



## 2 Technical specification

The following information represents the dimensions and indications of weight and the manufacturer's approved machine data.

	F80 (Advanced)	F105 (Advanced)
<b>2.1 Electrical connection</b>		
Total connection	3 x 400V ~ 50Hz 12 KVA ( 3 x 400V ~ 50Hz 14 KVA )	3 x 400V ~ 50Hz 12.5 KVA ( 3 x 400V ~ 50Hz 15 KVA )
<b>2.2 Milling spindle</b>		
Power of spindle drive S1 operation	2.2 kW ( 3.7 kW )	5.5 kW ( 7.5 kW )
Power of spindle drive S6-30 % operation	3.2 kW ( 5.5 kW )	7.8 kW ( 11 kW )
Torque S1 operation	14 Nm ( 24 Nm )	35 Nm ( 48 Nm )
Torque S6-30 % operation	22 Nm ( 35 Nm )	50 Nm ( 70 Nm )
Speed	50 - 8000 rpm ( 50 - 10000 rpm )	10 - 8000 rpm ( 10 - 10000 rpm )
Spindle seat	ISO 30 / BT 30 x 45°	ISO 40 / BT 40 x 45°
<b>2.3 Lubricant/coolant system</b>		
Power of the cooling lubricant pump [ W ]	650	650
Tank capacity [ litre ]	70	120
<b>2.4 Compressed air</b>		
min. connection [MPa]	0.6 (6 bar)	
Air consumption	0.1 - 0.15 m³ / h at 0.6 MPa	
Recommended compressed air quality	ISO 8573.1 class 2	
Compressed air consumer	<ul style="list-style-type: none"> <li>• Tool changer forward / backward</li> <li>• Tool clamp / unclamp</li> <li>• Option, clamp of rotary table (F105 Advanced)</li> </ul>	
<b>2.4.1 Compressed air service unit</b>		
Drainage filters	40 µm	
Housing	Polycarbonate	
max. pressure	1.5 MPa	
Recommended oil lubricator for compressed air	ISO VG32	
Quantity of oil Lubricator for compressed air	90ml	
Dewatering	manual	
Compressed air connection thread	3/8"	



	F80 (Advanced)	F105 (Advanced)
<b>2.5 Dimensions</b>		
Height [mm]		
Depth [mm]	3.4 "Installation plan F80" on page 232	3.5 "Installation plan F105" on page 234
Width [mm]		
Total weight [kg]	1900	2800
<b>2.6 Working area, traverse path</b>		
X-axis [mm]	400	550
Y-axis [mm]	225	305
Z axis travel [mm]	375	460
Z axis	75 to 475	100 to 600
Distance spindle - milling table [mm]		
<b>2.7 Accuracy</b>		
Repeat accuracy	± 0.015mm	± 0.01mm
Positioning accuracy	± 0.015mm	± 0.01mm
<b>2.8 Torques of servo motors</b>		
X axis	5 Nm ( 3.5 Nm )	8 Nm
Y axis	5 Nm ( 6 Nm )	8 Nm
Z axis	6 Nm ( 6 Nm )	11 Nm
<b>2.9 Milling table</b>		
Table length [mm]	800	800
Table width [mm]	260	320
T - slot size / number / distance [mm]	16 / 5 / 50	14 / 3 / 100
Max. load [kg]	150	300
max. feedrate [mm/min.]	10000	10000
<b>2.10 Tool changer</b>		
Max. number of tool places	10	12
max. tooling diameter [mm]	60	70
Max. tool lenght [mm]	200	300
Max. tool weight [kg]	6	6
Tool change time [s]	7	7
<b>2.11 Environmental conditions - operation</b>		
Temperature	19 - 21 °C (for an optimum milling result) 19 - 21 °C (for operation without malfunctions)	



	F80 (Advanced)	F105 (Advanced)
Admissible relative humidity	5...80 % no condensation	
Compressed air	700...1060 hPa	
<b>2.12 Environmental conditions - storage</b>		
Temperature		5 - 45 °C