

METALWORKS -- www.metal-works.net

3" x 12" & 3" x 16" x 40 KSI STEEL CANOPY PANELS SECTION PROPERTIES

PROFILE VIEW (DIMENSIONS IN INCHES)	GAGE STEEL	WEIGHT (PSF)	ALLOW SHEAR (KIPS)	ALLOW BEARING		TOP OF PANEL IN COMPRESSION			BOTTOM OF PANEL IN COMPRESSION		
				END 2" (KIPS)	INTERIOR 3" (KIPS)	Ix (in4)	Sx (in3)	ALLOW MOMENT (in-KIPS)	Ix (in4)	Sx (in3)	ALLOW MOMENT (in-KIPS)
3" x 12"	24	1.563	0.780	0.225	0.455	0.4627	0.1941	4.650	0.2513	0.1574	3.770
	22	1.974	1.570	0.347	0.689	0.6117	0.2605	6.240	0.3353	0.2173	5.204
	20	2.317	2.176	0.465	0.915	0.7360	0.3172	7.597	0.4100	0.2716	6.505
3" x 16"	24	1.410	0.780	0.225	0.455	0.4830	0.1928	4.617	0.2520	0.1578	3.779
	22	1.780	1.570	0.347	0.689	0.6590	0.2686	6.434	0.3360	0.2180	5.221
	20	2.089	2.176	0.465	0.915	0.8020	0.3311	7.929	0.4110	0.2720	6.514

3" x 12" & 3" x 16" x 50 KSI STEEL CANOPY PANELS SECTION PROPERTIES

PROFILE VIEW (DIMENSIONS IN INCHES)	GAGE STEEL	WEIGHT (PSF)	ALLOW SHEAR (KIPS)	ALLOW BEARING		TOP OF PANEL IN COMPRESSION			BOTTOM OF PANEL IN COMPRESSION		
				END 2" (KIPS)	INTERIOR 3" (KIPS)	Ix (in4)	Sx (in3)	ALLOW MOMENT (in-KIPS)	Ix (in4)	Sx (in3)	ALLOW MOMENT (in-KIPS)
3" x 12"	24	1.563	0.780	0.281	0.568	0.4381	0.1811	5.422	0.2420	0.1486	4.449
	22	1.974	1.570	0.433	0.861	0.5936	0.2502	7.492	0.3249	0.2072	6.204
	20	2.317	2.433	0.582	1.144	0.7190	0.3072	9.198	0.3960	0.2591	7.757
3" x 16"	24	1.410	0.780	0.281	0.568	0.4570	0.1801	5.391	0.2420	0.1490	4.461
	22	1.780	1.570	0.433	0.861	0.6350	0.2563	7.673	0.3260	0.2078	6.221
	20	2.089	2.433	0.582	1.144	0.7770	0.3178	9.515	0.3970	0.2600	7.784

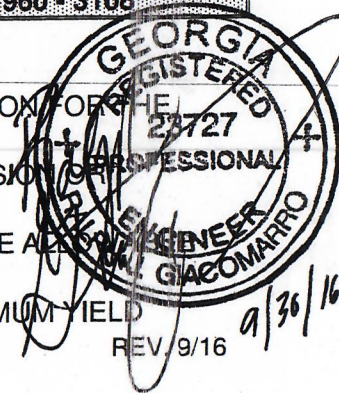
2.5" x 12" x 40 KSI STEEL SNAP LOCK PANELS SECTION PROPERTIES

PROFILE VIEW (DIMENSIONS IN INCHES)	GAGE STEEL	WEIGHT (PSF)	ALLOW SHEAR (KIPS)	ALLOW BEARING		TOP OF PANEL IN COMPRESSION			BOTTOM OF PANEL IN COMPRESSION		
				END 2" (KIPS)	INTERIOR 3" (KIPS)	Ix (in4)	Sx (in3)	ALLOW MOMENT (in-KIPS)	Ix (in4)	Sx (in3)	ALLOW MOMENT (in-KIPS)
2.5" x 12"	24	1.770	1.084	0.250	0.474	0.4293	0.2385	5.714	0.1925	0.1331	3.189
	22	2.140	1.600	0.354	0.667	0.5360	0.3038	7.277	0.2450	0.1736	4.157

