

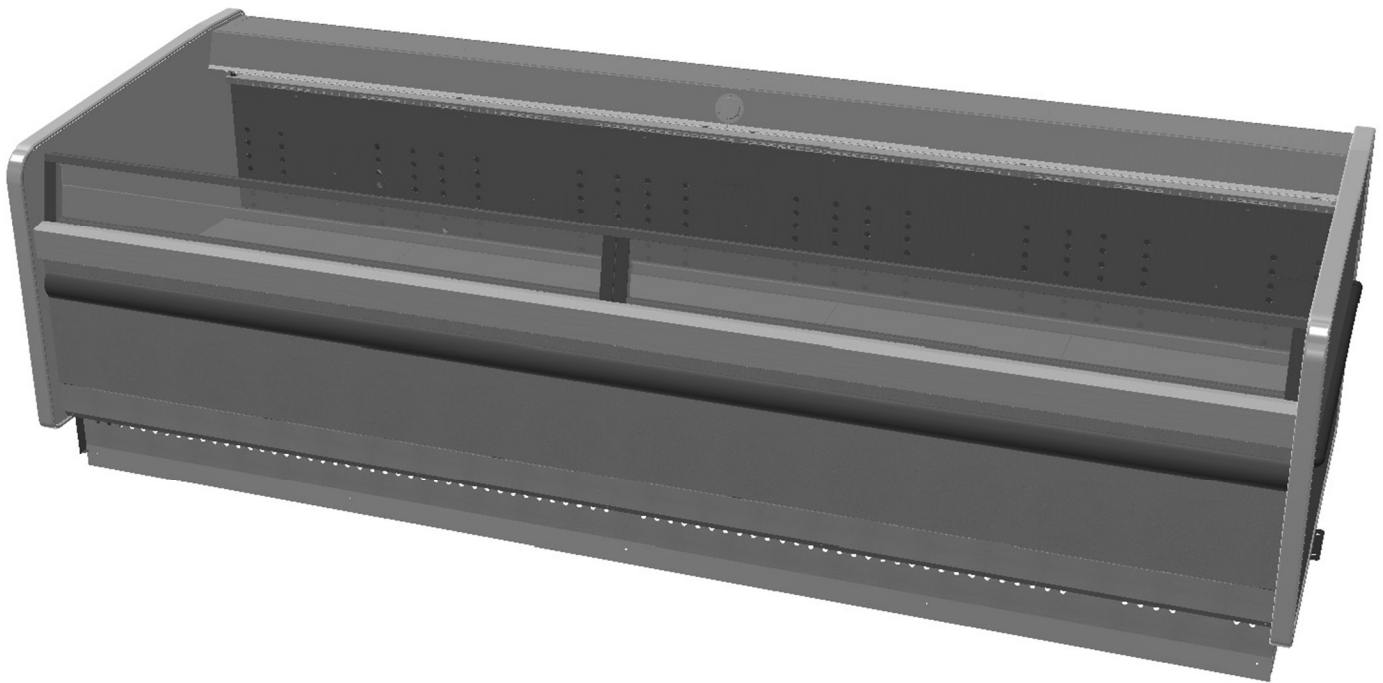


SINGLE-DECK DAIRY-DELI/MEAT CASES

CSM-EXA088 / CSM-EXA008 / CSM-EXA028

(H: 38", W: 42 1/4", L: 96 3/8") / (H: 38", W: 42 1/4", L: 120 1/2") / (H: 38", W: 42 1/4", L: 144 5/8")

INSTALLATION & SERVICE MANUAL REMOTE TYPE MERCHANDISER CASE



Activity Safety Precautions

In order to prevent any injuries to person, equipment and/or damage to the Hussmann Merchandiser Cases, sections requiring additional care to be undertaken will have one or all of the following safety reminders:



Red Safety Mark (Safety Mark A)

Extreme caution and care must be exercised when conducting this operation to ensure personal and equipment safety, and to prevent product damage.

Failure to exercise extreme caution may result in severe personal injury and/or equipment and/or product damage.



Yellow Safety Mark (Safety Mark B)

Caution and care should be exercised when conducting this operation to ensure personal and equipment safety, and to prevent product damage.

Failure to exercise caution may result in personal injury and/or equipment and/or product damage.



Hand Protection Required

Activities to be undertaken require finger and palm protection equipment to prevent personal injuries.

General Safety Precautions



Safety Equipment Required

Any installation where there is overhead work being conducted simultaneously where a Hussmann Case is being unloaded and/or set/aligned, proper safety equipment including headgear is required to ensure personal safety.

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1 Specifications

1.1 CSM-EXA088 (H: 38", L: 96 3/8") / CSM-EXA028 (H: 38", L: 144 5/8")

Model Name		CSM-EXA088			CSM-EXA008			CSM-EXA028		
General										
Application:		Medium Temperature (Dairy-Deli / Fresh Meat)			Medium Temperature (Dairy-Deli / Fresh Meat)			Medium Temperature (Dairy-Deli / Fresh Meat)		
Capacity (BTU/h/ft):		Parallel: 271; Conventional: 287			Parallel: 271; Conventional: 287			Parallel: 271; Conventional: 287		
DX	Discharge Air:	28.0°F (-2.2°C)			28.0°F (-2.2°C)			28.0°F (-2.2°C)		
	Evaporator Temp.:	23.0°F (-5.0°C)			23.0°F (-5.0°C)			23.0°F (-5.0°C)		
Glycol	Discharge Air:	26.0°F (-3.3°C)			26.0°F (-3.3°C)			26.0°F (-3.3°C)		
	Supply Temp.:	22.0°F (-5.5°C) @ 3.0 GPM			22.0°F (-5.5°C) @ 3.0 GPM			22.0°F (-5.5°C) @ 4.5 GPM		
CO2	Discharge Air:	28.0°F (-2.2°C)			28.0°F (-2.2°C)			28.0°F (-2.2°C)		
	Evaporator Temp.:	23.0°F (-5.0°C)			23.0°F (-5.0°C)			23.0°F (-5.0°C)		
Defrost (Off-cycle)		Medium Temperature			Medium Temperature			Medium Temperature		
Frequency (times per day):		4, once every 6 hours			4, once every 6 hours			4, once every 6 hours		
Termination Temperature:		50.0°F (10.00°C)			50.0°F (10.00°C)			50.0°F (10.00°C)		
Failsafe/Duration:		45 minutes (DX) / 60 minutes (Glycol) / 50 minutes (CO2)			45 minutes (DX) / 60 minutes (Glycol) / 50 minutes (CO2)			45 minutes (DX) / 60 minutes (Glycol) / 50 minutes (CO2)		
Electrical		1-phase 120V			1-phase 120V			1-phase 120V		
Anti-condensation Heater:		70W 0.61A			108W 0.95A			108W 0.95A		
Fan Motor:	Standard:	-			-			-		
	High Efficiency:	11W 0.22A			16.5W 0.33A			16.5W 0.33A		
Lights:	Exterior:	X Row of Lamps	-	-	X Row of Lamps	-	-	X Row of Lamps	-	-
	Interior:	Top Panel	-	-	Top Panel	-	-	Top Panel	-	-
		Handrail	-	-	Handrail	-	-	Handrail	-	-
		Shelves	-	-	Shelves	-	-	Shelves	-	-
	Total:	Standard	-	-	Standard	-	-	Standard	-	-
Components										
Anti-condensation Heater:		9FT4H12016400			9FT4H12016300			9FT4H12016300		
Fan Motor:	Standard:	-			-			-		
	High Efficiency:	SSCB12BREV1 x 2			SSCB12BREV1 x 3			SSCB12BREV1 x 3		
Fan Blade Pitch:		#109 x 2			#109 x 3			#109 x 3		
Illumination:		-			-			-		
Pipe Diameter:	DX:	Liquid 3/8", Suction 3/4"			Liquid 3/8", Suction 3/4"			Liquid 3/8", Suction 3/4"		
	Glycol:	Supply 1-1/8", Return 1-1/8"			Supply 1-1/8", Return 1-1/8"			Supply 1-1/8", Return 1-1/8"		
	CO2:	Liquid 3/8", Suction 3/8"			Liquid 3/8", Suction 3/8"					

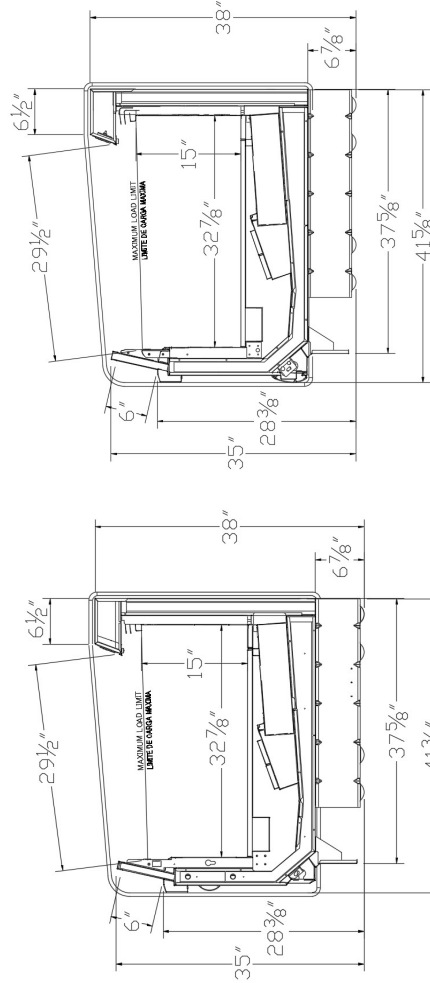
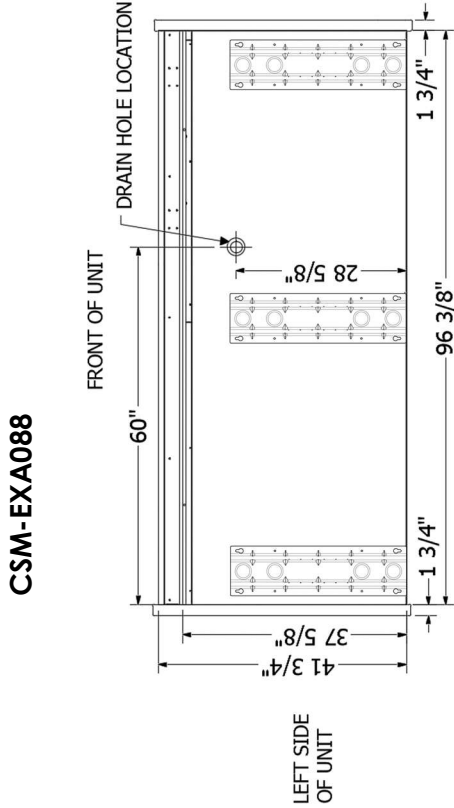
Model Name		CSM-EXA088	CSM-EXA008	CSM-EXA028
Measurements				
Outer Dimensions:		38" (H) × 42 1/4" (W) × 96 3/8" (L)	38" (H) × 42 1/4" (W) × 120 1/2" (L)	38" (H) × 42 1/4" (W) × 144 5/8" (L)
Open Space:		29.5"	29.5"	29.5"
Display Area:		19.0 sq.ft.	24.7 sq.ft	29.6 sq.ft
Effective Capacity:		23.8 cu.ft.	29.8 cu.ft.	35.7 cu.ft.
Shelf Dimensions:	N/A	-	-	-
Weight:		460.0 lbs (208.65k)	590.0 lbs (267.62k)	700.0 lbs (317.50k)
Waste Outlet Dimensions:		1 1/2"	1 1/2"	1 1/2"

