



# NEW MT-M SERIES

TRANSMISSION  
MODULE FOR  
MACHINE TOOL  
ROTARY AXIS

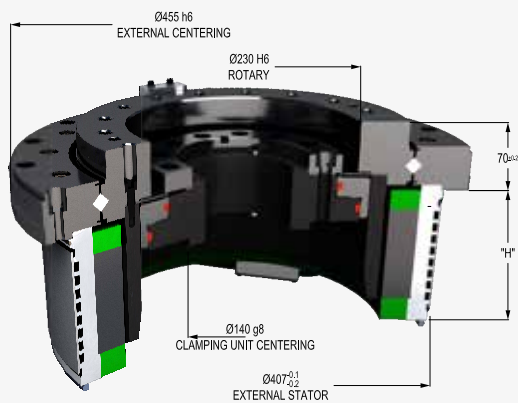
TEAM



DIRECT-DRIVE MOTION TECHNOLOGY

MOTION TECHNOLOGY

## MT 360



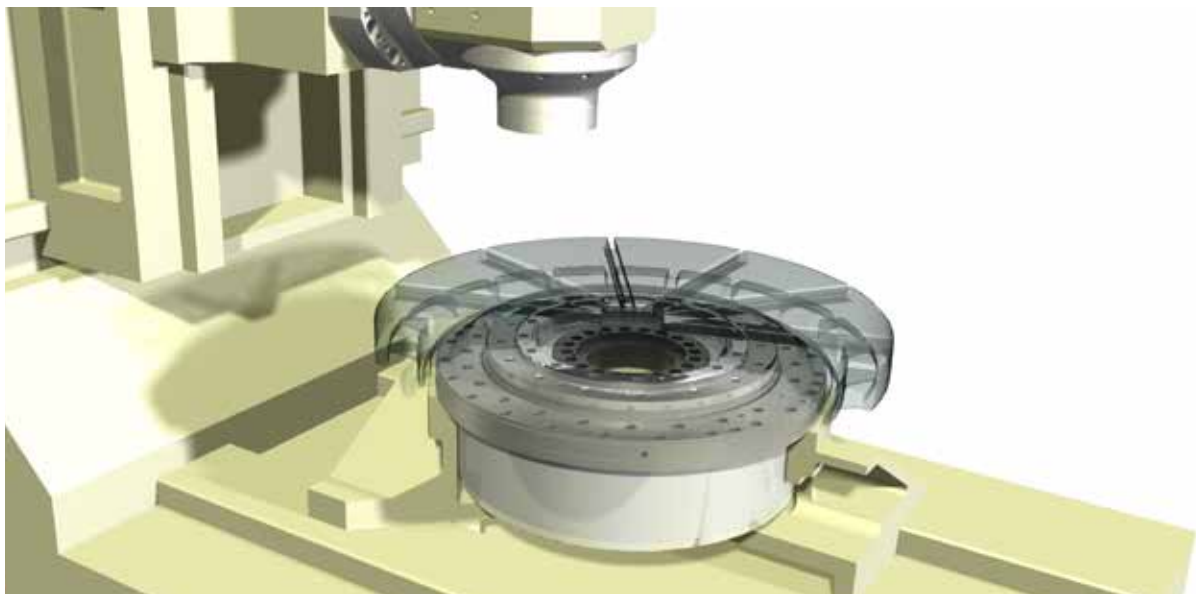
### PRODUCT RANGE

	SIZE 30	SIZE 50	SIZE 70	SIZE 100	SIZE 150
H	77	97	117	147	197

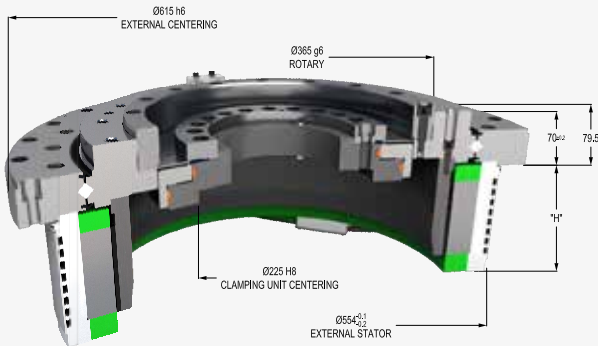
### MODULE TECHNICAL SPECIFICATIONS

			SIZE 30	SIZE 50	SIZE 70	SIZE 100	SIZE 150
Motor rated torque (Air Cooling)	Tac	[Nm]	112	175	249	341	504
Motor rated current (Air Cooling)	Iac	[A]	6,4	6	12	11,6	18
Motor rated torque (Water Cooling)	Twc	[Nm]	239	415	587	821	1240
Motor rated current (Water Cooling)	Iwc	[A]	13,5	14	29,4	28,6	45
Motor peak torque	Tpk	[Nm]	428	724	1013	1448	2173
Motor peak current	Ipk	[A]	36,8	35	73,5	73,5	115
Max Intermittent rotation speed	N max	[rpm]	95				
Recommended payload		[Kg]	up to 2500				
Clamping torque (@80 bar)	Standard	[Nm]	2920				
Clamping torque (@80 bar)	Advanced	[Nm]	5110				
Interface of measuring system			Absolute EnDat2.2				
Max system accuracy		[arcsec]	± 7 (standard accuracy) / ± 3 (high accuracy)				
