

# Combined B-Axis with Milling-Turning Spindles

System solutions for mill-turn applications

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# The concept of the 3DC series for mill-turn applications

Our 3DC series combines the compact design of a milling spindle with the high-torque B-axis. Both axes can be clamped separately from each other, e.g. to carry out a classic turning operation with a fixed tool or the highly effective mill-turning with a rotating tool and if applicable even with the swiveling B-axis.

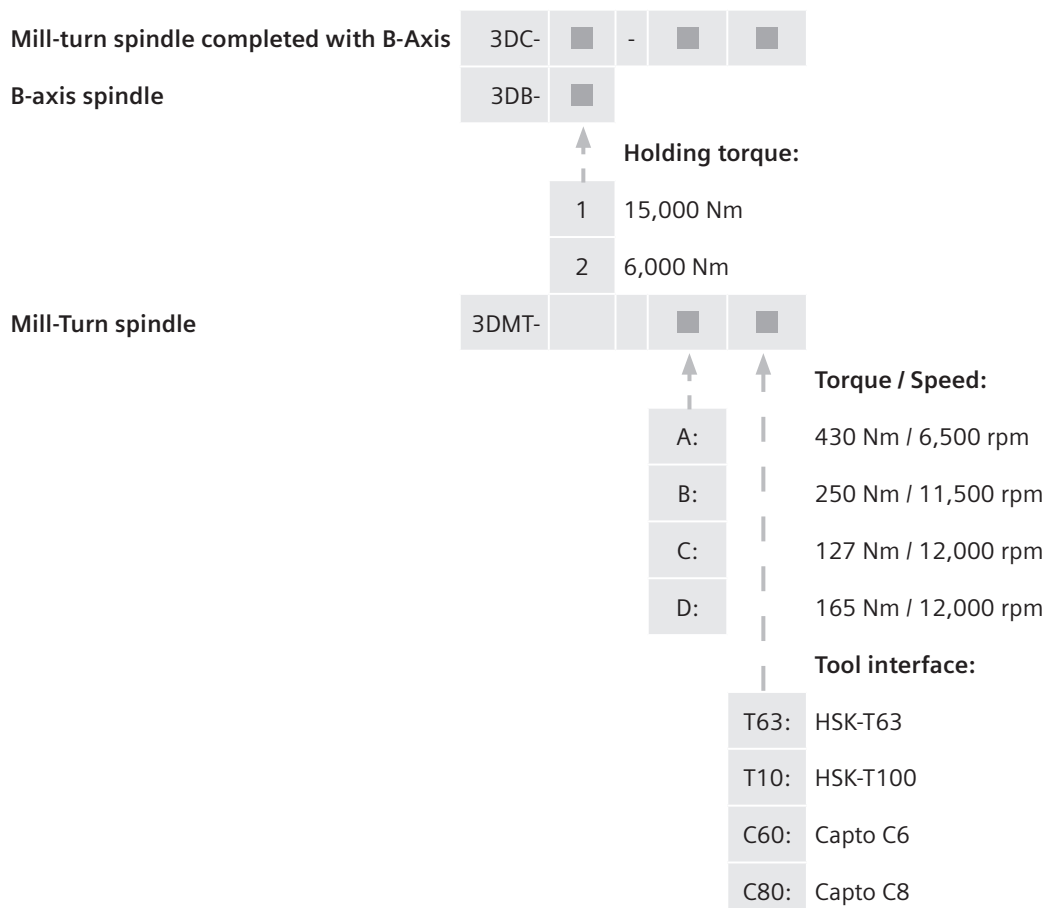
The 3DC series has a modular structure so that various combinations of milling spindles and B-axes are possible. They can be selected according to the application.

The milling spindles 3DMT differ in speed, power / torque and tool interface. The B-axis modules 3DB in two sizes differ mainly in the mechanical holding

torque. An index-free clamping system is optionally available. High-torque motor and integrated fail safe function are the principle features of the B-axis.

The Easy Connect principle between the mill-turn spindle and the B-axis, in which all media, including power and signals, are coupled directly and without readjustment due to the pre-centering, is very service-friendly and provides a rigid connection. The optional SMI24 (Siemens DRIVE-CLiQ) complements the user-friendliness of our 3DC series.

