

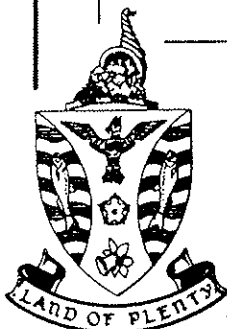
CONCRETE THRUST BLOCKING

Minimum thrust areas based on 1380 kPa water pressure including Water Hammer Allowance

Bearing strength more than 190 kPa for Hard Clay & Compacted Sand or Gravel See notes for other materials				
Type of Fitting	dia. mm	dist. to brg. face m	area m ²	length & depth of face - m
90° Bend	100	0.30	0.13	0.85 x 0.15
	150	0.30	0.26	1.25 x 0.21
	200	0.30	0.45	1.25 x 0.36
	250	0.37	0.72	1.25 x 0.58
45° Bend 45° Wye	100	0.30	0.07	0.47 x 0.15
	150	0.30	0.14	0.70 x 0.20
	200	0.30	0.24	1.25 x 0.19
	250	0.37	0.39	1.25 x 0.31
Tees, Caps Plugs and Plugged Crosses	100	0.30	0.09	0.63 x 0.15
	150	0.30	0.18	0.91 x 0.20
	200	0.30	0.31	1.00 x 0.32
	250	0.37	0.51	1.25 x 0.41
22 1/2° Bends	100	0.30	0.04	0.25 x 0.15
	150	0.30	0.07	0.35 x 0.20
	200	0.30	0.13	0.63 x 0.20
	250	0.35	0.20	0.80 x 0.25
Reducer	100	0.30	0.05	0.50 x 0.10
	150	0.30	0.08	0.53 x 0.15
	200	0.30	0.13	0.65 x 0.20
	250	0.35	0.20	0.80 x 0.25
	D	W		L

NOTES :

- To find dimensions of thrust blocks for soft clay (bearing strength 95 - 190 kPa) multiply depth shown on table by two. (i.e. 100mm - 90° Bend use 0.85 x 0.30 thrust block)
- For peat, silt, unconsolidated material (i.e. fill), with bearing strength less than 95 kPa, thrust blocks shall be designed by an Engineer.
- Concrete thrust blocks shall extend into the vertical face of undisturbed soil. In soft, unstable soils (bearing strength < 95 kPa), remove soil and replace with compactable fill of sufficient stability to resist thrust or special anchor block as directed by the Engineer.
- Blocking will be required for all bends, tees, plugs, caps, pipe deflections and other fittings on live mains where anchor rods are not practical.
- Thrust blocks shall be of at least 15 MPa 28 day concrete or high early strength concrete if required.
- Blocking shall be kept clear of bells.
- Blocking of vertical bends shall be designed by an Engineer.
- For larger diameter water mains thrust blocks shall be designed by an Engineer.
- Minimum curing time of concrete thrust blocks shall be 48 hours before water mains are charged.



MUNICIPALITY OF CENTRAL SAANICH

TITLE:

THRUST BLOCK DETAILS

STD.DWG.No.

406

Approved;

Date; SEPT. 1986

Scale; N.T.S.

Rev.