

PRODUCT PORTFOLIO MECHATRONIC UNITS

Individual products are implemented in the mechatronic units' product segment for special automation requirements.

Mechatronic units are customised drive solutions. Motor, motor controllers, and gears are combined in one device and thus enable a high degree of integration in customer application.

The adaptation of the mechanical and electrical interfaces, as well as software functionalities are ideal prerequisites for flexible application flows.

Combined with the possibility of a customer-specific constructive individualisation, the MTA motor and motor controller modular system offer optimal solutions for customers.



Properties:

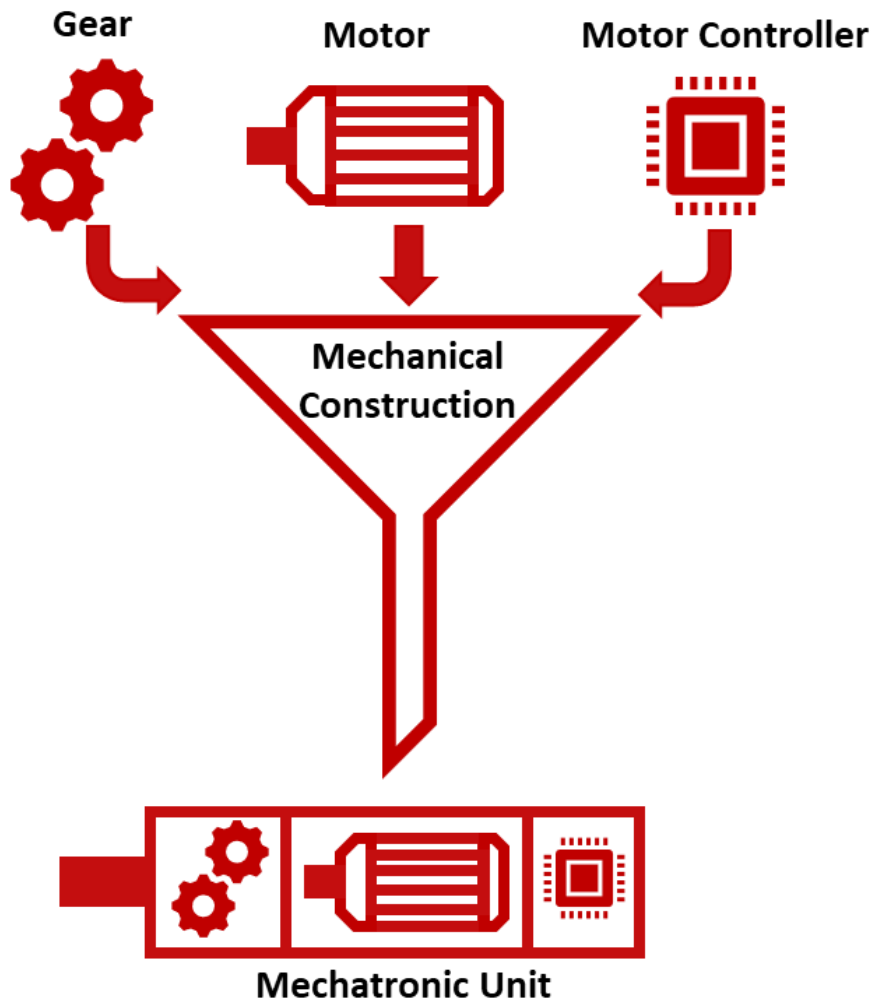
- Motors with internal and external rotor technology
- Electronics nominal voltage 24 VDC or 48 VDC
- motor commutation sensorless or with sensor
- Communication via standardised I/O interfaces
- Gearless drive solutions
- Single-stage, double-stage, or triple-stage gear versions
- Brake design as holding or service brake

Advantages/Benefits:

- Short development times with implementation options from a comprehensive modular system
- Adaptation of mechanical and electrical interfaces
- Optimisation through adaptation of motor characteristics
- End-to-end product platform through scalable construction form and motor performance
- Simple system integration due to compatibility with current industry standards

System integration:

The basic technology of MTA mechatronic units consists of a modular system with frameless kit motors, electronics, and gear components. This allows complex drive components to be developed in no time.



