



the corrosion expert

# FluoroFlow PTFE Lined Hoses

CRP is a world leader in the manufacture of PTFE and PFA lined equipment including pipe, fittings, valves, bellows, sight glasses and other ancillary equipment and now also FluoroFlow Hoses.

Offering:

FluoroFlow SCH: a super flexible, externally convoluted, smoothbore PTFE hose.

FluoroFlow HCH: A heavy wall extruded convoluted hose used extensively through the process industry.

CRP supplies in the chemical, agro-chemical, pharmaceutical, petrochemical, biotechnology, pulp & paper, metals refining, food and beverage manufacturing sectors. CRP is your single source for a complete corrosion-resistant system suitable for the toughest applications.

## CRP

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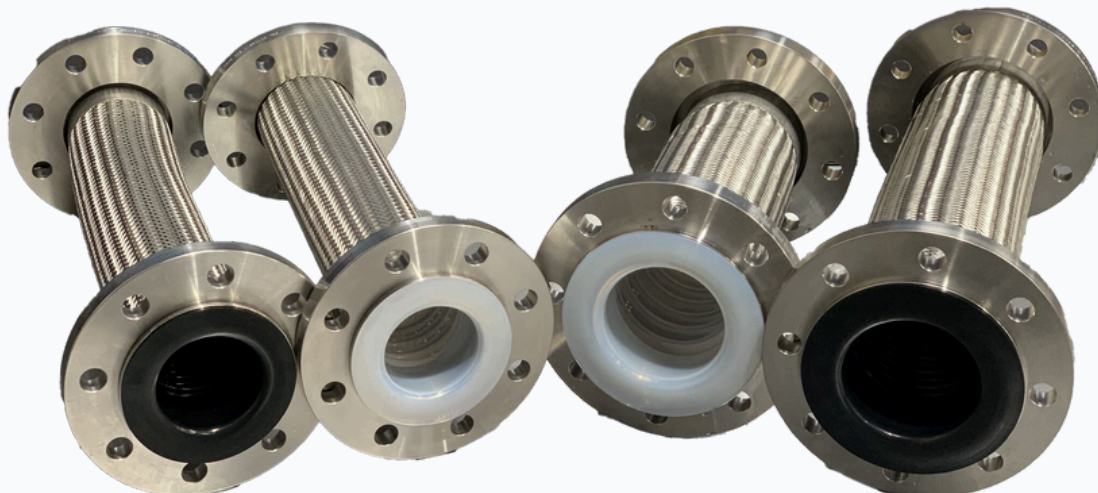
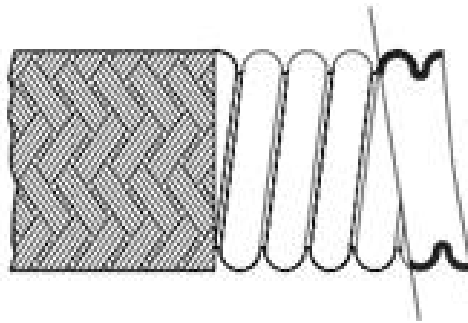


PTFE Lined, Flanged Stainless Steel  
Braided Hoses Heavy Walled,  
Convolute

### FluoroFlow HCH

A heavy wall extruded convoluted hose used extensively through the process industry. It's self cleaning design and unique way the hose can be lined through the fittings makes a completely bug free environment for applications where cleanliness is paramount. This also protects fittings against corrosion in applications transferring aggressive medias.

All hoses can be supplied with a Certificate of Conformity (CoC) upon request. Full Material certification (2.2 / 3.1) can be supplied if requested prior to manufacturing. All PTFE tubing used in production of our hose liners comply to the following Standards & Certification – FDA 21:177:1550 & EU Food, USP Class VI & 3-A Sanitary.



## Dimensional Information: FluoroFlow HCH

Size	ID Nominal	OD Nominal	Wall Thickness	MBR	Max. Length	MWP	BP	Vacuum
(")	(mm)	(mm)	(mm)	(mm)	(metre)	(Bar)	(Bar)	(mBar)
1/4"	7	11.68	0.76	18	20	4	16	744
3/8"	9.65	14.95	0.76	25	20	4	16	744
1/2"	13.08	17.9	0.89	40	20	4	16	887
5/8"	16	21.85	0.89	50	20	3	12	887
3/4"	19	26.4	1	60	20	3	12	887
1.00"	25.4	35	1.2	80	20	3	12	887
1.25"	31	41	1.2	100	20	2.5	10	887
1.50"	35.5	45	1.6	120	20	2.5	10	887
1.75"	44	55	1.6	135	20	2	8	887
2.00"	47.5	58.5	1.6	165	20	2	8	887
2.50"	60.25	76.25	1.6	230	20	1.5	6	887
3.00"	74	92	1.6	260	20	1.25	5	887
4.00"	98	121.3	1.82	300	20	1	4	887
6.00"	152	181	2.5	520	20	1	4	455

## Properties

### Application

Used globally in applications that require the up most cleanliness and with its heavier wall it is more suited to the arduous applications found in the process plant industry. When the application is of higher pressure then a Stainless Steel Braid would be required. A vacuum wire can be supplied if required.

