
CROP CIRCLE ASSEMBLY MANUAL



DECLARATION OF CONFORMITY

We the Manufacturer:

**Behlen Industries LP
927 Douglas Street
Brandon, Manitoba
Canada R7A 7B3**

Declare the Crop Circles® listed below conform to the
2006/42/EC Machinery Directive

CC040x2, CC040X4, CC040X6

CC051x2, CC051X4, CC051X6

CC062x2, CC062X4, CC062X6

CC070x2, CC070X4, CC070X6

CC077x2, CC077X4, CC077X6, CC077X8

CC090x2, CC090X4, CC090X6, CC090X8

CC105x2, CC105X4, CC105X6, CC105X8

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The Behlen Industries LP Crop Circle® is a steel temporary storage ring designed for Grains and Cereals storage

SAFETY ALERT

This Safety Alert symbol means
ATTENTION! BECOME ALERT!
YOUR SAFETY IS INVOLVED!



The Safety Alert symbol identifies important safety messages on the Behlen Crop Circle® and in the manual. When you see this symbol, be alert to the possibility of personal injury or death. Follow the instructions in the safety message.

Why is SAFETY important to you?

3 Big Reasons

Accidents Disable and Kill
Accidents Cost
Accidents Can Be Avoided

SIGNAL WORDS:

Note the use of the signal words **DANGER**, **WARNING** and **CAUTION** with the safety messages. The appropriate signal word for each message has been selected using the following guide-lines:

DANGER - Indicates an imminently hazardous situation that, if not avoided, will result in death or serious injury. This signal word is to be limited to the most extreme situations typically for machine components which, for functional purposes, cannot be guarded.

WARNING - Indicates a potentially hazardous situation that, if not avoided, could result in death or serious injury, and includes hazards that are exposed when guards are removed. It may also be used to alert against unsafe practices.

CAUTION - Indicates a potentially hazardous situation that, if not avoided, may result in minor or moderate injury. It may also be used to alert against unsafe practices.

If you have any questions not answered in this manual or require additional copies or the manual is damaged, please contact your dealer or Behlen Industries LP, 927 Douglas Street, Brandon, MB R7A 7B3. (Telephone) 1-888-315-1035, (FAX) 204-725-4932. (Internet) www.behlen.ca

SAFETY & GENERAL SAFETY

SAFETY

YOU are responsible for the **SAFE** operation and maintenance of your Behlen Crop Circle®. **YOU** must ensure that you and anyone else who is going to operate, maintain or work around the Crop Circle® be familiar with the operating and maintenance procedures and related **SAFETY** information contained in this manual.

Remember, **YOU** are the key to safety. Good safety practices not only protect you but also the people around you. Make these practices a working part of your safety program. Be certain that **EVERYONE** operating this equipment is familiar with the recommended operating and maintenance procedures and follows all the safety precautions. Most accidents can be prevented. Do not risk injury or death by ignoring good safety practices.

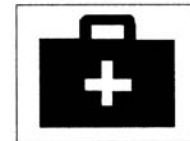
- Crop Circle® Cone owners must give operating instructions to operators or employees before allowing them to operate the machine, and at least annually .
- A person who has not read and understood all operating and safety instructions is not qualified to operate the machine. An untrained operator exposes himself/herself and bystanders to possible serious injury or death. Always be and stay alert to any possible unsafe operating or maintenance procedures or conditions.
- Do not modify the equipment in any way. Unauthorized modification may impair the function and/or safety of the components and systems and could affect the life of the equipment, possibly invalidating the warranty coverage.
- Think SAFETY! Work SAFELY!

GENERAL SAFETY

1. Read and understand the operator's Manual and all safety signs before operating, maintaining, adjusting or unplugging the Cone.



2. Have a first-aid kit available for use should the need arise and know how to use it.



3. Have a fire extinguisher available for use should the need arise and know how to use it.



4. Wear appropriate protective gear. This list includes but is not limited to:

- A hard hat
- Protective shoes with slip resistant soles
- Protective goggles, glasses or face shield
- Heavy gloves
- Protective clothing
- Respirator



5. Install and secure all guards before starting.
6. Establish a lock-out tag-out policy for the work site. Be sure all personnel are trained in and follow all procedures. Lock-out tag-out all power sources before entering bin or working around loading/unloading equipment.
7. Clear the area of people, especially small children, before starting.
8. Review safety related items annually with all personnel who will be using or maintaining the bin.


EQUIPMENT SAFETY GUIDELINES

EQUIPMENT SAFETY GUIDELINES

1. Safety of the operator and bystanders is one of the main concerns in designing and developing a machine. However, every year many accidents occur which could have been avoided by a few seconds of thought and a more careful approach to handling equipment. You, the operator, can avoid many accidents by observing the following precautions in this section. To avoid personal injury or death, study the following precautions and insist those working with you, or for you, follow them.
2. In order to provide a better view, certain photographs or illustrations in this manual may show an assembly with a safety shield removed. However, equipment should never be operated in this condition. Keep all shields in place. If shield removal becomes necessary for repairs, replace the shield prior to use.
3. Never use alcoholic beverages or drugs which can hinder alertness or coordination while operating this equipment. Consult your doctor about operating this machine while taking prescription medications.
4. **Under no circumstances should young children be allowed to work with this equipment. Do not allow persons to operate or assemble this unit until they have read this manual and have developed a thorough understanding of the safety precautions and of how it works.** Review the safety instructions with all users annually.
5. This equipment is dangerous to children and persons unfamiliar with its operation. The operator should be a responsible, properly trained and physically able person familiar with farm machinery and trained in this equipment's operations. If the elderly are assisting with farm work, their physical limitations need to be recognized and accommodated. Never exceed the limits of a piece of machinery. If its ability to do a job, or to do so safely, is in question – **DON'T TRY IT.**
6. Do not modify the equipment in any way. Unauthorized modifications result in serious injury or death and may impair the function and life of the equipment.
7. In addition to the design and configuration of this implement, including Safety Signs and Safety Equipment, hazard control and accident prevention are dependent upon the awareness, concern, prudence, and proper training of personnel involved in the operation, transport, maintenance, and storage of the machine. Refer also to Safety Messages and operation instruction in each of the appropriate sections of the auxiliary equipment and machine Manuals. Pay close attention to the Safety Signs affixed to the auxiliary equipment and the machine.

SAFETY TRAINING & SAFETY SIGNS

SAFETY TRAINING

1. Safety is a primary concern in the design and manufacture of our products. Unfortunately, our efforts to provide safe equipment can be wiped out by a single careless act of an operator or bystander.
2. In addition to the design and configuration of equipment, hazard control and accident prevention are dependent upon the awareness, concern, prudence and proper training of personnel involved in the operation, transport, maintenance and storage of this equipment.
3. It has been said, "The best safety feature is an informed, careful operator." We ask you to be that kind of an operator. It is the operator's responsibility to read and understand ALL Safety and Operating instructions in the manual and to follow these. Accidents can be avoided.
4. Working with unfamiliar equipment can lead to careless injuries. Read this manual, and the manual for your auxiliary equipment, before assembly or operating, to acquaint yourself with the machines. If this machine is used by any person other than yourself, it is the machine owner's responsibility to make certain that the operator, prior to operating:
 - a. Reads and understands the operator's manuals.
 - b. Is instructed in safe and proper use.
5. Know your controls and how to stop augers, conveyors and any other auxiliary equipment quickly in an emergency. Read this manual and the one provided with your other equipment.
6. Train all new personnel and review instructions frequently with existing workers. Be certain only a properly trained and physically able person will operate the machinery. A person who has not read and understood all operating and safety instructions is not qualified to operate the machine. An untrained operator exposes himself and bystanders to possible serious injury or death. If the elderly are assisting with farm work, their physical limitations need to be recognized and accommodated.

SAFETY SIGNS

1. Keep safety signs clean and legible at all times.
2. Replace safety signs that are missing or have become illegible.
3. Replaced parts that displayed a safety sign should also display the current sign.
4. Safety signs are available from your authorized Distributor or Dealer Parts Department or the factory.

How to Install Safety Signs:

- Be sure that the installation area is clean and dry.
- Be sure temperature is above 50°F (10°C).
- Determine exact position before you remove the backing paper.
- Remove the smallest portion of the split backing paper.
- Align the sign over the specified area and carefully press the small portion with the exposed sticky backing in place.
- Slowly peel back the remaining paper and carefully smooth the remaining portion of the sign in place.
- Small air pockets can be pierced with a pin and smoothed out using the piece of sign backing paper.

PREPERATION

PREPARATION

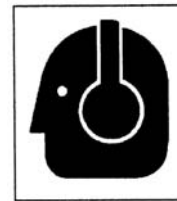
1. Never operate the Crop Circle[®] and auxiliary equipment until you have read and completely understand this manual, the auxiliary equipment Operator's Manual, and each of the Safety Messages found on the safety signs on the Bin and auxiliary equipment.

2. Personal protection equipment including hard hat, safety glasses, safety shoes, and gloves are recommended during assembly, installation, operation, adjustment, maintaining, repairing, removal, or moving the implement. Do not allow long hair, loose fitting clothing or jewellery to be around equipment.



3. **PROLONGED EXPOSURE TO LOUD NOISE MAY CAUSE PERMANENT HEARING LOSS!**

Motors or equipment attached can often be noisy enough to cause permanent, partial hearing loss. We recommend that you wear hearing protection on a full-time basis if the noise in the Operator's position exceeds 80db. Noise over 85db on a long-term basis can cause severe hearing loss. Noise over 90db adjacent to the Operator over a long-term basis may cause permanent, total hearing loss.



NOTE: Hearing loss from loud noise (from tractors, chain saws, radios, and other such sources close to the ear) is cumulative over a lifetime without hope of natural recovery.

