

UltraFlex® Hoses Fig. FH300 Hose Series

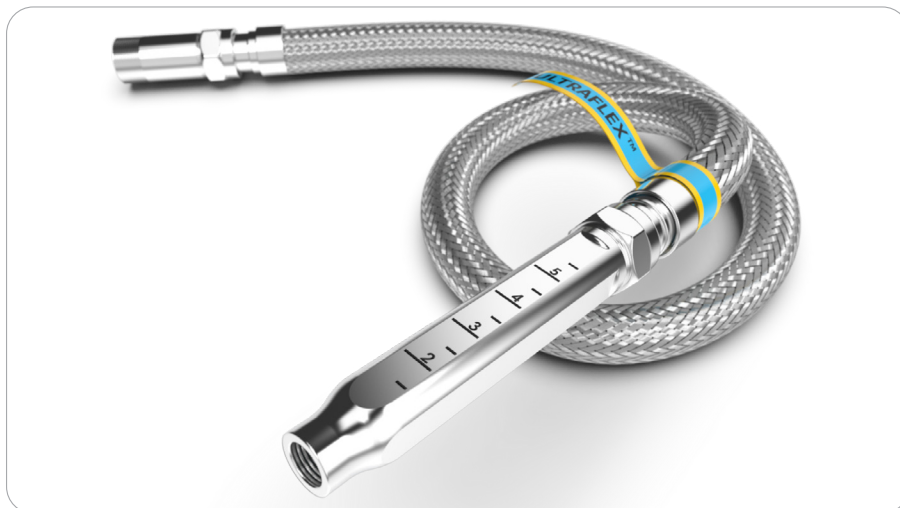


Fig. FH300 Hose Series cULus & FM Approved Brackets

FlexHead Bracket		FH306, FH306G, FH306W		FH325, FH325G, FH325W FH326, FH326G, FH326W	
Fig. #	Size	cULus	FM	cULus	FM
NEW FH120	24"	✓	✓	✓	✓
	48"		✓		✓
NEW FH150	24"	✓	✓		
	24"	✓	✓		
BKT-IPT	48"				
	24"		✓		
BKT-SFO4	48"		✓		

- The FH306 comes as a complete assembly with the FH391C threaded inlet and FH306C straight outlet drop.
- The FH306G, FH306W, FH325, FH325G, FH325W, FH326, FH326G, FH326W may be assembled in the field.
 - The FH325C and FH326C elbow drops are sold separately.
 - The FH391C, FH392C, and FH393C inlets are sold separately.

Product Specifications

Figure Number – Complete Assembly
FH306

Hose Assembly Length

28in 59in
40in 71in
48in

Outlet Thread Size (ASME B1.20.1)

½ NPT ¾ NPT

Figure Number – Outlet Components

FH306C – Straight – 6.3" Length
FH325C – Elbow Drop – 5" Length
FH326C – Elbow Drop – 6.3" Length

Figure Number – Inlet Components

FH391C – 1 MNPT Thread
FH392C – 1 NPS Grooved Inlet
FH393C – 1 Welded Inlet

Pressure Rating

UL & FM: 175psi (1,205kPa)

Minimum Bend Radius

UL: 2.0in (50.8mm)
FM: 7.0in (177.8mm)

Ambient Temperature

225°F (107°C) Max

Material

304 Stainless Steel Hose
Carbon Steel Fittings

Features

- Pre-Installed Sprinkler Head option available upon request
- Compliant with NFPA 13, 13R, & 13D
- Compliant with the FM Datasheets
- Wet, Dry, & Pre-Action Sprinkler Systems
- UL Listed for "Limited Flexibility".

Ordering

Specify figure number, length, outlet size, & description. Components sold separately.



