

2.2.3 Load tables - walls designed for compression by refined calculation:

The tables in this section are for walls designed using refined calculation where the design is based on the height or the length of the wall. Refer to Section 2.2 to determine if wall height or wall length governs the design of the wall.

20MPa Blocks, 20MPa Grout

Table 1 - 2.2.3: 20MPa blocks, 20MPa grout, $a_v = 0.75$, height governs

Table 2 - 2.2.3: 20MPa blocks, 20MPa grout, $a_v = 0.85$, height governs

Table 3 - 2.2.3: 20MPa blocks, 20MPa grout, $a_v = 1.00$, height governs

Table 4 - 2.2.3: 20MPa blocks, 20MPa grout, $a_v = 1.50$, height governs

Table 5 - 2.2.3: 20MPa blocks, 20MPa grout, $a_v = 2.50$, height governs

Table 6 - 2.2.3: 20MPa blocks, 20MPa grout, $a_v = 0.75$, $a_h = 1.0$, length governs

Table 7 - 2.2.3: 20MPa blocks, 20MPa grout, $a_v = 0.85$, $a_h = 1.0$, length governs

Table 8 - 2.2.3: 20MPa blocks, 20MPa grout, $a_v = 1.00$, $a_h = 1.0$, length governs

Table 9 - 2.2.3: 20MPa blocks, 20MPa grout, $a_v = 1.50$, $a_h = 1.0$, length governs

Table 10 - 2.2.3: 20MPa blocks, 20MPa grout, $a_v = 2.50$, $a_h = 1.0$, length governs

Table 11 - 2.2.3: 20MPa blocks, 20MPa grout, $a_v = 0.75$, $a_h = 2.5$, length governs

Table 12 - 2.2.3: 20MPa blocks, 20MPa grout, $a_v = 0.85$, $a_h = 2.5$, length governs

Table 13 - 2.2.3: 20MPa blocks, 20MPa grout, $a_v = 1.00$, $a_h = 2.5$, length governs

Table 14 - 2.2.3: 20MPa blocks, 20MPa grout, $a_v = 1.50$, $a_h = 2.5$, length governs

Table 15 - 2.2.3: 20MPa blocks, 20MPa grout, $a_v = 2.50$, $a_h = 2.5$, length governs

Table 1 - 2.2.3:

140 MORTARLESS WALL (unchamfered blocks)

Block: 20MPa

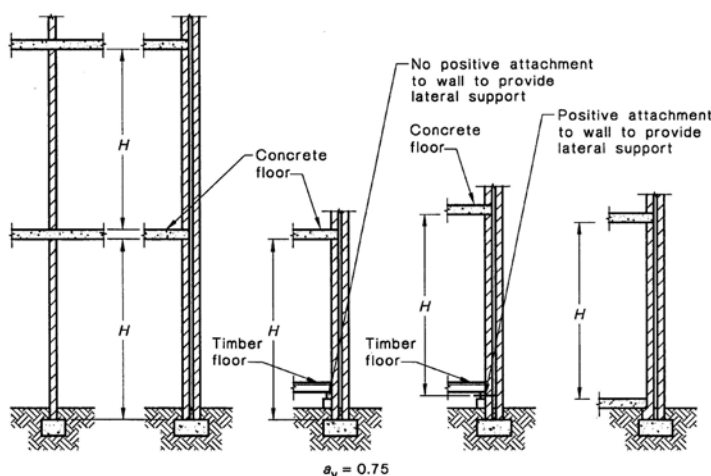
Wall span: VERTICAL

(reinforced vertically)

Grout: 20MPa

 $a_v = 0.75$

		$k F_0$ - MAXIMUM DESIGN LOAD IN COMPRESSION (kN/m)													
H (mm)	S_r	Eccentricity e_1													
		≤ 5.7 mm	10mm			20mm			30mm			40mm			≥ 57 mm
			e_2/e_1			e_2/e_1			e_2/e_1			e_2/e_1			
			1	0	-1	1	0	-1	1	0	-1	1	0	-1	
2000	10.7	319	253	278	303	193	239	286	133	201	269	72	162	252	0
2400	12.9	295	230	255	280	173	219	264	116	183	249	59	146	233	0
2800	15.0	272	207	232	257	154	198	243	100	164	229	47	131	214	0
3200	17.1	248	184	209	235	134	178	222	84	146	209	34	115	196	0
3600	19.3	224	161	187	212	115	157	200	68	128	188	21	99	177	0
4000	21.4	200	138	164	189	95	137	179	52	110	168	8	83	158	0
4400	23.6	176	115	141	167	75	116	157	35	92	148	0	67	139	0
4800	25.7	152	92	118	144	56	96	136	19	74	128	0	51	120	0
5200	27.9	128	69	95	121	36	75	115	3	55	108	0	36	101	0
5600	30.0	104	46	72	99	16	55	93	0	37	88	0	20	82	0
6000	32.1	80	23	49	76	0	34	72	0	19	68	0	4	63	0
6400	34.3	56	0	27	53	0	14	50	0	1	47	0	0	44	0
6800	36.4	32	0	4	31	0	0	29	0	0	27	0	0	26	0



Lateral support top and bottom
 Partial rotational restraint top and bottom
 Fully braced construction

Table 2 - 2.2.3:

140 MORTARLESS WALL (unchamfered blocks)

Block: 20MPa

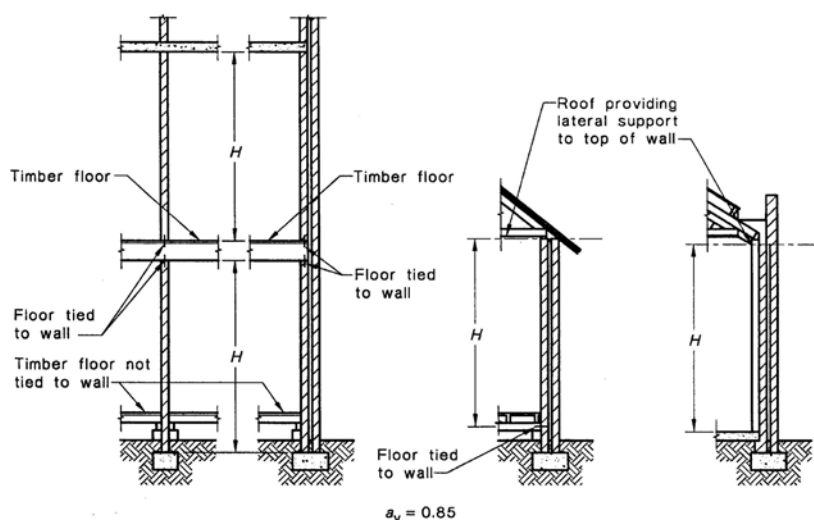
Wall span: VERTICAL

(reinforced vertically)

Grout: 20MPa

 $a_v = 0.85$

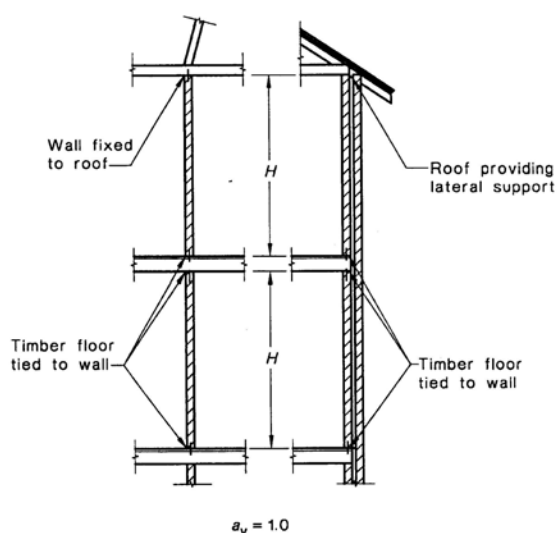
		$k F_0$ - MAXIMUM DESIGN LOAD IN COMPRESSION (kN/m)													
H (mm)	S_r	Eccentricity e_1													
		≤ 5.7 mm	10mm			20mm			30mm			40mm			≥ 57 mm
			e_2/e_1			e_2/e_1			e_2/e_1			e_2/e_1			
			1	0	-1	1	0	-1	1	0	-1	1	0	-1	
2000	12.1	303	238	263	287	180	226	272	122	189	256	64	152	240	0
2400	14.6	276	212	237	262	158	202	247	103	168	233	49	134	218	0
2800	17.0	249	186	211	236	135	179	223	85	147	210	35	116	197	0
3200	19.4	222	160	185	210	113	156	199	67	127	187	20	98	175	0
3600	21.9	195	134	159	185	91	133	175	48	106	164	6	80	154	0
4000	24.3	168	107	133	159	69	110	150	30	86	141	0	62	133	0
4400	26.7	141	81	107	133	47	86	126	12	65	119	0	44	111	0
4800	29.1	114	55	81	108	24	63	102	0	45	96	0	26	90	0
5200	31.6	87	29	56	82	2	40	78	0	24	73	0	8	68	0
5600	34.0	60	3	30	56	0	17	53	0	3	50	0	0	47	0
6000	36.4	32	0	4	31	0	0	29	0	0	27	0	0	26	0



Lateral support top and bottom
Partial rotational support one end
Fully braced construction

Table 3 - 2.2.3:**140 MORTARLESS WALL (unchamfered blocks)****Block: 20MPa****Wall span: VERTICAL****(reinforced vertically)****Grout: 20MPa** **$a_v = 1.00$**

		$k F_0$ - MAXIMUM DESIGN LOAD IN COMPRESSION (kN/m)													
H (mm)	S_r	Eccentricity e_1													
		≤ 5.7 mm	10mm			20mm			30mm			40mm			≥ 57 mm
			e_2/e_1			e_2/e_1			e_2/e_1			e_2/e_1			
			1	0	-1	1	0	-1	1	0	-1	1	0	-1	
2000	14.3	280	215	282	265	160	205	250	106	170	235	51	136	221	0
2400	17.1	248	184	246	235	134	178	222	84	146	209	34	115	196	0
2800	20.0	216	154	210	204	108	151	193	62	122	182	17	94	170	0
3200	22.9	184	123	174	174	82	123	165	41	98	155	0	73	145	0
3600	25.7	152	92	139	144	56	96	136	19	74	128	0	51	120	0
4000	28.6	120	61	103	114	30	68	107	0	49	101	0	30	95	0
4400	31.4	88	31	67	84	3	41	79	0	25	74	0	9	70	0
4800	34.3	56	0	31	53	0	14	50	0	1	47	0	0	44	0
5000	35.7	40	0	13	38	0	0	36	0	0	34	0	0	32	0



Lateral support top and bottom
Fully braced construction

Table 4 - 2.2.3:

140 MORTARLESS WALL (unchamfered blocks)

Block: 20MPa

Wall span: VERTICAL (reinforced vertically)

Grout: 20MPa

$a_v = 1.50$

		$k F_0$ - MAXIMUM DESIGN LOAD IN COMPRESSION (kN/m)													
H (mm)	S_r	Eccentricity e_1													
		≤ 5.7 mm	10mm			20mm			30mm			40mm			≥ 57 mm
			e_2/e_1			e_2/e_1			e_2/e_1			e_2/e_1			
			1	0	-1	1	0	-1	1	0	-1	1	0	-1	
2000	21.4	200	138	192	189	95	137	179	52	110	168	8	83	158	0
2400	25.7	152	92	139	144	56	96	136	19	74	128	0	51	120	0
2800	30.0	104	46	85	99	16	55	93	0	37	88	0	20	82	0
3200	34.3	56	0	31	53	0	14	50	0	1	47	0	0	44	0
3400	36.4	32	0	4	31	0	0	29	0	0	27	0	0	26	0

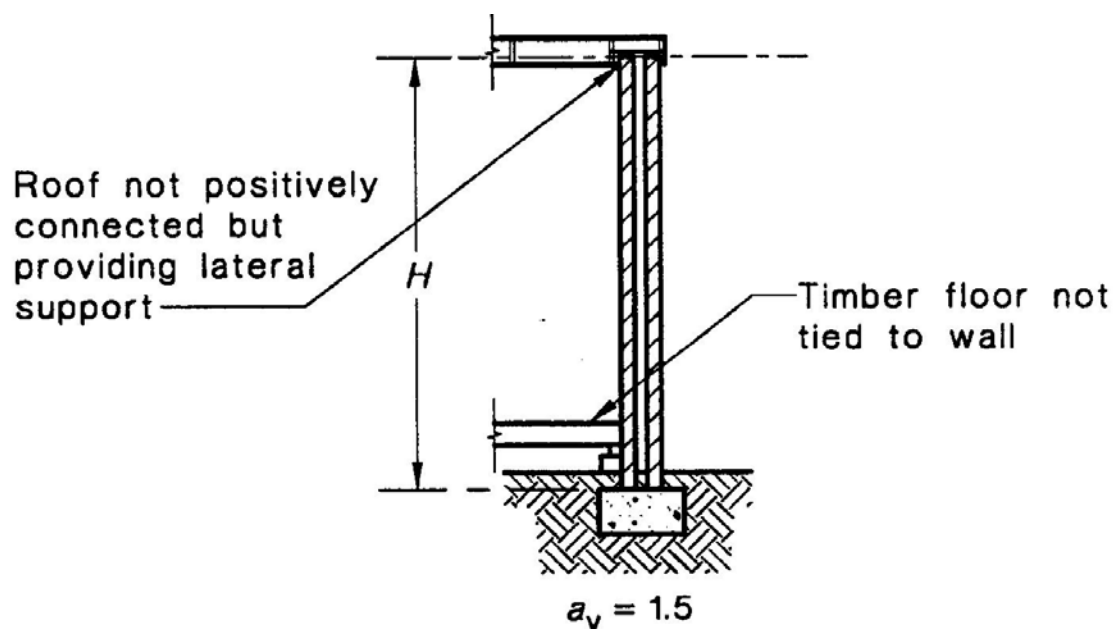


Table 5 - 2.2.3:

140 MORTARLESS WALL (unchamfered blocks)

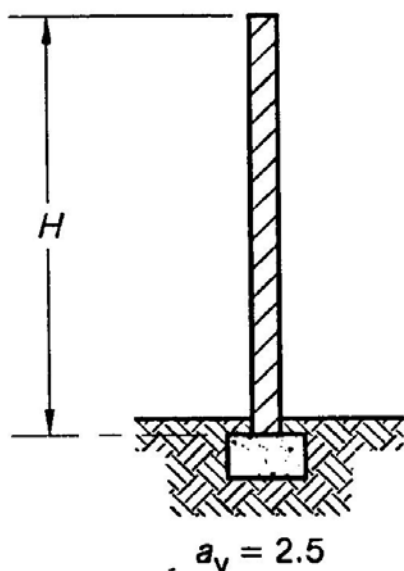
Block: 20MPa

Wall span: VERTICAL (reinforced vertically)

Grout: 20MPa

$a_v = 2.50$

		$k F_0$ - MAXIMUM DESIGN LOAD IN COMPRESSION (kN/m)													
H (mm)	S_r	Eccentricity e_1													
		≤ 5.7 mm	10mm			20mm			30mm			40mm			≥ 57 mm
			e_2/e_1			e_2/e_1			e_2/e_1			e_2/e_1			
			1	0	-1	1	0	-1	1	0	-1	1	0	-1	
1000	17.9	240	177	237	227	128	171	214	79	140	202	30	109	189	0
1200	21.4	200	138	192	189	95	137	179	52	110	168	8	83	158	0
1400	25.0	160	100	148	152	62	103	143	25	80	135	0	57	126	0
1600	28.6	120	61	103	114	30	68	107	0	49	101	0	30	95	0
1800	32.1	80	23	58	76	0	34	72	0	19	68	0	4	63	0
2000	35.7	40	0	13	38	0	0	36	0	0	34	0	0	32	0



