



WARNING:

READ AND UNDERSTAND CAREFULLY THIS DOCUMENT PRIOR TO ATTEMPTING TO INSTALL ARGCO® PRODUCTS. FAILURE TO FOLLOW THESE INSTRUCTIONS COULD CAUSE SERIOUS PERSONAL INJURY AND/OR PROPERTY DAMAGE. INSTALLATION, MAINTENANCE AND REPLACEMENT OF ARGCO® PRODUCTS MUST BE IMPLEMENTED ACCORDING TO NFPA 13/13D/13R AND EN12845 OR EQUIVALENT STANDARDS BY AN EXPERIENCED, WELL TRAINED INSTALLER. WEAR SAFETY GLASSES, HARDHAT, HAND AND FOOT PROTECTION DURING INSTALLATION. THE OWNER IS RESPONSIBLE FOR MAINTAINING THE FIRE PROTECTION SYSTEM IN PROPER OPERATING CONDITION.

TECHNICAL SPECIFICATIONS

MODELS, DEFINITION & APPROVALS

- AR-400-BR** 1" true bore braided hose with straight nipple **cULus § □, FM approved**
- AR-400-BRE** 1" true bore braided hose with elbow nipple **FM approved**
- AR-400-BRG** 1" true bore braided hose with DN25 / 1" grooved inlet nipple **FM approved**
- AR-400-BRGE** 1" braided hose w/ 1" grooved inlet and elbow reducer **FM approved**

All products listed are approved for both WET & DRY & PRE-ACTION systems as noted in NFPA 13/13R/13D

All products listed are intended for direct connection to fire sprinklers. .

§ UL listed as limited flexibility standards, file EX16260

□ UL does not approve it to be installed in the vertically straight orientation, inlet and outlet in same axis.

- INLET CONNECTIONS** DN25, NPT 1" male thread / grooved
- OUTLET CONNECTIONS** 1/2" or 3/4" or 1" NPT female thread
- MAXIMUM SERVICE PRESSURE (UL listed & FM approved)** 203psi
- MAXIMUM AMBIENT TEMPERATURE :** 150°F
- BENDING & FLOW PARAMETERS** Refer to Table 2

TABLE 1

MATERIAL LIST (each set of ARGCO® sprinkler hose)

Refer No.	Description	Qty. ea/set
①	Stainless Steel Corrugated Hose	X 1
②	Inlet Nipple	X 1
③	Gasket	X 2
④	Hexagon Nut	X 2
⑤	Reducing Nipple (straight or 90° bend)	X 1
⑥	Center Bracket	X 1
⑦	Side bracket with screws	X 2
⑧	Square Bar	X 1
(i)	Threaded Tee Fitting with 1" outlet	none
(ii)	T-bar Grid as per ASTM C635 (main rail)	none
(iii)	Sprinkler Head	none

Note: (i),(ii),(iii) are not included in ARGCO® standard flexible hose pack.

REQUIRED CEILING GRIDS

ARGCO® MEGA-FLEX AR-400-BR/ -BRE/ -BRG/ -BRGE series sprinkler hoses are designed for use with Intermediate or Heavy Duty ceiling grids manufactured to ASTM C635 (Standard Specification for the Manufacture, Performance, and Testing of Metal Suspension Systems for Acoustical Tile and Lay-in Panel Ceilings) and ASTM C636 (Standard Practice for Installation of Metal Ceiling Suspension Systems for Acoustical Tile and Lay-in Panels) Designation.

FLOW DIRECTION: Single way, as the arrow on product label.

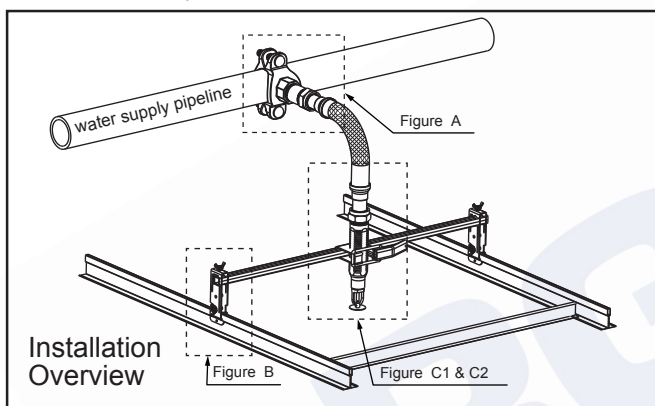
**ARGCO****MEGA-FLEX**
FLEXIBLE SPRINKLER DROP

MAIN MATERIAL SPECIFICATIONS

Flexible hose, braids:	AISI 304 Stainless steel
Hex nuts, inlet/discharge nipples:	Galv. Steel ASTM 1020
Brackets, square bars:	Galv. steel ASTM A283 Gr. D
Sealing ring:	EPDM

