



# Refrigeration Relay, Overloads & Hard Starts

## For Refrigeration Systems Without Run Capacitors

For servicing traditional style systems.

SUPCO offers the most complete line of Refrigeration relays, overloads and hard starts in the industry. For refrigeration systems with and without run capacitors, just choose the right combination for your application. All combinations are pre-wired for fast installation.



ICG

### ICG and PO Series Relays

#### Features/Benefits

- ICG Series features a “snap-on” bracket
- PO Series installs on compressors with “pin-type” terminals.
- Fastest cool down time of any solid state relays
- Can be used with and without start capacitor.

#### Applications

- One size for all compressors from 1/12 hp through 1/2 hp.
- Replaces all current type relays.

### Selection Table For Refrigeration Systems Without Run Capacitors

NO.	START			MOUNTING	HP RATING	VOLTAGE (VAC)
	RELAY	OVERLOAD	CAPACITOR			
ICG1	*			Quick Connect	1/12 - 1/2	115
ICG-220	*			Quick Connect	1/12 - 1/2	230
PO115	*			Push - on	1/12 - 1/2	115
PO230	*			Push - on	1/12 - 1/2	230
RO81	*	*		Quick Connect	1/12 - 1/5	115
RO41	*	*		Quick Connect	1/4 - 1/3	115
RO21	*	*		Quick Connect	1/2	115
RO82	*	*		Quick Connect	1/12 - 1/8	230
RO62	*	*		Quick Connect	1/6 - 1/5	230
RO42	*	*		Quick Connect	1/4 - 1/3	230
RO22	*	*		Quick Connect	1/2 - 2/3	230
PRO81	*	*		Push - on	1/12 - 1/5	115
PRO41	*	*		Push - on	1/4 - 1/3	115
PRO21	*	*		Push - on	1/2	115
PRO82	*	*		Push - on	1/12 - 1/8	230
PRO62	*	*		Push - on	1/6 - 1/5	230
PRO42	*	*		Push - on	1/4 - 1/3	230
PRO22	*	*		Push - on	1/2 - 2/3	230
RSC10	*		*	Quick Connect	1/12 - 1/2	115
RSC20	*		*	Quick Connect	1/12 - 1/2	230
RC0810	*	*	*	Quick Connect	1/12 - 1/5	115
RC0410	*	*	*	Quick Connect	1/4 - 1/3	115
RC0210	*	*	*	Quick Connect	1/2	115
RC0820	*	*	*	Quick Connect	1/12 - 1/8	230
RC0620	*	*	*	Quick Connect	1/6 - 1/5	230
RC0420	*	*	*	Quick Connect	1/4 - 1/3	230
RC0220	*	*	*	Quick Connect	1/2	230
SS410	*	*	*	Quick Connect	1/4 - 1/3	115



RO

### RO & PRO Series Relay and Overload Combinations

#### Features/Benefits

- RO Series features “snap-on” bracket
- PRO Series installs on “pin-type” terminal.
- Locked rotor protection eliminates start winding overheating
- Can be used with and without start capacitor motors from 1/4 to 1/3 hp.

#### Applications

- Select the right match to replace refrigerator compressor relay and overload units from 1/12 through 2/3 hp, 115 – 230 VAC.



RSC

### RSC Series Relay and Start Capacitor Combination

#### Features/Benefits

- Replaces current-type relays
- Provides a boost for hard start and unbalanced systems
- Prevents low voltage starting problems
- No additional wires required

#### Applications

- One size for all compressors from 1/12 hp through 1/2 hp.
- For domestic and commercial refrigeration systems and freezers



RCO

### RCO Series 3 N' 1 Relay, Overload and Start Capacitor Combination

#### Features/Benefits

- Replaces relay, overload and provides a boost for hard start and unbalanced systems
- Prevents low voltage starting problems

#### Applications

- Select the right match to replace refrigerator compressor relay and overload units from 1/12 through 2/3 hp, 115 – 230 VAC.
- For all capillary systems



SS410

### SS410 Super Start Relay Overload Combination

#### Features/Benefits

- Equipped with an electro-mechanical relay, locked rotor protector and a 255 mFd start capacitor.
- Increases torque to its maximum capacity

#### Applications

- For all motors including high starting torque motors from 1/4 to 1/3 hp.



## For Refrigeration Systems With Run Capacitors

For servicing Newer technology systems developed during the last decade. These relays, overloads and hard start combinations can also be used on systems without run capacitors.



UPRO

### URO & UPRO Series Relay and Overload Combinations

#### Features/Benefits

- Safe, reliable, long lasting PTC relay
- Locked rotor protection eliminates start winding overheating
- Can be used with and without start

#### Applications

- Select the right match to replace refrigerator compressor relay and overload units from 1/12 through 2/3 hp, 115 – 230 VAC.



