

RESTRAINING ROD REQUIREMENTS FOR MECH. JT. PIPING SYSTEMS  
 NO. AND SIZE OF THREADED ROD REQUIRED FOR 100 PSI TEST PRESSURE  
 (CALCULATED USING ASTM A307 STEEL)

SIZE IN.	TEE OR DEAD END	90-DEG BEND	45-DEG BEND	22.5-DEG BEND	11.25-DEG BEND
4	2-3/4"	2-3/4"	2-3/4"	2-3/4"	2-3/4"
6	2-3/4"	2-3/4"	2-3/4"	2-3/4"	2-3/4"
8	2-3/4"	2-3/4"	2-3/4"	2-3/4"	2-3/4"
10	2-3/4"	2-3/4"	2-3/4"	2-3/4"	2-3/4"
12	4-3/4"	4-3/4"	2-3/4"	2-3/4"	2-3/4"
16	4-3/4"	4-3/4"	2-3/4"	2-3/4"	2-3/4"
20	6-3/4"	6-3/4"	2-3/4"	2-3/4"	2-3/4"
24	8-3/4"	8-3/4"	3-3/4"	2-3/4"	2-3/4"
30	7-1"	7-1"	2-1"	2-1"	2-1"
36	10-1"	10-1"	3-1"	2-1"	2-1"
42	8-1 1/4"	8-1 1/4"	3-1 1/4"	2-1 1/4"	2-1 1/4"
48	11-1 1/4"	11-1 1/4"	3-1 1/4"	2-1 1/4"	2-1 1/4"
54	14-1 1/4"	14-1 1/4"	4-1 1/4"	2-1 1/4"	2-1 1/4"

RESTRAINING ROD REQUIREMENTS FOR MECH. JT. PIPING SYSTEMS  
 NO. AND SIZE OF THREADED ROD REQUIRED FOR 150 PSI TEST PRESSURE  
 (CALCULATED USING ASTM A-307 STEEL)

SIZE IN.	TEE OR DEAD END	90-DEG BEND	45-DEG BEND	22.5-DEG BEND	11.25-DEG BEND
4	2-3/4"	2-3/4"	2-3/4"	2-3/4"	2-3/4"
6	2-3/4"	2-3/4"	2-3/4"	2-3/4"	2-3/4"
8	2-3/4"	2-3/4"	2-3/4"	2-3/4"	2-3/4"
10	4-3/4"	4-3/4"	2-3/4"	2-3/4"	2-3/4"
12	4-3/4"	4-3/4"	2-3/4"	2-3/4"	2-3/4"
16	6-3/4"	6-3/4"	2-3/4"	2-3/4"	2-3/4"
20	10-3/4"	10-3/4"	3-3/4"	2-3/4"	2-3/4"
24	12-3/4"	12-3/4"	4-3/4"	2-3/4"	2-3/4"
30	10-1"	10-1"	3-1"	2-1"	2-1"
36	15-1"	15-1"	5-1"	2-1"	2-1"
42	12-1 1/4"	12-1 1/4"	4-1 1/4"	2-1 1/4"	2-1 1/4"
48	16-1 1/4"	16-1 1/4"	5-1 1/4"	2-1 1/4"	2-1 1/4"
54	20-1 1/4"	20-1 1/4"	6-1 1/4"	2-1 1/4"	2-1 1/4"

RESTRAINING RODS SHALL BE INSTALLED IN ACCORDANCE WITH THE NUMBER AND SIZE LISTED IN THE TABLE FOR THE REQUIRED TEST PRESSURE. RODS SHALL BE SPACED AT EQUAL INTERVALS AROUND THE CIRCUMFERENCE OF THE PIPE AND SHALL BE SECURELY ANCHORED TO PROVIDE A RIGID PIPING SYSTEM. RESTRAINING RODS SHALL BE STEEL WITH A MINIMUM YIELD STRENGTH OF 36,000 PSI. RESTRAINING RODS AND THEIR APPURTENANCES SHALL BE ENCASED WITH 8 MIL POLYETHYLENE FILM.

FILE NO.: 2500-063	CEDAR RAPIDS METROPOLITAN AREA STANDARD DETAILS FOR PUBLIC IMPROVEMENTS	
APPROVAL DATE: APRIL 2003		
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