

10.3. Shaft Load Capacity

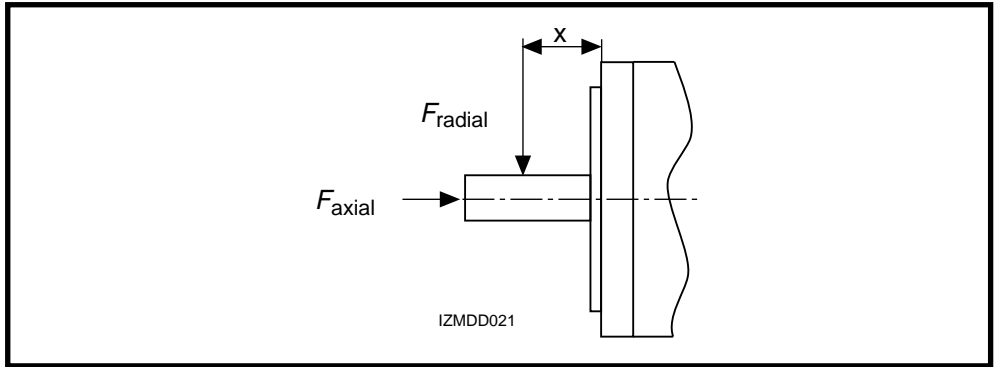


Fig 10.11: Shaft load

Permissible radial force
 F_{radial}

