

## Ordering information

	iTM 60 /50	iTM 60 /100	iTM 80 /50	iTM 80 /100
Intermediate circuit voltage [V]	330	330	330	330
Nominal current [A]	3	3	6	6
Surge current [A]	7,5	7,5	15	15
Nominal torque [Nm]	2,7	5,0	8,0	14,0
Peak current [Nm]	5	10	15	25
Max. speed [rpm]	1200	1000	1200	1000
Diameter * [mm]	130	130	170	170
Height [mm]	123	173	130	180
Weight [kg]				
horizontal version	4,00	5,81	7,33	10,39
vertikal version	4,03	5,78	7,40	10,40
Permissible stat. load [N]	1570	1570	1495	1495
Permissible dyn. load [N]	1225	1225	1360	1360
Item-No.				
horizontal version	267011 0000	267031 0000	267111 0000	267131 0000
vertikal version	267010 0000	267030 0000	267110 0000	267130 0000

\* Is only applicable for the vertikal version.

Technical specifications subject to change!

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Layout: iselmedia



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# Torque motors iTM

...in horizontal and vertical design



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# Torque motors iTM ...in the horizontal and vertical design

## General Information

With **torque motors** made by isel, you will be looking for mechanical transmission elements such as belts or gears in vain.

The torque rather is generated directly at the rotor, where it is needed. Through the integration of the drive components into the rotary unit, a extremely compact design is created. Thereby unwanted elasticity and transmission backlash are avoided.

Minimized friction losses and the high efficiency, increases the dynamics and results in excellent running characteristics.

The precise four-point-bearing is designed for high loads with good concentricity and low axial run-out.

The sealing provides a problem-free employment, even under most difficult conditions.

The integration of the measuring system at the rotor shaft provides high repeating and positioning accuracies.

The **torque motors iTM** are offered in 2 basic versions: iTM60 and iTM80. Two overall heights (active motor) of 50 and 100 mm for each series are available.

Major designs with higher performances are available on request. This variable design allows to cover a wide range of applications.

### The technology in detail

**Torque motors** are permanently excited three-phase synchronous motors with hollow shaft rotor. The respective unit consists of stator, rotor, housing, bearing and sensor components.

The stator consists of punched electrical sheets. The 3-phase phase winding is placed at an optimal degree of filling in to the grooves of the stator.

The stator with a completely interconnected three-phase winding is subsequently placed in the aluminum housing and fully encapsulated.

The rotor consists of a cylindrical hollow shaft made of steel, which is assembled on the perimeter with high-performance permanent magnets.

The 4-point groove ball bearing takes over the exact guidance of the rotor and provides ideal operating characteristics even at high loads.

The integrated sensors in the form of encoders and thermocouple provides the information about speed, position and current engine temperature.

