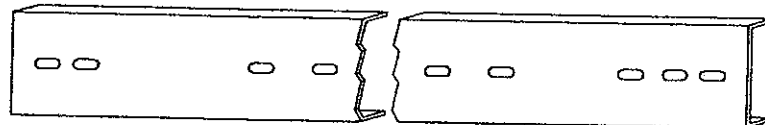
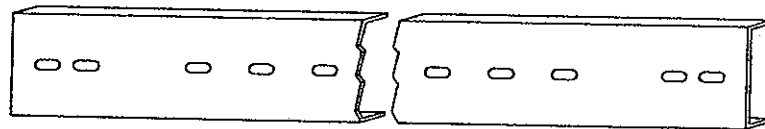




STIFFENER INSTALLATION INSTRUCTIONS



SHIVERS INCORPORATED
CORYDON, IOWA USA
(641) 872-1005
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P-12038

September 1, 2005



STIFFENERS

PART #	LENGTH	GAUGE	FOR BIN CORRUGATION	COLOR CODE
283A-001A	8'	12 GA.	2-2/3 OR 4"	WHITE (C-6015)
283B-001A	6'	8 GA.	2-2/3 OR 4"	ORANGE (C-6021)

SPECIAL ORDER STIFFENERS

PART #	LENGTH	GAUGE	FOR BIN CORRUGATION	COLOR CODE
283I-001A	10'	12 GA.	2-2/3"	GREEN (C-6014)
283J-001A	10'	12 GA.	4"	BLACK (C-6022)
283K-001A	8'	12 GA.	2-1/2" (WESTEEL)	RED (C-6126)
283L-001A	6'	8 GA.	2-1/2" (WESTEEL)	COPPER (C-6192)

CONNECTORS

ASSEMBLY #	DESCRIPTION	FOR BIN CORRUGATION	CONNECTOR LENGTH
285A-001A	CONNECTOR BUNDLE OF 4	2-2/3 OR 4"	10"
285B-001A	CONNECTOR BUNDLE OF 12	2-2/3 OR 4"	10"
285E-001A	CONNECTOR BUNDLE OF 4	2.5 (WESTEEL)	12"
285F-001A	CONNECTOR BUNDLE OF 12	2.5 (WESTEEL)	12"

HARDWARE SACKS

BIN BOLT W/ NEOPRENE WASHER,
FLAT WASHER, & NUT

PART #	QTY.	BOLT SIZE
284D-001A	20	5/16" X 1"
284E-001A	50	5/16" X 1"
284A-001A	100	5/16" X 1"
284B-001A	250	5/16" X 1"
284C-001A	500	5/16" X 1"
284F-001A	50	5/16" X 2-1/2"

INSTALLATION

Bin stiffeners may be required for SHIVERS Circulator and Dri-Flo installations. In the drying process, dynamic forces caused by the movement of grain create stress on the bin structure. Follow the Bin Manufacturer's specific recommendations or use SHIVERS Stiffeners. Bins without SHIVERS Stiffeners should have a written warranty from the bin manufacturer stating the bin is designed for recirculation without additional stiffeners required.

Use appropriate stiffener layout depending on your particular bin eave height and corrugation. For bins up to 17'04" eave height and with grain depths of less than 16', use one 8GA x 6' stiffener on the bottom of the bin and one 12GA x 8' stiffener above.

For bins over 17'04" and less than 21' eave height, use two 8GA x 6' stiffeners on the bottom and one 12GA x 8' stiffener on the top.

Do not install Circulator or Dri-Flo in bins over 21' or 8 rings tall.

Make sure that the stiffeners are tightly fitted against the concrete foundation. A small amount may have to be cut from the bottom of the stiffener in order to compensate for older bins that have settled. Be sure all splice joints are together before the connector splice is installed and tightened.

BINS UP TO 17'04" EAVE HEIGHT:

Use 8GA x 6' stiffener on the bottom and 12GA x 8' stiffener on top. One stiffener per bin sheet.

