

Combined B-Axis with Milling-Turning Spindles

System solutions for mill-turn applications

WEISS Spindeltechnologie
March 2024

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.

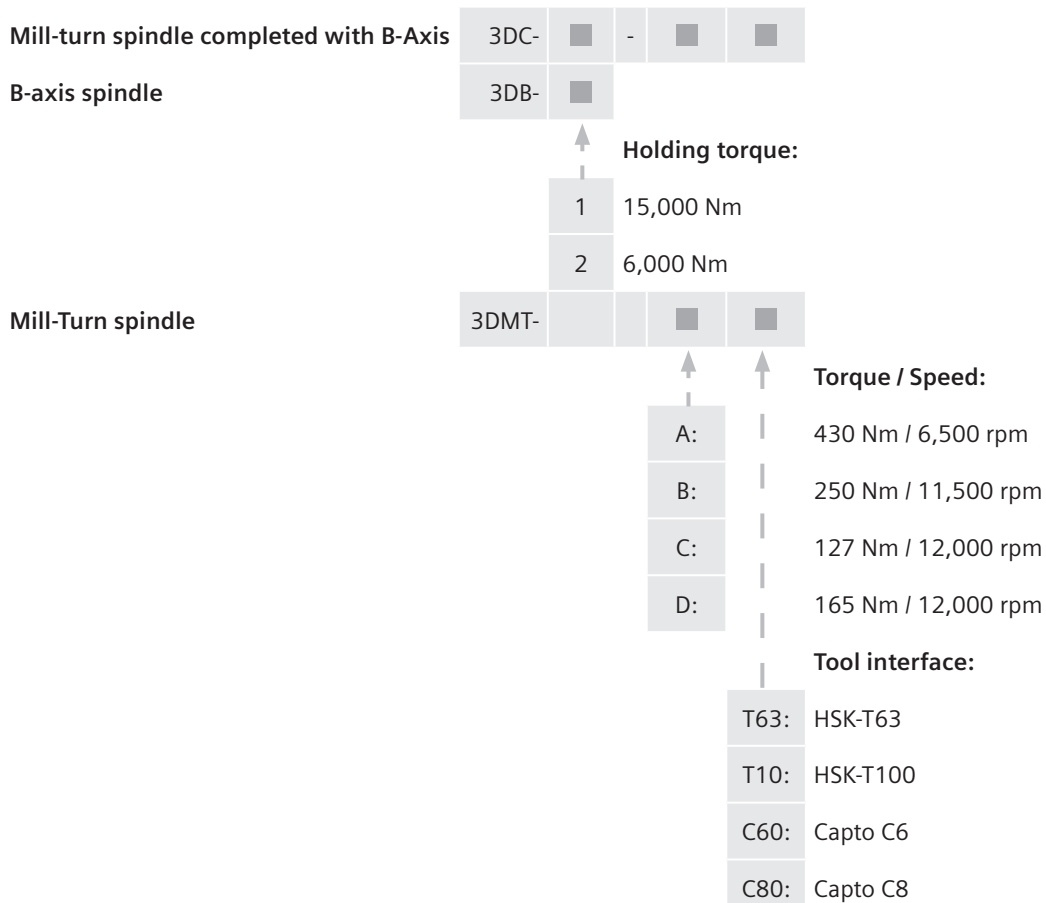
The 3DC series has a modular structure so that various combinations of milling spindles and B-axes are possible. They can be selected according to the application.

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.

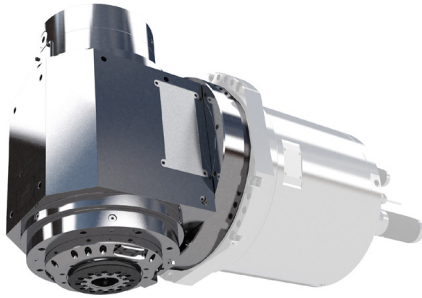
Classification



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.



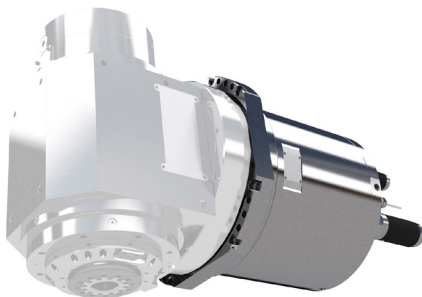
Technical data

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.

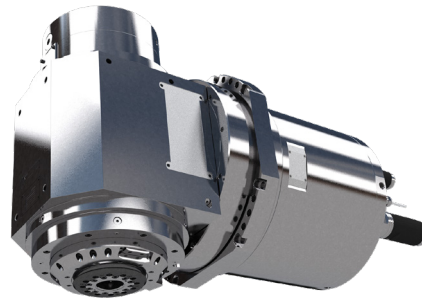


Technical data

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-CT63	3DC-2-DT10	HSK-T63
		-	-	3DC-2-CC63	-	PSC 63 (Capto C6)

Subject to change without prior notice
Printed in Germany
© Innomotics GmbH 2024

Innomotics GmbH
Bereich Spindeltechnologie
Birkenfelder Weg 14
96126 Maroldsweisach
DEUTSCHLAND
weiss-spindle.com

Transmittal, reproduction, dissemination and/or editing of this document as well as utilization of its contents and communication thereof to others without express authorization are prohibited. Offenders will be held liable for payment of damages. All rights created by patent grant or registration of a utility model or design patent are reserved.

The Siemens Businesses Large Drives Applications and Low Voltage Motors have already been transferred to Innomotics and the Siemens Business Weiss Spindeltechnologie GmbH will be transferred to Innomotics on April 1, 2024. The brand change from Siemens to Innomotics is ongoing.

Siemens', Innomotics' or WEISS' legal information, trademarks or logos contained in product related documents do not necessarily represent the actual branding used for the products. Any technical product information remains valid independently of the brand. Orders received as of August 1, 2024, will be confirmed exclusively with the product mark "Innomotics" and/or "WEISS" regarding the concerned products and services. Independent of the order date, all ordered products or services with delivery dates from April 1, 2025, will be delivered with the product mark "Innomotics" and/or "WEISS".