

2.2.1 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.

15MPa Blocks, 15MPa Grout

Table 1 - 2.2.1: 15MPa blocks, 15MPa grout, $a_v = 0.75$, height governs

Table 2 - 2.2.1: 15MPa blocks, 15MPa grout, $a_v = 0.85$, height governs

Table 3 - 2.2.1: 15MPa blocks, 15MPa grout, $a_v = 1.00$, height governs

Table 4 - 2.2.1: 15MPa blocks, 15MPa grout, $a_v = 1.50$, height governs

Table 5 - 2.2.1: 15MPa blocks, 15MPa grout, $a_v = 2.50$, height governs

Table 6 - 2.2.1: 15MPa blocks, 15MPa grout, $a_v = 0.75$, $a_h = 1.0$, length governs

Table 7 - 2.2.1: 15MPa blocks, 15MPa grout, $a_v = 0.85$, $a_h = 1.0$, length governs

Table 8 - 2.2.1: 15MPa blocks, 15MPa grout, $a_v = 1.00$, $a_h = 1.0$, length governs

Table 9 - 2.2.1: 15MPa blocks, 15MPa grout, $a_v = 1.50$, $a_h = 1.0$, length governs

Table 10 - 2.2.1: 15MPa blocks, 15MPa grout, $a_v = 2.50$, $a_h = 1.0$, length governs

Table 11 - 2.2.1: 15MPa blocks, 15MPa grout, $a_v = 0.75$, $a_h = 2.5$, length governs

Table 12 - 2.2.1: 15MPa blocks, 15MPa grout, $a_v = 0.85$, $a_h = 2.5$, length governs

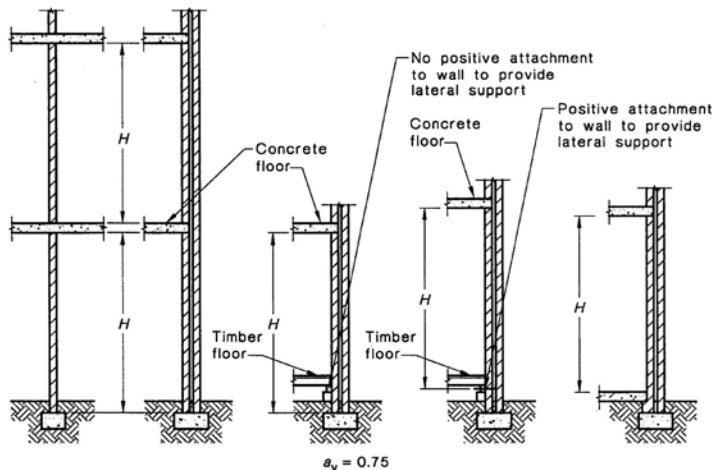
Table 13 - 2.2.1: 15MPa blocks, 15MPa grout, $a_v = 1.00$, $a_h = 2.5$, length governs

Table 14 - 2.2.1: 15MPa blocks, 15MPa grout, $a_v = 1.50$, $a_h = 2.5$, length governs

Table 15 - 2.2.1: 15MPa blocks, 15MPa grout, $a_v = 2.50$, $a_h = 2.5$, length governs

Table 1 - 2.2.1:

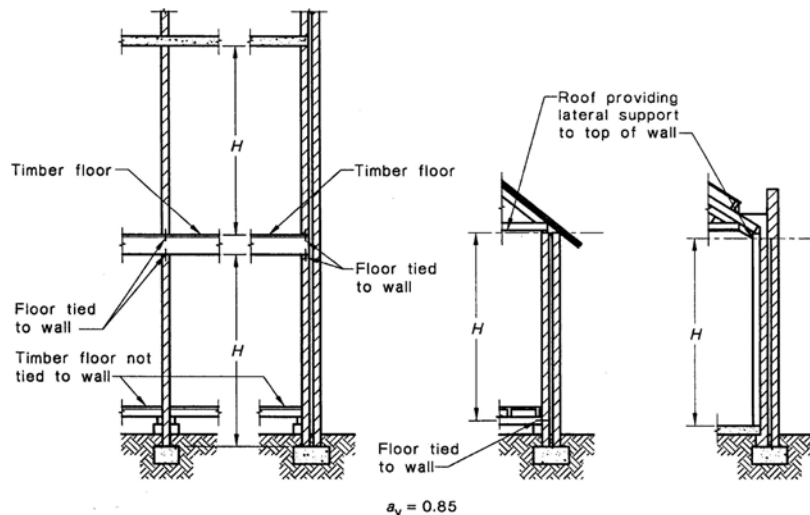
200 MORTARLESS WALL (unchamfered blocks)															
Block: 15MPa		Wall span: VERTICAL (reinforced vertically)													
Grout: 15MPa		$a_v = 0.75$													
		$k F_0$ - MAXIMUM DESIGN LOAD IN COMPRESSION (kN/m)													
H (mm)	S_r	Eccentricity e_1 (mm)													
		≤ 8.7 mm	20mm			40mm			60mm			80mm			≥ 87 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	7.5	459	346	387	428	235	315	396	124	244	364	13	173	333	0
2400	9	438	326	367	408	219	298	377	112	230	347	5	161	317	0
2800	10.5	416	306	347	387	203	281	359	100	215	330	0	149	301	0
3200	12	394	286	327	367	188	264	340	89	201	313	0	138	286	0
3600	13.5	373	267	307	347	172	247	321	77	186	296	0	126	270	0
4000	15	351	247	287	327	156	229	303	65	172	278	0	114	254	0
4400	16.5	329	227	267	307	140	212	284	53	157	261	0	103	239	0
4800	18	308	207	247	287	124	195	265	42	143	244	0	91	223	0
5200	19.5	286	187	227	266	108	178	247	30	128	227	0	79	207	0
5600	21	265	167	207	246	93	160	228	18	114	210	0	68	192	0
6000	22.5	243	147	187	226	77	143	209	6	100	193	0	56	176	0
6400	24	221	127	167	206	61	126	191	0	85	175	0	44	160	0
6800	25.5	200	107	147	186	45	109	172	0	71	158	0	33	145	0
7200	27	178	87	127	166	29	91	153	0	56	141	0	21	129	0
7600	28.5	156	67	106	146	13	74	135	0	42	124	0	9	113	0
8000	30	135	48	86	125	0	57	116	0	27	107	0	0	98	0
8400	31.5	113	28	66	105	0	40	97	0	13	90	0	0	82	0
8800	33	91	8	46	85	0	22	79	0	0	72	0	0	66	0
9200	34.5	70	0	26	65	0	5	60	0	0	55	0	0	51	0
9600	36	48	0	6	45	0	0	41	0	0	38	0	0	35	0



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

Table 2 - 2.2.1:

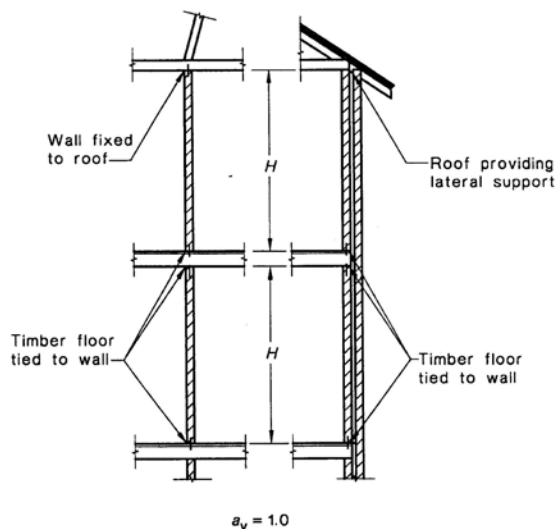
200 MORTARLESS WALL (unchamfered blocks)															
Block: 15MPa		Wall span: VERTICAL (reinforced vertically)													
Grout: 15MPa		$a_v = 0.85$													
		$k F_0$ - MAXIMUM DESIGN LOAD IN COMPRESSION (kN/m)													
H (mm)	S_r	Eccentricity e_1													
		≤ 8.7 mm	20mm			40mm			60mm			80mm			≥ 87 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	8.5	445	333	374	414	224	304	384	116	234	353	8	165	322	0
2400	10.2	420	310	351	391	207	284	362	103	218	333	0	152	304	0
2800	11.9	396	288	328	369	189	265	341	89	202	314	0	138	287	0
3200	13.6	371	265	305	346	171	245	320	76	185	295	0	125	269	0
3600	15.3	347	243	283	323	153	226	299	63	169	275	0	112	251	0
4000	17	322	220	260	300	135	206	278	50	153	256	0	99	233	0
4400	18.7	298	198	237	277	117	187	257	36	136	236	0	86	216	0
4800	20.4	273	175	215	254	99	167	236	23	120	217	0	72	198	0
5200	22.1	249	152	192	232	81	148	214	10	103	197	0	59	180	0
5600	23.8	224	130	169	209	63	128	193	0	87	178	0	46	162	0
6000	25.5	200	107	147	186	45	109	172	0	71	158	0	33	145	0
6400	27.2	175	85	124	163	27	89	151	0	54	139	0	19	127	0
6800	28.9	151	62	101	140	9	69	130	0	38	119	0	6	109	0
7200	30.6	126	40	78	117	0	50	109	0	21	100	0	0	91	0
7600	32.3	101	17	56	94	0	30	87	0	5	80	0	0	73	0
8000	34	77	0	33	72	0	11	66	0	0	61	0	0	56	0
8400	35.7	52	0	10	49	0	0	45	0	0	42	0	0	38	0



