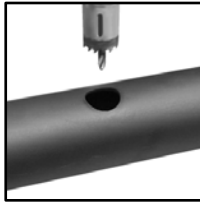


SHURJOINT®

Model 71 Female Threaded Outlet Fitting

Installation Instructions

- The hole cut in the branch or header pipe can be cut prior to or subsequent to the welding of the fittings (depending on local codes). The advantage of cutting a hole after welding is that the pipe is intact during welding and eliminates the likelihood of distortion caused by excessive heat.



If holes are cut prior to welding, as some codes require, follow the recommended welding procedure to avoid distortion of the header pipe. Refer to the recommended hole size contained in the chart on page 3.

| CAUTION |

- ✧ Excessive heat may cause the threads to distort and or leak.

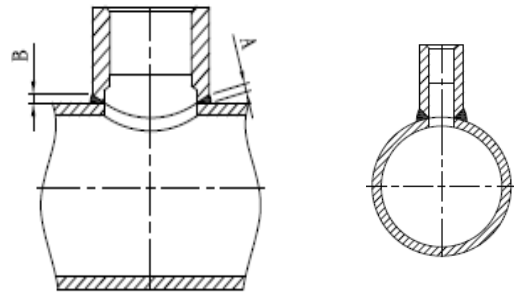
- The **Shurjoint** Model 71 Female Welded Outlet Fitting is designed for single pass welding.

- Model 71 outlets (except 1/4" size) feature a counter bore and a 1.6mm land around the full circumference of the mouth, which helps ensure full penetration welds and minimize the likelihood of burn through or distortion caused by excessive heat.

- It is recommended that the weld temperature be only as hot as needed to fully penetrate the materials being welded. Excessive heat may cause the wrench tight threads (those near the weld zone) to distort, as well as the pipe itself.



The following chart lists the recommended amount of weld for each outlet size.



1/4" Size outlet

1/2" ~ 4" Size outlet

Outlet Size	A (in/mm)	B (in/mm)
1/2	1/4 (6)	3/16 (5)
3/4	1/4 (6)	3/16 (5)
1	1/4 (6)	3/16 (5)
1 1/4	1/4 (6)	3/16 (5)
1 1/2	5/16 (8)	1/4 (6)
2	5/16 (8)	1/4 (6)
2 1/2	5/16 (8)	1/4 (6)
3	3/8 (10)	5/16 (8)
4	3/8 (10)	5/16 (8)

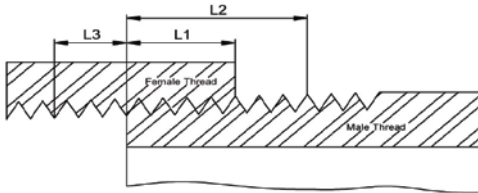


Threaded Assembly Instructions

1. Thread Inspection

Prior to installing a threaded branch pipe or nipple into a Model #71 outlet fitting, inspect the thread of the outlet and the nipple to insure that

- All threads are clean and free of rust, weld splatter and debris prior to the application of joint sealant (tape or paste).
- No burn-through has damaged the threads.
- Thread length is correct. All branch pipe or nipple's threads must be fabricated to ANSI B1.20.1 NPT (or BSPT threads to ISO 7 depending the product being installed).



2. Sealant Application

Apply a moderate amount of high quality fast drying vibration resistant sealant (Teflon* based pipe paste or Teflon tape is recommended). The sealant should be applied evenly across the full length of the pipe threads. For 1/4" though 1" outlets an anaerobic pipe sealant is recommended.

| CAUTION |

- ✧ If using Teflon tape, it should be applied with a minimum of three overlapping wraps along the full length of the threads. Wrap the tape from left to right starting at the beginning of the thread.

* Teflon is a registered trademark of DuPont

3. Make-on Fitting

Firmly tighten the fitting by hand. With the pipe firmly secured, advance the fitting another two to three complete revolutions beyond hand tight using a pipe wrench.

4. Test and Inspection

After initial installation, pressurize the system and inspect for leaks. If a leak is detected, advance the fitting to tighten and retest and inspect.

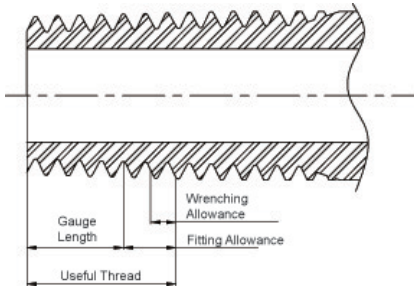
| CAUTION |

- ✧ Over tightening fittings may result in joint failure.
- ✧ Do not back-off fittings during or after tightening.
- ✧ Piping systems must always be depressurized and drained before attempting to disassemble, remove or adjust any piping component.

