Technical data

SCHAUBLIN Machines SA
Rue Nomlieutant 1
2735 Bévilard Switzerland
T +41 32 491 67 00
info@smsa.ch
www.smsa.ch

Spindle (ISO 702/I / DIN 55026)	**942**	**965**	
Spindle axial and radial runout	0.5	0.5	[µm]
Recommanded maximum turning diameter	400	400	[mm]
Distance between spindle nose and headstock cover	85	97	[mm]
Maximum distance between spindle nose face and turret	745	733	[mm]
ISO spindle nose	A2-5	A2-6	
Spindle speed	0 - 6'000	0 - 5'000	[min^{-1}]
Power, continuous / intermittent	12 / 14	13 / 14	[kW]
Continuous torque spindle / intermittenly	60 / 85	100 / 140	[Nm]
Spindel throughbore (without drawbar)	51	73	[mm]
Max. bar capacity	42	65	[mm]
Recommended max. swin	140	250	[mm]
Adjustable axial hydraulic clamping force	200 - 2750	400 - 5300	[daN]
Pneumatic spindle interlock, interlocking moment at 5 bar	200	200	[Nm]
C axis			
Programmable increment		0.0001	[°]
Interpolation		X - Y - Z - C	
Rapid feed		36'000	[°/min]
Positioning accuracy		± 0.012° / ± 43''	
Positioning repeatability		± 0.006° / ± 22''	
Cross slide upper			
Transverse stroke (on diameter), X axis		420	[mm]
Longitudinal stroke, Y axis		+/- 45	[mm]
Longitudinal stroke, Z axis		650	[mm]
Programmable increment, X axis on diameter		0.0001	[mm]
X, Y and Z axes, AC motor drive, power		1.8	[kW]
X, Y and Z axes, torque, continuous/intermittent		11 / 27	[Nm]
X and Y axes, ball screw, Ø x pitch		32 x 8	[mm]
Z axis, ball screw, Ø x pitch		40 x 12	[mm]
Positioning accuracy [P] X and Y axes	VDI /DGQ 3441	5	[µm]
Positioning accuracy [P] Z axis	VDI /DGQ 3441	5	[µm]
Positioning repeatability [PS] X and Y axes	VDI /DGQ 3441	2	[µm]
Positioning repeatability [PS] Z axis	VDI /DGQ 3441	3	[µm]
Feed			
Cutting feedrate, X, Y and Z axes		5	[m/min]
Rapid feed, X, Y and Z axes		18 / 10 / 30	[m/min]
Feed force, Z axis, continuous		500	[daN]

Technical data

SCHAUBLIN Machines SA
Rue Nomlieutant 1
2735 Bévilard Switzerland
T +41 32 491 67 00
info@smsa.ch
www.smsa.ch

Tooling: Turret with rotary tools			
Tool holder		Radial	
Number of tool stations		12	
Number of stations for rotary tools		12	
Standardized mounting of tool holders		VDI30 + TRIFIX	
Drive of the rotary tools according to the standards		DIN 5480	
Max. cross section of tool shank		20 x 20	[mm]
Spindle speed		0 - 12'000	[min-1]
Power, continuous/intermittent		4.6 / 8.8	[kW]
Torque, continuous / intermittent		11 / 21	[Nm]
Positioning accuracy		5	[µm]
Positioning repeatability		2	[µm]
Cross-slide Counter-spindle / Tailstock			
Longitudinal stroke, E axis		650	[mm]
Transverse stroke, Xt axis		160	[mm]
Programmable increment, E and Xt axes		0.0001	[mm]
AC motor drive, power, E and Xt axes		2.3	[kW]
Torque, continuous/intermittent, E and Xt axes		8 / 22	[Nm]
Ball screw, Ø x pitch, E and Xt axes		32 x 6	[mm]
Positioning accuracy [P], E and Xt axes	VDI /DGQ 3441	5	[µm]
Positioning repeatability [PS], E and Xt axes	VDI /DGQ 3441	3	[µm]
Counter-spindle A2-4 (ISO 702/I / DIN 55026)			
Spindle axial and radial runout		0.5	[µm]
Spindle speed		0 - 6'000	[min-1]
AC motor drive, power		12 / 14	[kW]
Torque, continuous/intermittent		60 / 85	[Nm]
Spindel throughbore (without drawbar)		51	[mm]
Possibility to built on a 3 jaws chuck		✓	
Recommanded maximum turning diameter		140	[mm]
Adjustable axial pneumatic clamping force		250 - 1600	[daN]
Pneumatic spindle interlock, interlocking moment at 5 bar		200	[Nm]
Max. distance between spindle noses A2-4 / A2-5		840 / 828	[mm]
C axis			
Programmable increment		0.0001	[°]
Interpolation		X - Y - Z - C	
Rapid feed		36'000	[°/min]
Positioning accuracy		± 0.012° / ± 43''	
Positioning repeatability		± 0.006° / ± 22''	
Motor-driven tailstock			
Internal taper of the sleeve		Morse 3	

Technical data

SCHAUBLIN Machines SA
Rue Nomlieutant 1
2735 Bévilard Switzerland
T +41 32 491 67 00
info@smsa.ch
www.smsa.ch

Version of machine with 2 paths (31i-B Plus)

