New Millennium Building Systems N-Dek Cellular Acoustical steel roof deck is secured to the structural supports and covered with an FM Approved fully or partially adhered roof covering or with a mechanically attached roof covering when the in-row fastener spacing is less than or equal to one-half of the deck span, per proprietary listings.

N-Dek Cellular Acoustical has an 8 in. (203 mm) rib module spacing and require minimum 2 in. (38 mm) thick polyisocyanurate insulation board be installed with edges along the centerline of the top flange. The spacing between edge ribs of two adjacent panels is 8.5 in. (216 mm); therefore insulation boards must be trimmed to provide proper edge bearing along the centerline of the top flange. When utilizing an FM Approved above-deck system with a mechanically fastened cover, select one with a cover fastener spacing greater than 8 in. (203 mm) and reduce the fastener spacing to coincide with placement of the fastener into the deck top flanges (e.g., FM Approved 12 in. (305 mm) spacing is reduced to 8 in. (203 mm) spacing; FM Approved 18 in. (457 mm) spacing is reduced to 16 in. (406 mm) spacing).

Go to www.roofnav.com to obtain up to date information.

The maximum allowable span is the lesser of:

- the span shown in the tables below,
- the maximum span for the selected proprietary fastener used to secure the deck or
- the maximum span shown in the specified RoofNav assembly

The wind uplift rating of the completed roof assembly cannot exceed the wind rating of the above deck components shown in the specified RoofNav assembly.

The decks are secured to structural supports using fasteners FM Approved for securing steel deck to structural supports. Steel deck side laps are secured using fasteners FM Approved for securing steel deck laps. Refer to RoofNav product listings for fastener details.

In lieu of mechanical fasteners, the decks are secured to supports with puddle welds as noted in Tables below. The spacing shown is the maximum spacing permitted and the weld diameter shown is the minimum visible weld diameter. Maximum four sheets of 22 ga. (0.0295 in. [0.75 mm]) and 20 ga. (0.0358 in. [0.91 mm]) thick decks can be welded and maximum three sheets of 18 ga. (0.0474 in. [1.2 mm]) and two sheets of 16 ga. (0.0598 in. [1.52 mm]) thick decks can be welded.

N-Dek Cellular Acoustical Secured with FM Approved fasteners						
Deck Design Thickness	Wind Rating - One Span					
	1-60		1-75		1-90	
MSG (in. [mm])	in.	mm	in.	mm	in.	mm
20/20 (0.0716 [1.82])	215	5461	215	5461	215	5461
20/18 (0.0832 [2.11])	224	5690	224	5690	224	5690
18/20 (0.0832 [2.11])	245	6223	245	6223	245	6223
18/18 (0.0948 [2.41])	256	6502	256	6502	256	6502
18/16 (0.1072 [2.72])	265	6731	265	6731	265	6731
16/18 (0.1072 [2.72])	285	7239	285	7239	285	7239
16/16 (0.1196 [3.04])	296	7518	296	7518	296	7518
16/14 (0.1345 [3.42])	307	7798	307	7798	307	7798
Deck Design Thickness	Wind Rating - Two Spans					
	1-60		1-75		1-90	
MSG (in. [mm])	in.	mm	in.	mm	in.	mm
20/20 (0.0716 [1.82])	220	5588	194	4928	176	4470
20/18 (0.0832 [2.11])	222	5639	195	4953	176	4470
18/20 (0.0832 [2.11])	272	6909	239	6071	216	5486
18/18 (0.0948 [2.41])	278	7061	244	6198	220	5588
18/16 (0.1072 [2.72])	284	7214	249	6325	224	5690
16/18 (0.1072 [2.72])	332	8433	290	7366	261	6629
16/16 (0.1196 [3.04])	340	8636	296	7518	266	6756
16/14 (0.1345 [3.42])	348	8839	302	7671	271	6883
Deck Design Thickness	Wind Rating - Three or More Spans					
	1-60		1-75		1-90	
MSG (in. [mm])	in.	mm	in.	mm	in.	mm
20/20 (0.0716 [1.82])	246	6248	217	5512	196	4978
20/18 (0.0832 [2.11])	248	6299	218	5537	197	5004
18/20 (0.0832 [2.11])	295	7493	268	6807	241	6121
18/18 (0.0948 [2.41])	311	7899	273	6934	246	6248
18/16 (0.1072 [2.72])	318	8077	278	7061	250	6350
16/18 (0.1072 [2.72])	339	8611	325	8255	292	7417
16/16 (0.1196 [3.04])	357	9068	331	8407	297	7544
16/14 (0.1345 [3.42])	375	9525	338	8585	303	7696

N-Dek Cellular Acoustical Secured with 0.75 in. (19 mm) diameter welds spaced 8 in. (203 mm) o.c.						
Deck Design Thickness	Wind Rating - One Span					
	1-60		1-75		1-90	
MSG (in. [mm])	in.	mm	in.	mm	in.	mm
20/20 (0.0716 [1.82])	215	5461	215	5461	215	5461
20/18 (0.0832 [2.11])	224	5690	224	5690	224	5690
18/20 (0.0832 [2.11])	245	6223	245	6223	245	6223
18/18 (0.0948 [2.41])	256	6502	256	6502	256	6502
18/16 (0.1072 [2.72])	265	6731	265	6731	265	6731
16/18 (0.1072 [2.72])	285	7239	285	7239	285	7239
16/16 (0.1196 [3.04])	296	7518	296	7518	296	7518
16/14 (0.1345 [3.42])	307	7798	307	7798	307	7798
Deck Design Thickness	Wind Rating - Two Spans					
	1-60		1-75		1-90	
MSG (in. [mm])	in.	mm	in.	mm	in.	mm
20/20 (0.0716 [1.82])	220	5588	194	4928	176	4470
20/18 (0.0832 [2.11])	222	5639	195	4953	176	4470
18/20 (0.0832 [2.11])	272	6909	239	6071	216	5486
18/18 (0.0948 [2.41])	278	7061	244	6198	220	5588
18/16 (0.1072 [2.72])	284	7214	249	6325	224	5690
16/18 (0.1072 [2.72])	332	8433	290	7366	261	6629
16/16 (0.1196 [3.04])	340	8636	296	7518	266	6756
16/14 (0.1345 [3.42])	348	8839	302	7671	271	6883
Deck Design Thickness	Wind Rating - Three or More Spans					
	1-60		1-75		1-90	
MSG (in. [mm])	in.	mm	in.	mm	in.	mm
20/20 (0.0716 [1.82])	246	6274	217	5512	196	4978
20/18 (0.0832 [2.11])	248	6299	218	5537	197	5004
18/20 (0.0832 [2.11])	295	7493	268	6807	241	6121
18/18 (0.0948 [2.41])	311	7899	273	6934	246	6248
18/16 (0.1072 [2.72])	318	8077	278	7061	250	6350
16/18 (0.1072 [2.72])	339	8611	325	8255	292	7417
16/16 (0.1196 [3.04])	357	9068	331	8407	297	7544
16/14 (0.1345 [3.42])	375	9525	338	8585	303	7696