

## Elastomer Coupling ESM-A

- With conical hub on both sides
- Plug-in, backlash-free, oscillation dampening
- Rotational symmetry
- High speeds

Tightening torque refers to screws.  
Peak torque is in general 1,5 times nominal.

Dimensions in mm. Length dimensions according to DIN ISO 2768 cH.

**Material:** Elastomer spider: polyurethane (size 2000: tempered steel) Conical hubs: high-tensile strength aluminum Clamping ring: heat treated steel - burnished  
Screws: ISO 4762 - 12.9

**Temperature range (°C):** Depends on size, see table.



## General Data

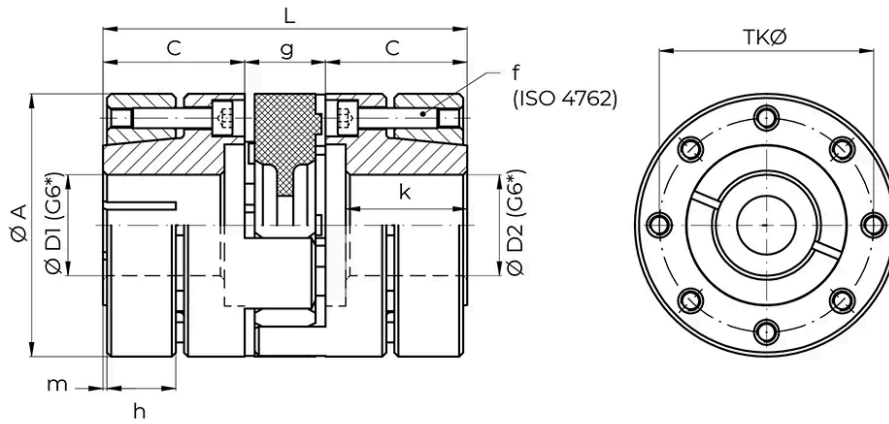
| Designation | Nominal Torque (Nm) | Hardness (shore) | Moment of inertia ( $10^{-6}\text{kg}\cdot\text{m}^2$ ) | Torsional stiffness (Nm/arcmin) | Axial max. shaft misalignment (mm) |
|-------------|---------------------|------------------|---|---------------------------------|------------------------------------|
| ESM-A10     | 10                  | 98 Sh-A          | 0.015   | 0.09                            | 0.5                                |
| ESM-A17     | 17                  | 98 Sh-A          | 0.05  | 0.24                            | 0.5                                |
| ESM-A25     | 25                  | 72 Sh-D          | 0.06  | 0.46                            | 0.5                                |
| ESM-A43     | 43                  | 98 Sh-A          | 0.19  | 0.7                             | 0.5                                |
| ESM-A50     | 50                  | 72 Sh-D          | 0.19  | 1.1                             | 0.5                                |
| ESM-A60     | 60                  | 98 Sh-A          | 0.28  | 1.0                             | 0.5                                |
| ESM-A90     | 90                  | 72 Sh-D          | 0.28  | 2.0                             | 0.5                                |
| ESM-A150    | 150                 | 98 Sh-A          | 0.65  | 1.2                             | 1                                  |
| ESM-A200    | 200                 | 72 Sh-D          | 0.65  | 2.3                             | 1                                  |
| ESM-A320    | 320                 | 98 Sh-A          | 2   | 3.6                             | 1                                  |
| ESM-A400    | 400                 | 72 Sh-D          | 2   | 7.0                             | 1                                  |
| ESM-A500    | 500                 | 98 Sh-A          | 5.6   | 4.5                             | 1                                  |
| ESM-A700    | 700                 | 98 Sh-A          | 13  | 8                               | 1                                  |
| ESM-A1000   | 1 000               | 72 Sh-D          | 13  | 12                              | 1                                  |
| ESM-A2000   | 2 000               | 98 Sh-A          | 75  | 21                              | 1                                  |

| Designation | Lateral max. shaft misalignment (mm) | Lateral spring rate (N/mm) | Tightening Torque (Nm) | Max. Speed (rpm) | Weight (kg) | Temperature range (°C) |
|-------------|--------------------------------------|----------------------------|------------------------|------------------|-------------|------------------------|
| ESM-A10     | 0.1                                  | 600                        | 2                      | 35 000           | 0.11        | -30° to +90°C          |
| ESM-A17     | 0.1                                  | 2 100                      | 3                      | 28 000           | 0.28        | -30° to +90°C          |
| ESM-A25     | 0.07                                 | 2 900                      | 3                      | 28 000           | 0.28        | -20° to +120°C         |
| ESM-A43     | 0.1                                  | 2 500                      | 6                      | 23 000           | 0.4         | -30° to +90°C          |
| ESM-A50     | 0.07                                 | 3 600                      | 6                      | 23 000           | 0.4         | -20° to +120°C         |
| ESM-A60     | 0.1                                  | 2 600                      | 6                      | 21 000           | 0.6         | -30° to +90°C          |
| ESM-A90     | 0.07                                 | 3 700                      | 6                      | 21 000           | 0.6         | -20° to +120°C         |
| ESM-A150    | 0.1                                  | 3 300                      | 6                      | 18 000           | 0.9         | -30° to +90°C          |
| ESM-A200    | 0.07                                 | 4 600                      | 6                      | 18 000           | 0.9         | -20° to +120°C         |
| ESM-A320    | 0.12                                 | 4 500                      | 30                     | 14 000           | 1.9         | -30° to +90°C          |
| ESM-A400    | 0.1                                  | 6 500                      | 30                     | 14 000           | 1.9         | -20° to +120°C         |
| ESM-A500    | 0.15                                 | 5 900                      | 50                     | 11 000           | 4.5         | -30° to +90°C          |