URSC

### URSC Series Relay and Start Capacitor Combination

#### Features/Benefits

- Replaces current-type relays
- Provides a boost for hard start and unbalanced systems
- Prevents low voltage starting problems
- No additional wires required

#### Applications

- One size for all compressors from 1/12 hp through 1/2 hp.
- For domestic and commercial refrigeration systems and freezers

### Selection Table For Refrigerator Systems With Run Capacitors

NO.	RELAY	OVERLOAD	CAPACITOR	START MOUNTING	HP RATING	VOLTAGE (VAC)
UR081	*	*		Quick Connect	1/12 - 1/5	115
UR041	*	*		Quick Connect	1/4 - 1/3	115
UR021	*	*		Quick Connect	1/2	115
UR082	*	*		Quick Connect	1/12 - 1/8	230
UR062	*	*		Quick Connect	1/6 - 1/5	230
UR042	*	*		Quick Connect	1/4 - 1/3	230
UR022	*	*		Quick Connect	1/2 - 2/3	230
UPRO81	*	*		Push - on	1/12 - 1/5	115
UPRO41	*	*		Push - on	1/4 - 1/3	115
UPRO82	*	*		Push - on	1/12 - 1/8	230
UPRO62	*	*		Push - on	1/6 - 1/5	230
UPRO42	*	*		Push - on	1/4 - 1/3	230
UPRO22	*	*		Push - on	1/2 - 2/3	230
URSC10	*		*	Quick Connect	1/12 - 1/2	115
URSC20	*		*	Quick Connect	1/12 - 1/2	230
URCO81	*	*	*	Quick Connect	1/12 - 1/5	115
URCO41	*	*	*	Quick Connect	1/4 - 1/3	115
URCO21	*	*	*	Quick Connect	1/2	115
URCO82	*	*	*	Quick Connect	1/12 - 1/5	230
URCO62	*	*	*	Quick Connect	1/6 - 1/5	230
URCO42	*	*	*	Quick Connect	1/4 - 1/3	230
URCO22	*	*	*	Quick Connect	1/2	230

\* URO replaces all UR



URSC

### URCO Series 3 N' 1 Relay, Overload and Start Capacitor Combination

#### Features/Benefits

- Replaces relay, overload and provides a boost for hard start and unbalanced systems
- Prevents low voltage starting problems

#### Applications

- Select the right match to replace refrigerator compressor relay and overload units from 1/12 through 2/3 hp, 115 – 230 VAC.

## Direct Replacement Solid State Relays, Overloads and Relay/Overload Combinations

- Direct Replacements for numerous OEM's
- Use OL Series Overloads with IC Series, PO Series and UR115



IC100



OL1

PART NO.	RELAY	OVERLOAD	HORSEPOWER	VAC	# OF TERMINALS	COMPRESSOR CONNECTIONS	CAPABLE	CAPACITOR REPLACES OEM NO.
IC100	*	---	1/12 to 1/3	120	2	2	Yes	216594300, WR7X194, WR7X214, 4318083
IC102	*	---	1/12 to 1/3	120	3	2	Yes	5303007173, WR7X240, WR7X5142, 68857-1
IC103	*	---	1/12 to 1/3	120	2	2	Yes	WR7X10011, WR7X190, WR7X195, WR7X259, 66858-1, 3204873
OL1	---	*	1/5 to 1/4	120/240	1	1	---	5303299560, 216100110
OL2	---	*	1/4 to 1/3+	120/240	1	1	---	5303270406, WR8X122
OL3	---	*	1/6 to 1/5	120/240	1	1	---	5303276514
OL4	---	*	1/4 to 1/3+	120/240	1	1	---	5303206885, 2154945

\* IC100, IC102 & IC103 replaces PON



# Refrigeration Relay, Overloads & Hard Starts

## OV Series Universal Replacement Motor Protectors

- Built in temperature activated disc opens and closes the motor overload protector's contacts.
- Excessive heat generated by the compressor, motor or crankcase heater will open the contacts to help protect the equipment from serious damage or burnout.
- Used in heat pumps, air conditioners, motors, refrigerators, freezers, pumps, water coolers, and heating applications.
- UL and CSA Approved



### OVKIT Overload Kit

- Contains one of each overload (10 total)

