TYPE "N" DEEP RIB DECK
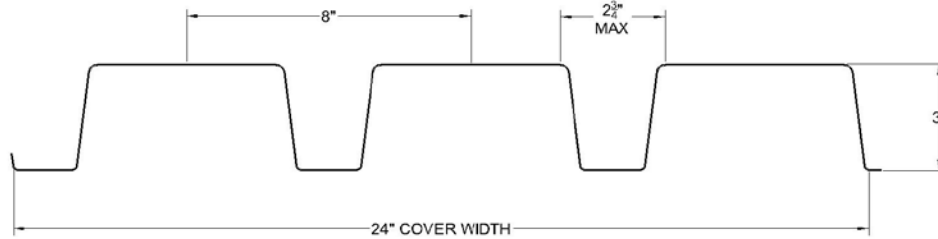# TYPE "NV" DEEP RIB SLOT VENTED DECK
TYPE "NA" DEEP RIB ACOUSTICAL DECK

SECTION PROPERTIES FY=50 KSI   ASD (Ω = 1.67)

DECK TYPE	DESIGN THICKNESS	WT PSF	I^P IN.^{4}	I^N IN.^{4}	S^P IN.^{3}	S^N IN.^{3}	M^P/Ω IN. - LBS. PER FT.	M^N/Ω IN.- LBS PER FT.
22	.0295 IN.	1.8	.643	.774	.342	.377	10253	11287
20	.0358 IN.	2.2	.778	.978	.447	.501	13389	15013
18	.0474 IN.	2.9	1.113	1.323	.641	.695	19187	20811
16	.0598 IN.	3.7	1.473	1.683	.831	.889	24873	26617

DECK-SPAN	DECK TYPE	DESIGN THICKNESS	DECK SUPPORT SPACING (FT. - IN.)								POUNDS PER SQUARE FOOT				
			8-00	9-00	10-00	11-00	12-00	13-00	14-00	15-00	16-00	17-00	18-00	19-00	20-00
SIMPLE	22	STRESS DOWNWARD	107	84	68	56	47	40	35	30	27	24	21	19	17
		STRESS UPWARD	118	93	75	62	52	45	38	33	29	26	23	21	19
		DEFLECTION L/240	82	58	42	32	24	19	15	12	10	9	7	6	5
	20	STRESS DOWNWARD	139	110	89	74	62	53	46	40	35	31	28	25	22
		STRESS UPWARD	156	124	100	83	70	59	51	44	39	35	31	28	25
		DEFLECTION L/240	100	70	51	38	30	23	19	15	12	10	9	7	6
	18	STRESS DOWNWARD	200	158	128	106	89	76	65	57	50	44	39	35	32
		STRESS UPWARD	217	171	139	115	96	82	71	62	54	48	43	38	35
		DEFLECTION L/240	143	100	73	55	42	33	27	22	18	15	13	11	9
	16	STRESS DOWNWARD	259	205	166	137	115	98	85	74	65	57	51	46	41
		STRESS UPWARD	277	219	177	147	123	105	91	79	69	61	55	49	44
		DEFLECTION L/240	189	133	97	73	56	44	35	29	24	20	17	14	12

DECK-SPAN	DECK TYPE	DESIGN THICKNESS	DECK SUPPORT SPACING (FT. - IN.)								POUNDS PER SQUARE FOOT				
			8-00	9-00	10-00	11-00	12-00	13-00	14-00	15-00	16-00	17-00	18-00	19-00	20-00
DOUBLE	22	STRESS DOWNWARD	118	93	75	62	52	45	38	33	29	26	23	21	19
		STRESS UPWARD	107	84	68	56	47	40	35	30	27	24	21	19	17
		DEFLECTION L/240	198	139	102	76	59	46	37	30	25	21	17	15	13
	20	STRESS DOWNWARD	156	124	100	83	70	59	51	44	39	35	31	28	25
		STRESS UPWARD	139	110	89	74	62	53	46	40	35	31	28	25	22
		DEFLECTION L/240	240	169	123	92	71	56	45	36	30	25	21	18	15
	18	STRESS DOWNWARD	217	171	139	115	96	82	71	62	54	48	43	38	35
		STRESS UPWARD	200	158	128	106	89	76	65	57	50	44	39	35	32
		DEFLECTION L/240	344	241	176	132	102	80	64	52	43	36	30	26	22
	16	STRESS DOWNWARD	277	219	177	147	123	105	91	79	69	61	55	49	44
		STRESS UPWARD	259	205	166	137	115	98	85	74	65	57	51	46	41
		DEFLECTION L/240	455	319	233	175	135	106	85	69	57	47	40	34	29

LOAD TABLES AND SECTION PROPERTIES WERE GENERATED BY THE SDI. FOR LOADS THAT CAUSE L/120 DEFLECTION, MULTIPLY BY 2.0. FOR LOADS THAT CAUSE L/180 DEFLECTION, MULTIPLY BY 1.5. FOR LOADS THAT CAUSE L/360 DEFLECTION, MULTIPLY BY 0.667.