4. Clear working area of debris, trash or hidden obstacles that might be hooked or snagged, causing injury, damage or tripping.
5. Operate only in daylight or good artificial light.
6. Be sure machine is properly anchored, adjusted and in good operating condition.
7. Ensure that all safety shielding and safety signs are properly installed and in good condition.
8. Before starting, give the machine a "once over" for any loose bolts, worn parts, cracks, leaks, frayed belts and make necessary repairs. Always follow maintenance instructions

OPERATING SAFETY

OPERATING SAFETY

1. Make sure that anyone who will be operating the Crop Circle[®] or working on or around the unit reads and understands all the operating, maintenance and safety information in the operator's manual.
2. Keep all bystanders, especially children, away from the Crop Circle[®] when loading or unloading is being done, or when authorized personnel are carrying out maintenance work.
3. Do not enter the Crop Circle[®] during loading. This could result in you being buried in the falling material and suffocating.
4. Do not enter the Crop Circle[®] during unloading. You could be caught in the unloading machinery resulting in serious injury or death.
5. If you enter the Crop Circle[®], make sure that there is no possibility that either the loading or unloading auger could be started up. Lock out the power sources for the augers and have a responsible, trained person close at hand to keep unauthorized individuals away from the work area.
6. Establish a lock-out tag-out policy for the work site. Be sure all personnel are trained in and follow all procedures. Lock-out tag-out all power sources before entering Crop Circle[®] or working around loading/unloading equipment.
7. Enter the empty Crop Circle[®] with extreme caution and wear protective clothing, goggles for eye protection and a properly filtered respirator mask for lung protection. It is also good safety practice to connect a safety line to yourself and a secure attachment point outside the Crop Circle[®] before entering the enclosed area.
8. Do not enter the bin from the top loading hatch or the inspection manway at the bottom of the bin to break loose impacted, caked or bridged material. You could fall through the bridged material if you are trying to clear it from the top. Or have it cave in on you from the bottom. Either situation could result in you being buried in the falling material and suffocating.
9. If material is bridged or caked causing a blockage. Use a long pole, a length of board or a stick to break the material loose.
10. Review safety related items annually with all personnel who will operating, using or maintaining the Crop Circle[®].

MAINTENANCE SAFETY & LOCK-OUT TAG-OUT SAFETY

MAINTENANCE SAFETY

1. Good maintenance is your responsibility. Poor maintenance is an invitation to trouble.

2. Follow good shop practices.

- Keep service area clean and dry.
- Be sure electrical outlets and tools are properly grounded.
- Use adequate light for the job at hand.



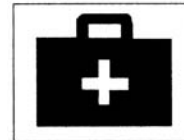
3. If you enter the Crop Circle[®], make sure that there is no possibility that either the loading or unloading auger could be started up. Lock out the power sources for the augers and have a responsible, trained person close at hand to keep unauthorized individuals away from the work area.

4. Review safety related items annually with all personnel who will be operating, using or maintaining the Cone.

5. Enter the empty Crop Circle[®] with extreme caution and wear protective clothing, goggles for eye protection and a properly filtered respirator mask for lung protection. It is also good safety practice to connect a safety line to yourself and a secure attachment point outside the Crop Circle[®] before entering the enclosed area.

6. Use personal protection devices such as eye, hand, breathing and hearing protectors, when performing any service or maintenance work.

7. A fire extinguisher and first aid kit should be kept readily accessible while performing maintenance on this equipment.



8. Periodically tighten all bolts, nuts and screws to ensure the unit is in a safe condition.

9. When completing a maintenance or service function, make sure all safety shields and devices are installed before placing unit in service.

LOCK-OUT TAG-OUT SAFETY

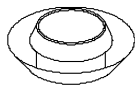
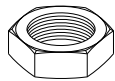
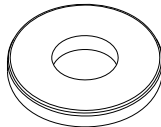
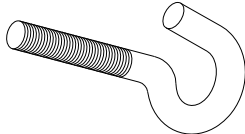
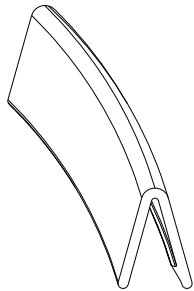
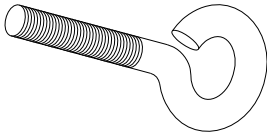
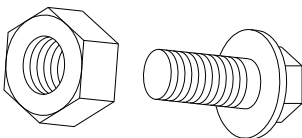
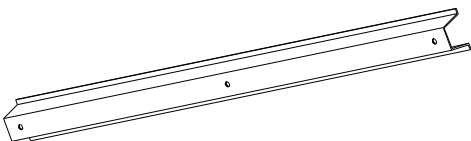

1. Establish a formal Lock-Out Tag-Out program for your operation.

2. Train all operators and service personnel before allowing them to work around the Crop Circle[®].

3. Provide tags at the work site and a sign-up sheet to record tag out details

Parts List

NOTE: Not all components listed are required for every Crop Circle®

Part#	Description	Illustration
1328006	Plastic Hole Plug	
2688010	Hex Nut 5/16" NC	
3948001	Flat Washer 5/16"	
217609	Tarp Hook 5/16" NC	
3209099	Metal Ring Edge Protector	
217711	Eye Bolt 3/8NC x 4" (.102m)	
999801	Bolt & Nut Kit 3/8NC x 3/4 (100 pcs)	
999805	Bolt & Nut Kit 3/8NC x 3/4 (500 pcs)	
999810	Bolt & Nut Kit 3/8NC x 3/4 (1,000 pcs)	
999811	Bolt & Nut Kit 3/8NC x 1 1/4 (100 pcs)	
999812	Bolt & Nut Kit 3/8NC x 1 1/4 (500 pcs)	
999813	Bolt & Nut Kit 3/8NC x 1 1/4 (1,000 pcs)	
217607	Stiffener 51" (1.295m)	
217608	Stiffener 75" (1.905m)	
150281	Rebar Peg 1/2 DIA. X 4 1/2 X 16 1/2 (.130m DIA. X .114m x .419m)	

REQUIRED TOOLS FOR ASSEMBLY

Hard Hat



Impact Wrench or Speed Wrench



7/16", 1/2", 9/16", 11/16" Wrenches



7/16", 1/2", 9/16", 11/16" Sockets



Hammer



Hearing Protection



Aligning Bars



Work Gloves



Safety Glasses



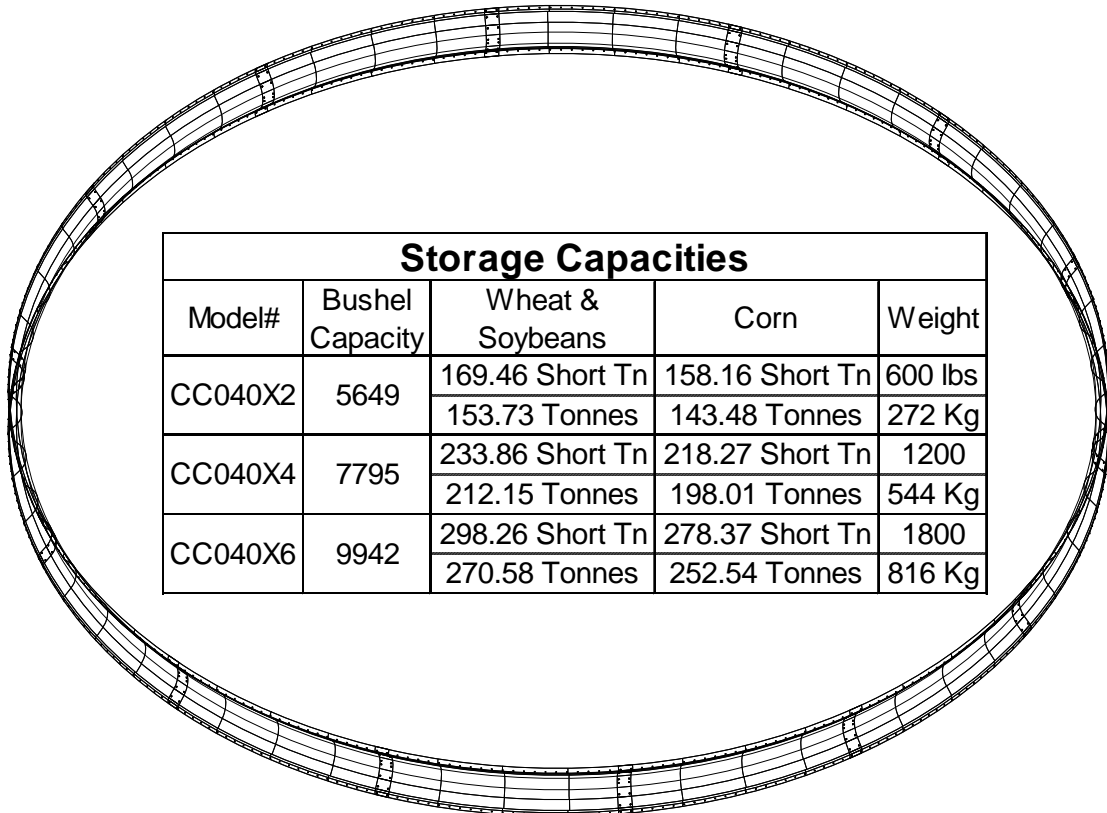
Steel Toe Work Boots



40' (12.192m) Crop Circle (40'-3 1/16" (12.27m) Actual Diameter)

PARTS LIST		Height	CC040X2	CC040X4	CC040X6
		Model #	2' (.610m)	4' (1.219m)	6' (1.829m)
Part#	Description	Qty.	Qty.	Qty.	Qty.
217532-22	Panel Crop Circle 25H 40'	10	21	32	
217532-22CD	Crop Circle Decaled Panel 40'D	1	1	1	
999801	Bolt & Nut Kit 3/8NC x 3/4 (100 pcs)	2	0	3	
999805	Bolt & Nut Kit 3/8NC x 3/4 (500 pcs)	0	1	1	
999811	Bolt & Nut Kit 3/8NC x 1 1/4 (100 pcs)	1	2	3	
150281	Rebar Peg 1/2" DIA. X 4 1/2" x 16 1/2" (.013m x .114m x .419m)	5	0	0	
217711	Eyebolt 3/8 X 4" (.102m)	5	0	0	
217607	Stiffener Crop Circle 51" (1.295m)	0	5	10	
CC040K	40' (12.192m) Crop Circle Hardware Kit	1	1	1	

CC040K - 40' (12.192m) Crop Circle Hardware Kit		
Part#	Description	Qty.
1328006	Plastic Hole Plug	750
21-23	Crop Circle Erection Manual	1
217609	Tarp Hook 5/16" NC	57
2688010	Hex Nut 5/16" NC	114
3209099	Metal Ring Edge Protector	6
3948001	Flat Washer 5/16"	114

