)	Baruffaldi VDI40 - TBMA- 160 with tool drive	
Max. permissible speed at tool coupling	max. 4 500 rpm	
Tool output	5 kW (S3 - 40% duty cycle 10 min.)	
Max. tool torque	20 Nm	
Precision		
Repetition accuracy	± 0.005 mm	
Positioning accuracy	± 0.005 mm	
Travel		
X axis	260 mm	
Z axis	1 150 mm	1 680 mm
Feed speed		
X axis/Y axis	15 000 mm/min	
Motor torque		
X axis	6 Nm	
Z axis	16 Nm	
Tailstock		
Tailstock chuck	MT 4	
Tailstock quill diameter	Ø 65 mm	
Tailstock - quill stroke	150 mm	
Dimensions		
Length x width x height	3 030 x 1 952 x 2 025 mm	3 530 x 1 952 x 2 025 mm
Overall weight	3 000 kg	3 450 kg

* depending on installed lathe chuck

Sinumerik 828D system software	PPU 240 SW 24	PPU 290 SW 26
CNC memory	3 MB	5 MB
Set change time	3 ms	2 ms
Look Ahead	50	100
Number of tools	128	256

SINUMERIK 828D Basic

High-tech for the compact class

The device of choice for any machining technology

- State-of-the-art processor technology and software architecture form the basis for 80-bit NANOFP precision (80-bit floating point precision)
- Premium, robust operator manels made of die-cast magnesium with IP65 degree of protection
- Maintenance-free front control panel (no fan, battery, hard disk or similar)
- ShopTurn: shortest programming time for creating one-off parts and small batches

Control system

- 10.4" colour display
- 4:3 format
- User-friendly SINUMERIK Operate software
- Front interfaces: USB 2.0, RJ45 Ethernet, Compact Flash (CF) Card
- The 8 horizontal and 8 vertical soft keys take the user to all control windows with just a few key presses
- Rugged and robust

INCLUDING

- Safety Integrated
- Residual material detection and machining
- Shopturn work step programming
- Managing network drives
- 3-D simulation
- Logging

Warranty extension

The warranty extension lets you protect your new machine against warranty damage for a further 12, 24 or 36 months after the two-year SIEMENS warranty expires. (can only be ordered within the two-year SIEMENS warranty)

