

# HUSSMANN

## Operating and Installation Instructions

### Sliding Glass Top & Solid Top Freezer / Cooler Chests

Curved Top (Y), Interior Step & Flat Top, Interior Step  
Flat Top (P), Flat Interior & Solid Top(H), Interior Step



**HUSSMANN**

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**INTRODUCTION :**

The HSD/SC and HBD/BC models have been designed to give maximum performance with minimum energy consumption. They have the versatility in product temperature range to be used for storage or display of ice cream at sub zero temperatures (-10f), or for storage or display at “normal” (under +40f) refrigerator temperatures. All cabinets are UL electrical, UL Canadian, NOM electrical and UL sanitation listed.

**INSPECTION :**

Upon receipt of the equipment, carefully examine the crating for damage. If damage is found make a note on the delivery ticket before signing. Carefully remove shipping crate and examine cabinet for “concealed” damage. If damage is found contact the delivering carrier immediately and have his agent prepare an inspection report for the purpose of filing a claim **THIS IS YOUR RESPONSIBILITY.**

**SPECIFICATIONS:**

**INTERIOR LINER**

The liner is made of durable pattern aluminum. Copper evaporator tubing is fastened to the exterior of the liner – It may show a frost pattern on the interior walls immediately upon starting the equipment. Do not drill or fasten anything to either the interior or the exterior walls of the equipment. Doing so may puncture a refrigeration line.

**INSULATION –**

The shell, and liner assemblies are foamed in place with a ozone friendly insulation providing outstanding insulating qualities and a solid unitized construction.

**CABINET DIMENSIONS, ELECTRICAL DATA, CABINET CAPACITIES**

Cabinet	OUTSIDE			INSIDE		
	<u>Length</u>	<u>Width</u>	<u>Height</u>	<u>Length</u>	<u>Width</u>	<u>Height</u>
HSD/SC-190Y	36.5	23.6	34.2	31.26	18.35	24.5
HSD/SC-220Y	40.6	23.6	34.2	35.43	18.35	24.5
HSD/SC-280Y	48.6	23.6	34.2	43.62	18.35	24.5
HSD/SC-320Y	54.4	23.6	34.2	49.21	18.35	24.5
HSD/SC-248BY	40.6	24.4	34.2	35	18.9	25.9
HSD/SC-328BY	48.9	24.4	34.2	43.2	18.9	25.9
HSD/SC-368BY	54.4	24.4	34.2	48.7	18.9	25.9
HSD/SC-360BY	49.6	27.7	34.4	43.7	21.2	25.1
HSD/SC-258	42.5	23.6	33.8	37.5	18.5	25.6
HSD/SC-302	45.7	23.6	33.8	40.5	18.5	25.6
HSD/SC-358	49.7	26.7	34.2	44	20.6	26.6
HSD/SC-408	53.7	26.7	34.2	47.5	20.6	26.6
HSD/SC-518	66.5	26.7	34.2	60.5	20.6	26.6
HSD/SC-132P	28.9	21.3	36.3	23.8	16.1	20.6
HSD/SC-162P	33.9	21.3	36.3	28.7	16.1	20.6
HSD/SC-192P	38.8	21.3	36.3	33.7	16.1	20.6
HSD/SC-218P	42.5	21.3	36.3	37.4	16.1	20.6
HBD/BC-142H	28.9	21.3	33.8	23.8	16.1	25.6
HBD/BC-160H	31.5	21.3	33.8	26.4	16.1	25.6
HBD/BC-180H	33.9	21.3	33.8	28.2	16.1	25.6
HBD/BC-195H	36.4	21.3	33.8	31.3	16.1	25.6
HBD/BC-215H	38.8	21.3	33.8	33.7	16.1	25.6
HBD/BC-258H	42.5	23.6	33.8	37.4	18.5	25.6
HBD/BC-302H	45.7	23.6	33.8	40.6	18.5	25.6

