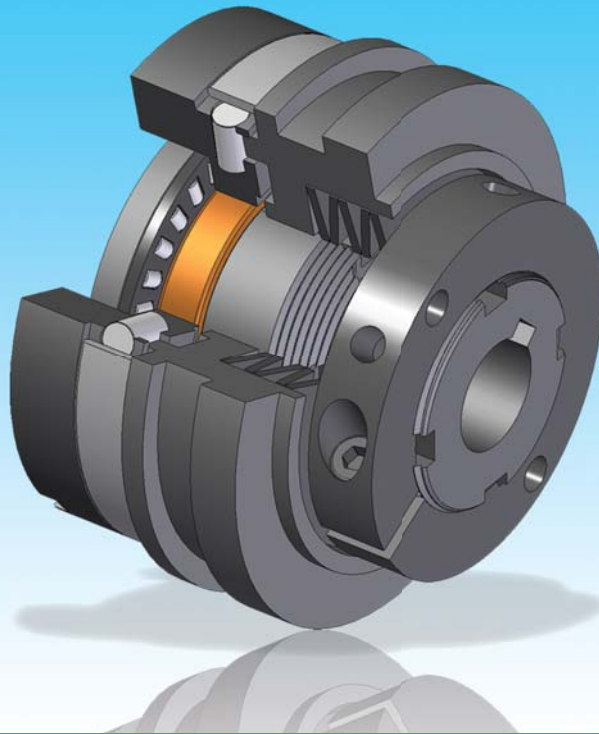


# ROLLERS TORQUE LIMITERS

(SAFETY COUPLINGS)

Up to 12.000 Nm of torque and 120 mm bore

## DSR



**ComInTec**<sup>®</sup>  
Technology for Safety

# DSR - rollers torque limiter: introduction



- ⦿ Precise torque setting by adjusting the radially balanced locking nut.
- ⦿ Innovative calibration system by "H dimension" for an immediate calibration of the device.
- ⦿ Equidistant re-engagement in phase or at 360°.
- ⦿ Available with electromechanical switch / proximity for the transmission disconnection.
- ⦿ Immediate intervention for an improved reaction compared to electronic systems.
- ⦿ Maintenance-free for long lasting high reliability.
- ⦿ Suitable for oily and wet environments.
- ON REQUEST
- ⦿ Complete with transmission gear, fully turned and mounted (plate wheel, pulley, gear pair).
- ⦿ Possibility to use helical springs for low intervention torques.
- ⦿ Connections with bore and keyway, locking assembly possible.
- ⦿ Version with personalized re-engagement in phase 36°, 45°, 60°, 90°, 120°, ... possible.

Safety coupling with the transmission of motion through rollers that allow complete disengagement when the calibrated torque is reached permitting a quick stop of the transmission due to micro-EM1. Suitable for transmitting high torque with high reliability and compact size.

## MAIN APPLICATIONS

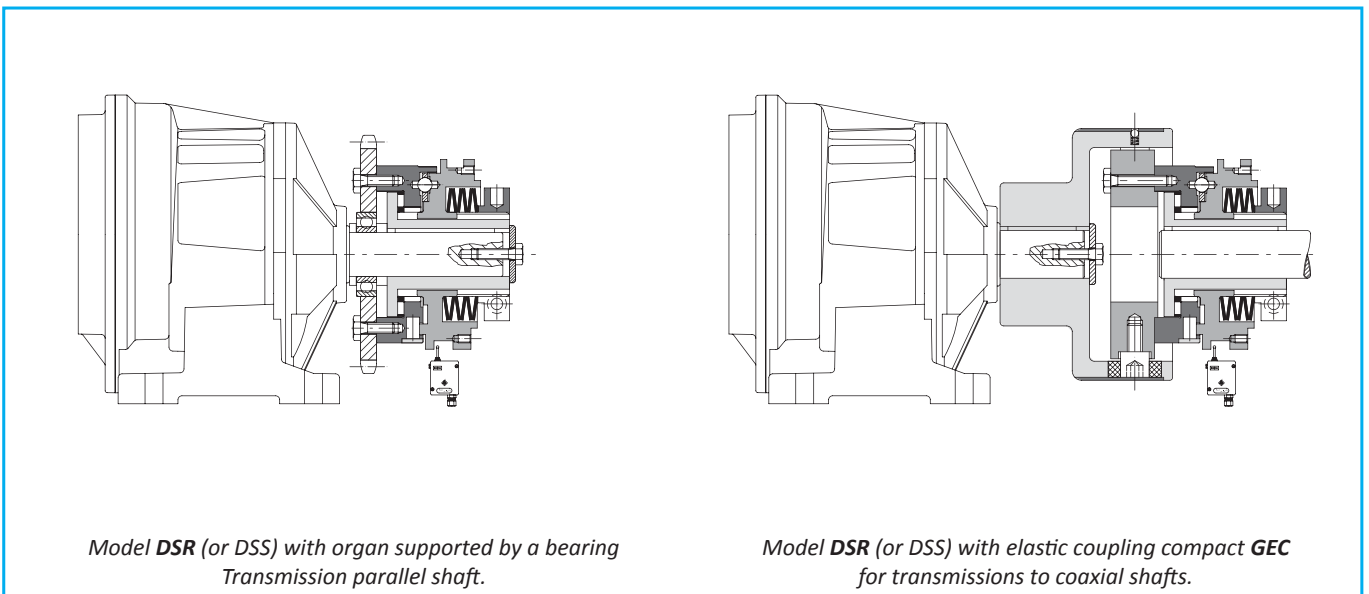
- ⦿ Packaging and wrapping machines.
- ⦿ Labelling machines.
- ⦿ Bottling machines.
- ⦿ Conveyors.

## ADVANTAGES AND BENEFITS

- ⦿ Protects the gearbox from jamming due to foreign matters.
- ⦿ Protects packages from squashing and deforming.
- ⦿ Protects the product handling elements from accumulations.
- ⦿ Maintains the timing between driver and driven after an overload.

