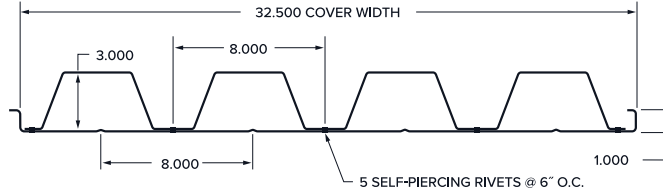


3" N Deck Cellular (NW32C™)

PROPERTIES

Gage (Hat/Pan)	Thickness (in)	Cover (in)	Weight (psf)
20/20	0.0358/0.0358	32.5	3.70
20/18	0.0358/0.0474		4.21
18/20	0.0474/0.0358		4.39
18/18	0.0474/0.0474		4.90



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REFER TO ESR-1169

ASD

SECTION PROPERTIES

DESIGN STRENGTHS

Gage	F _y (ksi)	I _D 1 Span (in ⁴ /ft)	I _D 2+ Span (in ⁴ /ft)	I _p (in ⁴ /ft)	I _n (in ⁴ /ft)	S _p (in ³ /ft)	S _n (in ³ /ft)	M _{n,p} /Ω (in-lb/ft)	M _{n,n} /Ω (in-lb/ft)	V _n /Ω (lb/ft)	*R _{be} /Ω (lb/ft)	*R _{bi} /Ω (lb/ft)
20/20	50	1.488	1.488	1.405	1.184	0.493	0.680	14758	20356	3324	777	1559
20/18	50	1.587	1.587	1.485	1.428	0.526	0.760	15736	22757	3324	777	1559
18/20	50	1.931	1.931	1.881	1.459	0.785	0.866	23512	25919	5635	1317	2623
18/18	50	2.090	2.090	2.034	1.737	0.805	0.983	24092	29434	5635	1317	2623

- Notes:**
- Section properties are calculated in accordance with the AISI S100-16 with Supplement 3.
 - Web crippling design strengths* are based on minimum bearing lengths of 1 1/2" for end bearing and 3" for interior bearing.

ALLOWABLE UNIFORM LOADS AND MAXIMUM CONSTRUCTION SPANS

Span Condition	Gage	Allowable Uniform Total Load (psf) / Load that Produces L/240 Deflection (psf)										SDI Max. Constr. Span (ctr / ctr)
		Center to Center Span (ft - in)										
		8 - 0	10 - 0	11 - 0	12 - 0	13 - 0	14 - 0	15 - 0	16 - 0	18 - 0	20 - 0	
Single	20/20	143 / 112	91 / 57	75 / 43	63 / 33	58 / 44	50 / 36	44 / 29	38 / 24	30 / 17	25 / 12	20 - 7
	20/18	143 / 112	91 / 57	75 / 43	66 / 60	61 / 47	54 / 38	47 / 31	41 / 25	32 / 18	26 / 13	21 - 4
	18/20	209 / 155	134 / 80	111 / 60	93 / 46	84 / 58	78 / 46	70 / 38	61 / 31	48 / 22	39 / 16	29 - 6
	18/18	209 / 155	134 / 80	111 / 60	94 / 79	87 / 62	81 / 50	71 / 41	63 / 33	50 / 23	40 / 17	29 - 5
Double	20/20	151 / 289	98 / 148	81 / 111	68 / 85	58 / 67	50 / 54	44 / 44	38 / 36	30 / 25	25 / 18	24 - 10
	20/18	151 / 289	98 / 148	81 / 111	68 / 85	58 / 67	50 / 54	44 / 44	40 / 61	35 / 43	32 / 31	25 - 8
	18/20	220 / 387	141 / 198	117 / 149	98 / 115	84 / 90	72 / 72	63 / 59	55 / 48	48 / 52	43 / 38	35 - 4
	18/18	220 / 387	141 / 198	117 / 149	98 / 115	84 / 90	72 / 72	63 / 59	57 / 81	50 / 57	45 / 41	35 - 2
Triple	20/20	177 / 226	121 / 116	101 / 87	85 / 67	72 / 53	62 / 42	54 / 34	-	-	-	25 - 2
	20/18	177 / 226	121 / 116	101 / 87	85 / 67	72 / 53	62 / 42	54 / 34	-	-	-	26 - 0
	18/20	274 / 303	176 / 155	146 / 117	123 / 90	104 / 71	90 / 57	79 / 46	-	-	-	35 - 9
	18/18	274 / 303	176 / 155	146 / 117	123 / 90	104 / 71	90 / 57	79 / 46	-	-	-	35 - 7

