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**REFRIGERATION CONTROLS INDEXED BY RANGE**

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50°F	-50°F	35°F	4°F	1609-100	FGH	Remote Bulb	10 feet	Close on Rise	129
50°F	-20°F	25°F	3°F	1609-90	HH2C	Remote Bulb	8 feet	Close on Rise	129
50°F	-20°F	Manual Reset	Manual Reset	16A60-9	HH	Remote Bulb	10 feet	Close on Rise	130
57°F	35°F	20°F	3°F	1609-94	FGH	Remote Bulb	6 feet	Close on Rise	132
90°F	-30°F	40°F	3.5°F	1609-101	FGH	Remote Bulb	5 feet	Close on Rise	129
90°F	-30°F	40°F	3.5°F	1609-103	FGH	Remote Bulb	10 feet	Close on Rise	129
90°F	-30°F	40°F	3.5°F	1609-104	FGH	Remote Bulb	20 feet	Close on Rise	129
90°F	-30°F	40°F	3.5°F	1609-105	FGH	Remote Bulb	5 feet	Close on Rise	129
90°F	-30°F	40°F	3.5°F	1629-33	FGH	Remote Bulb	8 feet	Close on Rise	131
90°F	-30°F	40°F	4.5°F	1687-9	SPDT	Remote Bulb	8 feet	SPDT	129
90°F	-30°F	20°F	3°F	201-20	FGH	Self Contained		Close on Rise	131
90°F	20°F	20°F	3°F	201-8	FGH	Self Contained		Close on Rise	131
90°F	20°F	20°F	3°F	241-2	FGH	Remote Bulb	8 feet	Close on Rise	129
N/A	N/A	1/16" Ice	1/16" Ice	16A35-3	FG	Remote Bulb	7 feet	Opens	130

\* See page 416 for full electrical ratings

**U.S. Models only**



**96-TD**

**96-TD LIQUID LINE FILTER-DRIERS**

Filter-Driers Designed to Offer Complete Protection to Your Refrigerant System. The 96-TD Series Removes Moisture, Acid and Foreign Materials to Protect the Compressor, Solenoid Valves, Expansion Valves, Capillary Tubes and Other Close Tolerance Parts of Your Refrigeration System

**FEATURES**

- Solid block desiccant core: a composite of molecular sieve and activated alumina.
- Provides high moisture, organic and inorganic acid removal.
- For use with HCFCs, CFCs and the lubricants that go with them.
- Nickel plated SAE flare and solid copper ODF fittings.
- Corrosion resistant paint.

**SPECIFICATIONS**

Maximum Working Pressure . . . . . 500 psig  
 Minimum Burst Pressure . . . . . 2500 psig  
 Agency . . . . . UL/CUL file number SA11002

**INSTALLATION NOTE:** The 96-TD liquid line filter-drier may be installed in any position. Best results are achieved when located as close as possible to the inlet of the expansion device. If using a liquid line solenoid or moisture indicator, locate the filter-drier upstream. This will provide protection to the solenoid valve and allow the moisture indicator to measure the drier effectiveness. Install the drier in as cold a location as possible in the direction of the flow arrow on the unit.

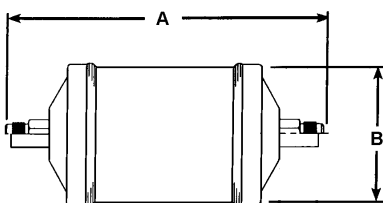
**SELECTION NOTE:** Given the proper liquid line size and connection type, the correct drier may be selected using the charts below. Choosing a unit size with sufficient water capacity to reduce moisture content of the system to a safe level should be considered.

**SELECTION**

NOMINAL SYSTEM TONNAGES BY APPLICATION 96TD LIQUID LINE FILTER-DRIERS	Model Number	Refrigeration Low Temp & Comm.			A/C Field Replace. & Install.		A/C OEM Self-Contained	
		R-134a	R-22	R404A/R507	R-134a	R-22	R-134a	R-22
		96-TD032	1/4	1/4	1/4	1/2	1/2	3/4
96-TD032S	1/4	1/4	1/4	1/2	1/2	3/4	1	
96-TD052	1/3	1/3	1/3	3/4	3/4	1	1	
96-TD052S	1/3	1/3	1/3	3/4	3/4	1	1	
96-TD053	1/3	1/3	1/3	1-1/2	2	2	3	
96-TD053S	1/3	1/3	1/3	1-1/2	2	2	3	
96-TD082S	1/2	1/2	1/2	3/4	1	1	1-1/2	
96-TD083	1	1	1	2	2	3	4	
96-TD083S	1	1	1	2	2	3	4	
96-TD163	2	2-1/2	2	3	3	4	5	
96-TD163S	2	2-1/2	2	3	3	4	5	
96-TD164	2	3	2	3	5	5	7-1/2	
96-TD164S	2	3	2	3	5	5	7-1/2	
96-TD165	2-1/2	3	2-1/2	5	5	7-1/2	10	
96-TD165S	2-1/2	3	2-1/2	5	5	7-1/2	10	
96-TD303S	3	3	2	3	4	4	5	
96-TD304S	3	5	3	5	7-1/2	7-1/2	7-1/2	
96-TD305	4	5	5	7-1/2	7-1/2	10	15	
96-TD305S	4	5	5	7-1/2	7-1/2	10	15	