Cabinet	ELECTRICAL		Ship <u>Weight</u>	CAPACITY		
	<u>Volts</u>	Breaker <u>Size</u>		Cubic <u>Feet</u>	<u>Amps</u>	<u>LRA</u>
HSD/SC-190Y	115	15 amp	128	6.7	3.4	8.6
HSD/SC-220Y	115	15 amp	137	7.8	3.5	8.6
HSD/SC-280Y	115	15 amp	150	9.9	3.7	11.9
HSD/SC-320Y	115	15 amp	159	11.3	3.8	11.9
HSD/SC-248BY	115	15 amp	136	8.7		
HSD/SC-328BY	115	15 amp	171	11.5		
HSD/SC-368BY	115	15 amp	180	13		
HSD/SC-360BY	115	15 amp	180	12.7		

	ELECTRICAL			CAPACITY		
	<u>Volts</u>	<u>Breaker Size</u>	<u>Ship Weight</u>	<u>Cubic Feet</u>	<u>Amps</u>	<u>LRA</u>
HSD/SC-258	115	15 amp	104	9.1	1.5	11.9
HSD/SC-302	115	15 amp	110	10.7	1.6	11.9
HSD/SC-358	115	15 amp	143	12.6	1.7	11.9
HSD/SC-408	115	15 amp	145	14.4	1.9	15.6
HSD/SC-518	115	15 amp	172	18.3	2.1	15.6
HSD/SC-132P	115	15 amp	102	4.7		
HSD/SC-162P	115	15 amp	106	5.7		
HSD/SC-192P	115	15 amp	115	6.8		
HSD/SC-218P	115	15 amp	124	7.7		
HBD/BC-142H	115	15 amp	75	5.0		
HBD/BC-160H	115	15 amp	77	5.6		
HBD/BC-180H	115	15 amp	79	6.4		
HBD/BC-195H	115	15 amp	86	6.9		
HBD/BC-215H	115	15 amp	93	7.6		
HBD/BC-258H	115	15 amp	99	9.1		
HBD/BC-302H	115	15 amp	106	10.7		

Check the unit serial plate location on the rear of the case for the type and amount of refrigerant used as this is subject to change from time to time:

<u>R-134a</u>		
HSD/SC-190Y	Curved Glass Top	5.82oz
HSD/SC-220Y	Curved Glass Top	6.35oz
HSD/SC-280Y	Curved Glass Top	7.58oz
HSD/SC-320Y	Curved Glass Top	8.29oz
HSD/SC-248BY	Curved Glass Top	5.64oz
HSD/SC-328BY	Curved Glass Top	6.53oz
HSD/SC-368BY	Curved Glass Top	6.88oz
HSD/SC-360BY	Curved Glass Top	6.88oz
HSD/SC-258	Flat Top Int. Step	5.64oz
HSD/SC-302	Flat Top Int. Step	6.00oz
HSD/SC-358	Flat Top Int. Step	6.53oz
HSD/SC-408	Flat Top Int. Step	6.88oz
HSD/SC-518	Flat Top Int. Step	7.76oz
HSD/SC-132P	Flat Top Flat Int.	3.17oz
HSD/SC-162P	Flat Top Flat Int.	3.35oz
HSD/SC-192P	Flat Top Flat Int.	3.53oz
HSD/SC-218P	Flat Top Flat Int.	4.05oz

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<b>HBD/BC-142H</b>	<b>Solid Top Int. Step</b>	<b>2.82oz</b>
<b>HBD/BC-160H</b>	<b>Solid Top Int. Step</b>	<b>3.17oz</b>
<b>HBD/BC-180H</b>	<b>Solid Top Int. Step</b>	<b>3.35oz</b>
<b>HBD/BC-195H</b>	<b>Solid Top Int. Step</b>	<b>3.53oz</b>
<b>HBD/BC-215H</b>	<b>Solid Top Int. Step</b>	<b>3.70oz</b>
<b>HBD/BC-258H</b>	<b>Solid Top Int. Step</b>	<b>4.76oz</b>
<b>HBD/BC-302H</b>	<b>Solid Top Int. Step</b>	<b>4.94oz</b>

**INSTALLATION and START UP**

**Leveling –**

Level case front to back and end to end, shimming where necessary upon installation to assure proper operation of drains and refrigeration systems.