- Standard Ambient Conditions: Indoor temperature 75°F (23.9°C), relative humidity 55%, wind speed under 39.4 fpm. All specifications are based upon temperature, humidity, and wind speed values equal to or less than Standard Ambient Conditions.
- Hussmann Merchandiser Cases described in this manual are designed for indoor use only.
- Hussmann Merchandiser Cases should not be exposed to direct sunlight.
- Fan Motors are High Efficiency-type (DC Fan Motors).
- Single Air Curtain Unit's Fan Motors must be replaced as soon as possible upon development of an issue in order to maintain optimum cooling performance and ensure merchandise quality.
- Performance Values based on Conventional System, not Parallel System.
- Performance Data based on NSF7.

2 Dimensions

2.1 External Dimensions

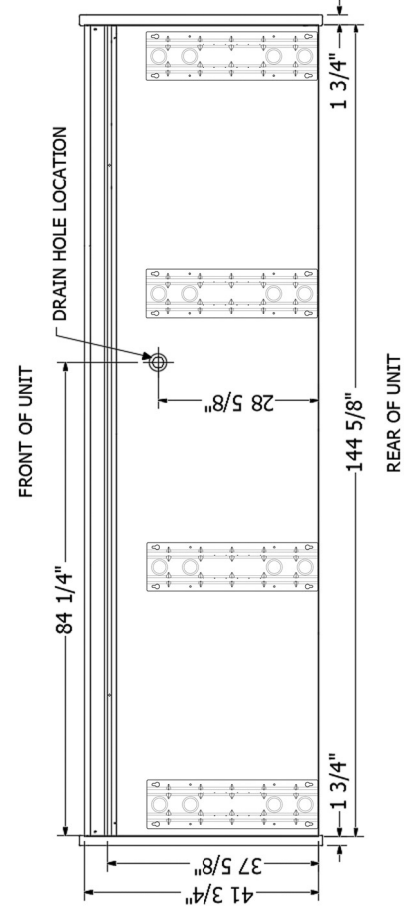
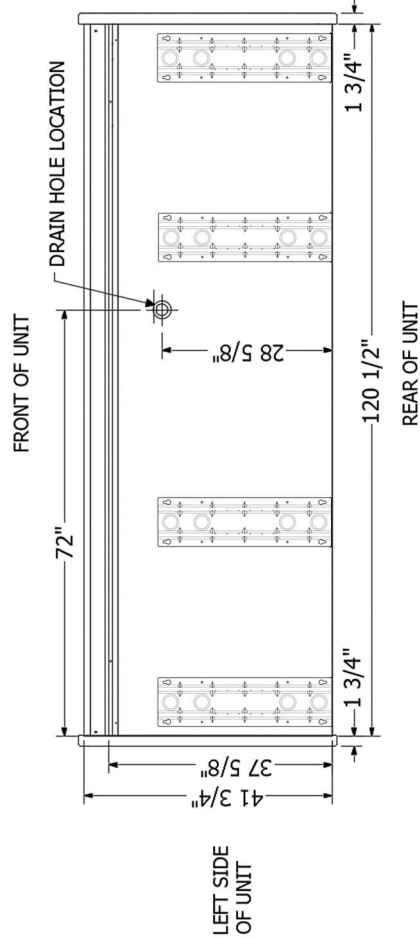
2.2 Footprint



Series G
Bottom Bumper

Series GC/GE
Upper Bumper

CSM-EXA028



3 Unloading and Lining-up Procedures

3.1 NSF Certification

The Hussmann Merchandiser Cases described in this manual are built to meet the requirements of American National Standard/NSF International Standard 7. Each Hussmann Merchandiser Case bears a nameplate identifying the type of application for which it was certified:

Type I Display Refrigerator/Freezer: Intended for use in an area where the environmental conditions are controlled and maintained so that the ambient temperature typically does not exceed 75°F.

3.2 Location

As noted above, the Hussmann Merchandiser Cases described in this manual are design for the display of products in interior spaces with climate control, with ambient conditions typically maintained below 75°F and 55% relative humidity. Proper Hussmann Merchandiser Case performance cannot be guaranteed when ambient temperature and/or humidity exceed this level.

Hussmann Merchandiser Cases should not be exposed to direct sunlight or other sources of heat.

Hussmann Merchandiser Cases should not be exposed to strong air currents, as these may disrupt the dual air curtains used to maintain proper temperature inside the merchandiser display area.

3.3 Shipping Damage

All Hussmann Merchandiser Cases and peripheral equipment should be examined for shipping damage prior to and during offloading. All Hussmann Merchandiser Cases and peripheral equipment are given a through outgoing inspection upon leaving our warehouse, and the carrier assumes responsibility for the safe arrival of our cases.

APPARENT DAMAGE: Any obvious loss or damage should be noted immediately at the time of receipt on the BOL (Bill of Lading) and signed by the carrier's agent (driver). Failure to do so may lead to rejection of the claim by the carrier.

CONCEALED DAMAGE: If damage that is not apparent during unloading is found after unpacking, retain all packing materials and submit a written request to the carrier for inspection within 15 days.

LOST ITEMS: Any claims related to lost or missing items must be made to Hussmann within 48 hours of receipt of equipment.

3.4 Unloading Instructions & Precautions



WARNING!

Hussmann Merchandiser Cases are heavy and bulky, and require at least 2 (**two**) people for unloading, moving, and installation.

Do not remove either of the 2 (two) Packing Plates from each Hussmann Merchandiser Case until the cases have been moved into place in the store lineup.

Do not walk on the top of the Hussmann Merchandiser Cases. Walking on the top of the Hussmann Merchandiser Case may lead to serious injury to yourself and others and/or damage to the case.

Do not place anything on the top of the Hussmann Merchandiser Case or use the top of any Hussmann Merchandiser Case for short- or long-term storage.

Recommended Practices for Unloading Hussmann Merchandiser Cases:

1. Do **NOT** use a Forklift to lift-up the Hussmann Merchandiser Case or remove from the trailer.
2. Use an appropriately rated J-Bar (Johnson Bar) to lift one end of the merchandiser.
3. Place an appropriately rated dolly under the base leg, lift the other side with the appropriately rated J-Bar.
4. Insert another appropriately rated dolly under that side.
5. Remove the Hussmann Merchandiser Case on the appropriately rated dollies out of the trailer and move to lineup location.
6. If moving the Hussmann Merchandiser Case to the lineup location via Forklift, exercise extreme caution so as to not incur any damages that may result from movement via Forklift (e.g. vibration due to excessive speed or hitting objects).

3.5 Aligning Cases



WARNING!

Husmann Merchandiser Cases are heavy and bulky, and require at least **2 (two)** people for unloading, moving, and installation.

Do not walk on the top of the Husmann Merchandiser Cases. Walking on the top of the Husmann Merchandiser Case may lead to serious injury to yourself and others and/or damage to the case.

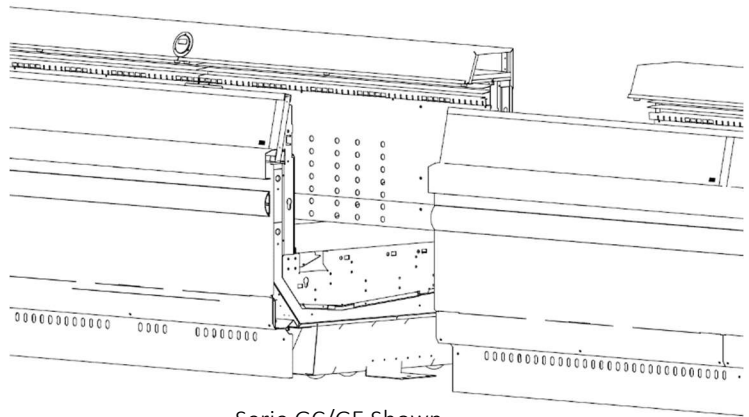
Do not place anything on the top of the Husmann Merchandiser Case or use the top of any Husmann Merchandiser Case for short- or long-term storage.

1. Review layout drawings for spaces where Husmann Merchandiser Cases are to be installed.
2. Based on the layout drawings and the Husmann Merchandiser Case footprint drawings, mark the floor to indicate the exact locations of the base legs (back edge and front edge) on each case. Multiple Husmann Merchandiser Cases should be aligned based upon the position of the base legs.
3. Snap chalk lines for the front and rear positions of the legs on each row of Husmann Merchandiser Case.
4. Mark the location showing the outside edge of each base leg on each Husmann Merchandiser Case.

3.6 Case Leveling

Husmann Merchandiser Cases must be installed level in order to ensure proper performance and drainage.

