

MINIMUM RESTRAINING LENGTH (m) (ON EACH SIDE OF FITTING)												
PIPE DIAMETER(mm)	VERTICAL DEFLECTION						HORIZONTAL DEFLECTION					
	DOWNWARD THRUST			UPWARD THRUST								
	11.25	22.5	45	11.25	22.5	45	11.25	22.5	45	90	TEE	DEAD END
100&150	1.5	2.8	4.9	4.9	7.5	10.1	1.5	2.8	4.9	8.1	10.7	15.2
200	2	3.7	6.3	6.3	9.6	13.1	2	3.7	6.3	10.5	12.8	18.5
300	2.8	5.2	9	8.8	13.4	18.3	2.8	5.2	9	14.9	14.9	26.8
400	3.6	6.7	11.6	11.2	17.2	23.7	3.6	6.7	11.6	19.3	15.7	34.7
VALVES												
150	9m RESTRAINED ON BOTH SIDES											
200	11m RESTRAINED ON BOTH SIDES											
300	16m RESTRAINED ON BOTH SIDES											
400	21m RESTRAINED ON BOTH SIDES											
REDUCERS TO HAVE MINIMUM OF 9.0m RESTRAINED ON LARGE SIDE OF FITTING (WHEN REDUCING BY ONE PIPE SIZE)												
*IF GREATER THAN ONE PIPE SIZE, A DESIGN BY A PROFESSIONAL ENGINEER IS REQUIRED.												



ENGINEERING & CORPORATE
ASSETS

MINIMUM RESTRAINING LENGTH(L) FOR PVC WATERMAINS

CHECKED: CT

APPROVED: KT

APPROVED DATE: JANUARY 2026

CKL-104

SCALE: NOT TO SCALE

DATE: JANUARY 2026

REVISION No. 1