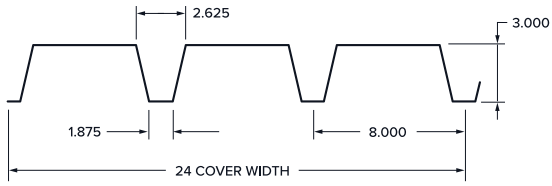
3" N Deck (N)

PROPERTIES

Gage	Thickness (in)	Cover (in)	Weight (psf)
22	0.0295	24	2.05
20	0.0358		2.48
18	0.0474		3.29
16	0.0598		4.14



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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)
22	40	0.759	0.886	0.690	0.881	0.372	0.427	8900	10216	2439	462	909
20	40	0.968	1.085	0.908	1.083	0.487	0.544	11654	13030	3592	666	1308
18	40	1.352	1.440	1.309	1.440	0.687	0.753	16456	18039	5663	1128	2208
16	40	1.768	1.814	1.745	1.814	0.890	0.951	21312	22767	7115	1740	3400

Notes:
1. Section properties are calculated in accordance with the AISI S100-16.
2. 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) Center to Center Span (ft - in)										SDI Max. Constr. Span (ctr / ctr)
		8 - 0	10 - 0	11 - 0	12 - 0	13 - 0	14 - 0	15 - 0	16 - 0	18 - 0	20 - 0	
Single	22	93 / 97	59 / 50	49 / 37	41 / 29	35 / 23	30 / 18	-	-	-	-	13 - 10
	20	121 / 124	78 / 63	64 / 48	54 / 37	46 / 29	40 / 23	35 / 19	30 / 15	24 / 11	-	17 - 6
	18	171 / 173	110 / 89	91 / 67	76 / 51	65 / 40	56 / 32	49 / 26	43 / 22	34 / 15	27 / 11	23 - 0
	16	222 / 226	142 / 116	117 / 87	99 / 67	84 / 53	72 / 42	63 / 34	55 / 28	44 / 20	36 / 14	27 - 7
Double	22	91 / 274	67 / 140	56 / 105	47 / 81	40 / 64	34 / 51	30 / 42	26 / 34	-	-	16 - 10
	20	131 / 335	86 / 172	71 / 129	60 / 99	51 / 78	44 / 63	38 / 51	34 / 42	27 / 29	-	21 - 3
	18	185 / 445	119 / 228	99 / 171	83 / 132	71 / 104	61 / 83	53 / 67	47 / 56	37 / 39	30 / 28	27 - 9
	16	234 / 560	150 / 287	125 / 215	105 / 166	89 / 131	77 / 105	67 / 85	59 / 70	47 / 49	38 / 36	33 - 0
Triple	22	103 / 214	83 / 110	69 / 82	58 / 63	50 / 50	43 / 40	37 / 32	-	-	-	17 - 1
	20	149 / 262	107 / 134	89 / 101	75 / 78	64 / 61	55 / 49	48 / 40	-	-	-	21 - 6
	18	230 / 348	148 / 178	123 / 134	103 / 103	88 / 81	76 / 65	66 / 53	-	-	-	28 - 1
	16	291 / 438	187 / 224	155 / 169	131 / 130	111 / 102	96 / 82	84 / 67	-	-	-	33 - 5

Notes:
3. Allowable Uniform Loads and maximum construction spans shown are based on the following criteria:
   - ANSI/SDI RD-2017 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.
4. 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.
5. ''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.
6. See website at www.newmill.com for Factory Mutual approved deck types and maximum FM construction spans.