**CONNECTIONS, DIMENSIONS, FLOW CAPACITIES**

**96-TD Series  
Dimensional Drawing**



① All ratings in accordance with ARI standard 710-86:  
 86°F Liquid Refrigerant Temperature,  
 5°F Saturated Temperature,  
 4.0 lbs./min./ton for R-134a,  
 2.9 lbs./min./ton for R-22,  
 4.4 lbs./min./ton for R-404A/R-507

Filter-Drier	Connections size & type	Dimension		① Flow Capacity Tons @ 1 psi ▲P		
		A	B	R-134a	R-22	R-404A/R507
96-TD032	1/4 SAE	4.32	1.63	1.7	1.9	1.2
96-TD032S	1/4 ODF-3/8 ODM	3.76	1.63	2.1	2.2	1.5
96-TD052	1/4 SAE	4.88	2.50	1.8	2.0	1.3
96-TD052S	1/4 ODF	4.33	2.50	2.6	2.8	1.9
96-TD053	3/8 SAE	5.20	2.50	3.3	3.6	2.4
96-TD053S	3/8 ODF	4.53	2.50	4.1	4.4	2.9
96-TD082S	1/4 ODF	5.24	2.50	2.8	3.0	2.0
96-TD083	3/8 SAE	6.10	2.50	3.9	4.2	2.8
96-TD083S	3/8 ODF	5.43	2.50	3.8	4.1	2.7
96-TD163	3/8 SAE	6.89	2.50	4.0	4.3	2.9
96-TD163S	3/8 ODF	6.22	2.50	4.4	4.8	3.2
96-TD164	1/2 SAE	7.13	2.50	7.5	8.1	5.4
96-TD164S	1/2 ODF	6.27	2.50	7.7	8.4	5.6
96-TD165	5/8 SAE	7.50	2.50	10.6	11.5	7.7
96-TD165S	5/8 ODF	6.54	2.50	11.8	12.8	8.5
96-TD303S	3/8 ODF	8.90	3.00	5.7	6.1	4.1
96-TD304S	1/2 ODF	8.94	3.00	7.9	8.6	5.7
96-TD305	5/8 SAE	10.18	3.00	12.4	13.5	9.0
96-TD305S	5/8 ODF	9.21	3.00	13.1	14.1	9.5



**96-TS**

**96-TS SUCTION LINE DRIERS**

Driers Designed to Clean Up Your Refrigerant System After a Compressor Burnout has Occurred. Removes Solid Contaminants and Harmful Acids that are Created During a Motor Burnout. Another Application: The 96-TS Installed as a Suction Line Filter-Drier in Remote Systems With Long Refrigerant Lines. The Filter-Drier Will Collect and Hold Any Dirt that is in the Evaporator or Suction Line at Start-Up

**FEATURES**

- Dual access valve on each end of the drier for accurate pressure drop readings across the drier.
- Solid block desiccant core effectively removes and holds a maximum amount of contaminants with minimal pressure drop.
- Provides high moisture, organic and inorganic acid removal.
- Binding material within the core protects the core from acid decomposition and allows the core to collect and hold the acids from a motor burnout.
- Inlet deflector spreads the refrigerant flow evenly across the molded core to provide full filtration capacity and to prevent erosion of the core.
- For use with HCFCs, CFCs and the lubricants that go with them.
- Nickel plated SAE flare and solid copper ODF fittings.
- Corrosion resistant paint.

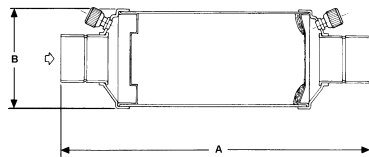
**SPECIFICATIONS**

Maximum Working Pressure . . . . . 500 psig  
 Minimum Burst Pressure . . . . . 2500 psig  
 Agency . . . . . UL/CUL file number SA11002

**INSTALLATION NOTE:** The 96-TS suction line filter-drier may be installed in any position in the suction line as close to the compressor as possible, ahead of the accumulator if there is one in the system.

In low temperature applications, the drier should be installed in a vertical position with the flow in a downward direction to prevent oil accumulation.

**SELECTION NOTE:** Given the proper suction line size, connection type and tonnage of the refrigerant system, the correct drier may be selected using the chart below.