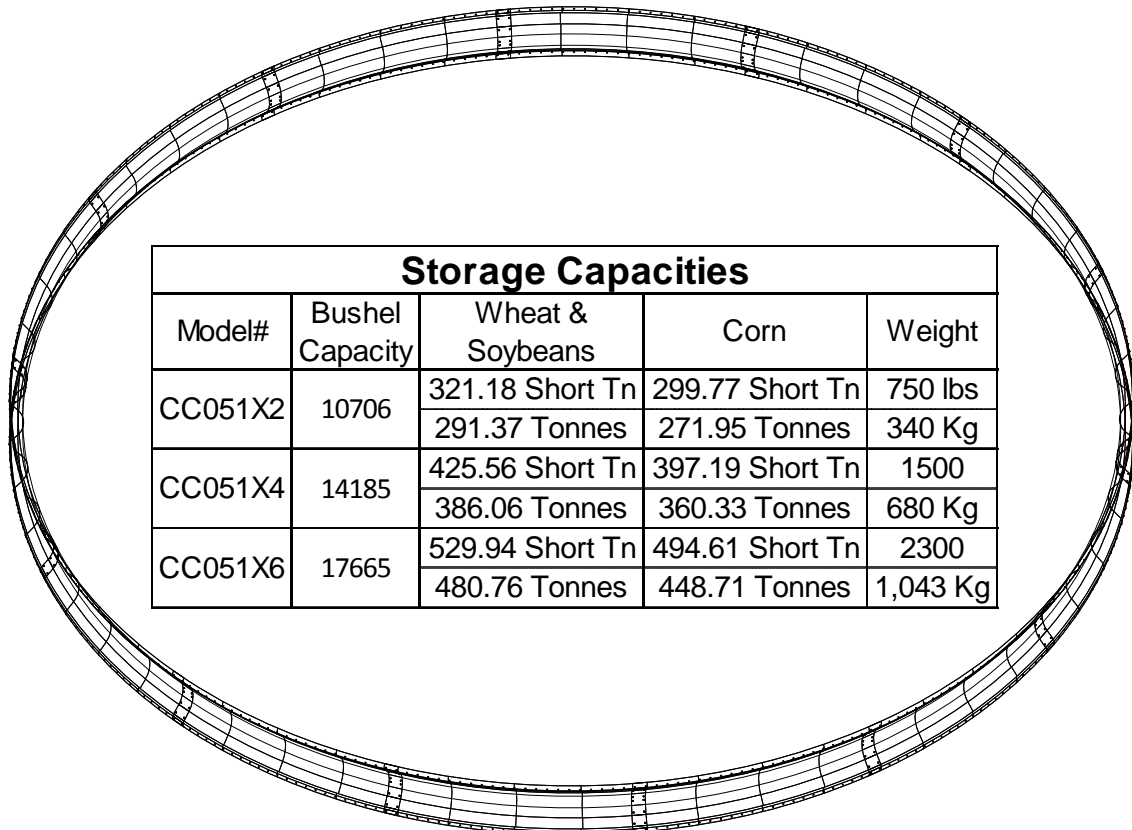


Storage Capacities				
Model#	Bushel Capacity	Wheat & Soybeans	Corn	Weight
CC040X2	5649	169.46 Short Tn	158.16 Short Tn	600 lbs
		153.73 Tonnes	143.48 Tonnes	272 Kg
CC040X4	7795	233.86 Short Tn	218.27 Short Tn	1200
		212.15 Tonnes	198.01 Tonnes	544 Kg
CC040X6	9942	298.26 Short Tn	278.37 Short Tn	1800
		270.58 Tonnes	252.54 Tonnes	816 Kg

51' (15.545m) Crop Circle (51'-3" (15.621m) Actual Diameter)

PARTS LIST		Height	CC051X2	CC051X4	CC051X6
		Model #	2' (.610m)	4' (1.219m)	6' (1.829m)
Part#	Description	Qty.	Qty.	Qty.	Qty.
217535-22	Panel Crop Circle 25H 51'	13	27	41	
217535-22CD	Crop Circle Decaled Panel 51'D	1	1	1	
999801	Bolt & Nut Kit 3/8NC x 3/4 (100 pcs)	2	2	0	
999805	Bolt & Nut Kit 3/8NC x 3/4 (500 pcs)	0	1	2	
999811	Bolt & Nut Kit 3/8NC x 1 1/4 (100 pcs)	1	3	4	
150281	Rebar Peg 1/2" DIA. X 4 1/2" x 16 1/2" (.013m x .114m x .419m)	7	0	0	
217711	Eyebolt 3/8 X 4" (.102m)	7	0	0	
217607	Stiffener Crop Circle 51" (1.295m)	0	6	12	
CC051K	51' (15.545m) Crop Circle Hardware Kit	1	1	1	

CC051K - 51' (15.545m) Crop Circle Hardware Kit		
Part#	Description	Qty.
1328006	Plastic Hole Plug	1000
21-23	Crop Circle Erection Manual	1
217609	Tarp Hook 5/16" NC	77
2688010	Hex Nut 5/16" NC	154
3209099	Metal Ring Edge Protector	7
3948001	Flat Washer 5/16"	154

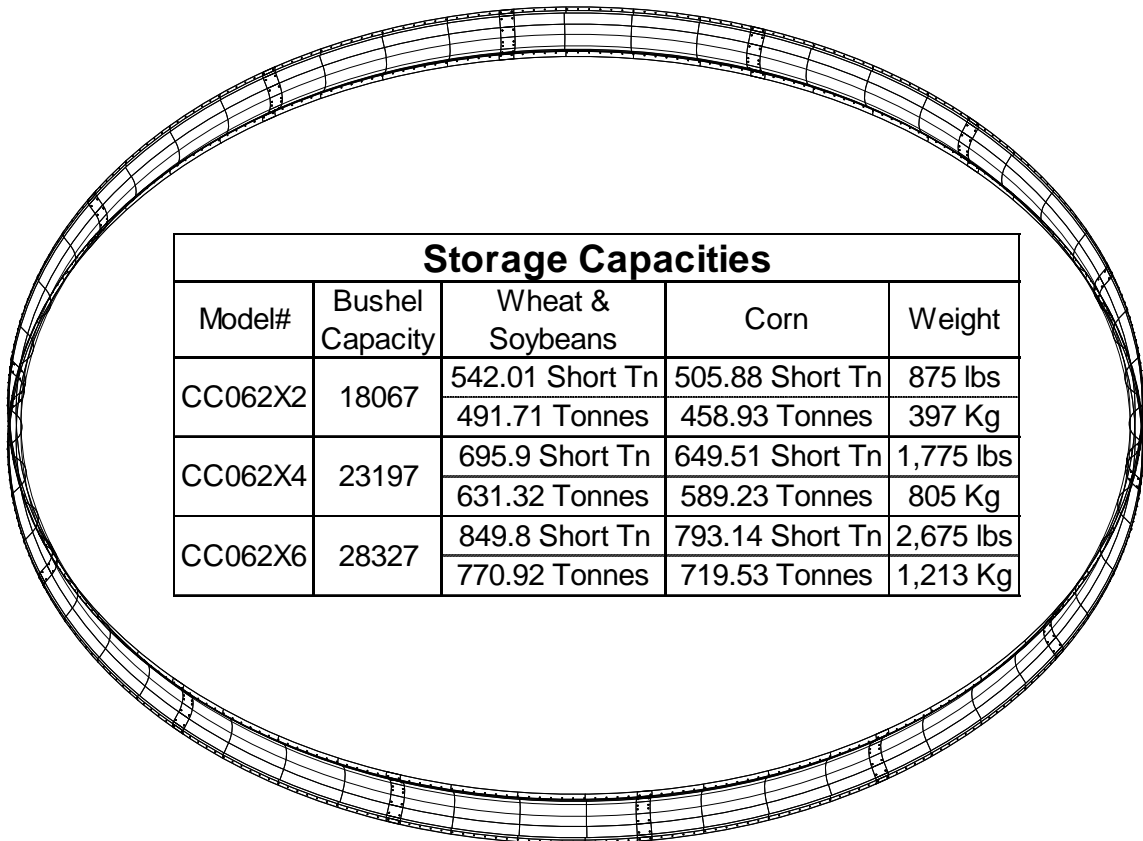


Storage Capacities				
Model#	Bushel Capacity	Wheat & Soybeans	Corn	Weight
CC051X2	10706	321.18 Short Tn	299.77 Short Tn	750 lbs
		291.37 Tonnes	271.95 Tonnes	340 Kg
CC051X4	14185	425.56 Short Tn	397.19 Short Tn	1500
		386.06 Tonnes	360.33 Tonnes	680 Kg
CC051X6	17665	529.94 Short Tn	494.61 Short Tn	2300
		480.76 Tonnes	448.71 Tonnes	1,043 Kg

62' (18.898m) Crop Circle (62'-2 3/4" (18.968m) Actual Diameter)

PARTS LIST		Height	CC062X2	CC062X4	CC062X6
		Model #	2' (.610m)	4' (1.219m)	6' (1.829m)
Part#	Description	Qty.	Qty.	Qty.	Qty.
217536-22	Panel Crop Circle 25H 60' (22GA)	16	33	50	
217536-22CD	Crop Circle Decaled Panel 62'D	1	1	1	
999801	Bolt & Nut Kit 3/8NC x 3/4 (100 pcs)	3	4	2	
999805	Bolt & Nut Kit 3/8NC x 3/4 (500 pcs)	0	1	2	
999811	Bolt & Nut Kit 3/8NC x 1 1/4 (100 pcs)	1	3	4	
150281	Rebar Peg 1/2" DIA. X 4 1/2" x 16 1/2" (.013m x .114m x .419m)	8	0	0	
217711	Eyebolt 3/8 X 4" (.102m)	8	0	0	
217607	Stiffener Crop Circle 51" (1.295m)	0	7	14	
CC062K	62' (18.898m) Crop Circle Hardware Kit	1	1	1	

CC062K - 62' (18.898m) Crop Circle Hardware Kit		
Part#	Description	Qty.
1328006	Plastic Hole Plug	1200
21-23	Crop Circle Erection Manual	1
217609	Tarp Hook 5/16" NC	91
2688010	Hex Nut 5/16" NC	182
3209099	Metal Ring Edge Protector	8
3948001	Flat Washer 5/16"	182

