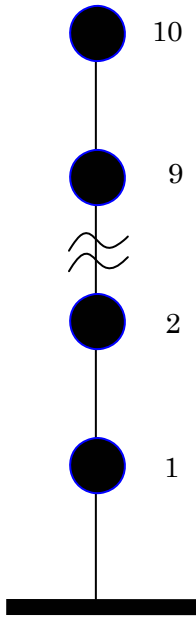


10-STORY MDOF MODEL WITH ELASTIC STIFFNESS

10-Story MDOF (Multi-Degree of Freedom) model with elastic stiffness



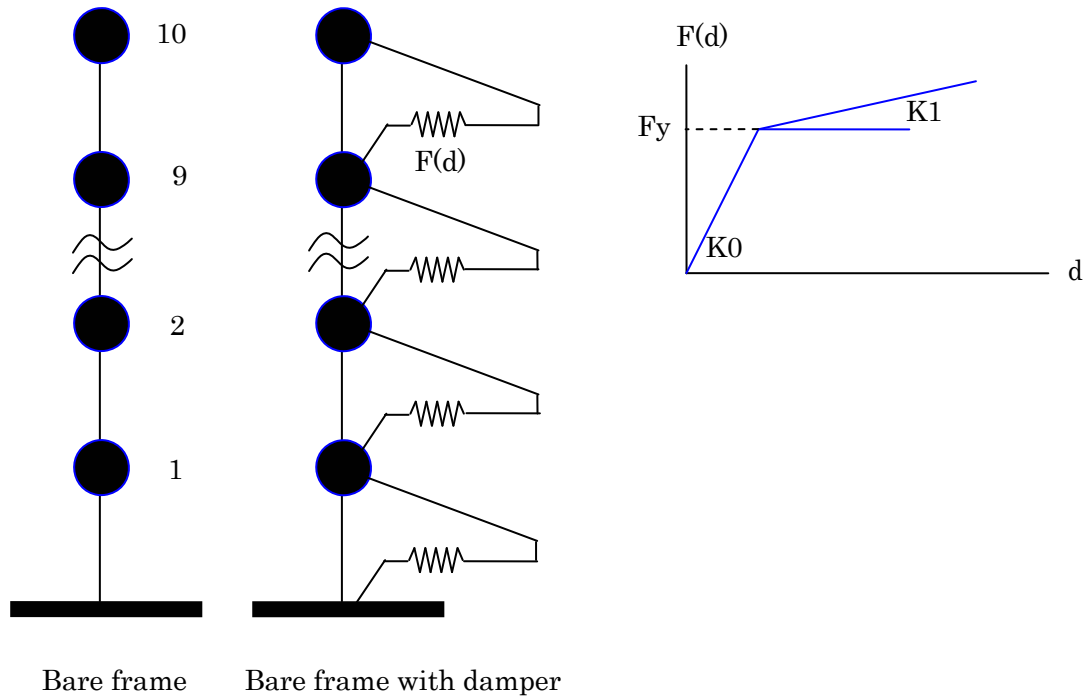
Bare frame

	W (kN)	H (mm)	K (kN/mm)
10	8579	4000	158.6
9	6365	4000	180.1
8	6431	4000	220.3
7	6470	4000	244.8
6	6539	4000	291.8
5	6567	4000	306.2
4	6622	4000	328.2
3	6664	4000	383.0
2	6680	4000	383.5
1	6859	6000	280.0

