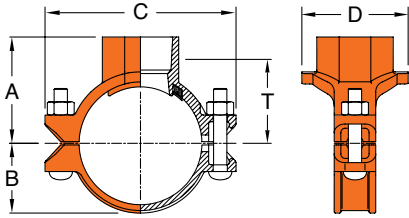


# M21

Mechanical Tee | Female Threaded Outlet



Job Name:	
Job Location:	
Engineer:	
Contractor:	
Tag:	
PO#:	
Rep:	
Wholesale Dist.:	



The Shurjoint Model M21 features an advanced design and when mounted on hole cut pipe the Model M21 provides a fast and easy mid-pipe threaded branch outlet. Threads are NPT per ANSI B1.20 or BSPT per ISO 7. By utilizing the Model M21 you can eliminate the need for welding or the use of multiple fittings. The M21 Mechanical Tee is comprised of upper and lower ductile iron housing segments, a grade "E" EPDM rubber gasket (Model M21 & M22 gaskets are interchangeable) and plated track bolts and nuts. Mechanical tees are supplied with our standard painted finishes, i.e. orange or RAL3000 red. Optional finishes such as hot dipped zinc galvanized and custom epoxy coatings are also available.

Shurjoint mechanical tees: Model M21, M22, 7721 & 7722 can also be used on applicable IPS size HDPE pipe. When used in conjunction with HDPE pipe the pressure rating would be the lower of the fitting or pipe rating. Please note Shurjoint mechanical tees are not recommended for use on PVC plastic pipe.

Important Note: Model M21 housing segments are not compatible and should not be used with other Shurjoint mechanical tee housing segments such as Model 7721 & 7722 mechanical tees.

For Fire Protection pressure rating, listing, and approval information, refer to Data Sheet B-42 or visit [www.shurjoint.com](http://www.shurjoint.com) for details or contact Shurjoint.

## DIMENSIONS

NOMINAL SIZE RUN X BRANCH	PIPE O.D.	MAX. WORKING PRESSURE (CWP)**	DIMENSIONS					BOLT SIZE	WEIGHT
			T‡	A	B	C	D		
in mm	in mm	PSI Bar	in mm	in mm	in mm	in mm	in mm	in mm	lb kg
2 x 1/2	2.375 x 0.840	300	1.97	2.50	1.50	4.56	3.19	3/8 x 2-1/8	2.18
50 x 15	60.3 x 21.3	20	50	63.5	38.1	115.9	81	M10 x 55	0.99
2 x 3/4	2.375 x 1.050	300	1.97	2.50	1.50	4.56	3.19	3/8 x 2-1/8	2.22
50 x 20	60.3 x 26.7	20	50	63.5	38.1	115.9	81	M10 x 55	1.01
2 x 1	2.375 x 1.315	300	1.85	2.50	1.50	4.56	3.19	3/8 x 2-1/8	2.40
50 x 25	60.3 x 33.4	20	47	63.5	38.1	115.9	81	M10 x 55	1.09
2 x 1-1/4	2.375 x 1.660	300	2.05	2.87	1.50	4.56	3.31	3/8 x 2-1/8	2.77
50 x 32	60.3 x 42.2	20	52	73.0	38.1	115.9	84	M10 x 55	1.26
2 x 1-1/2	2.375 x 1.900	300	2.08	3.00	1.50	4.56	3.31	3/8 x 2-1/8	3.01
50 x 40	60.3 x 48.3	20	52	76.2	38.1	115.9	84	M10 x 55	1.37
2-1/2 x 1/2	2.875 x 0.840	300	2.20	2.75	1.75	5.56	3.19	1/2 x 2-3/8	2.60
65 x 15	73.0 x 21.3	20	56	69.9	44.5	141.3	81	M12 x 60	1.20
2-1/2 x 3/4	2.875 x 1.050	300	2.20	2.75	1.75	5.56	3.19	1/2 x 2-3/8	2.70
65 x 20	73.0 x 26.7	20	56	69.9	44.5	141.3	81	M12 x 60	1.20
2-1/2 x 1	2.875 x 1.315	300	2.09	2.75	1.75	5.56	3.19	1/2 x 2-3/8	2.86
65 x 25	73.0 x 33.4	20	53	69.9	44.5	141.3	81	M12 x 60	1.30
2-1/2 x 1-1/4	2.875 x 1.660	300	2.28	3.00	1.75	5.56	3.70	1/2 x 2-3/8	3.21
65 x 32	73.0 x 42.2	20	58	76.2	44.5	141.3	94	M12 x 60	1.46
2-1/2 x 1-1/2	2.875 x 1.900	300	2.28	3.00	1.75	5.56	3.70	1/2 x 2-3/8	3.43
65 x 40	73.0 x 48.3	20	58	76.2	44.5	141.3	94	M12 x 60	1.56
76.1 x 15 mm	3.000 x 0.840 76.1 x 21.3	300 20	2.20 56	2.75 69.9	1.81 46.1	5.69 144.5	3.19 81	1/2 x 2-3/8 M12 x 60	2.64 1.20
76.1 x 20 mm	3.000 x 1.050 76.1 x 26.7	300 20	2.20 56	2.75 69.9	1.81 46.1	5.69 144.5	3.19 81	1/2 x 2-3/8 M12 x 60	2.64 1.20
76.1 x 25 mm	3.000 x 1.315 76.1 x 33.4	300 20	2.09 53	2.75 69.9	1.81 46.1	5.69 144.5	3.19 81	1/2 x 2-3/8 M12 x 60	2.86 1.30
76.1 x 32 mm	3.000 x 1.660 76.1 x 42.2	300 20	2.28 58	3.00 76.2	1.81 46.1	5.69 144.5	3.70 94	1/2 x 2-3/8 M12 x 60	3.21 1.46
76.1 x 40 mm	3.000 x 1.900 76.1 x 48.3	300 20	2.28 58	3.00 76.2	1.81 46.1	5.69 144.5	3.70 94	1/2 x 2-3/8 M12 x 60	3.43 1.56
3 x 1/2	3.500 x 0.840	300	2.36	3.06	2.09	6.19	3.19	1/2 x 3	3.17
80 x 15	88.9 x 21.3	20	60	77.8	53.2	157.2	81	M12 x 75	1.44
3 x 3/4	3.500 x 1.050	300	2.32	3.06	2.09	6.19	3.19	1/2 x 3	3.21
80 x 20	88.9 x 26.7	20	59	77.8	53.2	157.2	81	M12 x 75	1.46
3 x 1	3.500 x 1.315	300	2.40	3.06	2.09	6.19	3.19	1/2 x 3	3.37
80 x 25	88.9 x 33.4	20	61	77.8	53.2	157.2	81	M12 x 75	1.53