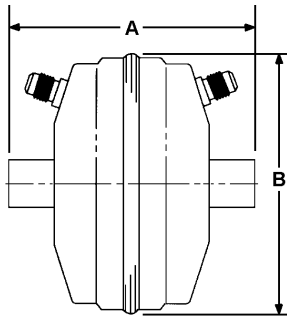
**96-TS Series  
Dimensional Drawing**

**SELECTION:  
CONNECTIONS, DIMENSIONS, FLOW CAPACITIES<sup>①</sup> IN REFRIGERANT TONS AT SELECTED EVAPORATOR TEMPERATURES**

Model Number	Connections size & type	Dimension		+40°F				+20°F				0°F				-20°F				-40°F			
				R-134a				R-22				R-502											
		A	B	Pressure Drop in psi																			
96-TS084S	1/2 ODF	5.48	2.5	2	1.5	1	0.5	3	2	1.5	1	0.5	3	2	1.5	1	0.5	3	2	1.5	1	0.5	
96-TS085S	5/8 ODF	5.74	2.5	2.4	1.6	1.0	0.5	3.8	2.5	1.7	1.1	0.6	3.1	2.0	1.3	0.8	0.4	3.1	2.0	1.3	0.8	0.4	
96-TS164S	1/2 ODF	6.27	2.5	1.7	1.2	0.7	0.4	2.7	1.8	1.2	0.8	0.4	2.2	1.4	1.0	0.6	0.3	2.2	1.4	1.0	0.6	0.3	
96-TS165S	5/8 ODF	6.54	2.5	2.2	1.5	0.9	0.5	3.4	2.2	1.5	1.0	0.5	2.8	1.8	1.2	0.8	0.4	2.8	1.8	1.2	0.8	0.4	
96-TS166S	3/4 ODF	6.95	2.5	2.6	1.8	1.1	0.6	4.1	2.7	1.8	1.2	0.6	3.4	2.2	1.5	0.9	0.5	3.4	2.2	1.5	0.9	0.5	
96-TS167S	7/8 ODF	7.13	2.5	2.7	1.8	1.1	0.6	4.6	2.8	1.9	1.1	0.6	4.3	2.6	1.7	1.0	0.6	4.3	2.6	1.7	1.0	0.6	
96-TS306S	3/4 ODF	9.63	3.0	3.4	2.3	1.4	0.7	5.4	3.5	2.4	1.5	0.8	4.4	2.8	1.9	1.2	0.6	4.4	2.8	1.9	1.2	0.6	
96-TS307S	7/8 ODF	9.80	3.0	3.8	2.5	1.6	0.8	5.7	3.9	2.6	1.7	0.9	4.9	3.1	2.1	1.3	0.7	4.9	3.1	2.1	1.3	0.7	
96-TS309S	1-1/8 ODF	9.80	3.0	3.9	2.6	1.6	0.8	6.1	4.0	2.7	1.7	0.9	5.0	3.2	2.2	1.3	0.7	5.0	3.2	2.2	1.3	0.7	

<sup>①</sup> All ratings in accordance with ARI standard 710-86

REFRIGERATION



**96-TSC  
DIMENSIONS DIAGRAM**

**96-TSC COMPACT SUCTION LINE DRIERS**

96-TSC Suction Line Filter-Driers are Designed for Use in Air-Conditioning, Heat Pump, and Refrigeration Systems in Which the Available Space in the Suction Line is Limited. Especially Useful in Heat Pump Systems Where the Drier Must be Placed Between the Reversing Valve and the Compressor

**FEATURES**

- High organic and inorganic acid removal.
- Dual access valves.
- Solid block desiccant core.
- For use with HCFCs, CFCs and the lubricants that go with them.
- Solid copper ODF fittings.
- Corrosion resistant paint.

**SPECIFICATIONS**

Maximum working pressure . . . . . 302 psig  
 Minimum burst pressure . . . . . 1510 psig  
 Agency . . . . . UL listed file number SA7175  
 . . . . . CSA listed file number LR100624

**CONNECTIONS, DIMENSIONS, FLOW CAPACITIES<sup>®</sup> IN REFRIGERANT TONS AT SELECTED EVAPORATOR TEMPERATURES**

Model Number	Connections Size & Type	Dimension A B		+40°F	+20°F	0°F	-20°F	+40°F	+20°F	0°F	-20°F	-40°F	+40°F	+20°F	0°F	-20°F	-40°F
				R-134a				R-22				R-502					
				Pressure Drop in PSI													
				2	1.5	1	0.5	3	2	1.5	1	0.5	3	2	1.5	1	0.5
96-TSC146S	5/8 ODF	4.49	4.57	2.3	1.5	0.9	0.5	3.6	2.4	1.6	1.0	0.5	2.6	1.7	1.1	0.7	0.3
96-TSC147S	7/8 ODF	4.55	4.57	3.3	2.2	1.4	0.7	5.2	3.4	2.3	1.5	0.8	3.6	2.3	1.5	0.9	0.5

① All ratings in accordance with ARI standard 710-86

REFRIGERATION



**REPLACEMENT FILTER-DRIER CORES**

Used on All 48, 96, 144, and 192 cubic inch drier shells

**FEATURES**

- Factory activated.
- Hermetically sealed.
- Universal gaskets provided.