1. For each lineup of Husmann Merchandiser Cases to be properly joined, use a level (preferably a laser level) to find the highest point on the front and rear chalk lines marked in step 3 above (during Case Alignment).
2. Determine which of the two points marked on the line is higher. This is the highest point in the case lineup.
3. Estimate the number of shims needed for the four corners of each case position, in order to bring all positions to the same height as the highest point found in step 2 above.
4. For each row, place the first Husmann Merchandiser Case where it will sit over the highest point in the lineup. Ensure that the case is level, using shims as needed.
5. Continue placing cases in the lineup, working outward to both sides from the position of the first case placed. Use shims to ensure that all cases in the lineup are level.



NOTE: Each base leg must rest on solid supports. Insert shims as needed if there are any gaps between the floor and each base leg.

NOTE: Failure to completely level each Case in the line-up prior to connection will result in Case-to-Case tolerance loss and exterior fit and finish to be subpar, resulting in gaps to occur between Cases.

3.7 Joining Instructions

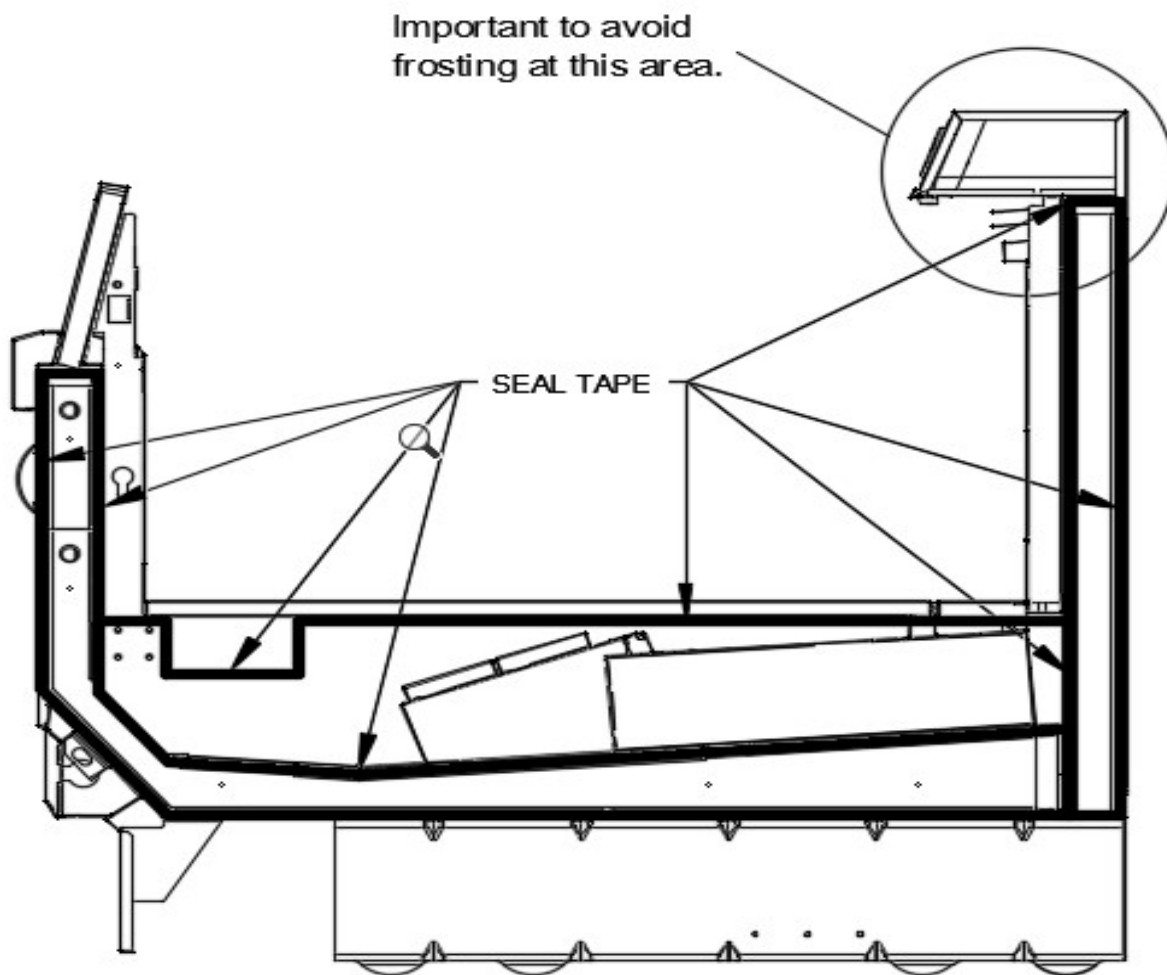
3.7.1 Applying Gasket (for connecting cases or installing side panels).

- ① Make sure that all Hussmann Merchandiser Cases are resting level (verify using level).
- ② Make sure that all required parts for joining are present (gasket, bolts, joint covers, nuts, etc.).
- ③ Remove all Wire Racks, Deck Pans, and Front Air Grilles from the far right and left ends of each case being joined.
- ④ Thoroughly clean all surfaces where the gasket will be placed to remove anything that might affect adhesion.
- ⑤ Place gasket along the areas shown in bold in the drawing at bottom. When connecting 2 (two) cases, apply gasket to 1 (one) case only.

CAUTION!

- **Perimeter gasket is required by NSF.**
- Do not stretch or twist gasket when applying.
- Do not leave gaps. Always overlap gasket rather than leaving gaps.
- Gasket ends that are open must be sealed off by applying silicone at the installation site.

Insufficient or improper sealing may lead to insufficient cooling and condensation.

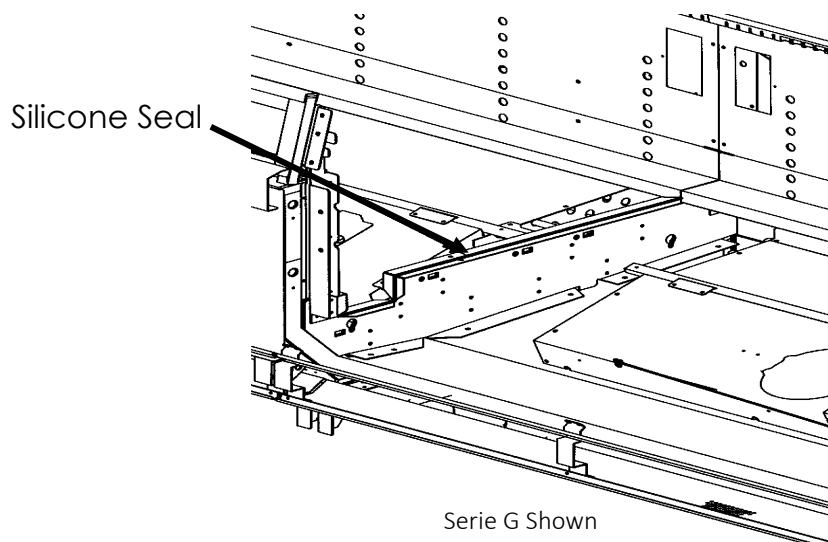
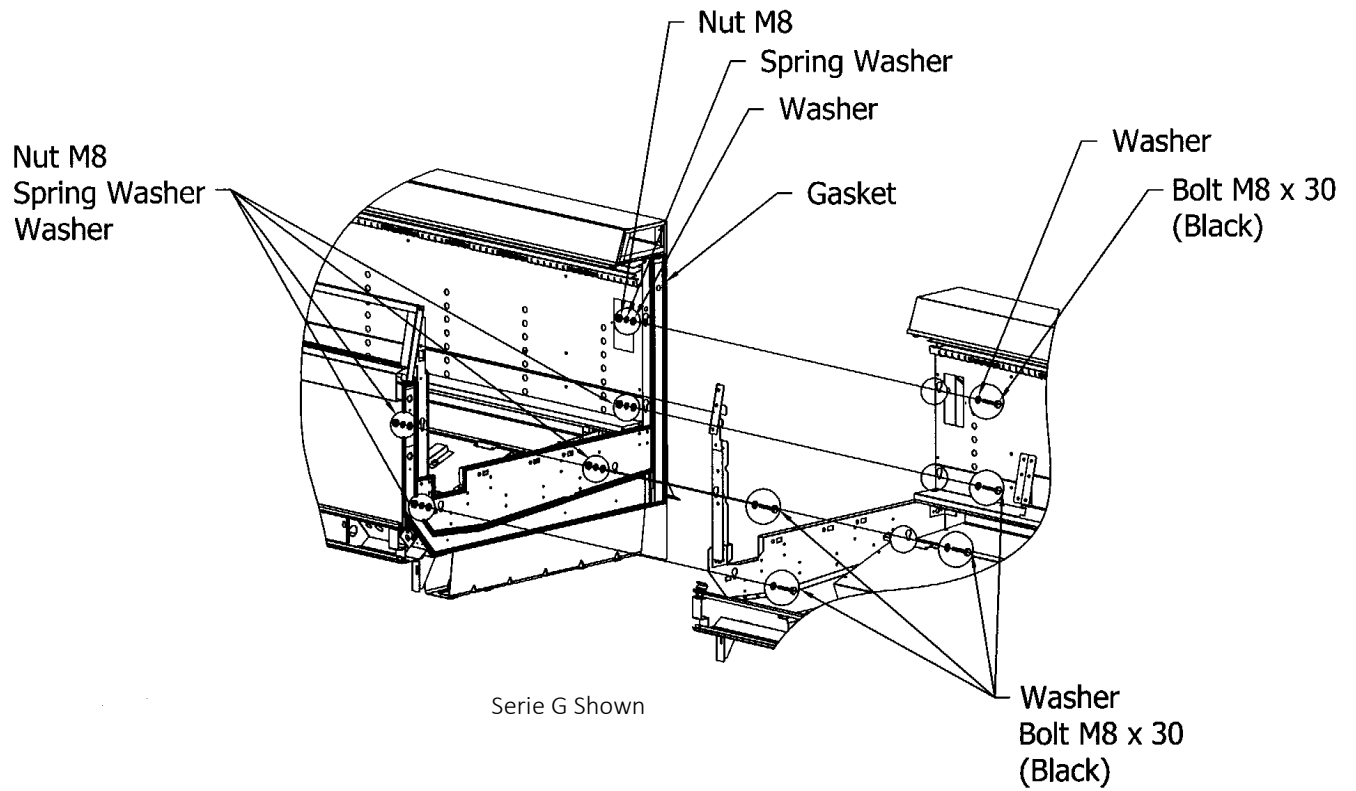


Serie GC/GE Shown

3.7.2 Connecting Cases.

- ① Apply gasket as described above.
- ② Connect cases by using the attached bolts and nuts.