12 months - Article no. 3589020

24 months - Article no. 3589021

36 months - Article no. 3589022



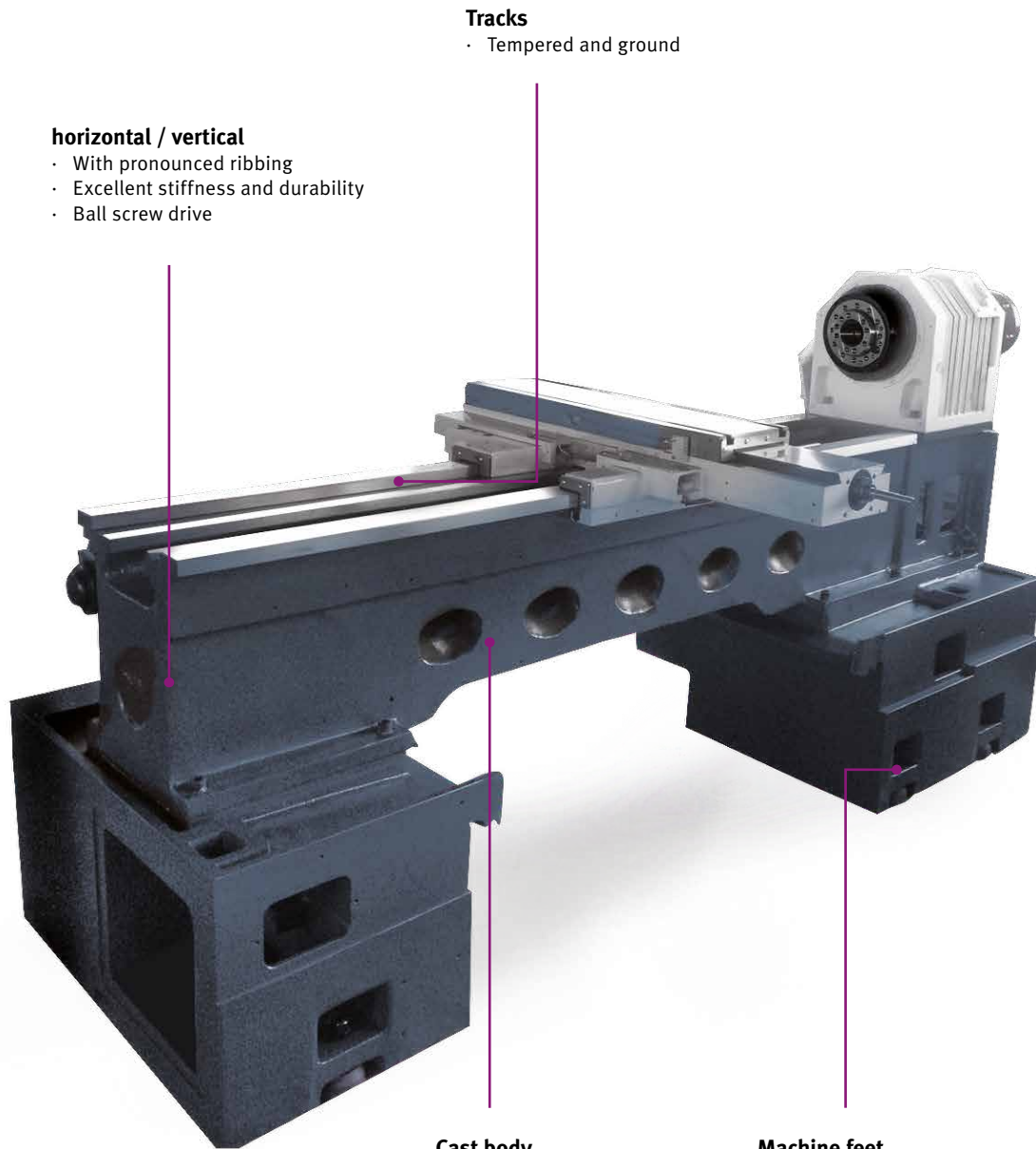
Siemens

SAFETY INTEGRATED

Set up work with open doors

Functional safety also provides protection against high costs!

- Avoiding the direct consequential cost of injury to persons
- Avoiding the indirect consequential cost of injuries
- Improved productivity thanks to increased machine availability: less unplanned downtime and more trouble-free production
- Longer period of use for system
- Improvement in global competitiveness thanks to boosting the export capability of machines



Tracks

- Tempered and ground

horizontal / vertical

- With pronounced ribbing
- Excellent stiffness and durability
- Ball screw drive

Cast body

- Tempered as per HRC48-52 and heat-treated

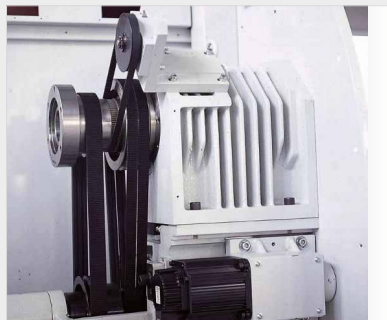
Machine feet

- Six pcs.
- Optimal machine levelling



HORIZONTAL / VERTICAL

- Particularly wide design
- Ball screw drive for excellent repetition accuracy



SPINDLE STOCK

- Precision borne
- Rugged design
- Smooth action even at high spindle speeds



HEAT EXCHANGER

- Closed switch cabinet with smart cooling management ensures an optimal temperature even in case of high ambient temperatures



SPEED CHANGER

- Pneumatic
- Automatic
- The shaft runs in sintered bronze thus guaranteeing excellent precision



AUTOM. LUBRICATION SYSTEM

- Automatic spindle stock lubrication
- Automatic lubrication of longitudinal and transverse slides



TOOL TURRET

- Eight tool slots
- Hydraulic VDI40 tool turret
- Max. chuck height 25 mm
- Max. chuck diameter 32 mm



TAILSTOCK

- Generously dimensioned
- Slide with ball screw and pre-stressed nut



HYDRAULIC POWER UNIT

- For clamping jaws, lathe chuck and tool turret
- Motor output 750 W
- Tank capacity 50 litres
- Clamping pressure/operating pressure 2 500 - 2 942 kPa



THREE-JAW CHUCK

- Hydraulic three-jaw lathe chuck Ø 200 mm
- Passageway Ø 52 mm
- Easy workpiece clamping

L440	L460		
Tool turret and C axis (Please note: travel can change)			
351441012	351442012		Tool turret Baruffaldi TBMA160 VDI40 8 tool slots, hydraulic - Instead of standard equipment › tool turret LS160
351441017	351442017	1	C axis brake system only with tool turret Baruffaldi TBMA 160 VDI40 (351441012/351442012)

Tailstock			
351441019	351442019		Machine preparation Hydraulic tailstock spindle
351441021	351442021		Hydraulic tailstock spindle
351441023	351442023	2	Pneumatic lifting device for the tailstock Pneumatic air cushion, reduces friction thus facilitating tailstock movement
351441022	351442022		Device for travelling tailstock Tailstock and support are linked for motion