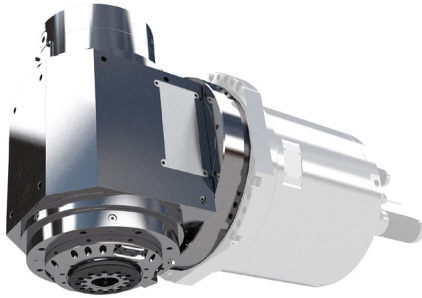
## Classification



# Milling-Turning-Spindle

Milling spindles with high performance motor and shaft clamping function.

The 3DMT milling-turning spindle modules are available in 4 torque classes and with 4 different tool interfaces.



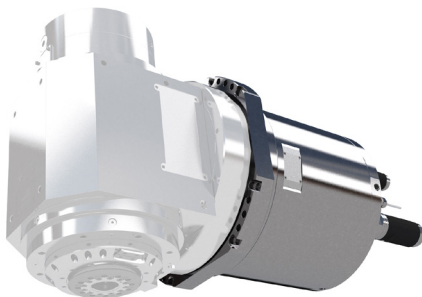
## Technical data

Mill-Turn-Spindle	A*		B*		C		D*
	3DMT-AT10	3DMT-AC80	3DMT-BT10	3DMT-BC80	3DMT-CT63	3DMT-CC63	3DMT-DT10
Tool interface	HSK-T100	PSC 80 (Capto C8)	HSK-T100	PSC 80 (Capto C8)	HSK-T63	PSC 63 (Capto C6)	HSK-T100
Maximum speed [rpm]	6,500		11,500		12,000		
Rated torque [Nm]	430		250		127		165
Rated power [kW]	63		65		40		38
Height [mm]	362				285		
Width [mm]	362				275		
Length [mm]	723				556		646
CTS [bar]	80						
Lubrication	grease						
Holding torque for turningfunction [Nm]	1,400				500		
Index angle for turningfunction [°]	3				6		

## B-axis

B-axis with torque motor, shaft clamping and fail-safe function.

The 3DB B-axis modules in two sizes differ mainly in the holding torque. An index-free clamping system is optionally available.

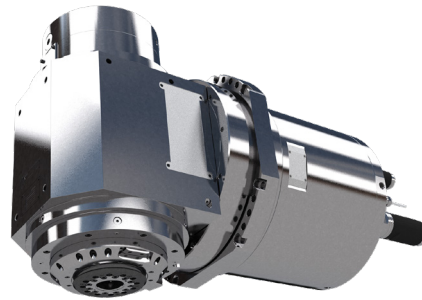


## Technical data

B-axis	3DB-1	3DB-2
Holding torque (hydraulic) index angle 2,5° [Nm]	15,000	6,000
<i>optionally:</i> Holding torque (hydraulic) index-free collet, infinitely variable [Nm]	2,800	1,000
Operating torque (motor) [Nm]	1,050	878
Holding torque (fail-safe function) index angle 2,5° [Nm]	500	200
Swivelling range [°]	+/-120	+/-120
Swivelling speed [rpm]	50	80
Center diameter [mm]	430	346
Total length [mm]	719	428

# Mill-turn spindle completed with B-Axis

The designation of the completed 3DC unit reflects the meaningful combination of the 3DMT and 3DB modules in a plain way.



## Possible combinations

Suitable combination of mill-turn spindle and B-axis		Mill-Turn Spindle				Tool interface
		A (430 Nm, 6,500 rpm)	B (250 Nm, 11,500 rpm)	C (127 Nm, 12,000 rpm)	D (165 Nm, 12,000 rpm)	
B-axis Spindle	Size 1 (15,000 Nm)	3DC-1-AT10	3DC-1-BT10	-	-	HSK-T100
		3DC-1-AC80	3DC-1-BC80			PSC 80 (Capto C8)
	Size 2 (6,000 Nm)	-	-		3DC-2-DT10	HSK-T100
				3DC-2-CT63		HSK-T63
				3DC-2-CC63		PSC 63 (Capto C6)