**SPECIFICATIONS**

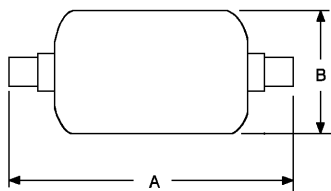
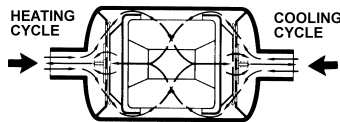
96-D48 standard capacity core . . . . . 100% activated alumina for general clean-up where high levels of acid exist  
 96-H48 high capacity core . . . . . Molecular sieve and activated alumina. Perfect for moisture and high acid level removal  
 96-W48HH burnout clean up core . . . . . Activated alumina, molecular sieve and activated charcoal removes acid, moisture and solid contaminants

**WATER CAPACITY IN DROPS (20 DROPS = 1 GRAM = 1 CC)**

Model Number	R-134a		R-22		R-407C		R-404A/507		R-502		Cubic Inch
	75°F	125°F	75°F	125°F	75°F	125°F	75°F	125°F	75°F	125°F	
96-D48	415	340	363	254	225	95	457	343	388	225	48
96-H48	676	538	597	436	445	285	721	535	643	475	48
96-W48HH	387	294	335	226	290	165	417	289	444	306	48



**96-TBF**



**96-TBF Series  
Dimensional Drawing**

**96-TBF BI-DIRECTIONAL HEAT PUMP DRIERS**

Bi-Directional Driers Designed to Provide Complete Protection to Your Heat Pump or Reverse Cycle System. This Compact Design Filters Contaminants, Removes Moisture & Acids During the Cooling & Heating Cycles During Winter and Summer. Internal Check Valves Prevent the Release of Collected Contaminants When the Heat Pump Cycles from the Heating to Cooling Modes

**FEATURES**

- Proven, nylon internal check valves.
- Solid block desiccant core: a composite of molecular sieve and activated alumina.
- Provides high moisture, organic and inorganic acid removal.
- The addition of charcoal to the desiccant core allows for the removal of wax that may occur at low evaporator temperatures.
- Nickel plated SAE flare and solid copper ODF fittings.
- Corrosion resistant paint.

**SPECIFICATIONS**

Maximum Working Pressure . . . . . 500 psig  
 Minimum Burst Pressure . . . . . 2500 psig  
 Agency . . . . . U.L. file number SA7175  
 C.S.A. file number LR100624

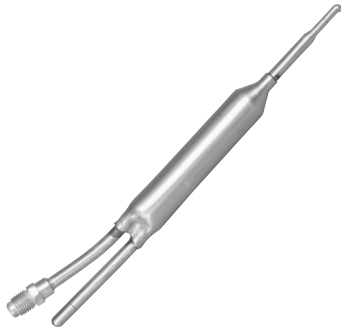
**INSTALLATION NOTE:** The drier may be installed in any position in the reversing liquid line.

**SELECTION NOTE:** Given the proper liquid line size, connection type and tonnage of the refrigerant system, the correct drier may be selected using the chart below. Choosing a unit size with sufficient water capacity to reduce moisture content of the system to a safe level should be considered.

**SELECTION: CONNECTIONS, DIMENSIONS, FLOW CAPACITIES**

Model Number	Connections size & type	Dimension		① Flow Capacity
		A	B	Tons @ 2 psi ▲P
<b>96-TBF083</b>	3/8 SAE	6.28	2.63	6.6
<b>96-TBF083S</b>	3/8 ODF	5.63	2.63	7.4
<b>96-TBF163</b>	3/8 SAE	6.97	2.63	6.7
<b>96-TBF163S</b>	3/8 ODF	6.31	2.63	7.5
<b>96-TBF164</b>	1/2 SAE	7.22	2.63	11.2
<b>96-TBF164S</b>	1/2 ODF	6.34	2.63	11.7
<b>96-TBF165S</b>	5/8 ODF	6.63	3.09	12.4

① All ratings in accordance with ARI standard 710-86: 2.9 lbs./min./ton for R-22



**96-CU SPUN COPPER LIQUID LINE DRIERS**

Spun Copper Service Drier for All Refrigerants

**FEATURES**

- 100% XH-9 beaded molecular sieve for maximum water capacity in HFC refrigerants.
- Recommended for use in original equipment or replacement residential, air-conditioning or refrigeration equipment.
- 100 micron filtration.
- Extended ends.