- Notes:**
- Allowable Uniform Loads and maximum construction spans shown are based on the following criteria:
 - ANSI/SDI SD-2022 Standard for Steel Roof Deck
 - Minimum bearing lengths of 1 1/2" for end bearing and 3" for interior bearing. Check web crippling if minimums are not met.
 - Maximum construction spans shown include a check for deck self-weight plus a nominal 200 lbs. concentrated load supported by a one foot section of deck per SDI criteria which exceeds the IBC requirement of a 300 lbs. roof maintenance load distributed over an area of 2 1/2 feet by 2 1/2 feet per Section 1607.4 and Table 1607.1.
 - "Load that Produces L/240 Deflection" values shown in RED exceed the "Allowable Uniform Total Load". These loads may be used to determine the deck capacity under deflection limits more stringent than L/240. In no case shall the "Allowable Uniform Total Load" be exceeded.
 - See website at www.newmill.com for Factory Mutual approved deck types and maximum FM construction spans.

MAXIMUM CANTILEVER SPANS

Gage	F _y (ksi)	Back-Span Condition		
		Single	Double	Triple
20/20	50	5 - 3	5 - 3	4 - 4
20/18	50	5 - 3	5 - 3	4 - 4
18/20	50	5 - 8	5 - 11	4 - 4
18/18	50	5 - 8	5 - 11	4 - 4

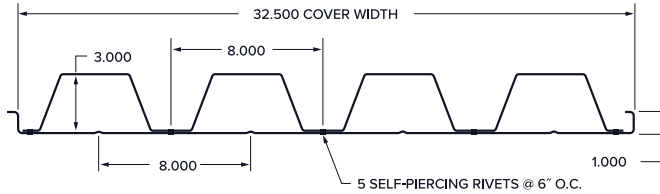
Notes:

- Maximum cantilever spans shown are based on the following criteria:
 - ANSI/SDI SD-2022 Standard for Steel Roof Deck
 - Adjacent span assumed to be at least 3 times longer than the cantilever and no greater than the maximum design or construction spans shown in table above
 - Bearing width at perimeter support assumed to be 3" minimum
 - Design total uniform load of 45 psf in conjunction with a 100 lb. concentrated load.

3" N Deck Cellular (NW32C™)

PROPERTIES

Gage (Hat/Pan)	Thickness (in)	Cover (in)	Weight (psf)
18/16	0.0474/0.0598	32.5	5.44
16/18	0.0598/0.0474		5.63
16/16	0.0598/0.0598		6.17



ICC-ES APPROVED
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SECTION PROPERTIES

DESIGN STRENGTHS

Gage	F _y (ksi)	I _D 1 Span (in ⁴ /ft)	I _D 2+ Span (in ⁴ /ft)	I _p (in ⁴ /ft)	I _n (in ⁴ /ft)	S _p (in ³ /ft)	S _n (in ³ /ft)	Mn,p/Ω (in-lb/ft)	Mn,n/Ω (in-lb/ft)	Vn/Ω (lb/ft)	*Rbe/Ω (lb/ft)	*Rbi/Ω (lb/ft)
18/16	50	2.231	2.231	2.170	1.984	0.800	1.026	23942	30713	5635	1317	2623
16/18	50	2.559	2.559	2.535	2.052	1.089	1.210	32611	36239	8227	2031	4029
16/16	50	2.739	2.739	2.712	2.318	1.112	1.262	33288	37795	8227	2031	4029

- Notes:**
- Section properties are calculated in accordance with the AISI S100-16 with Supplement 3.
 - Web crippling design strengths* are based on minimum bearing lengths of 1 1/2" for end bearing and 3" for interior bearing.