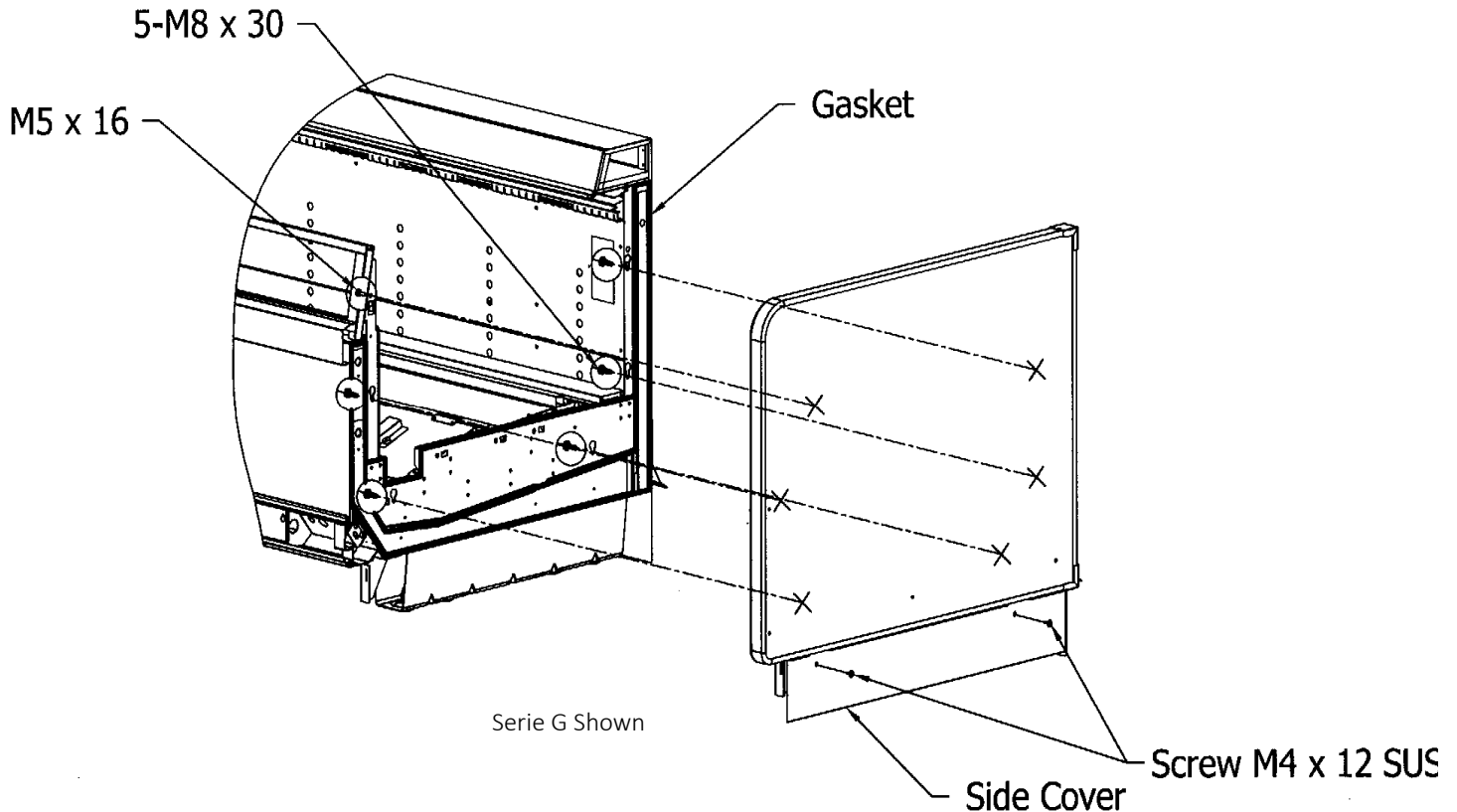
CSM-EXA089/029



NOTE: Connection point must be silicone sealed.

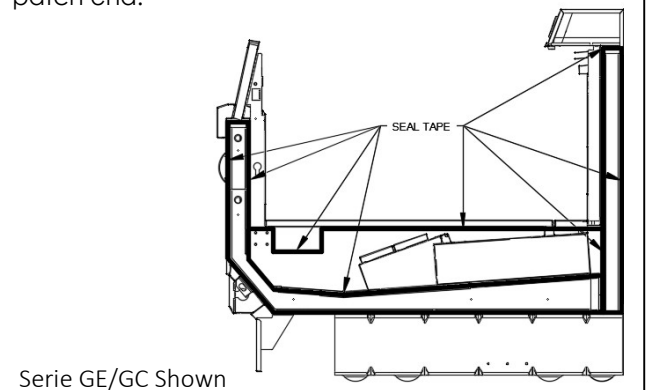
3.8 Installing Patch Ends, Standard

1. Apply gasket to Case Body (per previous instructions).
2. If present, remove protective film from inside wall of Patch End.
3. Place patch end to line-up with bolt holes.
4. From inside unit, ratchet in M8 and M5 bolt into Patch End until secure.
5. Apply Silicone Sealant between inside of Patch End and lower frame (see: drawing for details).
6. Attach Patch End Side Cover (Kickplate) as in below drawing.



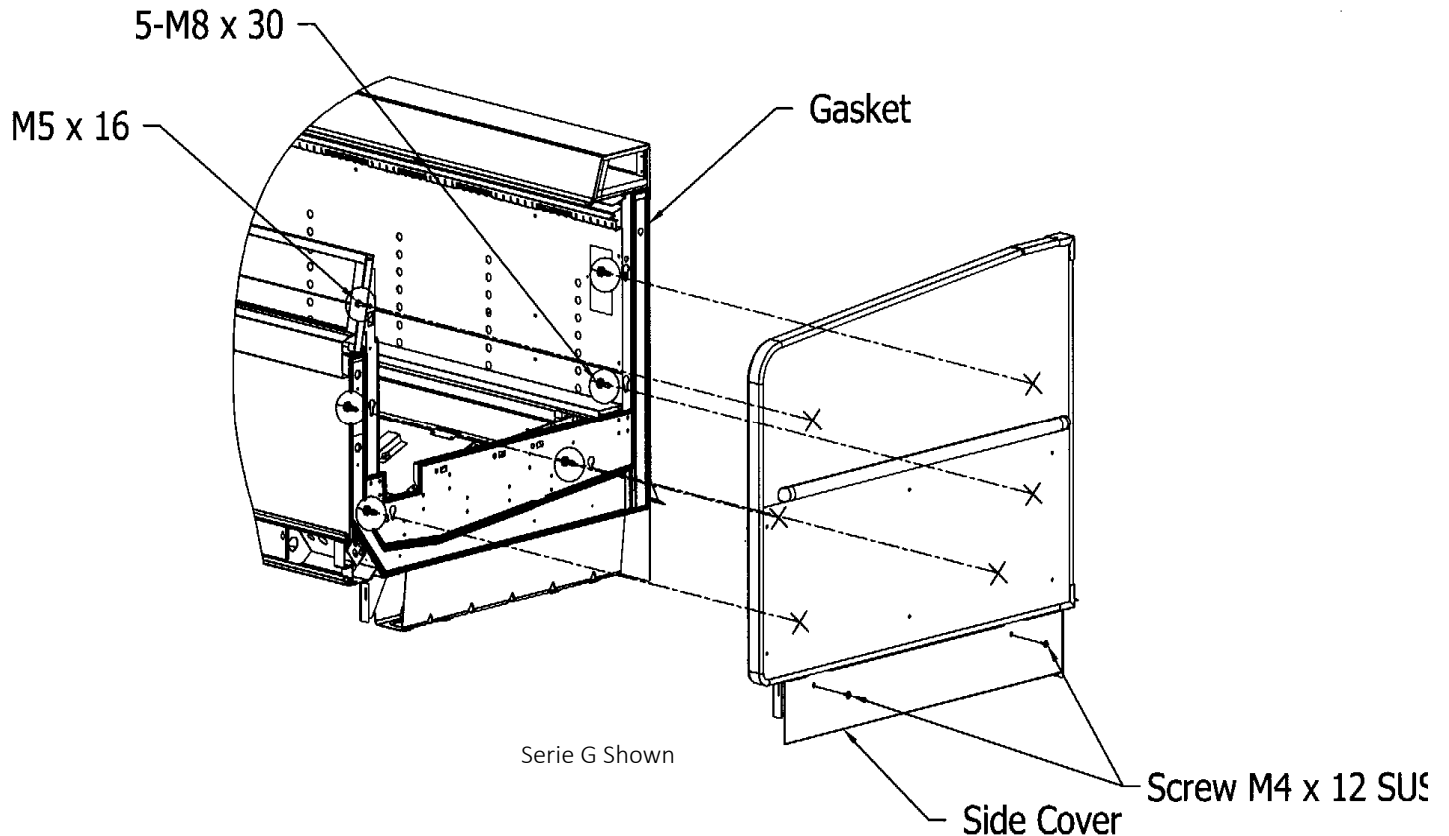
1. Apply gasket to Case Body (per previous instructions).
2. If present, remove protective film from inside wall of the Patch End.
3. Place Patch End to line-up with bolt holes.
4. From inside unit, ratchet in M8 and M5 bolt into Patch End until secure.
5. Apply Silicone Seal between inside of Patch End and lower frame (see drawing to the right for details).
6. Attach Patch End Side Cover (Kickplate) as in above drawing.

Apply silicone sealant inside after installing the patch end.