**SPECIFICATIONS**

Maximum working pressure . . . . . 500 psig

Model Number	Product Description	WATER CAPACITY ②											
		DROPS OF WATER ① ③											
		R-12		R-134a		R-22		R-407C		R-404A/507		R-502	
		75°F	125°F	75°F	125°F	75°F	125°F	75°F	125°F	75°F	125°F	75°F	125°F
96-CU619	Access Valve	25	23	23	21	23	20	19	14	23	21	24	21

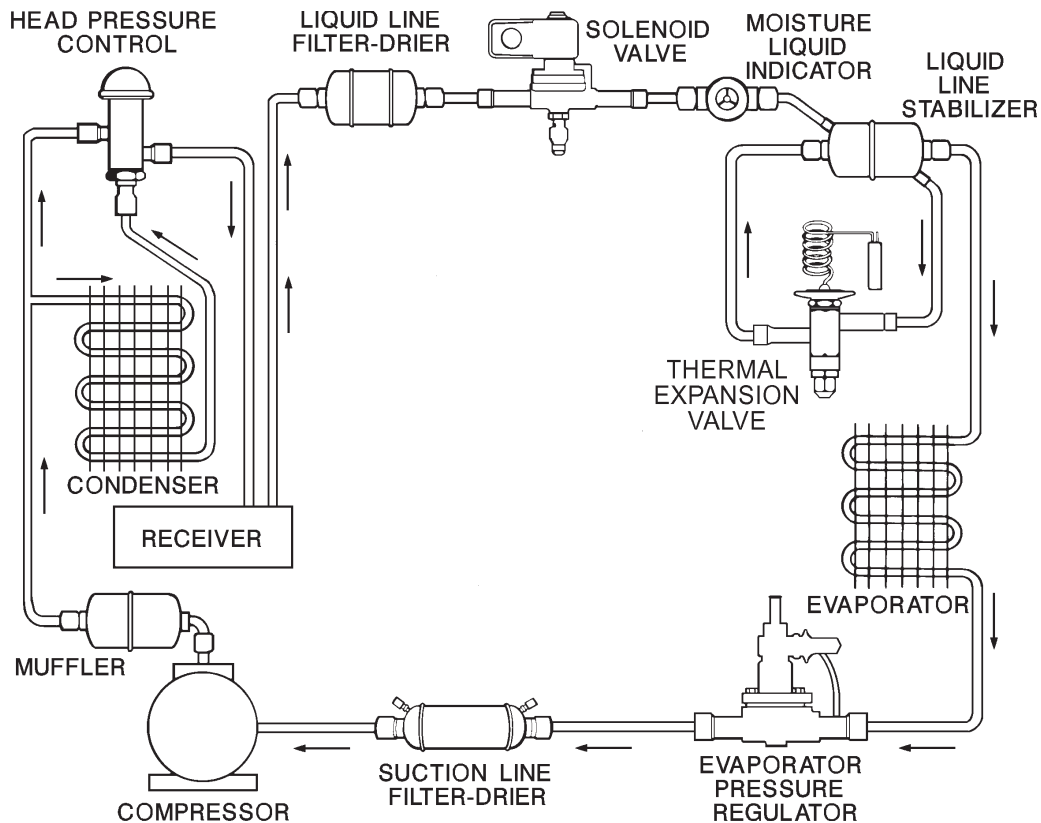
① All ratings in accordance with ARI Standard 710-86, 86°F liquid refrigerant temperature  
 5°F saturated vapor temperature  
 3.1 lbs./min./ton for R-134a  
 2.9 lbs./min./ton for R-22 and R-407C  
 4.0 lbs./min./ton for R-404A/507 and R-12  
 4.4 lbs./min./ton for R-502  
 2.7 lbs./min./ton for R-410A

② For 2 PSI ΔP, multiply values by 1.4

③ 20 drops of water = 1 gram = 1 cc

Model Number	Product Description	Parker Equivalent	Connections		Length in inches	Outer Diameter
			Inlet	Outlet		
96-CU619	Access Valve	MMS-200619	1/4"	Cap	8 7/8"	3/4"

REFRIGERATION





**96-HMI**

**CROSS REFERENCE**

NEW Model Number	Replaces
96-HMIY2SS	96-IHL2SS
96-HMIY3SS	added
96-HMIY4SS	96-IHL4SS
96-HMIY5SS	96-IHL5SS
96-HMIY2FM	96-IHL2FM
96-HMIY3FM	96-IHL3FM
96-HMIY5FM	96-IHL5FM

**96-HMI MOISTURE INDICATORS**

Designed to Provide an Accurate Method of Determining When the Moisture Content is Dangerously Wet in a Refrigeration System and When The Liquid Line Drier is No Longer Effective

**FEATURES**

- Forged brass bodies with brass fittings, designed for liquid line service.
- Sight glass features a wide angle view, allowing for easy inspection of the refrigerant system.
- Indicator element ring is highly sensitive to moisture and will gradually change color in reaction to the moisture content of the refrigerant system.

**SPECIFICATIONS**

Maximum Working Pressure . . . . . 500 psig  
 Minimum Burst Pressure . . . . . 2500 psig  
 Agency . . . . . U.L. file number SA9566  
 C.S.A. file number LR100624

**NOTE:** Bubbles passing through the sight glass may be an indication of a low system charge or a restriction in the refrigerant system.

