

## Flange Type

# LS connector

4 types of LS connectors are available, which 20 mm, 50 mm, 100 mm, 200 mm of eccentricity.



Make-to-order products

### Feature

#### Absorption of Movement

All parts other than flanges are flexible. Large movement can be absorbed with small overall length.

#### Classification of Eccentricity

LS connector is classified in 4 types of lateral movement, which are 20mm, 50mm, 100mm, 200mm.

### Classification of Pressure

| Aboveground / Underground Applications | Classification of Pressure | Max Operating Pressure(MPa) |
|----------------------------------------|----------------------------|-----------------------------|
| Aboveground application                | Middle Pressure            | 0.5                         |
|                                        | High Pressure              | 1.0                         |
| Underground application                | Middle Pressure            | 0.5                         |
|                                        | High Pressure              | 1.0                         |
| Negative Pressure application          | -0.1MPa (-760mmHg)         |                             |

#### ◆About Negative Pressure

Please contact us when in usage under the high negative pressure conditions, such as 24 hours operation or the negative pressure close to full vacuum, or frequent pump on/off.

### Classification of Pressure

| Classification of Lateral Movement |
|------------------------------------|
| For 20 mm, 50 mm, 100 mm, 200 mm   |

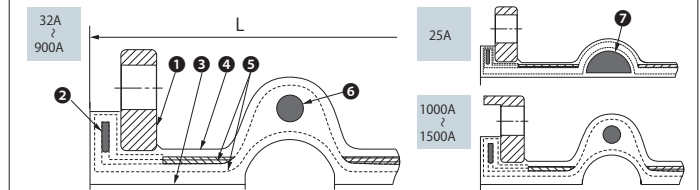
### Max. Working Temp.

Please consult us

For higher pressure applications, please consult us.



### Construction



| No. | Parts            | Material         | No. | Parts             | Material                    |
|-----|------------------|------------------|-----|-------------------|-----------------------------|
| ①   | Flange           | Mild Steel       | ⑤   | Reinforcing Fiber | Synthetic Fiber             |
| ②   | Reinforcing Ring | Mild Steel       | ⑥   | Reinforcing Ring  | Mild Steel                  |
| ③   | Inside Rubber    | Synthetic Rubber | ⑦   | Filler            | Special High Polymer Rubber |
| ④   | Outside Rubber   | Synthetic Rubber |     |                   |                             |

- Aboveground and underground types are available.
- The above figures show the underground type.
- The size 20A and 25A are filled arch type.
- The filled arch type is also producible more than 32A.