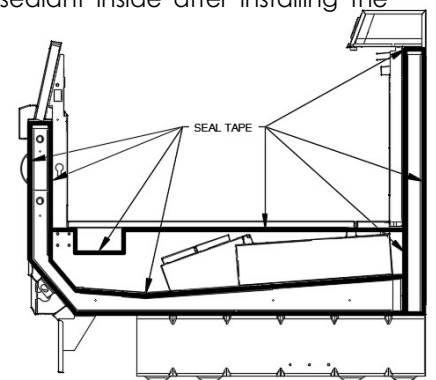
3.9 Installing Patch Ends, Contoured

1. Apply gasket to Case Body (per previous instructions).
2. If present, remove protective film from inside wall of Patch End.
3. Place patch end to line-up with bolt holes.
4. From inside unit, ratchet in M8 & optional M5 bolt into Patch End until secure.
5. Apply Silicone Sealant between inside of Patch End and lower frame (see: drawing for details).
6. Attach Patch End Side Cover (Kickplate) as in below drawing.

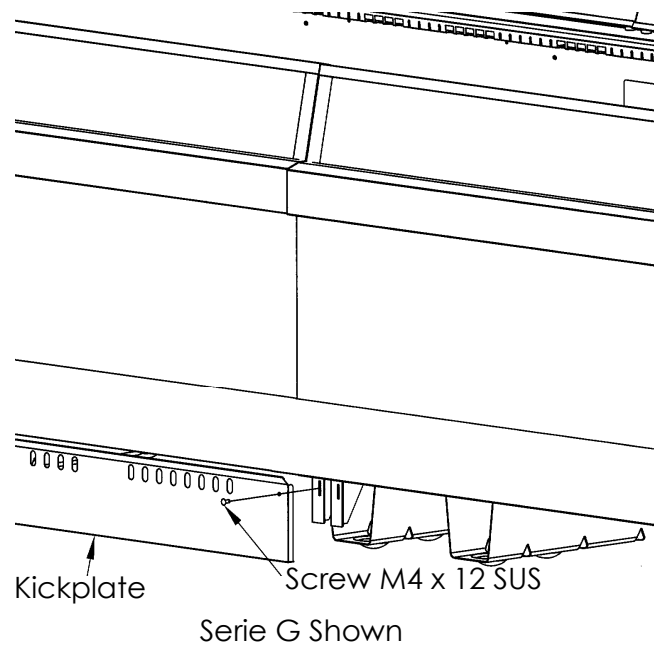


1. Apply gasket to Case Body (per previous instructions).
2. If present, remove protective film from inside wall of the Patch End.
3. Place Patch End to line-up with bolt holes.
4. From inside unit, ratchet in M8 and M5 bolt into Patch End until secure.
5. Apply Silicone Seal between inside of Patch End and lower frame (see drawing to the right for details).
6. Attach Patch End Side Cover (Kickplate) as in above drawing.

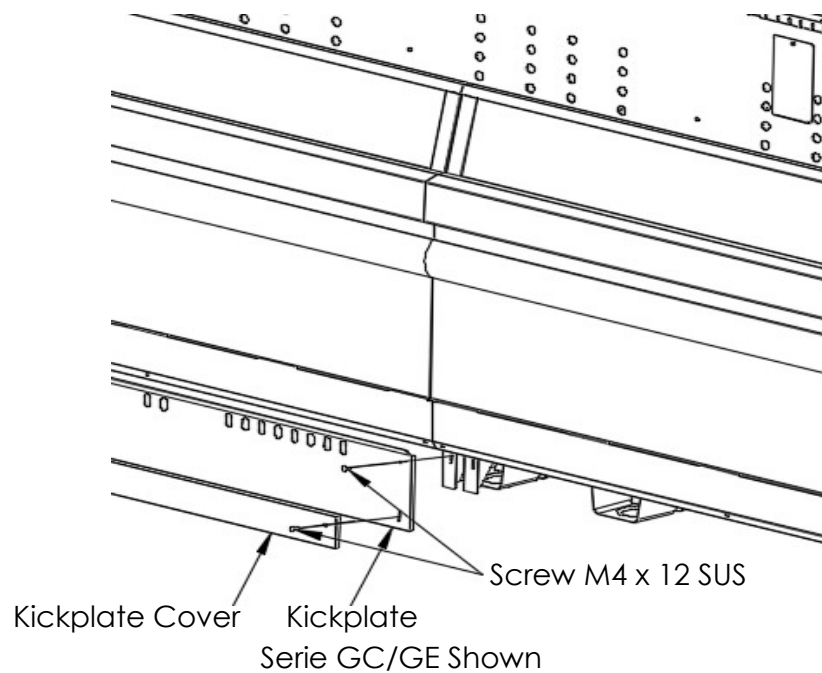
Apply silicone sealant inside after installing the patch end.



3.10 Installing Kickplate

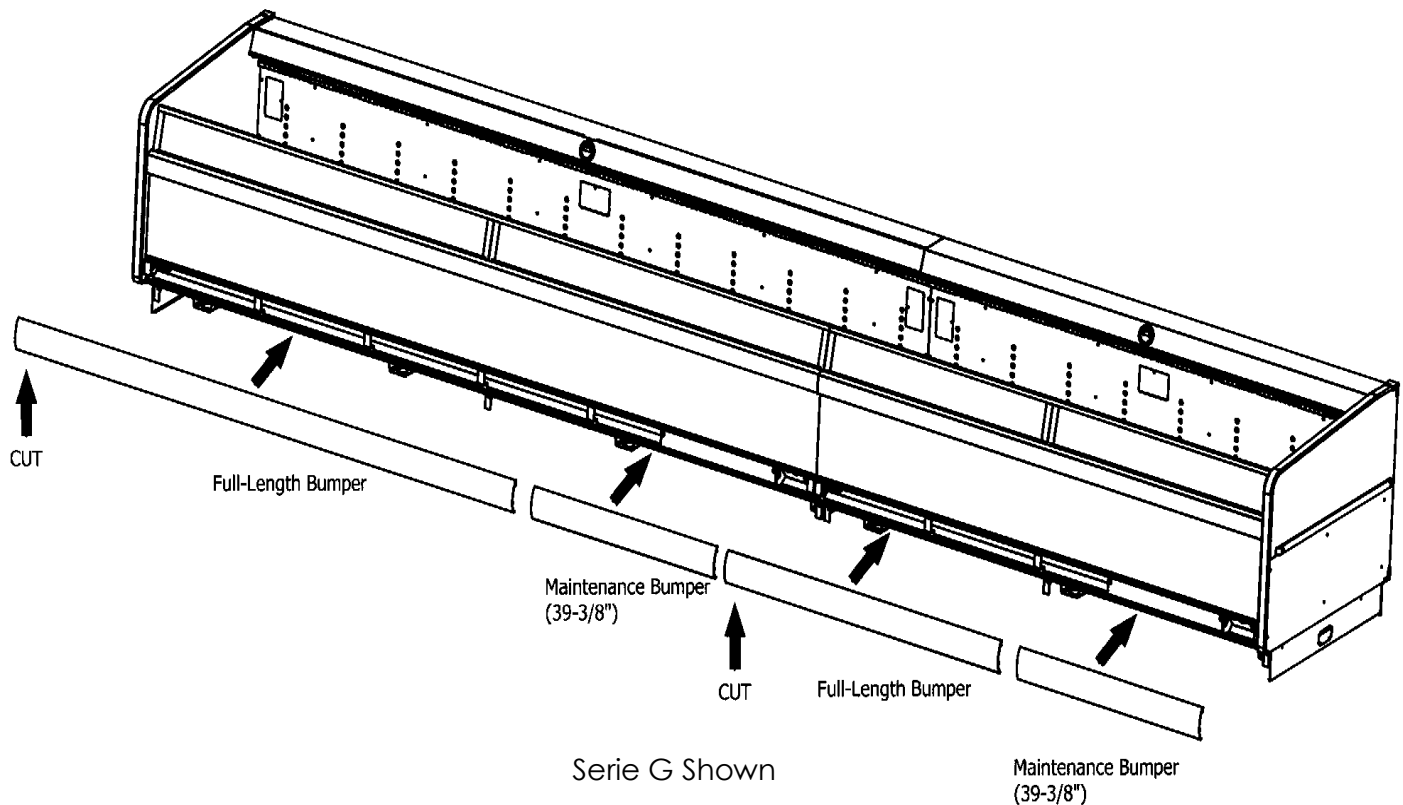


1. Align the mounting hole in the Kickplate with the slot in the Kickplate Mounting Bracket on the Hussmann Merchandiser Case and tighten accordingly.



1. Align the mounting hole in the Kickplate with the slot in the Kickplate Mounting Bracket on the Hussmann Merchandiser Case and tighten accordingly.
2. Align the mounting hole in the Kickplate Cover with the slot in the Kickplate on the Hussmann Merchandiser Case and tighten accordingly

