

1 Introduction

This chapter describes how to use the present documentation (refer to the chapter entitled "About this Documentation") and includes a general representation of the product in Chapter 1.1.

1.1 Product Presentation

Fields of application In connection with the digital intelligent drive controllers by Rexroth, the digital MKD AC motors offer cost-effective automation systems with an extensive functionality for the following fields of application:

- Machine tools
- Printing and paper industries
- Handling and automation
- Packaging machines and food
- Food industry (selected motor types style "non-painted").

Benefits MKD motors are characterized by the following advantages:

- High operational reliability
- Maintenance-free operation (owing to the brushless design and use of bearings grease-lubricated for their entire service life)
- Use under adverse environmental conditions is possible (owing to the completely closed motor design in IP 65 degree of protection)
- Overload protection (owing to motor temperature monitoring)
- High performance data
- High dynamics (owing to the favorable ratio of torque to inertia mass)
- High overload capability (owing to the favorable heat dissipation from the stator windings to the outside wall of the motor housing)
- Peak torque utilizable across a wide speed range (owing to electronic commutation)
- Continuous start-stop operation possible with high repeat frequencies (owing to electrical commutation)
- Easy attachment to the machine (owing to flange according to DIN 42948)
- Any installation position desired
- Direct overhung mounting of pinions and belt pulleys (owing to the bearing being designed for high radial loads)
- Easy cabling (owing to cable sets, available in various designs)
- Simple and quick startup (owing to data memory in the motor encoder unit)

Performance overview Motors with the following continuous torques at standstill are available:

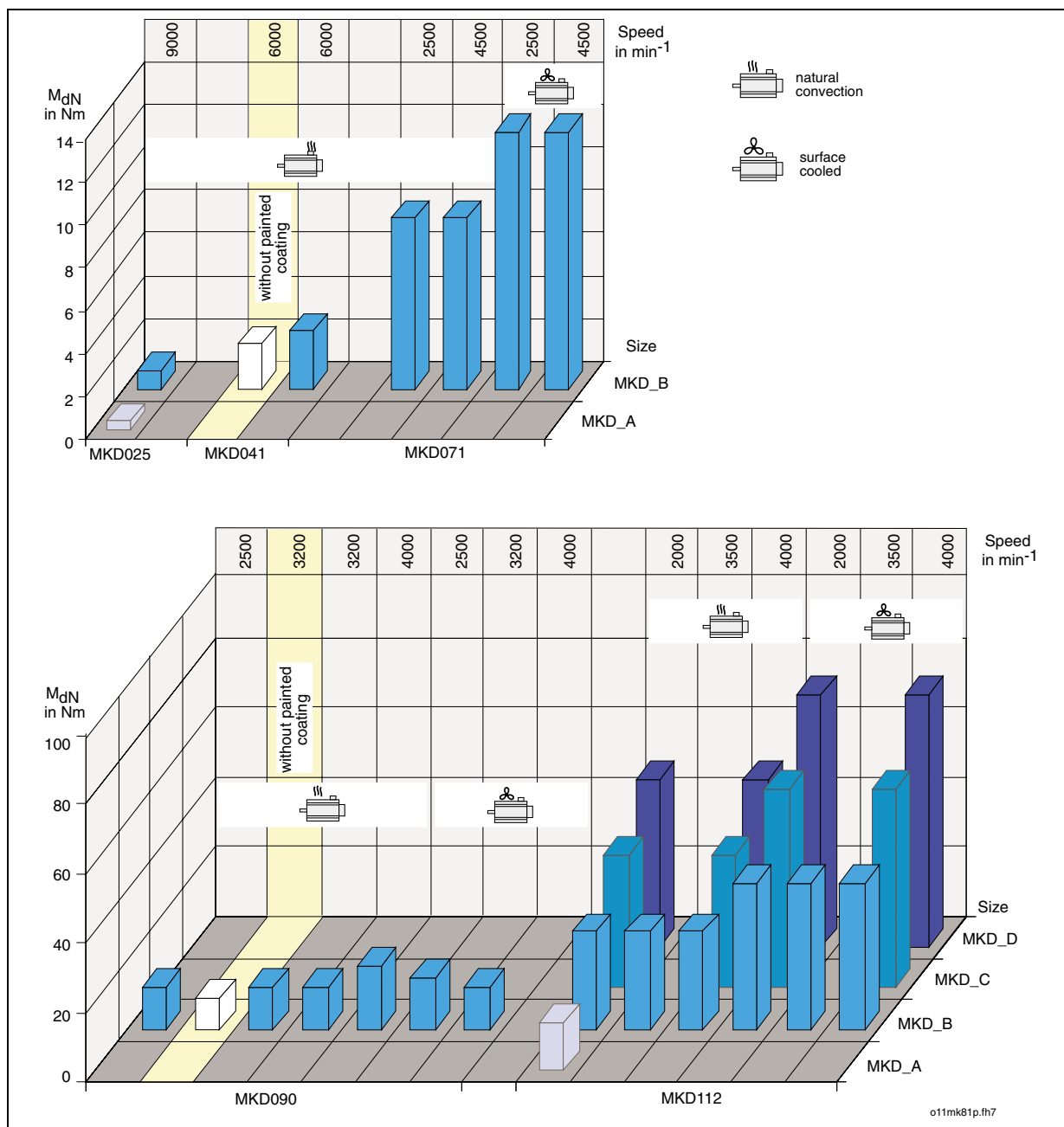


Fig. 1-1: Continuous torques at standstill of the available MKD motors

Note: For Information about MKD motors in ATEX-Design (Ex II3 GDx EEx NA II T155°C) use the Documentation DOK-MOTOR*-MKD*EXGIIK3-PRxx-DE-P.

Design and components MKD motors are permanent-magnet motors with electronic commutation. Special magnet materials permit the motors to be designed with low inertia masses. The following figure shows the principal design of MKD motors.

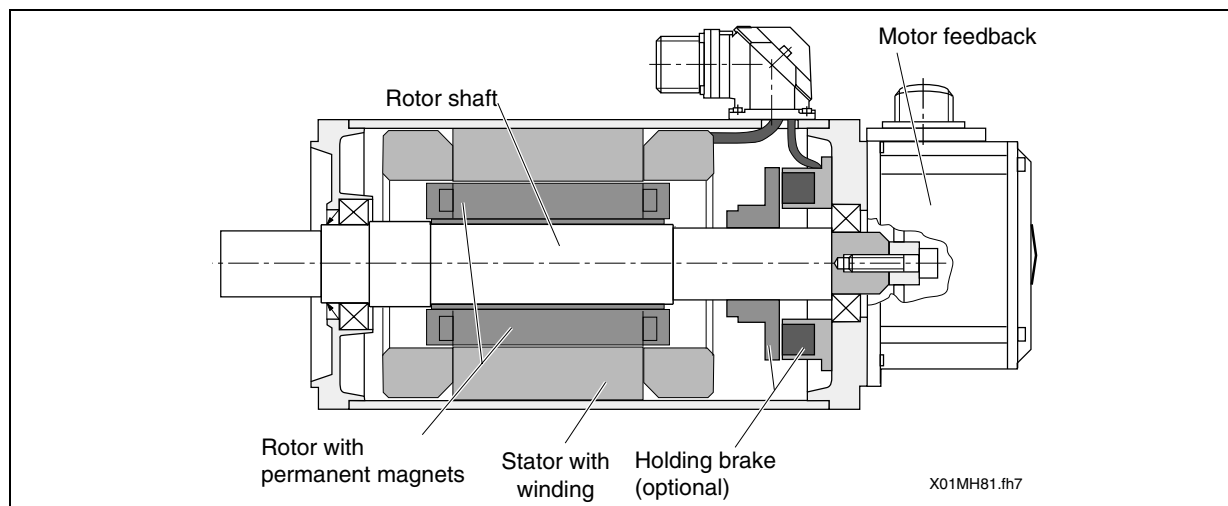


Fig. 1-2: Design of MKD motors

MKD motors are available in various designs. Please refer to the chapter on type codes for more detailed information.

1.2 About this Documentation

Structure of this Document Edition

The present documentation contains safety regulations, technical data, and operating instructions for MKD motors. The chapters can be subdivided in the following focal points with regard to their contents:

Chapter	Title	
1	Introduction	General information
2	Important Instructions on Use	Safety Required reading
3	Safety Instructions on Electric Drives and Controls	
4	MKD Type Code	Product description Planners and projectors
5	General Notes on Technical Data	
6	MKD025	
7	MKD041	
8	MKD071	
9	MKD090	
10	MKD112	
11	Accessories	
12	Connection System	
13	Application Instructions	
14	Handling	Practice Operating and main- tenance personnel
15	Assembly	
16	Startup, Operation, and Maintenance	
17	Service and Support	
18	Appendix	Additional information

Fig. 1-3: Document structure