Precision / Repeatability		[arcsec]	±1				

Its compact design with reduced axial dimensions, ensures versatility of use and different possibilities of installation:



## MT 500



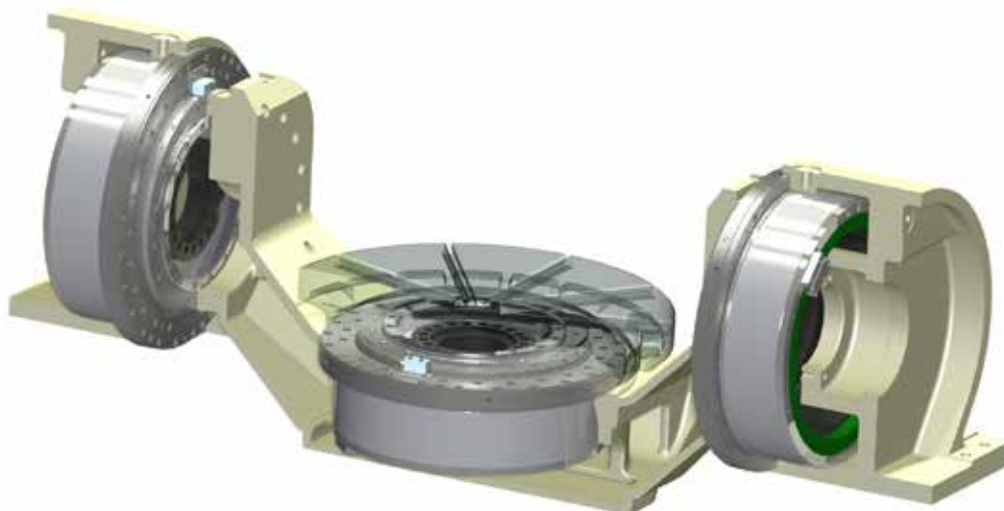
### PRODUCT RANGE

	SIZE 30	SIZE 50	SIZE 70	SIZE 100	SIZE 150
H	75	95	115	145	195

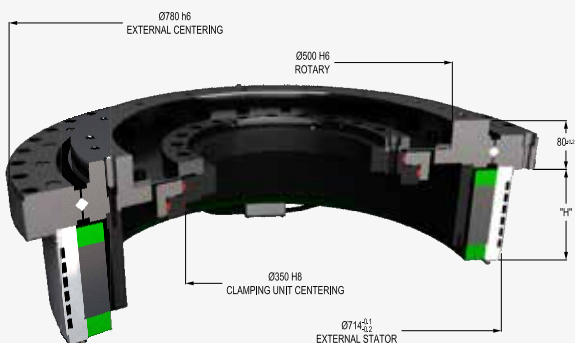
### MODULE TECHNICAL SPECIFICATIONS

			SIZE 30	SIZE 50	SIZE 70	SIZE 100	SIZE 150
Motor rated torque (Air Cooling)	Tac	[Nm]	220	340	435	615	922
Motor rated current (Air Cooling)	Iac	[A]	10,2	11	9,8	12	17,3
Motor rated torque (Water Cooling)	Twc	[Nm]	450	790	1100	1530	2390
Motor rated current (Water Cooling)	Iwc	[A]	22,6	26,3	25	31	47
Motor peak torque	Tpk	[Nm]	760	1460	1750	2400	3600
Motor peak current	Ipk	[A]	50	46	55	67	99
Max Intermittent rotation speed	N max	[rpm]	70				
Recommended payload		[Kg]	up to 4000				
Clamping torque (@80 bar)	Standard	[Nm]	5710				
Clamping torque (@80 bar)	Advanced	[Nm]	10000				
Interface of measuring system			Absolute EnDat2.2				
Max system accuracy		[arcsec]	± 5 (standard accuracy) / ± 3 (high accuracy)				
Precision / Repeatability		[arcsec]	±1				