TYPE "N" DEEP RIB DECK
TYPE "NV" DEEP RIB SLOT VENTED DECK
TYPE "NA" DEEP RIB ACOUSTICAL DECK

FY=50 KSI

	DECK TYPE	DESIGN THICKNESS		DECK SUPPORT SPACING (FT. - IN.)							POUNDS PER SQUARE FOOT					
			8-00	9-00	10-00	11-00	12-00	13-00	14-00	15-00	16-00	17-00	18-00	19-00	20-00
TRIPLE	22	STRESS DOWNWARD	147	116	94	78	65	56	48	42	37	33	29	26	24
		STRESS UPWARD	134	105	85	71	59	51	44	38	33	30	26	24	21
		DEFLECTION	155	109	79	60	46	36	29	24	19	16	14	12	10
	20	STRESS DOWNWARD	195	154	125	103	87	74	64	56	49	43	39	35	31
		STRESS UPWARD	174	138	112	92	77	66	57	50	44	39	34	31	28
		DEFLECTION	188	132	96	72	56	44	35	29	23	20	17	14	12
	18	STRESS DOWNWARD	271	214	173	143	120	103	88	77	68	60	54	48	43
		STRESS UPWARD	250	197	160	132	111	95	82	71	62	55	49	44	40
		DEFLECTION	269	189	138	103	80	63	50	41	34	28	24	20	17
	16	STRESS DOWNWARD	347	274	222	183	154	131	113	99	87	77	68	61	55
		STRESS UPWARD	324	256	207	171	144	123	106	92	81	72	64	57	52
		DEFLECTION	356	250	182	137	105	83	66	54	44	37	31	27	23

GAGE NUMBER	V^{N}/Ω LBS PER Ft	Web Crippling (R^{n}/Ω), lbs/ft One Flange Loading End Bearing			Web Crippling (R^{n}/Ω), lbs/ft One flange Loading Interior Bearing		
		1-1/2"	2"	3"	1-1/2"	2"	3"
22	2564	577	634	730	933	1012	1145
20	3724	831	911	1044	1351	1460	1644
18	6143	1406	1534	1747	2302	2476	2768
16	8679	2170	2356	2669	3575	3829	4255

ALL SECTION PROPERTIES AND ASD FLEXURAL STRENGTHS ARE CALCULATED IN ACCORDANCE WITH ANSI/SDI C-2017, ANSI/SDI SD-2022 AND AISI S100-2012 AND AISI S100-2016

| Span Cond.	GAGE NUMBER	ASD Span	ASD Cantilever Span
Single	22	17'-01"	4'-07"
	20	22'-04"	6'-01"
	18	32'-00"	8'-05"
	16	41'-05"	10'-7"
Double or Triple	22	21'-00"	
	20	27'-06"	
	18	39'-04"	
	16	51'-00"	

TYPE "NV" SHALL BE VENTED IN THE LOWER FLUTES WITH A .5% OPEN AREA. "NV" NOT AVAILABLE IN 16GA.
TYPE "NA" DECK SHALL BE PERFORATED IN THE WEBS WITH 5/32" DIAMETER HOLES STAGGERED 3/8" ON CENTER.
LOAD TABLES AND SECTION PROPERTIES WERE GENERATED BY THE SDI.

1. Roof deck section properties calculated in accordance with the AISI "Specification for the design of Cold-Formed Steel Structural Members."
2. Roof decks loads computed in accordance with the SDI bending moment and deflection formulas.
3. Loads shown in tables are uniformly distributed total (dead plus) loads in pounds per square foot. Loads in shaded area are governed by the live load deflection not in excess of L/240. The dead load included is 10 psf. All other loads are governed by the allowable flexural stress limit of 20,000 psi for 33,000 psi minimum yield.

4. Span lengths are considered center-to-center spacing of supports.
5. Spans which extend beyond the heavy vertical line in the load tables exceed the "Recommended Maximum spans for Construction and Maintenance Loads" shown on page 30.
6. Where heavy construction loads or other unusual concentrated loads are anticipated during the lifetime of the deck, the specified live load must be increased to offset the effects of the abnormal concentrated loading.