THINGS YOU SHOULD NEVER DO:

1. Do not install ARGCO® flexible hose with other manufacture's bracket system, vice versa.
2. Do not join one hose with another to form a longer hose.
Flexible hoses are intended only to connect sprinklers directly to water supply pipe line.
3. No install sprinkler system piping through heating ducts.
4. Do not install flexible hose where they will be exposed to environment that exceed the maximum ambient temperature rating for the hose. Protect the wet piping systems from freezing temperatures.
5. Protect the flexible hose from any sharp-edged material or tools. If any visible surface damage which may cause leaking, scrap or return the damaged hose and use a new one for installation.
6. No bend at the joint point between the straight tube (near inlet/discharge nipple) and the corrugation. Always bend close to center of the hose.
7. Always install ②side brackets on (iii)main T-bars of the ceiling system, never on cross support rails.
8. Never test ARGCO® products with higher than 406psi; it may reduce the flexibility of the hose.



HOW TO INSTALL?



Step 1. Determine the approximate place whether the sprinklers will be located. The sprinkler should be located as close as possible to the center of the distance between ceiling grids T-bars.

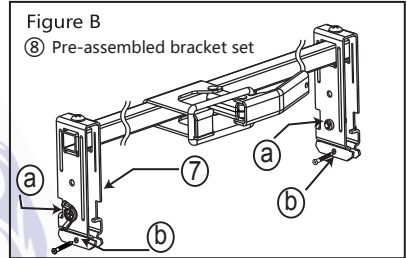
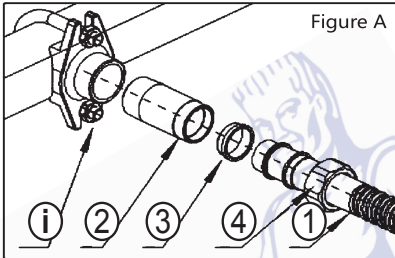
Step 2. Refer to Figure A, apply pipe joint compound or Teflon tape to the tapered threads of ②inlet nipple. Use a torque wrench tighten ②inlet nipple into (i)branch line outlet, with 35ft-lbs. For AR-400-BRG/-BRGE, use a UL/FM approved 1" grooved couplings to connect the grooved outlet on water supply hose branch outlet. Refer to grooved coupling's installation manual.

Step 3. Connect the ④hexagon nut on the hose to ②inlet nipple, with torque 20ft-lbs. Be aware ③gasket must be undamaged and properly placed.

- Do not over tighten hexagon nut to prevent damage to gasket.
- Do not apply any pipe dope or Teflon tape between inlet/discharge nipple and hexagon nuts on the flexible hose since gasket provides sufficient sealing capacity.

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FLEXIBLE SPRINKLER DROP

Step 4. Refer to Figure B, attach ⑧ Pre-assembled bracket set to (ii) T-bar mainrun grids. Make sure visually the grid's top is fully engaged into the bottom of ⑦ Side Brackets. Tighten (a) side screws with 3 ft-lbs to secure ⑦ Side Brackets to the grid (approx. another 1 full turn with screw driver after hand-tight, same hereinafter).



Step 5. For installation that must meet cULus listing requirement, or for add tamper resistance, drill two #8x1¼" sheet-metal screws at (b) location as shown in Figure B through T-bar grids, use torque wrench to ensure the tightening torque reaches 3 ft-lbs.

Step 6. Refer to figure C1, tighten another ④ hexagon nut to ⑤ discharge nipple, with torque 20ft-lbs. Same as step 4, don't use any pipe dope or Teflon tape, don't over torque the nut.

