

Assembly rules for GEL couplings

1.1. Coupling assembly

It is important to follow the instructions listed below to obtain a correct assembly of the coupling. The coupling is made up of the items shown in Figure 1.

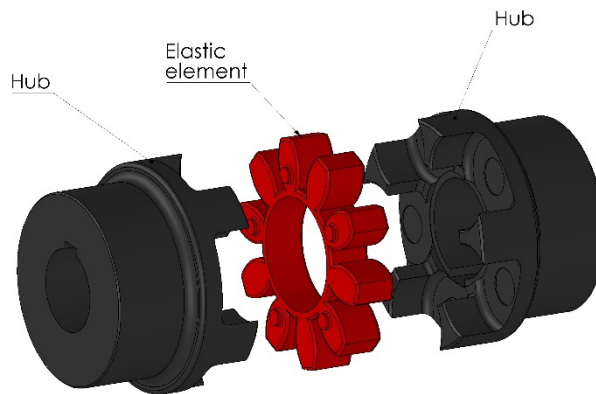


Fig.1

1. The hubs must be fully keyed onto the shafts so that the head of the shafts is flush with the respective reference surfaces, as shown in Fig. 2.

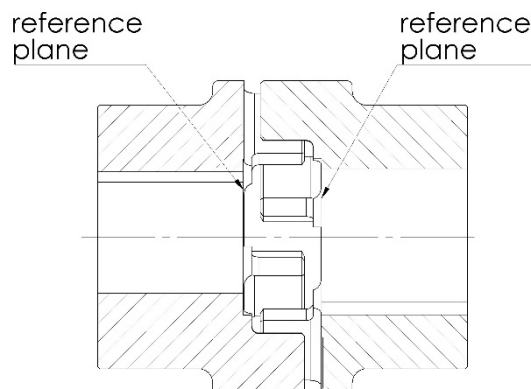
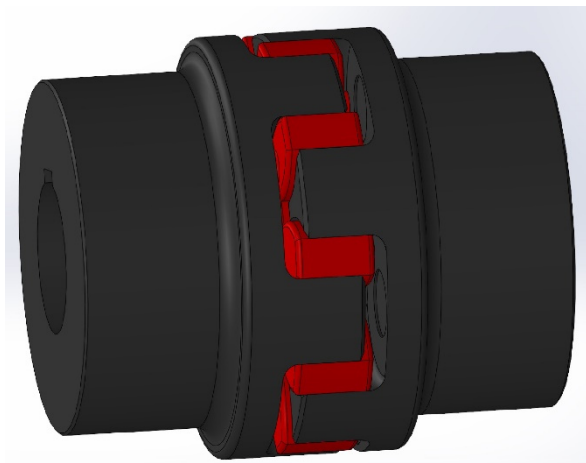


Fig.2

2. Once the hubs have been keyed onto the relevant shafts and the dowels, if any, are fixed, insert the elastic star on one of the two hubs and close the coupling so as to obtain the assembled piece as in Fig. 3.



3. Once the coupling is closed, check that the size S complies with the following table based on the size of the coupling:

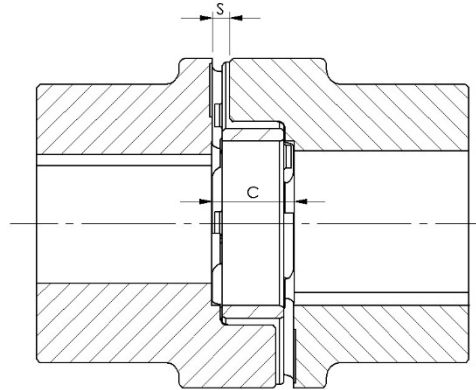


Table 1.a Values of size S to be respected for GEL models										
Size	45	55	65	85	95	105	125	135	165	195
S	2	2	2.5	3	3	3.5	4	4.5	5	5.5

Size C expresses the resulting DBSE value (distance between the shaft heads) and, if the values of S are respected, it has the following values:

Table 1.b Values of the resulting C size										
Size	45	55	65	85	95	105	125	135	165	195
C	16	18	20	24	26	28	30	35	40	45

1.2. Simultaneous alignment check

(To be carried out at commissioning or after the first start-up)

From the moment of assembly to the actual commissioning of the coupling, a lapse of time may elapse and contingent elements such as settling of the structures, interventions carried out in the adjacent areas that may have compromised the initial alignment may occur; in order to ensure optimal operation of the elastic coupling, it is recommended to carry out a further global check of the misalignments: “ANGULAR”, “AXIAL”, “PARALLEL” ones, comparing the data found with the values shown in Table 2.

This check is also advisable after the first start-up of the coupling.

Table 2 – Maximum values of misalignment

Size	Effective rated torque	Misalignments		
		Angular, max.	Parallel, max.	Axial, max.
	Nm	°	± mm	mm
45	17	1.2°	0.2	1.2
55	60	0.9°	0.2	1.4
65	160	0.9°	0.25	1.5
85	325	1.0°	0.28	1.8
95	450	1.0°	0.32	2.0
105	525	1.1°	0.36	2.1
125	625	1.1°	0.38	2.2
135	940	1.2°	0.42	2.6
165	1910	1.2°	0.48	3.0
195	3600	1.2°	0.50	3.4

ATTENTION! The reference values specified are maximum items with the others at zero. In case of simultaneous angular, axial, parallel misalignments, they must be evaluated globally as a percentage following the diagram below.