**SELECTION: CONNECTIONS & DIMENSIONS**

Model Number	Connections size & type	Dimensions	
		Length	Height
96-HMIY2FM	1/4" FEMALE X MALE FLARE	2.56"	1.29"
96-HMIY2SS	1/4" SOLDER X SOLDER	4.57"	1.10"
96-HMIY3FM	3/8" FEMALE X MALE FLARE	2.97"	1.38"
96-HMIY3SS	3/8" SOLDER X SOLDER	4.57"	1.11"
96-HMIY4SS	1/2" SOLDER X SOLDER	4.88"	1.29"
96-HMIY5SS	5/8" SOLDER X SOLDER	4.88"	1.38"



**96-PF PRE-FILTERS**

The Pre-Filter Offers Protection to Refrigerant Service Equipment. When Installed on the Inlet of the Service Equipment, the Refrigerant is Filtered Before Entering. The Pre-Filter is for Temporary Use Only and Changed After a Maximum of 200 lbs. of Refrigerant has Flowed Through the Filter (Change Sooner if Heavy System Contamination)

**FEATURES**

- Traps solid contaminants.
- Filtering media to remove aluminum and iron particles, copper and iron oxides, metal chips, varnish, flux, and dirt particles down to 30 microns.
- Corrosion resistant paint.
- Uses include refrigerant recovery, recycle, and reclaim equipment.

**SPECIFICATIONS**

Agency . . . . . U.L. file number SA7175  
 C.S.A. file number LR100624

**SELECTION: CONNECTIONS & DIMENSIONS**

Model Number	Connections size & type	Dimensions	
		Length	Height
96-PF032MF	1/4 MALE X FEMALE FLARE	4.28	1.63
96-PF052MF	1/4 MALE X FEMALE FLARE	4.74	2.50
96-PF052	1/4 FLARE	4.85	2.50

REFRIGERATION





**1609-101**

**REFRIGERATION TEMPERATURE CONTROL**

Provide Positive Control of Refrigeration Applications Where Remote Control is Desired

**FEATURES**

- Hydraulic action element.
- Dustproof steel case with top and bottom knockouts.
- Temperature dial graduated in °F and °C and can be adjusted through cover.
- High electrical ratings allow operation of most equipment without use of relays or motor starters.
- Type 1609-90 — For use in zoning systems where all thermostats control a common compressor & a separate solenoid refrigerant valve in each zone.

**SPECIFICATIONS**

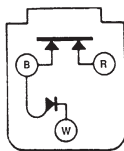
Dimensions . . . . . 5<sup>3</sup>/<sub>8</sub>" H + 2<sup>5</sup>/<sub>16</sub>" W x 2<sup>9</sup>/<sub>16</sub>" D  
 Finish . . . . . Grey  
 Bulb Mounting . . . . . Clamp included with all models except 1609-90  
 Agency . . . . . U.L. listed and C.S.A. certified

**PARTS AND ACCESSORIES**

- F89-0027 Refrigeration Well
- F55-0088 Packing Nut

Model Number	Range	Differential	Capillary Length	Bulb Size	Switch Action	Full Electrical Rating	Motor Rating (Full Load)	
							120 VAC	240 VAC
241-2	+20 to +90°F (- 6 to +32°C)	Adj. 3 to 20°F (2 to 11°C)	8 ft.	6 <sup>3</sup> / <sub>4</sub> " x <sup>3</sup> / <sub>8</sub> "	Close on Rise	FGH see page 416	16.0A	8.0A
1609-90	- 20 to +50°F (- 29 to +10°C)	Adj. 3 to 25°F (2 to 14°C)	8 ft.	5 <sup>1</sup> / <sub>4</sub> " x <sup>3</sup> / <sub>8</sub> "	Close on Rise	HH2C see page 416	7.4A	3.7A
1609-100	- 50 to +50°F (- 45 to +10°C)	Adj. 4 to 35°F (2 to 19°C)	10 ft.	6 <sup>3</sup> / <sub>8</sub> " x <sup>3</sup> / <sub>8</sub> "	Close on Rise	FGH see page 416	16.0A	8.0A
1609-101	- 30 to +90°F (- 34 to +32°C)	Adj. 3.5 to 40°F (2 to 22°C)	5 ft.	5 <sup>1</sup> / <sub>4</sub> " x <sup>3</sup> / <sub>8</sub> "	Close on Rise	FGH see page 416	16.0A	8.0A
1609-103	- 30 to +90°F (- 34 to +32°C)	Adj. 3.5 to 40°F (2 to 22°C)	10 ft.	5 <sup>1</sup> / <sub>4</sub> " x <sup>3</sup> / <sub>8</sub> "	Close on Rise	FGH see page 416	16.0A	8.0A
1609-104	- 30 to +90°F (- 34 to +32°C)	Adj. 3.5 to 40°F (2 to 22°C)	20 ft.	5 <sup>1</sup> / <sub>4</sub> " x <sup>3</sup> / <sub>8</sub> "	Close on Rise	FGH see page 416	16.0A	8.0A
1609-105 ①	- 30 to +90°F (- 34 to +32°C)	Adj. 3.5 to 40°F (2 to 22°C)	5 ft.	5 <sup>1</sup> / <sub>4</sub> " x <sup>3</sup> / <sub>8</sub> "	Close on Rise	FGH see page 416	16.0A	8.0A
1687-9	- 30 to +90°F (- 34 to +32°C)	Adj. 4.5 to 40°F (2.5 to 22°C)	8 ft.	5 <sup>1</sup> / <sub>4</sub> " x <sup>3</sup> / <sub>8</sub> "	SPDT	SPDT see page 416	7.4A	3.7A

① Knob adjustment

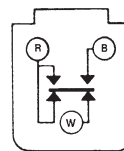


**HH2C Contact Structure**

HH2C Rated Controls

**Switch Action**

Double pole, single throw.  
 B terminal is common.  
 B-R and B-W contacts both close on a rise of temperature.