Application in the structural parts of a two-axis table



## MT 660



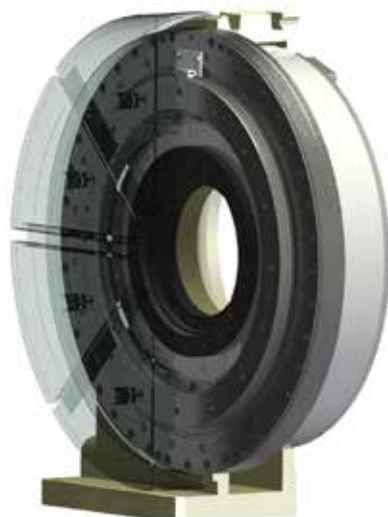
### PRODUCT RANGE

	SIZE 30	SIZE 50	SIZE 70	SIZE 100	SIZE 150
H1	84	104	124	154	194

### MODULE TECHNICAL SPECIFICATIONS

			SIZE 30	SIZE 50	SIZE 70	SIZE 100	SIZE 150
Motor rated torque (Air Cooling)	Tac	[Nm]	400	523	835	1200	1800
Motor rated current (Air Cooling)	Iac	[A]	10,5	11,3	14,3	17,7	25
Motor rated torque (Water Cooling)	Twc	[Nm]	815	1300	2012	2900	4000
Motor rated current (Water Cooling)	Iwc	[A]	21,2	26	34	42	57
Motor peak torque	Tpk	[Nm]	1600	2400	3500	5000	7200
Motor peak current	Ipk	[A]	56,5	56	80	101	138
Max Intermittent rotation speed	N max	[rpm]	50				
Recommended payload		[Kg]	up to 7000				
Clamping torque (@80 bar)	Standard	[Nm]	10100				
Clamping torque (@80 bar)	Advanced	[Nm]	17700				
Interface of measuring system			Incremental distance coded 1Vpp				
Max system accuracy		[arcsec]	± 5 (standard accuracy) / ± 3 (high accuracy)				
Precision / Repeatability		[arcsec]	±1				

The MT 660 module assembled into structural parts of rotary milling table positionable at 0° and 90°



# A NEW INDUSTRIAL COMPONENT: The torque servo motor for machine tool axis

## THE INNOVATIVE CONCEPT

Not only a Direct Drive motor, but a fully integrated component that simplifies configuration of a machine tool rotary axis.

## HIGHLY ENGINEERED STRUCTURE

The key factor is the deep level of **INTEGRATION** in **ONE** component of the typical elements of a machine tool rotary axis:

- **DIRECT DRIVE MOTOR (TORQUE MOTOR)**
- **MAIN SUPPORT BEARING WITH INTEGRATED MECHANICAL INTERFACE (TECHNAI PROPRIETARY DESIGN)**
- **HIGH PRECISION FEEDBACK ENCODER**
- **HYDRAULIC ACTUATED CLAMPING DEVICE**

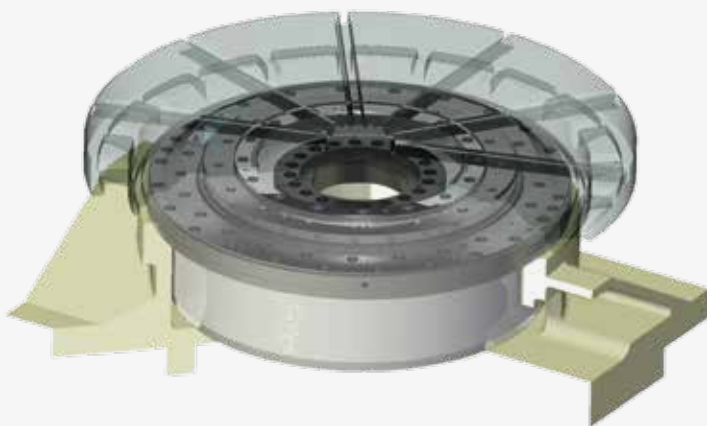
## COMPLETE PRODUCT RANGE

The range of MT rotary transmission modules is made of 3 sizes, corresponding to the respective stator diameter: MT-360, MT-500, MT-660 each one equipped with different motor lengths and with a set of options to customize and make the product suitable for multiple configurations.

### APPLICATION FIELDS

Realization of the 4th or 5th axis on:

- Movable column milling machines
- Medium size gantry and portal milling machines
- Vertical/Horizontal machining centres



## MAJOR INNOVATIONS AND BENEFITS

Integrated Direct Drive technology

Very competitive

cost/performance ratio

Machine/Table interface simple to design

Ease and speed of installation

Reliability and precision due to

rational assembly and low

number of components

Maintenance free

Limited runout

High stiffness

Positioning accuracy

High performance hydraulic clamp for indexed axis machining



DIRECT-DRIVE MOTION TECHNOLOGY

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