

## WESTEEL PRODUCT BULLETIN

### Roof Charts and Upright Standardization

December 12, 2018

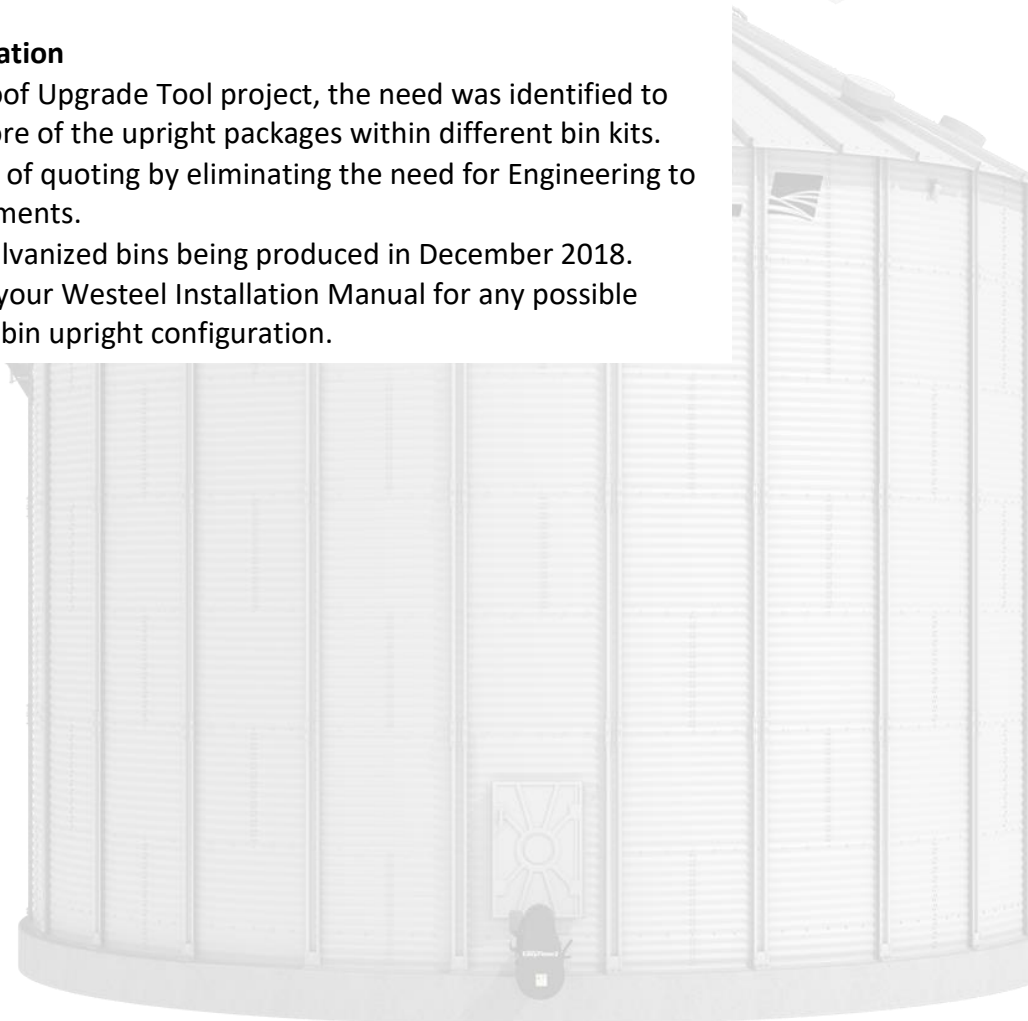
Westeel recently released the Roof Upgrade Tool to assist our customers with receiving the best product for their specific geographic area. As part of this project, there were additional updates made:

#### 1) Roof Capacity Charts and Roof Reinforcing Matrix

- Both sets of charts have been updated with current information.
- Updated charts attached to this bulletin and will be included in the next updated version of the Westeel 2019 Price List.
- Installation manuals have been updated as of December shipments.

#### 2) Upright Standardization

- Through the Roof Upgrade Tool project, the need was identified to standardize more of the upright packages within different bin kits.
- Allows for ease of quoting by eliminating the need for Engineering to review requirements.
- Released for galvanized bins being produced in December 2018.
- Please consult your Westeel Installation Manual for any possible changes to the bin upright configuration.