#### Horse Power at 120 Volts

PART NO.	LOCKED ROTOR AMPS												GEM NO.	MARS NO.	
	12.0	13.5	1/20	1/1	1/10	1/8	1/6	1/5	1/4	1/3	1/2	3/4			
OV32	12.0	13.5	•	•										MP359	35004
OV34	14.0	15.5		•	•	•	•	•						MP358	35007
OV36	16.0	18.0			•	•	•	•						MP357	35009
OV38	18.5	22.0			•	•	•	•	•					MP354	35010
OV40	22.5	26.5					•	•	•					MP360	35011
OV42	27.0	31.0					•	•	•					MP355	35012
OV44	31.5	35.5								•	•			MP361	35017
OV46	36.0	40.0								•	•	•		MP352	35018
OV48	40.5	44.5								•	•	•		MP351	35019
OV50	45.0	49.0									•	•		MP362	35020

#### Horse Power at 240 Volts

NO.	LOCKED ROTOR AMPS													GEM NO.	MARS NO.	
	12.0	13.5	1/10	1/8	1/6	1/5	1/4	1/4+	1/3	1/3+	1/2	1/2+	3/4			1
OV32	12.0	13.5	•	•	•	•	•	•	•						MP359	35004
OV34	14.0	15.5	•	•	•	•	•	•	•						MP358	35007
OV36	16.0	18.0			•	•	•	•	•						MP357	35009
OV38	18.5	22.0			•	•	•	•	•	•					MP354	35010
OV40	22.5	26.5						•	•	•	•	•	•	•	MP360	35011
OV42	27.0	31.0						•	•	•	•	•	•	•	MP355	35012
OV44	31.5	35.5										•	•	•	MP361	35017
OV46	36.0	40.0										•	•	•	MP352	35018
OV48	40.5	44.5										•	•	•	MP351	35019
OV50	45.0	49.0											•	•	MP362	35020

This application guide is offered as a guide only when no other information is available.

The application will vary with compressor manufacturer's systems and condenser applications (static, fan, and water cooled, etc.)

Other factors include refrigerant, motor type, and efficiency.

### Application Note:

#### Locked Rotor Amperage Measurement.

To determine the locked rotor amperage use the following procedure:

1. Disconnect source of electrical supply.
2. By-pass defective overload with jumper.
3. Remove wire from start terminal of compressor.
4. Place hook-on ampmeter on wire going to common or run terminal of compressor.
5. Connect plug to source of current and read ampmeter.
6. If unit does not have a start capacitor, add 1/2 of ampere reading to obtain the locked rotor amps. Example: If ampere reading is 21, add 1/3 (+ 7) = 28 locked rotor amps.
7. If unit has a start capacitor, add 10% of ampere reading. Example: If ampere reading is 21, add 10% (+2.1) = 23.1 locked rotor amps.
8. Replace defective overload and replace wire removed from start terminal.

**NOTE:** The above procedure should only be used when the motor winding is at ambient temperature.

# Refrigeration Relay, Overloads & Hard Starts



## Motor Protector Cross Reference

HP/TYPE	SUPCO OV	TECUMSEH O/L	HP/TYPE	SUPCO OV	TECUMSEH O/L	HP/TYPE	SUPCO OV	TECUMSEH O/L	HP/TYPE	SUPCO OV	TECUMSEH O/L
1/8 Fan	<b>OV34</b>	83281/83282	1/5 Fan	<b>OV38</b>	83030/83131	1/4 Static	<b>OV44</b>	83013/83017	1/3 Fan	<b>OV46</b>	83031/83074
		83316/83438			83183/83183-1			83036/83063			83168/83168-1
		83441/83461			83290/83426			83145-1/83172			83257/83257-1
		83473/83606			83439/83448			83172/83172-1			83257-2/83293
		83628/83711			83743/83743-1			83192/83192-1			83307/83332
1/6 Fan	<b>OV36</b>	83018/83021	1/5 Static	<b>OV40</b>	83746/83746-1	1/4 Static	<b>OV44</b>	83321/83373	1/3 Static	<b>OV48</b>	8300MRT26
1/8 Static	83042/83077	8300MRT58			83376-1/83378			8300MRT60			
	83091/83160	83047/83171			83400/83435			83219			
	83160-1/83165	83171-1/83291			83459/83647			83434			
	83165-1/83191	83366/83391			83681/83694			83673			
	8191-1/83287	83392	83736-1/83766	83765							
83463/83691	1/4 Fan	<b>OV42</b>	83011/83139	83376-1/83378	83789	83640/83708					
83006			83161/83161-1		83713/83714/83754						
			83163/83163-1								
			83259/83289								
			83292/83323								

## Valves & Fittings



### BPV Series Bullet® Piercing Valves

The *ONLY* valve with a permanent type, patented gasket application!



