

Technical Data Lathe

Working area

Swing over bed	180 mm
Swing over cross slide	75 mm
Max. length of workpiece (between centers)	180 mm
Max. dia. of workpiece	90 mm

Main spindle

Hole through spindle	21 mm
Speed range	80 — 4000 rpm.

Chucking devices	COMPACT 6 CNC T1	COMPACT 6 CNC P
Equipment		
Manually operated chuck	X	
Driver	X	
Collet attachment ESX-25)	X	
Pneumatic collet attachment		X
Pneumatic power chuck		X
Manually operated tailstock	X	
Pneumatic tailstock		X
Automatic turret	X	X

Main drive

Direct drive (no change of belts)	
DC motor	2 kW

Feed motors

Stepper motors in X- and Z-axis	
Feed	1—1200 mm/min
Resolution	0.001 mm
Feed power	2000 N
Rapid traverse	1200 mm/min

Tooling system

Automatic 8-station turret	
No. of tools	8
	(4 each for inside and outside turning)
Bore	16 mm
Height of tool shank	12 mm

Tailstock

Dia. of quill	35 mm
Stroke of quill	120 mm
Center	integrated

Dimensions

Machine (width x depth x height)	1035 x 815 x 745 mm
Control (width x depth x height)	810 x 300 x 560 mm

Weight

Machine	approx. 150 kg
Control	95 kg

Technical Data Control

Microprocessor-2-axis contouring control

Linear- and circular interpolation

Program memory for approx. 25 m of punched tape

Universal display (switchable) for

- ☐ Actual position
- ☐ Residual travel
- ☐ Spindle speed
- ☐ Tool offset
- ☐ Feed rate
- ☐ Additional parameters

Screen 9" (optional) monochrome

Input accuracy	(0.0001") 0.001 mm
Thread pitches	(0.0001"—1.25") 0.001—32 mm
Feed override	0—140 %
Spindle speed override	50—120 %
Interpolation area	± 9999.999 mm
Tool offset	10 pairs

Modes

- ☐ Manual (manual operation of slides)
- ☐ Execute (processing of input memory)
- ☐ Edit (program input via keyboard or RS 232 interface)
- ☐ Reference point (approach reference point)
- ☐ Automatic (processing of NC programs)

Sub-modes: Single block, skip block, dry run

Program Format

Structure according to DIN 66025 (ISO 1056, EIA RS 274 D)
Decimal point data entry

O	Number of program (00—99)
N	Block number (0000—9999)
G	Preparatory functions (00—99)
	G00 = Rapide traverse
	G01 = Linear interpolation
	G02 = Circular interpolation clockwise
	G03 = Circular interpolation counter clockwise
	G04 = Dwell
	G25 = Call of subroutines
	G27 = Unconditional jump
	G33 = Thread-cutting
	G53 = Deselect position offset 1 and 2
	G54 = Position offset 1
	G55 = Position offset 2
	G56 = Deselect position offset 3, 4 and 5
	G57 = Position offset 3
	G58 = Position offset 4
	G59 = Position offset 5 alterable in program
	G84 = Facing and longitudinal turning cycles with cutting cycles and final cut
	G85 = Threading cycle with plunge cut/side adjust ment etc., constant chip diameter
	G86 = Grooving cycle with cutting cycles, chip breaking, dwell at base
	G87 = Drilling cycle with chip breaking
	G88 = Drilling cycle with chip breaking and draw-back to starting point
	G70 = Inch data input
	G71 = Metric data input
	G92 = Preset register
	G94 = Feed in mm/min (0.01"/min)
	G95 = Feed in mm/rev. (0.0001"/rev.)
	G96 = Constant cutting speed
	G97 = Constant revolution (rpm)
X, Z	Position data, absolute (X in diameter)
U, W	Coordinate values incremental
I, K,	Interpolation parameter
P0 ... P7	
D0 ... D7	Variables for cycles etc. in 1/1000 mm
F	Feed in mm/min or 0.001 mm/rev. (0.01"/min or 0.0001"/rev.)
S	Spindle speed (with G97), cutting speed (with G96)
T	Tool number, tool offset
L	Special parameter: jump absolute/jump to subroutine
M	Miscellaneous functions (00—99)
	M00 = Program stop (programmable)
	M03 = Spindle on clockwise
	M04 = Spindle on counter clockwise
	M05 = Spindle stop
	M08 = Coolant on
	M09 = Coolant off
	M30 = Program end and reset
	M38 = Precise stop on
	M39 = Precise stop off

Permanent program memory for machine data, tool data and work-piece programs

Data input/output

RS 232C Interface (V24/20 mA) 150 — 2400 bd
Cassette recorder (Philips MDCR)

Optional extras

- ☐ Display screen 9" (monochrome)
- ☐ Extended memory for max. length of 100 m (328') punched tape
- ☐ Extended tooling system
- ☐ Manual tailstock
- ☐ Machine light