Continued from previous page.

NOMINAL SIZE RUN X BRANCH	PIPE O.D.	MAX. WORKING PRESSURE (CWP)**	DIMENSIONS					BOLT SIZE	WEIGHT
			T†	A	B	C	D		
in	in	PSI	in	in	in	in	in	in	lb
mm	mm	Bar	mm	mm	mm	mm	mm	mm	kg
3 x 1-1/4	3.500 x 1.660	300	2.56	3.25	2.09	6.19	3.70	1/2 x 3	3.98
80 x 32	88.9 x 42.2	20	65	82.6	53.2	157.2	94	M12 x 75	1.81
3 x 1-1/2	3.500 x 1.900	300	2.80	3.50	2.09	6.19	3.70	1/2 x 3	4.14
80 x 40	88.9 x 48.3	20	71	88.9	53.2	157.2	94	M12 x 75	1.88
3 x 2	3.500 x 2.375	300	2.76	3.50	2.09	6.19	4.25	1/2 x 3	4.55
80 x 50	88.9 x 60.3	20	70	88.9	53.2	157.2	108	M12 x 75	2.07
4 x 1/2	3.500 x 0.840	300	2.83	3.69	2.63	7.19	3.13	1/2 x 3	3.59
100 x 15	114.3 x 21.3	20	72	93.7	66.7	182.6	79.4	M12 x 75	1.63
4 x 3/4	4.500 x 1.050	300	2.79	3.69	2.63	7.19	3.13	1/2 x 3	3.61
100 x 20	114.3 x 26.7	20	71	93.7	66.7	182.6	79.4	M12 x 75	1.64
4 x 1	4.500 x 1.315	300	2.87	3.69	2.63	7.19	3.13	1/2 x 3	3.74
100 x 25	114.3 x 33.4	20	73	93.7	66.7	182.6	79.4	M12 x 75	1.70
4 x 1-1/4	4.500 x 1.660	300	3.07	3.63	2.63	7.19	4.00	1/2 x 3	4.18
100 x 32	114.3 x 42.2	20	78	92.1	66.7	182.6	101.6	M12 x 75	1.90
4 x 1-1/2	4.500 x 1.900	300	3.31	3.63	2.63	7.19	4.00	1/2 x 3	4.49
100 x 40	114.3 x 48.3	20	84	92.1	66.7	182.6	101.6	M12 x 75	2.04
4 x 2	4.500 x 2.375	300	3.27	4.00	2.63	7.19	4.00	1/2 x 3	5.00
100 x 50	114.3 x 60.3	20	83	101.6	66.7	182.6	101.6	M12 x 75	2.27
4 x 2-1/2	4.500 x 2.875	300	2.87	4.00	2.63	7.19	4.44	1/2 x 3	5.43
100 x 65	114.3 x 73.0	20	73	101.6	66.7	182.6	112.7	M12 x 75	2.47
100 x 76.1 mm	4.500 x 3.000	300	2.87	4.00	2.63	7.19	4.44	1/2 x 3	5.65
	114.3 x 76.1	20	73	101.6	66.7	182.6	112.7	M12 x 75	2.57
4 x 3	4.500 x 3.500	300	3.31	4.13	2.63	7.19	5.06	1/2 x 3	6.41
100 x 80	114.3 x 88.9	20	84	104.8	66.7	182.6	128.6	M12 x 75	2.91
139.7 x 50* mm	5.500 x 2.375	300	3.27	4.75	3.19	8.81	4.19	5/8 x 3-1/2	6.38
	139.7 x 60.3	20	83	120.7	81.0	223.8	106.4	M16 x 90	2.90
139.7 x 76.1* mm	5.500 x 3.000	300	3.67	4.75	3.19	8.81	4.57	5/8 x 3-1/2	7.40
	139.7 x 76.1	20	93	120.7	81.0	223.8	115.9	M16 x 90	3.40
139.7 x 80* mm	5.500 x 3.500	300	3.82	4.75	3.19	8.81	5.19	5/8 x 3-1/2	8.41
	139.7 x 88.9	20	97	127.0	81.0	223.8	131.8	M16 x 90	3.82
5 x 2	5.563 x 2.375	300	3.27	4.75	3.19	8.81	4.19	5/8 x 3-1/2	6.38