SUPCO's "Bullet® Piercing Valve" utilizes the same type of gasket found under the head plate of most air conditioning compressors. When installed, the gasket actually compresses the copper tubing .020" creating a permanent, leakproof seal that will withstand any pressure and temperature for the life of the unit.

#### Features

- Patented valve gasket application provides 50 times more sealing area than competitive "O" ring types
- A sealing force of over 180 inch lbs., torque tested with 500 lbs., pressure tested at 250°F
- Precision piercing needle is engineered for concentricity and hardness to insure perfect seating every time
- Nonpositional mounting — No adapter valve required
- Requires only a 2" clearance area for installation and operation
- Hex key wrench included — No additional tools required
- Corrosion resistant plated and lacquered finish

#### Applications

- Install on the high side as a permanent valve on the job
- Install on round suction lines or uneven tubing

BPV SERIES BULLET® PIERCING VALVES		
PART NO.	O.D. TUBING SIZE	PACKAGING
<b>BPV31*</b>	1/4", 5/16", 3/8"	12/Box
<b>BPV31D*</b>	1/4", 5/16", 3/8"	48/Box
<b>BPV21*</b>	1/2", 5/8"	8/Box
<b>BPV36</b>	3/16"	12/Box
<b>BPV14</b>	1/4"	12/Box
<b>BPV56</b>	5/16"	12/Box
<b>BPV38</b>	3/8"	12/Box
<b>BPV12</b>	1/2"	8/Box
<b>BPV58</b>	5/8"	8/Box
<b>BPV34</b>	3/4"	1/Box
<b>BPV78</b>	7/8"	1/Box

\*NOTE: BPV31 and BPV21 are furnished with adapter sleeves for indicated multiple use applications.



Shown larger than actual size.

### Gasket "O" Rings

PART NO.	ID Size	DESCRIPTION	PART NO.	ID Size	DESCRIPTION
<b>SF0099</b>	5/32"	Used for SF5050 Valve	<b>SF1060</b>	3/16"	Used in brass caps.
<b>SF0101</b>	1/4"	—	<b>SF1090</b>	5/16"	Black rubber (used for SF2070)
<b>SF0111</b>	5/16"	Black rubber (used for SF3900)	<b>SF5501</b>	1/4"	White teflon (used for SF5500 Series)



# Valves & Fittings



## SA Series Adjustable Line Tap Valves

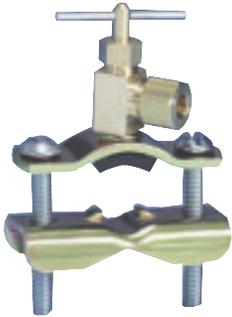
### Features

- Available in two sizes to accommodate five different OD tube sizes.
- Depressor valve action
- Can be mounted in any position
- Retracting needle ensures no restriction
- Throw away depressor pin simplifies line piercing
- Hex wrench included
- Adapter sleeves included
- Can be used with all refrigerants including R410A
- Maximum operating pressure 800 PSI
- Sold in 12 packs

### Applications

- Used to provide access fitting without having to remove refrigerant from air conditioning, refrigeration and heat pump systems.

PART NO.	TUBE SIZE OD	REPLACES
SA1	1/4", 5/16", 3/8"	A1 Watsco, A1 Diversitech, QTM1
SA2	1/2", 5/8"	A2 Watsco, A2 Diversitech, QTM2



## STV Series Self-Tapping Water Valves



### Features

- Self piercing on copper tubing or 0.035" wall hard PVC
- Fits 3/8" O.D. through 1 3/8" O.D. tubing or pipe
- Can be installed on pipe with existing hole
- Stainless steel piercing needle
- Molded gasket has a two stage seal on both tubing and valve
- Threaded bottom bracket for easy installation
- Includes all fittings for copper and plastic tubing
- Maximum water temperature 180°F/82°C

PART NO.	FLOW RATE	OUTLET	PIERCING NEEDLE	APPLICATION	COMMENTS
STV2	1 GPM	1/4" Comp.	1/8" Dia. (Hollow)	Ice Maker Kits	Reversible lower bracket
STV3	1 GPM	1/4" Comp.	1/8" Dia. (Hollow)	Humidifier Kits	
STV4	1 GPM	1/4" Comp.	3/32" Dia. (Solid, retractable)	Humidifier Kits	1/8" M.P.T. on body valve included



## STV2D Conventional "Drill" Type Valve

### Features

- Must pre-drill 1/4" hole in pipe or tubing
- Increased water flow from standard water valve
- Fits up to 1 3/8" O.D. Copper tubing
- Fits 1/2" or 3/4" galvanized iron water pipe
- Maximum water temperature 180°F/82°C
- Maximum water temperature 180°F/82°C
- Includes all fittings for 1/4" O.D. copper and plastic tubing

**Tech Tip:** Designed to be used on city water pressure only 30-40 psi.



## FTV Series Self-Tapping Valves

TAP INTO ANY TUBE OR PIPE WITHOUT SHUTTING DOWN, DRILLING OR CUTTING!

