



GENIE FLEXIBLE SPRINKLER JOINT

# FLEXIBLE SPRINKLER JOINT

Innovation

Genie  systems

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ISO 9001:2008 ISO 14001:2004

INT

pared to conven-  
nd problem free

**The following features of our products will lead to a great cost saving effect:**

**problem-free:** 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.

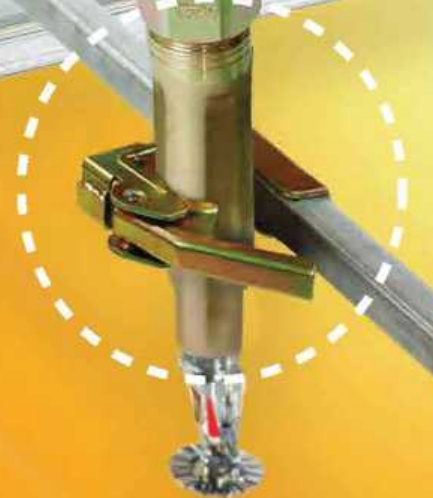
Available length : 700 - 1800mm (for UL and FM approved model)  
400 - 3500mm (for Japan and Korea)



Genie  systems®

# ***FLEXIBLE SPRINKLER JOINT***

The Daejin flexible sprinkler joint enhances work efficiency by 50-70% compared to traditional piping. Its anchoring parts are specially designed to allow for an easy and safe installation even when the task is performed by an unskilled installer.



## Greetings...

Established in 1989, DAEJIN SANUP Co has been manufacturing machines and construction material for over 20 years.

It started producing fire sprinkler joint in 2004. With experience and knowhow, the products of our company are noted of their high quality with competitive price and most of the products are exported in many countries.

DAEJIN has acquired ISO9001-2000, WQA, KFEIC (Korea Fire Equipment Inspection Cooperation, FM and UL certificates. Our reputable flexible sprinkler joints are the preferred choice worldwide.

Our flexible sprinkler joints along with their assembly part products come in such a wide variety of shapes and sizes that we feel confident that our products would match your expectations and particular needs.

Thank you

*Lim, Young Soon*

President  
DAEJIN SANUP CO.

## HISTORY...

- 1989. 02 Daejin Sanup Co established
- 1999. 03 Process washing machine shaft for Sanyo, Toshiba
- 2003. 03 ISO 14001 ~ 2004 (KorE—070745)  
ISO 9001 ~ 2000 (KorQ—071579)
- 2004. 07 Export Die casting to Australia HALCRO
- 2004. 12 Korea fire institute certificate for sprinkler joint
- 2005. 06 Machining washing machine shaft for Mitsubishi
- 2006. 09 Patent for DAEJIN sprinkler joint fixing part (10—063\*\*\*\*)
- 2006. 11 Patent for DAEJIN sprinkler joint fixing part (10—064\*\*\*\*)
- 2006. 12 Factory was moved to Hwaseong, Gyeonggi-Do
- 2008. 10 Development of multi blade anchor for soil and rock
- 2008. 11 FM Approval for braided model DJ25
- 2009. 05 UL Certificate for our braided model DJSP25
- 2010. 05 FM Approval for DJ28
- 2011. 06 UL certificate for DJSP25
- 2011. 07 UL certificate for new bracket design
- 2012. 01 GENIE SYSTEM FOR DAEJIN BRAND NAME
- 2012. 02 UL Certificate for Braided model DJ25B/ Unbraided model DJ25UB
- 2013. 05 UL Certificate for New Open Middle / End Bracket
- 2013. 08 UL Certificate for One Touch Middle / End Bracket





## Flexible and Problem Free

# ASSEMBLY INSTRUCTIONS

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



## Technical Data

Temperature	225 oF	
Rate Working pressure	175 psi	Max. 300 psi
Maximum Bend Radius	4" (UL type), 8" (FM type)	
K-Factor	1/2" Outlet	5.6 gpm
	3/4" Outlet	11.2 gpm(UL), 8.0gmp(FM)

## Friction Loss Data

Length	Nominal Inlet by Outlet Size, in.	Assembly Length, (units)	Max No. of 90° Bends	Min Bend Radius (units)	Equivalent Length of 1 in. Schedule 40 Steel Pipe (C = 120), ft
700	1/2" , 3/4"	700	UL (1), FM(1)	100	UL Type (24, 30) FM Type (17.9, 14.4)
1000	1/2" , 3/4"	1000	UL (2) FM(1)	100	UL Type (44, 48) FM Type (22.2, 18.3)
1200	1/2" , 3/4"	1200	UL (2) FM(4)	100	UL Type (49, 55) FM Type (37.0, 32.8)
1500	1/2" , 3/4"	1500	UL: (2) FM(4)	100	UL Type (59, 64) FM Type (45.5,43.2)
1800	1/2" , 3/4"	1800	UL (3) FM(5)	100	UL Type (84, 86) FM Type (63.0,58.7)