Portfolio overview:

External rotor motor portfolio:





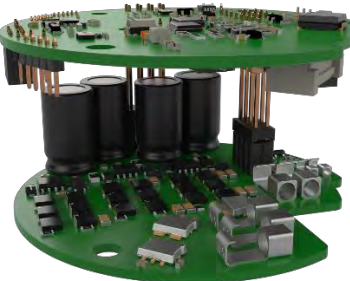
Several external rotor motors are available for gearless applications. The size of these direct drives is determined by the external diameter of the rotor. The smallest size has an external diameter of 47 mm. For a scalable portfolio with an external rotor diameter of up to 115 mm, a power range of 10 W to 300 W can be covered. The required torque can be adapted through variation of the stator length. The torque can be changed by individually adapting the winding. The entire characteristic of the drive can be optimised for application through these measures.

Internal rotor motor portfolio:



Several sizes of geared internal rotor motors are available for applications with a high torque requirement. The size of these direct drives is determined by the internal diameter of the stator. The smallest size has an external stator diameter of 39 mm. For a scalable portfolio with an external diameter of up to 168 mm, a power range of 50 W to 730 W can be covered. The required torque can be adapted through variation of the stator length. The torque can be changed by individually adapting the winding. The entire characteristic of the drive can be optimised for application through these measures.

Electronics portfolio:

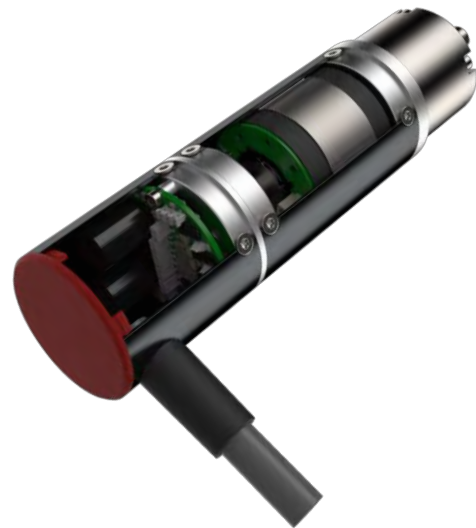
Size	Description	Value
	Nominal voltage: Nominal current: Maximum current: Interface: Motor commutation: Construction form:	24 VDC 2 A 5 A CANopen Sensorless Round, diameter 38 mm
	Nominal voltage: Nominal current: Maximum current: Interface: Motor commutation: Construction form:	24 VDC or 48 VDC 5 A 15 A CANopen or I/O A, B, I trace Round, diameter 40 mm
	Nominal voltage: Nominal current: Maximum current: Interface: Motor commutation: Brake control: Construction form:	24 VDC or 48 VDC 15 A 50 A CANopen or I/O A, B, I trace Integrated Round, diameter 65 mm

Gear portfolio:

Efficient planetary gears are available for all MTA internal rotor drives with a high torque requirement. The construction form of the planetary gears is adapted to the form of the MTA internal rotor motors. Single-stage, double-stage or triple-stage planetary gears can be combined with different transmission ratios, depending on the type of application. Highly integrated motor gear constructions are available for extremely compact construction forms.

Areas of application/Product images:

Mechatronic units are implemented in a wide range of applications and industries. Target applications for the mechatronic units' product range are applications that require a high degree of integration in the customer's machine or system.



Type code:

Mechatronic units		MU	3	7	4	- 0045 -	1	3	A	1	- S0 -	1A	- C111
Mechatronic unit		MU											
	75 mm		3										
	53 mm		2										
Motor size	42 mm		1										
	730 W			9									
	500 W			8									
	400 W			7									
	300 W			6									
	250 W			5									
	200 W			4									
	150 W			3									
	100 W			2									
Mechanical power	70 W			1									
	48 VDC				4								
Nominal voltage	24 VDC				2								
	4500 rpm					4500							
	450 rpm					0450							
	375 rpm					0375							
	280 rpm					0280							
	225 rpm					0225							
	180 rpm					0180							
	90 rpm					0090							
Output speed	45 rpm					0045							
	Flat gear						5						
	Helical gearbox						4						
	Bevel gearbox						3						
	Worm gears						2						
Gear type	Planetary gear						1						
	CANopen							4					
	CANopen, digital I/Os							3					
	CANopen, analogue/digital I/Os							2					
Interface	Analogue/digital I/Os							1					
Protection class	IP54								A				
	Service brake 1.00 Nm									D			
	Service brake 0.50 Nm									C			
	Holding brake 2.6 Nm									7			
	Holding brake 1.5 Nm									6			
	Holding brake 0.75 Nm									5			
Brake	No brake									1			
	Attached safety sensor										S1		
Safety systems	No safety sensor										S0		
	Length 0.5 m, M16 screwable connector											1D	
	Length 0.5 m, connector M8 snap-in											1C	
	Length 0.5 m, M8 screwable connector											1B	
Cable and connector	Length 0.5 m, open ends											1A	
Customer-specific version													C111