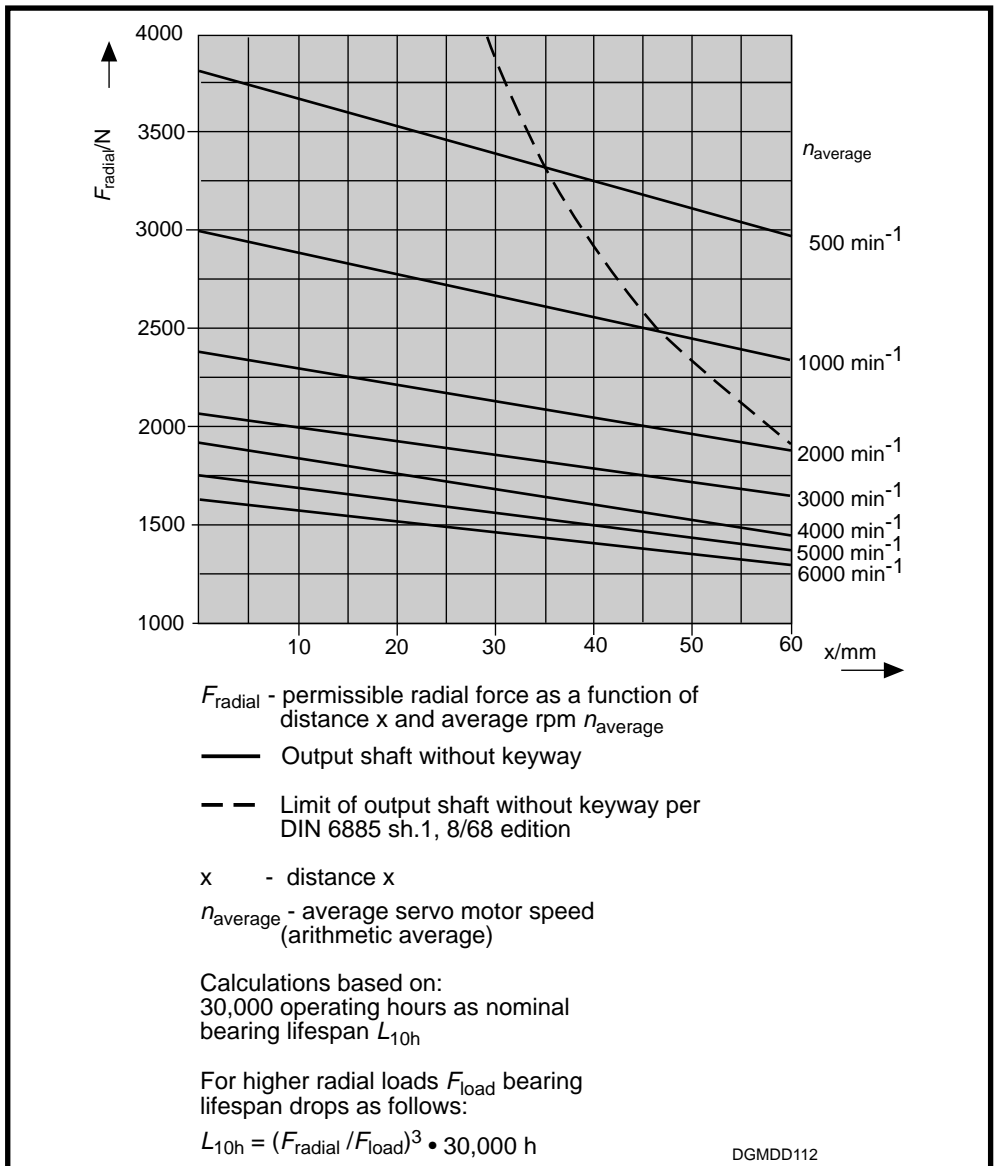


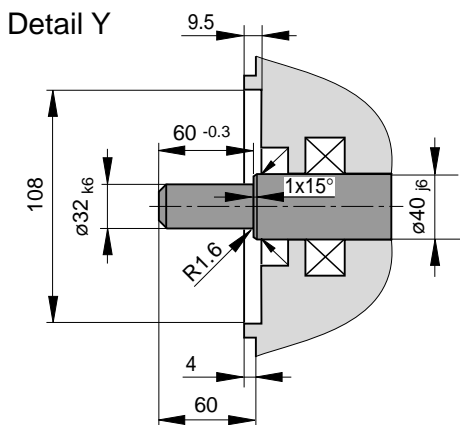
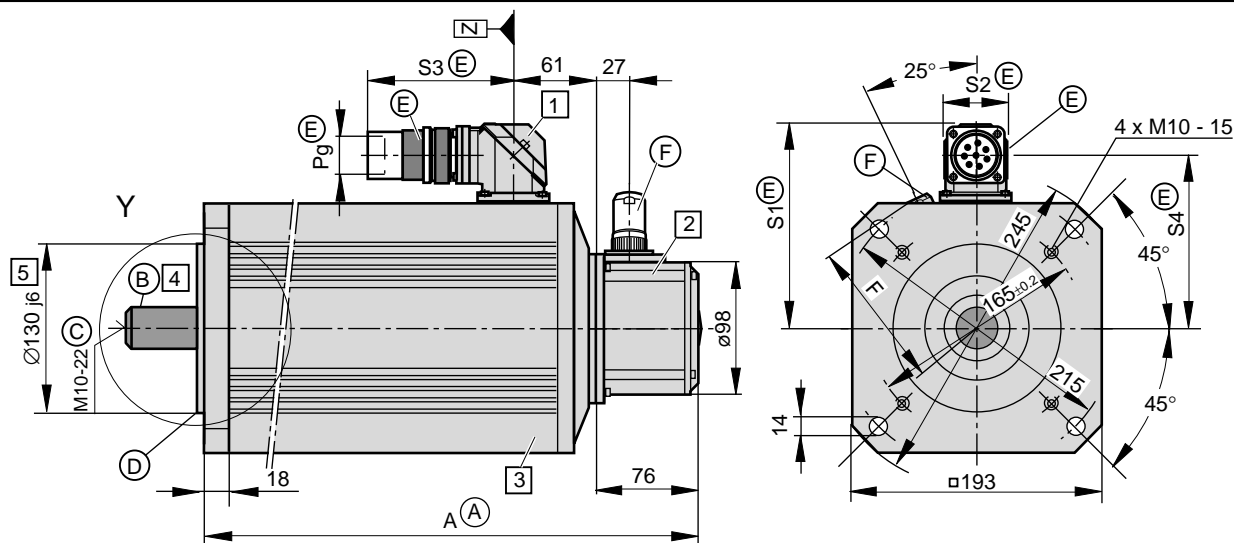
Fig 10.12: Permissible radial force