5. Care & Maintenance

Shurjoint Model 71 fittings in most applications do not require any special maintenance. Always follow generally accepted piping principles when caring for a piping system and ensure the entire system is maintained per all local codes and requirements including the most current version of NFPA Standard 25, entitled Inspection, Testing and Maintenance of a Water Based Fire Protection Systems.

NPT Threaded Pipe Threads , ANSI/ASME B1.20.1 Length of Effective Threads				
Drop Nipple or Outlet Size	L1 Dim. Hand Tight in./thrds.	L3 Dim. Wrench Tight in./thrds.	Total L1+L3 Length in./thrds.	L2 Dim. Effective Threads in./thrds.
1/2"	0.320/4.48	0.214/3.00	0.534/7.48	0.534/7.47
3/4"	0.339/4.75	0.214/3.00	0.553/7.75	0.546/7.64
1"	0.400/4.60	0.261/3.00	0.661/7.60	0.683/7.85
1 1/4"	0.420/4.83	0.261/3.00	0.681/7.83	0.707/8.13
1 1/2"	0.420/4.83	0.261/3.00	0.681/7.83	0.724/8.32
2"	0.436/5.01	0.261/3.00	0.697/8.01	0.757/8.70



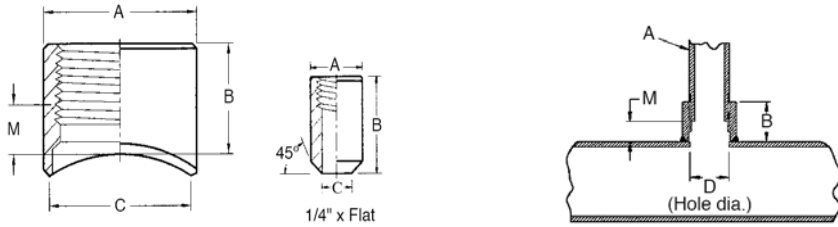
ISO 7/1, BS21, DIN 2999 Pipe Thread				
Drop Nipple or Outlet Size	Gauge Length (Hand tight)	Fitting allowance	Wrenching allowance	Useful Thread
in	mm / Turns	mm / Turns	mm / Turns	mm / Turns
1/4	6.0 / 4-1/2	3.7 / 2-3/4	2.0 / 1-1/2	10 / 7-1/4
1/2	8.2 / 4-1/2	5.0 / 2-3/4	2.7 / 1-1/2	13 / 7-1/4
3/4	9.5 / 5-1/4	5.0 / 2-3/4	2.7 / 1-1/2	15 / 8
1	10.4 / 4-1/2	6.4 / 2-3/4	3.5 / 1-1/2	17 / 7-1/4
1-1/4	12.7 / 5-1/2	6.4 / 2-3/4	3.5 / 1-1/2	19 / 8-1/4
1-1/2	12.7 / 5-1/2	6.4 / 2-3/4	3.5 / 1-1/2	19 / 8-1/4
2	15.9 / 6-7/8	7.5 / 3-1/4	2 / 4.6	24 / 10-1/8
2-1/2	17.5 / 7-9/16	9.2 / 4	2-1/2 / 5.8	27 / 11-9/16
3	20.6 / 8-15/16	9.2 / 4	2-1/2 / 5.8	30 / 12-15/16
4	25.4 / 11	10.4 / 4-1/2	3 / 6.9	36 / 15-1/2

| CAUTION |

- ✧ Improper threads and or depth will affect sealing.