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

Table 3 - 2.2.1:

200 MORTARLESS WALL (unchamfered blocks)															
Block: 15MPa		Wall span: VERTICAL (reinforced vertically)													
Grout: 15MPa		$a_v = 1.00$													
		$k F_0$ - MAXIMUM DESIGN LOAD IN COMPRESSION (kN/m)													
H (mm)	S_r	Eccentricity e_1													
		≤ 8.7 mm	20mm			40mm			60mm			80mm			≥ 87 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	423	313	354	394	209	287	365	104	220	336	0	153	307	0
2400	12	394	286	327	367	188	264	340	89	201	313	0	138	286	0
2800	14	366	260	300	340	166	241	315	73	181	290	0	122	265	0
3200	16	337	233	273	313	145	218	290	57	162	267	0	107	244	0
3600	18	308	207	247	287	124	195	265	42	143	244	0	91	223	0
4000	20	279	180	220	260	103	172	240	26	124	221	0	75	202	0
4400	22	250	154	193	233	82	149	216	10	104	198	0	60	181	0
4800	24	221	127	167	206	61	126	191	0	85	175	0	44	160	0
5200	26	192	101	140	179	40	103	166	0	66	153	0	29	139	0
5600	28	164	74	113	152	19	80	141	0	47	130	0	13	118	0
6000	30	135	48	86	125	0	57	116	0	27	107	0	0	98	0
6400	32	106	21	60	99	0	34	91	0	8	84	0	0	77	0
6800	34	77	0	33	72	0	11	66	0	0	61	0	0	56	0
7200	36	48	0	6	45	0	0	41	0	0	38	0	0	35	0



**Lateral support top and bottom
Fully braced construction**

Table 4 - 2.2.1:

200 MORTARLESS WALL (unchamfered blocks)															
Block: 15MPa		Wall span: VERTICAL (reinforced vertically)													
Grout: 15MPa		$a_v = 1.50$													
		$k F_0$ - MAXIMUM DESIGN LOAD IN COMPRESSION (kN/m)													
H (mm)	S_r	Eccentricity e_1													
		≤ 8.7 mm	20mm			40mm			60mm			80mm			≥ 87 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	15	351	247	287	327	156	229	303	65	172	278	0	114	254	0
2400	18	308	207	247	287	124	195	265	42	143	244	0	91	223	0
2800	21	265	167	207	246	93	160	228	18	114	210	0	68	192	0
3200	24	221	127	167	206	61	126	191	0	85	175	0	44	160	0
3600	27	178	87	127	166	29	91	153	0	56	141	0	21	129	0
4000	30	135	48	86	125	0	57	116	0	27	107	0	0	98	0
4400	33	91	8	46	85	0	22	79	0	0	72	0	0	66	0
4800	36	48	0	6	45	0	0	41	0	0	38	0	0	35	0

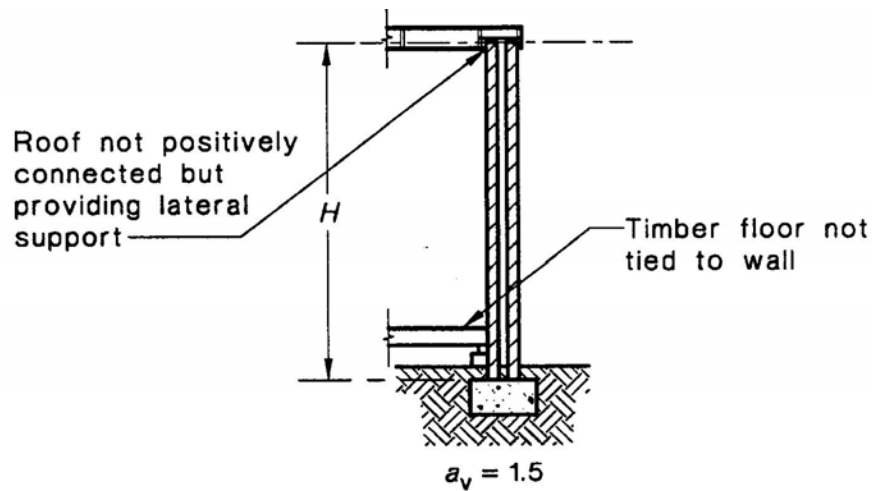
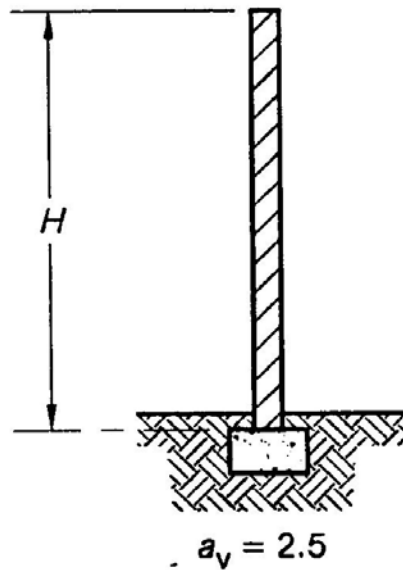