### Dimensions and Allowable Movements

| Nominal Dia. [mm] | 20 mm Lateral Movement<br>1 – Bellow (mm) |       |       |           | 50 mm Lateral Movement<br>2 – Bellow (mm) |       |       |           | 100 mm Lateral Movement<br>3 – Bellow (mm) |       |       |           | 200 mm Lateral Movement<br>4 – Bellow (mm) |       |       |           |
|-------------------|-------------------------------------------|-------|-------|-----------|-------------------------------------------|-------|-------|-----------|--------------------------------------------|-------|-------|-----------|--------------------------------------------|-------|-------|-----------|
|                   | L                                         | Elon. | Comp. | Mass [kg] | L                                         | Elon. | Comp. | Mass [kg] | L                                          | Elon. | Comp. | Mass [kg] | L                                          | Elon. | Comp. | Mass [kg] |
| 15                | 150                                       | 15    | 20    | 1.9       | 250                                       | 30    | 45    | 2.2       | 350                                        | 40    | 60    | 2.8       | 450                                        | 40    | 60    | 3.4       |
| 20                | 150                                       | 15    | 20    | 2.3       | 250                                       | 30    | 45    | 2.6       | 350                                        | 40    | 60    | 3.2       | 450                                        | 40    | 60    | 3.8       |
| 25                | 150                                       | 15    | 20    | 2.6       | 250                                       | 30    | 45    | 2.9       | 350                                        | 40    | 60    | 3.6       | 450                                        | 40    | 60    | 4.3       |
| 32                | 150                                       | 15    | 20    | 3.0       | 250                                       | 30    | 45    | 3.4       | 350                                        | 40    | 60    | 4.4       | 450                                        | 40    | 60    | 5.3       |
| 40                | 150                                       | 15    | 20    | 3.6       | 250                                       | 30    | 45    | 4.0       | 350                                        | 40    | 60    | 5.2       | 450                                        | 40    | 60    | 6.3       |
| 50                | 150                                       | 15    | 20    | 4.4       | 250                                       | 30    | 45    | 4.9       | 350                                        | 40    | 60    | 6.2       | 450                                        | 40    | 60    | 7.4       |
| 65                | 150                                       | 15    | 20    | 5.2       | 250                                       | 30    | 45    | 5.9       | 350                                        | 40    | 60    | 8.0       | 450                                        | 40    | 60    | 9.5       |
| 80                | 150                                       | 20    | 20    | 6.0       | 300                                       | 30    | 45    | 6.7       | 350                                        | 40    | 60    | 9.1       | 450                                        | 40    | 60    | 11        |
| 100               | 150                                       | 20    | 20    | 7.2       | 300                                       | 30    | 45    | 8.4       | 350                                        | 40    | 60    | 11        | 450                                        | 40    | 60    | 13        |
| 125               | 150                                       | 20    | 20    | 10        | 300                                       | 30    | 45    | 12        | 350                                        | 40    | 60    | 15        | 450                                        | 40    | 60    | 17        |
| 150               | 200                                       | 20    | 20    | 13        | 300                                       | 30    | 45    | 16        | 500                                        | 40    | 60    | 20        | 600                                        | 40    | 60    | 22        |
| 200               | 200                                       | 20    | 20    | 18        | 300                                       | 30    | 45    | 21        | 500                                        | 40    | 60    | 26        | 600                                        | 40    | 60    | 28        |
| 250               | 200                                       | 20    | 20    | 26        | 300                                       | 30    | 45    | 31        | 500                                        | 40    | 60    | 37        | 600                                        | 40    | 60    | 43        |
| 300               | 200                                       | 20    | 20    | 33        | 300                                       | 30    | 45    | 39        | 550                                        | 40    | 60    | 46        | 650                                        | 40    | 60    | 55        |
| 350               | 200                                       | 25    | 30    | 42        | 350                                       | 40    | 50    | 50        | 550                                        | 50    | 70    | 59        | 650                                        | 50    | 70    | 68        |
| 400               | 200                                       | 25    | 30    | 50        | 350                                       | 40    | 50    | 60        | 550                                        | 50    | 70    | 74        | 650                                        | 50    | 70    | 85        |
| 450               | 200                                       | 25    | 30    | 61        | 350                                       | 40    | 50    | 74        | 550                                        | 50    | 70    | 95        | 650                                        | 50    | 70    | 105       |
| 500               | 250                                       | 25    | 30    | 71        | 350                                       | 40    | 50    | 87        | 550                                        | 50    | 70    | 110       | 650                                        | 50    | 70    | 125       |
| 600               | 250                                       | 25    | 30    | 99        | 400                                       | 40    | 50    | 121       | 550                                        | 50    | 70    | 145       | 650                                        | 50    | 70    | 168       |
| 700               | 250                                       | 25    | 30    | 116       | 400                                       | 40    | 50    | 137       | 650                                        | 50    | 70    | 170       | 750                                        | 50    | 70    | 197       |
| 800               | 300                                       | 25    | 30    | 133       | 400                                       | 40    | 50    | 156       | 650                                        | 50    | 70    | 190       | 750                                        | 50    | 70    | 225       |
| 900               | 300                                       | 25    | 30    | 150       | 400                                       | 40    | 50    | 178       | 650                                        | 50    | 70    | 220       | 750                                        | 50    | 70    | 254       |
| 1000              | 300                                       | 25    | 30    | 170       | 450                                       | 40    | 50    | 197       | 700                                        | 50    | 70    | 250       | 800                                        | 50    | 70    | 287       |
| 1100              | 300                                       | 25    | 30    | 190       | 450                                       | 40    | 50    | 225       | 700                                        | 50    | 70    | 280       | 800                                        | 50    | 70    | 324       |
| 1200              | 300                                       | 25    | 30    | 217       | 450                                       | 40    | 50    | 254       | 700                                        | 50    | 70    | 310       | 800                                        | 50    | 70    | 357       |
| 1350              | 300                                       | 25    | 30    | 260       | 450                                       | 40    | 50    | 300       | 700                                        | 50    | 70    | 370       | 800                                        | 50    | 70    | 420       |
| 1500              | 350                                       | 25    | 30    | 405       | 450                                       | 40    | 50    | 460       | 750                                        | 50    | 70    | 590       | 950                                        | 50    | 70    | 680       |

L = Overall Length    Elon. = Elongation    Comp. = Compression  
 • Mass indicates the weight for underground type.  
 • Please use each movement within allowable movements.  
 • Please note that the information in the above table is for single movement only. In case of complex movements, please do adjustment by using the following formula.

C.A.E. (C.A.C.) = A.A.E.(A.A.C.) × {1 - (  $\frac{A.T.M.}{A.A.M.} + \frac{A.A.M.}{A.A.M.}$  ) }  
 C.A.E. (C.A.C.): Correct Elongation Movement  
 (Correct Compression Movement)  
 A.A.E. (A.A.C.): Allowable Elongation Movement  
 (Allowable Compression Movement)  
 A.T.M.: Allowable Transverse Movement  
 A.A.M.: Allowable Angular Movement

**Note:** This brochure may be revised without prior notice. We apologize in advance for any inconvenience this may cause.

Agent

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