Free standing wall
No lateral support to top edge

Table 6 - 2.2.3:**140 MORTARLESS WALL (unchamfered blocks)****Block: 20MPa****Wall Span: HORIZONTAL** (reinforced vertically & horizontally)**Grout: 20MPa** **$a_v = 0.75$** **$a_h = 1.0$**

		$k F_0$ - MAXIMUM DESIGN LOAD IN COMPRESSION (kN/m)					
$\sqrt{H \times L}$ (mm)	S_r	Eccentricity e_1					
		$\leq 5.7\text{mm}$	10mm	20mm	30mm	40mm	$\geq 57\text{mm}$
2000	8.7	342	276	212	148	84	0
2400	10.4	323	257	196	135	74	0
2800	12.1	304	238	180	122	64	0
3200	13.9	284	220	164	109	53	0
3600	15.6	265	201	148	96	43	0
4000	17.3	246	182	133	83	33	0
4400	19.1	226	164	117	70	23	0
4800	20.8	207	145	101	57	12	0
5200	22.5	188	126	85	43	2	0
5600	24.2	168	108	69	30	0	0
6000	26.0	149	89	53	17	0	0
6400	27.7	130	70	37	4	0	0
6800	29.4	110	52	22	0	0	0
7200	31.2	91	33	6	0	0	0
7600	32.9	72	15	0	0	0	0
8000	34.6	52	0	0	0	0	0
8400	36.4	33	0	0	0	0	0

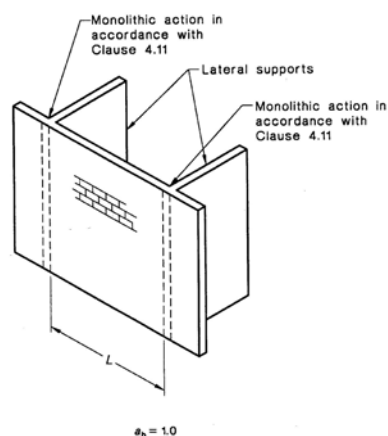
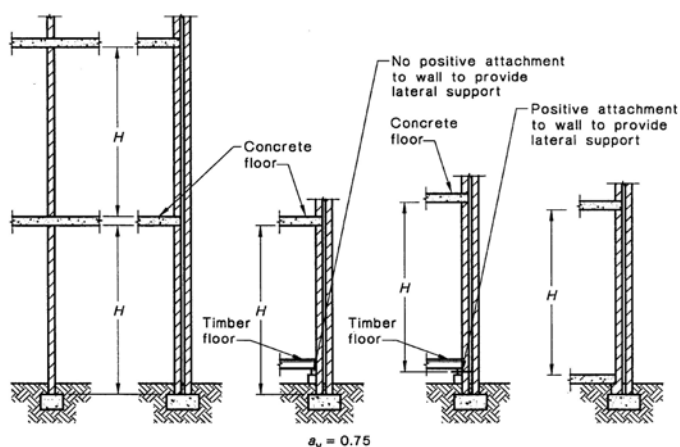


Table 7 - 2.2.3:

140 MORTARLESS WALL (unchamfered blocks)**Block: 20MPa****Wall Span: HORIZONTAL** (reinforced vertically & horizontally)**Grout: 20MPa** **$a_v = 0.85$** **$a_h = 1.0$**

		$k F_0$ - MAXIMUM DESIGN LOAD IN COMPRESSION (kN/m)					
$\sqrt{H \times L}$ (mm)	S_r	Eccentricity e_1					
		$\leq 5.7\text{mm}$	10mm	20mm	30mm	40mm	$\geq 57\text{mm}$
2000	9.2	336	270	207	144	81	0
2400	11.1	315	250	190	130	70	0
2800	12.9	295	230	173	116	59	0
3200	14.8	274	210	156	102	48	0
3600	16.6	254	190	139	88	37	0
4000	18.4	233	170	122	74	26	0
4400	20.3	213	150	105	60	15	0
4800	22.1	192	131	89	46	4	0
5200	24.0	171	111	72	32	0	0
5600	25.8	151	91	55	19	0	0
6000	27.7	130	71	38	5	0	0
6400	29.5	110	51	21	0	0	0
6800	31.3	89	31	4	0	0	0
7200	33.2	69	12	0	0	0	0
7600	35.0	48	0	0	0	0	0
7800	36.0	38	0	0	0	0	0

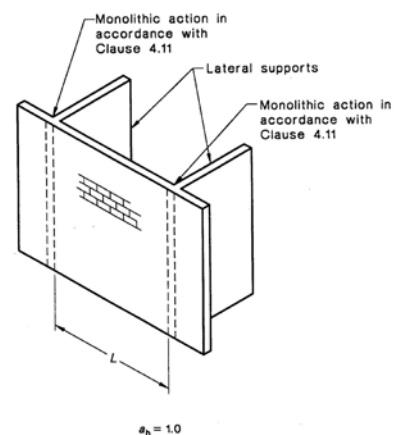
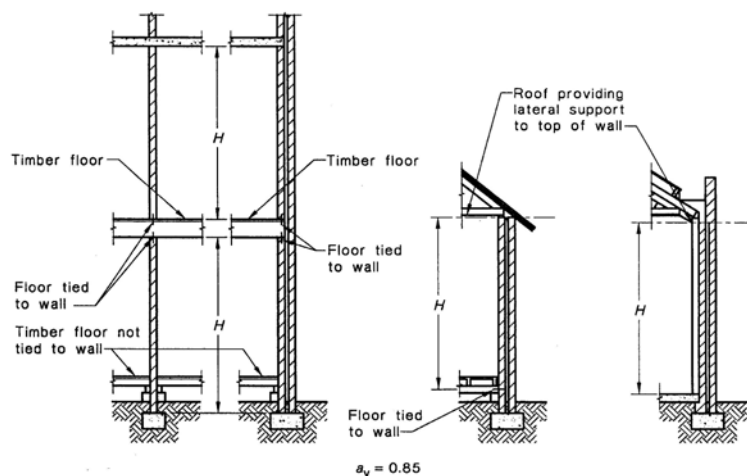