Table 1: SHURJOINT Model 71 Female Threaded Outlet Fitting Performance Data

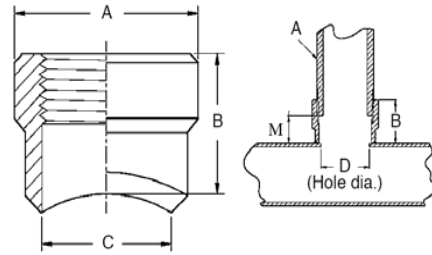


Model 71 Female Threaded Outlet Fitting									
Nominal Outlet Size	Header Size Range	Outlet OD A	Outlet Length B	Counter Bore C	Make-UP M	Hole Saw Dia. (Ref.) D	Max. Hole Dia. (Ref.) D	Approx Weight	
mm <i>in</i>	in	mm <i>in</i>	mm <i>in</i>	mm <i>in</i>	mm <i>in</i>	mm <i>in</i>	mm <i>in</i>	Kgs	Lbs
8	1¼ - 8	19.1	31.8	10.7	20.5	9.5	10.3	0.04	0.09
¾		0.75	1.25	0.42	0.81	3/8	13/32		
15 ½	1¼ - 1½	28.6	25.4	20.6	12.7	17.5	20.6	0.07	0.15
	1½ - 2							0.07	0.15
	2 - 2½							0.06	0.13
	2½ - 8							0.05	0.11
20 ¾	1¼ - 1½	34.9	25.4	26.9	12.7	22.2	25.4	0.10	0.22
	1½ - 2							0.09	0.20
	2 - 2½							0.09	0.20
	2½ - 8							0.08	0.18
25 1	1¼ - 1½	40.0	28.6	31.8	12.7	28.6	31.8	0.11	0.24
	1½ - 2							0.11	0.24
	2 - 2½							0.11	0.24
	2½ - 3							0.11	0.24
	3 - 4							0.11	0.24
	5 - 8							0.10	0.22
32 1¼	1½ - 2	48.5	31.8	41.0	12.7	34.9	38.1	0.19	0.42
	2 - 2½							0.19	0.42
	2½ - 3							0.19	0.42
	3 - 4							0.18	0.40
	5 - 8							0.18	0.40
40 1½	2	55.0	31.8	47.0	22.2	41.3	44.5	0.24	0.53
	2½							0.24	0.53
	3 - 4							0.22	0.48
	5 - 8							0.22	0.48
50 2	2½	67.0	38.1	58.6	22.2	54.0	57.2	0.40	0.88
	3							0.39	0.86
	4							0.39	0.86
	5							0.39	0.86
	6							0.38	0.84
	8							0.38	0.84
65 2½ (73.0 OD)	3	79.0	44.5	70.1	28.6	63.5	66.7	0.48	1.06
	4							0.38	0.84
	5							0.38	0.84
	6							0.45	0.99
80 3	8	98.0	53.3	87.0	38.1	79.4	82.6	0.49	1.08
	4							0.80	1.76
	5							0.77	1.70
	6							0.77	1.70
100 4	8	125.2	60.3	113.3	50.8	104.8	108.0	0.77	1.70
	5							1.40	3.08
	6							1.32	2.90
	8							1.32	2.90

The precision machined mouth is designed to fit the first listed header size perfectly, and allows only a small gap along the longitudinal centerline of the second listed header size.



Each outlet size shown in the following table fits the same header pipe size. Special attention is required to the hole size (D) in the header pipe, which is one size smaller than the regular hole size.



Model 71 Female Threaded Outlet Fitting									
Nominal Outlet Size	Header Size	Outlet O D	Outlet Length B	Counter Bore C	Make-UP M	Hole Saw Dia. (Ref.) D	Max. Hole Dia. (Ref.) D	Approx. Weight	
								Kgs	Lbs
mm <i>in</i>	<i>in</i>	mm <i>i</i>	mm <i>in</i>	mm <i>in</i>	mm <i>in</i>	mm <i>in</i>	mm <i>in</i>		
32 <i>1¼</i>	1¼	48.5 <i>1.9</i>	31.8 <i>1.25</i>	36.5 <i>1.44</i>	12.7 <i>0.50</i>	31.8 <i>1¼</i>	34.9 <i>1¾</i>	0.19	0.42
40 <i>1½</i>	1½	55.0 <i>2.1</i>	31.8 <i>1.25</i>	42.5 <i>1.67</i>	22.2 <i>0.88</i>	38.1 <i>1½</i>	41.3 <i>1¾</i>	0.21	0.46
50 <i>2</i>	2	67.0 <i>2.6</i>	38.1 <i>1.50</i>	54.5 <i>2.15</i>	22.2 <i>0.88</i>	50.8 <i>2</i>	54.0 <i>2¾</i>	0.34	0.75
65 <i>2½ (73.0 OD)</i>	2½	79.0 <i>3.11</i>	44.5 <i>1.75</i>	65.2 <i>2.57</i>	28.6 <i>1.13</i>	60.3 <i>2¾</i>	63.5 <i>2½</i>	0.49	1.08
80 <i>3</i>	3	98.0 <i>3.8</i>	53.3 <i>2.10</i>	81.0 <i>3.19</i>	38.1 <i>1.50</i>	76.1 <i>3</i>	79.4 <i>3¾</i>	0.80	1.76
100 <i>4</i>	4	125.2 <i>4.9</i>	60.3 <i>2.37</i>	107.0 <i>4.21</i>	50.8 <i>2.00</i>	101.6 <i>4</i>	104.8 <i>4¾</i>	1.40	3.08