3.11 Installing Bumper Serie G



Attaching the Bumper

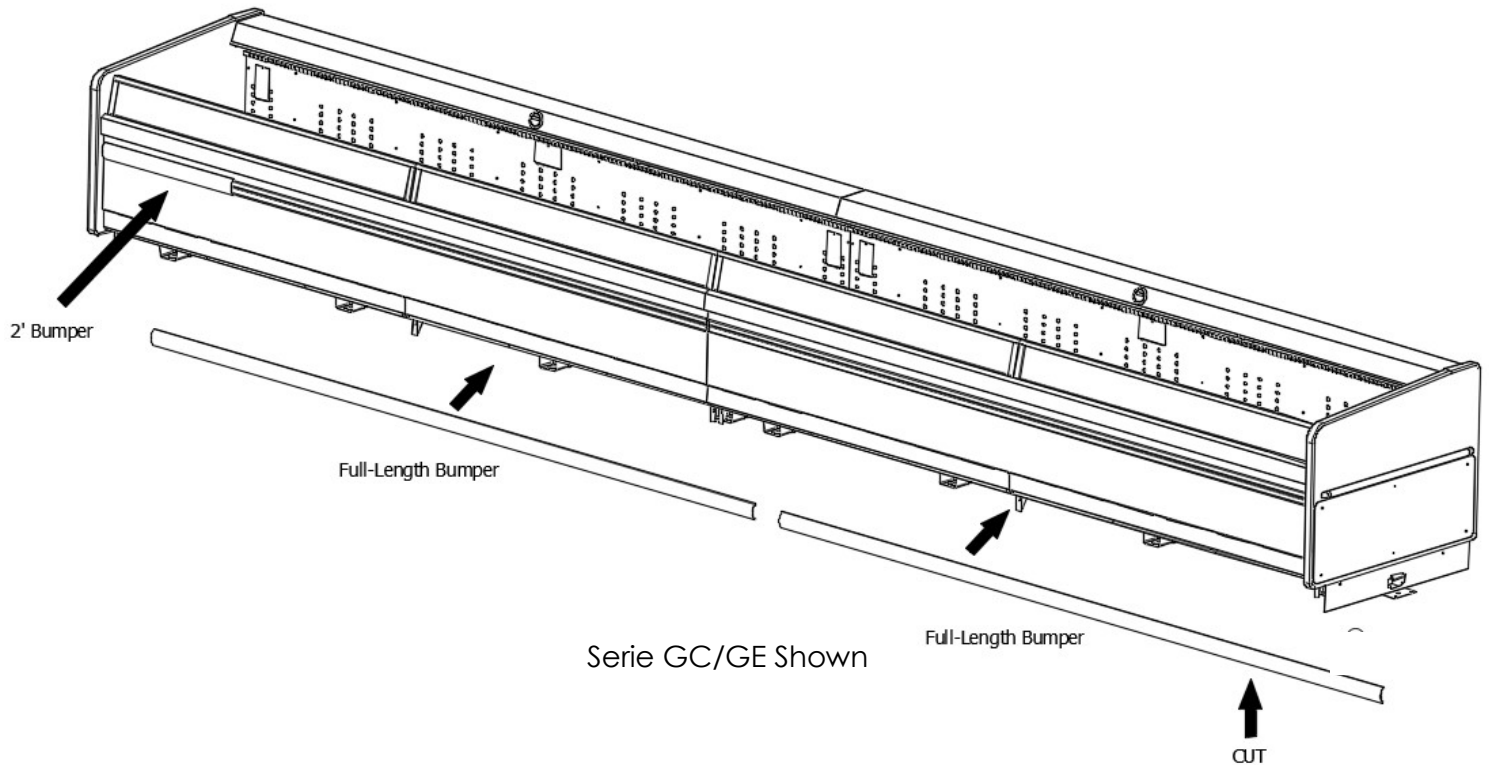
1. Attach Maintenance Bumper (length 39-3/8 inches) to bumper brackets over the electrical connection box ("raceway") on each Hussmann Merchandiser Case. The Raceway is located on the right end of each Hussmann Merchandiser Case.
2. Attach Full-Length Bumpers between Maintenance Bumpers on separate Hussmann Merchandiser Cases, and also between Maintenance Bumpers and Patch Ends.
3. Cut Full-Length Bumpers to size on-site. Cut to correct size so that no gaps remain between pieces.



WARNING!

Wear appropriate eye and hand protection and exercise care when using power tools to prevent personal injuries and damage to the case.

3.12 Installing Bumper Serie GC/GE



Attaching the Bumper

1. Attach End Bumper (length 2 foot) to bumper base on the front of the case on each Hussmann Merchandiser Case.
2. Attach Full-Length Bumpers after and overlap all separate Hussmann Merchandiser Cases.
3. Cut Full-Length Bumpers to size on-site. Cut to correct size so that no gaps remain between pieces.
 - Tip: drop the final Bumper inside the unit 20 to 30 min until it contracts, then measure, cut to correct size and install.



WARNING!

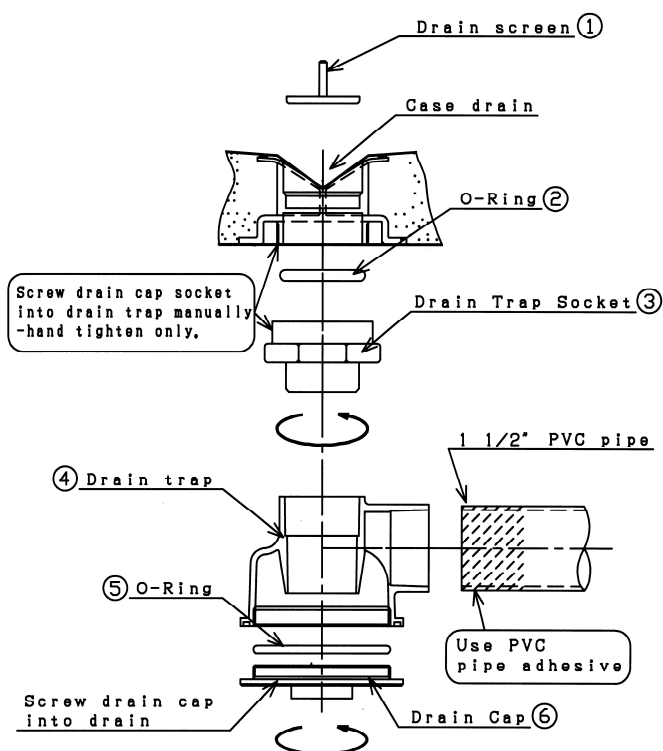
Wear appropriate eye and hand protection and exercise care when using power tools to prevent personal injuries and damage to the case.

4 Refrigeration, Plumbing & Electrical Procedures

4.1 Piping (Plumbing, Refrigeration)

- U-trap installation

Install U-Trap referring to the drawing below.



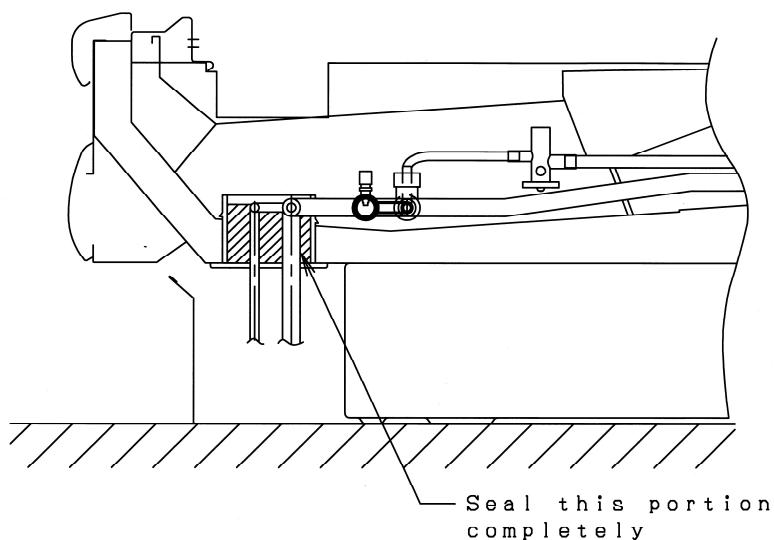
	Part Name	Part Number
①	Drain Screen	845-0-1962-001-00
②	O-ring	845-2-6946-001-00
③	Drain Trap Socket	845-2-6959-003-00
④	Drain Trap	845-2-1437-103-00
⑤	O-Ring	845-2-0183-107-00
⑥	Drain Cap	845-2-1345-110-00

- Sealing the refrigerant pipe opening

Seal pipe completely.

Insufficient sealing may cause the following problems:

- Insufficient cooling
- Excessive frost
- Icing over
- Condensation on the bottom of case.



4.2 Electrical Data

Please refer to Specifications section and nameplate attached to the Hussmann Merchandiser Case for electrical information.

4.3 Electrical – Guidelines & Precautions

All wiring and electrical field work must comply with the National Electrical Code ("NEC") and other applicable local codes. All electrical connections must be made inside the raceway area.

4.4 Wiring

4.4.1 Wiring Color Code

WIRING COLOR CODE

Leads for all electric circuits are identified by a colored plastic band; neutral wire for each circuit has either white insulation or a white plastic sleeve in addition to the color band.

BLUE.....FAN MOTORS

ORANGE.....LIGHTS

YELLOW.....CONDENSATE HEATERS

RED.....DEFROST HEATERS, 208V

GRAY.....DEFROST TERMINATION THERM.

GREEN.....GROUND

ELECTRICIAN NOTE: Use copper conductor wire only.
Case must be grounded.

CORD DE COULEUR DE CABLAGE

Les cables de tous les circuits électriques sont identifiés par une bande de plastique de couleur; le fil neutre de chaque circuit comporte une isolation blanche ou un manchon de plastique blanc en plus de la bande de couleur.

BLEU.....MOTEURS DU VENTILATEUR

ORANGE.....ECLAIRAGE

JAUNE.....CHAUFFAGE ANTI-CONDENSATION

ROUGE.....CHAUFFAGE DE DEGIVRAGE, 208V

GRIS.....THERM. D'ARRET DE DEGIVRAGE

VERT.....MISE A LA TERRE

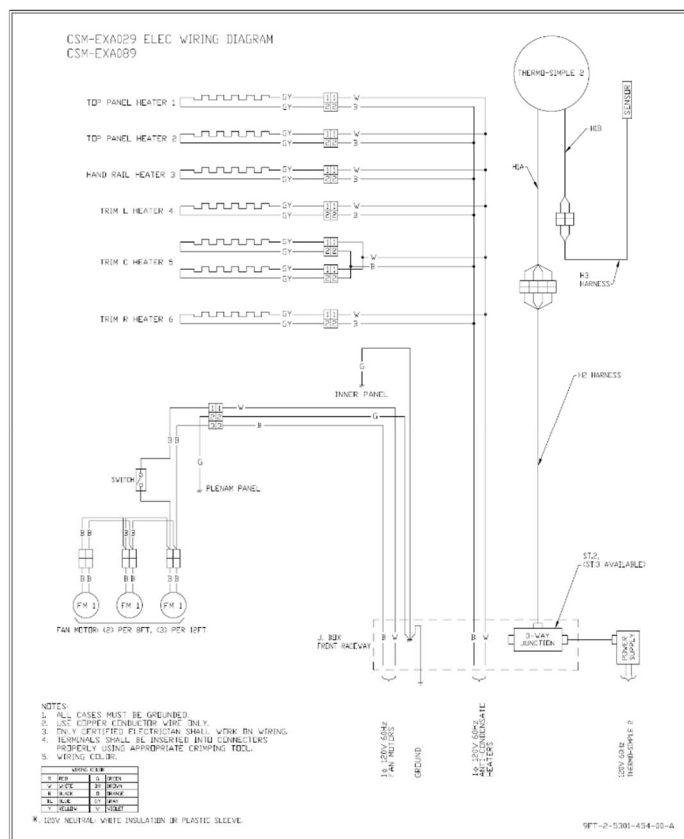
REMARQUE A L'ELECTRICIEN: Utilisez uniquement du fil électrique avec des conducteurs de cuivre. Le réfrigérateur doit être mis à la terre.