125 x 50	141.3 x 60.3	20	83	120.7	81.0	223.8	106.4	M16 x 90	2.90
5 x 2-1/2	5.563 x 2.875	300	3.67	4.75	3.19	8.81	4.44	5/8 x 3-1/2	7.46
125 x 65	141.3 x 73.0	20	93	120.7	81.0	223.8	112.7	M16 x 90	3.39
5 x 3	5.563 x 3.500	300	3.82	4.75	3.19	8.81	5.19	5/8 x 3-1/2	8.40
125 x 80	141.3 x 88.9	20	97	127.0	81.0	223.8	131.8	M16 x 90	3.82
165.1 x 32 mm	6.500 x 1.660	300	4.41	5.13	3.72	9.87	3.63	5/8 x 3-1/2	5.57
	165.1 x 42.2	20	112	130.2	94.5	250.8	92.1	M16 x 90	2.53
165.1 x 40 mm	6.500 x 1.900	300	4.41	5.13	3.72	9.87	3.63	5/8 x 3-1/2	6.60
	165.1 x 48.3	20	112	130.2	94.5	250.8	92.1	M16 x 90	3.00
165.1 x 50 mm	6.500 x 2.375	300	4.37	5.13	3.72	9.87	4.19	5/8 x 3-1/2	6.97
	165.1 x 60.3	20	111	130.2	94.5	250.8	106.4	M16 x 90	3.17
165.1 x 65 mm	6.500 x 2.875	300	3.98	5.13	3.72	9.87	4.44	5/8 x 3-1/2	7.88
	165.1 x 73.0	20	101	130.2	94.5	250.8	112.7	M16 x 90	3.58
165.1 x 76.1 mm	6.500 x 2.875	300	3.98	5.13	3.72	9.87	4.56	5/8 x 3-1/2	8.25
	165.1 x 76.1	20	101	130.2	94.5	250.8	115.9	M16 x 90	3.75
165.1 x 80 mm	6.500 x 3.500	300	4.33	5.50	3.72	9.87	5.19	5/8 x 3-1/2	9.09
	165.1 x 88.9	20	110	139.7	94.5	250.8	131.8	M16 x 90	4.13
165.1 x 100 mm	6.500 x 4.500	300	4.45	5.75	3.72	9.87	6.25	5/8 x 3-1/2	10.50
	165.1 x 114.3	20	113	146.1	94.5	250.8	158.8	M16 x 90	4.77
6 x 1-1/4	6.625 x 1.660	300	4.41	5.13	3.72	9.87	3.63	5/8 x 3-1/2	6.41
150 x 32	168.3 x 42.2	20	112	130.2	94.5	250.8	92.1	M16 x 90	2.91
6 x 1-1/2	6.625 x 1.900	300	4.41	5.13	3.72	9.87	3.63	5/8 x 3-1/2	6.58
150 x 40	168.3 x 48.3	20	112	130.2	94.5	250.8	92.1	M16 x 90	2.99
6 x 2	6.625 x 2.375	300	4.37	5.13	3.72	9.87	4.19	5/8 x 3-1/2	7.00
150 x 50	168.3 x 60.3	20	111	130.2	94.5	250.8	106.4	M16 x 90	3.18
6 x 2-1/2	6.625 x 2.875	300	3.98	5.13	3.72	9.87	4.44	5/8 x 3-1/2	7.88
150 x 65	168.3 x 73.0	20	101	130.2	94.5	250.8	112.7	M16 x 90	3.58
150 x 76.1 mm	6.625 x 2.875	300	3.98	5.13	3.72	9.87	4.56	5/8 x 3-1/2	9.02
	168.3 x 76.1	20	101	130.2	94.5	250.8	115.9	M16 x 90	3.58
6 x 3	6.625 x 3.500	300	4.33	5.50	3.72	9.87	5.19	5/8 x 3-1/2	9.02
150 x 80	168.3 x 88.9	20	110	139.7	94.5	250.8	131.8	M16 x 90	4.10
6 x 4	6.625 x 4.500	300	4.45	5.75	3.72	9.87	6.25	5/8 x 3-1/2	10.47
150 x 100	168.3 x 114.3	20	113	146.1	94.5	250.8	158.8	M16 x 90	4.76