ALLOWABLE UNIFORM LOADS AND MAXIMUM CONSTRUCTION SPANS

Span Condition	Gage	Allowable Uniform Total Load (psf) / Load that Produces L/240 Deflection (psf)										SDI Max. Constr. Span (ctr / ctr)
		Center to Center Span (ft - in)										
		8 - 0	10 - 0	11 - 0	12 - 0	13 - 0	14 - 0	15 - 0	16 - 0	18 - 0	20 - 0	
Single	18/16	209 / 155	134 / 80	111 / 60	100 / 85	92 / 67	81 / 53	71 / 43	62 / 36	49 / 25	40 / 18	28 - 8
	16/18	281 / 201	180 / 103	149 / 77	128 / 97	118 / 76	110 / 61	97 / 50	85 / 41	67 / 29	54 / 21	36 - 0
	16/16	281 / 201	180 / 103	149 / 77	134 / 104	124 / 82	113 / 65	99 / 53	87 / 44	68 / 31	55 / 22	35 - 9
Double	18/16	220 / 387	141 / 198	117 / 149	98 / 115	84 / 90	72 / 72	63 / 59	55 / 48	44 / 34	35 / 25	34 - 2
	16/18	291 / 488	187 / 250	154 / 188	130 / 145	111 / 114	95 / 91	83 / 74	77 / 99	68 / 69	60 / 51	40 - 0
	16/16	291 / 488	187 / 250	154 / 188	130 / 145	111 / 114	95 / 91	86 / 128	81 / 106	72 / 74	63 / 54	40 - 0
Triple	18/16	274 / 303	176 / 155	146 / 117	123 / 90	104 / 71	90 / 57	79 / 46	-	-	-	34 - 7
	16/18	364 / 382	233 / 196	193 / 147	162 / 113	138 / 89	119 / 71	104 / 58	-	-	-	40 - 0
	16/16	364 / 382	233 / 196	193 / 147	162 / 113	138 / 89	119 / 71	104 / 58	-	-	-	40 - 0

- Notes:**
- Allowable Uniform Loads and maximum construction spans shown are based on the following criteria:
 - ANSI/SDI SD-2022 Standard for Steel Roof Deck
 - Minimum bearing lengths of 1 1/2" for end bearing and 3" for interior bearing. Check web crippling if minimums are not met.
 - Maximum construction spans shown include a check for deck self-weight plus a nominal 200 lbs. concentrated load supported by a one foot section of deck per SDI criteria which exceeds the IBC requirement of a 300 lbs. roof maintenance load distributed over an area of 2 1/2 feet by 2 1/2 feet per Section 1607.4 and Table 1607.1.
 - "Load that Produces L/240 Deflection" values shown in RED exceed the "Allowable Uniform Total Load". These loads may be used to determine the deck capacity under deflection limits more stringent than L/240. In no case shall the "Allowable Uniform Total Load" be exceeded.
 - See website at www.newmill.com for Factory Mutual approved deck types and maximum FM construction spans.

MAXIMUM CANTILEVER SPANS

Gage	F _y (ksi)	Back-Span Condition		
		Single	Double	Triple
18/16	50	5 - 9	5 - 11	4 - 4
16/18	50	6 - 7	5 - 11	4 - 4
16/16	50	7 - 10	5 - 11	4 - 4

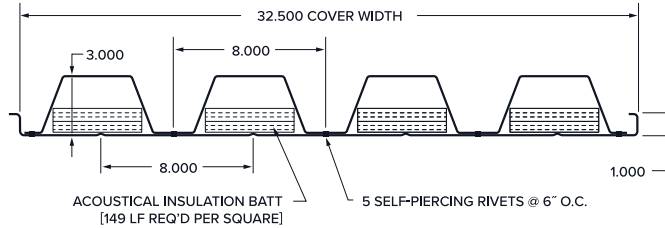
Notes:

- Maximum cantilever spans shown are based on the following criteria:
 - ANSI/SDI SD-2022 Standard for Steel Roof Deck
 - Adjacent span assumed to be at least 3 times longer than the cantilever and no greater than the maximum design or construction spans shown in table above
 - Bearing width at perimeter support assumed to be 3" minimum
 - Design total uniform load of 45 psf in conjunction with a 100 lb. concentrated load.