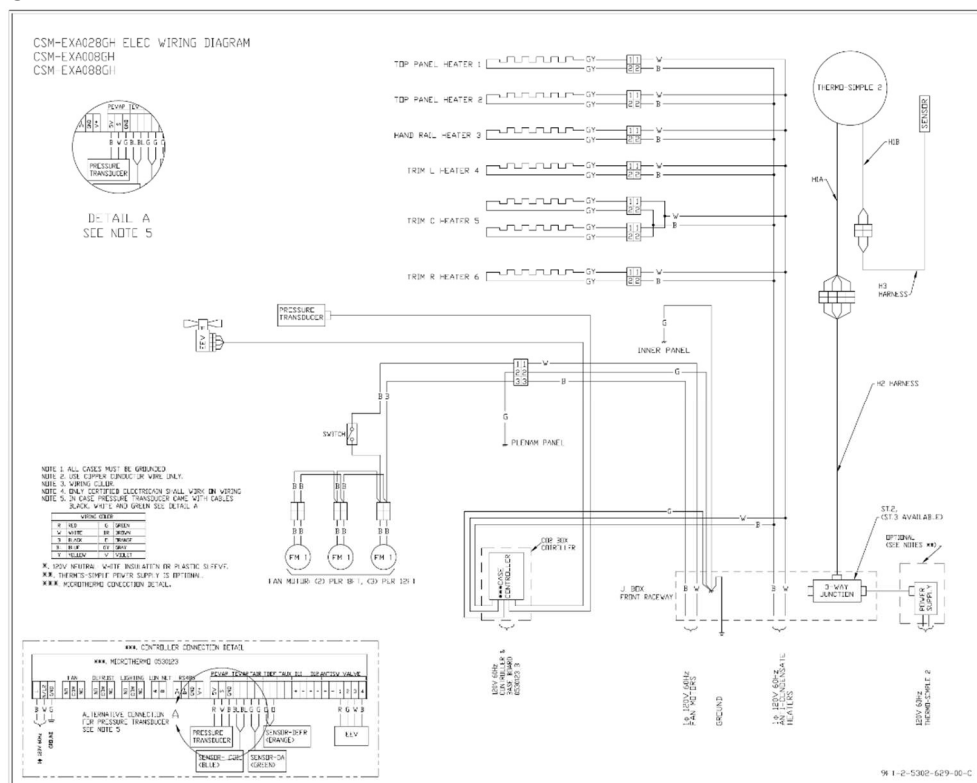
WARNING!

While undertaking any electrical work, ensure that the case is not plugged-in and/or the power has been turned off at the source and that the source has been flagged appropriately to indicate that work is being conducted to prevent personal injuries and damage to the case.

4.4.2 Wiring Diagram DX



Wiring Diagram CO2



5 Operation

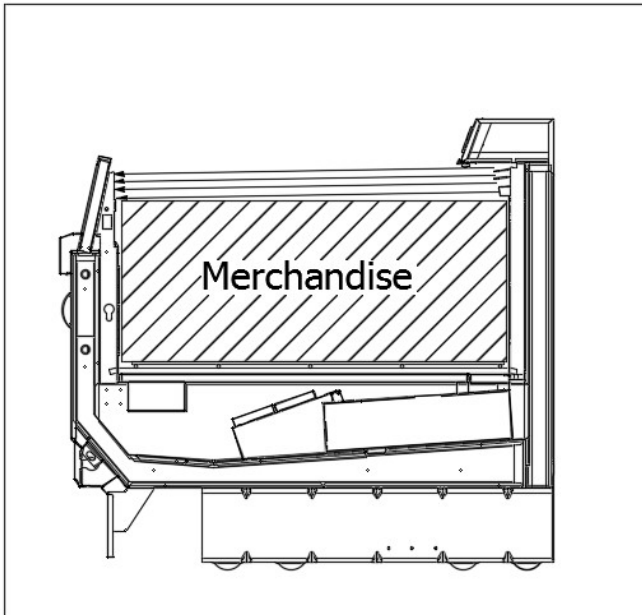
5.1 Refrigeration Load Limits

In order to maintain proper temperature and unit performance, the air curtain in each Hussmann Merchandiser Case must remain unobstructed:

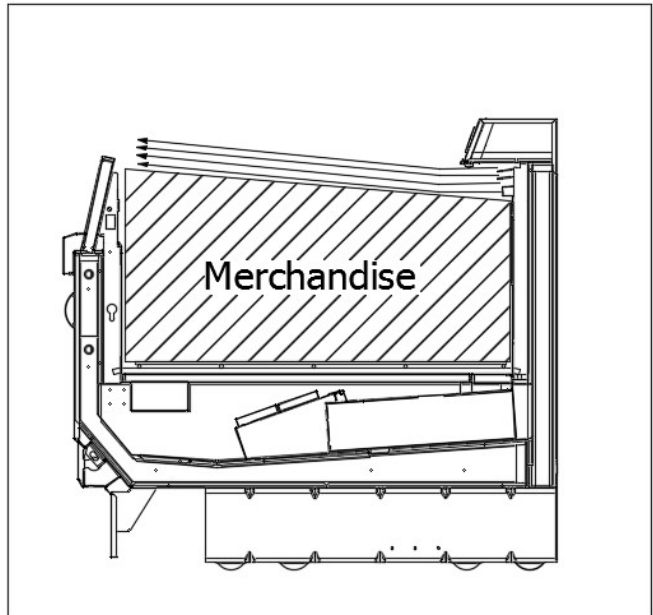
- Do not stock beyond the marked load limits.
- Do not block Return Air Grilles.
- Do not block airflow in any other way (with signs, tools, packages, etc.)

Failure to follow these precautions will lead to insufficient temperature control, spoilage of stored merchandise, and excessive frost.

CORRECT



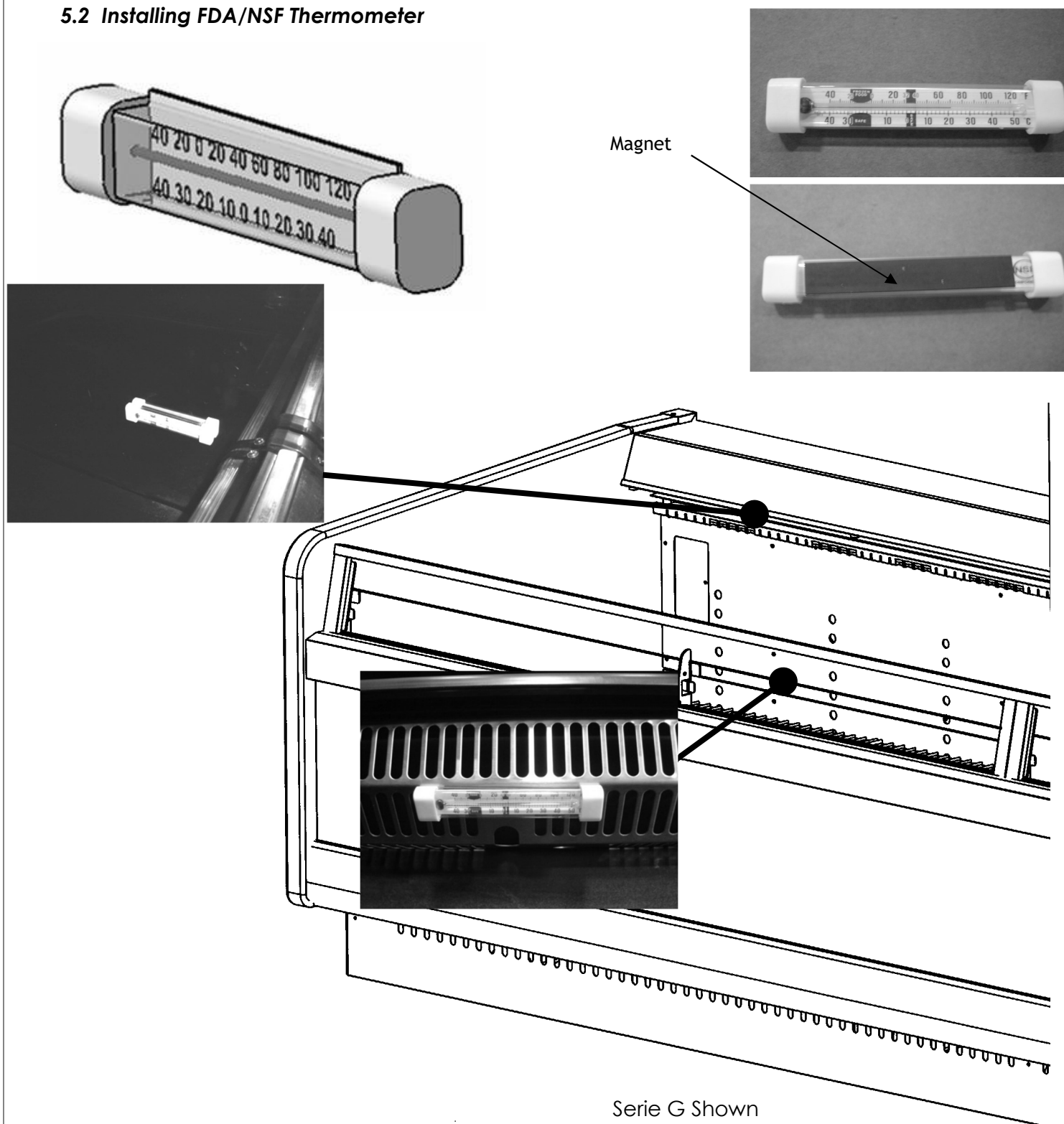
INCORRECT



Loading merchandise beyond the maximum level will result in merchandise touching or entering the cold air curtain.

Serie GC/GE Shown

5.2 Installing FDA/NSF Thermometer



Serie G Shown

Suggested locations for the thermometer required by NSF/ANSI 7 and the FDA Food Code are indicated above.

It is the responsibility of the purchaser/end user of this product to determine the location within the food storage area that best meets these code requirements.