**SPDT Contact Structure**

SPDT Rated Controls

**Switch Action**

R-B Open on Rise  
 R-W Close on Rise



**16A60-9**

**MANUAL RESET FREEZE PROTECTION CONTROL**

Designed to Shut Down Cooling Equipment Before Undesirably Low Temperatures are Reached

**FEATURES**

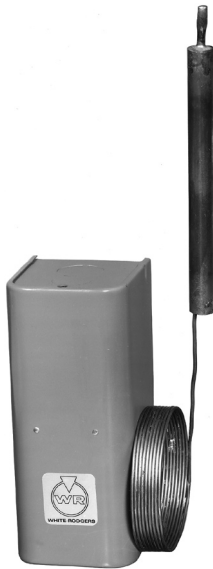
- Temperature dial graduated in °F and °C scales.
- Adjustable dial stop to limit minimum setting — Shipped at 36°F (2°C).
- Dustproof steel case with top and bottom knockouts.
- Hydraulic action element — Unaffected by vibration — No leveling required.
- Equipped with special 1/2" packing nut assembly.

**SPECIFICATIONS**

Dimensions . . . . . 5<sup>3</sup>/<sub>8</sub>" H x 2<sup>5</sup>/<sub>16</sub>" W x 2<sup>9</sup>/<sub>16</sub>" D  
 Finish . . . . . Grey  
 Thread Size (packing nut) . . . . . 1/2" NPT  
 Agency . . . . . U.L. listed and C.S.A. certified

Model Number	Range	Differential	Capillary Length	Bulb Size	Switch Action	Full Electrical Rating	Motor Rating (Full Load)	
							120 VAC	240 VAC
16A60-9	- 30 to 50°F (- 34 to 10°C)	Manual (3 to 25°C)	10 ft.	5 <sup>3</sup> / <sub>4</sub> " x 3/8"	Open on Fall	HH see page 416	7.4A	3.7A

REFRIGERATION



**16A35-3**

**ICE BANK CONTROL**

Controls Compressor to Maintain an Ice Bank of Desired Thickness. Excellent for use on Refrigerated Cabinets Where an Ice Bank is Built as a Means of Storing Refrigeration

**FEATURES**

- Specially designed element controls ice bank thickness to within 1/16".
- Thickness of ice determined by location of sensing element to evaporator coil.
- Control stops compressor when ice bank completely covers sensing element and starts compressor when ice bank begins to melt.
- Dustproof steel case with top and bottom knockouts.
- Two mounting straps included.
- Hydraulic action element — No leveling required.

**SPECIFICATIONS**

Dimensions . . . . . 5<sup>3</sup>/<sub>8</sub>" H x 2<sup>5</sup>/<sub>16</sub>" W x 2<sup>9</sup>/<sub>16</sub>" D  
 Finish . . . . . Grey  
 Switch Action . . . . . Opens when bulb is covered with ice  
 Agency . . . . . U.L. listed and C.S.A. certified

Model Number	Differential	Capillary Length	Bulb Size	Full Electrical Rating	Motor Rating (Full Load)	
					120 VAC	240 VAC
16A35-3	1/16" ice	7 ft.	5" x 1/2"	FG see page 416	14.0A	7.0A



**201-8**

**REFRIGERATION TEMPERATURE CONTROLS FOR WALK IN BOXES**

Designed for use in Garages, Factories, Warehouses and Similar Commercial and Industrial Installations

**FEATURES**

- Dust, moisture and vermin resistant heavy metal case.
- Handles inductive and non-inductive loads.
- No leveling required — Mounts in any position.
- Quick response to temperature changes.
- Nickel plated element.