## 2019 Roof Design Capacities for Non-Structural Roofs

Maximum Roof Snow Load @ Standard Peak Load							
Bin Series	Standard Peak Load	Standard Roof		Plus Upgrade 1		Plus Upgrade 2	
	lbs (kN)	psf	kPa	psf	kPa	psf	kPa
15	4000 (17.8)	45	2.15	n/a		n/a	
16		45	2.15				
18		45	2.15				
21		30	1.44	46	2.20		
24		21	1.01	39	1.87		
27	5000 (22.2)	24	1.15	39	1.87	n/a	
30		20	0.96	32	1.53	40	1.92
33		23	1.10	33	1.58	44	2.11
36		24	1.15	30	1.44	38	1.82
39		22	1.05	27	1.29	36	1.72
42		19	0.91	24	1.15	34	1.63
45		16	0.77	23	1.10	32	1.53
48		21	1.01	26	1.24	33	1.58
51	8000 (35.6)	20	0.96	28	1.34	n/a	
54		17	0.81	27	1.29		

Maximum Roof Snow Load @ Maximum Peak Load							
Bin Series	Upgraded Peak Load	Standard Roof		Plus Upgrade 1		Plus Upgrade 2	
	lbs (kN)	psf	kPa	psf	kPa	psf	kPa
15	8000 (35.6)	29	1.39	n/a		n/a	
16		29	1.39				
18		29	1.39				
21		24	1.15	37	1.77		
24		17	0.81	26	1.24		
27	10000 (44.5)	19	0.91	28	1.34	n/a	
30		15	0.72	24	1.15	33	1.58
33		18	0.86	24	1.15	36	1.72
36		18	0.86	23	1.10	31	1.48
39		16	0.77	21	1.01	30	1.44
42		14	0.67	19	0.91	27	1.29
45		13	0.62	18	0.86	25	1.20
48		16	0.77	21	1.01	26	1.24
51	12000* (53.4)	14	0.67	21	1.01	n/a	
54		13	0.62	20	0.96		

Notes:

- 1) Standard roofs are adequate for many applications but additional capacity is available when optional upgrade packages are used
- 2) Upgrade packages include roof stiffening rings and/or rib supports
- 3) For peak load between standard and upgrade limits, a straight line interpolation can be used to determine maximum roof snow load
- 4) \* Structural roofs for 48'-54' with rafters are available to support peak ring loads greater than 10,000 (44.5 kN) & 12,000 lbs (53.4 kN)

## 2019 Roof Design Capacities for Structural Roofs

Maximum Roof Snow Load @ Standard Peak Load			
Bin Series	Peak Load	Standard Roof	
	lbs (kN)	psf	kPa
48	20000 (89.0)	39	1.87
51		39	1.87
54		39	1.87
60		39	1.87
66		38	1.82
72		38	1.82
75		37	1.77
78		37	1.77
84		37	1.77
90		37	1.77
96		37	1.77
102		32	1.53
105		32	1.53
108		32	1.53

Maximum Roof Snow Load @ Upgraded Peak Load			
Bin Series	Peak Load	Standard Roof	
	lbs (kN)	psf	kPa
48	60000 (266.9)	38	1.82
51		38	1.82
54		38	1.82
60		38	1.82
66		37	1.77
72		37	1.77
75		36	1.72
78		36	1.72
84		36	1.72
90		34	1.63
96		34	1.63
102		31	1.48
105		31	1.48
108		31	1.48

Notes:

- 1) Standard capacities are provided. Additional capacity is available with optional upgrades.

Component →	Roof Stiffening Ring Tubes				Rib Supports
Location & Colour →	1st - Yellow	2nd - Black	3rd - Red	4th - Green	Under Ribs
Chord Length (in) →	103.8	167.4	197.6	200.4	Varies
Qty of Expanders →	2	2	3	4	n/a
Bin Series	Component Part Numbers (and Quantity)				
15	n/a	n/a	n/a	n/a	n/a
16					
18					
21					
24					
27	195100 (5)	195101 (5)	n/a	n/a	212752 (21)
30	195100 (5)				212753 (24)
33	195100 (5)				n/a
36	195100 (5)				212755 (30)
39	195100 (5)				212756 (33)
42	195100 (5)	195101 (5)	195102 (6)	195103 (7)	212757 (36)
45	195100 (5)	195101 (5)	195102 (6)		212758 (39)
48	195100 (5)	195101 (5)	195102 (6)		212759 (42)
51	n/a	195101 (5)	195102 (6)		212760 (45)
54		195101 (5)	195102 (6)		212761 (48)
Notes:	• Roofs are supplied as standard or with optional upgrades for higher load capacity				
	<-- standard components for all roofs				
	<-- optional components supplied with all roof upgrade levels 1 & 2				
	<-- optional components supplied with roofs upgraded to level 2				
	☒ Structural roofs with rafter system are available for 48' bins and larger. These raftered roofs do not require stiffening rings or rib supports				