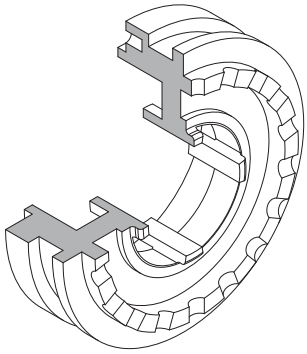
|  |   |   |         |
|--|---|---|---------|
|  | DSR: Basic model.   | from 2,5 to 12000 Nm<br>120 mm max bore | Page 25 |
|  | ... / FS: suitable for the mounting of simple transmission.             | from 2,5 to 12000 Nm<br>120 mm max bore | Page 26 |
|  | ... + GTR: connection with torsionally rigid coupling.                  | from 2,5 to 2800 Nm<br>90 mm max bore   | Page 27 |
|  | ... + GAS: connection with flexible coupling with high misalignments.   | from 2,5 to 9600 Nm<br>129 mm max bore  | Page 27 |
|  | ... + GEC: connection with flexible coupling with reduced misalignment. | from 2,5 to 12000 Nm<br>180 mm max bore | Page 28 |

## EXAMPLE OF ASSEMBLY



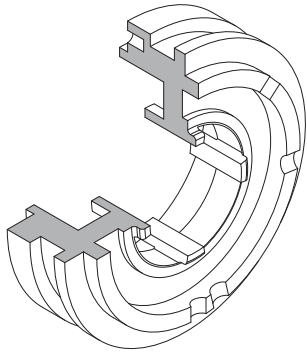
Model **DSR** (or **DSS**) with organ supported by a bearing  
Transmission parallel shaft.

Model **DSR** (or **DSS**) with elastic coupling compact **GEC**  
for transmissions to coaxial shafts.



**DSR: Roller torque limiter for steady transmission with high torques and vibrations**

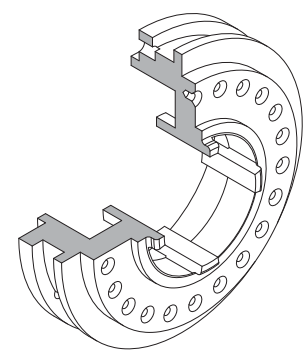
- Roller transmission.
- Equidistant automatic re-engagement.
- High torque settings at reduced dimensions.
- Same intervention torque in both directions.
- Torque range from 10 to 12.000 Nm; max. bore  $\varnothing$ 120 mm.



**DSR/F: Roller phase torque limiter, synchronised connection between input and output.**

- Roller transmission.
- Optimized roller arrangement (patented) with perfect stability and 3 point contact.
- Automatic re-engagement in phase 360° or personalized (30°, 45°, 60°, 90°, 120°, ...)
- High torque settings with compact dimensions.
- Torque range from 10 to 12000 Nm; max. bore  $\varnothing$ 120 mm.

The safety devices ComInTec with reengements in “phase” are characterized by a unique distribution of the rollers that represents the mathematically optimal solution to have a secure support balanced in all possible positions within 360°. When the limiter disengages, there are always at least three equally spaced rollers that rest on the rolling surface.



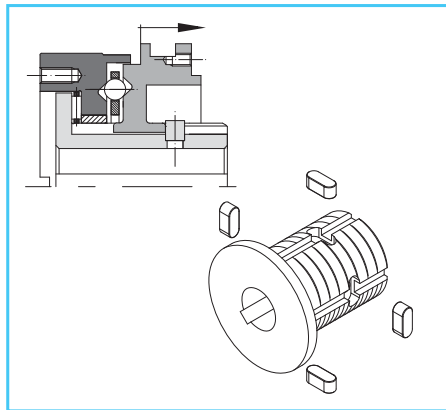
**DSS: Ball torque limiter with optimum sensitivity in case of sudden torque variations (ON REQUEST)**

- Ball transmission.
- High sensitivity and immediate intervention in case of minimal torque variation.
- Equidistant automatic re-engagement.
- Same intervention torque in both directions.
- Torque range from 2,5 to 2.050 Nm; max. bore  $\varnothing$ 68 mm.

## NUMBER OF RE-ENGAGEMENTS IN 360 DEGREES

| Model        | Size |      |       |       |       |       |       |       |
|--------------|------|------|-------|-------|-------|-------|-------|-------|
|              | 0.56 | 1.90 | 2.110 | 3.130 | 4.160 | 5.194 | 6.240 | 7.280 |
| <b>DSR</b>   | 18   | 18   | 16    | 16    | 16    | 24    | 24    | 24    |
| <b>DSR/F</b> | 1    | 1    | 1     | 1     | 1     | 1     | 1     | 1     |
| <b>DSS</b>   | 24   | 22   | 20    | 20    | 22    | 15    | -     | -     |

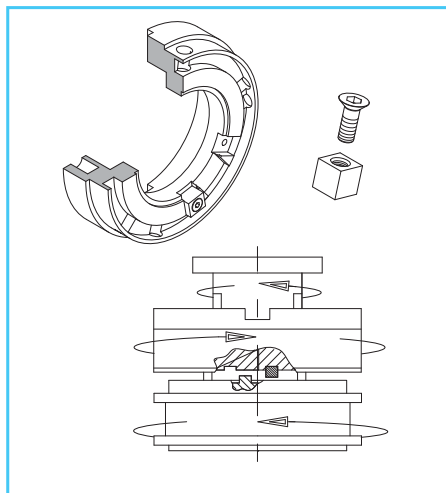
## DSR - rollers torque limiter: versions



### .../TAS: Torque limiter with stop pins

- ⊙ Complete disconnection prevented.
- ⊙ Minimum movement of the mobile base for an electrical signal to stop transmission.
- ⊙ Roller or ball transmission.
- ⊙ Torque range from 2,5 to 2.800 Nm; max. bore  $\varnothing 68$  mm.
- ⊙ Suitable for applications where the drive must not be disconnected.