### Design

Heavy wall convoluted PTFE tube with SS 304 / 316 braid.

### Inner layer

Natural (GP) or Anti-static (AS) helically convoluted heavy wall PTFE tube.

### Outer layer

SS 304 / 316 braid.

(34 = Stainless Steel 304 Grade / 36 = Stainless Steel 316 Grade)

### Temperature Min

-60°C.

### Temperature Max

+260°C.

### Material

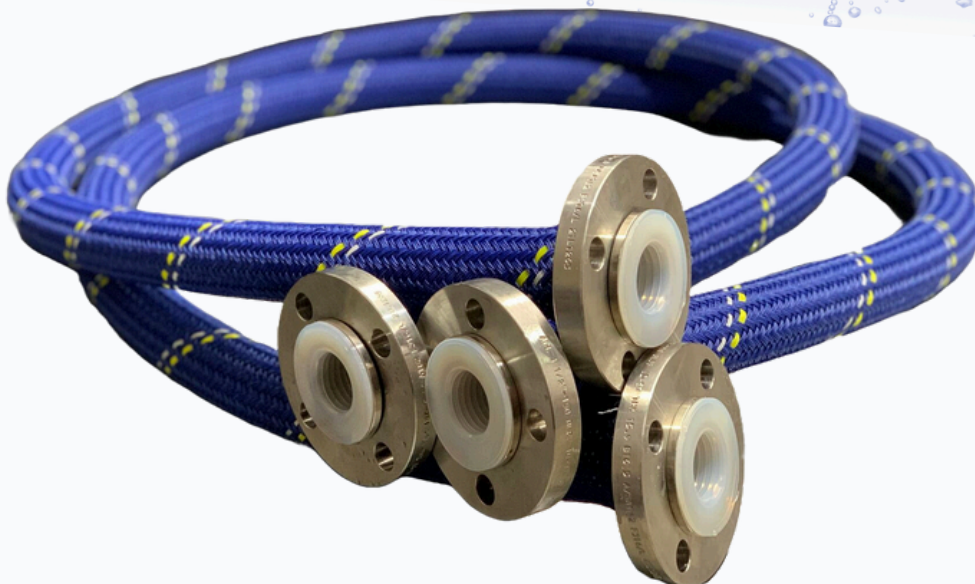
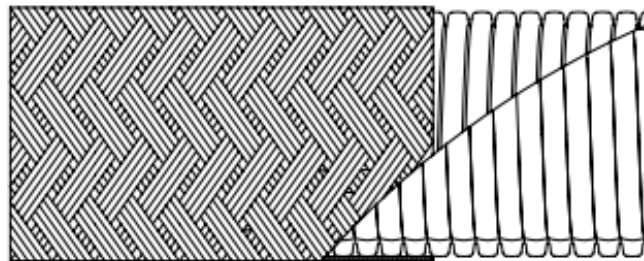
PTFE to: 'ASTM D4895, TYPE 1, GRADE 4, CLASS B' & 'ASTM D4895, TYPE 1, GRADE 3, CLASS B'

## FluoroFlow SCH

FluoroFlow SCH is a super flexible, externally convoluted, Smoothbore PTFE hose. When space and flexibility are an issue, but a smoothbore is a must for an uninterrupted flow and ease of cleaning, it is the ultimate problem solver. Available with FDA approved Natural (GP) or Anti-static (AS) PTFE tubes. PTFE lined 'Flared/Tafted' fittings to improve cleanliness, remove bug traps and improve the ability to clean in place.

Available options –

SS - STAINLESS STEEL BRAID SS/RC - STAINLESS STEEL BRAID, RUBBER COVER  
SS/SI - STAINLESS STEEL BRAID, SILICONE COVER PB -  
POLYPROPYLENE BRAID





## Dimensional Information: FluoroFlow SCH

Size	ID Nominal	OD Nominal	Wall Thickness	MBR	Max Length	MWP	BP
(")	(mm)	(mm)	(mm)	(mm)	(metre)	(Bar)	(Bar)
1/2"	13.4	18	1.6	38	10	60	240
3/4"	19.1	24.1	1.8	50	10	60	240
7/8"	21	27	2.1	55	10	55	220
1.00"	25.4	31.4	2.2	70	10	50	200
1.25"	31.8	39.3	2.65	100	10	45	180
1.50"	38.1	46.1	3	140	10	40	160
2.00"	49.5	58.2	4	280	10	30	120

## Properties

### Application

Used globally in applications that require the up most cleanliness and with its Smoothbore Convuluted liner and heavier wall it is more suited to the arduous applications found in the process plant industries – Pharmaceutical, Bio-pharm, Chemical, Food & Beverage & Clean environments.