Table 8 - 2.2.3:

140 MORTARLESS WALL (unchamfered blocks)

Block: 20MPa

Wall Span: HORIZONTAL (reinforced vertically & horizontally)

Grout: 20MPa

$a_v = 1.00$

$a_h = 1.0$

		$k F_0$ - MAXIMUM DESIGN LOAD IN COMPRESSION (kN/m)					
$\sqrt{HxL}$ (mm)	S_r	Eccentricity e_1					
		$\leq 5.7\text{mm}$	10mm	20mm	30mm	40mm	$\geq 57\text{mm}$
2000	10.0	327	261	200	138	76	0
2400	12.0	305	240	181	123	65	0
2800	14.0	283	218	163	108	53	0
3200	16.0	260	197	145	93	41	0
3600	18.0	238	175	126	78	29	0
4000	20.0	216	154	108	62	17	0
4400	22.0	193	132	90	47	5	0
4800	24.0	171	110	71	32	0	0
5200	26.0	149	89	53	17	0	0
5600	28.0	126	67	35	2	0	0
6000	30.0	104	46	16	0	0	0
6400	32.0	82	24	0	0	0	0
6800	34.0	60	3	0	0	0	0
7200	36.0	37	0	0	0	0	0

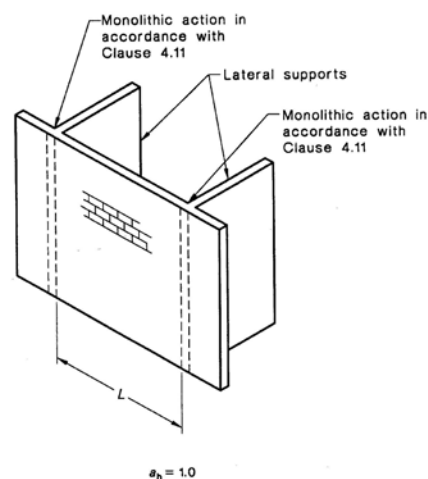
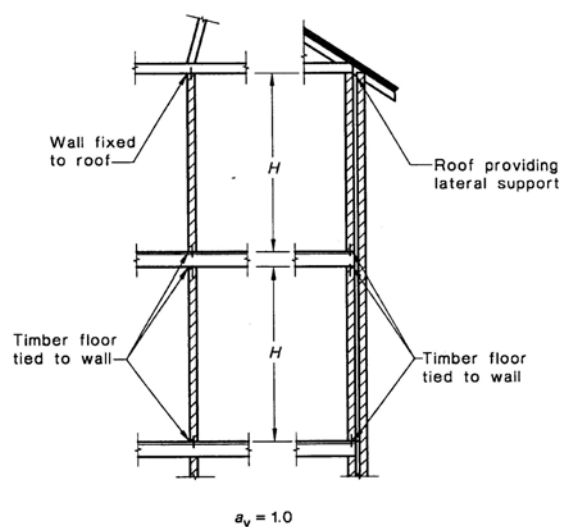


Table 9 - 2.2.3:

140 MORTARLESS WALL (unchamfered blocks)

Block: 20MPa

Wall Span: HORIZONTAL (reinforced vertically & horizontally)

Grout: 20MPa

$a_v = 1.50$

$a_h = 1.0$

		$k F_0$ - MAXIMUM DESIGN LOAD IN COMPRESSION (kN/m)					
$\sqrt{H \times L}$ (mm)	S_r	Eccentricity e_1					
		$\leq 5.7\text{mm}$	10mm	20mm	30mm	40mm	$\geq 57\text{mm}$
1200	7.3	372	290	224	158	92	0
1600	9.8	330	263	201	139	78	0
2000	12.2	302	237	179	121	63	0
2400	14.7	275	211	157	102	48	0
2800	17.1	248	184	134	84	34	0
3200	19.6	220	158	112	66	19	0
3600	22.0	193	131	89	47	5	0
4000	24.5	166	105	67	29	0	0
4400	26.9	138	79	44	10	0	0
4800	29.4	111	52	22	0	0	0
5200	31.8	84	26	0	0	0	0
5600	34.3	56	0	0	0	0	0
6000	36.7	29	0	0	0	0	0

