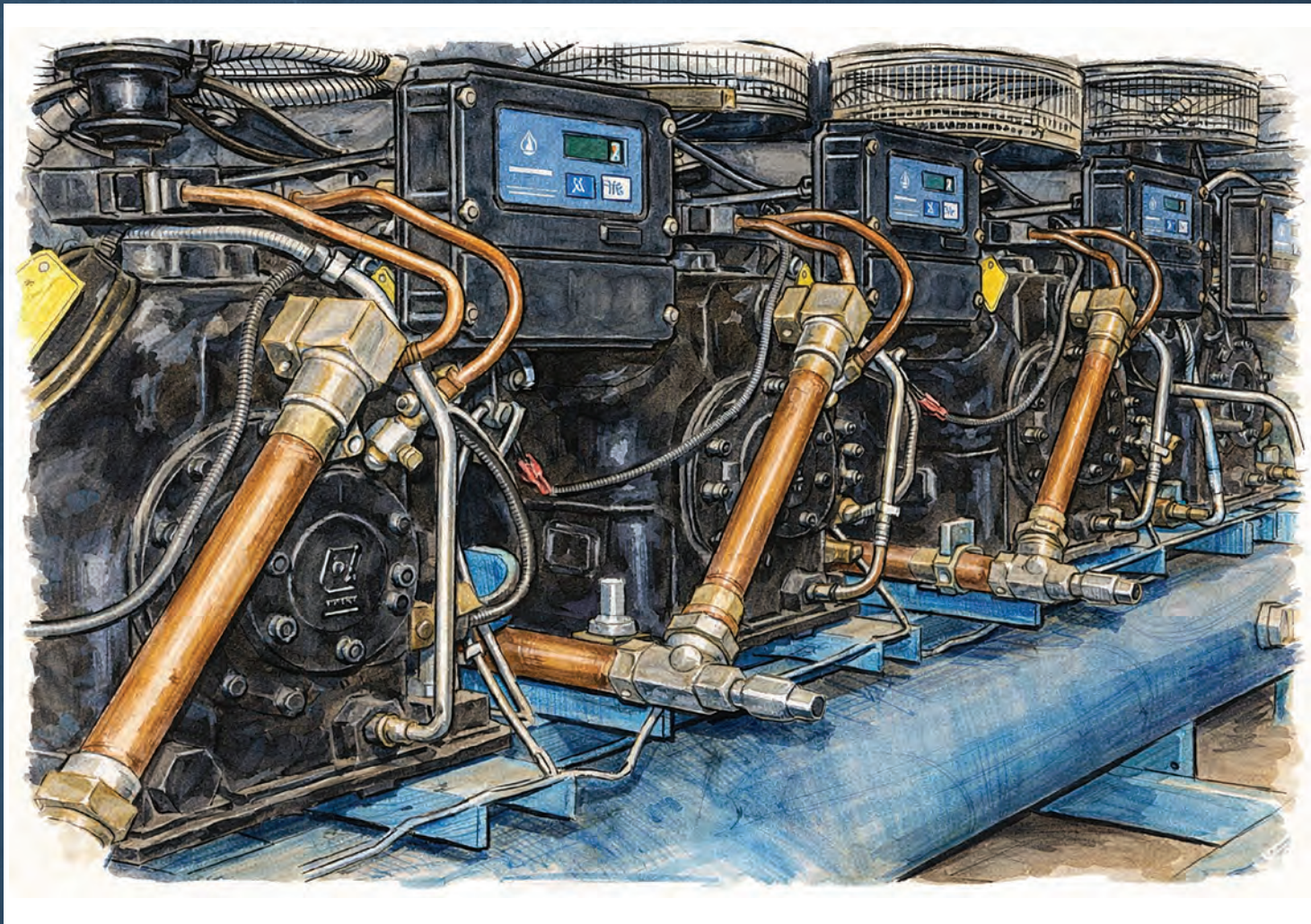


REFRIGERATION SOLUTIONS



SUPERMARKET DOOR PARTS | CHILLER BARREL GASKETS

FLARELOK® | ROTOLock VALVES & ADAPTERS | SERVICE VALVE CAPS | INDICATORS

SIGMA ENGINEERING LLC

Sigma Engineering LLC is the leader in technical support and inventory. We have an amazing support team that answers the phone quicker than you can say..... SUPERHEAT!! Our free TECHMASTER Charts are like get out of jail free cards, handy even for a seasoned tech.