TYPE "N" DEEP RIB DECK
TYPE "NV" DEEP RIB SLOT VENTED DECK
TYPE "NA" DEEP RIB ACOUSTICAL DECK
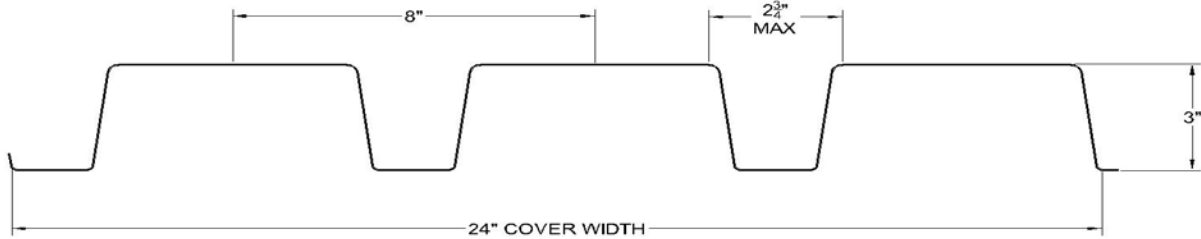
SECTION PROPERTIES FY=60 KSI (GRADE 80)   ASD (Ω = 1.67)

DECK TYPE	DESIGN THICKNESS	WT PSF	I^P IN.^{4}	I^N IN.^{4}	S^P IN.^{3}	S^N IN.^{3}	M^P/Ω IN.-LBS. PER FT.	M^N/Ω IN.-LBS PER FT.
22	.0295 IN.	1.8	0.635	0.754	0.332	0.354	11910	12728
20	.0358 IN.	2.2	0.791	0.967	0.432	0.490	15503	17607
18	.0474 IN.	2.9	1.094	1.317	.633	0.688	22743	24724
16	.0598 IN.	3.7	1.447	1.680	.807	0.886	28994	31823

DECK-SPAN	DECK TYPE	DESIGN THICKNESS	DECK SUPPORT SPACING (FT.-IN.) POUNDS PER SQUARE FOOT												
			8-00	9-00	10-00	11-00	12-00	13-00	14-00	15-00	16-00	17-00	18-00	19-00	20-00
SIMPLE	22	STRESS DOWNWARD	124	98	79	66	55	47	41	35	31	27	25	22	20
		STRESS UPWARD	133	105	85	70	59	50	43	38	33	29	26	24	21
		DEFLECTION L/240	81	57	42	31	24	19	15	12	10	8	7	6	5
	20	STRESS DOWNWARD	161	128	103	85	72	61	53	46	40	36	32	29	26
		STRESS UPWARD	183	145	117	97	82	69	60	52	46	41	36	33	29
		DEFLECTION L/240	101	71	52	39	30	24	19	15	13	11	9	8	6
	18	STRESS DOWNWARD	237	187	152	125	105	90	77	67	59	52	47	42	38
		STRESS UPWARD	258	203	165	136	114	98	84	73	64	57	51	46	41
		DEFLECTION L/240	140	99	72	54	42	33	26	21	18	15	12	10	9
	16	STRESS DOWNWARD	302	239	193	160	134	114	99	86	76	67	60	54	48
		STRESS UPWARD	331	262	212	175	147	126	108	94	83	73	65	59	53
		DEFLECTION L/240	186	130	95	71	55	43	35	28	23	19	16	14	12

DECK-SPAN	DECK TYPE	DESIGN THICKNESS	DECK SUPPORT SPACING (FT.-IN.) POUNDS PER SQUARE FOOT												
			8-00	9-00	10-00	11-00	12-00	13-00	14-00	15-00	16-00	17-00	18-00	19-00	20-00
DOUBLE	22	STRESS DOWNWARD	133	105	85	70	59	50	43	38	33	29	26	24	21
		STRESS UPWARD	124	98	79	66	55	47	41	35	31	27	25	22	20
		DEFLECTION L/240	196	138	100	75	58	46	37	30	24	20	17	15	13
	20	STRESS DOWNWARD	183	145	117	97	82	69	60	52	46	41	36	33	29
		STRESS UPWARD	161	128	103	85	72	61	53	46	40	36	32	29	26
		DEFLECTION L/240	244	172	125	94	72	57	46	37	31	25	21	18	16
	18	STRESS DOWNWARD	258	203	165	136	114	98	84	73	64	57	51	46	41
		STRESS UPWARD	237	187	152	125	105	90	77	67	59	52	47	42	38
		DEFLECTION L/240	338	237	173	130	100	79	63	51	42	35	30	25	22
	16	STRESS DOWNWARD	331	262	212	175	147	126	108	94	83	73	65	59	53
		STRESS UPWARD	302	239	193	160	134	114	99	86	76	67	60	54	48
		DEFLECTION L/240	447	314	229	172	132	104	83	68	56	47	39	33	29