Table 5 - 2.2.1:

200 MORTARLESS WALL (unchamfered blocks)															
Block: 15MPa		Wall span: VERTICAL (reinforced vertically)													
Grout: 15MPa		$a_v = 2.50$													
		$k F_0$ - MAXIMUM DESIGN LOAD IN COMPRESSION (kN/m)													
H (mm)	S_r	Eccentricity e_1													
		≤ 8.7 mm	20mm			40mm			60mm			80mm			≥ 87 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	25	207	114	153	193	50	114	178	0	75	164	0	37	150	0
2400	30	135	48	86	125	0	57	116	0	27	107	0	0	98	0
2800	35	63	0	20	58	0	0	54	0	0	50	0	0	45	0



**Free standing wall
No lateral support to top edge**

Table 6 - 2.2.1:

200 MORTARLESS WALL (unchamfered blocks)							
Block: 15MPa		Wall Span: HORIZONTAL (reinforced vertically & horizontally)					
Grout: 15MPa		$a_v = 0.75$		$a_h = 1.0$			
		$k F_0$ - MAXIMUM DESIGN LOAD IN COMPRESSION (kN/m)					
$\sqrt{H \times L}$ (mm)	S_r	Eccentricity e_1					
		$\leq 8.7\text{mm}$	20mm	40mm	60mm	80mm	$\geq 87\text{mm}$
2000	6.1	480	365	250	135	20	0
2400	7.3	463	349	237	126	14	0
2800	8.5	445	333	225	116	8	0
3200	9.7	428	317	212	107	1	0
3600	10.9	410	301	199	97	0	0
4000	12.1	393	285	186	88	0	0
4400	13.3	375	269	173	78	0	0
4800	14.5	358	253	161	69	0	0
5200	15.8	340	237	148	59	0	0
5600	17.0	323	220	135	50	0	0
6000	18.2	305	204	122	40	0	0
6400	19.4	288	188	109	31	0	0
6800	20.6	270	172	97	21	0	0
7200	21.8	253	156	84	12	0	0
7600	23.0	235	140	71	2	0	0
8000	24.2	218	124	58	0	0	0
8400	25.5	200	108	45	0	0	0
8800	26.7	183	92	33	0	0	0
9200	27.9	165	76	20	0	0	0
9600	29.1	148	59	7	0	0	0
10000	30.3	130	43	0	0	0	0
10400	31.5	113	27	0	0	0	0
10800	32.7	95	11	0	0	0	0
11200	33.9	78	0	0	0	0	0
11600	35.2	60	0	0	0	0	0
12000	36.4	43	0	0	0	0	0

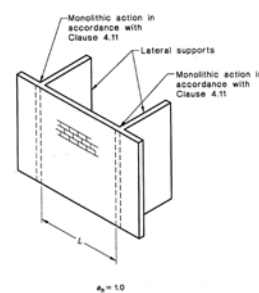
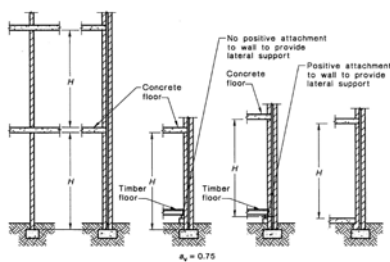


Table 7 - 2.2.1:

200 MORTARLESS WALL (unchamfered blocks)							
Block: 15MPa		Wall Span: HORIZONTAL (reinforced vertically & horizontally)					
Grout: 15MPa		$a_v = 0.85$		$a_h = 1.0$			
		$k F_0$ - MAXIMUM DESIGN LOAD IN COMPRESSION (kN/m)					
$\sqrt{H \times L}$ (mm)	S_r	Eccentricity e_1					
		$\leq 8.7\text{mm}$	20mm	40mm	60mm	80mm	$\geq 87\text{mm}$
2000	6.5	474	360	246	132	18	0
2400	7.7	456	343	232	122	11	0
2800	9.0	437	326	219	112	5	0
3200	10.3	419	309	205	102	0	0
3600	11.6	400	292	192	92	0	0
4000	12.9	381	274	178	82	0	0
4400	14.2	363	257	164	71	0	0
4800	15.5	344	240	151	61	0	0
5200	16.8	325	223	137	51	0	0
5600	18.1	307	206	123	41	0	0
6000	19.4	288	189	110	31	0	0
6400	20.7	270	172	96	21	0	0
6800	21.9	251	154	83	11	0	0
7200	23.2	232	137	69	1	0	0
7600	24.5	214	120	55	0	0	0
8000	25.8	195	103	42	0	0	0
8400	27.1	176	86	28	0	0	0
8800	28.4	158	69	15	0	0	0
9200	29.7	139	52	1	0	0	0
9600	31.0	121	35	0	0	0	0
10000	32.3	102	17	0	0	0	0
10400	33.6	83	0	0	0	0	0
10800	34.8	65	0	0	0	0	0
11200	36.1	46	0	0	0	0	0

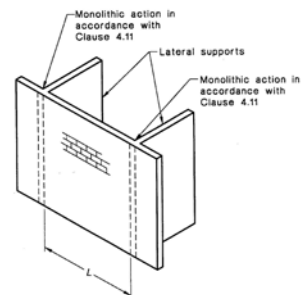
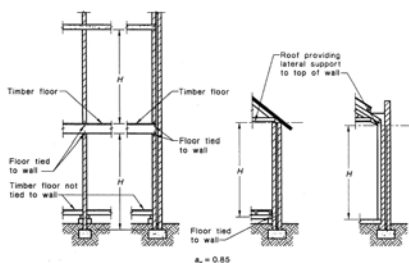


Table 8 - 2.2.1:

200 MORTARLESS WALL (unchamfered blocks)							
Block: 15MPa		Wall Span: HORIZONTAL (reinforced vertically & horizontally)					
Grout: 15MPa		a _v = 1.00		a _h = 1.0			
		k F ₀ - MAXIMUM DESIGN LOAD IN COMPRESSION (kN/m)					
√HxL (mm)	S _r	Eccentricity e ₁					
		≤ 8.7mm	20mm	40mm	60mm	80mm	≥ 87mm
2000	7.0	467	353	240	128	15	0
2400	8.4	446	334	225	117	8	0
2800	9.8	426	316	211	106	1	0
3200	11.2	406	297	196	95	0	0
3600	12.6	386	278	181	84	0	0
4000	14.0	366	260	166	73	0	0
4400	15.4	345	241	152	62	0	0
4800	16.8	325	223	137	51	0	0
5200	18.2	305	204	122	40	0	0
5600	19.6	285	186	107	29	0	0
6000	21.0	265	167	93	18	0	0
6400	22.4	244	148	78	7	0	0
6800	23.8	224	130	63	0	0	0
7200	25.2	204	111	48	0	0	0
7600	26.6	184	93	33	0	0	0
8000	28.0	164	74	19	0	0	0
8400	29.4	143	55	4	0	0	0
8800	30.8	123	37	0	0	0	0
9200	32.2	103	18	0	0	0	0
9600	33.6	83	0	0	0	0	0
10000	35.0	63	0	0	0	0	0
10400	36.4	42	0	0	0	0	0

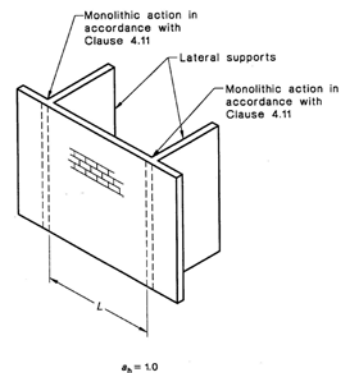
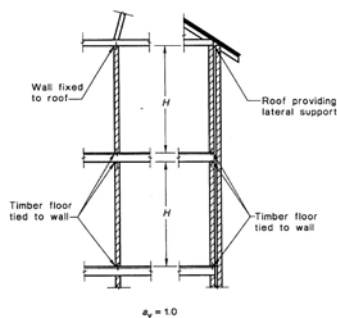


Table 9 - 2.2.1:

200 MORTARLESS WALL (unchamfered blocks)							
Block: 15MPa		Wall Span: HORIZONTAL (reinforced vertically & horizontally)					
Grout: 15MPa		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					
		≤ 8.7mm	20mm	40mm	60mm	80mm	≥ 87mm
1200	5.1	481	377	260	142	25	0
1600	6.9	469	355	242	129	16	0
2000	8.6	444	332	224	116	7	0
2400	10.3	419	309	206	102	0	0
2800	12.0	394	286	187	89	0	0
3200	13.7	370	264	169	75	0	0
3600	15.4	345	241	151	62	0	0
4000	17.1	320	218	133	48	0	0
4400	18.9	295	195	115	35	0	0
4800	20.6	271	173	97	22	0	0
5200	22.3	246	150	79	8	0	0
5600	24.0	221	127	61	0	0	0
6000	25.7	196	104	43	0	0	0
6400	27.4	172	82	25	0	0	0
6800	29.1	147	59	7	0	0	0
7200	30.9	122	36	0	0	0	0
7600	32.6	97	13	0	0	0	0
8000	34.3	73	0	0	0	0	0
8400	36.0	48	0	0	0	0	0

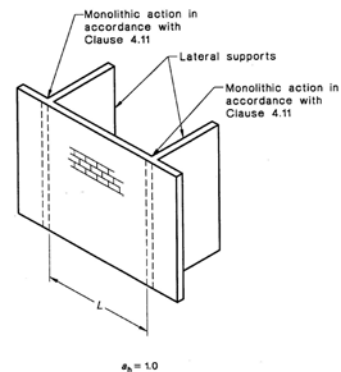
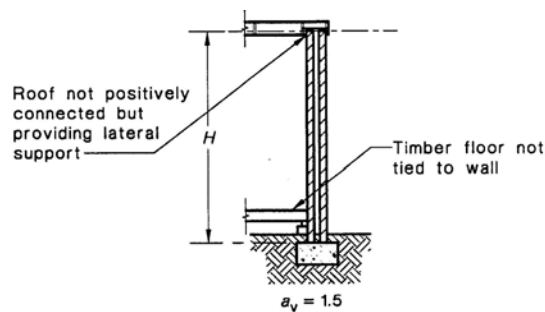


Table 10 - 2.2.1:

200 MORTARLESS WALL (unchamfered blocks)							
Block: 15MPa		Wall Span: HORIZONTAL (reinforced vertically & horizontally)					
Grout: 15MPa		$a_v = 2.50$		$a_h = 1.0$			
		$k F_0$ - MAXIMUM DESIGN LOAD IN COMPRESSION (kN/m)					
$\sqrt{H \times L}$ (mm)	S_r	Eccentricity e_1					
		$\leq 8.7\text{mm}$	20mm	40mm	60mm	80mm	$\geq 87\text{mm}$
1200	6.6	472	358	244	131	17	0
1600	8.9	440	328	221	113	6	0
2000	11.1	408	299	197	96	0	0
2400	13.3	376	269	174	79	0	0
2800	15.5	344	240	151	61	0	0
3200	17.7	312	211	127	44	0	0
3600	19.9	280	181	104	27	0	0
4000	22.1	248	152	81	9	0	0
4400	24.3	216	123	57	0	0	0
4800	26.6	184	93	34	0	0	0
5200	28.8	152	64	10	0	0	0
5600	31.0	120	34	0	0	0	0
6000	33.2	88	5	0	0	0	0
6400	35.4	57	0	0	0	0	0

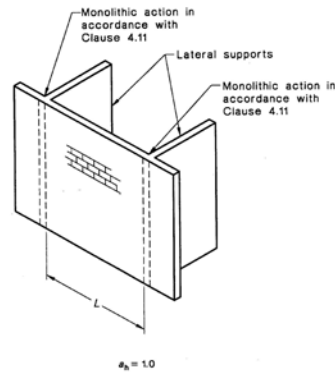
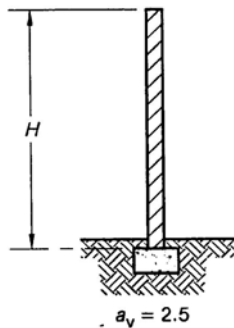


Table 11 - 2.2.1:

200 MORTARLESS WALL (unchamfered blocks)

Block: 15MPa

Wall Span: HORIZONTAL (reinforced vertically & horizontally)

Grout: 15MPa

$a_v = 0.75$

$a_h = 2.5$

		$k F_0$ - MAXIMUM DESIGN LOAD IN COMPRESSION (kN/m)					
$\sqrt{H \times L}$ (mm)	S_r	Eccentricity e_1					
		$\leq 8.7\text{mm}$	20mm	40mm	60mm	80mm	$\geq 87\text{mm}$
2000	9.6	429	318	213	108	2	0
2400	11.5	402	293	193	93	0	0
2800	13.4	374	268	173	78	0	0
3200	15.3	346	242	152	63	0	0
3600	17.3	319	217	132	48	0	0
4000	19.2	291	191	112	33	0	0
4400	21.1	263	166	92	17	0	0
4800	23.0	236	140	71	2	0	0
5200	24.9	208	115	51	0	0	0
5600	26.8	180	89	31	0	0	0
6000	28.8	153	64	11	0	0	0
6400	30.7	125	39	0	0	0	0
6800	32.6	97	13	0	0	0	0
7200	34.5	70	0	0	0	0	0
7600	36.4	42	0	0	0	0	0