The stop pins inserted in the central support as shown in the figure serve to limit the axial stroke of the device, preventing its complete disengagement and thus maintaining a stable transmission connection.

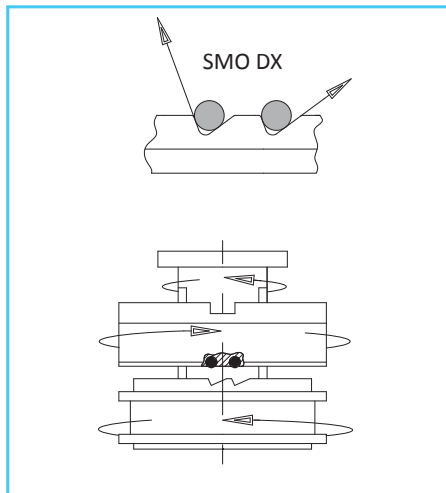


### .../AM: Torque limiter with mechanical disconnection to maintain the timing between driver and driven

- ⊙ Stop pin (patented) resists 4 times the maximum torque.
- ⊙ 345° rotation allows the cancellation of the residual torque before the device stops.
- ⊙ Maintains the timing and re-engages in the same position.
- ⊙ High torque settings at reduced dimensions.
- ⊙ Torque range from 10 to 2.800 Nm; max. bore  $\varnothing 68$  mm.

To allow our engineers to select the correct direction "SX" or "DX" for your application, we require a drawing showing:

- how the unit will be mounted on to the shaft (orientation).
- the direction of rotation
- confirm which drive will continue to rotate after the overload,
- the shaft or plate wheel, pulley, etc.

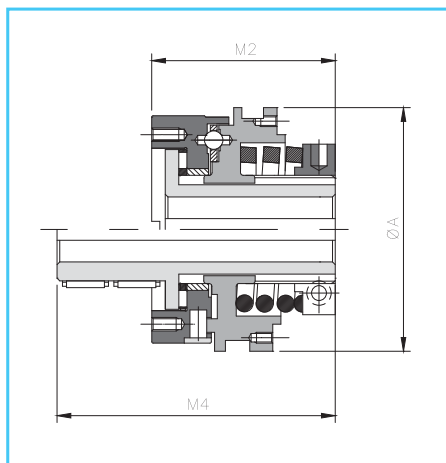


### .../SMO: Torque limiter with different disengagement torques from clockwise to anti-clockwise rotation.

- ⊙ Different intervention torques in the two rotation directions (patented).
- ⊙ Locking of one direction possible.
- ⊙ Roller transmission with automatic re-engagement.
- ⊙ Available with equidistant re-engagement or personalized angular phases.
- ⊙ Torque range from 10 to 12.000 Nm; max. bore  $\varnothing 120$  mm.

To allow our engineers to select the correct direction "SX" or "DX" for your application, we require a drawing showing:

- how the unit will be mounted on to the shaft (orientation).
- the direction of rotation.
- in which direction the high/low torque is required.



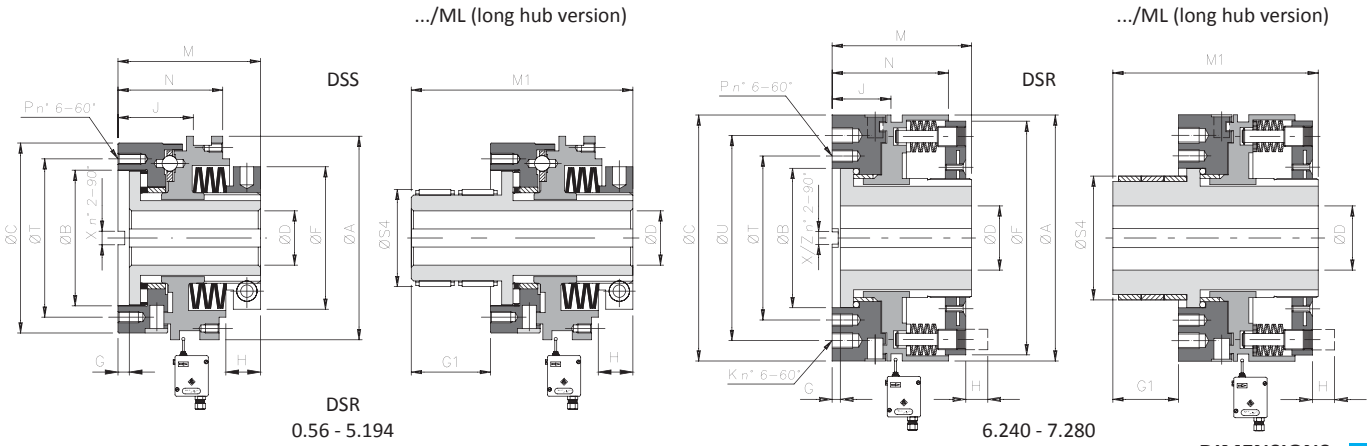
### .../CM: minimum torque version

Helical springs execution, for a wider torque range and consequently a finer adjustment on calibration is possible

| Size  | Model | Torque [Nm] |           | A   | M2   | M4  |
|-------|-------|-------------|-----------|-----|------|-----|
|       |       | spring ST   | spring SQ |     |      |     |
| 0.56  | DSS   | 0,8 - 10,9  | -         | 56  | 64,5 | 92  |
|       | DSR   | 1,9 - 25,6  | -         |     |      |     |
| 1.90  | DSS   | 2 - 40      | 5 - 90    | 90  | 75   | 110 |
|       | DSR   | 8 - 75      | 8 - 145   |     |      |     |
| 2.110 | DSS   | 9 - 50      | 12 - 100  | 110 | 91   | 129 |
|       | DSR   | 12 - 90     | 25 - 190  |     |      |     |
| 3.130 | DSS   | 12 - 135    | 24 - 190  | 130 | 110  | 157 |
|       | DSR   | 30 - 300    | 50 - 320  |     |      |     |

# DSR - rollers torque limiter: technical data

- Basic model, connection with in-line shafts possible.
- The assembly with helical springs allows a higher sensitivity in torque setting: .../CM.
- Available with longer shaft for the assembly with transmission elements of large size : .../ML.
- Available with anti-corrosive surface treatments.
- Available with intervention signal ring.
- Torque range from 2,5 to 12.000 Nm; max. bore  $\varnothing$ 120 mm.



