

# Flexible and Problem Free

# **ASSEMBLY INSTRUCTIONS**

Daejin's brackets are very easy and simple to install Flexible sprinker joints to suspended ceiling. Its open cap design of center bracket solves all the problems that arise when installing Flexible sprinker joints to ceiling.



- 1. Connect the branch line connection nipple to the branch line
- 2. Connect the nut of the flexible joint to the branch line connection nipple
- 3. Tighten the nut of the flexible joint to the reducing nipple
- 4. Assemble two end brackets and a center bracket to a square bar. Place two end brackets to the aimed position of the rails of suspended ceiling properly and tighten wing nuts to a torque of 20-25 kgf.cm
- 5. Locate the center bracket to a desired position of the square bar and join the Reducing nipple to the center bracket. Tighten the nut to a torque of 20-30 kgf.cm
- 6. Join a sprinkler to the reducing nipple of the flexible joint

The sprinkler can be installed to the reducing nipple on the floor in advance.



## Standard

Daejin Flexible Sprinkler Joint is designed in accordance with NFPA 13, 13D, and 13R for limited flexible application.



## Certification

DAEJIN products presented here are listed and approved by various fire protection approval laboratories and organizations.

















Pressure loss & equivalent length

The results of this test are shown in Tables 1 to 5.









Table 1 Summary of pressure loss & equivalent length for 700 mm flexible hose with one 90° bend and terminated in a ½" outlet reducer

| (l/min) | upstream(bar) | downstream(bar) | (bar) | Eqivalent Length |
|---------|---------------|-----------------|-------|------------------|
| 40      | 0.31          | 0.20            | 0.005 | 0.40             |
| 60      | 0.75          | 0.49            | 0.077 | 3.00             |
| 80      | 1.43          | 0.93            | 0.199 | 4.56             |
| 100     | 2.22          | 1.44            | 0.321 | 4.89             |
| 120     | 3.22          | 2.08            | 0.483 | 5.23             |
| 150     | 5.01          | 3.23            | 0.751 | 5.38             |

Table 2 Summary of pressure loss & equivalent length for 1000 mm flexible hose with two 90° bends and terminated in a straight ½" outlet reducer

| Flow rate<br>(Vmin) | Pressure<br>upstream(bar) | Pressure<br>downstream(bar) | Corrected pressure loss (bar) | Eqivalent Length |
|---------------------|---------------------------|-----------------------------|-------------------------------|------------------|
| 40                  | 0.34                      | 0.20                        | 0.035                         | 2.88             |
| 60                  | 0.93                      | 0.52                        | 0.227                         | 8.86             |
| 80                  | 1.66                      | 0.92                        | 0.439                         | 10.06            |
| 100                 | 2.62                      | 1.43                        | 0.731                         | 11.09            |
| 120                 | 3.79                      | 2.05                        | 1.083                         | 11.73            |
| 150                 | 6.05                      | 3.24                        | 1.781                         | 12.76            |

Table 3 Summary of pressure loss & equivalent length for 1200 mm flexible hose with two 90° bends and terminated in a straight ½" outlet reducer

| Flow rate<br>(I/min) | Pressure upstream(bar) | Pressure<br>downstream(bar) | Corrected pressure loss (bar) | Eqivalent Length |
|----------------------|------------------------|-----------------------------|-------------------------------|------------------|
| 40                   | 0.36                   | 0.20                        | 0.055                         | 4.53             |
| 60                   | 0.97                   | 0.52                        | 0.267                         | 10.42            |
| 80                   | 1.73                   | 0.92                        | 0.509                         | 11.67            |
| 100                  | 2.75                   | 1.43                        | 0.861                         | 13.06            |
| 120                  | 4.02                   | 2.07                        | 1.293                         | 14.00            |
| 150                  | 6.32                   | 3.21                        | 2.081                         | 14.91            |

### Average equivalent length – 11.43

| Flow rate<br>(I/min) | Pressure upstream(bar) | Pressure<br>downstream(bar) | Corrected pressure loss (bar) | Eqivalent Length |
|----------------------|------------------------|-----------------------------|-------------------------------|------------------|
| 40                   | 0.37                   | 0.20                        | 0.065                         | 5.36             |
| 60                   | 0.98                   | 0.52                        | 0.277                         | 10.81            |
| 80                   | 1.76                   | 0.93                        | 0.529                         | 12.13            |
| 100                  | 2.77                   | 1.43                        | 0.881                         | 13.37            |
| 120                  | 4.03                   | 2.08                        | 1.313                         | 14.22            |
| 150                  | 6.35                   | 3.22                        | 2.101                         | 15.06            |
|                      |                        |                             |                               |                  |

| Flow rate<br>(l/min) | Pressure upstream(bar) | Pressure<br>downstream(bar) | Corrected pressure loss (bar) | Eqivalent Length |
|----------------------|------------------------|-----------------------------|-------------------------------|------------------|
| 40                   | 0.40                   | 0.19                        | 0.105                         | 8.66             |
| 60                   | 1.05                   | 0.51                        | 0.357                         | 13.93            |
| 80                   | 1.93                   | 0.92                        | 0.709                         | 16.25            |
| 100                  | 3.05                   | 1.44                        | 1.151                         | 17.46            |
| 120                  | 4.38                   | 2.05                        | 1.673                         | 18.12            |
| 150                  | 7.04                   | 3.25                        | 2.761                         | 19.79            |



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Daejin's various specially designed and patented brackets will solve many problems when installing the Flexible joint to the suspended ceiling.