### Applications

Humidifiers, water coolers, vending machines, oil lines and steam systems.

- Maximum operating pressure 500 psi

PART NO.	BRANCH TAP FITTING	APPLICATION
FTV34	3/8" SAE Flare	
FTV12	3/8" SAE Flare	1/2" Steel or brass pipe approx. 7/8" O.D.

Not intended for gas applications.

## Line Service Valves



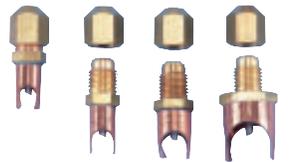
PART NO.	DESCRIPTION	PIPE THREAD	PART NO.	DESCRIPTION	PIPE THREAD
SF1010	1/8" copper tubing, wrench cap and core	—	SF3603	3/16" copper tubing, wrench cap and core	1/8" m.
SF2525	1/4" copper tubing, wrench cap and core	—	SF3604	1/4" copper tubing, wrench cap and core	1/8" m.
SF3600	1/8" ID hole, 3/16", 1/4", 5/16" steps, 1/8" MPT below hex wrench cap and core	—	SF3605	5/16" copper tubing, wrench cap and core	—
SF3602	1/4" copper tubing, 3/16" & 1/8" copper bushings, wrench cap and core	1/8" m.	SF3606	3/8" copper tubing, wrench cap and core	—
			SF3608	1/8" copper tubing, wrench cap and core	1/8" m.



SF5512

## SF5000 Series Saddle Valve Copper to Copper

Completely self tapping. Steel pin with core penetrates line and is locked into valve body in one operation, simply by tightening cap.



SF5514 SF5516 SF5538 SF5558



SF5518 SF5534 F5578

PART NO.	TUBING	PART NO.	TUBING
SF5512	1/2" O.D.	SF5534	3/4" O.D.
SF5514	1/4" O.D.	SF5538	3/8" O.D.
SF5516	5/16" O.D.	SF5558	5/8" O.D.
SF5518	1 1/8" O.D.	SF5578	7/8" O.D.



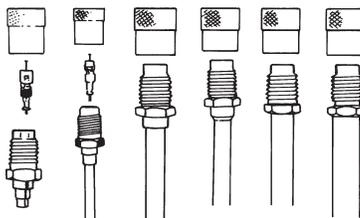
## SF5421 Tee Fitting Service Valve

SF5421 is a copper tee with the body brazed on. Furnished complete with core and wrench cap. The 1/4" I.D. x 5/16" O.D. will service 1/4", 5/16", and 3/8" tubing.

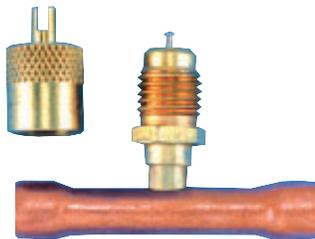
## SF8400 Series Economy Service Valves



SF8400 SF8408 SF8403 SF8404 SF8405 SF8406



PART NO.	I.D. HOLE	O.D.	MOUNTING
SF8400	1/8"	3/16", 1/4", 5/16" Step	Braze Only with SF1515 Core
SF8408		1/8" Tube, 3/16", 1/4", 5/16" Step	
SF8403		3/16" Tube, 1/4" Step	
SF8404		1/4" Tube	
SF8405		5/16" Tube	
SF8406		3/8" Tube	



## SF8000 Series Universal Line Valves

Available in various sizes. Copper Tee with the body brazed on. Two styles - a flared or straight end copper piece. (See chart below for exact size.)

### Straight Copper Piece

PART NO.	LENGTH	I.D.	O.D.
SF8418	1 7/8"	1 1/8"	1 1/4"
SF8434	1 5/16"	3/4"	13/16"
SF8478	1 9/16"	7/8"	1"

### Flared Copper Piece

PART NO.	LENGTH	I.D.	O.D.
SF8412	1 3/4"	1/2"	9/16"
SF8414	2 9/32"	1/4"	5/16"
SF8416	2"	5/16"	3/8"
SF8458	2"	5/8"	11/16"



## SF4040 Charging Hose Flow-Control Valve

- Reliable and easy to use
- Install on the end of a charging hose and minimize refrigerant loss during servicing
- A quarter turn of the handle makes quick work of shutting on and off
- Straight flow through design offers maximum flow rate
- Brass depressor tip fully engages valve core



## SF1808 Oil Tap

The OIL TAP is installed on a semi-hermetic compressor for the changing of oil and testing procedures. The internal pressure helps discharge the oil from the crankcase and acid tests can be made while the compressor is running. It allows the addition by vacuum or removal by pressure of oil while compressor is running. And, you can detect hazardous refrigerant pooling in crankcase before start-up and control removal using compound gauge. They can be permanently installed.