† T: Take-Out (Center of run to end of pipe to be engaged)

[ ] Important: Make special note of the hole saw size and maximum diameter allowed on these sizes, deviation could lead to joint failure.

\*Working pressure is based on standard wall carbon steel pipe.

## HOLE SIZES

MECHANICAL TEES RUN X BRANCH	HOLE DIMENSIONS		A. SURFACE PREPARATION
	HOLE SAW SIZE	MAX DIA. ALLOWED	
in	in	in	in
mm	mm	mm	mm
2 x 1/2	1-1/2	1-5/8	3-1/2
50 x 15	38	41	89
2 x 3/4	1-1/2	1-5/8	3-1/2
50 x 20	38	41	89
2 x 1	1-1/2	1-5/8	3-1/2
50 x 25	38	41	89
2 x 1-1/4	13/4*	1-7/8*	4
50 x 32	45	47	102
2 x 1-1/2	1-3/4*	1-7/8*	4
50 x 40	45	47	102
2-1/2 x 1/2	1-1/2	1-5/8	3-1/2
65 x 15	38	41	89
2-1/2 x 3/4	11/2	1-5/8	3-1/2
65 x 20	38	41	89
2-1/2 x 1	1-1/2	1-5/8	3-1/2
65 x 25	38	41	89
2-1/2 x 1-1/4	2	2-1/8	4
65 x 32	51	54	102
2-1/2 x 1-1/2	2	2-1/8	4
65 x 40	51	54	102
3 x 1/2	1-1/2	1-5/8	3-1/2
80 x 15	38	41	89
3 x 3/4	1-1/2	1-5/8	3-1/2
80 x 20	38	41	89
3 x 1	1-1/2	1-5/8	3-1/2
80 x 25	38	41	89

