

# Perception Collection®



**Perception Collection** is a set of concealed fastened metal siding panels, each with unique geometric angles and rib patterns which can be combined to create a distinct design. The shadow effect of these panels, whether used in a vertical or horizontal siding applications, evolves as the day progresses—it builds texture and changes design perception.

**Perception Collection** panels are available with a high performance clip, offering unlimited thermal movement while reducing chances of oil canning.



Shown with flush clip



Shown with standoff clip



Shown as direct fastened

## standard features

- Available in 22ga in standard finishes. 20ga available by special order.
- Refer to AEP Span Color Charts for full range of color options, prints, textures, finishes and paint systems.
- Custom colors, thick film primer and/or clear coat paint finishes available. Subject to 3,000 square feet minimum order.
- Custom manufactured sheet lengths from 5'-0" to 40'-0" maximum.
- ASTM E1592 (wind uplift), ASTM E283 (air infiltration), ASTM E331 (water infiltration) tested.
- Available in two attachment configurations - a directly attached fastening flange or clip interlocking hem. Two clip options enable panels to be installed flush to substrate or with a 1/2" standoff.
- Panels can be used in a rainscreen system.
- Panel evaluated by accredited third party. All structural performance data is contained within an IBC/IRC 2018 code compliance report (#ER-0309).



## Outward Load Capacity

Design Patents: D735355, D734502, D736962, D750278, D734501

Panel / Gauge	Maximum* Negative (Outward) Uniform Load Capacity (lbs/ft²) / Span (ft. - in.)						
	2' - 0"	2' - 6"	3' - 0"	3' - 6"	4' - 0"	4' - 6"	5' - 0"
PC10-12d, 20-24ga (DIRECT FASTENED)	93	85	77	69	62	54	46
PC20/30/40/50-12d, 20-24ga (DIRECT FASTENED)	92	83	75	67	59	50	42
PC10/20/30/40/50-12c, 24ga (CLIP ATTACHED)	85	78	70	62	55	47	39
PC10/20/30/40/50-12c, 20-22ga (CLIP ATTACHED)	101	93	85	76	68	60	52

\*Maximum allowable outward load capacities are shown and dependent upon fastener-to-substrate capacities. Refer to IAPMO-UES report #ER-0309 for specific product system capacities.

## PC10-12

Properties									Standard Finishes	
Gauge	Base Steel Thickness (in)	Yield (ksi)	Tensile (ksi)	Wt. (lbs/ft <sup>2</sup> )	I+ (in <sup>4</sup> /ft)	S+ (in <sup>3</sup> /ft)	I- (in <sup>4</sup> /ft)	S- (in <sup>3</sup> /ft)	Metallic Coating	Paint System
24	0.0232	50	65	1.49	0.0553	0.0855	0.0535	0.0959	AZ50	Cool Dura Tech™ 5000 or Cool Dura Tech™ mx
22	0.0294	50	65	1.87	0.0711	0.1194	0.0692	0.1327	AZ50	
20	0.0354	40	55	2.24	0.0860	0.1610	0.0853	0.1632	G90	

Gauge	Span	Condition	Positive (Inward) Uniform Load Capacity (lbs/ft <sup>2</sup> ) / Span (ft. - in.)						
			2' - 0"	3' - 0"	4' - 0"	5' - 0"	6' - 0"	7' - 0"	8' - 0"
24	Single Span	ASD, W/Ω	427	190	107	68	47	35	27
		L/180	605	179	76	39	22	14	9
	Double Span	ASD, W/Ω	271	181	116	74	52	38	29
		L/180	1456	432	182	93	54	34	23
	Triple Span	ASD, W/Ω	308	206	143	93	65	48	37
		L/180	1141	338	143	73	42	27	18
22	Single Span	ASD, W/Ω	596	265	149	95	66	49	37
		L/180	777	230	97	50	29	18	12
	Double Span	ASD, W/Ω	419	278	159	104	72	52	41
		L/180	1872	555	234	120	69	44	29
	Triple Span	ASD, W/Ω	476	317	197	128	90	66	50
		L/180	1467	435	183	94	54	34	23
20	Single Span	ASD, W/Ω	643	286	161	103	71	52	40
		L/180	940	278	117	60	35	22	15
	Double Span	ASD, W/Ω	471	273	157	101	71	52	40
		L/180	2263	671	283	145	84	53	35
	Triple Span	ASD, W/Ω	535	333	193	125	88	65	50
		L/180	1773	525	222	113	66	41	28

## PC20-12

Properties									Standard Finishes	
Gauge	Base Steel Thickness (in)	Yield (ksi)	Tensile (ksi)	Wt. (lbs/ft <sup>2</sup> )	I+ (in <sup>4</sup> /ft)	S+ (in <sup>3</sup> /ft)	I- (in <sup>4</sup> /ft)	S- (in <sup>3</sup> /ft)	Metallic Coating	Paint System
24	0.0232	50	65	1.40	0.0481	0.0600	0.0540	0.0752	AZ50	Cool Dura Tech™ 5000 or Cool Dura Tech™ mx
22	0.0294	50	65	1.76	0.0632	0.0852	0.0708	0.1067	AZ50	
20	0.0354	40	55	2.11	0.0790	0.1190	0.0877	0.1498	G90	

