

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-UB	Unbraided hose with straight nipple	cULus listed §
AR-BR	Braided hose with straight nipple	cULus listed § ▫, FM approved
AR-BRE	Braided hose with elbow nipple	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	NPT 1" male thread
OUTLET CONNECTIONS	1/2" , 3/4" NPT female thread
MAXIMUM SERVICE PRESSURE (UL & FM listed)	203psi
MAXIMUM AMBIENT TEMPERATURE :	66°C / 150°F

MINIMUM BEND RADIUS & MAXIMUM NUMBER OF 90° BENDS
 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	Fast Center Bracket (figure C1) with screws	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.

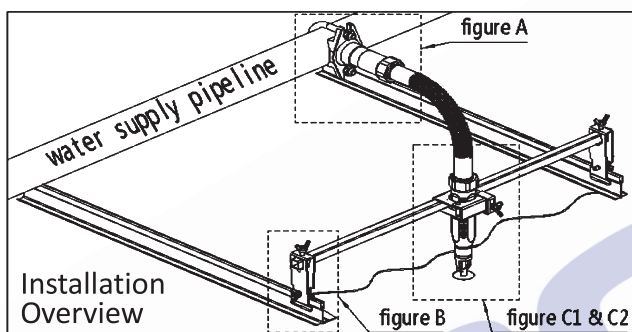
REQUIRED CEILING GRIDS

ARGCO® style AR-UB series & AR-BR series 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.

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 one 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 ⑦side 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?



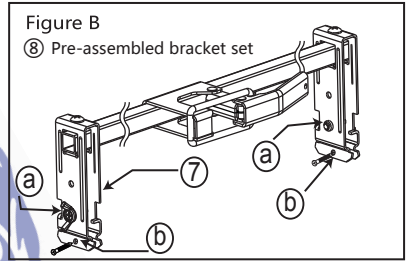
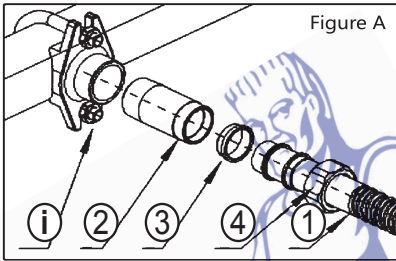
STEP 1. Review the sections "Warning", "Technical specifications" & "Things you should never do".

STEP 2. Determine the approximate place where 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 3. Refer to Figure A, apply pipe joint compound or PTFE tape to the tapered threads of ②inlet nipple. Use a torque wrench tighten ②inlet nipple into (i)branch line outlet, with 35ft-lbs.

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

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.

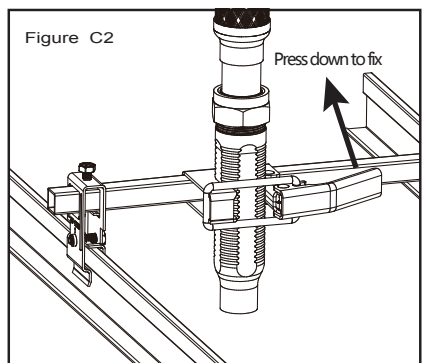
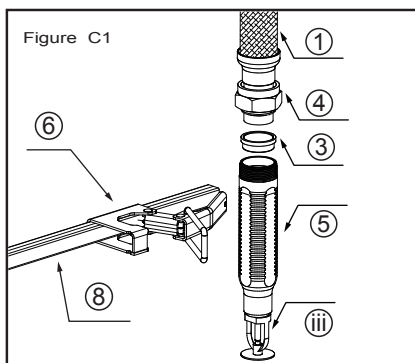


TABLE 2.a
UL listing data



	Style code	Hose length	Min. bend radius	Max. bend degree	EQL, 1" SCH40 at C-120 in feet	
		Feet / inch			inches	n x 90°
Unbraided	AR-UB-07	2.3 / 28	4	2	27	28
	AR-UB-10	3.3 / 40	4	3	37	41
	AR-UB-12	3.9 / 48	4	3	49	47
	AR-UB-15	4.9 / 60	4	3	63	64
	AR-UB-18	5.9 / 72	4	4	78	80
Braided	AR-BR-07	2.3 / 28	4	2	25	21
	AR-BR-10	3.3 / 40	4	3	33	36
	AR-BR-12	3.9 / 48	4	3	39	43
	AR-BR-15	4.9 / 60	4	3	50	52
	AR-BR-18	5.9 / 72	4	3	58	63

- UL listing the maximum anchoring space between two side brackets is 610mm / 24 inches.
- Maximum allowed sprinkler K-factor: 1/2" head K5.6 imperial, 3/4" head K14.0 imperial.

TABLE 2.b
FM approval data



	Style code	Hose length	Min. bend radius	Max. bend degree	EQL, 1" SCH40 at C-120 in feet	
		Feet / inch			inches	n x 90°
Straight nipple	AR-BR-07	2.3 / 28	9.8	1	26.7	21.5
	AR-BR-10	3.3 / 40	9.8	2	42.6	39.6
	AR-BR-12	3.9 / 48	9.8	3	53.2	51.6
	AR-BR-15	4.9 / 60	9.8	3	67.8	63.5
	AR-BR-18	5.9 / 72	9.8	4	82.4	75.4
Elbow nipple	AR-BRE-07	2.3 / 28	9.8	1	26.5	16.8
	AR-BRE-10	3.3 / 40	9.8	2	40.8	34.2
	AR-BRE-12	3.9 / 48	9.8	3	50.4	45.8
	AR-BRE-15	4.9 / 60	9.8	3	65.7	58.7
	AR-BRE-18	5.9 / 72	9.8	4	81.0	71.5

- Maximum allowed sprinkler K-factor: 1/2" head K8.0 imperial, 3/4" head K17.0 imperial.

MAIN MATERIAL SPECIFICATIONS (DETAILS REFER TO TABLE 1)

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