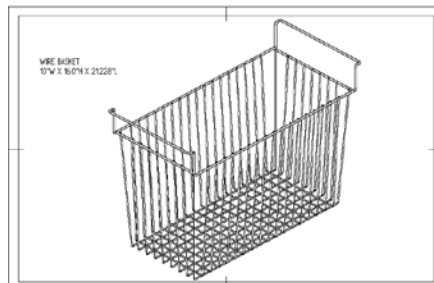
**Casters-**

The units are shipped complete with 4 swivel casters attached to each underside corner of the case. The front two casters have a lock-in-place feature. To activate the locking mechanism, push down **firmly** on the plastic flange that protrudes from the caster. To unlock the caster, pull up on the flange. The casters are of high quality with sealed bearings and do not require any oiling or maintenance.



**Baskets:**

Each HSD/SC and HBD/BC unit is shipped standard with one hanging basket. Additional baskets may be ordered from your Distributor/Dealer. See the Literature Brochure for sizes and quantities of baskets for each specific model.



**Drain –**

A 1-inch drain is provided on the cabinet floor which runs to the outside of the cabinet where it is capped. It is important for proper operating temperatures to assure that the exterior drain cap is in place when the equipment is refrigerating.

**Power Cord –**

All models are equipped with three wire grounded service cords. For your own protection, connection must be made to a 115 volt grounded receptacle and a power supply with a fifteen ampere rating minimum.

The cabinets are designed to operate on 115 volts, single phase, 60 cycle current. A separate circuit is recommended to prevent product loss due to overloading or malfunction of other equipment on the same circuit. Use a 15 amp time delay fuse. The supply circuit must conform to National and local electrical codes.

A wiring diagram is provided at the end of this manual.

**VOLTAGE, AS MEASURED AT THE COMPRESSOR TERMINAL DURING OPERATION, MUST NOT VARY MORE THAN 5% FROM CABINET SERIAL PLATE RATING.**

**NOTE: DO NOT DRILL ANY HOLES IN SIDE OF CABINET**

A space of 5 inches must be left open at the front and back and right hand end of the cabinet to insure proper air flow over the condensing unit in order to cool it.

Cabinets should not be installed in direct sunlight or near/under heat ducts for proper operation.

**\*\*\*\*\* IMPORTANT \*\*\*\*\***

Cabinet should be started and allowed to cool down to normal operating temperature before loading any products.

**OPERATION and NORMAL MAINTENANCE**

**TEMPERATURE CONTROL –**

The temperature control which senses the cold wall temperature is located at the side of the case. Adjustment of the control is done by turning the knob clockwise for colder temperatures and counterclockwise for warmer temperatures.



The control is adjustable for both Freezer and Refrigerator Temperatures. Towards the Maximum Zone are freezing temperatures and towards the Minimum Zone are refrigerator temperatures. Due to the case design, once an adjustment is made some time will lapse before the temperature inside the fixture reacts to the change.

**DEFROSTING – Disconnect Power Supply Before Starting -**

Defrosting is accomplished manually by scraping frost from areas where it has collected on the cabinet interior. Remove excess ice and water. After washing and drying thoroughly reconnect the power supply.

**CONDENSING UNIT –**

On Models so equipped, check occasionally to assure that the condenser fan motor in the compressor area is operating properly. This motor assists in the cooling process and also keep the compressor cool for longer life.



**CLEANING CONDENSER –**

On Models so equipped, the condenser is designed to require minimum maintenance. However, to keep the unit at top efficiency, check periodically, and remove any accumulated dust and debris.

To clean condenser, a soft, nylon brush should be used to loosen dirt and lint. Then vacuum up the dirt or blow condenser out with a high pressure gas such as nitrogen. Never use a wire brush to clean condenser tubes.

**CLEANING EXTERIOR –**

When cleaning the exterior of the cabinet use a soft cloth or sponge with water and a mild detergent. Rinse and wipe dry.

**CLEANING INTERIOR –**

For cleaning the interior of the liner storage area, a flush out drain has been provided on the case floor to assist in getting rid of any water in the bottom of the case.

Disconnect the electrical power cord and wash using a soft cloth or sponge and a mild detergent. **DO NOT USE AN ABRASIVE CLEANER OR STEEL WOOL – THESE WILL MAR THE FINISH.**

Wipe dry before restarting the cabinet. Allow the cabinet to cool down to proper temperature before reloading product.