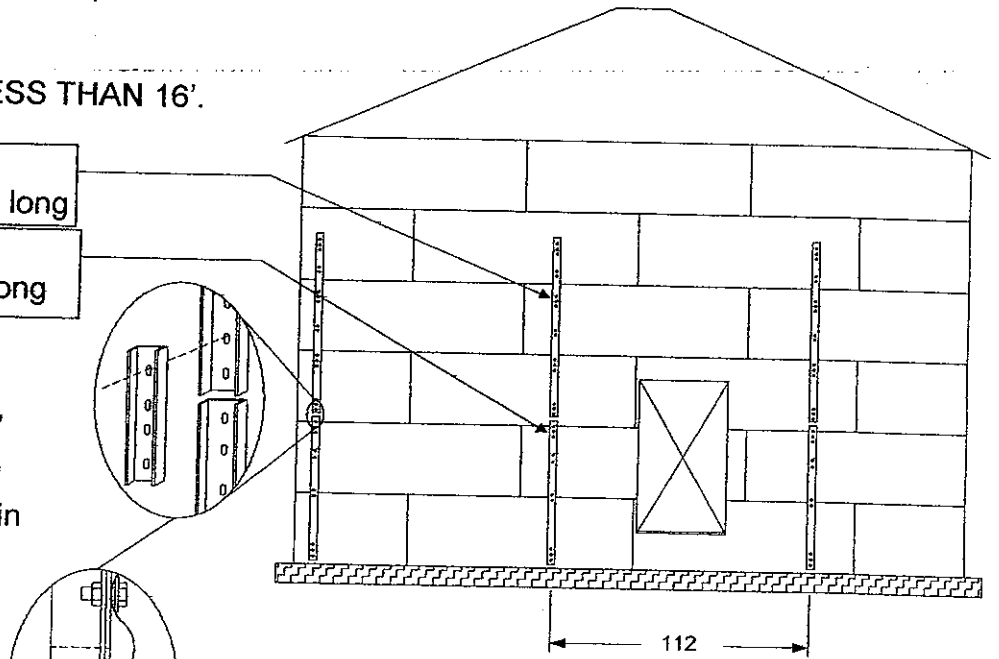
GRAIN DEPTH OF LESS THAN 16'

STIFFENERS:
ONE 12GA. x 8' long

STIFFENERS:
ONE 8GA. x 6' long

Bolt stiffeners every 8", except use all bolts in Connector Splice. Drill 11/32" holes through bin side wall.

Bolt heads with Neoprene Washers are inside of bin. Use only Grade 5 or Grade 8 bolts.



Install first two stiffeners 112" apart, centered on the bin door, then proceed around bin installing 112" on center, one per bin sheet.

NOTE: BOLT STIFFENERS TO BIN SIDEWALL SHEETS, NOT THE VERTICAL SEAMS.

BINS OVER 17'04" UP TO 21' EAVE HEIGHT:

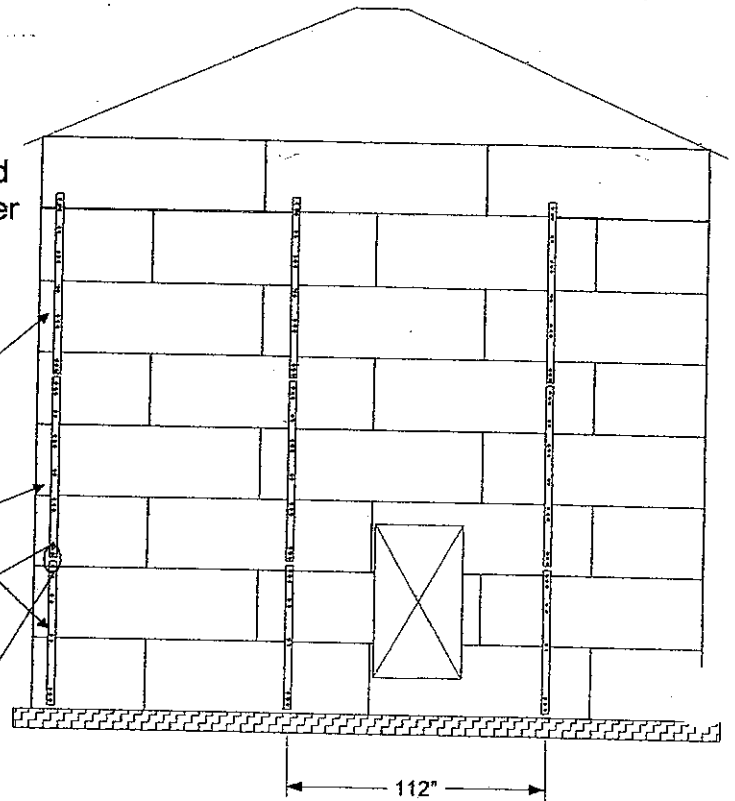
Use TWO 8GA x 6' stiffeners on the bottom and one 12GA x 8' stiffener on top. One stiffener per bin sheet.

STIFFENERS:
ONE 12GA. x 8' long

STIFFENERS:
TWO 8GA. x 6' long

Bolt stiffeners every 8", except use all bolts in Connector Splice. Drill 11/32" holes through bin side wall.

Bolt heads with Neoprene Washers are inside of bin. Use only Grade 5 or Grade 8 bolts.



Install first two stiffeners 112" apart, centered on the bin door, then proceed around bin installing 112" on center, one per bin sheet.

NOTE: BOLT STIFFENERS TO BIN SIDEWALL SHEETS, NOT THE VERTICAL SEAMS.

