

5. Technical description

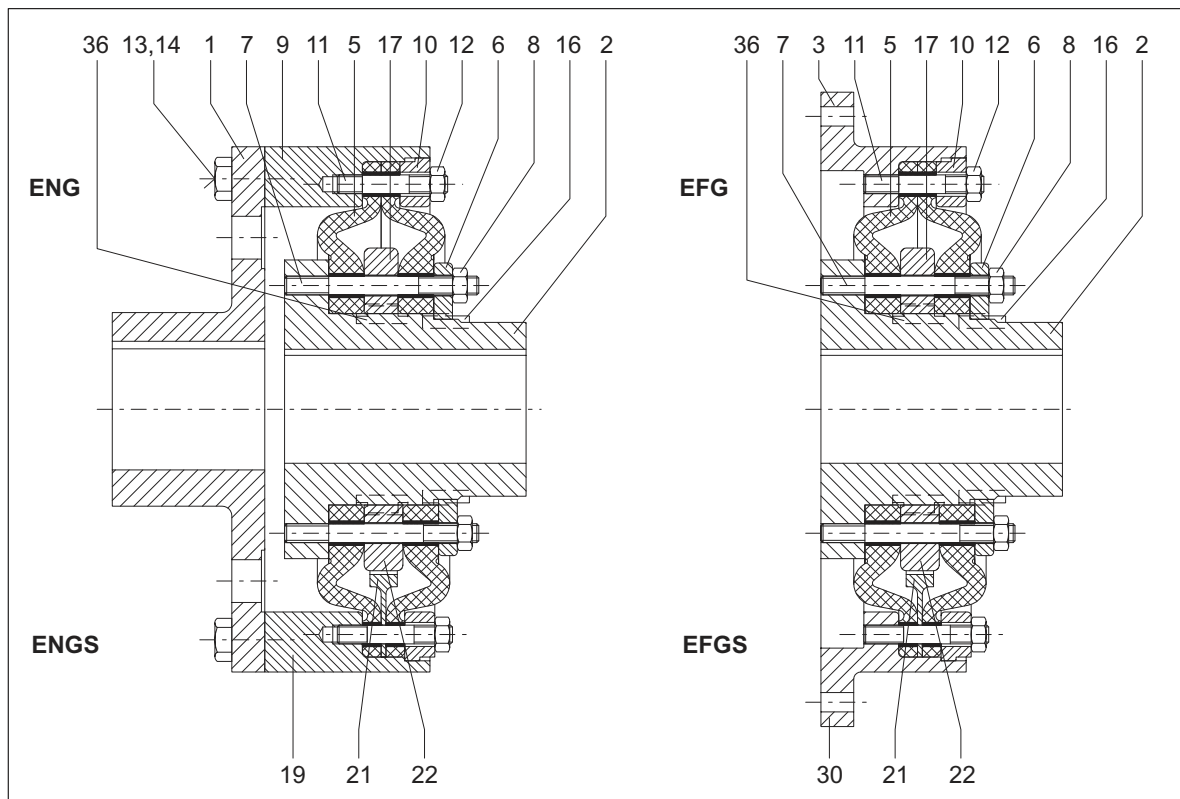
5.1 General description

ELPEX couplings are highly elastic, torsional-vibration-insulating couplings.

They are suitable for connecting machines and can compensate for important shaft misalignment. The restorative forces set up are low and can be determined with the specified axial and radial rigidities (see section 1).

Because of the friction connection of the elastic rings (5) in the metal parts the coupling is free of torsional backlash.

5.2 Types ENG / ENGS and EFG / EFGS



On types ENG and ENGS the elastic rings (5) connect part 1 (1) to part 2 (2) via the coupling ring (9/19). Part 1 (1) is flange-mounted to the coupling ring (9/19) with hexagon head screws (14) and centred with two parallel pins (13).

On types EFG and EFGS the elastic rings (5) connect part 3 (3) / part 30 (30) to part 2 (2).