MECHANICAL TEES RUN X BRANCH	HOLE DIMENSIONS		A. SURFACE PREPARATION
	HOLE SAW SIZE	MAX DIA. ALLOWED	
in	in	in	in
mm	mm	mm	mm
3 x 1-1/4	2	2-1/8	4
80 x 32	51	54	102
3 x 1-1/2	2	2-1/8	4
80 x 40	51	54	102
3 x 2	2-1/2	2-5/8	4 1/2
80 x 50	64	67	114
4 x 1/2	1-1/2	1-5/8	3 1/2
100 x 15	38	41	89
4 x 3/4	1-1/2	1-5/8	3-1/2
100 x 20	38	41	89
4 x 1	1-1/2	1-5/8	3-1/2
100 x 25	38	41	89
4 x 1-1/4	2	2-1/8	4
100 x 32	51	54	102
4 x 1-1/2	2	2-1/8	4
100 x 40	51	54	102
4 x 2	2-1/2	2-5/8	4-1/2
100 x 50	64	67	114
4 x 2-1/2	2-3/4	2-7/8	4-3/4
100 x 65	70	73	121
4 x 3	3-1/2	3-5/8	5-1/2
100 x 80	89	92	140
5 x 2	2-1/2	2-5/8	4-1/2
125 x 50	64	67	114
5 x 2-1/2	2-3/4	2-7/8	4-3/4
125 x 65	70	73	121

MECHANICAL TEES RUN X BRANCH	HOLE DIMENSIONS		A. SURFACE PREPARATION
	HOLE SAW SIZE	MAX DIA. ALLOWED	
in	in	in	in
mm	mm	mm	mm
6 x 1-1/4	2	2-1/8	4
150 x 32	51	54	102
6 x 1-1/2	2	2-1/8	4
150 x 40	51	54	102
6 x 2	2-1/2	2-5/8	4-1/2
150 x 50	64	67	114
6 x 2-1/2	2-3/4	2-7/8	4-3/4
150 x 65	70	73	121
6 x 3	3-1/2	3-5/8	5-1/2
150 x 80	89	92	140
6 x 4	4-1/2	4-5/8	6-1/2
150 x 100	114	118	165
8 x 2	2-3/4*	2-7/8*	4-3/4
200 x 50	70	73	121
8 x 2-1/2	2-3/4	2-7/8	4-3/4
200 x 65	70	73	121
8 x 3	3-1/2	3-5/8	5-1/2
200 x 80	89	92	140
8 x 4	4-1/2	4-5/8	6-1/2
200 x 100	114	118	165

*\*Important: Make special note of the hole saw size and maximum diameter allowed on these sizes, deviation could lead to joint failure.*

## LISTINGS/APPROVALS

The information provided below is based on the latest listing and approval data at the time of publication. Listings/Approvals are subject to change and/or additions by the approvals agencies. Contact Shurjoint for the performance on other pipes and the latest listings and approvals

UL / CUL			
NOM. SIZE	SCH 40	SCH 10	BS13 87(M)
in	psi	psi	psi
mm	Bar	Bar	Bar
2 x 1/2	300	300	NA
50 x 15	20	20	
2 x 3/4	300	300	NA
50 x 20	20	20	
2 x 1	300	300	NA
50 x 25	20	20	
2 x 1-1/4	300	300	NA
50 x 32	20	20	
2 x 1-1/2	300	300	NA
50 x 40	20	20	
2-1/2 x 1-1/2	300	300	NA
65 x 15	20	20	
2-1/2 x 3/4	300	300	NA
65 x 20	20	20	
2-1/2 x 1	300	300	NA
65 x 25	20	20	
2-1/2 x 1-1/4	300	300	NA
65 x 32	20	20	
2-1/2 x 1-1/2	300	300	NA
65 x 40	20	20	
76.1 x 1/2	NA	NA	300
65 x 15			20
76.1 x 3/4	NA	NA	300
65 x 20			20
76.1 x 1	NA	NA	300
65 x 25			20
76.1 x 1-1/4	NA	NA	300
65 x 32			20
76.1 x 1-1/2	NA	NA	300
65 x 40			20
3 x 1/2	300	300	NA
80 x 15			20
3 x 3/4	300	300	NA
80 x 20	20	20	
3 x 1	300	300	NA
80 x 25	20	20	
3 x 1-1/4	300	300	NA
80 x 32	20	20	
3 x 1-1/2	300	300	NA
80 x 40	20	20	
3 x 2	300	300	NA
80 x 50	20	20	
4 x 1/2	300	300	NA
100 x 15	20	20	
4 x 3/4	300	300	NA
100 x 20	20	20	
4 x 1	300	300	NA
100 x 25	20	20	

