

Controller	PC3 Process Control	PC84 Process Control
Controller principle	PC controller with bus system (Beckhoff company) installed in the switch cabinet	SINUMERIK 840D SL CNC hardware NCU 710.3 PN with PLC 317-3PN/DP The Sinumerik 840D-sl controller unites CNC, PLC and communication tasks in one NCU component group. Power supply module and motor modules are connected to the NCU via Drive Cliq
Processor	Intel Celeron 1 GHz	
Memory	128 MB Compact Flash Program memory	User program memory CNC 10 MB, PLC 512 KB System software NCU on CF card Data exchange via USB stick.
Operating device	Ketop C155 10,1" TFT Display (16:10) LED-Backlight WXGA 1280x800	Handheld Terminal HT8 Round shape with an extremely robust IP 65 housing with fully graphic 7.5" TFT colour display 640 x 480 (VGA), touch screen, membrane keys, override rotary switch. Emergency-stop pushbutton and 2 enabling pushbuttons for left- and right-handed users. Simple insertion or removal during operation (Hot Plug and Play), without triggering an emergency stop in conjunction with the PN Plus connection box.
User interface	Windows 10 IoT Enterprise Touchscreen: capacitive	
Option Operation in switch cabinet		OP010 with TCU and machine control panel MCP483 IE OP010: Membrane keyboard, screen fully graphics capable, 10.4", STN, colour display, 640x480 (VGA), USB port on front panel TCU: SINUMERIK 840Dsl TCU 30.3 (Thin Client Unit)
Programming	Operator guidance through plain text and graphic display, simple creation and management of spraying programs Teach function or value input, programming in automatic mode	
Option	Offline programming on office PC	
Programming functions	Integrated basic position program, Mold limitation: horizontal and vertical individually programmable, integrated function Axial approach with mold open or two separate start signals, graphical selection of spraying circuits, help function via plain text	Integrated basic position program, Mold limitation: horizontal and vertical individually programmable, integrated function Axial approach with mold open or two separate start signals, Graphical selection of spraying circuits and auxiliary functions.

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Process technology option	Programming of air and medium pressures, separating agent flow measurement with analysis features	Programming of air and medium pressures separating agent flow measurement with diagnosis
Visualization	Detailed status data of the machine and interlinking signals with plain text and graphics Detailed display of all current process status data Fault and warning messages with description of cause and troubleshooting	Detailed status display of machine and interlinking signals with plain text and graphics Display of the current processes Fault and warning message with description of cause and troubleshooting as well as message history
Safety	Personnel and machine protection concept according to CE / UL Monitoring by two-channel hardware functions, 3-stage enabling switch Machine stop button	Personnel and machine protection concept according to CE, monitoring by two-channel hardware functions and ergonomically arranged enabling switches, EMERGENCY STOP button two-channel, programming interlock by password
Axis controller	2-axis controller with infinitely variable programmable speeds Interpolation of axis movements	Multi-axis path controller for interpolation of axis movements, infinitely variable programmable speeds.
Interfaces to DCM	DISPO 20 (Hardware) DISPO 25 (Profibus or ProfiNet)	DISPO20 (hardware) or DISPO25 (Profibus or Profinet)
Profibus/ProfiNet (option)	For partial integration with DCM and for extended controller function	
Data backup	Data storage on CF card in the controller Data exchange via USB stick	Via USB stick to HT8 or OP10
Switch cabinet size	600 x 500 x 2000 mm (B x T x H) 800 x 600 x 2000 mm (B x T x H) for ESM 4	800 x 500 x 2000 mm (B x T x H) inkl. 200 mm socket
Switch cabinet weight	170 kg	220 kg
Protection class	IP 54	IP 54
Operating device Dimensions: Weight: Protection class Length of connecting cable:	portable D = 250 mm 1250 g IP 65 10 m	portable D = 290 mm 1.9 kg IP 54 10 m highly flexible