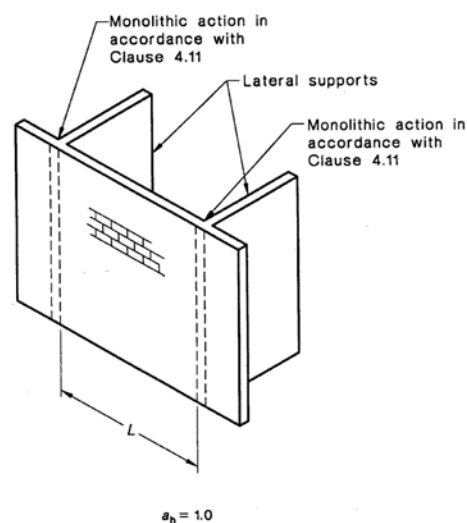
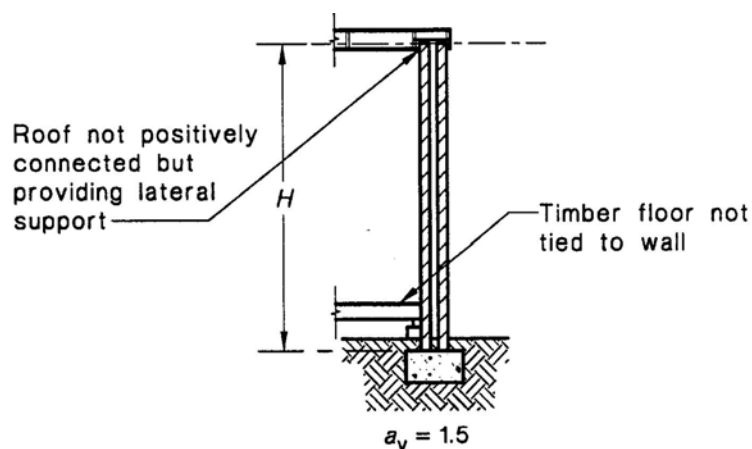


Table 10 - 2.2.3:

140 MORTARLESS WALL (unchamfered blocks)

Block: 20MPa

Wall Span: HORIZONTAL (reinforced vertically & horizontally)

Grout: 20MPa

$a_v = 2.50$

$a_h = 1.0$

		$k F_0$ - MAXIMUM DESIGN LOAD IN COMPRESSION (kN/m)					
$\sqrt{H \times L}$ (mm)	S_r	Eccentricity e_1					
		$\leq 5.7\text{mm}$	10mm	20mm	30mm	40mm	$\geq 57\text{mm}$
1200	9.5	333	267	204	142	79	0
1600	12.6	298	233	175	118	61	0
2000	15.8	263	199	146	94	42	0
2400	19.0	227	165	117	70	23	0
2800	22.1	192	131	88	46	4	0
3200	25.3	157	96	59	22	0	0
3600	28.5	121	62	31	0	0	0
4000	31.6	86	28	2	0	0	0
4400	34.8	51	0	0	0	0	0
4600	36.4	33	0	0	0	0	0

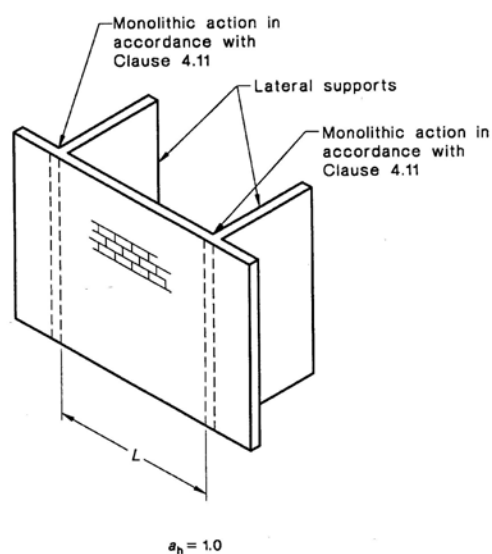
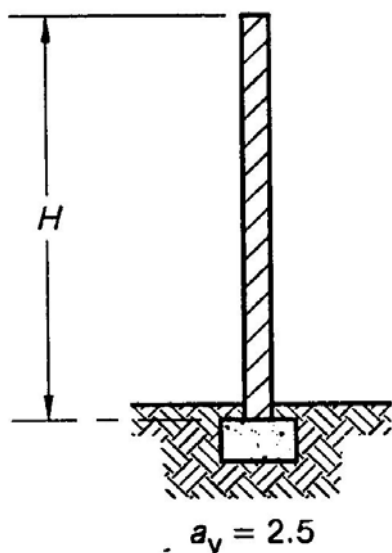


Table 11 - 2.2.3:

140 MORTARLESS WALL (unchamfered blocks)

Block: 20MPa

Wall Span: HORIZONTAL (reinforced vertically & horizontally)

Grout: 20MPa

$a_v = 0.75$

$a_h = 2.5$

		$k F_0$ - MAXIMUM DESIGN LOAD IN COMPRESSION (kN/m)					
$\sqrt{H \times L}$ (mm)	S_r	Eccentricity e_1					
		$\leq 5.7\text{mm}$	10mm	20mm	30mm	40mm	$\geq 57\text{mm}$
2000	13.7	286	221	166	110	54	0
2400	16.4	256	192	141	89	38	0
2800	19.2	225	162	116	69	22	0
3200	21.9	194	133	91	48	6	0
3600	24.6	164	103	65	27	0	0
4000	27.4	133	74	40	7	0	0
4400	30.1	103	45	15	0	0	0
4800	32.9	72	15	0	0	0	0
5200	35.6	42	0	0	0	0	0