## Features

Length	700,1000,1200,1500,1800mm	
Reducing nipple Dia	1/2" , 3/4" NPT or BSPT (Straight or 90 degree elbow) , Material STPG370(SS400)	
Type	Unbraided	UL certificate
	Braided ( φ 26.8)	UL and FM approval
	Braided ( φ 28.0)	FM approved

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# INSTALLATION INSTRUCTIONS

## 1. Introduction

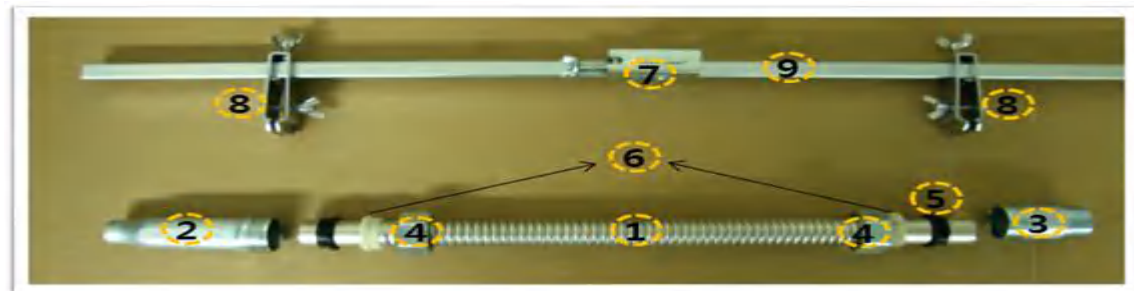
The DAEJIN Flexible Sprinkler Hose is an innovative product designed to save time and costs. It can be installed fast with ease by an unskilled worker and its flexibility also allows the sprinkler hose to be installed in a limited space. The advanced technology and high quality control of DAEJIN will meet our customers' high standards. The DAEJIN Flexible Sprinkler Hose is designed in accordance with NFPA 13, 13D, and 13R for limited flexible application.

The anchoring components to the building components for this sprinkler hose fitting is intended for use with drop ceilings, reference to specific ceiling constructions such as intermediate and heavy duty ceilings as described in the Standard Specification for the Manufacture, Performance, and Testing of Metal suspension Systems for Acoustical Tile and Lay-in Panel ceilings, ASTM C635 when installed in accordance with the Standard Practice for installation of Metal Ceiling Suspension Systems for Acoustical Tile and Lay-in Panel, ASTM C636.



(Figure 1:General features of a DAEJIN Flexible Sprinkler Hose with fittings and ceiling structure when assembled)

## 2. Parts List



(Figure 2)

NO	Part Name	Material	Q'ty	Remark
1	Flexible Tube	STS304	1	0.3t
2	Reducer	STPG370	1	Zn plate
3	Nipple	STPG370	1	Zn plate
4	Nut	S10C	2	Zn plate
5	Gasket	EPDM	2	
6	Isolation Ring	Nylon66	2	
7	Middle Bracket(A-DFM)	STEEL	1	Zn plate
8	End Bracket(A-DFM)	STEEL	2	Zn plate
9	Square Bar	GI PIPE	1	Zn plate

### 3. Technical data

- ▶ Rated Pressure, psi : 175
- ▶ Maximum Ambient Temperature, F,C : 225 °F, 107°C
- ▶ LBRest Sprinkler K-factor for 1/2 in.outlet : DJ25UB, DJ25B : 5.6
- ▶ LBRest Sprinkler K-factor for 3/4 in.outlet :DJ25UB : 11.2, DJ25B : 8.0
- ▶ Intended use in Wet systems and Dry systems
- ▶ Minimum Bending Radius, mm : DJ25UB : 100, DJ25B : 190
- ▶ Maximum Bends :
  - 3 :DJ25UB 1800 /DJ25B 1525, 1800
  - 2:DJ25UB- 1000, 1200, 1500/DJ25B-1220, 915
  - 1:DJ25UB 700/ DJ25B 610, 790
- ▶ Flexibility: limited
- ▶ Intended use for direct connection to fire sprinklers
- ▶ Intended for use with drop ceilings, **DAEJIN**Flexible Sprinkler Hose can be installed on intermediate and heavy duty ceilings.
- ▶ Equivalent length:

Model	Nominal Inletby OutletSize, in.	Assembly Length,(mm)	MaxNo. of 90° Bends	Min Bend Radius (mm)	EquivalentLength of 1 in.Schedule 40Steel Pipe(C = 120), ft
DJ25UB -700	1 X 1/2	700	1	100	24
DJ25UB -1000	1 X 1/2	1000	2	100	44
DJ25UB -1200	1 X 1/2	1200	2	100	49
DJ25UB -1500	1 X 1/2	1500	2	100	59
DJ25UB -1800	1 X 1/2	1800	3	100	84
Model	Nominal Inletby OutletSize, in.	Assembly Length,(mm)	MaxNo. of 90° Bends	Min Bend Radius (mm)	EquivalentLength of 1 in.Schedule 40Steel Pipe (C = 120), ft
DJ25UB -700	1 X 3/4	700	1	100	30
DJ25UB -1000	1 X 3/4	1000	2	100	48
DJ25UB -1200	1 X 3/4	1200	2	100	55
DJ25UB -1500	1 X 3/4	1500	2	100	64
DJ25UB -1800	1 X 3/4	1800	3	100	86

Model	Specified length mm, (ft)	Nominal Outlet Size, in	Number of bends	EquivalentLength(ft)
DJ25B	610 (2.0)	1x1/2	0	4
			1	12
DJ25B	790 (2.6)	1x1/2	0	9
			1	19
DJ25B	915 (3.0)	1x1/2	0	20
			2	42
DJ25B	1220 (4.0)	1x1/2	0	35
			2	53
DJ25B	1525 (5.0)	1x1/2	0	36
			3	68
DJ25B	1800 (5.9)	1x1/2	0	60
			3	94
Model	Specified length mm, (ft)	Nominal Outlet Size, in	Number of bends	EquivalentLength(ft)
DJ25B	610 (2.0)	1x3/4	0	10
			1	21
DJ25B	790 (2.6)	1x3/4	0	16
			1	27
DJ25B	915 (3.0)	1x3/4	0	24
			2	47
DJ25B	1220 (4.0)	1x3/4	0	31
			2	49
DJ25B	1525 (5.0)	1x3/4	0	42
			3	73
DJ25B	1800 (5.9)	1x3/4	0	66
			3	99



#### 4. Assembly Instructions

##### A. Connecting the Reducer



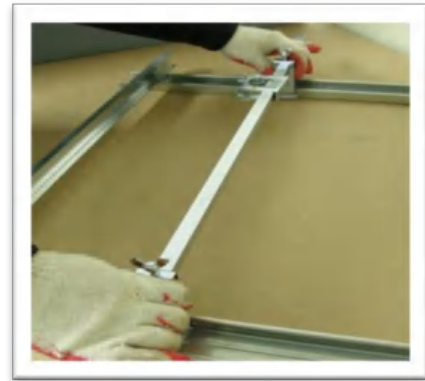
Disconnect the Reducer by turning the Nut (not the Reducer) from the Flexible Sprinkler Hose. Check That the Gasket and the Isolation Ring are properly in place. Reconnect the Reducer to the Flexible Sprinkler Hose by turning the Nut. Two open-ended spanners(or adjustable wrenches) should be used to tighten the Nut closely to ensure the leak-proof connection. Recommended torque for the work is 320 kgf.cm( Figure 3 ).

##### B. Connecting the Nipple to the main piping system of the building



Disconnect the Nipple from the Flexible Sprinkler Hose. Assemble the Nipple to the main piping system of the building with normal sealing procedures and tighten it closely to ensure a leak-proof connection as shown in the picture (Fig 4). Recommended torque for this work is 950~1,000 kgf.cm. Check that the Gasket and the Isolation Ring are properly placed at the end of the Flexible Hose. Connect the Flexible Hose to the Nipple by tightening the Nut closely. Recommended torque for this work is 320 kgf.cm

### C. Connecting the square bar on the Ceiling Structure.



a) Join the two End brackets and the Middle bracket to the Square bar and place the End brackets properly on the aimed ceiling structure as shown in the picture.(Fig 5) (The maximum distance between two End brackets is 1500 mm and minimum 600mm)

b) Fasten the Wing bolts on the top of the End brackets tightly. Recommended torque for this work is 20-25kgf.cm(Figure 5) .

c) Push the End brackets into the ceiling structure rail and check that the End brackets sit on the ceiling structure properly.

d) Fasten the Wing bolts on the side of the End brackets. Recommended torque for this work is 25~30 kgf.cm

### D. Installing the Reducer to the Middle bracket.



Open the Middle bracket cover and position the Reducer inside the Middle bracket properly.

Close the Middle bracket cover and fasten the Wing bolt firmly. Recommended torque for this work is 25~30 kgf.cm (Figure 6)

Date :25<sup>th</sup> of JAN 2013