<b>TROUBLE</b>	<b>PROBABLE CAUSE</b>	<b>SOLUTION</b>
<b>Compressor will not start, no noise</b>	<b>1. Power disconnected</b>	<b>1. Check service cord for proper connection</b>
	<b>2. Blown fuse or breaker</b>	<b>2. Replace fuse or reset breaker</b>
	<b>3. Defective or broken wiring</b>	<b>3. Repair or replace</b>
	<b>4. Defective overload</b>	<b>4. Replace</b>
	<b>5. Defective temperature control</b>	<b>5. Replace</b>

**Compressor will not cut out on overload**

- |  |  |
|--|--|
| <b>1. Low voltage</b>                  | <b>1. Correct see serial plate for proper electrical requirements.</b> |
| <b>2. Defective compressor</b>         | <b>2. Replace</b>  |
| <b>3. Defective relay</b>              | <b>3. Replace</b>  |
| <b>4. Restriction pinched cap tube</b> | <b>4. Repair or replace</b>  |
| <b>5. Restriction moisture</b>         | <b>5. Leak check replace drier evacuate and recharge</b>               |

**TROUBLE SHOOTING  
CHART**

- |   |  |
|---|--|
| <b>6. Inadequate air over condenser</b> | <b>6. Move cabinet so it has 5" front and back of unit compartment opening</b> |
| <b>7. Defective condenser fan motor</b> | <b>7. Replace</b>  |

**High head pressure**

- |  |  |
|--|--|
| <b>1. Cabinet location too warm</b>              | <b>1. Relocate cabinet remove air flow restriction</b>   |
| <b>2. Defective condenser fan motor</b>          | <b>2. Replace</b>  |
| <b>3. Air or non condensable gases in system</b> | <b>3. Leak check-change drier, evacuate and recharge</b> |

**Warm storage temperatures**

- |   |  |
|---|--|
| <b>1. Temperature control not set properly</b>        | <b>1. Reset control</b>                                    |
| <b>2. Short of refrigerant</b>                        | <b>2. Leak check - change drier, evacuate and recharge</b> |
| <b>3. Cabinet location too warm</b>                   | <b>3. Relocate cabinet</b>                                 |
| <b>4. Too much refrigerant</b>                        | <b>4. Change drier evacuate and recharge</b>               |
| <b>5. Low voltage, compressor cycling on overload</b> | <b>5. Check voltage supply</b>                             |

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**Compressor runs continuously – product too cold**

**1. Defective control**

**1. Replace**

**2. Control feeler tube not installed in well**

**2. Push control feeler tube into well**

**3. Short on refrigerant**

**3. Leak check change drier and recharge**

**Compressor runs continuously – product too warm**

**1. Short on refrigerant**

**1. Leak check – change dryers evacuate and recharge**

**2. Inefficient compressor**

**2. Replace**

**Please read carefully to assure prompt and accurate service**

**Ordering Replacement Parts –**

- ❖ **Contact your nearest Hussmann Distributor.**
- ❖ **Always specify model and serial number of cabinet.**
- ❖ **If correct part number is not known, give a clear description of part itself and its function in the cabinet or remote unit.**

**Warranty Parts Procedure –**

- ❖ **Same as items above**
- ❖ **Give original installation date of cabinet and, if possible, forward a copy of the original invoice or delivery receipt.**
- ❖ **All shipments of in-warranty replacement parts will be invoiced from the factory until such time as the defective part is returned and proved to be defective by our Quality Control Department.**
- ❖ **Contact your Hussmann Distributor for instructions on returning in-warranty parts.**
- ❖ **Warranty parts must be returned to the factory within 30 days of date of failure to assure proper disposition.**
- ❖ **Lack of any of the above information may result in the shipment of the wrong part, or a delay in shipment.**

