

# Medium Pressure Hose

- Hose manufactured in 316 stainless steel
- Braid manufactured in 304 and 316 stainless steel
- Directly braided on reels - Up to 80mm (3")
- UFBX0 = Unbraided Hose UFBX1 = Single Braid layer UFBX2 = Double Braid Layer

UFBX - 316

Nominal Bore	Hose Type	Hose O/D	Min Bend Radius		Maximum Pressure				Weight
			Static	Dynamic	Working		Test		
			mm	mm	Bar	PSI	Bar	PSI	
6 / ¼"	UFBX0	10	16	110	10	145	15	218	0.09
	UFBX1	11.4	25		167	2422	251	3633	0.17
	UFBX2	12.8			220	3191	330	4786	0.25
8 / 5/16"	UFBX0	12	20	130	10	145	15	218	0.13
	UFBX1	13.4	32		136	1973	204	2959	0.23
	UFBX2	14.7			210	3046	315	4569	0.33
10 / 3/8"	UFBX0	14.9	22	150	5.5	80	8	120	0.17
	UFBX1	16.3	38		100	1450	150	2176	0.28
	UFBX2	17.6			178	2582	267	3873	0.39
12 / ½"	UFBX0	19.3	24	165	5.5	80	8	120	0.24
	UFBX1	20.7	45		74	1073	111	1610	0.43
	UFBX2	22.4			103	1494	155	2241	0.60
15 / 5/8"	UFBX0	22	28	195	5	73	8	109	0.28
	UFBX1	23.3	50		70	1015	105	1523	0.45
	UFBX2	24.6			125	1813	188	2719	0.62
20 / ¾"	UFBX0	25.8	30	200	4.1	59	6	89	0.37
	UFBX1	27.4	70		65	943	98	1414	0.62
	UFBX2	29			86	1247	129	1871	0.87
25 / 1"	UFBX0	33.7	44	200	4.1	59	6	89	0.50
	UFBX1	35.8	85		50	725	75	1088	0.88
	UFBX2	37.9			76	1102	114	1653	1.30
32 / 1 ¼"	UFBX0	41.1	55	250	3.4	49	5	74	0.64
	UFBX1	43.2	105		39	566	59	848	1.10
	UFBX2	45.3			57	827	86	1240	1.60
40 / 1 ½"	UFBX0	47.9	70	250	2.4	35	4	52	0.89
	UFBX1	50	127		35	508	53	761	1.40
	UFBX2	52.2			55	798	83	1197	1.90
50 / 2"	UFBX0	62.1	90	350	1	15	2	22	1.20
	UFBX1	64.2	160		30	435	45	653	1.90
	UFBX2	66.3			44	638	66	957	2.70
65 / 2 ½"	UFBX0	76.5	110	410	1	15	2	22	1.90
	UFBX1	78.6	200		26	377	39	566	2.80
	UFBX2	80.7			46	667	69	1001	3.70
80 / 3"	UFBX0	89.8	130	450	1	15	2	22	2.30
	UFBX1	91.9	230		22	319	33	479	3.40
	UFBX2	94.1			40	580	60	870	4.50
100 / 4"	UFBX0	127	200	560	0.69	10	1	15	3.00
	UFBX1	129	230		21.5	312	32	468	4.90
	UFBX2	132			34	490	51	735	6.80
125 / 5"	UFBX0	149	343	711	0.21	3	0.3	4	4.00
	UFBX1	151	343		23.4	340	35.2	510	5.93
	UFBX2	154			30	435	45	650	7.87
150 / 6"	UFBX0	178	406	864	0.21	3	0.3	4	6.62
	UFBX1	180	406		14.5	210	21.7	315	9.15
	UFBX2	183			21.4	310	32.1	465	11.73
200 / 8"	UFBX0	230	508	1067	0.14	2	0.21	3	8.50
	UFBX1	233	508		15.2	220	22.8	330	11.79
	UFBX2	235			23.4	340	35.2	510	16.74
250 / 10"	UFBX0	284	864	1753	0.14	2	0.21	3	8.84
	UFBX1	287	864		12.8	185	19	275	15.36
	UFBX2	290			22.8	330	34.1	495	21.87
300 / 12"	UFBX0	337	940	1880	0.14	2	0.21	3	10.55
	UFBX1	339	940		12.07	175	18	260	20.29
	UFBX2	343			21.7	315	32	470	30.04

## Construction

The hoses are annularly corrugated formed from butt welded rigid tube. Depending on the application, required working pressure and conditions of operation, a single or double layer of wire braid can be applied externally to the hose to restrain it, increasing its ability to withstand pressure, increasing hoop strength and protection from abrasion. The extent of braided, gauge and angle lay is calculated carefully to maximise performance.

## Materials

Tube: BS EN 10088 -2:2014 1.4541 (321S31) or 1.4404 (316S11)

Braid: BS EN 10088-3 :2014 1.4301 (304S31) or 1.4401 (316S31)

## Shock Pressure

Pulsating, surge or shock pressures considerably affect hose longevity and if encountered, peak pressure must not exceed 50% of the maximum working pressure.

## Flow Velocity

High velocities should be avoided as they can lead to premature fatigue failure.

An interlock hose should be used as a liner if velocity exceeds:

Unbraided: 30m/s (gas); 15m/s (liquid)

Braided: 45m/s (gas); 22.5m/s (liquid)

When the hose is installed in a bend condition, these values should be reduced by 50% for a 90° bend, 25% for a 45° and so on, proportionally to the angle. With higher velocity, the next larger hose with liner should be used.

## Pressure Loss

To achieve the same pressure loss as in steel pipes, the diameter of the corrugated hose should be increased by 15%.

## Pressure Derating Factors

The pressure ratings given apply to hose with welded end connections at room temperatures. The following derating factors must be applied at higher temperatures.

Operating Temperature (°C)	321S31 Stainless Steel	316S11 Stainless Steel
-200 to 20	1	1
50	0.92	0.88
100	0.83	0.74
150	0.78	0.67
200	0.74	0.62
250	0.71	0.58
300	0.67	0.54
350	0.64	0.52
400	0.62	0.50
450	0.61	0.48
500	0.60	0.47
550	0.59	0.47
600	-	-

## Design and installation considerations

Flexing is usually in accordance with one or a combination of the types of motion shown below. The formulae given are provided to help determine the length of hose required to prevent flexing below the minimum bend radius, thereby ensuring maximum flexibility.

Avoid sharp bends and torsional twisting. Keep flexing in one plane.

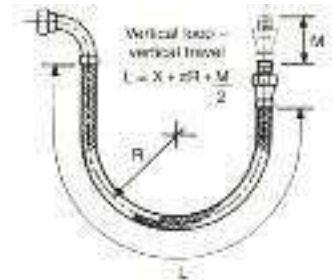
$L$  = Minimum live length excluding end-fitting ferrule

$R$  = Minimum bend radius

$M$  = Movement

$\pi = 3.142$

$X$  = Extra non-flexed length of hose (given below).



I.D.	6	10	15	20	25	32	40	50	65	80
$X$	50	75	100	125	150	175	200	250	275	300