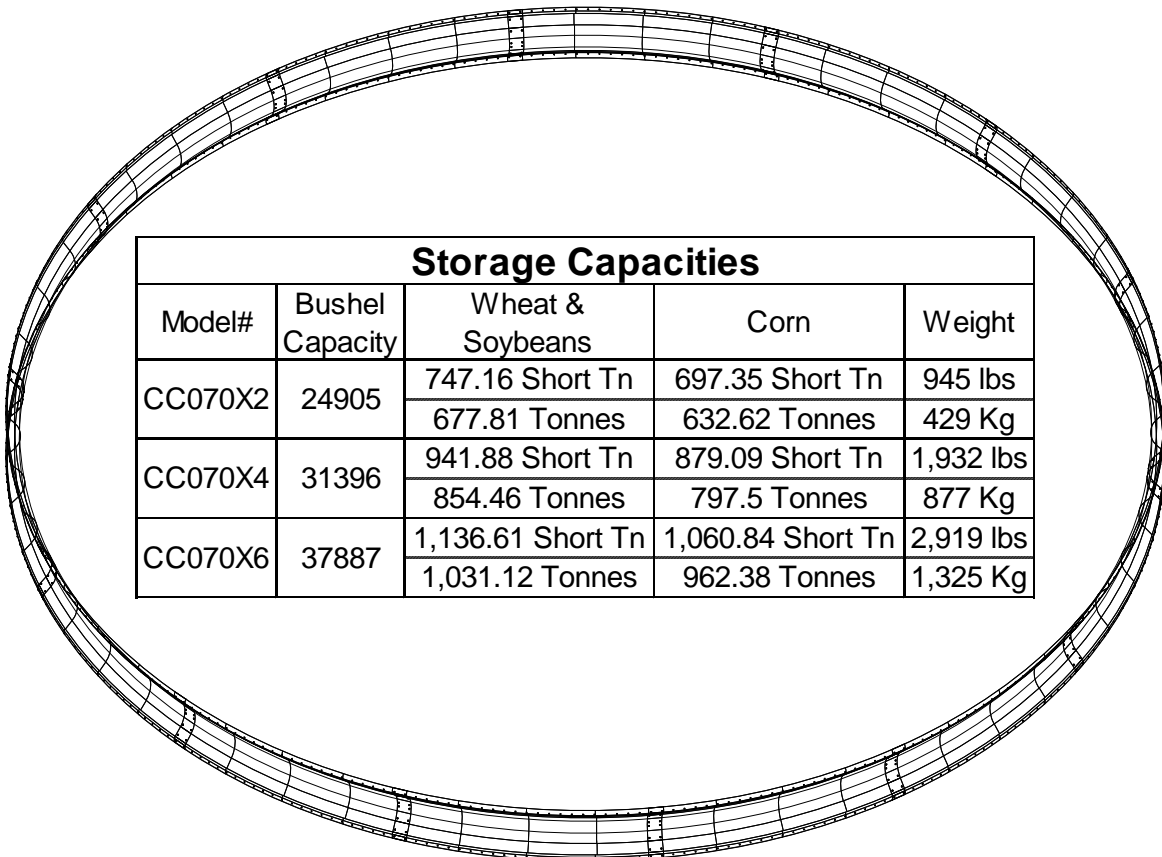


Storage Capacities				
Model#	Bushel Capacity	Wheat & Soybeans	Corn	Weight
CC062X2	18067	542.01 Short Tn	505.88 Short Tn	875 lbs
		491.71 Tonnes	458.93 Tonnes	397 Kg
CC062X4	23197	695.9 Short Tn	649.51 Short Tn	1,775 lbs
		631.32 Tonnes	589.23 Tonnes	805 Kg
CC062X6	28327	849.8 Short Tn	793.14 Short Tn	2,675 lbs
		770.92 Tonnes	719.53 Tonnes	1,213 Kg

70' (21.336m) Crop Circle (70'-0" (21.336m) Actual Diameter)

PARTS LIST		Height Model #	CC070X2	CC070X4	CC070X6
			2' (.610m)	4' (1.219m)	6' (1.829m)
Part#	Description	Qty.	Qty.	Qty.	
217538-22	Panel Crop Circle 25H 70' (22GA)	18	37	56	
217538-22CD	Crop Circle Decaled Panel 70'D	1	1	1	
999801	Bolt & Nut Kit 3/8NC x 3/4 (100 pcs)	4	3	3	
999805	Bolt & Nut Kit 3/8NC x 3/4 (500 pcs)	0	1	2	
999811	Bolt & Nut Kit 3/8NC x 1 1/4 (100 pcs)	0	3	1	
150281	Rebar Peg 1/2" DIA. X 4 1/2" x 16 1/2" (.013m x .114m x .419m)	9	0	0	
217711	Eyebolt 3/8 X 4" (.102m)	9	0	0	
217607	Stiffener Crop Circle 51" (1.295m)	0	8	16	
CC070K	70' (21.336m) Crop Circle Hardware Kit	1	1	1	

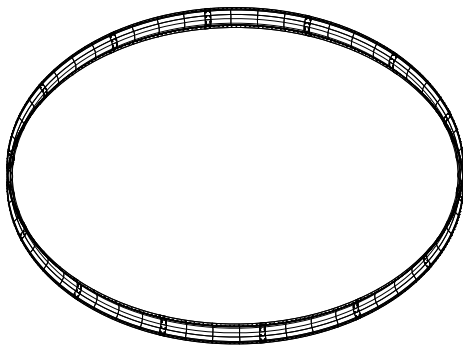
CC070K - 70' (21.336m) Crop Circle Hardware Kit		
Part#	Description	Qty.
1328006	Plastic Hole Plug	1000
21-23	Crop Circle Erection Manual	1
217609	Tarp Hook 5/16" NC	101
2688010	Hex Nut 5/16" NC	202
3209099	Metal Ring Edge Protector	10
3948001	Flat Washer 5/16"	202



Storage Capacities				
Model#	Bushel Capacity	Wheat & Soybeans	Corn	Weight
CC070X2	24905	747.16 Short Tn	697.35 Short Tn	945 lbs
		677.81 Tonnes	632.62 Tonnes	429 Kg
CC070X4	31396	941.88 Short Tn	879.09 Short Tn	1,932 lbs
		854.46 Tonnes	797.5 Tonnes	877 Kg
CC070X6	37887	1,136.61 Short Tn	1,060.84 Short Tn	2,919 lbs
		1,031.12 Tonnes	962.38 Tonnes	1,325 Kg

77' (23.470m) Crop Circle (76'-10 1/2" (23.432m) Actual Diameter)

PARTS LIST		Height	CC077X2	CC077X4	CC077X6	CC077X8
		Model #	2' (.610m)	4' (1.219m)	6' (1.829m)	8' (2.438m)
Part#	Description	Qty.	Qty.	Qty.	Qty.	
217541-22	Panel Crop Circle 25H 77' (22GA)	20	41	41	41	
217541-22CD	Crop Circle Decaled Panel 77'D	1	1	1	1	
217541-20	Panel Crop Circle 25H 75' (20GA)	0	0	21	21	
217541-18	Panel Crop Circle 25H 75' (18GA)	0	0	0	21	
999801	Bolt & Nut Kit 3/8NC x 3/4 (100 pcs)	5	2	1	0	
999805	Bolt & Nut Kit 3/8NC x 3/4 (500 pcs)	0	2	0	1	
999870	Bolt & Nut Kit 3/8NC x 3/4 (750 pcs)	0	0	1	2	
999811	Bolt & Nut Kit 3/8NC x 1 1/4 (100 pcs)	2	4	1	2	
999812	Bolt & Nut Kit 3/8NC x 1 1/4 (500 pcs)	0	0	1	1	
150281	Rebar Peg 1/2" DIA. X 4 1/2" x 16 1/2" (.013m x .114m x .419m)	10	0	0	0	
217711	Eyebolt 3/8 X 4" (.102m)	10	0	0	0	
217607	Stiffener Crop Circle 51" (1.295m)	0	8	16	12	
217608	Stiffener Crop Circle 75" (1.905m)	0	0	0	12	
CC077K	77' (23.470m) Crop Circle Hardware Kit	1	1	1	1	



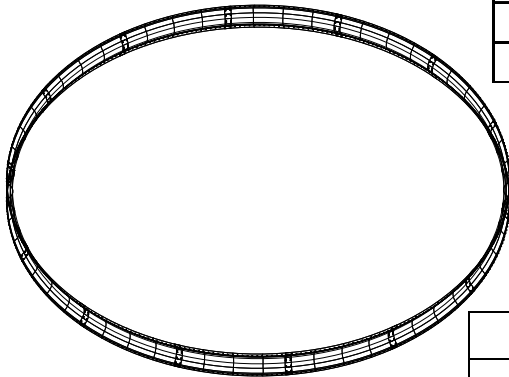
CC077K - 77' (23.470m) Crop Circle Hardware Kit		
Part#	Description	Qty.
1328006	Plastic Hole Plug	1700
21-23	Crop Circle Erection Manual	1
217609	Tarp Hook 5/16" NC	111
2688010	Hex Nut 5/16" NC	222
3209099	Metal Ring Edge Protector	10
3948001	Flat Washer 5/16"	222

Storage Capacities				
Model#	Bushel Capacity	Wheat & Soybeans	Corn	Weight
CC077X2	32219	966.56 Short Tn	902.13 Short Tn	1,050 lbs
		876.85 Tonnes	818.4 Tonnes	476 Kg
CC077X4	40047	1,201.42 Short Tn	1,121.33 Short Tn	2,150 lbs
		1,089.91 Tonnes	1,017.25 Tonnes	955 Kg
CC077X6	47876	1,436.28 Short Tn	1,340.52 Short Tn	3,450 lbs
		1,302.97 Tonnes	121,610. Tonnes	1,565 Kg
CC077X8	55704	1,671.13 Short Tn	1,559.72 Short Tn	5,125 lbs
		1,516.03 Tonnes	1,414.96 Tonnes	2,325 Kg

**90' (27.432m) Crop Circle
(90'-2" (27.483m) Actual Diameter)**

PARTS LIST		Height Model #	CC090X2	CC090X4	CC090X6	CC090X8
			2' (.610m)	4' (1.219m)	6' (1.829m)	8' (2.438m)
Part#	Description	Qty.	Qty.	Qty.	Qty.	
217544-22	Panel Crop Circle 25H 90'	24	49	49	79	
217544-22CD	Crop Circle Decaled Panel 90'D	1	1	1	1	
217544-20	Panel Crop Circle 25H 90'	0	0	25	25	
217544-18	Panel Crop Circle 25H 90'	0	0	0	25	
999801	Bolt & Nut Kit 3/8"NC x 3/4" (100 pcs)	3	0	2	4	
999805	Bolt & Nut Kit 3/8"NC x 3/4" (500 pcs)	0	1	0	1	
999870	Bolt & Nut Kit 3/8"NC x 3/4" (750 pcs)	0	0	2	2	
999811	Bolt & Nut Kit 3/8"NC x 1 1/4" (100 pcs)	1	4	1	3	
999812	Bolt & Nut Kit 3/8"NC x 1 1/4" (500 pcs)	0	0	1	1	
150281	Rebar Peg 1/2" DIA. X 4 1/2" x 16 1/2" (.013m x .114m x .419m)	12	0	1	0	
217711	Eyebolt 3/8" X 4" (.102m)	12	0	0	0	
217607	Stiffener Crop Circle 51" (1.295m)	0	10	20	15	
217608	Stiffener Crop Circle 75" (1.905m)	0	0	0	15	
CC090K	90' (27.432m) Crop Circle Hardware Kit	1	1	1	1	