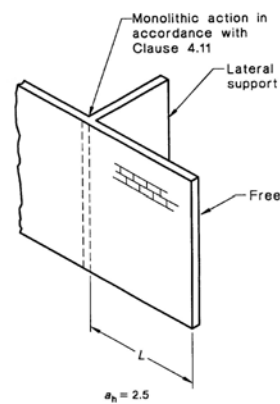
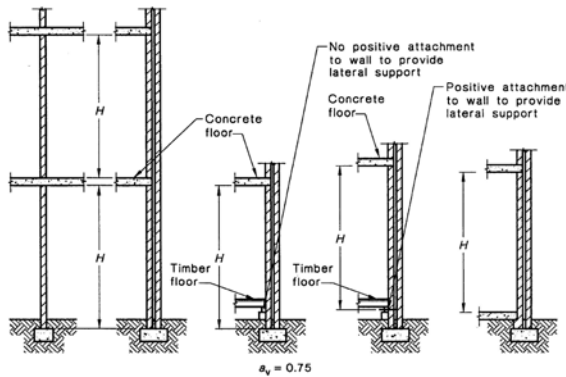


Table 12 - 2.2.1:

200 MORTARLESS WALL (unchamfered blocks)							
Block: 15MPa		Wall Span: HORIZONTAL (reinforced vertically & horizontally)					
Grout: 15MPa		$a_v = 0.85$		$a_h = 2.5$			
		$k F_0$ - MAXIMUM DESIGN LOAD IN COMPRESSION (kN/m)					
$\sqrt{H \times L}$ (mm)	S_r	Eccentricity e_1					
		$\leq 8.7\text{mm}$	20mm	40mm	60mm	80mm	$\geq 87\text{mm}$
2000	10.2	420	310	206	103	0	0
2400	12.2	391	283	185	87	0	0
2800	14.3	361	256	163	71	0	0
3200	16.3	332	229	142	55	0	0
3600	18.4	303	202	120	39	0	0
4000	20.4	273	175	99	23	0	0
4400	22.4	244	148	77	7	0	0
4800	24.5	214	121	56	0	0	0
5200	26.5	185	94	34	0	0	0
5600	28.6	155	66	13	0	0	0
6000	30.6	126	39	0	0	0	0
6400	32.7	96	12	0	0	0	0
6800	34.7	67	0	0	0	0	0
7200	36.7	37	0	0	0	0	0

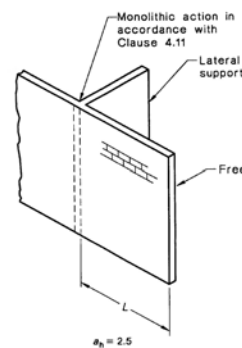
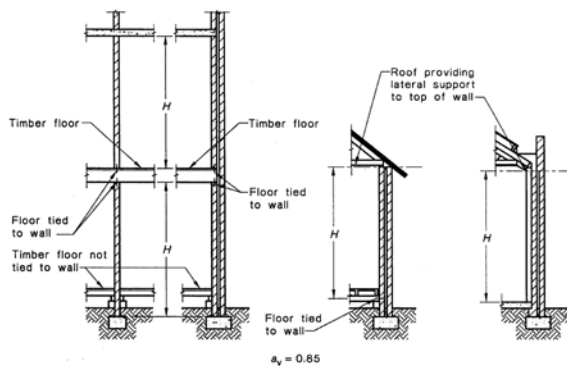


Table 13 - 2.2.1:

200 MORTARLESS WALL (unchamfered blocks)							
Block: 15MPa		Wall Span: HORIZONTAL (reinforced vertically & horizontally)					
Grout: 15MPa		$a_v = 1.00$		$a_h = 2.5$			
		$k F_0$ - MAXIMUM DESIGN LOAD IN COMPRESSION (kN/m)					
$\sqrt{H \times L}$ (mm)	S_r	Eccentricity e_1					
		$\leq 8.7\text{mm}$	20mm	40mm	60mm	80mm	$\geq 87\text{mm}$
2000	11.1	408	299	197	96	0	0
2400	13.3	376	269	174	79	0	0
2800	15.5	344	240	151	61	0	0
3200	17.7	312	211	127	44	0	0
3600	19.9	280	181	104	27	0	0
4000	22.1	248	152	81	9	0	0
4400	24.3	216	123	57	0	0	0
4800	26.6	184	93	34	0	0	0
5200	28.8	152	64	10	0	0	0
5600	31.0	120	34	0	0	0	0
6000	33.2	88	5	0	0	0	0
6400	35.4	57	0	0	0	0	0

