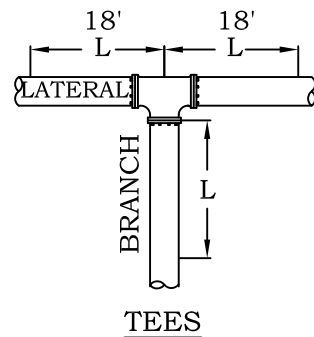


TEES

LENGTH OF PIPE TO BE RESTRAINED IN FEET

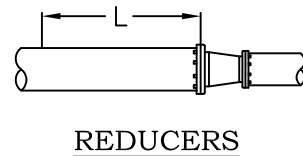
BRANCH SIZE	NOMINAL LATERAL SIZE (L)							
	8"	10"	12"	14"	16"	18"	20"	24"
6"	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
8"	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
10"	14.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
12"	36.0	23.0	10.0	1.0	1.0	1.0	1.0	1.0
14"	55.0	44.0	33.0	21.0	9.0	1.0	1.0	1.0
16"	72.0	62.0	53.0	42.0	32.0	21.0	10.0	1.0
18"	87.0	79.0	71.0	61.0	52.0	42.0	33.0	11.0
20"	102.0	94.0	87.0	79.0	71.0	62.0	53.0	34.0
24"	128.0	122.0	116.0	109.0	103.0	96.0	88.0	73.0



REDUCERS

LENGTH OF PIPE TO BE RESTRAINED IN FEET

FITTING SIZE	NOMINAL LATERAL SIZE (L)							
	6"	8"	10"	12"	14"	16"	18"	20"
4"	24.0	43.0	58.0	73.0	86.0	99.0	111.0	123.0
6"	-	25.0	44.0	61.0	76.0	90.0	103.0	116.0
8"	-	-	24.0	45.0	62.0	78.0	93.0	107.0
10"	-	-	-	25.0	45.0	64.0	80.0	95.0
12"	-	-	-	-	25.0	46.0	64.0	81.0
14"	-	-	-	-	-	25.0	46.0	65.0
16"	-	-	-	-	-	-	24.0	46.0
18"	-	-	-	-	-	-	-	24.0

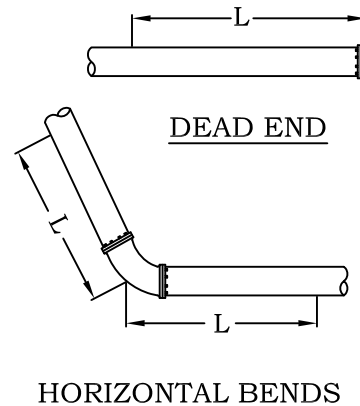


REDUCERS: RESTRAINT LENGTH OF LARGER PIPE
RESTRAINING THE SMALL SIDE OF THE FITTING IS OPTIONAL

BENDS / DEAD END

LENGTH OF PIPE TO BE RESTRAINED IN FEET

FITTING SIZE	90° BEND	45° BEND	22-1/2° BEND	11-1/4° BEND	DEAD END
4"	14.0	6.0	3.0	2.0	32.0
6"	20.0	9.0	4.0	2.0	46.0
8"	26.0	11.0	6.0	3.0	59.0
10"	31.0	13.0	6.0	3.0	71.0
12"	36.0	15.0	8.0	4.0	84.0
14"	40.0	17.0	8.0	4.0	95.0
16"	45.0	19.0	9.0	5.0	107.0
18"	49.0	21.0	10.0	5.0	118.0
20"	54.0	23.0	11.0	6.0	130.0
24"	62.0	26.0	13.0	7.0	151.0



ABOVE RESTRAINED LENGTH CALCULATION BASED ON:

1. MINIMUM OF 3 FT OF PIPE COVER
2. 200 PSI HYDROSTATIC TEST PRESSURE
3. FACTOR OF SAFETY = 1.5 TO 1
4. UNINTERRUPTED LENGTH OF PIPE ALONG RUN (Lr) = 18 FT
5. POORLY GRADED GRAVELS AND GRAVEL-SAND MIXTURES, LITTLE OR NO FINES (GP)
6. FOR FITTINGS SMALLER THAN SHOWN ABOVE USE SMALLEST RESTRAINT SIZE SHOWN.

NOTES:

- 1) FIRE HYDRANTS ARE TYPICALLY INSTALLED BY RESTRAINING ALL OF THE JOINTS FROM THE MAIN TO THE MECHANICAL SHOE AT THE HYDRANT.
- 2) FIELD LOK GASKETS CAN BE USED IN PLACE OF MEGALUG SERIES 1100 RESTRAINT



**MEGALUG INSTALLATION
RESTRAINT LENGTHS REQUIRED**

DATE	REVISION		
		DATE 02/15/18	
		DRAWN SLW	APPROVED WSC
			SPEC NO. MR