UL / CUL			
NOM. SIZE	SCH 40	SCH 10	BS13 87(M)
in	psi	psi	psi
mm	Bar	Bar	Bar
4 x 1-1/4	300	300	NA
100 x 32	20	20	
4 x 1-1/2	300	300	NA
100 x 40	20	20	
4 x 2	300	300	NA
100 x 50	20	20	
4 x 2-1/2	300	300	NA
100 x 65	20	20	
4 x 3	175	175	NA
100 x 80	12	12	
139.7 x 2	NA	NA	300
125 x 50			20
139.7 x 76.1	NA	NA	300
125 x 65			20
139.7 x 3	NA	NA	300
125 x 80			20
5 x 2	300	NA	NA
125 x 50	20		
5 x 2-1/2	300	NA	NA
125 x 50	20		
5 x 3	300	NA	NA
125 x 80	20		
165.1 x 1-1/4	NA	NA	300
150 x 32			20
165.1 x 1-1/2	NA	NA	300
150 x 40			20
165.1 x 2	NA	NA	300
150 x 50			20
165.1 x 2-1/2	NA	NA	300
150 x 65			20
165.1 x 3	NA	NA	175
150 x 80			12
165.1 x 4	NA	NA	175
150 x 100			12
6 x 1-1/4	300	300	300
150 x 32	20	20	20
6 x 1-1/2	300	300	300
150 x 40	20	20	20
6 x 2	300	300	300
150 x 50	20	20	20
6 x 2-1/2	300	300	300
150 x 65	20	20	20
6 x 3	175	175	175
150 x 80	12	12	12
6 x 4	175	175	175
150 x 100	12	12	12

\*For speciality pipes listed with UL refer to Data Sheet B-42 or visit [www.shurjoint.com](http://www.shurjoint.com) for details or contact Shurjoint.

FM				
NOM. SIZE	SCH 40	SCH 10	BS EN 10255	*SPECIALTY
in	psi	psi	psi	psi
mm	Bar	Bar	Bar	Bar
2 x 1/2	300	300	NA	300
50 x 15	20	20		20
2 x 3/4	300	300	NA	300
50 x 20	20	20		20
2 x 1	300	300	NA	300
50 x 25	20	20		20
2 x 1-1/4	300	300	NA	300
50 x 32	20	20		20
2 x 1-1/2	300	300	NA	300
50 x 40	20	20		20
2-1/2 x 1-1/2	300	300	NA	300
65 x 15	20	20		20
2-1/2 x 3/4	300	300	NA	300
65 x 20	20	20		20
2-1/2 x 1	300	300	NA	300
65 x 25	20	20		20
2-1/2 x 1-1/4	300	300	NA	300
65 x 32	20	20		20
2-1/2 x 1-1/2	300	300	NA	300
65 x 40	20	20		20
3 x 1/2	300	300	NA	300
80 x 15	20	20		20
3 x 3/4	300	300	NA	300
80 x 20	20	20		20
3 x 1	300	300	NA	300
80 x 25	20	20		20
3 x 1-1/4	300	300	NA	300
80 x 32	20	20		20
3 x 1-1/2	300	300	NA	300
80 x 40	20	20		20
3 x 2	300	300	NA	300
80 x 50	20	20		20
4 x 1/2	300	300	NA	300
100 x 15	20	20		20
4 x 3/4	300	300	NA	300
100 x 20	20	20		20
4 x 1	300	300	NA	300
100 x 25	20	20		20
4 x 1-1/4	300	300	NA	300
100 x 32	20	20		20
4 x 1-1/2	300	300	NA	300
100 x 40	20	20		20
4 x 2	300	300	NA	300
100 x 50	20	20		20
4 x 2-1/2	300	300	NA	300
100 x 65	20	20		20
4 x 3	175	175	NA	175
100 x 80	12	12		12
5 x 2	300	300	NA	300
125 x 50	20	20		20
5 x 2-1/2	300	300	NA	300
125 x 65	20	20		20
165.1 x 1-1/4	NA	NA	300	NA
150 x 32			20	
165.1 x 1-1/2	NA	NA	300	NA
150 x 40			20	
165.1 x 2	NA	NA	300	NA
150 x 50			20	
165.1 x 2-1/2	NA	NA	300	NA
150 x 65			20	
165.1 x 3	NA	NA	175	NA
150 x 80			12	
165.1 x 4	NA	NA	175	NA
150 x 100			12	
6 x 1-1/4	300	300	NA	300
150 x 32	20	20		20
6 x 1-1/2	300	300	NA	300
150 x 40	20	20		20
6 x 2	300	300	NA	300
150 x 50	20	20		20
6 x 2-1/2	300	300	NA	300
150 x 65	20	20		20
6 x 3	175	175	NA	175
150 x 80	12	12		12
6 x 4	175	175	NA	175
150 x 100	12	12		12