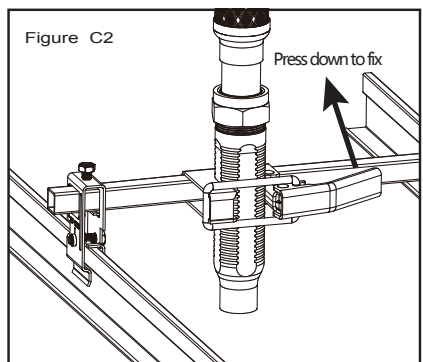
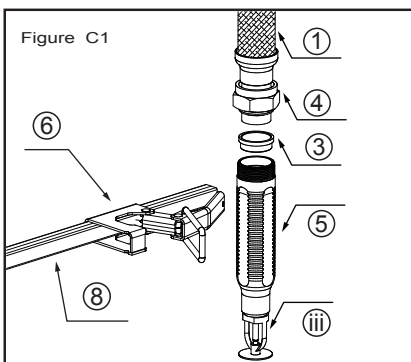
Step 7. Move ⑥ Center Bracket to the desired location. Bend ① flexible hose and place ⑤ Discharge Nipple into ⑥ Center Bracket. Adjust the height of ⑤ discharge nipple to ensure sprinkler will be correctly located.

NOTICE: NEVER BEND THE HOSE SHARPER THAN TABLE 2 SPECIFIED. SMALLER BEND RADIUS MAY ADVERSELY AFFECT FRICTION LOSS SPECIFICATIONS STATED BY APPROVAL LABS.

Step 8. Close ⑥ Center Bracket as shown in the figure C2 and press down the lever firmly. Make sure the bracket side-edge lock into the nipple grooves.

Step 9. Apply pipe dope or Teflon tape to the male threads of (iii) sprinkler head. Install (iii) sprinkler into ⑤ Discharge Nipple by following the sprinkler manufacturer's installation instruction.

Step 10. After installation is complete, test the system for leaks in accordance with NFPA guidelines.



**ARGCO****MEGA-FLEX**
FLEXIBLE SPRINKLER DROP**TABLE 2.a UL listing data**

Style code	Sprklr. size	Hose length	Min. bend radius	Max. bend degree	Max.allow. Sprinkler K-factor	EQL of 33.7mm/1" SCH40 Pipe
		inches	inches	n x 90°	Imprl.	feet
AR-400-BR	1/2"	28	2	4	K8.0	18
		40	2	5	K8.0	24
		48	2	8	K8.0	37
		60	2	10	K8.0	49
		72	2	12	K8.0	52
AR-400-BR	3/4"	28	2	4	K14.0	18
		40	2	5	K14.0	24
		48	2	8	K14.0	37
		60	2	10	K14.0	49
		72	2	12	K14.0	52
AR-400-BR	1"	28	2	4	K25.2	18
		40	2	5	K25.2	24
		48	2	8	K25.2	37
		60	2	10	K25.2	49
		72	2	12	K25.2	52

• UL listing the maximum anchoring space between two side brackets is 610mm / 24 inches.

TABLE 2.b FM approval data

	Style code	Sprinkler size	Hose length	Min. bend radius	Max. bend degree	Max.allow. Sprinkler K-factor	EQL of 33.7mm/1" SCH40 Pipe
			inch	inch	n x 90°	Imprl.	feet
with straight reducers	AR-400-BR AR-400-BRG	1/2"	28	7	1	K5.6	4.5
			40	7	3	K5.6	9.8
			48	7	3	K5.6	13.4
			60	7	4	K5.6	18.8
			72	7	4	K5.6	24.2
	AR-400-BR AR-400-BRG	3/4"	28	7	1	K14.0	13.0
			40	7	3	K14.0	20.7
			48	7	3	K14.0	25.9
			60	7	4	K14.0	33.7
			72	7	4	K14.0	41.5
	AR-400-BR AR-400-BRG	1"	28	7	1	K25.2	5.6
			40	7	3	K25.2	9.2
			48	7	3	K25.2	11.6
			60	7	4	K25.2	15.2
			72	7	4	K25.2	19.1
w/ elbow reducers	AR-400-BRE AR-400-BRGE	1/2"	28	7	1	K5.6	16.3
			40	7	3	K5.6	24.4
			48	7	3	K5.6	29.8
			60	7	4	K5.6	37.9
			72	7	4	K5.6	46.0
	AR-400-BRE AR-400-BRGE	3/4"	28	7	1	K14.0	16.6
			40	7	3	K14.0	23.7
			48	7	3	K14.0	29.1
			60	7	4	K14.0	37.2
			72	7	4	K14.0	45.3



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