Tooling: Turret with rotary tools			
Tool holder		Radial	
Number of tool stations		12	
Number of stations for rotary tools	(DIN 69880)	12	
Standardized mounting of tool holders		VDI30 + TRIFIX	
Drive of the rotary tools according to the standards		DIN 5480	
Max. cross section of tool shank		20 x 20	[mm]
Spindle speed		0 - 12'000	[min-1]
Power, continuous/intermittent		4.6 / 8.8	[kW]
Torque, continuous / intermittent		11 / 21	[Nm]
Positioning accuracy		5	[µm]
Positioning repeatability		2	[µm]
Cross slide lower			
Transverse stroke (on diameter), X axis		400	[mm]
Longitudinal stroke, Y axis		+/- 5	[mm]
Longitudinal stroke, Z axis		400	[mm]
Programmable increment, X axis on diameter		0.0001	[mm]
X, Y and Z axes, AC motor drive, power		2.3 - 1.0 - 1.8	[kW]
X, Y and Z axes, torque, continuous/intermittent		8/32 - 4/8.8 - 11/27	[Nm]
X and Y axes, ball screw, Ø x pitch		Ø32x6 - Ø28x6	[mm]
Z axis, ball screw, Ø x pitch		Ø40x12	[mm]
Positioning accuracy [P] X and Y axes	VDI /DGQ 3441	5	[µm]
Positioning accuracy [P] Z axis	VDI /DGQ 3441	5	[µm]
Positioning repeatability [PS] X and Y axes	VDI /DGQ 3441	2	[µm]
Positioning repeatability [PS] Z axis	VDI /DGQ 3441	3	[µm]
Feed			
Cutting feedrate, X, Y and Z axes		5	[m/min]
Rapid feed, X, Y and Z axes		18 / 10 / 30	[m/min]
Feed force, Z axis, continuous		500	[daN]

Technical data

SCHAUBLIN Machines SA
Rue Nomlieutant 1
2735 Bévilard Switzerland
T +41 32 491 67 00
info@smsa.ch
www.smsa.ch

Base coolant supply		
Tank capacity	200	[l]
Coolant flow	83l/min @ 2.4bar	[l/min]
Pneumatic consumption		
Min./max. pneumatic pressure	5 - 14	[bar]
Type of connection	G1/4”	[G]
Quality of the air	Clean and dry	
Electrical power supply		
Voltage	400	[V]
Tolerated fluctuations	+/- 5	[%]
Other Voltage	Option	
Frequency	50	[Hz]
Tolerated fluctuations	+/- 5	[%]
Rated current	28	[A]
Protection at mains end	40	[A]
Power consumption of the machine	19	[kVA]
Obstruction and weight		
Overall dimensions: length x depth x height	2'450 x 1’900 x 2’120	[mm]
Approx. net weight of the machine (including oil)	5’000	[kg]
Floor load	15	[kg/cm2]
Load per square meter for one machine	1000	[kg/m2]
Dimensions of the pallet	2’860 x 2’440	[mm]
Weight of the pallet	300	[kg]
Spindle center height over floor	1174	[mm]
Lubrication of linear guideways and ball screws		
Kind of linear guideway and ball screws lubrication for axes X, Y, Z, Xt and E	Automatic	
Kind of oil	Motorex Super-Gliss 68K	
Various		
Color of the machine: SCHAUBLIN standard color 2 colors, color 1 Grey	RAL 7015	
Color of the machine: SCHAUBLIN standard color 2 colors, color 2 White	RAL 9010	
Noise level under load at the operator's station	76	[dB_A]
Machine and equipment in accordance with the CE safety standards	✓	
Operating temperature	+15 ⇨ +30	[°]
Relative humidity	10 ⇨ 75	[%]

Technical data

SCHAUBLIN Machines SA
Rue Nomlieutant 1
2735 Bévilard Switzerland
T +41 32 491 67 00
info@smsa.ch
www.smsa.ch

Control unit			
Type of control unit	Fanuc 0i-TF PLUS	Fanuc 31i-B PLUS	
Cloor screen	15" LCD, iHMI	15" LCD, iHMI	
Manual Guide i	✓	✓	
Memory	2 Mb	8 Mb	
Number of programs	1000	1000	
Tool offsets	128 etx. 200	128 etx. 200	
Programmable increment	0.0001	0.0001	
Axis feedrate override	0-120	0-120	[%]
Spindle override	50-120	50-120	[%]
M codes in one block	3	3	
Background editing	✓	✓	
Constant surface speed control	✓	✓	
Spindle positioning	✓	✓	
Rigid tapping (with Spindle)	✓	✓	
Multiple threading	✓	✓	
Taper thread cutting	✓	✓	
Continuous threading	✓	✓	
Variable lead threading	✓	✓	
Custom Macro B	✓	✓	
Polar coordinate interpolation	✓	✓	
Cylindrical interpolation	✓	✓	
Helical Interpolation option	Option	✓	
Polygon turning	✓	✓	
Inch/Metric	✓	✓	
Fanuc Picture (Personnal customer page)	✓	✓	
Languages control unit			
French, German, English, Italian, Spanish, Portuguese, Dutch, Swedish, Danish, Russian, Polish, Czech, Hungarian, Turkish, Japanese, Korean, Chinese (simplified characters), Chinese (traditional characters)	✓	✓	
Interface control unit			
Interface RS232-C	✓	✓	
Interface PCMCIA	✓	✓	
Interface Ethernet (embedded)	✓	✓	
RS-232	Option	Option	
Port Ethercat (optional board)	Option	Option	
Port fast Ethernet (optional board)	Option	Option	
Data server (optional board)	Option	Option	