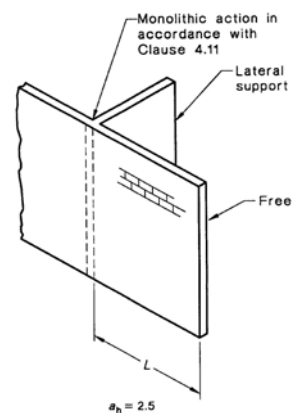
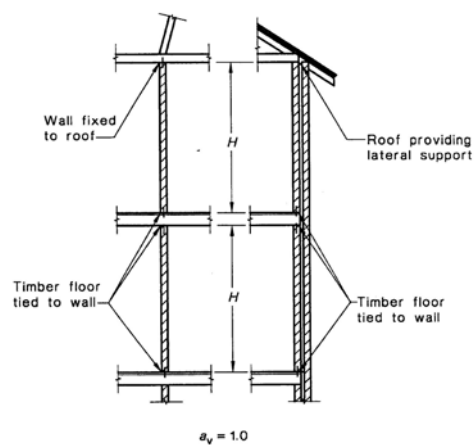


Table 14 - 2.2.1:

200 MORTARLESS WALL (unchamfered blocks)

Block: 15MPa

Wall Span: HORIZONTAL (reinforced vertically & horizontally)

Grout: 15MPa

$a_v = 1.50$

$a_h = 2.5$

		$k F_0$ - MAXIMUM DESIGN LOAD IN COMPRESSION (kN/m)					
$\sqrt{H \times L}$ (mm)	S_r	Eccentricity e_1					
		$\leq 8.7\text{mm}$	20mm	40mm	60mm	80mm	$\geq 87\text{mm}$
1200	8.1	450	338	228	119	9	0
1600	10.8	411	302	200	98	0	0
2000	13.6	372	266	171	76	0	0
2400	16.3	333	230	142	55	0	0
2800	19.0	294	194	114	34	0	0
3200	21.7	255	158	85	13	0	0
3600	24.4	215	122	57	0	0	0
4000	27.1	176	86	28	0	0	0
4400	29.8	137	50	-1	0	0	0
4800	32.5	98	14	0	0	0	0
5200	35.2	59	0	0	0	0	0

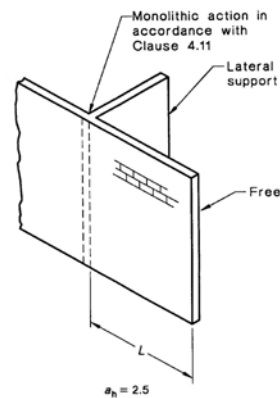
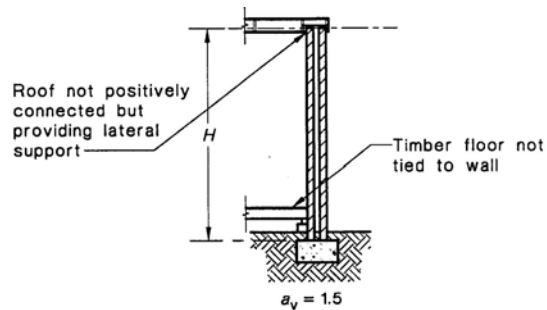


Table 15 - 2.2.1:

200 MORTARLESS WALL (unchamfered blocks)							
Block: 15MPa		Wall Span: HORIZONTAL (reinforced vertically & horizontally)					
Grout: 15MPa		$a_v = 2.50$		$a_h = 2.5$			
		$k F_0$ - MAXIMUM DESIGN LOAD IN COMPRESSION (kN/m)					
$\sqrt{H \times L}$ (mm)	S_r	Eccentricity e_1					
		$\leq 8.7\text{mm}$	20mm	40mm	60mm	80mm	$\geq 87\text{mm}$
1200	10.5	416	306	203	100	0	0
1600	14.0	366	260	166	73	0	0
2000	17.5	315	213	129	46	0	0
2400	21.0	265	167	93	18	0	0
2800	24.5	214	121	56	0	0	0
3200	28.0	164	74	19	0	0	0
3600	31.5	113	28	0	0	0	0
4000	35.0	63	0	0	0	0	0