## Safety:

Rigorous water leakage test is applied to all the joint in the factory lab. All the products of our company have been approved by FM and UL.

Available length: 700-1800mm (for UL and FM approved model) 400-3500mm (for Japan and Korea)



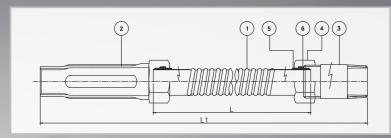








#### UNBRAIDED FLEXIBLE HOSE



1. FLEXIBLE TUBE

3. NIPPLE 4. SLIP NU 5. ISOLATION-RING 6. GASKET

#### **SPECIFICATIONS**

| Lengths Available 700mm, 1000mm, 1200mm, 1500mm, 1800mm |              | Hose                               | Stainless Steel 304                |              |  |
|---|--------------|------------------------------------|------------------------------------|--------------|--|
| Outlet  | 1/2" or 3/4" | Nut & Nipple                       | Zinc-Plated Steel                  |              |  |
| Hose Type   | Unbraided    | Sealing Gasket<br>/ Isolation Ring |                                    | PDM / NYLON  |  |
|   |              |                                    |                                    |              |  |
| Max. Ambient Temperature Rating 225°F                   |              | Minimum Bend<br>Raius              | 100mm(UL/ULC) From connection nuts |              |  |
| Max. Working  |              |                                    | 1 Tom connection nats              |              |  |
| Pressure Rating 175 psig (UL/ULC)                       |              |                                    | Inlet                              | 1"NPT or BSP |  |
|   | Connection   |                                    |                                    |              |  |
| Required torque to ass<br>with the flexible hose : 3    |              | Outlet                             | 1/2" or 3/4"NPT or BS              |              |  |



| Model       | Rated<br>Pressure,<br>psig | Max.<br>Ambient<br>Temp, °F | Nom. Inlet<br>by Outlet<br>Size, in. | Assembly<br>Length,<br>ft (mm) | Max<br>No. of<br>90° Bends | Min Bend<br>Radius,<br>mm. | Equivalent<br>Length of 1 in.<br>Schedule 40<br>Steel Pipe<br>(C = 120), ft | Flexibility<br>Type |
|-------------|----------------------------|-----------------------------|--------------------------------------|--------------------------------|----------------------------|----------------------------|---|---------------------|
| DJ25UB-700  | 175                        | 225                         | 1x1/2                                | 700                            | 1                          | 100                        | 24  | Limited             |
| DJ25UB-1000 | 175                        | 225                         | 1x1/2                                | 1000                           | 2                          | 100                        | 44  | Limited             |
| DJ25UB-1200 | 175                        | 225                         | 1x1/2                                | 1200                           | 2                          | 100                        | 49  | Limited             |
| DJ25UB-1500 | 175                        | 225                         | 1x1/2                                | 1500                           | 2                          | 100                        | 59  | Limited             |
| DJ25UB-1800 | 175                        | 225                         | 1x1/2                                | 1800                           | 3                          | 100                        | 84  | Limited             |
|             |                            |                             |                                      |                                |                            |                            |   |                     |
| DJ25UB-700  | 175                        | 225                         | 1x3/4                                | 700                            | 1                          | 100                        | 30  | Limited             |
| DJ25UB-1000 | 175                        | 225                         | 1x3/4                                | 1000                           | 2                          | 100                        | 48  | Limited             |
| DJ25UB-1200 | 175                        | 225                         | 1x3/4                                | 1200                           | 2                          | 100                        | 55  | Limited             |
| DJ25UB-1500 | 175                        | 225                         | 1x3/4                                | 1500                           | 2                          | 100                        | 64  | Limited             |
| DJ25UB-1800 | 175                        | 225                         | 1x3/4                                | 1800                           | 3                          | 100                        | 86  | Limited             |

<sup>\*</sup> UL: 100mm minimum bend radius, where C=120

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| Outlet  | 1/2" or 3/4" | Nut & Nipple                       | Zinc-Plated Steel   |                        |
| Hose Type   | Unbraided    | Sealing Gasket<br>/ Isolation Ring | EPDM / NYLON        |                        |
|   |              |                                    |                     |                        |
| Max. Ambient Temperature Rating 225°F   |              | Minimum Bend<br>Raius              |                     |                        |
| Max. Working  |              |                                    |                     |                        |
| Pressure Rating 16 BAR( LPCB )  |              |                                    | Inlet               | 1"NPT or BSP           |
| Required torque to assemble reducer and nipple with the flexible hose: 300 kgf.cm |              | Connection                         | Outlet              | 1/2" or 3/4"NPT or BSP |