Installation Instructions

1. General Description

SP-Joint(Flexible Sprinkler Hose with Fittings) is intended use for direct connection to fire sprinklers and is intended use in wet systems, dry systems or both wet and dry systems. It do not only allows you to adjust any detailed dimension freely but is also economical since it reduces the time required for installation and that in fine finishes.
In addition, The SP-Joint is designed in accordance with NFPA 13, 13D and 13R for limited flexibility application.
SP-Joint is intended for use with drop ceilings, in accordance with 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 Panels, ASTM C636.

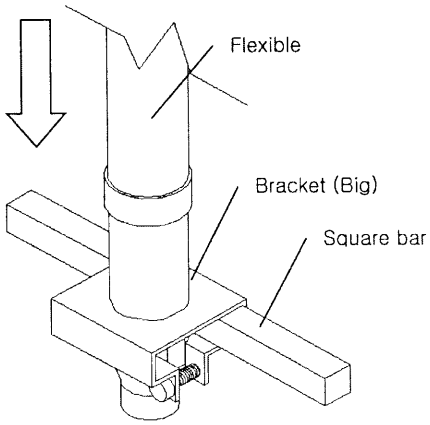
2. Technical Data

Maximum Working Pressure : 12.5kgf/㎠ (175psi)
Maximum Temperature : 66℃ (150 F) with EPDM Packing
Useable Sprinkler : 1/2″ (K=5.6)
Minimum Bend Radius : 100㎜(4 inch)
Maximum Bends are 1 upto 600㎜, 900㎜
Maximum Bends are 2 upto 1200㎜, 1500㎜
Maximum Bends are 3 upto 1800㎜
Equivalent length of 1 in. Schedule 40 Steel Pipe(C=120),ft

Model	Equivalent Length of 1 in.Schedule 40 Steel Pipe(C = 120), ft
ASA - SP - 600	24
ASA - SP - 900	48
ASA - SP - 1200	64
ASA - SP - 1500	80
ASA - SP - 1800	103
ASA - BK - L	-
ASA - BK - S	-
ASA - SQ - 1000	-

The Features of Sprinkler Flexible Hose

1) High Durability and Corrosion-Resistance :
Treated in braids, flexible tube is highly resistant to pressure and has a high tensile strength. Made of polished and boron-treated STS 304 stainless, SP-Joint has an excellent resistance against corrosion.
2) It can be installed into a tiny space :
SP-Joint can allow to install a returnable piping system even into such a tiny space as a lower duct. A quick and accurate work can be performed through configuration preventing fall out of Packing when connecting nipple and slip nuts.
3) Easy Installation :
You can adjust freely any detailed dimensions with SP-Joint. You can even install, built-in type head with it.
4) Economical Installation :
SP-Joint will help you thread pipe or meet dimension easily and fast in installing a returnable piping system. Thus you can reduce of the cost.



3. Installation

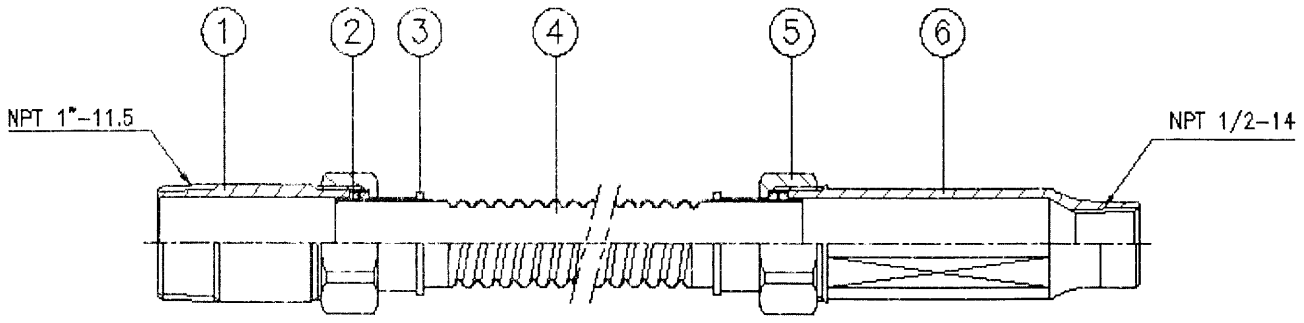
1) Check the appropriate place that the sprinkler head will be located.
(The minimum distance between carrying bars is 500㎜)
(The maximum distance between carrying bars is 900㎜)
2) The sprinkler head should be located close as possible to

the center of the distance carrying bars.

3) Slide bracket(Big) into the square bar.
4) Loosely attach the square bar with the two square bar support brackets(small) to the carrying bar such that square bar crosses the location where the sprinkler head will be.
5) Install the 1" male nipple onto the line fitting using NPT threaded end. Make sure that the arrow and shoulder of the nipple are both pointing toward the direction of the sprinkler.
6) Connect the SP-Joint to the 1" male nipple on the piping line- check for shoulder and arrow direction. Nipple Reducer tighten carefully to torque 50 Nm(442.5 lb-in) without twisting.
7) Bend the SP-Joint into a curve(s) that locates the nipple at the other end of SP-Joint. The SP-Joint arc should not be twisted, and the arc should be large and smooth [The minimum bend radius of the arc is 100㎜(4")]. No SP-Joint may have more than 1 bends.
8) Insert the reducer into the bracket(Big) and loosely tighten the fixing bolt.
9) Attach the sprinkler head to the reducer in accordance with the sprinkler's installation instructions.
10) Verify that reducer is seated in the bracket(Big) precisely locate the sprinkler head in a right position vertically. Tighten fixing bolt on the two braket(small) fixing the carrying bar and square bar. Tighten the fixing bolt on the braket(big) to torquare of 3.4±0.3Nm(30±2.7lb-in). Tighten the fixing bolt on the braket(small) to torquare of 3.4±0.3Nm(30±2.7lb-in).
11) After tightening all the fixing bolts verify that the sprinkler head is still properly located in accordance with installation instructions.

<Cautions>

1) When transporting and loading SP-Joint, make sure that there is no piercing material on the ground in order to prevent damages onto preducts.
2) Products maybe damaged if piled up higher than 5 layers of boxes.
3) Repeated bending of one portion before the installation will cause breaking or loss of resisting pressure.
4) SP-Joint is composed of stainless grater, and must not be used as an earth for welding.
5) Slip Nut must be tightened with hands because an excessive force can damage Packing.
6) When connecting Nipple and Joint, connect Nipple to Packing contact point(M). If connected in opposite(NPT) direction, a leakage may occur.
7) Check the thread of a pipe and nipple, if it is NPT. (Must be used same spec.)
8) Don't use pipe wrench when assembling.



NO.	Part Name	Material	Standard NO.	Q'ty	Remark
1	Nipple	SPP	KS D 3507	1	Zinc Coating
2	Packing	EPDM	-	2	Hs 71
3	Stopper Ring	66Nylon	-	2	HR 118
4	Flexible Tube	STS 304	KS D 3698	1	
5	Nut	C3771BE-F	KS D 5101	2	
		SPP	KS D 3507		Zinc Coating
6	Reducer	SPP	KS D 3507	1	Zinc Coating