DATA ON OTHER PANEL STYLES IS AVAILABLE ON REQUEST. CALL OR EMAIL : benhouston@bellsouth.net
 METALWORKS, P.O. BOX 2009 - 4409 MCBRAYER RD, OAKWOOD, GA 30566. PHONE (678) 960 - 3109, FAX (678) 960 - 3108

GENERAL NOTES:

- SECTION PROPERTIES HAVE BEEN DETERMINED IN ACCORDANCE WITH THE AISI "NORTH AMERICAN SPECIFICATION FOR THE DESIGN OF COLD FORMED STEEL STRUCTURAL MEMBERS" 2012 EDITION.
- Sx IS THE ELASTIC SECTION MODULUS OF THE EFFECTIVE SECTION CALCULATED WITH THE EXTREME COMPRESSION OR TENSION FIBER AT A YIELD STRESS OF 40/50 KSI.
- Ix IS THE EFFECTIVE MOMENT OF INERTIA BASED UPON PROCEDURE 1 FOR DEFLECTION DETERMINATION AT THE ALLOWED MOMENT AS CONTAINED IN THE AISI SPECIFICATION.
- STEEL UTILIZED FOR ALL SECTIONS CONFORMS TO ASTM A653 STRUCTURAL QUALITY GRADE 40/50 WITH A MINIMUM YIELD STRENGTH OF 40/50 KSI.



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3"x16"x40KSI STEEL CANOPY PANELS--RIBS UP--PANELS HUNG BENEATH SUPPORTING STRUCTURE--UPLIFT LOADING
(ALLOWABLE LOADS HAVE NOT BEEN FACTORED UP 33% DUE TO WIND INDUCED UPLIFT)

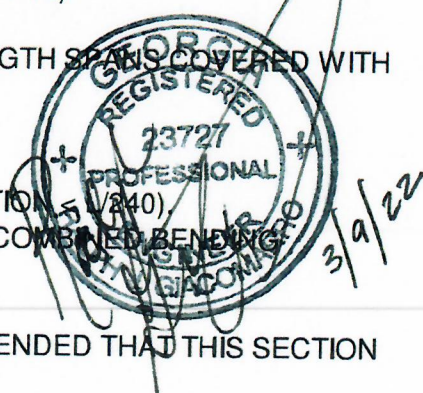
UPLIFT LOAD DATA : MAXIMUM ALLOWABLE UNIFORM LOADING IN POUNDS PER SQUARE FOOT

PANEL SIZE (DIMENSIONS IN INCHES)	GAGE STEEL	SUPPORT CONDITION	SPAN LENGTH (FEET)												
			3.0	4.0	5.0	6.0	7.0	8.0	9.0	10.0	11.0	12.0	13.0	14.0	15.0
3" x 16"	24	1 SPAN	113*	84*	63	44	32	24	17	12	--	--	--	--	--
		2 SPAN	91*	68*	55*	46*	38	29	23	19	16	13	11	--	--
		3 SPAN	103*	78*	62*	52*	44*	36	29	23	18	14	11	--	--
		4 SPAN	100*	75*	60*	50*	43*	34	27	22	18	14	11	--	--
	22	1 SPAN	174*	130*	87	61	44	32	23	17	12	--	--	--	--
		2 SPAN	138*	103*	83*	69*	54	41	33	27	22	19	16	14	12
		3 SPAN	157*	117*	94*	78*	67	51	41	31	23	18	14	11	--
		4 SPAN	151*	113*	90*	75*	62	48	38	31	25	19	15	12	--
	20	1 SPAN	233*	174*	130	90	59	39	28	20	15	12	--	--	--
		2 SPAN	183*	137*	110*	90	66	51	40	33	27	23	19	17	14
		3 SPAN	208*	156*	125*	104*	83	64	50	38	29	22	17	14	11
		4 SPAN	200*	150*	120*	100*	77	59	47	38	30	23	18	15	12

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GENERAL NOTES:

- SECTION PROPERTIES HAVE BEEN DETERMINED IN ACCORDANCE WITH THE AISI "NORTH AMERICAN SPECIFICATION FOR THE DESIGN OF COLD FORMED STEEL STRUCTURAL MEMBERS" 2018 EDITION (AIS S100-16/S1-18).
- USE "1 SPAN" LOAD TABLE VALUES FOR SIMPLY - SUPPORTED SPANS ONLY.
- USE "2 SPAN", "3 SPAN" OR "4 SPAN" LOAD TABLE VALUES ONLY FOR 2 OR MORE EQUAL LENGTH SPANS COVERED WITH CONTINUOUS PANEL SECTION.
- ALL LOADS ARE LIVE LOADS (DEAD WEIGHT OF PANEL HAS ALREADY BEEN SUBTRACTED).
- ALLOWABLE LOADS HAVE NOT BEEN FACTORED UP 33% DUE TO WIND INDUCED UPLIFT.
- LOADS TO LEFT OF HEAVY LINE WITH "*" ARE CONTROLLED BY BEARING CAPACITY (DEFLECTION $< L/240$).
- LOADS TO LEFT OF HEAVY LINE WITHOUT "*" ARE CONTROLLED BY BENDING STRENGTH OR COMBINED BENDING STRENGTH AND SHEAR (DEFLECTION $< L/240$).
- LOADS TO RIGHT OF HEAVY LINE ARE CONTROLLED BY DEFLECTION (DEFLECTION = $L/240$).
- " --- " INDICATES THAT LIVE LOAD/UPLIFT CAPACITY IS LESS THAN 10 PSF. IT IS NOT RECOMMENDED THAT THIS SECTION BE UTILIZED AT THIS SPAN LENGTH.
- STEEL UTILIZED FOR ALL SECTIONS CONFORMS TO ASTM A653 STRUCTURAL QUALITY GRADE 40 WITH A MINIMUM YIELD STRENGTH OF 40 KSI.



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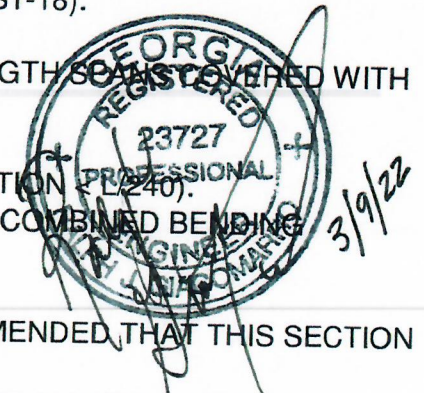
3"x16"x40KSI STEEL CANOPY PANELS--RIBS UP--PANELS HUNG BENEATH SUPPORTING STRUCTURE--GRAVITY LOADING
LIVE LOAD DATA : MAXIMUM ALLOWABLE UNIFORM LOADING IN POUNDS PER SQUARE FOOT

PANEL SIZE (DIMENSIONS IN INCHES)	GAGE STEEL	SUPPORT CONDITION	SPAN LENGTH (FEET)												
			3.0	4.0	5.0	6.0	7.0	8.0	9.0	10.0	11.0	12.0	13.0	14.0	15.0
3" x 16"	24	1 SPAN	213	119	76	52	38	29	22	18	15	12	--	--	--
		2 SPAN	151	89	58	41	30	23	18	14	11	--	--	--	--
		3 SPAN	180	108	72	50	37	28	22	18	15	12	10	--	--
		4 SPAN	171	102	67	47	35	27	21	17	14	11	--	--	--
	22	1 SPAN	297	166	106	73	53	40	31	25	20	17	13	10	--
		2 SPAN	224	129	83	58	42	32	25	20	16	13	11	--	--
		3 SPAN	272	159	103	72	53	40	31	25	21	17	14	12	10
		4 SPAN	257	149	97	67	49	37	29	23	19	16	13	11	--
	20	1 SPAN	366	205	130	90	65	50	39	31	25	21	16	12	--
		2 SPAN	332	192	124	87	63	48	38	30	25	20	17	14	12
		3 SPAN	403	236	154	108	79	60	48	38	31	26	22	19	16
		4 SPAN	380	222	144	101	74	56	44	36	29	24	20	17	15

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3"x12"x40KSI STEEL CANOPY PANELS--RIBS UP--PANELS HUNG BENEATH SUPPORTING STRUCTURE--GRAVITY LOADING