## SF1818 and SF1414 Brass Bodies

- Both bodies complete with neoprene seal, core and cap.
- Each is a quarter male flare above the hex.



SF1818  
(1/8" NPT-DRYSEAL)



SF1414  
(1/4" MPT-DRYSEAL)

## Valve Replacement Parts



PART NO.	DESCRIPTION
SF2219	Heavy duty round brass cap for 1/2" Acme fittings, neoprene seal
SF2220	Glass-filled nylon cap for 1/2" Acme fittings, neoprene seal
SF2235	Heavy duty hex brass cap with dual neoprene or metal seal
SF2245	Heavy duty round brass cap with neoprene seal
SF2250	Heavy duty round brass cap with handy core wrench on top and neoprene seal
SF4450	Valve core with neoprene seal compatible with most refrigerants (Replaces SF1515)
SF5161	5/16" OD neoprene hose gasket for charging hoses



# Valves & Fittings



## Adapters/Couplers

Quick coupler valve depressors complete with leakproof neoprene seal and depressor tips. Use to make connection between equipment with unlike threads. Made of CDA 360 brass. Available in straight and 90° configuration.

PART NO.	DESCRIPTION
SF2010	1/4" female flare swivel x 1/4" male flare access, 90° configuration. Depressor tip and seal, no valve core.
SF2012	1/4" female flare swivel 1/2" male Acme, depressor tip and seal
SF2020	1/4" female flare hex x 1/2" male Acme
SF2028	1/4" male flare x 1/2" Acme female swivel, depressor tip seal



## SF2035 Hose Gas Retaining Coupler

- 1/4" female flare retainer Sure-seal x 1/4" male flare



## SF2060 & SF5050 Thumbscrew Core Depressors

For use on a 1/4" male flare to allow the core to be opened to the degree of flow desired. Solid brass construction. Compact design makes it ideal in close quarters.

PART NO.	DESCRIPTION
SF2060	For 1/4" male flares.
SF5050	For 1/4" male flares. Made small for use in close quarters



## SF2070 Hose Gas Retainer and Core Depressor Tool

This tool is attached to a charging hose, then it is coupled to an access fitting. Thumb screw the depressor tip down to depress the core and allow gas to flow through the hose. Thumb screw back to allow the core to shut off. The depressor tip rod will back seat in a Teflon gasket to retain the gas in the hose. There will be no loss of the gas in the hose when you disconnect from the access fitting.



## SF2090 Hose Gas Retaining Coupler

- 90° 1/4" female flare retainer x 1/4" male flare



## SF2595 and SF2597 Gauge Adapter

**SF2595** A 1 1/4" piece of 1/4" copper tubing, double flared on one end with a 1/4" female flare nut and a depressor tip. The end of the copper tube opposite the female flare has been swaged to allow 1/4" copper tube to enter for brazing.

**SF2597** is a 1 1/4" piece of 1/4" copper tubing, double flared on one end with a 1/4" female flare and a depressor tip. The other end has a 1/4" male flare that has been brazed on. A core may be inserted in the 1/4" male flare, but is not provided.



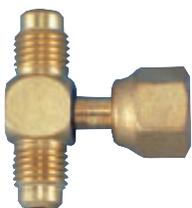
## Gauge Adapters

PART NO.	DESCRIPTION
SF5014	Same as SF5036 except for 1/4" male flare.
SF5036	1/4" adapter to 3/16" fittings. Contains depressor pin.



## SF8725 Connector

The SF8725 has a gasket in the 1/4" hex nut. The valve body is stationary. When threads of existing system fittings are stripped and a new core won't go in, use this. It has a core, and no depressor tip.