Example 1:

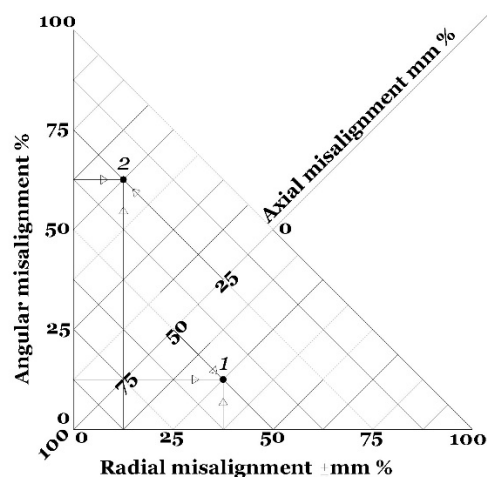
Angular misal. = 50°
 Radial misal. = 37,5°
 Axial misal. = 12,5°

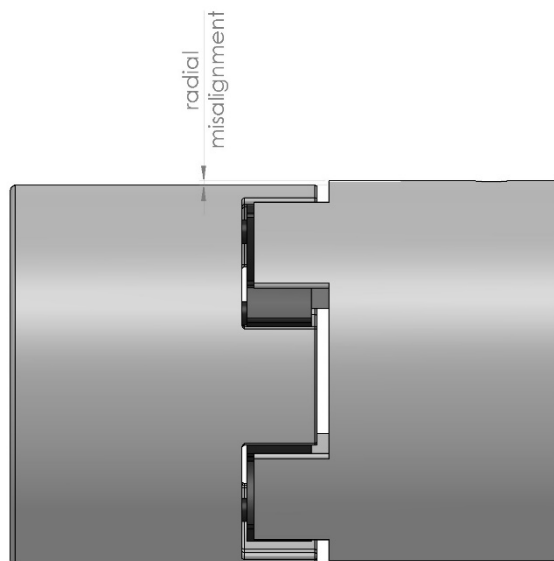
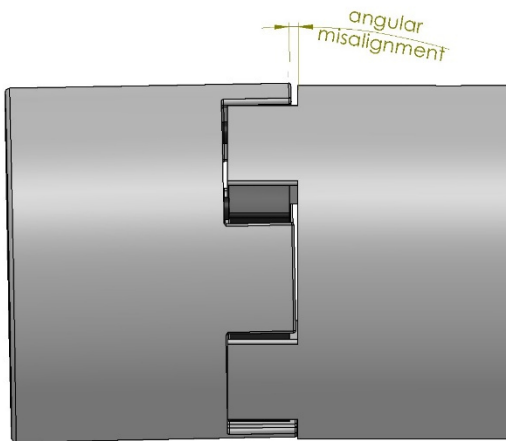
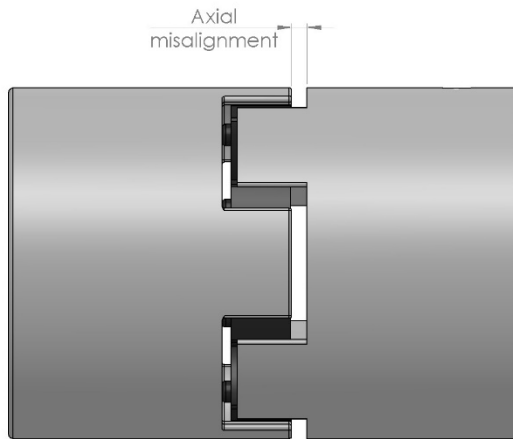
Example 2:

Angular misal. = 25%
 Radial misal. = 12,5%
 Axial misal. = 62,5%

The percentage sum of the three misalignment cannot exceed 100%:
 $\text{angular misal.} + \text{radial misal.} + \text{axial misal.} \leq 100$

This maximum value is reduced to 80% in zones explosive potential mate





1.3. Check intervals

A first check must be carried out after the first 1000 working hours or at the latest two months after commissioning:

- Visually check the 360° coupling and make sure there are no signs of malfunction or oxidation.
- Check the alignment of the coupling and verify that it is within the parameters.
- If no problems are found, subsequent checks can be scheduled at intervals of 4000 hours of operation or at most one year.
- If, during the first check, there is even minimal wear of the elastic element, immediately replace it and check the alignments and the transmitted power.

N.B.: In any case, it is always advisable to check the state of the insert at each periodic check, and replace it if there are signs of wear/burning, as its duration depends on other important factors, in addition to the temperature, such as: alignment accuracy, vibrations and their frequency, starts per hour, unexpected overloads, high temperature variations, corrosive agents.

Normal operation is considered such that no more than 3 starts per hour are exceeded within 24 hours of continuous operation

1.4. Operating temperatures

All the elastic crowns of the "GEL" series are designed to work in the following temperature range:

RED star, 96 ShA (standard): -40°C / +140°C

YELLOW star, 94 ShA: -30°C / +140°C

BLACK star, 92 ShA: -40°C / + 140°C