LIVE LOAD DATA : MAXIMUM ALLOWABLE UNIFORM LOADING IN POUNDS PER SQUARE FOOT

PANEL SIZE (DIMENSIONS IN INCHES)	GAGE STEEL	SUPPORT CONDITION	SPAN LENGTH (FEET)												
			3.0	4.0	5.0	6.0	7.0	8.0	9.0	10.0	11.0	12.0	13.0	14.0	15.0
3' x 12"	24	1 SPAN	343	192	122	85	62	47	37	29	21	16	12	--	--
		2 SPAN	230	139	92	65	48	37	29	23	19	16	13	11	--
		3 SPAN	270	166	112	79	59	45	36	29	24	20	17	14	12
		4 SPAN	258	158	105	75	55	43	34	27	22	18	16	13	11
	22	1 SPAN	460	258	164	114	83	63	49	38	28	21	16	13	--
		2 SPAN	348	203	132	92	67	51	40	32	26	22	18	16	13
		3 SPAN	420	248	163	114	84	64	51	41	33	28	23	20	17
		4 SPAN	397	234	153	107	79	60	47	38	31	26	22	19	16
	20	1 SPAN	560	314	200	138	101	77	60	46	34	26	20	15	12
		2 SPAN	443	256	166	116	85	65	51	41	33	28	23	20	17
		3 SPAN	537	315	205	144	106	81	64	51	42	35	30	25	22
		4 SPAN	507	296	193	135	99	76	59	48	39	33	27	23	20

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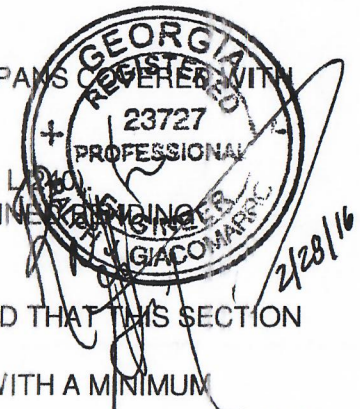
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PANEL SIZE (DIMENSIONS IN INCHES)	GAGE STEEL	SUPPORT CONDITION	SPAN LENGTH (FEET)												
			3.0	4.0	5.0	6.0	7.0	8.0	9.0	10.0	11.0	12.0	13.0	14.0	15.0
2.5" x 12"	24	1 SPAN	421	236	151	104	76	53	37	26	19	15	11	---	---
		2 SPAN	217	125	81	56	41	31	24	19	16	13	11	---	---
		3 SPAN	263	154	100	70	51	39	31	25	20	17	14	12	---
		4 SPAN	248	145	94	65	48	36	29	23	19	15	13	11	---
	22	1 SPAN	537	301	192	133	97	66	46	33	24	18	14	11	---
		2 SPAN	288	165	106	74	54	41	32	25	21	17	14	12	10
		3 SPAN	351	204	132	92	67	51	40	32	26	22	18	15	13
		4 SPAN	330	191	124	86	63	48	37	30	24	20	17	14	12

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**2.5"x12"x40KSI STEEL SNAP LOCK PANELS-RIBS UP-PANELS HUNG BENEATH SUPPORTING STRUCTURE-UPLIFT LOADING
(ALLOWABLE LOADS HAVE NOT BEEN FACTORED UP 33% DUE TO WIND INDUCED UPLIFT)**

UPLIFT LOAD DATA : MAXIMUM ALLOWABLE UNIFORM LOADING IN POUNDS PER SQUARE FOOT															
PANEL SIZE (DIMENSIONS IN INCHES)	GAGE STEEL	SUPPORT CONDITION	SPAN LENGTH (FEET)												
			3.0	4.0	5.0	6.0	7.0	8.0	9.0	10.0	11.0	12.0	13.0	14.0	15.0
2.5" x 12"	24	1 SPAN	167*	125*	85	58	37	25	17	13	---	---	---	---	---
		2 SPAN	126*	95*	76*	63*	54*	47*	42	30	23	18	14	11	---
		3 SPAN	144*	108*	86*	72*	62*	47	33	24	18	14	11	---	---
		4 SPAN	138*	104*	83*	69*	59*	49	35	25	19	15	12	---	---
	22	1 SPAN	236*	173	111	74	47	31	22	16	12	---	---	---	---
		2 SPAN	178*	133*	107*	89*	76*	67*	53	39	29	22	18	14	11
		3 SPAN	202*	152*	121*	101*	87*	59	42	30	23	18	14	11	---
		4 SPAN	195*	146*	117*	97*	83*	63	44	32	24	19	15	12	---

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