

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.																								



MINIMUM RESTRAINING LENGTH(L) FOR PVC WATERMAINS

CKL-104

SCALE: NOT TO SCALE

DATE: JANUARY 2026

ENGINEERING & CORPORATE ASSETS

CHECKED: CT

APPROVED: KT

APPROVED DATE: JANUARY 2026

REVISION No. 1