

Measured holding force of a single **APAK 20.0** snowguard : **0.31** [kN]

D: distance between snowguards' rows on the PV array surface (= module width for landscape/horizontal configurations, or module length for portrait/vertical configurations) : **1.14** [m]

Number of **APAK 20.0** snowguards per linear meter of horizontal or landscape modules

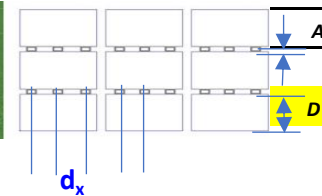
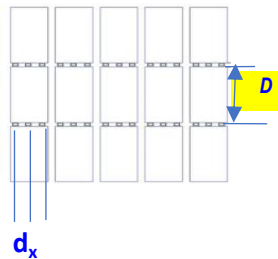
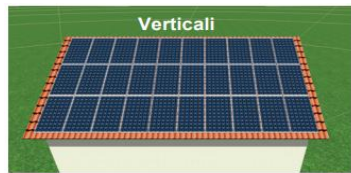
Snow height on the ground [cm]				Snow load		Roof pitch in degrees [°]																							
Fresh	Settled	Old	Wet	N/m ²	kN/m ²	5	10	15	20	25	30	35	40	45	50	55	60												
50	25	14	13	500	0.5	0.05	3	0.10	3	0.14	3	0.18	3	0.22	3	0.25	3	0.27	3	0.28	3	0.29	3	0.28	3	0.27	3	0.25	3
75	38	21	19	750	0.8	0.07	3	0.15	3	0.21	3	0.27	3	0.33	3	0.37	3	0.40	3	0.42	3	0.43	3	0.42	3	0.40	3	0.37	3
100	50	29	25	1000	1.0	0.10	3	0.19	3	0.29	3	0.37	3	0.44	3	0.49	3	0.54	3	0.56	3	0.57	3	0.56	3	0.54	3	0.49	3
125	63	36	31	1250	1.3	0.12	3	0.24	3	0.36	3	0.46	3	0.55	3	0.62	3	0.67	3	0.70	3	0.71	3	0.70	3	0.67	3	0.62	3
150	75	43	38	1500	1.5	0.15	3	0.29	3	0.43	3	0.55	3	0.65	3	0.74	3	0.80	3	0.84	3	0.86	3	0.84	3	0.80	3	0.74	3
175	88	50	44	1750	1.8	0.17	3	0.34	3	0.50	3	0.64	3	0.76	3	0.86	3	0.94	4	0.98	4	1.00	4	0.98	4	0.94	4	0.86	3
200	100	57	50	2000	2.0	0.20	3	0.39	3	0.57	3	0.73	3	0.87	3	0.99	4	1.07	4	1.12	4	1.14	4	1.12	4	1.07	4	0.99	4
225	113	64	56	2250	2.3	0.22	3	0.44	3	0.64	3	0.82	3	0.98	4	1.11	4	1.21	4	1.26	5	1.28	5	1.26	5	1.21	4	1.11	4
250	125	71	63	2500	2.5	0.25	3	0.49	3	0.71	3	0.92	3	1.09	4	1.23	4	1.34	5	1.40	5	1.43	5	1.40	5	1.34	5	1.23	4
275	138	79	69	2750	2.8	0.27	3	0.54	3	0.78	3	1.01	4	1.20	4	1.36	5	1.47	5	1.54	5	1.57	6	1.54	5	1.47	5	1.36	5
300	150	86	75	3000	3.0	0.30	3	0.58	3	0.86	3	1.10	4	1.31	5	1.48	5	1.61	6	1.68	6	1.71	6	1.68	6	1.61	6	1.48	5
325	163	93	81	3250	3.3	0.32	3	0.63	3	0.93	3	1.19	4	1.42	5	1.60	6	1.74	6	1.82	6	1.85	6	1.82	6	1.74	6	1.60	6
350	175	100	88	3500	3.5	0.35	3	0.68	3	1.00	4	1.28	5	1.53	5	1.73	6	1.87	7	1.96	7	2.00	7	1.96	7	1.87	7	1.73	6
375	188	107	94	3750	3.8	0.37	3	0.73	3	1.07	4	1.37	5	1.64	6	1.85	6	2.01	7	2.11	7	2.14	7	2.11	7	2.01	7	1.85	6
400	200	114	100	4000	4.0	0.40	3	0.78	3	1.14	4	1.47	5	1.75	6	1.97	7	2.14	7	2.25	NO	2.28	NO	2.25	NO	2.14	7	1.97	7
425	213	121	106	4250	4.3	0.42	3	0.83	3	1.21	4	1.56	6	1.86	6	2.10	7	2.28	NO	2.39	NO	2.42	NO	2.39	NO	2.28	NO	2.10	7
450	225	129	113	4500	4.5	0.45	3	0.88	3	1.28	5	1.65	6	1.96	7	2.22	NO	2.41	NO	2.53	NO	2.57	NO	2.53	NO	2.41	NO	2.22	NO
475	238	136	119	4750	4.8	0.47	3	0.93	3	1.35	5	1.74	6	2.07	7	2.34	NO	2.54	NO	2.67	NO	2.71	NO	2.67	NO	2.54	NO	2.34	NO
500	250	143	125	5000	5.0	0.49	3	0.97	4	1.43	5	1.83	6	2.18	NO	2.47	NO	2.68	NO	2.81	NO	2.85	NO	2.81	NO	2.68	NO	2.47	NO
525	263	150	131	5250	5.3	0.52	3	1.02	4	1.50	5	1.92	7	2.29	NO	2.59	NO	2.81	NO	2.95	NO	2.99	NO	2.95	NO	2.81	NO	2.59	NO
550	275	157	138	5500	5.5	0.54	3	1.07	4	1.57	6	2.02	7	2.40	NO	2.71	NO	2.95	NO	3.09	NO	3.14	NO	3.09	NO	2.95	NO	2.71	NO
575	288	164	144	5750	5.8	0.57	3	1.12	4	1.64	6	2.11	7	2.51	NO	2.84	NO	3.08	NO	3.23	NO	3.28	NO	3.23	NO	3.08	NO	2.84	NO
600	300	171	150	6000	6.0	0.59	3	1.17	4	1.71	6	2.20	NO	2.62	NO	2.96	NO	3.21	NO	3.37	NO	3.42	NO	3.37	NO	3.21	NO	2.96	NO
625	313	179	156	6250	6.3	0.62	3	1.22	4	1.78	6	2.29	NO	2.73	NO	3.09	NO	3.35	NO	3.51	NO	3.56	NO	3.51	NO	3.35	NO	3.09	NO
650	325	186	163	6500	6.5	0.64	3	1.27	5	1.85	6	2.38	NO	2.84	NO	3.21	NO	3.48	NO	3.65	NO	3.71	NO	3.65	NO	3.48	NO	3.21	NO
675	338	193	169	6750	6.8	0.67	3	1.32	5	1.92	7	2.47	NO	2.95	NO	3.33	NO	3.62	NO	3.79	NO	3.85	NO	3.79	NO	3.62	NO	3.33	NO

Resulting snow load on snowguards in kN, depending on snow load in kN/m² and roof pitch, according to EN 1991-1-3, cl. 6.4

Color coding - n. of APAK snowguards per linear meter in the horizontal direction:

3	4	5	6	7	NO
50.0	33.3	25.0	20.0	16.7	Snowguards not effective

Resulting distance d_x between snowguards [cm]:



A: Distance between two adjacent PV modules' edges **20.0 mm**
INPUT: maximum distance in the horizontal plan between rows of snowguards or between the first row of hooks from top and the ridge