## Tee Connectors

PART NO.	DESCRIPTION
SF9601	1/4" m. flare x 1/4" flare nut with depressor tip x 1/4" m. flare on the branch with one valve core
SF9602	1/4" m. flare with valve core x 1/4" m. flare x 1/4" f. flare nut with depressor tip on the branch
SF9603	All brass connector tee. 1/4" m. flare with valve core and cap x 1/4" m. flare x 1/4" f. flare nut with depressor tip on the branch
SF9623	1/4" m. flare x 1/4" m. flare x 1/4" m. flare with two valve cores but no caps



## SF9600 Series 1/4" Flare Forged Access Tees

- Forged brass tee
- All 1/4" flares are threaded for valve cores

PART NO.	SIZE	MPT END I.D.
SF9613	1/4" m. flare x 1/4" m. flare x 1/4" m. flare, two valve cores, no caps	
SF9614	1/4" m. flare x 1/4" MPT x 1/4" m. flare access on branch, one cap and one valve core	5/16" for brazing a copper tube
SF9615	1/4" m. flare x 1/4" m. flare MPT on branch, one cap and one valve core	5/16" for brazing a copper tube
SF9616	1/4" m. flare x 1/8" MPT x 1/4" m. flare access on branch, one cap and valve core	1/4" for brazing a copper tube
SF9620	1/4" m. flare x 1/4" m. flare x 1/8" MPT on branch, one cap and valve core	1/4" for brazing a copper tube



## SF9644 Connector

2 - 1/4" male flares, one with core and cap, in a "U" shape. At the side is a 1/4" female flare with depressor tip and opposite that is an additional 1/4" male flare

## Valve Tools



### SF3800 Chaser

- Two tools, a core wrench and thread chaser, complete with a core carrying case and six cores
- Length with core wrench lid 3 1/2"



### SF3813 Valve Core Remover / Container

- Heavy-duty, all brass
- Includes 3 valve cores
- Length is 3"

## Core Removal Tools



PART NO.	DESCRIPTION
SF3900	Designed for removing and replacing a "Schrader" type core, without losing the charge. All brass construction.
SF3910	Same as above with an additional side port (1/4" male flare) with core.
SF5560	The shut off system with molded neoprene shut off gland for SF3900 and SF3910. Brass stem knob, retaining nut and gland, all in one piece.
SF5577	The brass rod with chuck, rear end sealing nut and knob, all in one piece.

## Core Removal Tools (with Ball Valve)



PART NO.	DESCRIPTION
SF3920	Removes a valve core from a 1/4" male flare access fitting without loss of refrigerant. Because it has a ball valve inside rather than a stem-type valve, the tool can be closed with just a quarter turn.
SF3930	Same as above with an additional side port.
SF5555	All the o-rings necessary to repair any CRT, except the ones in the chuck that grab the core stem.



## SF3970 Internal Temperature Reading Tool

(Measures -58°F to +302°F)

This two piece tool provides a better way of obtaining a temperature reading inside the system. It allows you to insert the digital thermometer through an access fitting, and you can adjust for superheat while you're inside. Furnished complete with core extractor tool and digital thermometer. Easy to follow instructions included.

Replaces SF3940 AND SF3960



# Valve Tools



## SF4311 "FasTap" Tube Piercing Pliers

Fast refrigerant recovery with pliers that clamp on and pierce tube. Pliers work on copper tubing sizes ranging from 1/4" to 7/8" OD. They are simple to use and light weight. Adjust pliers to proper size, align tip to the center of tube, clamp down and pierce with quick action. Piercing tip is self-sharpening, but also easily replaceable.



## SF4314 Tube Piercing Pliers Replacement Tip



# Condensate Drain Pans



## 70 Condensate Drain

Authorized, cost effective replacement drain for most commercial refrigerators and freezers.

### Features/Benefits:

- PTC Control supplies only required heat to evaporate water.
- Thermostat and float NOT required
- Self regulating
- Uniform heating
- Die cast aluminum eliminates corrosion
- Removable cord set for easy cleaning
- Fast evaporation rate (6 oz./ hour)
- Low Profile(3") to fit tight spaces
- NSF, UL and CSA(where noted) approved



PART NO.	CAPACITY	VOLTS	WATTS	AMPS	EVAPORATE.	
					RATE	SIZE
70	50 OZ.	115	300	2.61	6 OZ./HR.	12 1/4" x 4 3/4" x 3"
70-220	50 OZ.	220	300	1.36	6 OZ./HR.	12 1/4" x 4 3/4" x 3"
70CSA*	50 OZ.	115	190	1.65	6 OZ./HR.	12 1/4" x 4 3/4" x 3"
70CSA220*	50 OZ.	220	190	.86	6 OZ./HR.	12 1/4" x 4 3/4" x 3"

\*CSA indicates CSA approval. \*\* All are 50/60 HZ



## 30-OS, 31 & 75 Condensate Drains

- Standard cast aluminum condensate drains complete with long life heating element and mounting legs.
- Designed for continuous use.