### Design

Smoothbore Convuluted PTFE tube with Stainless Steel 304 / 316 braid.

### Inner layer

Natural (GP) or Anti-static (AS) smoothbore convuluted PTFE tube.

### Outer layer

SS 304 / 316 braid.

(34 = Stainless Steel 304 Grade / 36 = Stainless Steel 316 Grade)

### Temperature Min

-60°C.

### Temperature Max

+260°C.

### Material

PTFE to: 'ASTM D4895, TYPE 1, GRADE 4, CLASS B' & 'ASTM D4895, TYPE 1, GRADE 3, CLASS B'.

# PTFE Lined Hoses Considerations for Length Calculations

## CALCULATING THE HOSE LENGTH

The formula for calculating the bent section of the hose length around a radius is derived from the basic formula that the circumference of a circle =  $2\pi R$ , where  $R$  = the radius of the circle, and  $\pi$  = a constant, = 3.142.

So, if the hose goes around a 90° bend, which is 1/4 of a full circumference, and the radius of the bend is  $R$ , then the length of the hose around the bend is =  $1/4 \times 2\pi R$ . Or half way round, in a U-shape, =  $1/2 \times 2\pi R$ .

### NOTE:

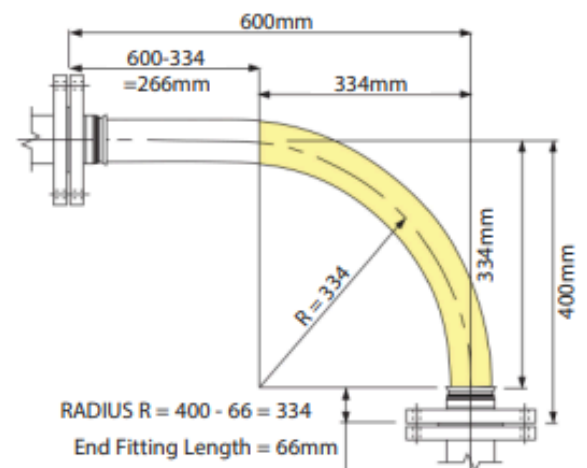
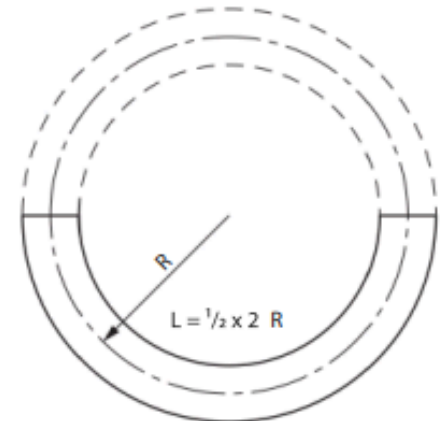
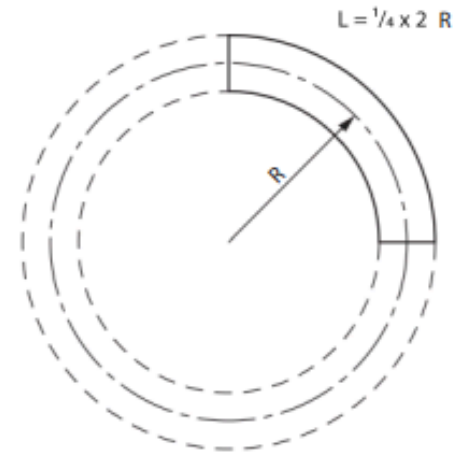
In calculating the length of a hose assembly, the (non-flexible) length of the end fittings must be added in, also the length of any straight sections of hose, as in the following example:

To calculate the length for a 2" bore size hose with flange end fittings, to be fitted in a 90° configuration with one leg 400mm long, the other 600mm long.

Length of Bent Section (yellow)	= $1/4 \times 2\pi R$ (334)	
	= $1/4 \times 2 \times 3.142 \times 334$	= 525mm
Length of top, Straight Section, including the top end fitting length	= $600 - 334$	= 266mm
Length of bottom end fitting	=	66mm
Total length of Hose Assembly	= $525 + 266 + 66$	= 857mm

### Things to consider:

- A hose will normally take the longest radius available to it to go around a corner, not the MBR! Also - always remember to include the non-flexible end fitting lengths.
- In dynamic applications, remember to always calculate the lengths for the most extended configuration during the flexing cycle, not the least extended.
- If the configuration is simply too complex for calculation, then obtain a length of flexible tubing of some kind, mark on paper, or a wall, or floor, or both where the connection points will be relative to each other, scaled down if necessary, then manually run the flexible tubing between them with full radii round bends. Measure the extended length, then scale up if necessary to determine the approximate length of the hose.





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This information is for general guidance only, no warranty is given for its accuracy and CRP reserve the right to change specifications without notice © CRP

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