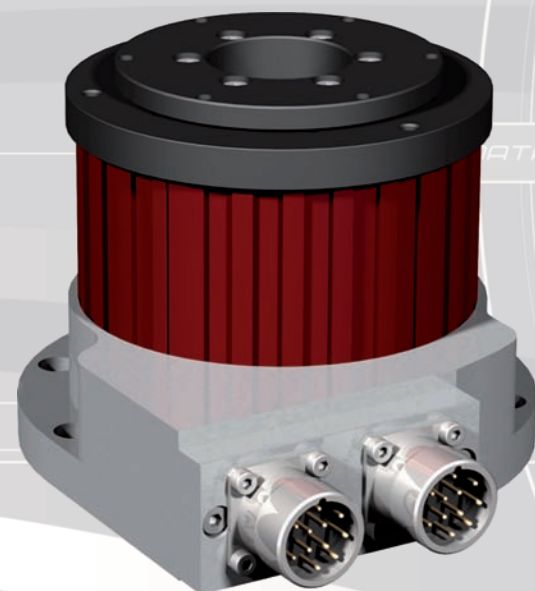


Illustration:  
iTM 60 in vertical version

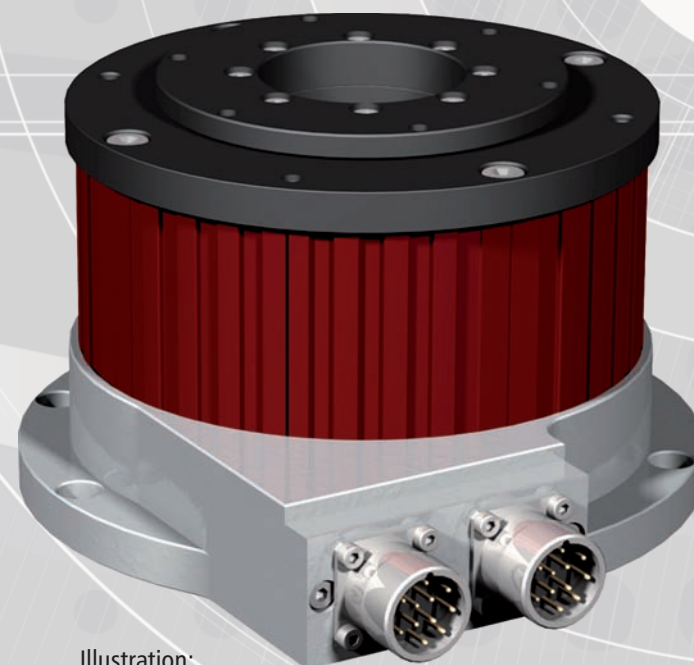


Illustration:  
iTM 80 in vertical version

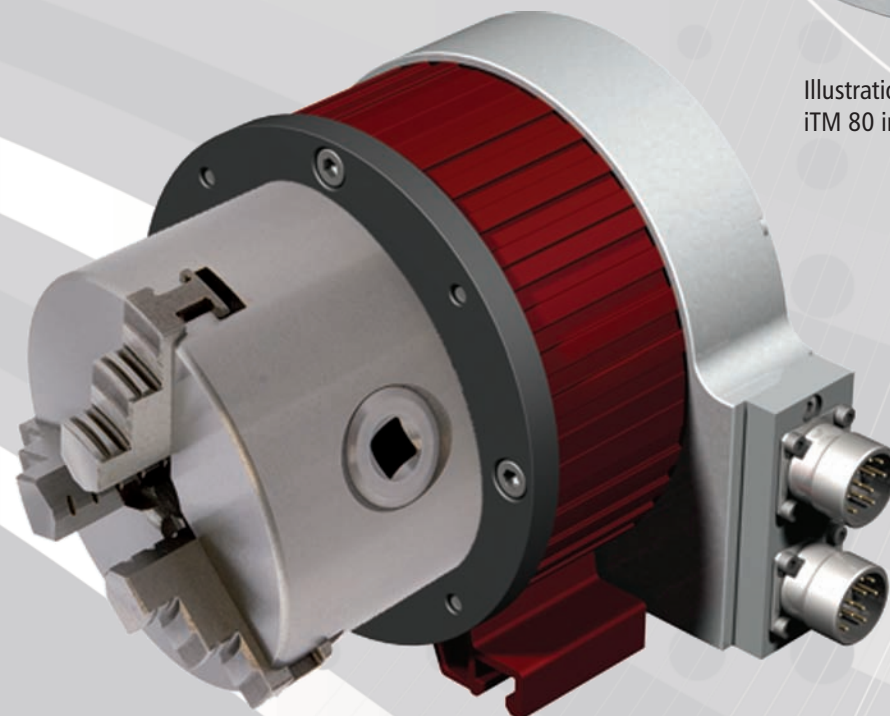


Illustration:  
iTM 80 in horizontal version with 3-jaw chuck

## Main features

- Compact design with hollow shaft
- Horizontal and vertical design circular
- Connector
- Temperature monitoring
- Magnetic measurement system (incremental or sin/cos)
- High dynamics and torsional strength
- Great acceleration left / right without backlash
- Backlash free 4-point suspension with good round- and axial running
- High torques up to 50 Nm and revs. up to 1200 rpm
- optional:
  - Drive control system
  - Major designs and performance
  - Brake

## Applications

- Indexing machines, rotary tables, swivel axes
- Rotary axes (A, B, C-axis at 5-axis machine tools)
- Dynamic tool magazines
- Automatisierung technology
- Packaging machine
- Medizin technology
- Textile machinery
- Grinding machine