MAXIMUM CANTILEVER SPANS

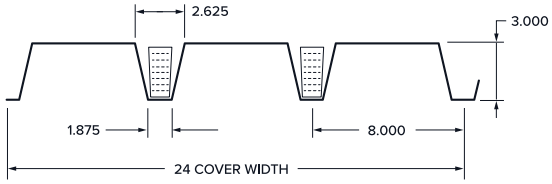
Gage	F_y (ksi)	Back-Span Condition		
		Single	Double	Triple
22	40	3 - 9	3 - 9	3 - 9
20	40	4 - 8	4 - 8	4 - 4
18	40	5 - 10	5 - 11	4 - 4
16	40	6 - 2	5 - 11	4 - 4

Notes:
7. Maximum cantilever spans shown are based on the following criteria:
   - ANSI/SDI RD-2017 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 Acoustical (NA)

PROPERTIES

Gage	Thickness (in)	Cover (in)	Weight (psf)
22	0.0295	24	1.92
20	0.0358		2.33
18	0.0474		3.08
16	0.0598		3.88



ICC-ES APPROVED
REFER TO ESR-3818

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)
22	40	0.713	0.829	0.649	0.823	0.340	0.378	8144	9053	1602	428	901
20	40	0.911	1.016	0.856	1.014	0.450	0.492	10780	11773	2357	623	1297
18	40	1.274	1.349	1.237	1.349	0.638	0.685	15276	16414	3709	1066	2192
16	40	1.664	1.700	1.647	1.700	0.823	0.865	19702	20730	4649	1658	3378

Notes:
1. Section properties are calculated in accordance with the AISI S100-16, with perforation modifiers applied in accordance with SDI white paper ''Perforated Metal Deck Design with Commentary''.
2. 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) Center to Center Span (ft - in)									SDI Max. Constr. Span (ctr / ctr)
		8 - 0	10 - 0	11 - 0	12 - 0	13 - 0	14 - 0	15 - 0	16 - 0	18 - 0	20 - 0	
Single	22	85 / 91	54 / 47	45 / 35	38 / 27	32 / 21	-	-	-	-	-	12 - 9
	20	112 / 117	72 / 60	59 / 45	50 / 35	43 / 27	37 / 22	32 / 18	28 / 15	-	-	16 - 4
	18	159 / 163	102 / 84	84 / 63	71 / 48	60 / 38	52 / 30	45 / 25	40 / 20	31 / 14	25 / 10	21 - 9
	16	205 / 213	131 / 109	109 / 82	91 / 63	78 / 50	67 / 40	58 / 32	51 / 27	41 / 19	33 / 14	26 - 2
Double	22	90 / 256	59 / 131	49 / 98	41 / 76	35 / 60	30 / 48	26 / 39	23 / 32	-	-	15 - 7
	20	119 / 314	77 / 161	64 / 121	54 / 93	46 / 73	40 / 59	35 / 48	30 / 39	24 / 28	-	19 - 11
	18	167 / 416	108 / 213	89 / 160	75 / 123	64 / 97	55 / 78	48 / 63	42 / 52	34 / 37	27 / 27	26 - 3
	16	210 / 525	136 / 269	113 / 202	95 / 155	81 / 122	70 / 98	61 / 80	54 / 66	42 / 46	34 / 34	31 - 4
Triple	22	102 / 200	73 / 103	60 / 77	51 / 59	44 / 47	38 / 37	33 / 30	-	-	-	15 - 10
	20	146 / 246	95 / 126	79 / 94	67 / 73	57 / 57	49 / 46	43 / 37	-	-	-	20 - 2
	18	206 / 326	134 / 167	111 / 125	93 / 97	80 / 76	69 / 61	60 / 49	-	-	-	26 - 8
	16	260 / 411	169 / 210	140 / 158	118 / 122	101 / 96	87 / 77	76 / 62	-	-	-	31 - 9

Notes:
3. Allowable Uniform Loads and maximum construction spans shown are based on the following criteria:
   - ANSI/SDI RD-2017 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.
4. 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.
5. ''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.
6. 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
22	40	3 - 4	3 - 4	3 - 4
20	40	4 - 3	4 - 3	4 - 3
18	40	5 - 9	5 - 9	4 - 4
16	40	6 - 1	5 - 11	4 - 4

Notes:
7. Maximum cantilever spans shown are based on the following criteria:
   - ANSI/SDI RD-2017 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.