3" N Deck Cellular Acoustical (NW32CA™)

PROPERTIES

Gage (Hat/Pan)	Thickness (in)	Cover (in)	Weight (psf)
20/20	0.0358/0.0358	32.5	3.55
20/18	0.0358/0.0474		4.00
18/20	0.0474/0.0358		4.24
18/18	0.0474/0.0474		4.69



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REFER TO ESR-1169

ASD

SECTION PROPERTIES

DESIGN STRENGTHS

Gage	F _y (ksi)	I _D 1 Span (in ⁴ /ft)	I _D 2+ Span (in ⁴ /ft)	I _p (in ⁴ /ft)	I _n (in ⁴ /ft)	S _p (in ³ /ft)	S _n (in ³ /ft)	M _{n,p} /Ω (in-lb/ft)	M _{n,n} /Ω (in-lb/ft)	V _n /Ω (lb/ft)	*R _{be} /Ω (lb/ft)	*R _{bi} /Ω (lb/ft)
20/20	50	1.391	1.391	1.316	1.183	0.496	0.680	14864	20356	3324	777	1559
20/18	50	1.503	1.503	1.418	1.394	0.493	0.759	14771	22718	3324	777	1559
18/20	50	1.803	1.803	1.758	1.459	0.769	0.866	23016	25919	5635	1317	2623
18/18	50	1.950	1.950	1.900	1.708	0.788	0.982	23597	29408	5635	1317	2623

- Notes:**
- Section properties are calculated in accordance with the AISI S100-16 with Supplement 3, with perforation modifiers applied in accordance with SDI white paper "Perforated Metal Deck Design with Commentary".
 - Web crippling design strengths* are based on minimum bearing lengths of 1 1/2" for end bearing and 3" for interior bearing.

ALLOWABLE UNIFORM LOADS AND MAXIMUM CONSTRUCTION SPANS

Span Condition	Gage	Allowable Uniform Total Load (psf) / Load that Produces L/240 Deflection (psf)										SDI Max. Constr. Span (ctr / ctr)
		Center to Center Span (ft - in)										
		8 - 0	10 - 0	11 - 0	12 - 0	13 - 0	14 - 0	15 - 0	16 - 0	18 - 0	20 - 0	
Single	20/20	143 / 112	91 / 57	75 / 43	68 / 53	59 / 42	51 / 33	44 / 27	39 / 22	31 / 16	25 / 11	20 - 10
	20/18	143 / 112	91 / 57	77 / 74	68 / 57	58 / 45	50 / 36	44 / 29	38 / 24	30 / 17	25 / 12	20 - 5
	18/20	209 / 155	134 / 80	111 / 60	100 / 68	91 / 54	78 / 43	68 / 35	60 / 29	47 / 20	38 / 15	29 - 3
	18/18	209 / 155	134 / 80	111 / 96	102 / 74	93 / 58	80 / 47	70 / 38	61 / 31	49 / 22	39 / 16	29 - 3
Double	20/20	151 / 289	98 / 148	81 / 111	68 / 85	58 / 67	50 / 54	44 / 44	38 / 36	30 / 25	25 / 18	25 - 2
	20/18	151 / 289	98 / 148	81 / 111	68 / 85	58 / 67	50 / 54	45 / 70	42 / 58	38 / 41	34 / 30	24 - 9
	18/20	220 / 387	141 / 198	117 / 149	98 / 115	84 / 90	72 / 72	64 / 84	60 / 70	53 / 49	43 / 36	34 - 11
	18/18	220 / 387	141 / 198	117 / 149	98 / 115	84 / 90	72 / 72	65 / 91	61 / 75	55 / 53	49 / 39	34 - 11
Triple	20/20	177 / 226	121 / 116	101 / 87	85 / 67	72 / 53	62 / 42	54 / 34	-	-	-	25 - 6
	20/18	177 / 226	121 / 116	101 / 87	85 / 67	72 / 53	62 / 42	54 / 34	-	-	-	25 - 1
	18/20	274 / 303	176 / 155	146 / 117	123 / 90	104 / 71	90 / 57	79 / 46	-	-	-	35 - 5
	18/18	274 / 303	176 / 155	146 / 117	123 / 90	104 / 71	90 / 57	79 / 46	-	-	-	35 - 4