W: floor weight, H: story height, K: story stiffness

10-STORY MDOF MODEL WITH STEEL DAMPER

10-Story MDOF (Multi-Degree of Freedom) model with steel damper



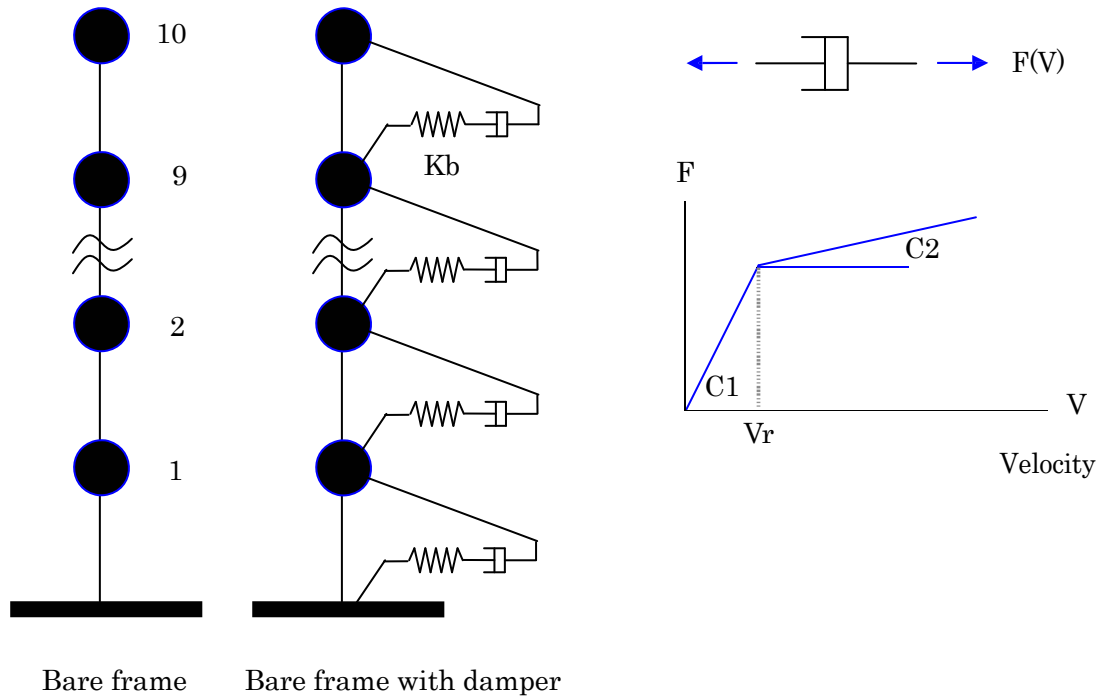
	W (kN)	H (mm)	K (kN/mm)	K_0 (kN/mm)	F_y (kN)	K_1/K_0
10	8579	4000	158.6	100.9	673	0.02
9	6365	4000	180.1	336.2	2241	0.02
8	6431	4000	220.3	447.1	2981	0.02
7	6470	4000	244.8	581.0	3873	0.02
6	6539	4000	291.8	591.1	3940	0.02
5	6567	4000	306.2	699.9	4666	0.02
4	6622	4000	328.2	747.6	4984	0.02
3	6664	4000	383.0	634.4	4229	0.02
2	6680	4000	383.5	708.9	4726	0.02
1	6859	6000	280.0	407.6	4076	0.02

W: floor weight, H: story height, K: story stiffness

K_0 : initial stiffness of steel damper, F_y : yielding strength of steel damper

10-STORY MDOF MODEL WITH OIL DAMPER

10-Story MDOF (Multi-Degree of Freedom) model with oil damper



	W (kN)	H (mm)	K (kN/mm)	Kb (kN/mm)	C1 (kN*s/mm)	C2/C1	Vr (mm/s)
10	8579	4000	158.6	163.8	34.0	0.02	38.6
9	6365	4000	180.1	186.0	38.7	0.02	38.6
8	6431	4000	220.3	227.5	47.3	0.02	38.6
7	6470	4000	244.8	252.8	52.6	0.02	38.6
6	6539	4000	291.8	301.4	62.7	0.02	38.6
5	6567	4000	306.2	316.2	65.7	0.02	38.6
4	6622	4000	328.2	339.0	70.5	0.02	38.6
3	6664	4000	383.0	395.6	82.2	0.02	38.6
2	6680	4000	383.5	396.1	82.3	0.02	38.6
1	6859	6000	280.0	289.1	60.1	0.02	57.9

W: floor weight, H: story height, K: story stiffness

Kb: brace stiffness, C1, C2: damping coefficient, Vr: release velocity

Reference

- 1) Design and Construction Manual for Passive Response Control Structure (2nd Edition), Japan Society of Seismic Isolation, 2005 (in Japanese)