6 Care and Cleaning Guidelines

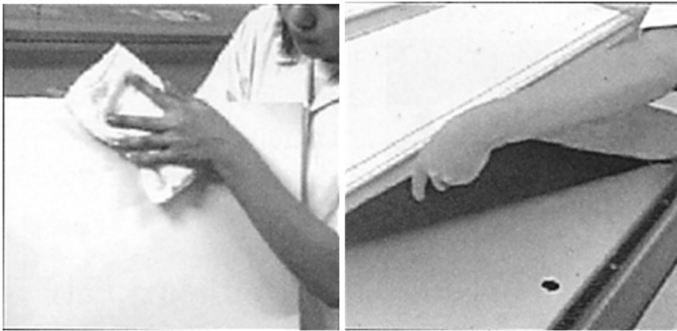
In order to keep Hussmann Merchandiser Cases sanitary and in good working order, we recommend thorough periodic cleaning as follows:

6.1 Exterior Panels (Daily Cleaning)



- a. Exterior panels should be cleaned with water only. Wet a soft cloth and wring it out to wipe down panels.
- b. If required, you may use a mild detergent and warm water to remove stains. You should follow by wiping down with water only in order to prevent discoloration.
- c. Take particular care to clean areas that may be exposed to salt or saline solutions.
- d. DO NOT use scrapers, blades or other sharp objects to remove adhesive, as you may damage panels. You may use rubbing alcohol to remove adhesive if water and mild detergents alone are insufficient.

6.2 Surfaces (Daily Cleaning)



- a. Clean the entire shelf surface, preferably with water only. If required, you may use a mild detergent and warm water to remove stains. You should follow by wiping down with water only in order to prevent discoloration.
- b. Make sure to clean under mats or objects resting on the shelf surfaces.



WARNING

- Make sure to turn Hussmann Merchandiser Case power off and close hand valve before cleaning Deck Pans or Drain Trap.
- Take care not to touch the fans or wiring.
- Use gloves.

Failure to take these precautions may lead to electric shock and/or accidents involving the fan blades. You should turn power on and open hand valve ONLY AFTER you have completed cleaning and put parts back in place.

6.4 Mirrors (if so equipped), Drain Trap (Monthly Cleaning)

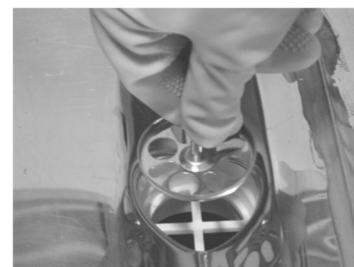
When cleaning mirrors, if so equipped,

Clean mirrors, if so equipped, with a mild detergent and water, then dry with a non-abrasive cloth.



Please make sure to check and clean the drain trap at least once a month.

Remove any material that has gathered in the drain trap and dispose of it. Clean the drain trap and put it back in its original position.

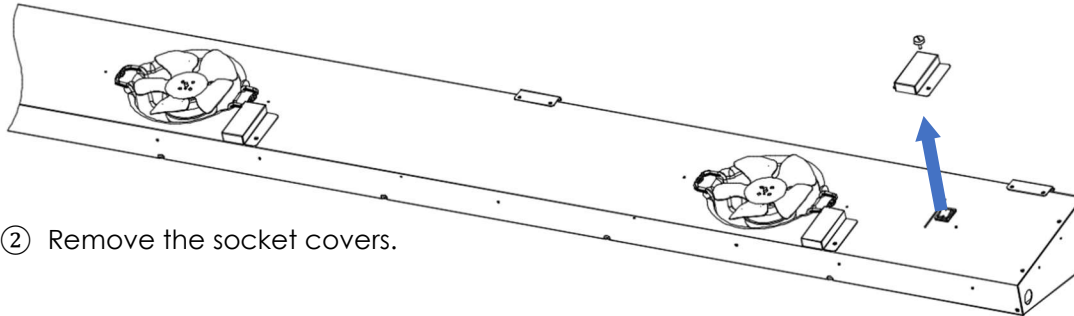


7 Service

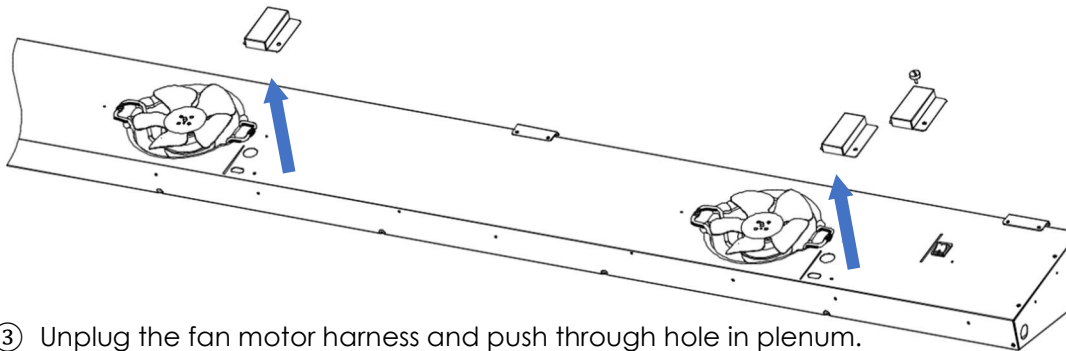
7.1 Replacing Fan Motors and Blades

To replace the fan motors:

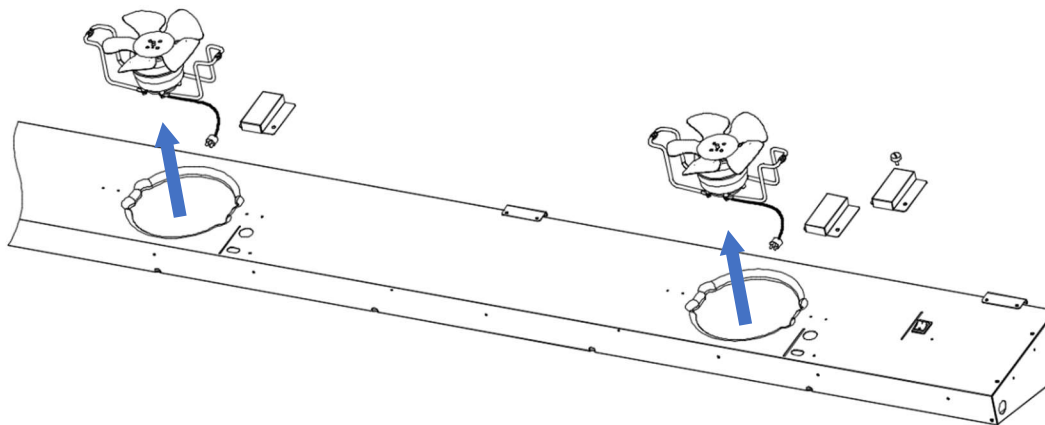
- ① Remove the socket cover of the switch on turn it off.



- ② Remove the socket covers.



- ③ Unplug the fan motor harness and push through hole in plenum.
- ④ Detach fan motor mounting bracket from plenum and pull up to remove.



CAUTION!

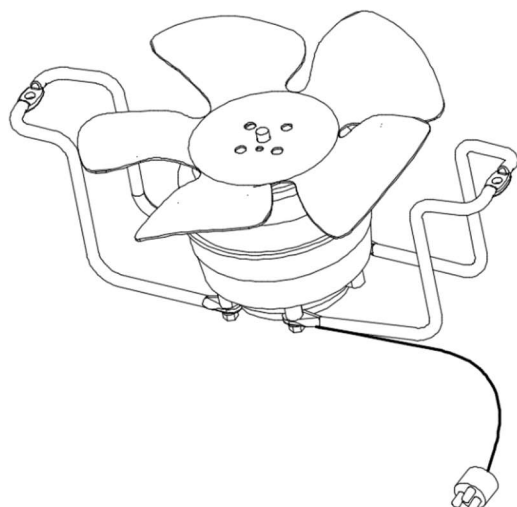
In the instance where the Fan Motor Assembly nearest the TXV (Thermal Expansion Valve), located to the left facing, should cease functioning, the overall cooling performance of the Case will be affected, therefore, replacement must be conducted in a timely manner so as to not cause Merchandise to be compromised.



HAND PROTECTION REQUIRED!

Activities to be undertaken require finger and palm protection to prevent personal injuries.

Fan Motor Assembly Part Numbers (High Efficiency-Type Fan Motors)



For models with High Efficiency-type (DC) Fan Motors

Fan Motor Assemblies:

Speed	Part Number	CSM-EXA088	CSM-EXA008	CSM-EXA028
		Quantity used	Quantity used	Quantity used
1700RPM	9FT0000000230	2	3	3

7.2 Expansion Valves (TXV)

Sporlan

Model	Refrigerant	Valve Body Hussmann P/N	Body Type
CSM-EXA089	R404A	9FT-2-4501-690-02	SBQ 3/8 X BQC-A X KT-43-SC-5
	R407A	9FT-2-4501-690-11	SBQ 3/8 X BQC-AA X KT-43-VC-5
	R507	9FT-2-4501-690-22	SBQ 3/8 X BQC-A X KT-43-PC-5
CSM-EXA029	R404A	9FT-2-4501-690-03	SBQ 3/8 X BQC-B X KT-43-SC-5
	R407A	9FT-2-4501-690-12	SBQ 3/8 X BQC-A X KT-43-VC-5
	R507	9FT-2-4501-690-23	SBQ 3/8 X BQC-B X KT-43-PC-5

7.3 Balancing Valves (Glycol)

Hays

Model	GPM	Auto-Balancing Valve
		Hussmann P/N
CSM-EXA088 CSM-EXA008	3	9FT-2-4501-690-02
CSM-EXA028	4.5	9FT-2-4501-690-03

PROPOSITION 65 WARNING:

This product contains chemicals known to the State of California to cause cancer and/or birth defects or other reproductive harm.

7.4 CO2 Parts

Model	EEV Valve	Transducer	Case Controller	Description
CSM-EXA088	0539753	0527069	0530123	SER-AA
CSM-EXA008	0539753	0527069	0530123	SER-AA
CSM-EXA028	0539753	0527069	0530123	SER-AA





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