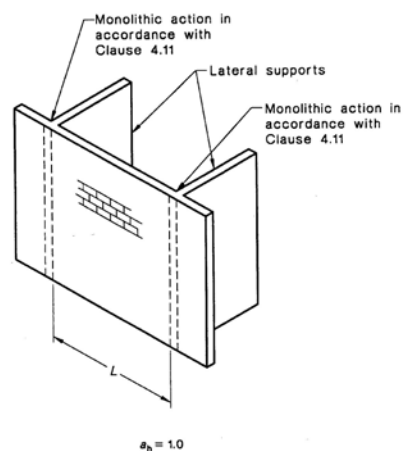
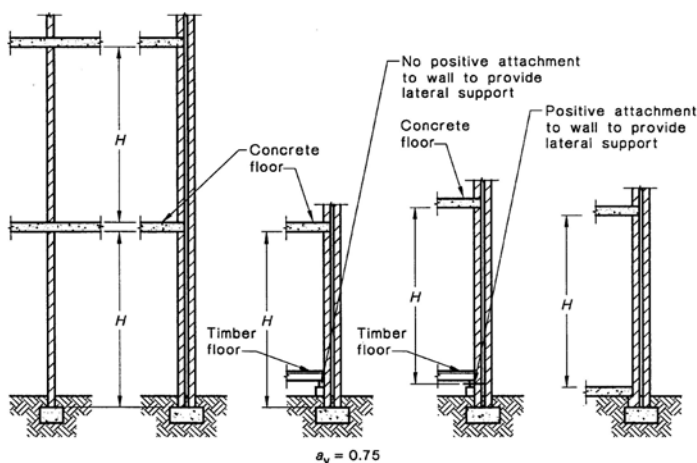


Table 12 - 2.2.3:**140 MORTARLESS WALL (unchamfered blocks)****Block: 20MPa****Wall Span: HORIZONTAL** (reinforced vertically & horizontally)**Grout: 20MPa** **$a_v = 0.85$** **$a_h = 2.5$**

		$k F_0$ - MAXIMUM DESIGN LOAD IN COMPRESSION (kN/m)					
$\sqrt{H \times L}$ (mm)	S_r	Eccentricity e_1					
		$\leq 5.7\text{mm}$	10mm	20mm	30mm	40mm	$\geq 57\text{mm}$
2000	14.6	276	212	158	103	49	0
2400	17.5	244	181	131	81	32	0
2800	20.4	211	149	104	59	15	0
3200	23.3	179	118	78	37	0	0
3600	26.2	146	86	51	15	0	0
4000	29.2	114	55	24	0	0	0
4400	32.1	81	24	0	0	0	0
4800	35.0	49	0	0	0	0	0
5000	36.4	32	0	0	0	0	0

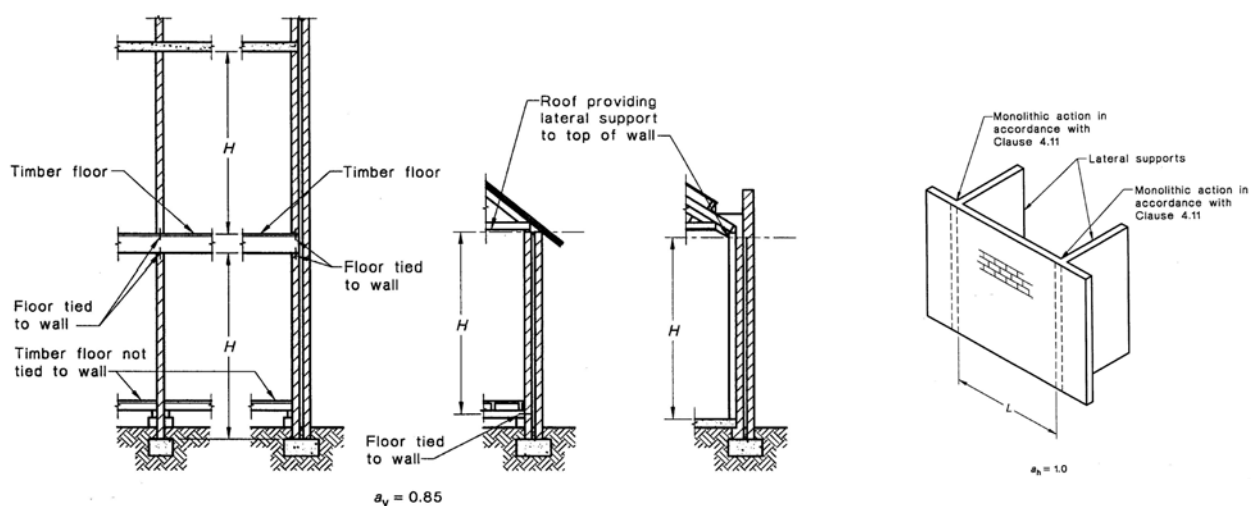


Table 13 - 2.2.3:

140 MORTARLESS WALL (unchamfered blocks)

Block: 20MPa

Wall Span: HORIZONTAL (reinforced vertically & horizontally)

Grout: 20MPa

$a_v = 1.00$

$a_h = 2.5$

		$k F_0$ - MAXIMUM DESIGN LOAD IN COMPRESSION (kN/m)					
$\sqrt{H \times L}$ (mm)	S_r	Eccentricity e_1					
		$\leq 5.7\text{mm}$	10mm	20mm	30mm	40mm	$\geq 57\text{mm}$
2000	15.8	263	199	146	94	42	0
2400	19.0	227	165	117	70	23	0
2800	22.1	192	131	88	46	4	0
3200	25.3	157	96	59	22	0	0
3600	28.5	121	62	31	0	0	0
4000	31.6	86	28	2	0	0	0
4400	34.8	51	0	0	0	0	0
4600	36.4	33	0	0	0	0	0