\* MF, MT, EZT, FF, EF

## FLOW DATA

Values for flow of water at +60°F (+16°C).

$$C_v = \frac{Q}{\sqrt{\Delta P}}$$

Where:

Cv = Flow coefficient

Q = Flow (GPM)

ΔP = Pressure drop (psi)

### Cv VALUES

NOMINAL SIZE	CV VALUES
in	
mm	
½	17
15	17
¾	21
20	21
1	25
25	25
1¼	45
32	45
1½	60
40	60
2	100
50	100
2½	135
65	135
3	200
80	200
4	400
100	400

### FLOW CHARACTERISTICS

NOMINAL SIZE	EQUIVALENT LENGTH
in	feet
mm	m
½	2.0
15	0.6
¾	3.0
20	0.9
1	3.0
25	0.9
1¼	4.0*
32	1.2
1½	4.0*
40	1.2
2	6.0
50	1.8
2½	8.0
65	2.4
3	10.0
80	3.1
4	14.0
100	4.3

\*Expressed in equivalent of schedule 40 pipe based on Hazen & Williams formula:  
C=120 Equivalent length of 2" x 1¼" and 2" x 1½" are 6 feet (1.83 meters) and 11 feet (3.36 meters) respectively.

## MATERIAL SPECIFICATIONS

### HOUSING:

- Ductile Iron to ASTM A536, Gr. 65-45-12 and or ASTM A395 Gr.65-45-15, min. tensile strength 65,000 psi (448 MPa).

### SURFACE FINISH:

- Standard painted finishes in orange or RAL3000 red.
- Hot dip zinc galvanized (optional)
- Epoxy coatings in RAL3000 red or other colors (optional)

### RUBBER GASKET:

#### Grade "E" EPDM (Color code: Green stripe)

- Good for cold & hot water up to +230°F (+110°C). Also good for services for water with acid, water with chlorine, deionized water, seawater and waste water, dilute acids, oil-free air and many chemicals.
- Not recommended for petroleum oils, minerals oils, solvents and aromatic hydrocarbons.**
- Maximum Temperature Range: -30°F (-34°C) to +230°F (+110°C).  
\*EPDM gaskets for water services are not recommended for steam services.

#### (Option) Grade "T" Nitrile (Color code: Orange stripe)

- Recommended for petroleum products, air with oil vapors, vegetable and mineral oils.
- Temperature range: -20°F to +180°F (-29°C to +82°C)
- Do not use for HOT WATER above +150°F (+66°C) or HOT DRY AIR above +140°F (+60°C).**

### OTHER OPTIONS

#### Grade "O" - Fluoroelastomer

#### Grade "L" - Silicone

- For dry systems we recommend the use of the Shurjoint GapSeal gasket.
- For additional details contact Shurjoint.

### BOLTS & NUTS:

- Heat treated carbon manganese steel track bolts to ASTM A449-83a (or A183 Gr. 2), minimum tensile strength 110,000 psi (758 MPa), Zinc electroplated, with heavy-duty hexagonal nuts to ASTM A563.

## GENERAL NOTES

- Maximum Working Pressure (CWP) listed is the maximum cold water pressure for general piping services tested to ASTM F1476 and or AWWA C606 methods. Figures listed are based on roll- or cut-grooved standard wall carbon steel pipe. For other pipe schedules or pipe materials, contact Shurjoint for additional information.
- Listed and or Approved Pressures are pressure ratings for fire protection systems, tested and approved by various approval bodies. Please always refer to the latest approval data posted on the Shurjoint website.
- Field Joint Test: For one time only the system may be tested hydrostatically at 1.5 times the maximum working pressure listed (AWWA C606 5.2.3).
- Warning: Piping systems must always be depressurized and drained before attempting disassembly and or removal of any components.
- The 10 Year Limited Warranty applies to manufacturing defects only and does not cover severe service/temperature applications or wear parts.
- Shurjoint reserves the right to change specifications, designs and or standard without notice and without incurring any obligations.