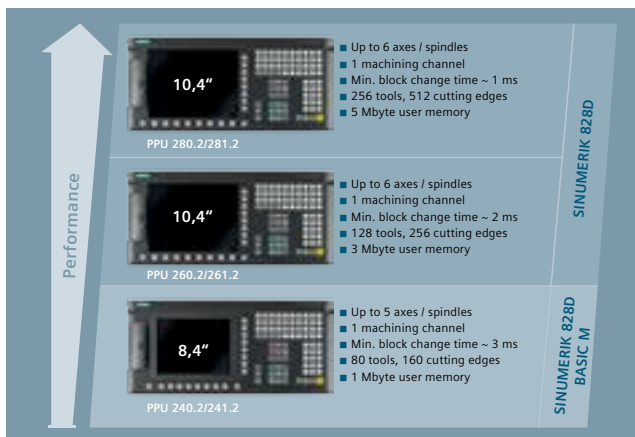




## SINUMERIK 828D and SINUMERIK 828D BASIC M

# The compact CNCs for standardized milling machines



**Milling on standardized machines – SINUMERIK 828D and SINUMERIK 828D BASIC M are setting the benchmark with their unique CNC performance.**

Rugged hardware architecture and intelligent control algorithms – coupled with premium drive and motor technology – ensure the highest degree of dynamic performance and precision when machining. The intuitive SINUMERIK Operate user interface facilitates efficient machine operation. With a convincing performance, SINUMERIK 828D and SINUMERIK 828D BASIC M master all of the challenges for standardized milling machines. They are supplemented by a range of solutions for IT integration.

### Highlights

- Compact, rugged and maintenance-free panel CNC
- Highest machining precision with 80-bit NANO<sup>FP</sup> accuracy
- Intelligent kinematic transformations for machining cylindrical workpieces and in swiveled workpiece planes
- SINUMERIK MDynamics technology package with the Advanced Surface function: perfect workpiece surfaces and shortest machining times for mold making
- Interactive input based on Animated Elements
- Transparent tool management
- programGUIDE for the shortest machining times for large series production
- ShopMill machining step programming for the shortest programming time for small series production and individual parts
- CNC simulation to ensure process reliability
- Extensive package of technology cycles – including residual material detection and in-process measurement
- Auto Servo Tuning (AST) for optimization at the press of a button
- Easy Message guarantees maximum availability by monitoring the process with SMS text messages sent to your cell phone
- Even simpler planning and execution of cyclic maintenance work with the onboard maintenance planner
- SINUMERIK Operate user interface available in over 23 languages

# Technical data

	SINUMERIK 828D BASIC	SINUMERIK 828D	
	PPU24x	PPU26x	PPU28x
<b>Configuration</b>			
Operation with SINAMICS S120 Combi, S120 Booksize	•	•	•
Maximum number of axes/spindles	5	6	6
CNC user memory up to	1 MB	3 MB	5 MB
Additional CNC user memory on CF card/USB stick	•	•	•
Minimum block change time	~3 ms	~2 ms	~1 ms
Current/speed controller cycle, e.g. for high-speed spindles		125 µs / 62,5 µs	
Display size (TFT color displays)	8,4"	10,4"	10,4"
PLC adaptation control		S7-200-based	
<b>Axis functions</b>			
Travel to fixed stop with Force Control	•	•	•
Acceleration with jerk limitation, dynamic precontrol	•	•	•
Dynamic Servo Control in the drive	•	•	•
<b>Interpolation</b>			
Interpolating axes, up to	4	4	4
Straight line, circle, helix, splines, polynomials, involutes	•	•	•
Advanced Surface, compressor		Milling	
Look Ahead, number of blocks	50	100	150
<b>Transformations</b>			
Face/peripheral surface transformation TRANSMIT	•	•	•
Multi-side machining (3+2 axis machining)	•	•	•
<b>SINUMERIK synchronous architecture</b>			
Synchronous motion actions	•	•	•
Asynchronous subprograms ASUB	•	•	•
<b>Compensations</b>			
Compensation of measuring system and spindle pitch (bidirectional)	•	•	•
Temperature compensation, sag compensation	•	•	•
Additional compensations (cogging torques, etc.)	•	•	•
<b>Tools/tool management</b>			
Number of tools/cutting edges in the tool list, up to	80/160	128/256	256/512
Unit quantity/tool life monitoring with replacement tool management	•	•	•
<b>CNC operation</b>			
SINUMERIK Operate	•	•	•
Animated Elements	•	•	•
SinuTrain training and offline programming tool	•	•	•
<b>CNC programming</b>			
SINUMERIK CNC programming language with high-level language elements	•	•	•
Online ISO dialect interpreter	•	•	•
programGUIDE (technology cycle support)	•	•	•
Technology cycles for drilling, milling and turning	•	•	•
Cycles for in-process measurements (with cycle support)	•	•	•
(tool probe calibration, workpiece measurement, tool measurement)			
ShopMill/ShopTurn machining step programming	•	•	•
3D CNC simulation for turning/milling	•	•	•
Simulation parallel to the main machining time (simulation of program X, while program Y is being executed)	-	-	-
Additional functions to increase machine performance (residual material detection, multiple clamping, contour processor, etc.)	•	•	•
<b>Onboard optimization and diagnostics</b>			
Context-sensitive onboard help system	•	•	•
Onboard servo and drive optimization (AST)	•	•	•
Onboard signal, bus and network diagnostics	•	•	•
<b>IT integration</b>			
Standard data transfer		RS232C/CF card/USB/Ethernet	
SINUMERIK Integrate (Access MyMachine)	•	•	•
<b>Safety functions</b>			
SINUMERIK Safety Integrated (drive-based)	•	•	•
<b>Openness in the user interface</b>			
SINUMERIK Integrate Run MyScreens (OA EasyScreen)	•	•	•
<b>SINUMERIK Ctrl-Energy</b>			
Ctrl-E Analysis (determining the energy usage of the machine)	•	•	•
Ctrl-E Profile (energy management of the machine in non-productive times)	•	•	•
Automatic reactive current compensation (with Active Line Module)	•	•	•
Automatic flux reduction for induction spindle motors	•	•	•