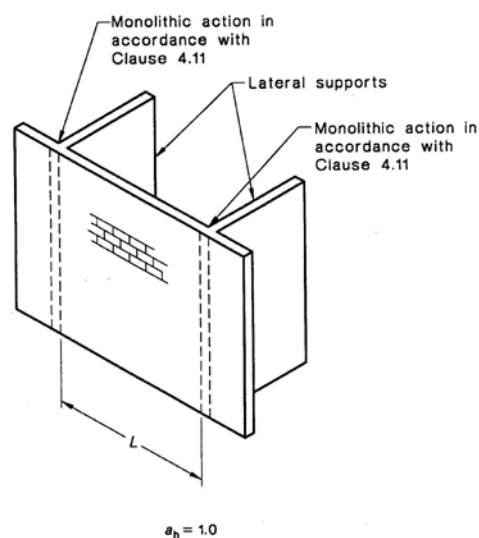
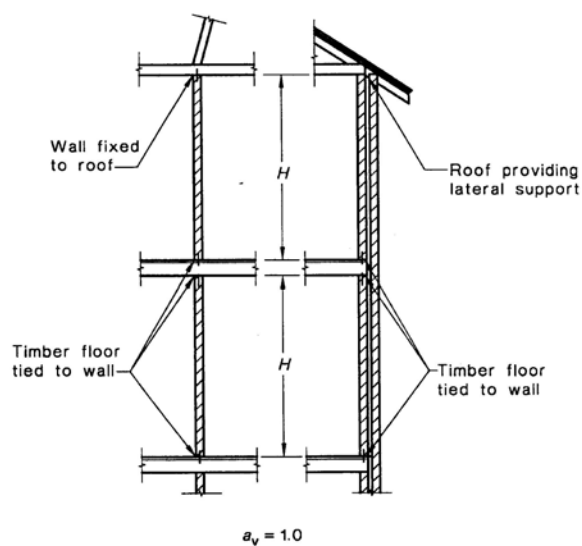


Table 14 - 2.2.3:

140 MORTARLESS WALL (unchamfered blocks)

Block: 20MPa

Wall Span: HORIZONTAL (reinforced vertically & horizontally)

Grout: 20MPa

$a_v = 1.50$

$a_h = 2.5$

		$k F_0$ - MAXIMUM DESIGN LOAD IN COMPRESSION (kN/m)					
$\sqrt{H \times L}$ (mm)	S_r	Eccentricity e_1					
		$\leq 5.7\text{mm}$	10mm	20mm	30mm	40mm	$\geq 57\text{mm}$
1200	11.6	309	244	185	126	67	0
1600	15.5	266	202	149	96	44	0
2000	19.4	223	160	114	67	21	0
2400	23.2	180	119	78	38	0	0
2800	27.1	136	77	43	9	0	0
3200	31.0	93	35	7	0	0	0
3600	34.9	50	0	0	0	0	0
3800	36.8	28	0	0	0	0	0

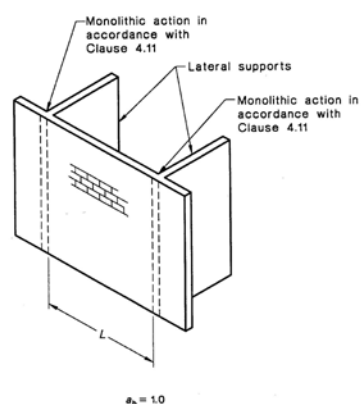
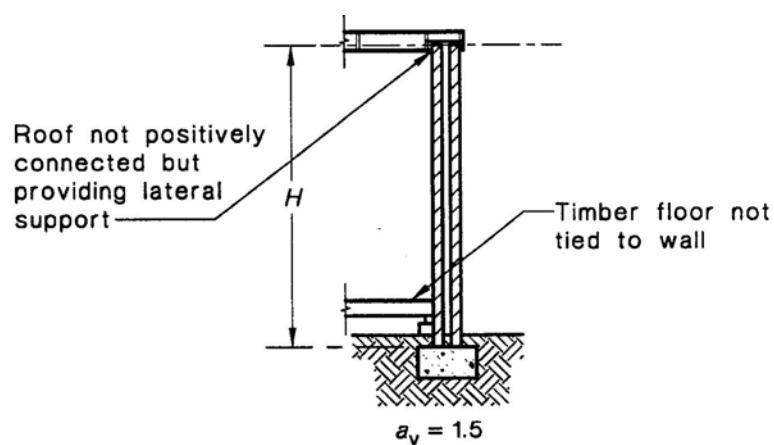


Table 15 - 2.2.3:

140 MORTARLESS WALL (unchamfered blocks)

Block: 20MPa

Wall Span: HORIZONTAL (reinforced vertically & horizontally)

Grout: 20MPa

$a_v = 2.50$

$a_h = 2.5$

		$k F_0$ - MAXIMUM DESIGN LOAD IN COMPRESSION (kN/m)					
$\sqrt{H \times L}$ (mm)	S_r	Eccentricity e_1					
		$\leq 5.7\text{mm}$	10mm	20mm	30mm	40mm	$\geq 57\text{mm}$
1200	15.0	272	207	154	100	47	0
1600	20.0	216	154	108	62	17	0
2000	25.0	160	100	62	25	0	0
2400	30.0	104	46	16	0	0	0
2800	35.0	48	0	0	0	0	0