PROJECT INFORMATION	APPROVAL STAMP
Project:	Approved
Address:	Approved as noted
Contractor:	Not approved
Engineer:	Remarks:
Submittal Date:	
Notes 1:	
Notes 2:	

FH306 Series Straight Drop Hoses
Fig. FH306, FH306G, FH306W

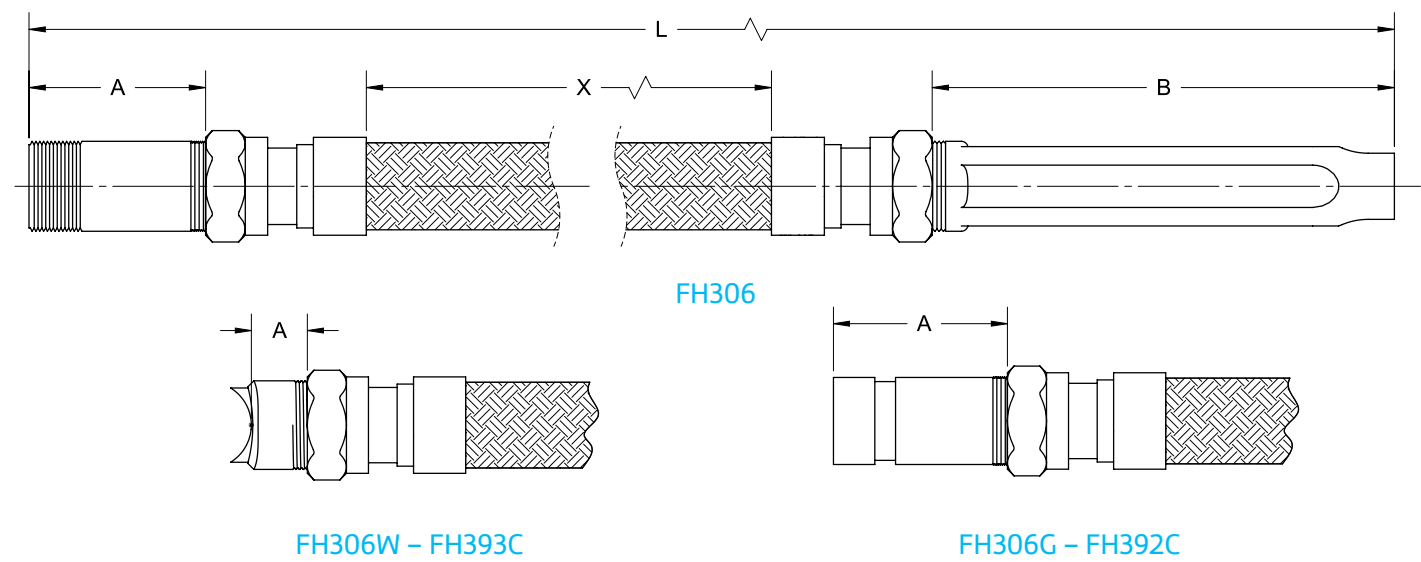


Fig. FH306 Series Dimensions

Assembly Length		True Length (L)		Braid Length (X)		Inlet Nipple Length (A)		Outlet Drop Length (B)	
in		in	mm	in	mm	in	mm	in	mm
24.0		27.6	700	14.4	365				
36.0		39.4	1000	25.4	644				
48.0		47.2	1200	33.4	848	2.5	63.5	6.3	160.0
60.0		59.1	1500	45.4	1152				
72.0		70.9	1800	57.4	1457				



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FH306 Series Straight Drop Hoses Fig. FH306, FH306G, FH306W