<u>Part Nos.</u>	<u>Description</u>	<u>Model(s) Used On</u>
5-HM-1007	Compressor Panasonic DG57C84RAU6	HSD/SC-190Y HSD/SC-220Y HBD/BC-258H HBD/BC-302H HSD/SC-218P
5-HM-1008	Compressor Panasonic DG73C12RAU6	HSD/SC-280Y HSD/SC-320Y HSD/SC-258 HSD/SC-302 HSD/SC-358 HSD/SC-408 HSD/SC-518
5-HM-1009	Compressor Panasonic DG86C15RAU6	HSD/SC-248BY
5-HM-10027	Compressor Samsung SK182C-L2U	HSD/SC-328BY HSD/SC-360BY
5-HM-10028	Compressor Samsung SK1A1C-L2W	HSD/SC-368BY
5-HM-10029	Compressor Samsung SK1A1C-L2W	HSD/SC-132P HSD/SC-162P HSD/SC-192P HBD/BC-142H HBD/BC-160H HBD/BC-180H HBD/BC-195H HBD/BC-215H
5-HM-1006	Compressor LGETR MA53LBCM	Used on all Models
(All above 115-volt, R-134a Refrigerant)		
5-HM-2001	Temperature Control WKF32H-102-022	Used on all Models
5-HM-2002	Temperature Control WPF27H-102-022	Used on all Models
5-HM-2003	Temperature Control WPF27J-L4	Used on all Models
5-HM-3002	Condenser Fan Motor M4Q045CA2704	Used on all Models (Except -P and -H)
5-HM-8001	Caster – Non Locking (2)	Used on all Models
5-HM-8002	Caster – Locking (2)	Used on all Models
5-HM-10001	Sliding Glass Door Lower	HSD/SC-258
5-HM-10002	Sliding Glass Door Lower	HSD/SC-302
5-HM-10003	Sliding Glass Door Lower	HSD/SC-358
5-HM-10004	Sliding Glass Door Lower	HSD/SC-408
5-HM-10005	Sliding Glass Door Lower	HSD/SC-518
5-HM-10006	Sliding Glass Door Lower	HSD/SC-190Y
5-HM-10007	Sliding Glass Door Lower	HSD/SC-220Y
5-HM-10008	Sliding Glass Door Lower	HSD/SC-280Y
5-HM-10009	Sliding Glass Door Lower	HSD/SC-320Y
5-HM-10010	Sliding Glass Door Lower	HSD/SC-132P
5-HM-10011	Sliding Glass Door Lower	HSD/SC-162P
5-HM-10012	Sliding Glass Door Lower	HSD/SC-192P
5-HM-10013	Sliding Glass Door Lower	HSD/SC-218P
5-HM-10027	Sliding Glass Door Lower	HSD/SC-248BY
5-HM-10028	Sliding Glass Door Lower	HSD/SC-328BY
5-HM-10029	Sliding Glass Door Lower	HSD/SC-368BY
5-HM-10030	Sliding Glass Door Lower	HSD/SC-360BY
5-HM-10014	Sliding Glass Door Upper	HSD/SC-258
5-HM-10015	Sliding Glass Door Upper	HSD/SC-302
5-HM-10016	Sliding Glass Door Upper	HSD/SC-358
5-HM-10017	Sliding Glass Door Upper	HSD/SC-408
5-HM-10018	Sliding Glass Door Upper	HSD/SC-518
5-HM-10019	Sliding Glass Door Upper	HSD/SC-190Y
5-HM-10020	Sliding Glass Door Upper	HSD/SC-220Y
5-HM-10021	Sliding Glass Door Upper	HSD/SC-280Y
5-HM-10022	Sliding Glass Door Upper	HSD/SC-320Y
5-HM-10023	Sliding Glass Door Upper	HSD/SC-132P
5-HM-10024	Sliding Glass Door Upper	HSD/SC-162P
5-HM-10025	Sliding Glass Door Upper	HSD/SC-192P
5-HM-10026	Sliding Glass Door Upper	HSD/SC-218P
5-HM-10031	Sliding Glass Door Upper	HSD/SC-248BY
5-HM-10032	Sliding Glass Door Upper	HSD/SC-328BY
5-HM-10033	Sliding Glass Door Upper	HSD/SC-368BY
5-HM-10034	Sliding Glass Door Upper	HSD/SC-360BY

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5-HM-12006 Keys for Lid Lock