## General Data

| Designation      | Lateral max. shaft misalignment (mm) | Lateral spring rate (N/mm) | Tightening Torque (Nm) | Max. Speed (rpm) | Weight (kg) | Temperature range (°C) |
|------------------|--------------------------------------|----------------------------|------------------------|------------------|-------------|------------------------|
| <b>ESM-A700</b>  | 0.15                                 | 7 000                      | 100                    | 9 500            | 7           | −30° to +90°C          |
| <b>ESM-A1000</b> | 0.1                                  | 9 600                      | 100                    | 9 500            | 7           | −20° to +120°C         |
| <b>ESM-A2000</b> | 0.15                                 | 9 000                      | 100                    | 7 000            | 20          | −30° to +90°C          |

## Dimensions



\*Other bore tolerances on request.

| Designation | Nominal Torque (Nm) | A   | L         | C    | g  | f                 | k    | m   | ØD1/2 min. |
|-------------|---------------------|-----|-----------|------|----|-------------------|------|-----|------------|
| ESM-A10     | 10                  | 32  | 50 (±0.5) | 18.5 | 13 | 4xM3 - Ts= 2 Nm   | 15.5 | 1   | 6          |
| ESM-A17     | 17                  | 40  | 66 (±0.5) | 25   | 16 | 6xM4 - Ts= 3Nm    | 21   | 1   | 9          |
| ESM-A25     | 25                  | 40  | 66 (±0.5) | 25   | 16 | 6xM4 - Ts= 3Nm    | 21   | 1   | 10         |
| ESM-A43     | 43                  | 50  | 78 (±0.5) | 30   | 18 | 4xM5 - Ts= 6Nm    | 25   | 1   | 12         |
| ESM-A50     | 50                  | 50  | 78 (±0.5) | 30   | 18 | 4xM5 - Ts= 6Nm    | 25   | 1   | 15         |
| ESM-A60     | 60                  | 55  | 78 (±0.5) | 30   | 18 | 4xM5 - Ts= 8Nm    | 25   | 1   | 13         |
| ESM-A90     | 90                  | 55  | 78 (±0.5) | 30   | 18 | 4xM5 - Ts= 6Nm    | 25   | 1   | 17         |
| ESM-A150    | 150                 | 65  | 90 (±1)   | 35   | 20 | 8xM5 - Ts= 6Nm    | 30   | 1   | 17         |
| ESM-A200    | 200                 | 65  | 90 (±1)   | 35   | 20 | 8xM5 - Ts=6 Nm    | 30   | 1   | 19         |
| ESM-A320    | 320                 | 80  | 114 (±1)  | 45   | 24 | 4xM8 - Ts= 30Nm   | 40   | 1   | 20         |
| ESM-A400    | 400                 | 80  | 114 (±1)  | 45   | 24 | 4xM8 - Ts= 30Nm   | 40   | 1   | 25         |
| ESM-A500    | 500                 | 100 | 138 (±1)  | 55   | 28 | 4xM10 - Ts= 50Nm  | 48   | 1   | 22         |
| ESM-A700    | 700                 | 120 | 155 (±1)  | 61   | 33 | 4xM12 - Ts= 100Nm | 54   | 1.2 | 25         |
| ESM-A1000   | 1 000               | 120 | 155 (±1)  | 61   | 33 | 4xM12 - Ts= 100Nm | 54   | 1   | 25         |
| ESM-A2000   | 2 000               | 160 | 186 (±1)  | 73   | 40 | 8xM12 - Ts= 100Nm | 73   | -   | 35         |

| Designation | ØD1/2 max. | ØD1/2 prebored | TKØ  |
|-------------|------------|----------------|------|
| ESM-A10     | 14         | 5              | 24.5 |
| ESM-A17     | 19         | 9              | 31   |
| ESM-A25     | 19         | 9              | 31   |
| ESM-A43     | 24         | 10             | 39.5 |

## Dimensions

| Designation | ØD1/2 max. | ØD1/2 prebored | TKØ  |
|-------------|------------|----------------|------|
| ESM-A50     | 24         | 10             | 39.5 |
| ESM-A60     | 26         | 12             | 43   |
| ESM-A90     | 26         | 12             | 43   |
| ESM-A150    | 36         | 12             | 53   |
| ESM-A200    | 36         | 12             | 53   |
| ESM-A320    | 40         | 18             | 64   |
| ESM-A400    | 40         | 18             | 64   |
| ESM-A500    | 48         | 20             | 79   |
| ESM-A700    | 60         | 24             | 96   |
| ESM-A1000   | 60         | 24             | 96   |
| ESM-A2000   | 85         | 34             | 130  |