## DIMENSIONS

| Size  | Mod.       | A   | B<br>H7 | C   | D H7 |     |       | F     | G   | G1   | J            | M     | M1    | N          | P   | S4 h7   |         | T   | X      | U   | Z      |
|-------|------------|-----|---------|-----|------|-----|-------|-------|-----|------|--------------|-------|-------|------------|-----|---------|---------|-----|--------|-----|--------|
|       |            |     |         |     | pb   | max |       |       |     |      |              |       |       |            |     | Bushing | Bearing |     |        |     |        |
|       |            |     |         |     |      | /ML |       |       |     |      |              |       |       |            |     |         |         |     |        |     |        |
| 0.56  | DSS<br>DSR | 56  | 41      | 56  | -    | 20  | 20*   | 42    | 3,8 | 27,5 | 21<br>20     | 46    | 73,5  | 32<br>31,5 | M5  | 33      | 33      | 48  | 6x3    | -   | 6x3    |
| 1.90  | DSS<br>DSR | 90  | 60      | 84  | -    | 28  | 28*   | 63    | 5   | 35   | 33,5<br>27,5 | 63    | 98    | 47<br>45   | M5  | 45      | 43      | 70  | 6x3    | -   | 6x3    |
| 2.110 | DSS<br>DSR | 110 | 78      | 104 | -    | 40  | 38    | 82    | 6   | 38   | 39<br>36,5   | 76    | 114   | 54<br>52   | M6  | 60      | 55      | 89  | 8x3,5  | -   | 8x3,5  |
| 3.130 | DSS<br>DSR | 130 | 90,5    | 124 | 20   | 50  | 50*   | 104   | 6   | 47   | 47<br>45     | 88    | 135   | 65<br>64   | M8  | 72      | 70      | 105 | 10x4   | -   | 10x4   |
| 4.160 | DSS<br>DSR | 160 | 105     | 148 | 25   | 58  | 58*   | 128   | 8   | 53   | 58,5<br>54,5 | 107   | 160   | 76,5       | M10 | 85      | 83      | 125 | 12x4   | -   | 12x4   |
| 5.194 | DSS<br>DSR | 194 | 120,5   | 176 | 28   | 68  | 68*   | 157   | 6,5 | 57,5 | 65<br>64,5   | 124,5 | 182   | 88<br>88,5 | M12 | 98      | 98      | 155 | 14x4,6 | -   | 14x4,6 |
| 6.240 | DSR        | 240 | 136     | 240 | 50   | 90  | ▲ 90  | 227   | 8   | ▲ 64 | 54,5         | 141   | ▲ 205 | 113,5      | M12 | ▲ 118   | -       | 160 | 18x5,1 | 200 | 16x5,1 |
| 7.280 | DSR        | 280 | 198     | 280 | 50   | 120 | ▲ 120 | 262,5 | 8   | ▲ 82 | 82           | 200   | ▲ 282 | 159        | M20 | ▲ 168   | -       | 230 | 20x6,1 | -   | 20x6,1 |

\* with reduced keyway UNI 7510.

## TECHNICAL DETAILS

| Size  | Model      | Torque [Nm]           |                          |                           | Inertia [kgm <sup>2</sup> ] |          |                 | Max speed [Rpm] | Weight [Kg] |        |
|-------|------------|-----------------------|--------------------------|---------------------------|-----------------------------|----------|-----------------|-----------------|-------------|--------|
|       |            | T0                    | T1                       | T2                        | Flange side                 | Nut side | Nut side .../ML |                 | DSR         | .../ML |
| 0.56  | DSS<br>DSR | 2,5 - 9,5<br>10 - 20  | 5,5 - 17,5<br>14 - 37    | 15 - 32<br>30 - 75        | 0,00008                     | 0,00010  | 0,00011         | 4500<br>1500    | 0,6         | 0,7    |
| 1.90  | DSS<br>DSR | 20 - 49<br>50 - 105   | 25 - 65<br>85 - 145      | 35 - 115<br>130 - 265     | 0,00059                     | 0,00106  | 0,00111         | 3000<br>1000    | 1,9         | 2,4    |
| 2.110 | DSS<br>DSR | 19 - 72<br>60 - 150   | 55 - 160<br>142 - 330    | 80 - 290<br>275 - 620     | 0,00174                     | 0,00268  | 0,00281         | 2500<br>800     | 3,6         | 4,4    |
| 3.130 | DSS<br>DSR | 50 - 225<br>115 - 370 | 70 - 300<br>200 - 510    | 130 - 540<br>430 - 900    | 0,00441                     | 0,00639  | 0,00686         | 2000<br>700     | 6,0         | 7,3    |
| 4.160 | DSS<br>DSR | -                     | 150 - 690<br>330 - 1040  | 300 - 1280<br>750 - 1800  | 0,01067                     | 0,01797  | 0,01891         | 1600<br>550     | 10,7        | 13,2   |
| 5.194 | DSS<br>DSR | -                     | 360 - 1040<br>540 - 1620 | 460 - 2050<br>1050 - 2800 | 0,02873                     | 0,04239  | 0,04453         | 1300<br>400     | 18,2        | 21,6   |
| 6.240 | DSR        | 1600 - 3800           | 2000 - 8000              | -                         | 0,10306                     | 0,16930  | 0,17371         | 300             | 30,6        | ▲ 38,5 |
| 7.280 | DSR        | 2000 - 5600           | 2500 - 12000             | -                         | 0,09313                     | 0,36412  | 0,39456         | 200             | 79          | ▲ 91,8 |

