

S:\5263\DETL\ DET-24 11/16/07 11:07 robinsonjd

MINIMUM RESTRAINED PIPE LENGTH (FT) FOR VERTICAL BENDS			
(WITHOUT POLYETHYLENE ENCASEMENT)			
DIAMETER (IN)	VERTICAL BEND ANGLE (DEGREES)		
	45	22½	11¼
6	20	1	5
8	26	12	6
10	32	15	8
12	37	18	9
14	43	21	10
16	48	23	12
18	54	26	13
20	59	28	14
24	70	34	17

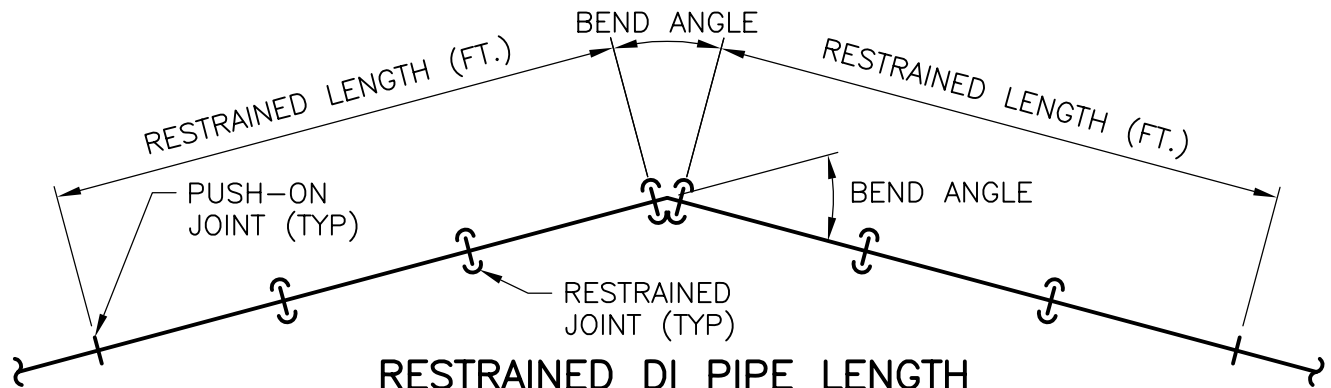
MINIMUM RESTRAINED PIPE LENGTH (FT) FOR HORIZONTAL BENDS				
(WITHOUT POLYETHYLENE ENCASEMENT)				
DIAMETER (IN)	HORIZONTAL BEND ANGLE (DEGREES)			
	90	45	22½	11¼
6	15	6	3	1
8	19	8	4	2
10	23	10	5	2
12	28	11	5	3
14	32	13	6	3
16	36	15	7	4
18	40	16	8	4
20	43	18	9	4
24	51	21	10	5

MINIMUM RESTRAINED PIPE LENGTH (FT) FOR VERTICAL BENDS			
(WITH POLYETHYLENE ENCASEMENT)			
DIAMETER (IN)	VERTICAL BEND ANGLE (DEGREES)		
	45	22½	11¼
6	29	14	7
8	37	18	9
10	45	22	11
12	53	26	13
14	61	29	15
16	69	33	16
18	77	37	18
20	85	41	20
24	100	48	24

MINIMUM RESTRAINED PIPE LENGTH (FT) FOR HORIZONTAL BENDS				
(WITH POLYETHYLENE ENCASEMENT)				
DIAMETER (IN)	HORIZONTAL BEND ANGLE (DEGREES)			
	90	45	22½	11¼
6	16	7	3	2
8	21	9	4	2
10	26	11	5	3
12	30	13	6	3
14	35	14	7	3
16	39	16	8	4
18	44	18	9	4
20	48	20	9	5
24	56	23	11	6

NOTES:

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|---|------------------------------|---------------------|
| 1 | DESIGN PRESSURE | = 150 PSI |
| 2 | DEPTH OF COVER | = 4 FEET |
| 3 | SAFETY FACTOR | = 1.5 |
| 4 | SOIL TYPE | = COHESIVE GRANULAR |
| 5 | SOIL INTERNAL FRICTION ANGLE | = 20 DEGREES |
| 6 | SOIL COHESION | = 200 PSF |
| 7 | SOIL DENSITY | = 90 PCF |



RESTRAINED DI PIPE LENGTH

* PROVIDE ¾" THREADED
RODS (2 PER ASSEMBLY)
AT LEAST 3 PIPE LENGTHS
UPSTREAM AND
DOWNSTREAM OF BEND.

DETAIL

NO SCALE

