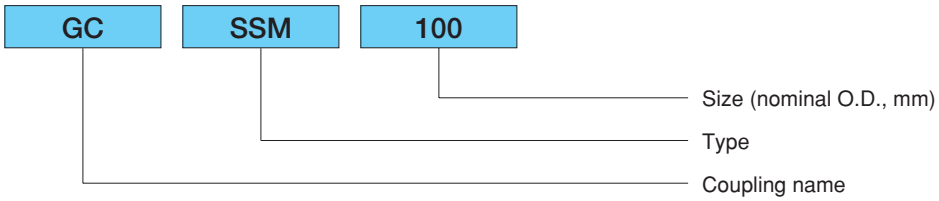
GC Coupling nomenclature



GC Coupling flexibility

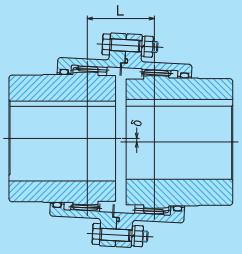


Figure 1
Parallel offset

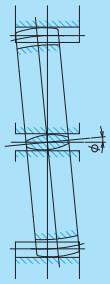


Figure 2
A section shows
a gear mesh under offset
and angular condition

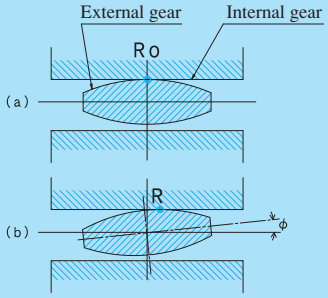
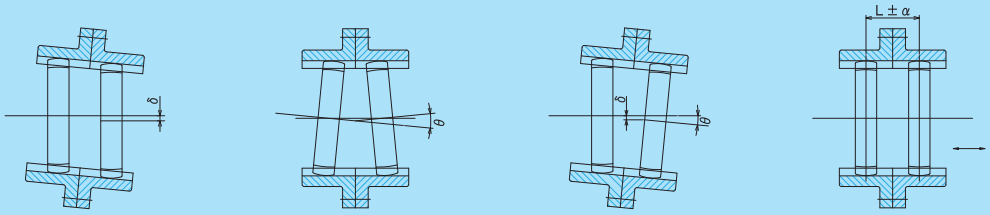


Figure 3
Contact between internal gear
and external gear teeth in meshing

When offset misalignment exists, the coupling gear tooth tilts by $\tan\phi = \delta/L$ as shown in Figure 1.
When the shafts are concentric, the gear tooth is in contact at the crowned tooth center (Ro) as shown in Figure 3(a). However, when the shafts have offset or angular misalignment after installation the gear tooth comes into contact at the point (R) away from the tooth center as shown in Figure 3(b). The larger the tilting angle is, the remoter the contact point goes away from the center. Thus, the contact on arced surface ensures free and smooth meshing between internal gear and external gear under offset and angular misalignment.
Our GC Couplings are designed and manufactured to have adequate crowning and backlash so that they can work freely and smoothly within allowable range.

1. Examples of misalignment



a. Parallel offset
b. Angular
c. Offset and angular combined
d. Axial gap

Figure 4

2. Allowable misalignment

The values in the tables below indicate the structurally allowable limits.
It is, therefore, practically recommended that the alignment should be made as accurately as possible according to the service conditions such as the place of application, type of machine, service speed, etc.
Recommended alignment target for longer working life: Less than 1/10 of the values shown in the table 2&3 below.

(a) Angular misalignment

Table 2

Type	Angular (θ)
GC-SSM,GC-SMM	3°
GC-CCM	2°
GC-MV	0.5°

Type	Angular (θ)
GC-SEM	1.5°
GC-CEM	1°

$\theta = 2\phi$