▲ On request

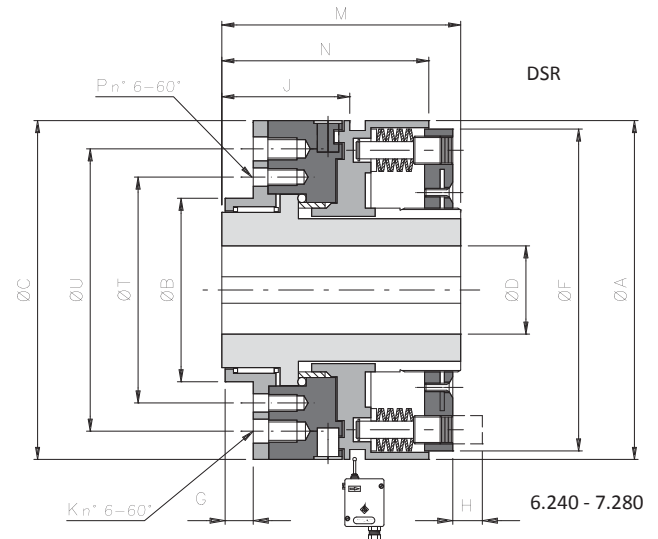
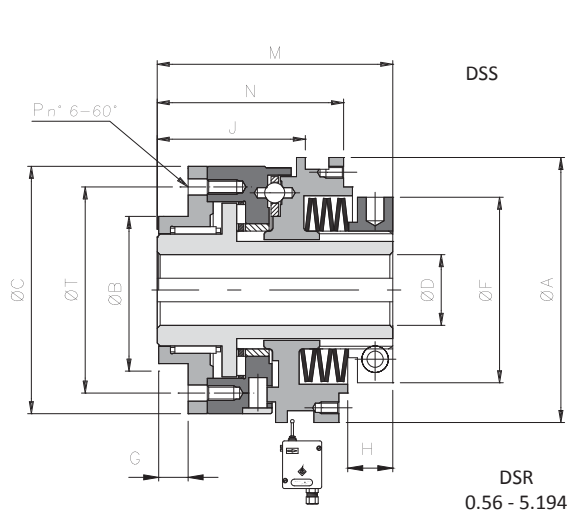
## NOTES

- Weights are relevant to the pilot bore torque limiter (DSR or DSS), inertias refer to the torque limiter (DSS or DSR) hole max.
- Microswitches EM1 or EM2 and inductive sensor PRX see page 73

## .../FS - version with supporting flange: technical data



- Basic model with flange for parallel shafts.
- The assembly with helical springs allows a higher sensitivity in torque setting: .../FS/CM.
- Available with anti-corrosive surface treatments.
- Available with /FIR flange for reduced axial dimensions.
- Available with /FAV flange for cardan coupling connection.
- Torque range from 2,5 to 12.000 Nm; max. bore  $\varnothing$ 120 mm.



### DIMENSIONS

| Size  | Model      | A   | B<br>h7 | C   | D H7       |     | F     | G    | J            | K   | M   | N            | P   | T   | U   |
|-------|------------|-----|---------|-----|------------|-----|-------|------|--------------|-----|-----|--------------|-----|-----|-----|
|       |            |     |         |     | Pilot bore | max |       |      |              |     |     |              |     |     |     |
| 0.56  | DSS<br>DSR | 56  | 38      | 56  | -          | 20* | 42    | 7,5  | 34,5<br>33   | -   | 59  | 45<br>44     | M5  | 48  | -   |
| 1.90  | DSS<br>DSR | 90  | 50      | 84  | -          | 28* | 63    | 9,5  | 50,5<br>44,5 | -   | 80  | 64<br>62     | M5  | 70  | -   |
| 2.110 | DSS<br>DSR | 110 | 60      | 104 | -          | 38  | 82    | 11,5 | 56<br>53,5   | -   | 93  | 71<br>69     | M6  | 89  | -   |
| 3.130 | DSS<br>DSR | 130 | 80      | 124 | 20         | 50* | 104   | 11,5 | 65<br>63     | -   | 106 | 83<br>82     | M8  | 105 | -   |
| 4.160 | DSS<br>DSR | 160 | 100     | 148 | 25         | 58* | 128   | 15,5 | 83,5<br>79,5 | -   | 132 | 101,5        | M10 | 125 | -   |
| 5.194 | DSS<br>DSR | 194 | 120     | 176 | 28         | 68* | 157   | 17,5 | 92,5<br>93   | -   | 152 | 115,5<br>116 | M12 | 155 | -   |
| 6.240 | DSR        | 240 | 130     | 240 | 50         | 90  | 227   | 18   | 83,5         | M16 | 170 | 142,5        | M12 | 160 | 200 |
| 7.280 | DSR        | 280 | 190     | 280 | 50         | 120 | 262,5 | 30   | 130          | -   | 248 | 207          | M20 | 230 | -   |

\* with reduced keyway UNI 7510.