CC090K - 90' (27.432m) Crop Circle Hardware Kit		
Part#	Description	Qty.
1328006	Plastic Hole Plug	1500
21-23	Crop Circle Erection Manual	1
217609	Tarp Hook 5/16" NC	132
2688010	Hex Nut 5/16" NC	264
3209099	Metal Ring Edge Protector	12
3948001	Flat Washer 5/16"	264

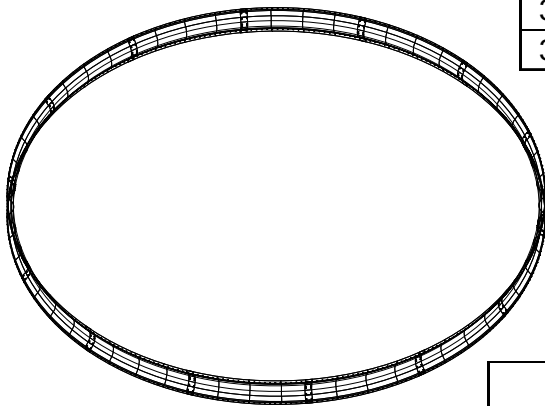


Storage Capacities				
Model#	Bushel Capacity	Wheat & Soybeans	Corn	Weight
CC090X2	50125	1,503.74 Short Tn	1,403.49 Short Tn	1,239 lbs
		1,364.17 Tonnes	1,503.74 Tonnes	563 Kg
CC090X4	60894	1,826.83 Short Tn	1,705.04 Short Tn	2,530 lbs
		1,657.27 Tonnes	1,705.04 Tonnes	1,148 Kg
CC090X6	71644	2,149.91 Short Tn	2,006.59 Short Tn	4,033 lbs
		1,950.00 Tonnes	1,820.00 Tonnes	1,830 Kg
CC090X8	82433	2,473.00 Short Tn	2,308.14 Short Tn	6,064 lbs
		2,244.00 Tonnes	2,094.00 Tonnes	2,751 Kg

105' (32.004m) Crop Circle (105'-0" (32.004m) Actual Diameter)

PARTS LIST		Height Model #	CC105X2	CC105X4	CC105X6	CC105X8
			2' (.610m)	4' (1.219m)	6' (1.829m)	8' (2.438m)
Part#	Description	Qty.	Qty.	Qty.	Qty.	
217546-22	Panel Crop Circle 25H 105'	28	57	57	57	
217546-22CD	Crop Circle Decaled Panel 105'D	1	1	1	1	
217546-18	Panel Crop Circle 25H 105'	0	0	29	58	
999801	Bolt & Nut Kit 3/8"NC x 3/4" (100 pcs)	3	1	0	3	
999805	Bolt & Nut Kit 3/8"NC x 3/4" (500 pcs)	0	2	1	2	
999870	Bolt & Nut Kit 3/8"NC x 3/4" (750 pcs)	0	1	2	2	
999811	Bolt & Nut Kit 3/8"NC x 1 1/4" (100 pcs)	1	2	2		
999812	Bolt & Nut Kit 3/8"NC x 1 1/4" (500 pcs)		1	1	2	
150281	Rebar Peg 1/2" DIA. X 4 1/2" x 16 1/2" (.013m x .114m x .419m)	14	0	0	0	
217711	Eyebolt 3/8" X 4" (.102m)	14	0	0	0	
217607	Stiffener Crop Circle 51" (1.295m)	0	11	22	17	
217608	Stiffener Crop Circle 75" (1.905m)	0	0	0	17	
CC105K	105' (32.004m) Crop Circle Hardware Kit	1	1	1	1	

CC105K - 105' (32.004m) Crop Circle Hardware Kit		
Part#	Description	Qty.
1328006	Plastic Hole Plug	1,500.00
21-23	Crop Circle Erection Manual	1
217609	Tarp Hook 5/16" NC	154
2688010	Hex Nut 5/16" NC	308
3209099	Metal Ring Edge Protector	14
3948001	Flat Washer 5/16"	308



Storage Capacities				
Model#	Bushel Capacity	Wheat & Soybeans	Corn	Weight
CC105X2	76753	2,302.59 Short Tn	2,149.08 Short Tn	1,427 lbs
		2088.87 Tonnes	1949.61 Tonnes	648 Kg
CC105X4	91357	2,740.72 Short Tn	2,558.01 Short Tn	2,940 lbs
		2486.34 Tonnes	2320.59 Tonnes	1,334 Kg
CC105X6	105962	3,178.86 Short Tn	2,966.94 Short Tn	5,209 lbs
		2883.81 Tonnes	2691.56 Tonnes	2,363 Kg
CC105X8	120567	3,617. Short Tn	3,375.86 Short Tn	7,566 lbs
		3281.28 Tonnes	3062.53 Tonnes	3,432 Kg

ASSEMBLY PROCEDURE

NOTE: Choose a site to build the Crop Circle[®] with a higher elevation than the surrounding area. This will ensure adequate drainage.

NOTE: The Crop Circle[®] must be round to ensure proper fit of Tarp. Behlen Industries and its suppliers will not be responsible for improper tarp fit due to out of round construction of the Crop Circle[®].

Marking Circumference (Figure 1)

- Insert pin in ground at desired center point of Crop Circle[®].
- Using rope that measures the radius of the Crop Circle[®], mark out circumference.

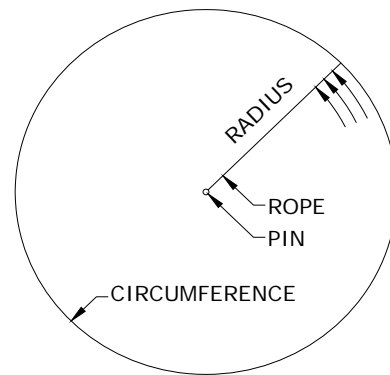


FIGURE 1

Lap Bolting Procedure (Figure 2)

- Place drift pins in #2 holes, align holes, and insert bolts into #1 holes.
- Remove drift pins from #2 holes, place in #3 holes, and insert bolts in #2 holes.
- Remove drift pins from #3 holes, place in #4 holes, and insert bolts in #3 holes.
- **Nuts should be temporarily finger-tightened only.**
- Once all bolts are in place, all fasteners can be tightened.

When performing final tightening of fasteners, turn bolt only.

The poly washer will compress and completely seal the bolt hole as long as the bolt is properly installed. Replace all torn or improperly sealed washers.

- Use Hole Plugs in all un-used top and bottom seam-line holes.

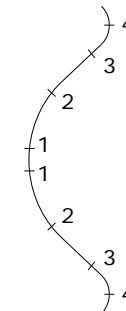


FIGURE 2

ASSEMBLY PROCEDURE

Panel Layout (Figure 3)

- Panels must be assembled in a clockwise manor. (Figure 3)

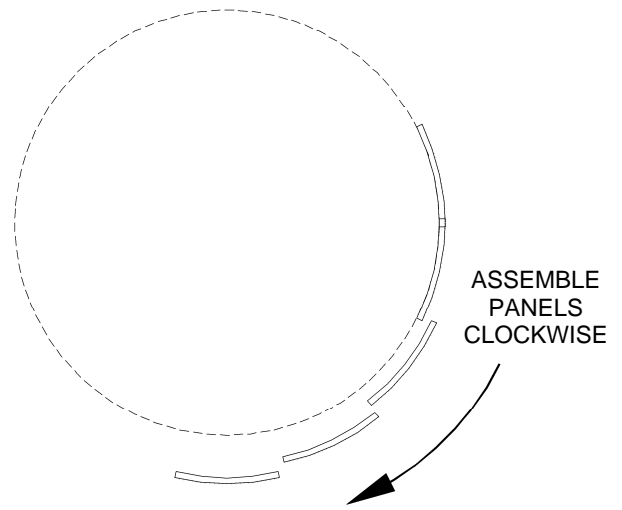


FIGURE 3

Panel Lapping (Figure 4)

- Painted end of panel must be bolted to the non-painted end of the next panel to ensure proper fit.
- Always place or lap the next panel overtop of the previous. This will ensure a proper and consistent fit.

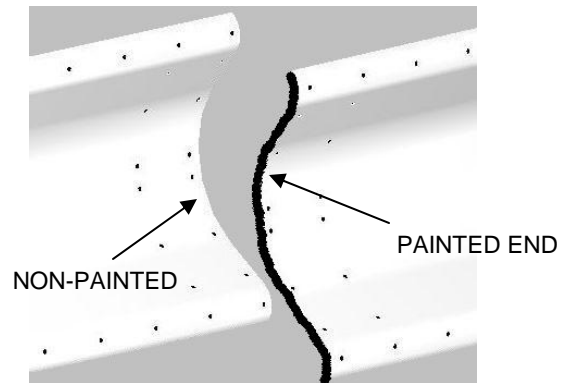


FIGURE 4

Attaching Second Ring (Figure 5)

- The second ring panels must be placed on the outside of the first ring to prevent water from entering the Crop Circle.
- The seam lines for the second ring must be offset from those on the first ring by at least 8 bolts holes.

OVERLAP SECOND RING PANELS TO THE OUTSIDE OF THE FIRST RING

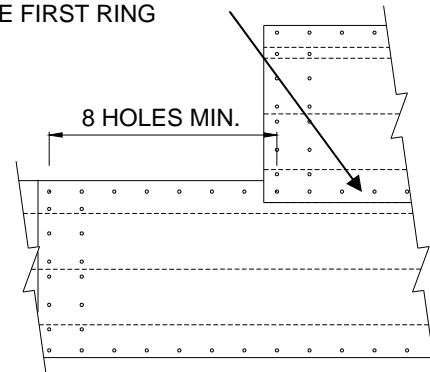


FIGURE 5

ASSEMBLY PROCEDURE

Anchoring the Crop Circle®

Setting Rebar & Eyebolt Anchors—

2' (.610m) Models (Figure 6 & 7)

- Secure Eye Bolts to the bottom seam-line (row of holes) of the Crop Circle®, evenly spaced.
- Drive Rebar rod into the ground, through the loop in an Eye Bolt, approx. .305m-.356m.
- Bend rebar rod over the top of the Eye Bolt to hold the Crop Circle® in place.



FIGURE 6

Setting Stiffeners— 4' (1.219m), 6' (1.829m), 8' (2.438m) Models (Figure 8,9,10)

- Set shortest Stiffener .610m into the ground as shown (Figure 6).
- Using existing bolts, attach Stiffeners to Crop Circle® Panels.
- Field-drill holes for stiffener channels where there are no existing holes.