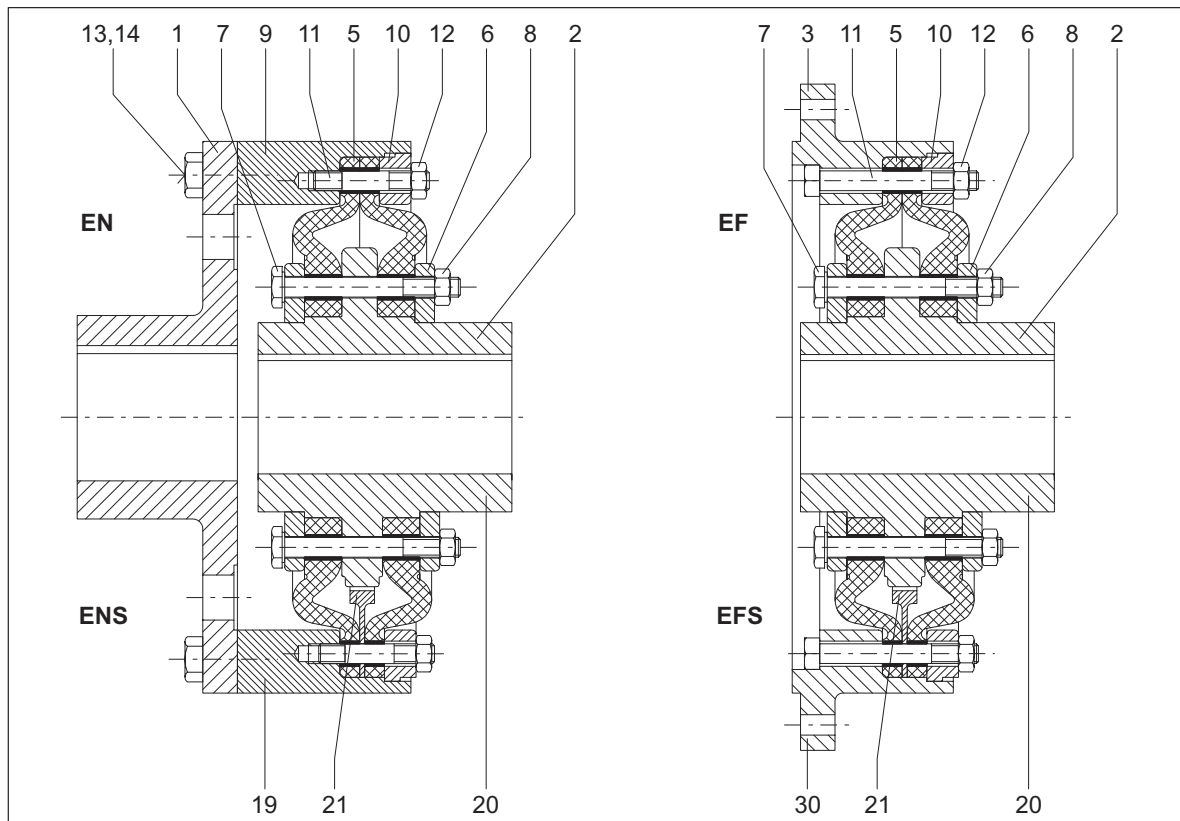
The elastic rings (5) are fastened in the groove in the coupling ring (9/19) / of part 3 (3) / 30 (30) by a retaining ring (10), set screws (11) and nuts (12). Fastening on part 2 (2) is done by clamping between the raised flange of part 2 (2) and the retaining ring (6), using set screws (7) and nuts (8).

The retaining ring (17) / stop ring (22) between the two elastic rings (5) is also in two parts, enabling the fitting and demounting of the split elastic rings (5) to be carried out without moving the coupled machines.

Types ENGS and EFGS are fitted with a fail-safe device. The stop rings (21; 22) are provided with cams engaging in one another which come into contact with one another only if a maximum torque is well exceeded or if the elastic rings (5) are irreparably damaged. This fail-safe device enables emergency operation with a limited torque.

Types ENG and ENGS are also available without part 1 (1) and can be flange-mounted direct (see section 1, item 1).

5.3 Types EN / ENS and EF / EFS



On types EN and ENS the elastic rings (5) connect part 1 (1) to part 2 (2) / 20 (20) via the coupling ring (9/19). Part 1 (1) is flange-mounted to the coupling ring (9 /19) with hexagon head screws (14) and centred with two parallel pins (13).

On types EF and EFS the elastic rings (5) connect part 3 (3) / 30 (30) to part 2 (2) / 20 (20).

The elastic rings (5) are fastened in the groove in the coupling ring (9/19) / of part 3 (3) / 30 (30) by a retaining ring (10), set screws (11) and nuts (12). Fastening on part 2 (2) / 20 (20) is done by clamping between the raised flange of part 2 (2) / 20 (20) and the retaining ring (6), using set screws (7) and nuts (8).

Types ENS and EFS are fitted with a fail-safe device. Part 20 (20) and the stop ring (21) are provided with cams engaging in one another which come into contact with one another only if a maximum torque is well exceeded or the elastic rings (5) are irreparably damaged. This fail-safe device enables emergency operation with a limited torque.

Types EN and ENS are also available without part 1 (1) and can be flange-mounted direct (see section 1, item 1).

5.4 Description of the elastic rings

ELPEX couplings up to size 220 are provided with single-part and from size 270 to size 690 with two-part elastic rings (5). These are arranged with the part surfaces offset by 90° relative to one another. From size 840 up the elastic rings are in four parts (4 x 90°).

The elastic rings (5) are made of natural rubber into which the double-thread inlays for transmitting the torque have been vulcanised. The elastic rings (5) are available in two designs, which differ in the number of double-thread inlays vulcanised in. This enables two different torques to be transmitted per size. This distinction is indicated by -1 or -2 in the size designation.