Fig. FH306 Series cULus Listing per UL 2443 & FM Approval (Listing) per FM 1637

Outlet Thread Size	Assembly Length	Equivalent Length							Max # of 90° Bends		
		UL		FM					UL		FM
		3-Bend	Max	k = 5.6	k = 8.0	k = 11.2	k = 14.0	k = 16.8	3-Bend	Max	
-	In	ft/m	ft/m	ft/m	ft/m	ft/m	ft/m	ft/m	#	#	#
½ NPT	24.0	14 4.3	18 5.5	20.9 6.4	21.5 6.6	27.1 8.3	-	-	3	4	1
	36.0	18 5.5	24 7.3	28.3 8.6	29.2 8.9	34.7 10.6	-	-	3	5	2
	48.0	21 6.4	34 10.4	32.9 10.0	34.0 10.4	39.3 12.0	-	-	3	8	3
	60.0	25 7.6	43 13.1	39.2 11.9	40.6 12.4	45.8 14.0	-	-	3	10	3
	72.0	29 8.8	51 15.5	46.0 14.0	47.6 14.5	52.7 16.1	-	-	3	12	4
¾ NPT	24.0	18 5.5	21 6.4	-	14.7 4.5	14.7 4.5	14.6 4.5	14.5 4.4	3	4	1
	36.0	22 6.7	30.0 9.1	-	22.1 6.7	22.1 6.7	22.1 6.7	21.9 6.7	3	5	2
	48.0	29 8.8	42 12.8	-	26.7 8.1	26.6 8.1	26.6 8.1	26.4 8.0	3	8	3
	60.0	32 9.8	53 16.2	-	33.0 10.1	32.9 10.0	32.9 10.0	32.7 10.0	3	10	3
	72.0	32 9.8	58 17.7	-	39.8 12.1	39.6 12.1	39.7 12.1	39.4 12.0	3	12	4

1. Equivalent Length of 1 NPS (DN25) Sch 40 Pipe.
2. Equivalent Lengths listed above assume the corresponding number of 90° bends listed to the right of the table.
3. A 90° bend can be achieved with two 45° bends or three 30° bends.
4. UL Equivalent Lengths are listed for installation with sprinklers with a maximum k-factor of 14.0.
5. FM Equivalent Lengths listed above include the Friction Loss of the Sprinkler



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FH325 & FH326 Series Elbow Drop Hoses