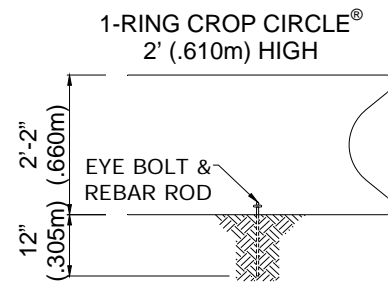


FIGURE 7

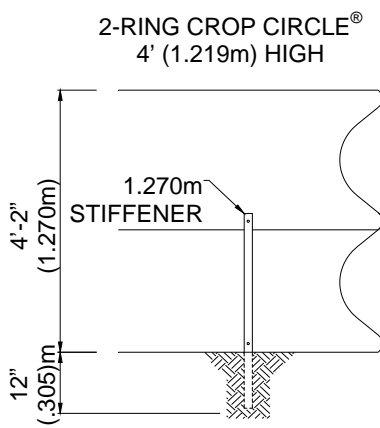


FIGURE 8

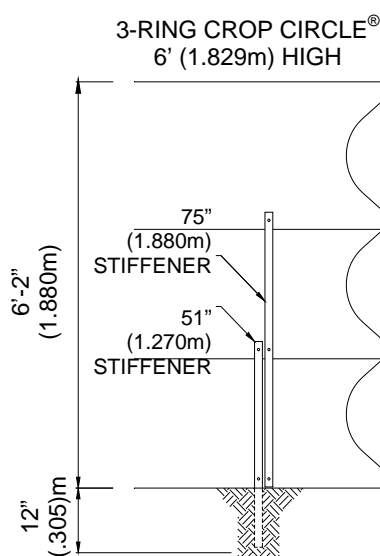


FIGURE 9

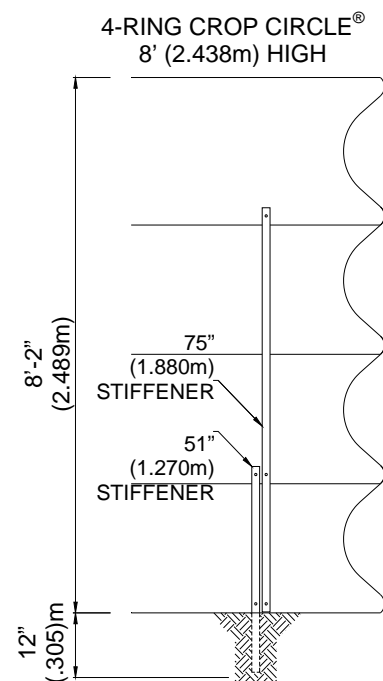


FIGURE 10

ASSEMBLY PROCEDURE

Edge Protector (Figure 11)

- Attach the Metal Ring Edge Protector around to entire top edge of the Crop Circle[®] as illustrated



FIGURE 11

Tarp Hooks (Figure 12)

- Install Tarp Hooks as required around the perimeter of the Crop Circle[®].

NOTE: Be sure to use flat washers when installing tarp hooks.

If Crop Circle is 2' (.610m) high install the Tarp Hooks at the bottom of the panel (closest to the ground).

If Crop Circle is 4' (1.219m), 6' (1.429m), or 8' (2.438m) high install the Tarp Hooks on the bottom of the top panel (the seam line between the top panel and second from top panel of the Crop Circle.)



FIGURE 12

NOTE:

If installing a tarp with ratchets and straps the tarp hooks do not need to be installed.

Plastic Hole Plugs

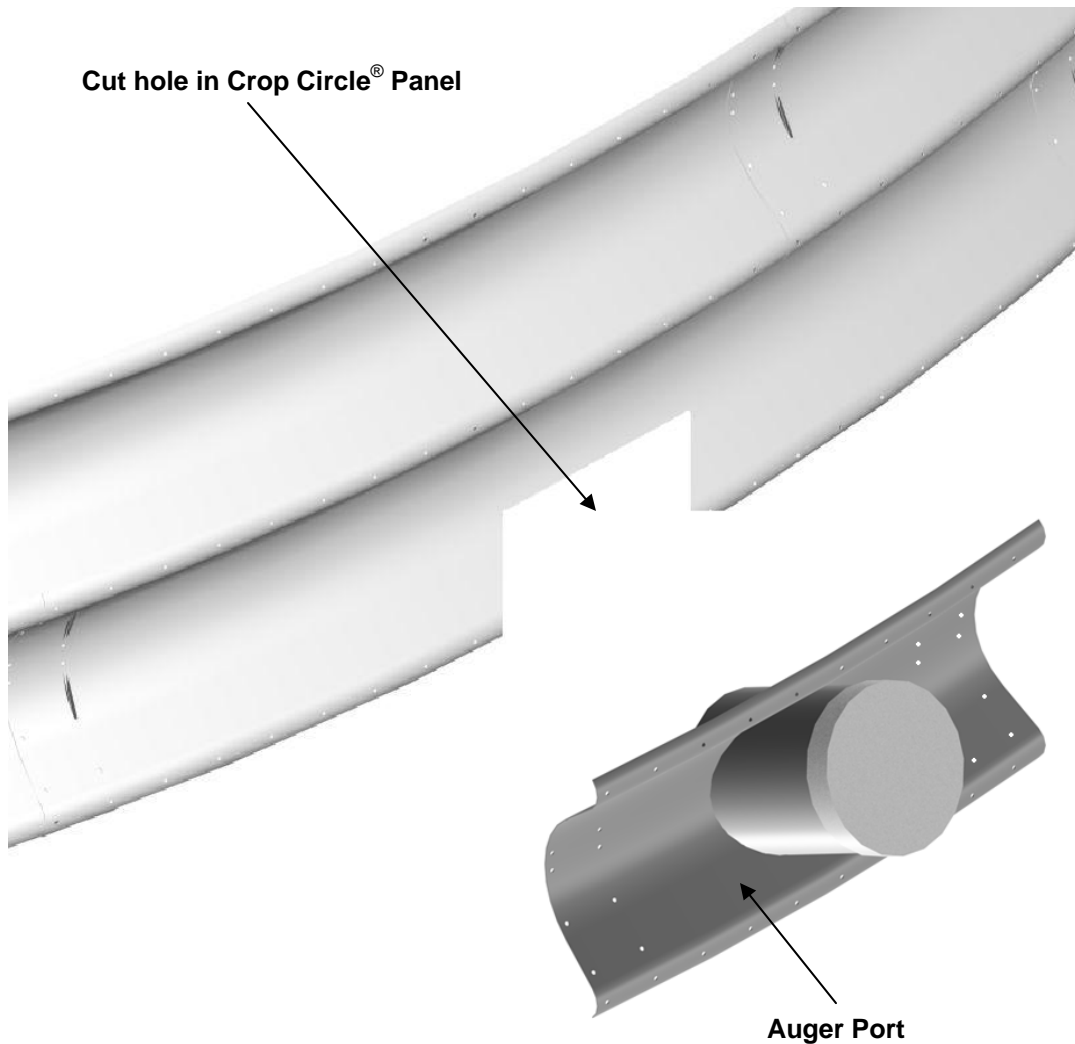
- Insert Plastic Hole Plugs in all holes that do not have bolts.

AUGER PORT

Auger Port Installation

Cut a hole the size of the Auger Port Tube in one of the Crop Circle® panels with a jigsaw or a torch.

Use the Auger Port Panel as a template and drill holes in the Crop Circle® panel where required. Bolt on the Auger Panel. (Note: All bolts must be used.)

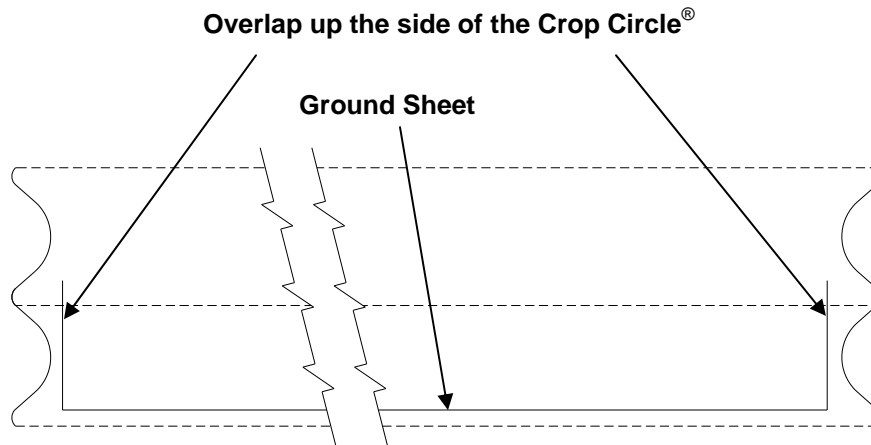


GROUND SHEET

Ground Sheet Installation

After the Crop Circle[®] has been fully built the ground sheet can be placed inside. Place the ground sheet in the center of the Crop Circle[®] and unfold it.

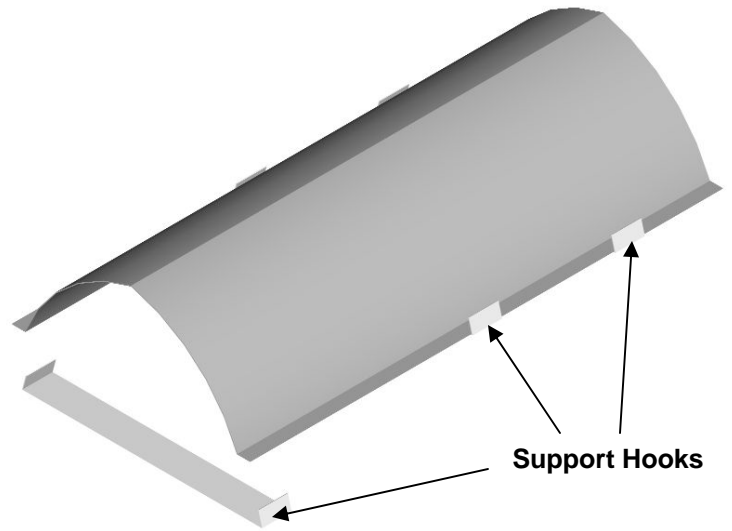
The ground sheet will be larger than the perimeter of the Crop Circle[®]. When filling the Crop Circle[®] with grain a person must hold the ground sheet up against the side of the Crop Circle[®] until the grain is high enough to hold it up.