PART NO.	CAPACITY	VOLTS	WATTS	AMPS	EVAPORATE.	
					RATE	SIZE
30-OS*	38 OZ.	120	160	1.33	8 OZ./HR.	10" x 4" x 2 7/8"
30-220-OS*	38 OZ.	220	160	.73	8 OZ./HR.	10" x 4" x 2 7/8"
31	50 OZ.	120	160	1.33	6 OZ./HR.	10" x 4 1/2" x 3 3/8"
31-220	50 OZ.	220	160	.73	6 OZ./HR.	10" x 4 1/2" x 3 3/8"
75	75 OZ.	120	320	2.67	14 OZ./HR.	10" x 9" x 2 3/4"
75-220	75 OZ.	220	320	1.45	14 OZ./HR.	10" x 9" x 2 3/4"

\* Indicates NSF listing \*\* All are 50/60 HZ

## Wall Mount Brackets

PART NO.	CONDENSATE DRAIN NO.
30WM	30-OS Series, 70 Series
31WM	31 Series



# Heaters

## Door Heaters



## SH280 Series Door Heaters Mullion & Dew Point

Part numbers SH281 thru SH284

### Features/Benefits

- Prevents Moisture on Glass Display Doors
- Eliminates Frost Build Up On Doors & Cabinet Fronts
- Available in 220 Volts (Special Order)

### Applications

- Commercial & Domestic Refrigerators & Freezers



## Drain Heaters

All SUPCO Drain Heaters are designed for continuous use to protect drains against ice build up which leads to clogging. All of these heaters cannot be cut, spliced, extended or altered in any way.

### Applications

- Domestic and Commercial Refrigeration
- Air Conditioner & Heat Pump Systems
- Condensate Drain Pans, Tubes and Troughs



### SH200 Series Flexible Braided Aluminum Drain Heaters

Part numbers SH201 thru SH207

#### Features/Benefits

- Aluminum Construction
- Variety of Lengths and Wattage's Available
- Available in 220 Volts (Special Order)



### SH250 Universal Drain Heater

#### Features/Benefits

- Used With Existing Heater or Where No Heater Exists
- Available in 220 Volts (Special Order)

PART NO.	DIAMETER	PRONG LENGTH	WIRE LEADS
SH250	0.91"	2.25"	56"

#### Tech Tip

- The SH250 Universal Drain Heater is designed for "series wiring connection" only.



### SH250 Series Silicone Drain Heaters

Part numbers SH251 and SH252

#### Features/Benefits

- Silicone Construction
- Designed For Waterproof Low Wattage Heat
- GE Serpentine Coil Heater Applications

#### Tech Tip

- The SH252 Silicone Drain Heater is designed for "series wiring connection" only.

SH251 replaces GE WR51X72, Frigidaire 6582706  
SH252 replaces Frigidaire 7517924



### SH500 Series Drain Heaters

#### Features/Benefits

- Durable Metal Braid
- Available In 220 Volts (Special Order)
- Heater Tip 7/16" Diameter

Part numbers SH500 thru SH505

- Silicone Construction
- Designed For Waterproof Low Wattage Heat

## Foil Heaters



### SH220 Series Aluminum Foil Heaters

Part numbers SH221 thru SH226

#### Features/Benefits

- Pressure Sensitive Adhesive Backing For Easy Installation
- Six Assorted Shapes and Wattage's
- Available in 220 Volts

#### Applications

- Commercial & Domestic Refrigeration
- Mullions
- Drain Troughs
- Drain Pans
- Spot Heating

#### Heater Specifications

PART NO.	VOLTS	WATTS	SIZE	LEADS	PART NO.	VOLTS	WATTS	SIZE	LEADS
SH201	115	15	18"	23"	SH250	120	3		
SH202	115	45	29"	23"	SH251	115	8	heater tip - 3"	
SH203	115	55	44"	23"	SH252		7 1/2	heater tip - 2"	
SH204	115	75	48"	23"	SH281	120	3	36 1/2' Ft.	
SH205	115	65	56"	23"	SH282	120	3	18' Ft.	
SH206	115	80	70"	23"	SH283	220	3	36' Ft.	
SH207	115	110	86"	23"	SH284	220	3	18' Ft.	
SH221	115	6	10" x 1"		SH500	120	11	9"	18"
SH222	115	10	24" x 1 1/4"		SH502	120	15	13"	18"
SH223	115	10	14 1/2" x 5 1/2"		SH503	240	15	13"	18"
SH224	115	65	27 1/2" x 5 1/2"		SH504	120	25	21"	18"
SH225	115	15	10 1/2" x 10 1/2"		SH505	240	25	21"	18"
SH226	115	40	10 1/2" x 10 1/2"						