Fig. FH325, FH325G, FH325W

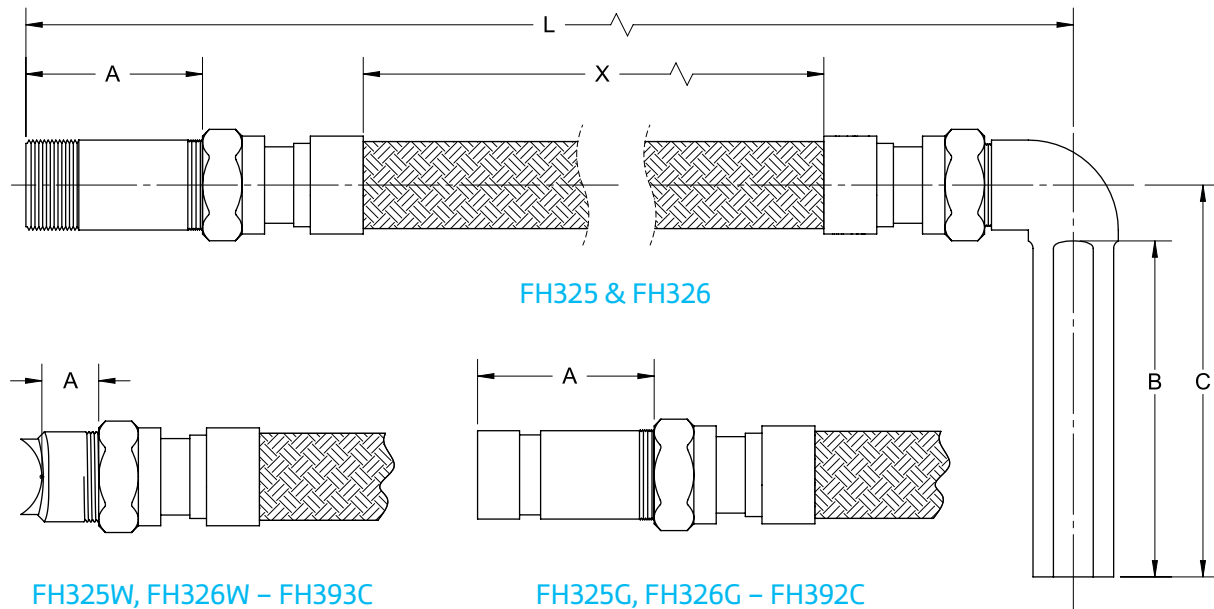


Fig. FH325 & FH326 Series Dimensions

Assembly Length		True Length (L)		Braid Length (X)		Inlet Nipple Length (A)		Outlet Drop Length (B)		Outlet Drop Length (C)	
in		in	mm	in	mm	in	mm	in	mm	in	mm
24.0		21.9	556	14.7	373						
36.0		33.7	856	26.7	678						
48.0		41.6	1056	38.7	983	3.0	76.2	See Below		See Below	
60.0		53.4	1356	50.7	1288						
72.0		65.2	1656	62.7	1593						

Dimensions (Continued)

Figure Number	Outlet Drop Length (B)		Outlet Drop Height (C)	
	in	mm	in	mm
FH325, FH325G, FH325W	5.0	127.0	5.8	147.0
FH326, FH326G, FH326W	6.3	160.0	7.1	180.0



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FH325 Series Elbow Drop Hoses Fig. FH325, FH325G, FH325W

Fig. FH325 Series cULus Listing per UL 2443 & FM Approval (Listing) per FM 1637

Outlet Thread Size	Assembly Length	Equivalent Length							Max # of 90° Bends		
		UL		FM					UL		FM
		3-Bend	Max	k = 5.6	k = 8.0	k = 11.2	k = 14.0	k = 16.8	3-Bend	Max	
-	In	ft/m	ft/m	ft/m	ft/m	ft/m	ft/m	ft/m	#	#	#
½ NPT	24.0	18 5.5	21 6.4	25.7 7.8	24.5 7.5	31.3 9.5	-	-	3	4	1
	36.0	26 7.9	31 9.4	31.9 9.7	35.5 10.8	43.3 13.2	-	-	3	5	2
	48.0	25 7.6	43 13.1	38.1 11.6	40.0 12.2	48.4 14.8	-	-	3	8	3
	60.0	32 9.8	50 5.2	44.2 13.5	46.3 14.1	55.4 16.9	-	-	3	10	3
	72.0	37 11.2	63 19.2	50.4 15.4	49.3 15.0	58.8 17.9	-	-	3	12	4
¾ NPT	24.0	20 6.1	25 7.6	-	16.2 4.9	15.9 4.8	16.1 4.9	14.2 4.3	3	4	1
	36.0	24 7.3	29 8.8	-	22.2 6.8	26.1 8.0	26.2 8.0	25.2 7.7	3	5	2
	48.0	29 8.8	41 12.5	-	28.3 8.6	30.4 9.3	30.4 9.3	29.9 9.1	3	8	3
	60.0	32 9.8	56 17.1	-	34.4 10.5	36.4 11.1	36.3 11.1	36.3 11.1	3	10	3
	72.0	38 11.6	60 18.3	-	40.5 12.3	39.3 12.0	39.0 11.9	39.4 12.0	3	12	4

1. Equivalent Length of 1 NPS (DN25) Sch 40 Pipe.
2. Equivalent Lengths listed above assume the corresponding number of 90° bends listed to the right of the table.
3. A 90° bend can be achieved with two 45° bends or three 30° bends.
4. UL Equivalent Lengths are listed for installation with sprinklers with a maximum k-factor of 14.0.
5. FM Equivalent Lengths listed above include the Friction Loss of the Sprinkler.