AERATION DUCT

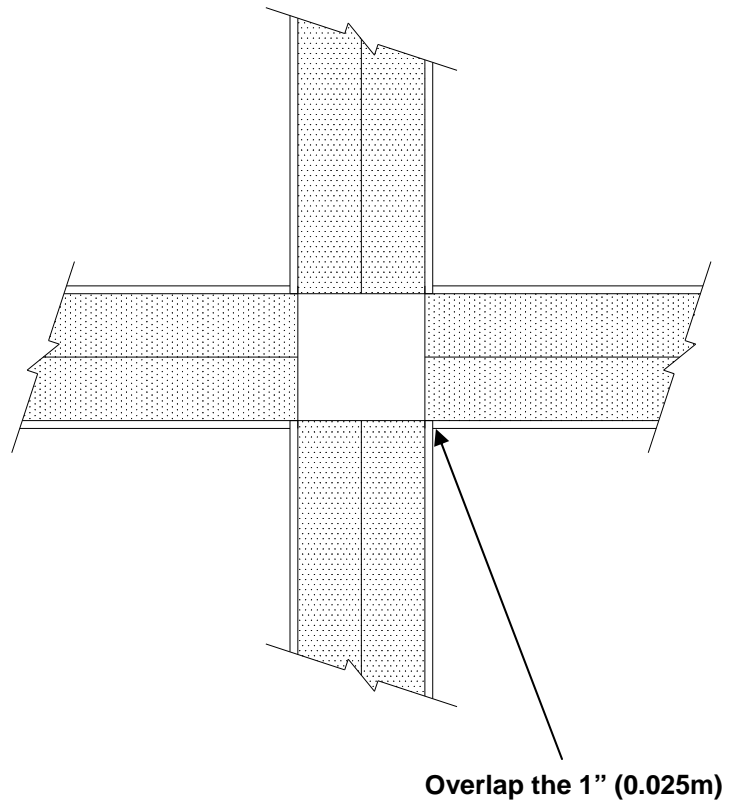
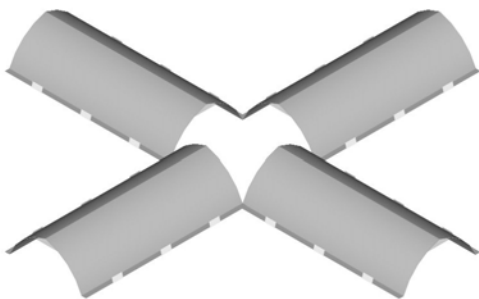
Step 1

The first step is to put the support hooks on. If the hooks are too loose place the duct on the floor and step on it as to bend the duct open for better hook fit. Place the hooks about 15cm from the ends and one in the center of the duct.



Step 2

The second step is to lay the ducts on the center of the Crop Circle[®] with the 1" (.025m) lips of each duct overlapping as shown in the illustration below. Face the perforations away from the centre. Sometimes you may need to use duct tape to keep the ducting in place.



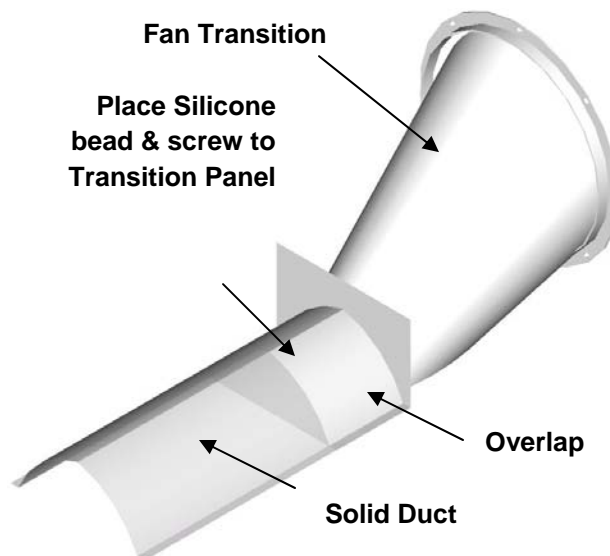
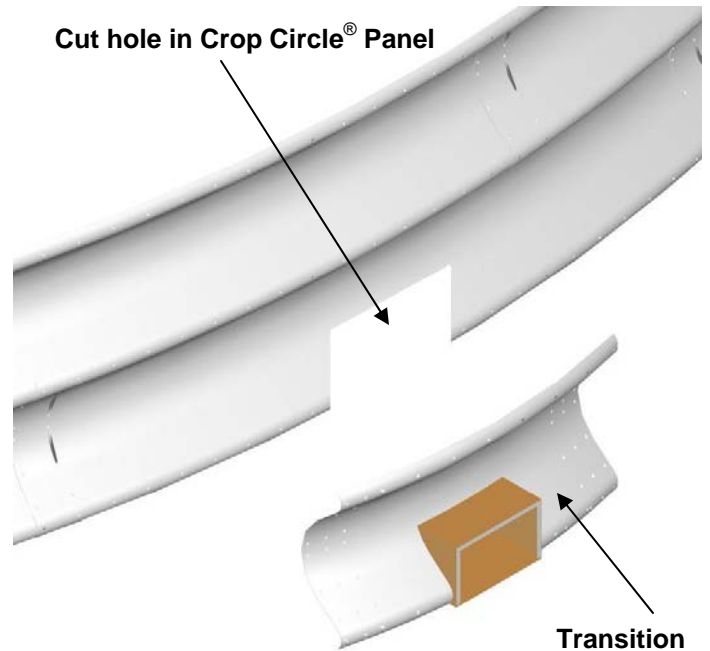
AERATION DUCT

Step 3

Cut a hole the size of the ducting in one of the Crop Circle® panels with a jigsaw or a torch. Use the Transition Panel as a template and drill holes in the Crop Circle® panel where required. Bolt on the Transition Panel. (Note: All bolts must be used.)

Put a bead of silicone on the flange of the Fan Transition then screw it to the Transition Panel using Tek screws.

CAUTION: Make sure that the transition is flat on the ground.



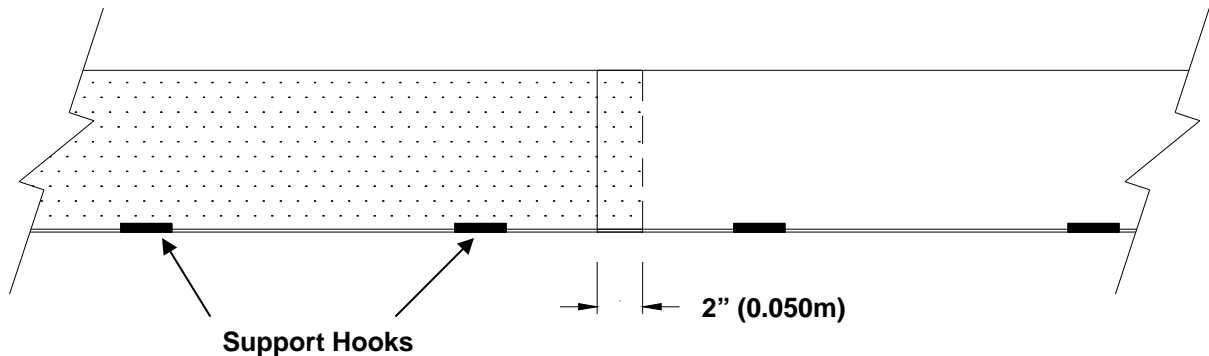
NOTE: Transition Panel and Support Hooks removed from drawing for clarity.

AERATION DUCT

Step 4

The fourth step is to take the solid duct, put on the support hooks as you did on the perforated ducts (Step 1), then lay it on top of the transition spout in the Crop Circle®. You can fasten it to the transition with screws or just leave it sit. The minimum overlap is 2" (0.050m).

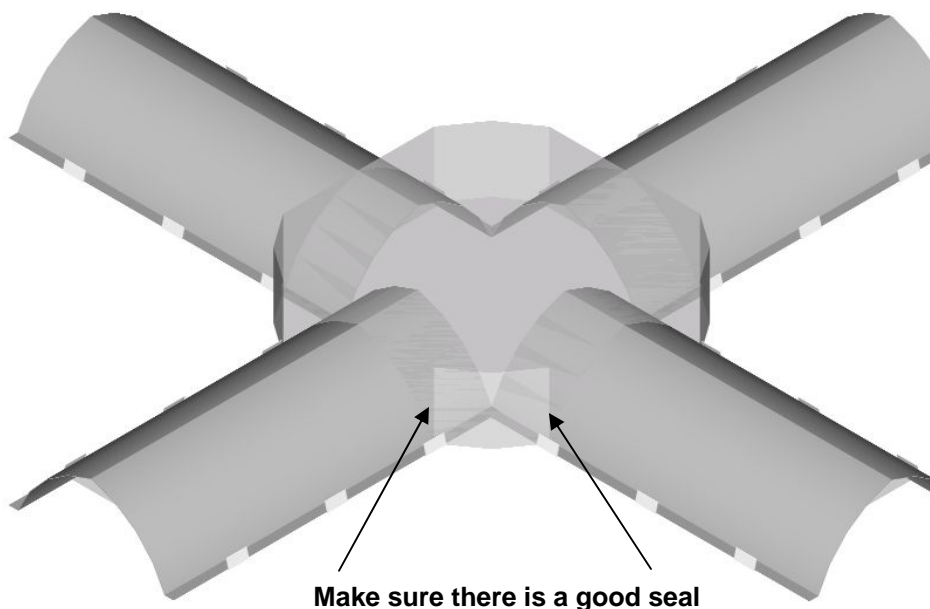
Then put the perforated duct from the system under the solid duct about 2" (0.050m).
CAUTION: Be sure that the sides of the lips sit flat on the ground.