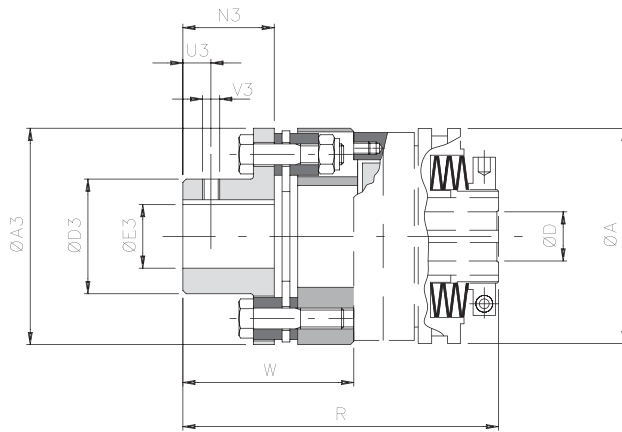
### TECHNICAL DETAILS

| Size  | Model      | Torque [Nm]           |                          |                           | Inertia [kgm <sup>2</sup> ] |          | Max speed<br>[Rpm] | Weight [kg] |
|-------|------------|-----------------------|--------------------------|---------------------------|-----------------------------|----------|--------------------|-------------|
|       |            | T0                    | T1                       | T2                        | Flange side                 | Nut side |                    |             |
| 0.56  | DSS<br>DSR | 2,5 - 9,5<br>10 - 20  | 5,5 - 17,5<br>14 - 37    | 15 - 32<br>30 - 75        | 0,00012                     | 0,00010  | 4500<br>1500       | 0,7         |
| 1.90  | DSS<br>DSR | 20 - 49<br>50 - 105   | 25 - 65<br>85 - 145      | 35 - 115<br>130 - 265     | 0,00087                     | 0,00109  | 3000<br>1000       | 2,4         |
| 2.110 | DSS<br>DSR | 19 - 72<br>60 - 150   | 55 - 160<br>142 - 330    | 80 - 290<br>275 - 620     | 0,00234                     | 0,00275  | 2500<br>800        | 4,4         |
| 3.130 | DSS<br>DSR | 50 - 225<br>115 - 370 | 70 - 300<br>200 - 510    | 130 - 540<br>430 - 900    | 0,00575                     | 0,00660  | 2000<br>700        | 7,1         |
| 4.160 | DSS<br>DSR | -                     | 150 - 690<br>330 - 1040  | 300 - 1280<br>750 - 1800  | 0,01447                     | 0,01848  | 1600<br>550        | 13          |
| 5.194 | DSS<br>DSR | -                     | 360 - 1040<br>540 - 1620 | 460 - 2050<br>1050 - 2800 | 0,03664                     | 0,04352  | 1300<br>400        | 21,6        |
| 6.240 | DSR        | 1600 - 3800           | 2000 - 8000              | -                         | 0,13005                     | 0,17123  | 300                | 37,5        |
| 7.280 | DSR        | 2000 - 5600           | 2500 - 12000             | -                         | 0,18058                     | 0,38306  | 200                | 90,5        |

### NOTES

- Weights are relevant to the pilot bore torque limiter (.../FS), inertias refer to the torque limiter (.../FS) hole max.
- Microswitches EM1 or EM2 and inductive sensor PRX see page 73

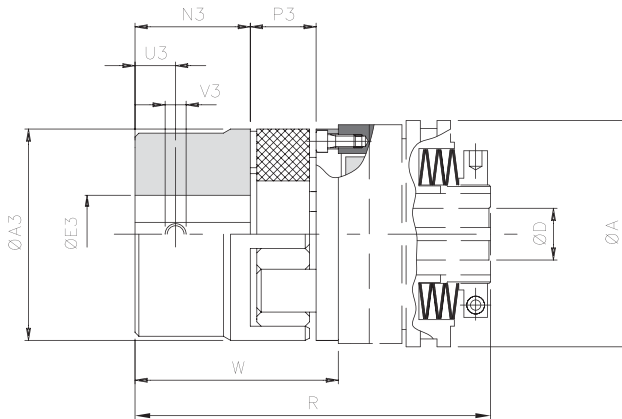
## ... + GTR - model with torsionally rigid coupling: technical data



DIMENSIONS AND TECHNICAL DETAILS

| Size  |     | Torque [Nm] |      | A3  | D3  | E3 H7 max | N3 | U3 | V3  | A   | D H7       |     | R   | W     | Misalignments |              |               | Rigidity [Nm/rad*10 <sup>3</sup> ] | Max speed [Rpm] |      | Weight [Kg] |
|-------|-----|-------------|------|-----|-----|-----------|----|----|-----|-----|------------|-----|-----|-------|---------------|--------------|---------------|------------------------------------|-----------------|------|-------------|
| DSS   | DSR | Nom         | Max  |     |     |           |    |    |     |     | Pilot bore | max |     |       | Angular α [°] | Axial X [mm] | Radial K [mm] |                                    | DSS             | DSR  |             |
| 0.56  | 0   | 60          | 120  | 78  | 45  | 32        | 29 | 10 | M5  | 56  | -          | 20  | 105 | 59    | 1°            | 1,40         | 0             | 80                                 | 4500            | 1500 | 1,4         |
| 1.90  | 2   | 150         | 300  | 92  | 53  | 38        | 42 | 10 | M5  | 90  | -          | 28  | 137 | 74    | 0° 45'        | 0,95         |               | 156                                | 3000            | 1000 | 2,1         |
| 2.110 | 3   | 300         | 600  | 112 | 65  | 45        | 46 | 15 | M8  | 110 | -          | 40  | 161 | 85    | 0° 45'        | 1,25         |               | 415                                | 2500            | 800  | 3,9         |
| 3.130 | 4   | 700         | 1400 | 136 | 75  | 52        | 56 | 15 | M8  | 130 | 20         | 50  | 186 | 98    | 0° 45'        | 1,45         |               | 970                                | 2000            | 700  | 5,8         |
| 4.160 | 5   | 1100        | 2200 | 162 | 92  | 65        | 66 | 20 | M8  | 160 | 25         | 58  | 223 | 116,5 | 0° 45'        | 1,65         |               | 1846                               | 1600            | 550  | 10,8        |
| 5.194 | 7   | 2600        | 5200 | 206 | 130 | 90        | 92 | 20 | M10 | 194 | 28         | 68  | 270 | 145,5 | 0° 45'        | 2,25         |               | 3511                               | 1300            | 400  | 21,9        |

