

PIPE RESTRAINT LENGTH (FT)

PIPE SIZE	REDUCER – LARGE SIZE							TEES – BRANCH LINE SIZE							
	6"	8"	12"	16"	20"	24"	30"	4"	6"	8"	12"	16"	20"	24"	30"
4"	28	51	88	123	115	186	231	19	11	3	1	1	1	1	1
6"	–	30	74	112	147	174	225	41	35	29	16	4	1	1	1
8"	–	–	54	97	135	169	217	–	57	52	41	31	21	11	1
12"	–	–	–	57	102	143	196	–	–	–	82	73	65	56	44
16"	–	–	–	–	58	106	167	–	–	–	–	112	104	97	85
20"	–	–	–	–	–	58	129	–	–	–	–	–	142	134	123
24"	–	–	–	–	–	–	83	–	–	–	–	–	–	171	160
30"	–	–	–	–	–	–	–	–	–	–	–	–	–	–	213

HORIZONTAL PIPE RESTRAINT LENGTH (FT)

PIPE SIZE	11–1/4° BEND	22–1/2° BEND	45° BEND	90° BEND	DEAD END
4"	2	4	9	20	38
6"	3	6	12	28	54
8"	4	8	16	37	71
12"	6	11	22	53	102
16"	7	14	29	68	133
20"	9	17	35	83	163
24"	10	20	41	97	193
30"	12	24	49	117	236

VERTICAL PIPE RESTRAINT LENGTH (FT)

PIPE SIZE	11–1/4° BEND		22–1/2° BEND		45° BEND		90° BEND	
	UPPER	LOWER	UPPER	LOWER	UPPER	LOWER	UPPER	LOWER
4"	6	2	12	4	23	7	N/A	N/A
6"	8	3	16	5	33	10	N/A	N/A
8"	11	4	21	7	43	13	N/A	N/A
12"	15	5	30	9	62	19	N/A	N/A
16"	20	6	39	12	81	24	N/A	N/A
20"	24	7	48	14	99	29	N/A	N/A
24"	28	8	56	17	116	34	N/A	N/A
30"	34	10	68	20	141	41	N/A	N/A

ALL CALCULATIONS BASED ON EBAA IRON RESTRAINT LENGTH CALCULATOR v5.01.
 ALL CALCULATIONS ASSUME SOIL TYPE CL, SAFETY FACTOR OF 1.5 TO 1, TRENCH TYPE 3,
 DEPTH OF BURY OF 3.5', TEST PRESSURE OF 200.
 TEES ASSUME "LENGTH ON RUN" OF 5'.
 VERTICAL OFFSETS ASSUME LOW SIDE DEPTH OF 5'.
 LISTED LENGTHS ARE MINIMUMS. RESTRAINTS SHALL BE INSTALLED TO NEXT JOINT BEYOND ALL LISTED DISTANCES.
 RESTRAINTS ARE TO BE INSTALLED THE SPECIFIED LENGTH IN EACH DIRECTION AWAY FROM THE JOINT.



PVC RESTRAINT LENGTH TABLE

DRAWING NO.

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