- Notes:**
- Allowable Uniform Loads and maximum construction spans shown are based on the following criteria:
 - ANSI/SDI SD-2022 Standard for Steel Roof Deck
 - Minimum bearing lengths of 1 1/2" for end bearing and 3" for interior bearing. Check web crippling if minimums are not met.
 - Maximum construction spans shown include a check for deck self-weight plus a nominal 200 lbs. concentrated load supported by a one foot section of deck per SDI criteria which exceeds the IBC requirement of a 300 lbs. roof maintenance load distributed over an area of 2 1/2 feet by 2 1/2 feet per Section 1607.4 and Table 1607.1.
 - "Load that Produces L/240 Deflection" values shown in RED exceed the "Allowable Uniform Total Load". These loads may be used to determine the deck capacity under deflection limits more stringent than L/240. In no case shall the "Allowable Uniform Total Load" be exceeded.
 - See website at www.newmill.com for Factory Mutual approved deck types and maximum FM construction spans.

MAXIMUM CANTILEVER SPANS

Gage	F _y (ksi)	Back-Span Condition		
		Single	Double	Triple
20/20	50	5 - 3	5 - 3	4 - 4
20/18	50	5 - 3	5 - 3	4 - 4
18/20	50	5 - 8	5 - 11	4 - 4
18/18	50	5 - 10	5 - 11	4 - 4

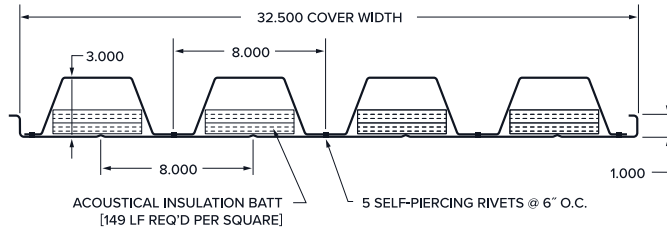
Notes:

- Maximum cantilever spans shown are based on the following criteria:
 - ANSI/SDI SD-2022 Standard for Steel Roof Deck
 - Adjacent span assumed to be at least 3 times longer than the cantilever and no greater than the maximum design or construction spans shown in table above
 - Bearing width at perimeter support assumed to be 3" minimum
 - Design total uniform load of 45 psf in conjunction with a 100 lb. concentrated load.

3" N Deck Cellular Acoustical (NW32CA™)

PROPERTIES

Gage (Hat/Pan)	Thickness (in)	Cover (in)	Weight (psf)
18/16	0.0474/0.0598	32.5	5.18
16/18	0.0598/0.0474		5.43
16/16	0.0598/0.0598		5.92



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REFER TO ESR-1169

ASD

SECTION PROPERTIES

DESIGN STRENGTHS

Gage	F _y (ksi)	I _D 1 Span (in ⁴ /ft)	I _D 2+ Span (in ⁴ /ft)	I _p (in ⁴ /ft)	I _n (in ⁴ /ft)	S _p (in ³ /ft)	S _n (in ³ /ft)	Mn,p/Ω (in-lb/ft)	Mn,n/Ω (in-lb/ft)	Vn/Ω (lb/ft)	*Rbe/Ω (lb/ft)	*Rbi/Ω (lb/ft)
18/16	50	2.084	2.084	2.029	1.902	0.805	1.019	24095	30508	5635	1317	2623
16/18	50	2.386	2.386	2.364	2.028	1.066	1.210	31921	36236	8227	2031	4029
16/16	50	2.552	2.552	2.528	2.237	1.089	1.256	32601	37608	8227	2031	4029

- Notes:**
- Section properties are calculated in accordance with the AISI S100-16 with Supplement 3, with perforation modifiers applied in accordance with SDI white paper "Perforated Metal Deck Design with Commentary".
 - Web crippling design strengths* are based on minimum bearing lengths of 1 1/2" for end bearing and 3" for interior bearing.

