# 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.


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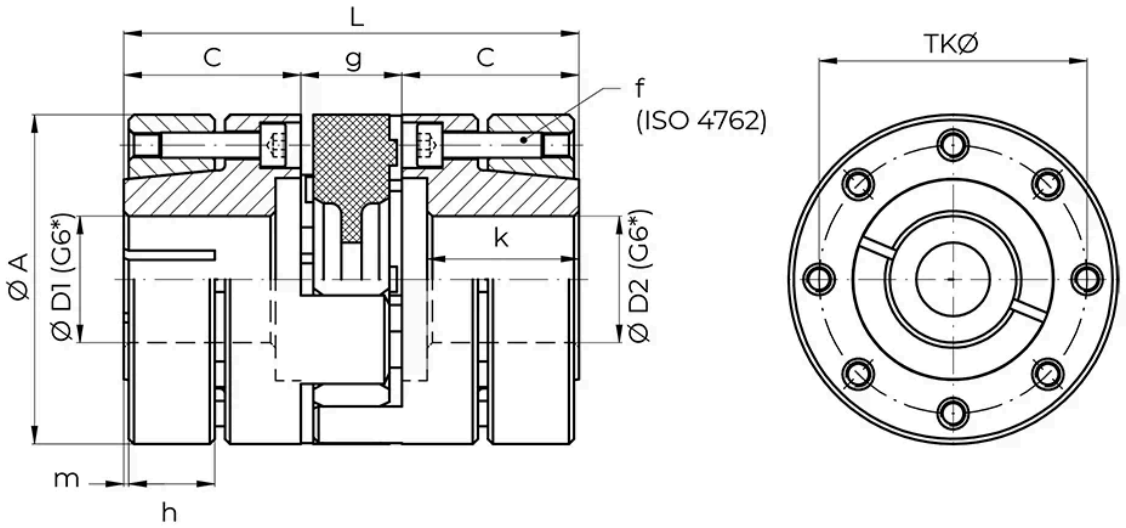
# General Data

| Designation | Nominal Torque (Nm) | Hardness (shore) | Moment of inertia ($10^{-6}$kg*m²) | 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 |
| **ESM-A700** | 0.15 | 7 000 | 100 | 9 500 | 7 | –30° to +90°C |
| **ESM-A1000** | 0.1 | 9 600 | 100 | 9 500 | 7 | –20° to +120°C |
| **ESM-A2000** | 0.15 | 9 000 | 100 | 7 000 | 20 | –30° to +90°C |


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# 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 |
| **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 |


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| Designation | ØD1/2 max. | ØD1/2 prebored | TKØ |
|---|---|---|---|
| **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 |


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