## ... + GAS - model with jaw coupling: technical data



DIMENSIONS AND TECHNICAL DETAILS

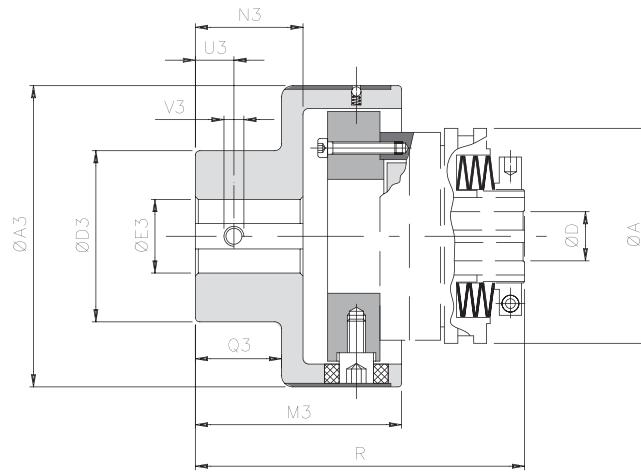
| Size    |          | Torque [Nm] |      | A3      | E3 H7 max | N3  | P3  | U3 | V3 | A   | D H7       |     | R   | W     | Misalignments |              |               | Max speed [Rpm] |      | Weight [Kg] |      |
|---------|----------|-------------|------|---------|-----------|-----|-----|----|----|-----|------------|-----|-----|-------|---------------|--------------|---------------|-----------------|------|-------------|------|
| DSS     | DSR      | Nom         | Max  |         |           |     |     |    |    |     | Pilot bore | max |     |       | Angular α [°] | Axial X [mm] | Radial K [mm] | DSS             | DSR  |             |      |
| 0.56    | 0 (24)   |             |      | 00 (19) | 60        | 120 | 55  | 35 | 30 | 18  | 10         | M5  | 56  | -     | 20            | 105          | 57            | 1° 18'          | 1    | 0,22        | 4500 |
| 1.90    | 2 (38)   | 0 (24)      | 325  | 650     | 80        | 48  | 45  | 24 | 15 | M8  | 90         | -   | 28  | 141   | 78            | 1,4          | 0,28          |                 | 3000 | 1000        | 3,7  |
| 2.110   | 4 (48)   | 1 (28)      | 525  | 1050    | 105       | 62  | 56  | 28 | 20 | M8  | 110        | -   | 40  | 171   | 95            | 1,7          | 0,36          |                 | 2500 | 800         | 5,2  |
| 3.130   | 5 (55)   | 2 (38)      | 685  | 1370    | 120       | 74  | 65  | 30 | 20 | M10 | 130        | 20  | 50  | 198   | 110           | 1,8          | 0,38          |                 | 2000 | 700         | 9,1  |
| 4.160   | 7 (75)   | 4 (48)      | 1465 | 2930    | 160       | 95  | 85  | 40 | 25 | M10 | 160        | 25  | 58  | 249   | 142           | 2,5          | 0,48          |                 | 1600 | 550         | 17,9 |
| 5.194   | 8 (90)   | 5 (55)      | 3600 | 7200    | 200       | 110 | 100 | 45 | 30 | M12 | 194        | 28  | 68  | 288,5 | 164           | 2,8          | 0,50          |                 | 1300 | 400         | 29,5 |
| ▲ 6.240 | 9 (100)  | -           | 3300 | 6600    | 225       | 115 | 110 | 50 | 30 | M12 | 240        | 50  | 90  | 326   | 185           | 3,0          | 0,52          |                 | -    | 300         | -    |
| ▲ 7.280 | 10 (110) | -           | 4800 | 9600    | 255       | 125 | 120 | 55 | 33 | M16 | 280        | 50  | 120 | 412   | 212           | 3,2          | 0,55          |                 | -    | 200         | -    |

▲ On request

NOTES

- Data is relevant only to application (GTR - GAS), for torque limiter data see on page 25.
- Weights are relevant to the pilot bore torque limiter (GTR - GAS).
- Microswitches EM1 or EM2 and inductive sensor PRX see page 73

## ... + GEC - model with compact elastic coupling: technical data



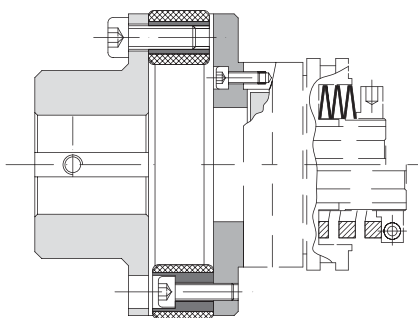
### DIMENSIONS

| Size      |     | Torque [Nm] |       | A3  | D3  | E3 H7      |     | M3   | N3  | Q3  | U3 | V3  | A   | D H7       |     | R     |
|-----------|-----|-------------|-------|-----|-----|------------|-----|------|-----|-----|----|-----|-----|------------|-----|-------|
| DSS - DSR | GEC | Nom         | Max   |     |     | pilot bore | max |      |     |     |    |     |     | pilot bore | max |       |
| 0.56      | 0   | 70          | 110   | 78  | 50  | 10         | 28  | 63,5 | 32  | 28  | 8  | M4  | 56  | -          | 20  | 100,5 |
| 1.90      | 1   | 280         | 420   | 108 | 70  | 12         | 38  | 89   | 49  | 44  | 12 | M6  | 90  | -          | 28  | 142   |
| 2.110     | 2   | 570         | 860   | 130 | 80  | 15         | 45  | 111  | 65  | 59  | 15 | M8  | 110 | -          | 40  | 177   |
| 3.130     | 3   | 980         | 1500  | 161 | 100 | 15         | 60  | 140  | 85  | 77  | 15 | M8  | 130 | 20         | 50  | 215   |
| 4.160     | 4   | 2340        | 3600  | 206 | 120 | 20         | 70  | 168  | 105 | 97  | 20 | M10 | 160 | 25         | 58  | 261   |
| 5.194     | 5   | 3880        | 5800  | 239 | 135 | 30         | 80  | 201  | 130 | 120 | 20 | M10 | 194 | 28         | 68  | 309,5 |
| 6.240     | 6   | 15000       | 20000 | 315 | 215 | 40         | 150 | 260  | 165 | 150 | 25 | M12 | 240 | 50         | 90  | 381   |
| 7.280     | 7   | 30000       | 35000 | 364 | 240 | 40         | 180 | 310  | 205 | 185 | 25 | M12 | 280 | 50         | 120 | 485   |