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UltraFlex® Hoses Fig. FH300 Hose Series

Installation Instructions

Connection to the Threaded Branch – FH306, FH325, FH326 with the FH391C inlet nipple

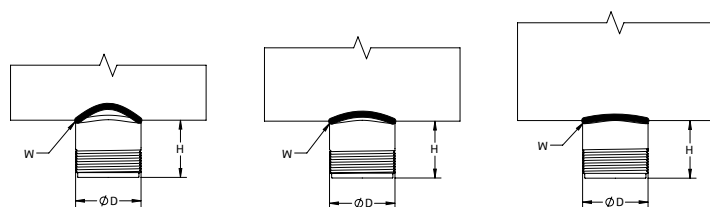
- 1 Separate the FH391C 1 MNPT inlet nipple (if necessary) from the flexible hose assembly.
- 2 Inspect both male NPT and female NPT threads of the branch outlet prior to assembly. Threads should be free from mechanical damage, dirt, chips, and excess cutting oil. Clean components as necessary.
- 3 Apply pipe dope, sealant, or tape to the male NPT thread on the inlet nipple. Do not apply any dope, tape, or sealant to the straight threads.
- 4 Thread into the into the branch outlet. Tighten the assembly wrench-tight by placing the pipe wrench on the unthreaded nipple section. Only place the pipe wrench on the unthreaded portion of the inlet nipple.
- 5 Typical wrench-tight makeup is 3 full turns past hand-tight. Typical hand-tight makeup is between 4½ to 5 turns.

Connection to the Grooved Branch – FH306G, FH325G, FH326G with the FH392C inlet nipple

- 1 The FH392C 1 NPS grooved inlet nipple shall be connected to the branch outlet with a 1 NPS grooved coupling designed for installation with AWWA C606 grooves.

Connection to the Grooved Branch – FH306W, FH325W, FH326W with the FH393C inlet nipple

- 1 The FH393C welded inlet nipple thread protector cap should remain on the threads during installation & fabrication.
- 2 The FH393C welded Inlet nipple may be welded to 1¼" – 5" Schedule 10 & 40 Pipes.
- 3 Drill a 1.25" (31.75mm) hole at the desired location on the branch pipe.
- 4 Center the FH393C on the hole with the flow direction arrow pointing towards the sprinkler.
- 5 Weld the FH393C per the requirements of NFPA 13 and all other local code requirements. The FH393C is manufactured from carbon steel.
- 6 **Note:** The FH393C was UL & FM tested with a ⅛" weld bead. The weld should follow the outline of the pipe, which will vary for the different pipe sizes.



FH393C Welded Inlet Installed Dimensions

D		H		W (Tested Weld)	
in	mm	in	mm	in	mm
1.315	33.4	1.00	25.4	0.125	3.2



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UltraFlex® Hoses Fig. FH300 Hose Series

Installation Instructions (Continued)

Connection of Inlet Nipples & Outlet Drops to the braided hose with unions

- 1 Separate the inlet nipple or outlet drop (if necessary) from the flexible hose.
- 2 Examine the O-ring in the threaded hex union attached to the end of the hose. Ensure it is seated properly and free of debris.
- 3 Ensure the flow direction arrow on the hose, inlet nipple, and outlet drop is pointing in the direction of flow.
- 4 Tighten the threaded hex union at the end of the braided hose to the inlet nipple. Hand tight plus ½ turn (15ft-lbs).

Connection to the Sprinkler Head

- 1 Install the sprinkler head into the sprinkler threads on the outlet drop per the sprinkler manufacturer's installation instructions.
- 2 If installing a sprinkler to a hose after the hose has been connected to the bracket, it is best practice to prevent twisting of the bracket and hose by holding the outlet drop with a pipe wrench.

Connection to the Bracket

- 1 Installation of the hose to the bracket shall be per the bracket's installation instructions.
See Page 1 for Listed and Approved brackets.

Bending the Hose

- 1 The hose may be bent to ensure the inlet nipple and outlet drop are in the desired locations.
- 2 The hose should never be bent to a radius less than minimum listed bend radius.
Note: The bend radius is defined to the center of the hose.
- 3 The hose must have at least one 90° bend. A 90° bend can be achieved with two 45° bends or three 30° bends.
- 4 For best performance, the bends in the hose should be as large and smooth as possible.

General Installation Notes

- 1 Never apply a wrench to the braided section of the hose.
- 2 The hose inlet may be installed in any direction from the branch.



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