Bar feeder			
351441037	351442037		Bar feeder interface Preparation
351441033	351442033		Bar feeder Pro V 65E 1.2 metres Including bar feeder interface (351441037/351442037)
351441034	351442034	3	Bar feeder Pro V 65LE 1.5 metres Including bar feeder interface (351441037/351442037)
351441038	351442038		Bar feeder Pro Conqueror 3 metres Including bar feeder interface (351441037/351442037)

Miscellaneous			
351441001	351442001	4	Internal tool cooling External unit (we recommend an extraction unit)
351441007	351442007	5	Oil separator With rotary disc, removes oil from the coolant
351441013	351442013		High performance coolant pump 5 bar
351441014	351442014	6	Air conditioner Instead of standard equipment › heat exchanger
351441016	351442016		Tool holder set for the LS160 tool turret included in standard equipment - Only for standard changer, not VDI
351441020	351442020		Portable electronic handwheel Instead of standard equipment › electronic handwheel (cannot be combined with joystick 351441002 / 351442002)
351441002	351442002		Joystick cannot be combined with electronic handwheel 351441(2)0 20
351441003	351442003		Fixed steady Passageway Ø 20 - Ø 200 mm
351441004	351442004	7	Travelling steady Passageway Ø 20 - Ø 100 mm
351441005	351442005		Chip conveyor L 440: 1.0 metre - L 460: 1.5 metres
351441006			Chip carriage Rollable, folding, L x W x H: 994 x 510 x 838 mm
3582081			Renishaw measuring arm HPPA More information on „Renishaw“ from page 164

Software			
3584014		9	Software DXF Viewer/Reader from version 4.7

Hardware			
351442080		8	Siemens control PPU 290 15.6" colour display- 16:9 format, Software SW 26

Lathe chuck			
351441008	351442008		Three-jaw lathe chuck manual Ø 200 mm
351441011	351442011		Four-jaw lathe chuck manual Ø 250 mm
351441028	351442028		Three-jaw lathe chuck hydraulic Ø 250 mm instead of standard equipment › three-jaw lathe chuck hydraulic Ø 200 mm
351441031	351442031		Four-jaw lathe chuck hydraulic Ø 250 mm instead of standard equipment › three-jaw lathe chuck hydraulic Ø 200 mm
3519707			Soft top jaw for the factory standard › three-jaw lathe chuck hydraulic Ø 200 mm
3519727			Hard insert jaws for the factory standard › three-jaw lathe chuck hydraulic Ø 200 mm
3519708			Soft top jaw - for the three-jaw lathe chuck hydraulic Ø 250 mm (351441028) - for the four-jaw lathe chuck hydraulic Ø 250 mm (351441031)
3519728			Hard insert jaws - for the three-jaw lathe chuck hydraulic Ø 250 mm (351441028) - for the four-jaw lathe chuck hydraulic Ø 250 mm (351441031)



1

TOOL TURRET

Optionally

- VDI 30 or VDI 40
- With or without driven tools
- Driven speed Tools 6 000 rpm
- 12 tools
- Collet h x w square max. 25 x 25 mm



2

TAILSTOCK

- Fully automatic, easily configurable tailstock ensures tailstock motion with improved repetition accuracy and precision



3

BAR FEEDER

- Pro V 65E: Bar length 1 200 mm, loading weight 250 kg
- Pro V 65LE: Bar length 1 500 mm, loading weight 280 kg
- Conqueror: Bar length 3 020 mm, loading weight 400 kg



4

INTERNAL TOOL COOLING

- External power unit
- Tank capacity 165 litres
- Pressure 20 bar



5

OIL SEPARATOR

- Separates third party oil from coolant emulsion
- The third-party oil in the coolant shortens the tool service life



6

AIR CONDITIONER

- Instead of heat exchanger



7

Steady rests

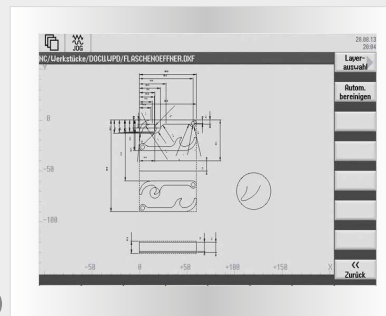
- Fixed and travelling steadies available



8

CONTROL PPU 290

- Capacitive display with Multi-Touch controller
- Intuitive Multi-Touch control
- Soft key selection via touch function
- Software SW 26



9

DXF READER

- DXF data can be converted to NC programs for drilling patterns and contours