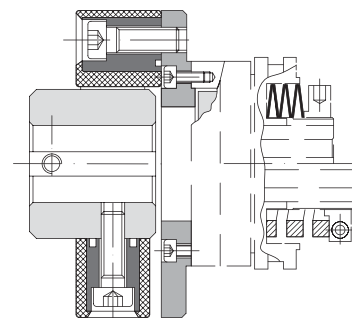
### TECHNICAL DETAILS

| Size       |     | Misalignments        |              |              |              |               |              | Max speed [Rpm] |      | Weight [kg] |
|------------|-----|----------------------|--------------|--------------|--------------|---------------|--------------|-----------------|------|-------------|
| DSS<br>DSR | GEC | Angular $\alpha$ [°] |              | Axial X [mm] |              | Radial K [mm] |              | DSS             | DSR  |             |
|            |     | continuous           | intermittent | continuous   | intermittent | continuous    | intermittent |                 |      |             |
| 0.56       | 0   | 1°                   | 1° 30'       | ± 0,7        | ± 1,5        | 0,5           | 0,7          | 4500            | 1500 | 1,2         |
| 1.90       | 1   | 0° 48'               | 1°           | ± 0,7        | ± 1,5        | 0,5           | 0,7          | 3000            | 1000 | 3,5         |
| 2.110      | 2   | 0° 36'               | 0° 48'       | ± 0,7        | ± 1,5        | 0,6           | 0,7          | 2500            | 800  | 6,2         |
| 3.130      | 3   | 0° 30'               | 0° 42'       | ± 0,8        | ± 1,6        | 0,6           | 0,8          | 2000            | 700  | 11,5        |
| 4.160      | 4   | 0° 24'               | 0° 30'       | ± 0,8        | ± 1,6        | 0,6           | 0,8          | 1600            | 550  | 20,8        |
| 5.194      | 5   | 0° 24'               | 0° 30'       | ± 0,8        | ± 1,6        | 0,6           | 0,8          | 1300            | 400  | 32          |
| 6.240      | 6   | 0° 24'               | 0° 30'       | ± 0,8        | ± 1,6        | 0,6           | 0,8          | -               | 300  | 91,3        |
| 7.280      | 7   | 0° 24'               | 0° 30'       | ± 0,8        | ± 1,6        | 0,6           | 0,8          | -               | 200  | 173,9       |

### OTHER COUPLINGS ON REQUEST



Model DSR (or DSS) with elastic coupling GF to absorb high torsional vibrations and for fast substitution of the elastic element.



Modello DSR (or DSS) with elastic coupling GGF to accept high misalignments.

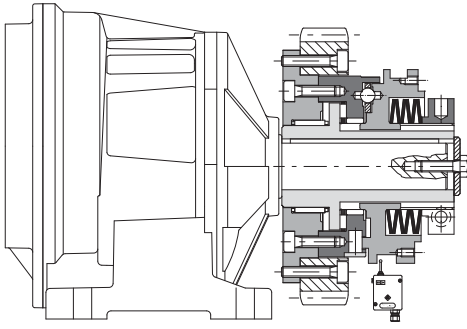
### NOTES

▲ On request

- Data is relevant only to application (GEC), for torque limiter data see on page 25.
- Weights are relevant to the pilot bore torque limiter (GEC).
- Microswitches EM1 or EM2 and inductive sensor PRX see page 73

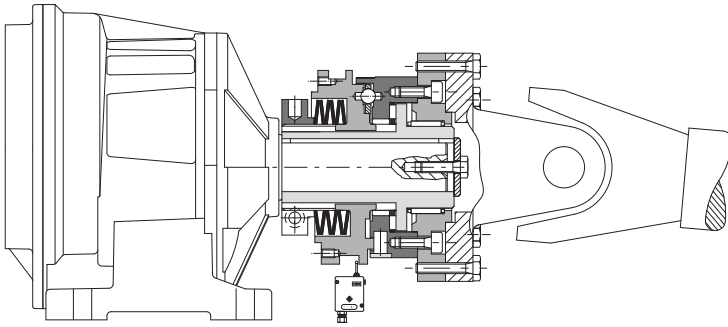


## DSR - rollers torque limiter: versions on request



.../FIR

Flange designed to minimize axial dimensions, supported by the cage and rollers.



.../FAV

Flange designed and arranged for the connection of the cardan shafts, supported by the cage and rollers.

## DSR - rollers torque limiter: additional information

### ORDER EXAMPLE

| ROLLERS TORQUE LIMITER |       |             |               |                |
|------------------------|-------|-------------|---------------|----------------|
| Size                   | Model | .../Version | Finished bore | Torque/Springs |
| 2.110                  | DSR/F | -           | ø30 H7        | 350 Nm         |

+

| COUPLING |                            |               |          |
|----------|----------------------------|---------------|----------|
| Model    | Elastomeric element        | Finished bore | Hub type |
| GAS      | Normal red element 98 Sh-A | ø38 H7        | A1       |

| Size          |
|---------------|
| 0.56 to 7.280 |

| Springs |
|---------|
| T0      |
| T1      |
| T2      |

| Model |                             |
|-------|-----------------------------|
| DSR   | Roller torque limiter       |
| DSR/F | Roller phase torque limiter |
| DSS   | Ball torque limiter         |

| Version |                        |
|---------|------------------------|
| -       | base version           |
| .../ML  | with long hub          |
| .../FS  | with supporting flange |
| .../CM  | with helical springs   |
| .../SMO | with one-way rotation  |
| .../AM  | with mechanical stop   |
| .../TAS | with stops pin         |

| Model |                                 |
|-------|---------------------------------|
| GTR   | Torsionally rigid disc coupling |
| GAS   | Elastic jaw coupling            |
| GEC   | Compact elastic coupling        |

| Locking type                           |
|--|
| See hub connection type list on page 4 |