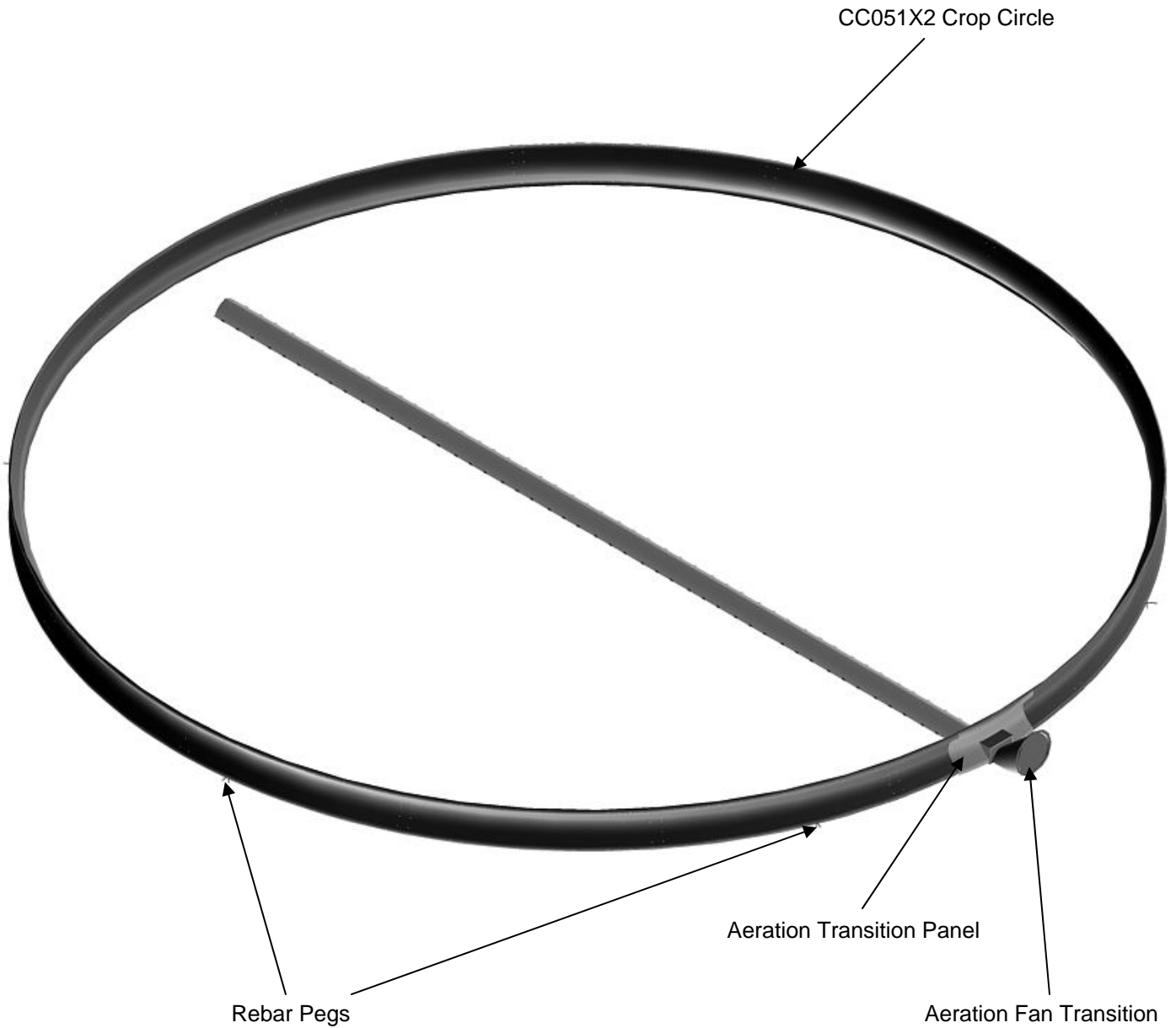
Step 5

This is the last step. The centre piece is to be placed over top of the four ducts connecting. Make sure the ducts are overlapping the 1" (0.020m) lip. Be sure the center piece is fitting properly. Sometimes it may be a good idea to put a few shovels of grain on the system before the auger is in full force.

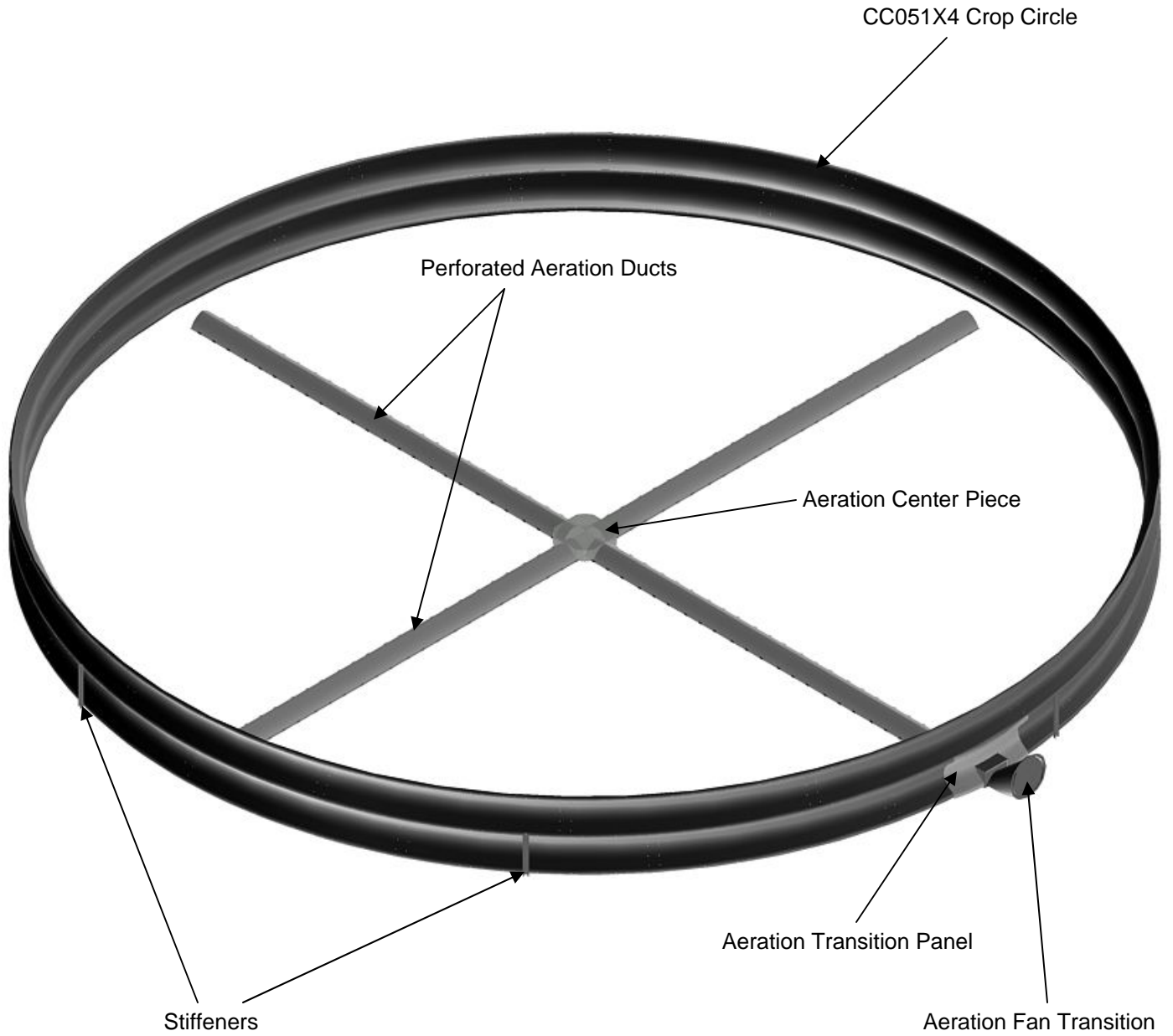
You may bend the centre piece to give a better fit. After this is done you may start filling the Crop Circle®. When the Crop Circle® is full shine into the duct with a flashlight to make sure it did not shift or collapse. If it did not shift or collapse you may bolt of the fan and start the aeration.



51' (15.545m) x 2' (.610m) Crop Circle Assembly with Single Row Aeration



51' (15.545m) x 4' (1.219m) Crop Circle Assembly with Cross Aeration



FILLING AND UNLOADING THE CROP CIRCLE

FILLING THE CROP CIRCLE®

Position the Auger so the discharge spout is located over the center of the Crop Circle.

This will allow the grain to pile evenly.



Be sure to follow all safety procedures for all equipment used to fill and unload the Crop Circle®.

UNLOADING THE CROP CIRCLE®

2' (.610m) & 4' (1.219m) Models

1. The unload auger can be inserted directly into the grain for removal.
2. Once grain has been removed from the entire perimeter of the Crop Circle® panels can be removed to allow the auger to be moved into the Crop Circle® to remove the remaining grain.

6' (1.829m), 8' (2.438m) Models

1. Due to the wall height a Grain Vac must be used to removed grain from the perimeter of the Crop Circle®
2. Once grain has been removed from the entire perimeter of the Crop Circle® panels can be removed to allow an auger to be moved into the Crop Circle® to remove the remaining grain.



Crop Circle® Panels can not be removed unless there is no grain in contact with the panels. If panels are unbolted when grain is against them the panels could swing out unpredictably causing serious injury or death.



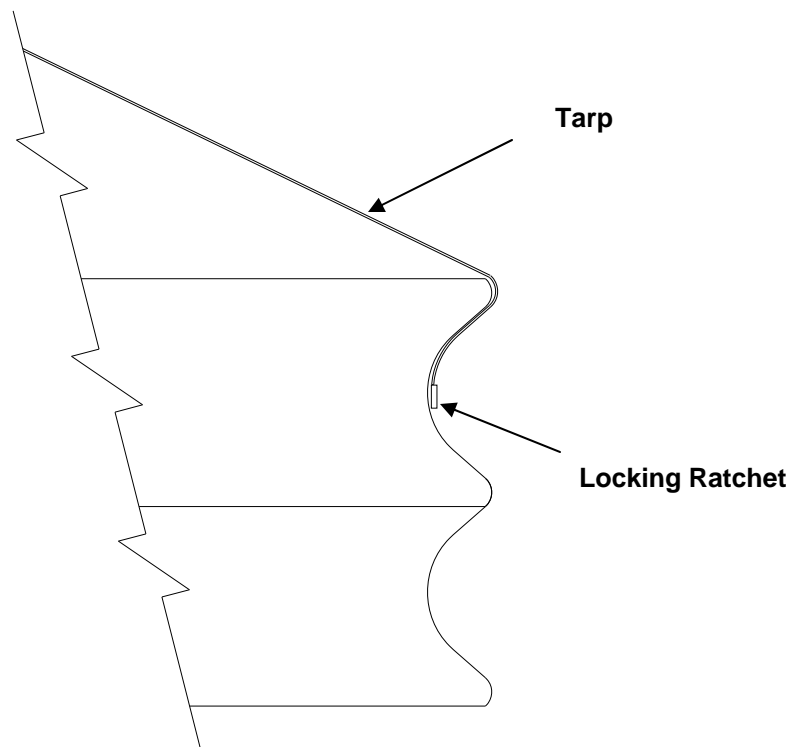
TARP INSTALLATION

Tarp Installation (Tarps with Locking Ratchet)

Place the tarp on top of the pile of grain by using a crane or loader on a tractor. Once the entire tarp is draped over the panels of the Crop Circle[®] it can be tightened down.

This is done by using the 3 ratchets located around the tarp. When tightened to tarp should be tight to the Crop Circle[®] panels.

NOTE: The Crop Circle[®] must be round to ensure proper fit of Tarp. Behlen Industries and its suppliers will not be responsible for improper tarp fit due to out of round construction of the Crop Circle[®].



Tarp Tightened to Crop Circle[®]



- Do not attempt to install tarp with winds higher than 9 MPH (15 km/h). The tarp could become airborne resulting in damage to machinery and/or personal injury.
- Suffocation could occur if entangled in the tarp. Handle tarps with care.