ALLOWABLE UNIFORM LOADS AND MAXIMUM CONSTRUCTION SPANS

Span Condition	Gage	Allowable Uniform Total Load (psf) / Load that Produces L/240 Deflection (psf)										SDI Max. Constr. Span (ctr / ctr)
		Center to Center Span (ft - in)										
		8 - 0	10 - 0	11 - 0	12 - 0	13 - 0	14 - 0	15 - 0	16 - 0	18 - 0	20 - 0	
Single	18/16	209 / 155	134 / 80	117 / 103	107 / 79	95 / 62	82 / 50	71 / 40	63 / 33	50 / 23	40 / 17	29 - 1
	16/18	281 / 201	180 / 103	153 / 118	141 / 91	126 / 71	109 / 57	95 / 46	83 / 38	66 / 27	53 / 20	35 - 9
	16/16	281 / 201	180 / 103	159 / 126	146 / 97	129 / 76	111 / 61	97 / 50	85 / 41	67 / 29	54 / 21	35 - 7
Double	18/16	220 / 387	141 / 198	117 / 149	98 / 115	84 / 90	72 / 72	63 / 59	55 / 48	44 / 34	36 / 41	34 - 8
	16/18	291 / 488	187 / 250	154 / 188	130 / 145	111 / 114	96 / 137	90 / 112	84 / 92	74 / 65	60 / 47	40 - 0
	16/16	291 / 488	187 / 250	154 / 188	130 / 145	111 / 114	100 / 147	93 / 120	87 / 98	77 / 69	62 / 50	40 - 0
Triple	18/16	274 / 303	176 / 155	146 / 117	123 / 90	104 / 71	90 / 57	79 / 46	-	-	-	35 - 1
	16/18	364 / 382	233 / 196	193 / 147	162 / 113	138 / 89	119 / 71	104 / 58	-	-	-	40 - 0
	16/16	364 / 382	233 / 196	193 / 147	162 / 113	138 / 89	119 / 71	104 / 58	-	-	-	40 - 0

- Notes:**
- Allowable Uniform Loads and maximum construction spans shown are based on the following criteria:
 - ANSI/SDI SD-2022 Standard for Steel Roof Deck
 - Minimum bearing lengths of 1 1/2" for end bearing and 3" for interior bearing. Check web crippling if minimums are not met.
 - Maximum construction spans shown include a check for deck self-weight plus a nominal 200 lbs. concentrated load supported by a one foot section of deck per SDI criteria which exceeds the IBC requirement of a 300 lbs. roof maintenance load distributed over an area of 2 1/2 feet by 2 1/2 feet per Section 1607.4 and Table 1607.1.
 - "Load that Produces L/240 Deflection" values shown in RED exceed the "Allowable Uniform Total Load". These loads may be used to determine the deck capacity under deflection limits more stringent than L/240. In no case shall the "Allowable Uniform Total Load" be exceeded.
 - See website at www.newmill.com for Factory Mutual approved deck types and maximum FM construction spans.

MAXIMUM CANTILEVER SPANS

Gage	F _y (ksi)	Back-Span Condition		
		Single	Double	Triple
18/16	50	6 - 3	5 - 11	4 - 4
16/18	50	6 - 6	5 - 11	4 - 4
16/16	50	7 - 9	5 - 11	4 - 4

Notes:

- Maximum cantilever spans shown are based on the following criteria:
 - ANSI/SDI SD-2022 Standard for Steel Roof Deck
 - Adjacent span assumed to be at least 3 times longer than the cantilever and no greater than the maximum design or construction spans shown in table above
 - Bearing width at perimeter support assumed to be 3" minimum
 - Design total uniform load of 45 psf in conjunction with a 100 lb. concentrated load.