Permissible axial force
 F_{axial}

$$F_{\text{axial}} = 0.35 \cdot F_{\text{radial}}$$

F_{axial} - permissible axial force
 F_{radial} - permissible radial force

10.4. Dimensional Data



- Ⓒ Shaft end per DIN 748 section 3, 7/75 edition, IEC 72, 1971 edition, cylindrical
- Center hole DS M3-8 per DIN 332 section 2, 5/83 edition
- Max. tightening torque M_A for screws in the threads of the center hole: 10 Nm

- Ⓓ Flange type per DIN 42948, 11/65 edition, makes mounting possible
- as per design B5 (throughholes in flange)
- as per design B14 (threads in flange)

- Ⓔ **Motor power connector**
Depends on motor, must be ordered separately.

Ⓐ **Dimensional table Dim. A**

Size	Dim. A 1)
MDD 112 A	312
MDD 112 B	387
MDD 112 C	462
MDD 112 D	537

1) Bigger with some options.
The then valid dimensions is indicated with the respective feature.

- Ⓑ Concentricity, excentricity and coaxiality to the shaft per DIN 42955, tolerance class R, 12/81 edition.

Table of dimensions

type \ dim.	S1	S2	S3	S4	Pg
INS 108 ³⁾	151	45	110	133	21
INS 172 ²⁾	163	53	145	138	36

²⁾ with MDD 112 B-N-040, MDD 112 C-N-030, MDD 112 C-N-040, MDD 112 C-N-060, MDD 112 D-N-020, MDD 112 D-N-030, MDD 112 D-N-040, MDD 112 B-L-030, MDD 112 C-L-020, MDD 112 D-L-015

³⁾ other MDD 112

- Ⓕ **Feedback connector**
Must be ordered separately.

Table of dimensions

Name	Connector type	Dim. F
straight conn.	INS 513	110
	INS 512	112
angle conn. ⁴⁾	INS 511	108
	INS 510	

⁴⁾ Do not use with axially surface-cooled motor.

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Fig 10.13: Dimensional data MDD 112

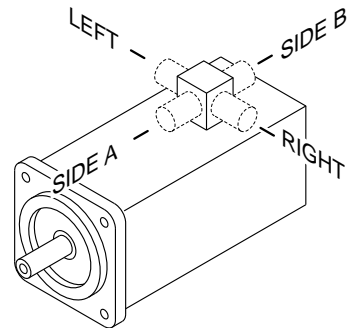
Available Options

1 Power connection

The output direction of the electrical power connector is selected at the time the order is placed. Possible output direction is either:

- side A or
- side B
- to the right
- to the left

The drawing depicts side A as output direction. The dimensions of any other output direction are obtained by virtually turning the connector housing around the Z axis.



2 Motor feedback

- Digital servo feedback (DSF)
- Digital servo feedback (DSF) with integrated multiturn absolute encoder

The dimensions are identical.

3 Blocking brake

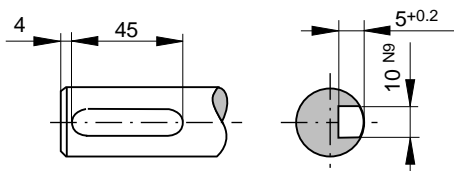
- without blocking brake
- with blocking brake: 14 Nm } The dimensions are identical.
- with blocking brake: 40 Nm (not available with MDD 112 A)
- with blocking brake: 60 Nm (not available with MDD 112)

Dimensional table for motor with holding brake of 40 Nm and 60 Nm

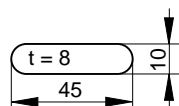
Size	Dim. A
MDD 112 B	437
MDD 112 C	512
MDD 112 D	587

4 Output shaft

- plain shaft (preferred type)
- with keyway per DIN 6885 sheet 1, 8/68 edition
(Note: balanced with entire key!)



Matching key: DIN 6885-A 10 x 8 x 45



5 Special centering diameter

- $\varnothing 180_{j6}$

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Fig 10.14: Dimensional data MDD 112 - available options