LOAD TABLES AND SECTION PROPERTIES WERE GENERATED BY THE SDI. FOR LOADS THAT CAUSE L/120 DEFLECTION, MULTIPLY BY 2.0. FOR LOADS THAT CAUSE L/180 DEFLECTION, MULTIPLY BY 1.5. FOR LOADS THAT CAUSE L/360 DEFLECTION, MULTIPLY BY 0.667.

TYPE "N" DEEP RIB DECK
TYPE "NV" DEEP RIB SLOT VENTED DECK
TYPE "NA" DEEP RIB ACOUSTICAL DECK

FY=60 KSI (GRADE 80)

	DECK TYPE	DESIGN THICKNESS		DECK SUPPORT SPACING (FT. - IN.)											POUNDS PER SQUARE FOOT	
			8-00	9-00	10-00	11-00	12-00	13-00	14-00	15-00	16-00	17-00	18-00	19-00	20-00
TRIPLE	22	STRESS DOWNWARD	166	131	106	88	74	63	54	47	41	37	33	29	27
		STRESS UPWARD	155	123	99	82	69	59	51	44	39	34	31	27	25
		DEFLECTION	153	108	79	59	45	36	29	23	19	16	13	11	10
	20	STRESS DOWNWARD	229	181	147	121	102	87	75	65	57	51	45	41	37
		STRESS UPWARD	202	159	129	107	90	76	66	57	50	45	40	36	32
		DEFLECTION	191	134	98	74	57	45	36	29	24	20	17	14	12
	18	STRESS DOWNWARD	322	254	206	170	143	122	105	92	80	71	64	57	52
		STRESS UPWARD	296	234	190	157	132	112	97	84	74	66	58	52	47
		DEFLECTION	264	186	135	102	78	62	49	40	33	28	23	20	17
	16	STRESS DOWNWARD	414	327	265	219	184	157	135	118	104	92	82	73	66
		STRESS UPWARD	378	298	242	200	168	143	123	107	94	84	75	67	60
		DEFLECTION	350	245	179	134	104	81	65	53	44	36	31	26	22

GAGE NUMBER	V^N/Ω LBS PER Ft	Web Crippling (R^n/Ω), lbs/ft One Flange Loading End Bearing			Web Crippling (R^n/Ω), lbs/ft One flange Laoding Interior Bearing		
		1-1/2"	2"	3"	1-1/2"	2"	3"
22	2812	692	761	876	1120	1215	1374
20	4114	997	1093	1253	1621	1752	1973
18	6910	1688	1840	2096	2763	2971	3322
16	10060	2603	2827	3203	4289	4595	5107

Span Cond.	GAGE NUMBER	ASD Span	ASD Cantilever Span
Single	22	19'-10"	5'-02"
	20	25'-10"	7'-01"
	18	37'-07"	9'-11"
	16	48'-04"	12'-7"
Double or Triple	22	24'-05"	
	20	31'-10"	
	18	46'-08"	
	16	59'-06"	

TYPE "NV" SHALL BE VENTED IN THE LOWER FLUTES WITH A .5% OPEN AREA. "NV" NOT AVAILABLE IN 16GA.
TYPE "NA" DECK SHALL BE PERFORATED IN THE WEBS WITH 5/32" DIAMETER HOLES STAGGERED 3/8" ON CENTER.
LOAD TABLES AND SECTION PROPERTIES WERE GENERATED BY THE SDI.

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2. Roof decks loads computed in accordance with the SDI bending moment and deflection formulas.
3. Loads shown in tables are uniformly distributed total (dead plus) loads in pounds per square foot. Loads in shaded area are governed by the live load deflection not in excess of L/240. The dead load included is 10 psf. All other loads are governed by the allowable flexural stress limit of 20,000 psi for 33,000 psi minimum yield.

4. Span lengths are considered center-to-center spacing of supports.
5. Spans which extend beyond the heavy vertical line in the load tables exceed the "Recommended Maximum spans for Construction and Maintenance Loads" shown on page 30.
6. Where heavy construction loads or other unusual concentrated loads are anticipated during the lifetime of the deck, the specified live load must be increased to offset the effects of the abnormal concentrated loading.
7. The design stress for Grade 80 is 0.75 times the 80 ksi due to the low ductility of the steel.