Gauge	Span	Condition	Positive (Inward) Uniform Load Capacity (lbs/ft <sup>2</sup> ) / Span (ft. - in.)						
			2' - 0"	3' - 0"	4' - 0"	5' - 0"	6' - 0"	7' - 0"	8' - 0"
24	Single Span	ASD, W/Ω	289	133	75	48	33	24	19
		L/180	525	156	66	34	19	12	8
	Double Span	ASD, W/Ω	181	121	90	58	41	30	23
		L/180	1265	375	158	81	47	30	20
	Triple Span	ASD, W/Ω	206	137	103	72	50	37	28
		L/180	991	294	124	63	37	23	15
22	Single Span	ASD, W/Ω	425	189	106	68	47	35	27
		L/180	690	204	86	44	26	16	11
	Double Span	ASD, W/Ω	279	186	126	82	58	42	33
		L/180	1662	493	208	106	62	39	26
	Triple Span	ASD, W/Ω	317	212	155	102	71	53	40
		L/180	1302	386	163	83	48	30	20
20	Single Span	ASD, W/Ω	475	211	119	76	53	39	30
		L/180	863	256	108	55	32	20	13
	Double Span	ASD, W/Ω	314	209	140	91	64	47	36
		L/180	2079	616	260	133	77	48	32
	Triple Span	ASD, W/Ω	357	238	171	113	80	59	45
		L/180	1629	483	204	104	60	38	25

## PC30-12

Properties									Standard Finishes	
Gauge	Base Steel Thickness (in)	Yield (ksi)	Tensile (ksi)	Wt. (lbs/ft <sup>2</sup> )	I+ (in <sup>4</sup> /ft)	S+ (in <sup>3</sup> /ft)	I- (in <sup>4</sup> /ft)	S- (in <sup>3</sup> /ft)	Metallic Coating	Paint System
24	0.0232	50	65	1.40	0.0481	0.0600	0.0540	0.0752	AZ50	Cool Dura Tech™ 5000 or Cool Dura Tech™ mx
22	0.0294	50	65	1.76	0.0632	0.0852	0.0708	0.1066	AZ50	
20	0.0354	40	55	2.11	0.0793	0.1190	0.0877	0.1498	G90	

Gauge	Span	Condition	Positive (Inward) Uniform Load Capacity (lbs/ft <sup>2</sup> ) / Span (ft. - in.)						
			2' - 0"	3' - 0"	4' - 0"	5' - 0"	6' - 0"	7' - 0"	8' - 0"
24	Single Span	ASD, W/Ω	289	133	75	48	33	24	19
		L/180	526	156	66	34	19	12	8
	Double Span	ASD, W/Ω	181	121	89	58	41	30	23
		L/180	1266	375	158	81	47	30	20
	Triple Span	ASD, W/Ω	206	137	103	72	50	37	28
		L/180	992	294	124	63	37	23	15
22	Single Span	ASD, W/Ω	425	189	106	68	47	35	27
		L/180	690	204	86	44	26	16	11
	Double Span	ASD, W/Ω	279	186	127	82	57	42	33
		L/180	1662	493	208	106	62	39	26
	Triple Span	ASD, W/Ω	317	212	156	102	71	53	40
		L/180	1302	386	163	83	48	30	20
20	Single Span	ASD, W/Ω	475	211	119	76	53	39	30
		L/180	867	257	108	55	32	20	14
	Double Span	ASD, W/Ω	314	209	140	91	64	47	36
		L/180	2088	619	261	134	77	49	33
	Triple Span	ASD, W/Ω	357	238	171	113	80	59	45
		L/180	1636	485	204	105	61	38	26

## PC40-12

Properties									Standard Finishes	
Gauge	Base Steel Thickness (in)	Yield (ksi)	Tensile (ksi)	Wt. (lbs/ft <sup>2</sup> )	I+ (in <sup>4</sup> /ft)	S+ (in <sup>3</sup> /ft)	I- (in <sup>4</sup> /ft)	S- (in <sup>3</sup> /ft)	Metallic Coating	Paint System
24	0.0232	50	65	1.40	0.0500	0.0614	0.0540	0.0752	AZ50	Cool Dura Tech™ 5000 or Cool Dura Tech™ mx
22	0.0294	50	65	1.76	0.0667	0.0881	0.0708	0.1066	AZ50	
20	0.0354	40	55	2.11	0.0846	0.1253	0.0877	0.1497	G90	