HSD/SC-258,302,358,408,518

5-HM-12007 Keys for Lid Lock

HSD/SC-132P,162P,192P,218P

5-HM-12008 Keys for Lid Lock

HSD/SC-190Y,220Y,280Y,320Y

5-HM-12009 Keys for Lid Lock

HBD/BC-142H,160H,180H,195H

HBD/BC-215H,258H,302H

HSD/SC-248BY,328BY,368BY,360BY

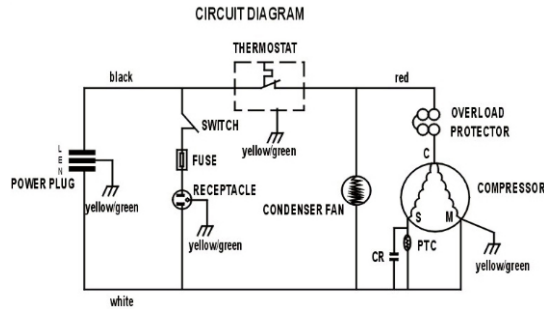
5-HM-13001 Opt. Light Fuse 2-Amp

Curved Glass with Lighted Sign

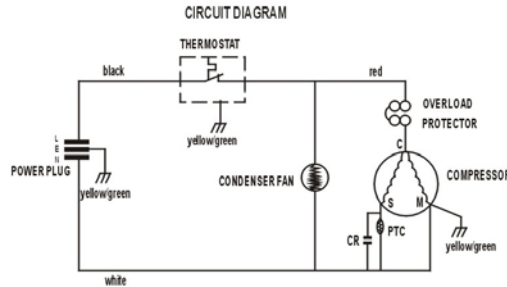
5-HM-15001 Outside Drain Cap

Used on all Models

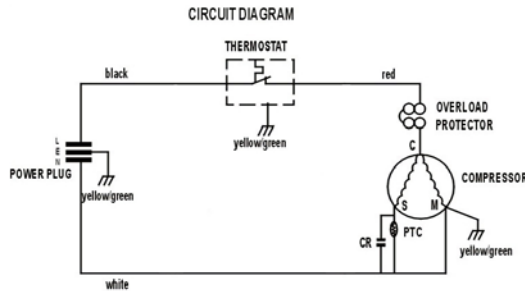
**WIRING DIAGRAMS :**



**Model(s) Used On: HSD/SC-190Y, HSD/SC-220Y, HSD/SC-280Y, HSD/SC-320Y**

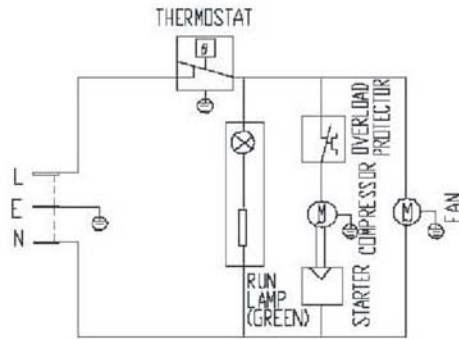


**Model(s) Used On: HSD/SC-258, HSD/SC-302, HBD/BC-258H, HBD/BC-302H  
HSD/SC-358, HSD/SC-408, HSD/SC-518**

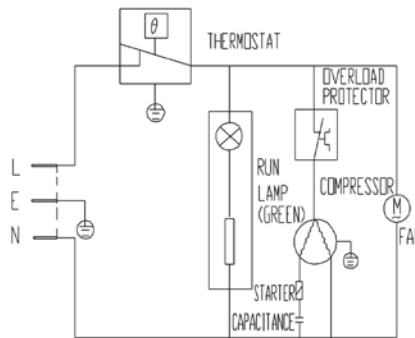


**Model(s) Used On: HSD/SC-132P, HSD/SC-162P, HSD/SC-192P, HSD/SC-218P, HBD/BC-142H,  
HBD/BC-160H, HBD/BC-180H, HBD/BC-195H, HBD/BC-215H**

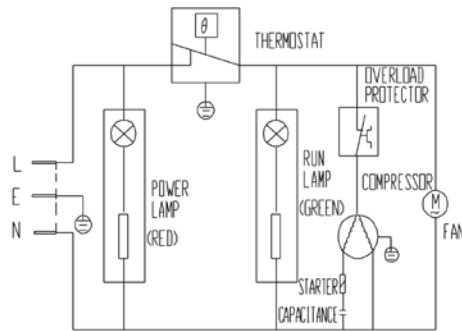
**WIRING DIAGRAMS :**



**Model(s) Used On: HSD/SC-248BY**



**Model(s) Used On: HSD/SC-328BY, HSD/SC-368BY**



**Model(s) Used On: HSD/SC-360BY**