**SPECIFICATIONS**

Dimensions . . . . . 5<sup>3</sup>/<sub>8</sub>" H + 2<sup>1</sup>/<sub>2</sub>" coil x 2<sup>5</sup>/<sub>16</sub>" W x 2<sup>9</sup>/<sub>16</sub>" D  
 Finish . . . . . Grey  
 Agency . . . . . U.L. listed and C.S.A. certified

Model Number	Range	Differential	Switch Action	Full Electrical Rating	Motor Rating (Full Load)		Resistive (Non-Inductive)	
					120 VAC	240 VAC	120 VAC	240 VAC
201-8	20 to 90°F (- 6 to 32°C)	Adj. 3 to 20°F (2 to 11°C)	Close on Rise	FGH See page 416	16.0A	8.0A	25.0A	22.0A
201-20	- 30 to 90°F (- 34 to 32°C)	Adj. 3 to 20°F (2 to 11°C)	Close on Rise	FGH See page 416	16.0A	8.0A	25.0A	22.0A



**1629-33**

**SELECTIVE RANGE TEMPERATURE CONTROL**

Used on Water, Beer and Beverage Coolers, Vegetable and Meat Display Cases and Similar Applications. Special Knob Limits Adjustable Range

**FEATURES**

- Dustproof steel case with top and bottom knockouts.
- Selective range — Allows any 24°F (13°C) section of control temperature range to be used as knob adjusted range.
- Select-range dial labeled 1 through 5.
- High electrical rating allows operation of most equipment without use of relays or motor starter.
- Hydraulic action element with bulb mounting clamp included.

**SPECIFICATIONS**

Dimensions . . . . . 5<sup>3</sup>/<sub>8</sub>" H x 2<sup>5</sup>/<sub>16</sub>" W x 2<sup>9</sup>/<sub>16</sub>" D + <sup>5</sup>/<sub>8</sub>" Knob  
 Finish . . . . . Grey  
 Agency . . . . . U.L. listed and C.S.A. certified

Model Number	Range	Differential	Selective Range	Capillary Length	Bulb Size	Switch Action	Full Electrical Rating	Motor Rating (Full Load)	
								120 VAC	240 VAC
1629-33	- 30 to +90°F (- 34 to +32°C)	Adj. 3.5 to 40°F (2 to 22°C)	24°F (13°C)	8 ft.	5 <sup>1</sup> / <sub>4</sub> " x <sup>3</sup> / <sub>16</sub> "	Close on rise	FGH See page 416	16.0A	8.0A



**1609-94**

**NICKEL PLATED TEMPERATURE CONTROL  
FOR ICE MAKING EQUIPMENT**

Maintains Desired Ice Level on Bin Type Ice Making Machines

**FEATURES**

- Sensing bulb and capillary nickel plated to meet sanitary requirements.
- Temperature dial graduated in °F and °C and can be adjusted through cover.
- Dustproof steel case with top and bottom knockouts.
- Hydraulic action element — No leveling required.
- Easy to wire screw terminals.
- Adjustable differential.

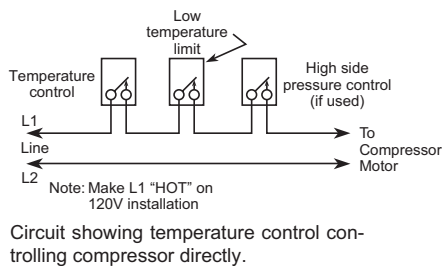
**SPECIFICATIONS**

Dimensions . . . . . 5<sup>3</sup>/<sub>8</sub>" H x 2<sup>5</sup>/<sub>16</sub>" W x 2<sup>9</sup>/<sub>16</sub>" D  
 Finish . . . . . Grey  
 Bulb Finish . . . . . Nickel plated  
 Agency . . . . . U.L. listed and C.S.A. certified

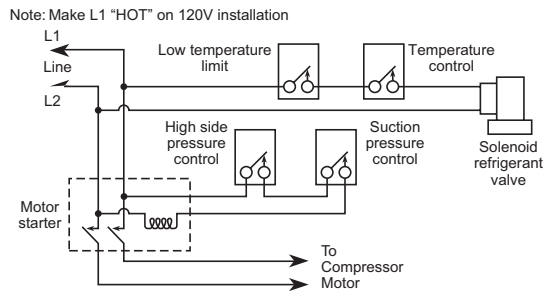
Model Number	Range	Differential	Capillary Length	Bulb Size	Switch Action	Full Electrical Rating	Motor Rating (Full Load)	
							120 VAC	240 VAC
1609-94	35 to 57°F (2 to 13°C)	Adj. 3 to 20°F (2 to 11°C)	6 ft.	7 <sup>1</sup> / <sub>4</sub> " x 3 <sup>3</sup> / <sub>8</sub> "	Close on Rise	FGH see page 416	16.0A	8.0A

REFRIGERATION

**Controls with one circuit (two terminals)**

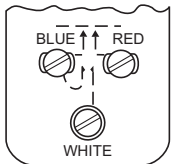


**Typical Refrigeration Pump Down Circuit**



**Controls with two circuits (three terminals)**

The blue terminal is common. The table below shows the maximum load allowed between terminals.



LOAD CONDITIONS	MAXIMUM ALLOWABLE RATING			
	Full Load		Locked Rotor	
	120V	240V	120V	240V
Load between Blue and Red terminals must not exceed:	7.4A	3.7A	44.5A	22.2A
Load between Blue and White terminals must not exceed:	7.4A	3.7A	44.5A	22.2A

This diagram shows a typical two-circuit application. Several zones receive refrigeration from the same compressor, but each zone requires its own solenoid refrigerant valve, temperature control and limit control.