Gauge	Span	Condition	Positive (Inward) Uniform Load Capacity (lbs/ft <sup>2</sup> ) / Span (ft. - in.)						
			2' - 0"	3' - 0"	4' - 0"	5' - 0"	6' - 0"	7' - 0"	8' - 0"
24	Single Span	ASD, W/Ω	289	136	77	49	34	25	19
		L/180	547	162	68	35	20	13	9
	Double Span	ASD, W/Ω	181	121	89	58	41	30	23
		L/180	1317	390	165	84	49	31	21
	Triple Span	ASD, W/Ω	206	137	103	72	51	37	28
		L/180	1032	306	129	66	38	24	16
22	Single Span	ASD, W/Ω	440	195	110	70	49	36	27
		L/180	729	216	91	47	27	17	11
	Double Span	ASD, W/Ω	279	186	127	82	57	42	33
		L/180	1755	520	219	112	65	41	27
	Triple Span	ASD, W/Ω	317	212	155	102	71	53	41
		L/180	1375	407	172	88	51	32	21
20	Single Span	ASD, W/Ω	493	222	125	80	56	41	31
		L/180	924	274	116	59	34	22	14
	Double Span	ASD, W/Ω	314	209	140	91	64	47	36
		L/180	2227	660	278	143	82	52	35
	Triple Span	ASD, W/Ω	357	238	170	113	79	59	46
		L/180	1744	517	218	112	65	41	27

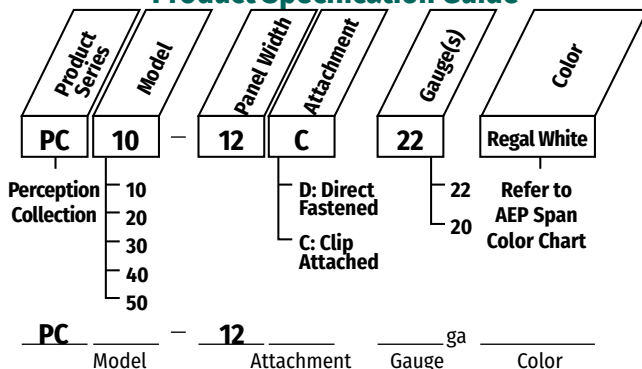
## PC50-12

Properties									Standard Finishes	
Gauge	Base Steel Thickness (in)	Yield (ksi)	Tensile (ksi)	Wt. (lbs/ft <sup>2</sup> )	I+ (in <sup>4</sup> /ft)	S+ (in <sup>3</sup> /ft)	I- (in <sup>4</sup> /ft)	S- (in <sup>3</sup> /ft)	Metallic Coating	Paint System
24	0.0232	50	65	1.30	0.0358	0.0322	0.0446	0.0479	AZ50	Cool Dura Tech™ 5000 or Cool Dura Tech™ mx
22	0.0294	50	65	1.64	0.0483	0.0467	0.0603	0.0686	AZ50	
20	0.0354	40	55	1.97	0.0630	0.0677	0.0770	0.0979	G90	

Gauge	Span	Condition	Positive (Inward) Uniform Load Capacity (lbs/ft <sup>2</sup> ) / Span (ft. - in.)							
			2' - 0"	3' - 0"	4' - 0"	5' - 0"	6' - 0"	7' - 0"	8' - 0"	
24	Single Span	ASD, W/Ω	144	72	40	26	18	13	10	
		L/180	391	116	49	25	14	9	6	
	Double Span	ASD, W/Ω	90	60	45	36	25	19	14	
		L/180	942	279	118	60	35	22	15	
	Triple Span	ASD, W/Ω	103	69	51	41	31	23	18	
		L/180	738	219	92	47	27	17	12	
22	Single Span	ASD, W/Ω	221	104	58	37	26	19	15	
		L/180	527	156	66	34	20	12	8	
	Double Span	ASD, W/Ω	140	93	70	52	36	27	21	
		L/180	1270	376	159	81	47	30	20	
	Triple Span	ASD, W/Ω	159	106	79	63	44	33	26	
		L/180	995	295	124	64	37	23	16	
20	Single Span	ASD, W/Ω	246	120	68	43	30	22	17	
		L/180	688	204	86	44	25	16	11	
	Double Span	ASD, W/Ω	157	105	78	58	41	31	24	
		L/180	1658	491	207	106	61	39	26	
	Triple Span	ASD, W/Ω	178	119	89	71	51	38	29	
		L/180	1299	385	162	83	48	30	20	

Inward Loads	Single Span		<b>NOTES:</b> Tabulated values are for positive (inward) loading only. The W/Ω (ASD) values are based on allowable panel strength. L/180 values based on allowable service load deflections. The moments of inertia, I+ and I-, presented for determining deflection are: $(2I_{Effective} + I_{Gross})/3$ Values are based on AISI S100-16/S1-18 Specifications subject to change without notice.
	Double Span		
	Triple Span		

### Product Specification Guide



**Oil Canning** : All flat metal surfaces can display waviness commonly referred to as "oil canning". "Oil canning" is an inherent characteristic of steel products, not a defect, and therefore is not a cause for panel rejection.