TECHMASTER Charts available at a local wholesaler or download from our website.

WHY use Sigma Engineering Parts?

1. Made in the USA - Over 90% of product is proudly made right here!
2. Unmatched Support - Sales, Technical, and Engineering Support at it's finest.
3. Inventory - Over 99% of orders ship on the same day of PO!!
4. Hard to find parts made easy - We are known for having the unobtainium items in stock!
5. Easy Button - We simply want you to be a repeat customer, so we work at it.

About the Cover

An Old School Refrigeration Rack with some clever Refrigeration Piping. The Angle Adapter (Pg 12) is not utilized by all, but can provide some pretty trick piping. Below, the Angle Adapter is connected to the Compressor with a Brass Adapter. The removable line then feeds down at an angle to another Brass Adapter which is connected to the Rotolock Service Valve. The line then squirts thru the rack to a common header. Pretty trick huh?

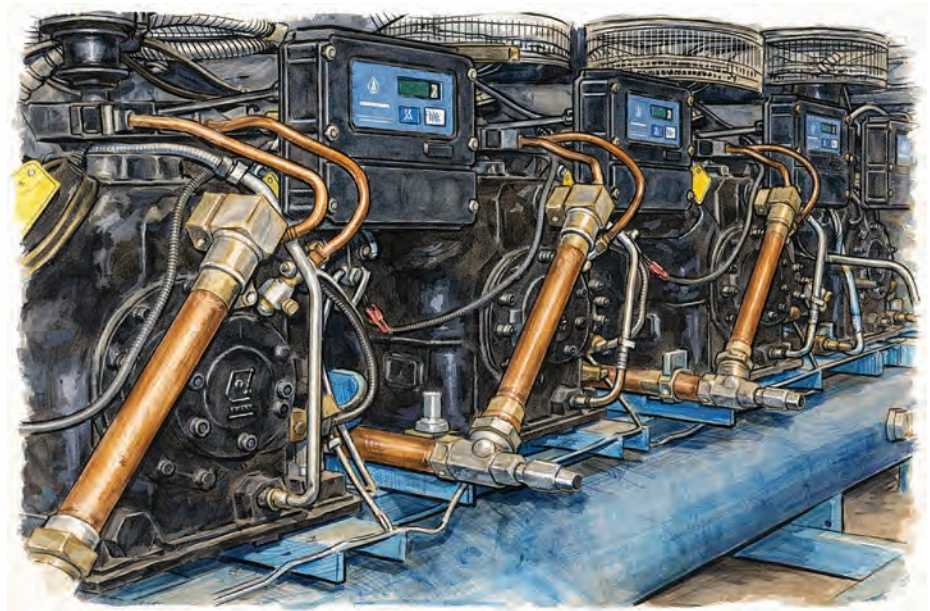


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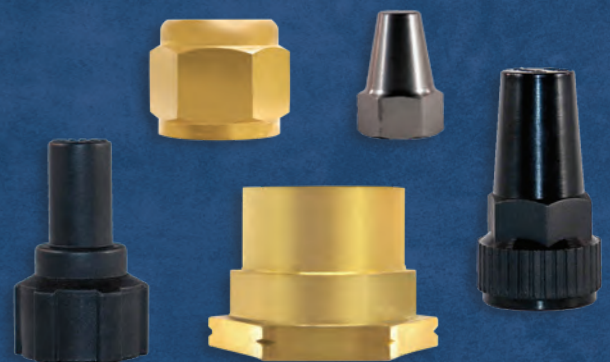
LL Indicators & Dials



Sigma is the **ONLY** choice for your replacement Liquid Level needs. All items in **STOCK** all of the time.

For more info check out pages 6-9

Service Valve Bottom Caps



Supermarkets rely on Sigma's large selection of replacement caps to address the issue of refrigerant leaks.

EVERY VALVE • EVERY CAP • IN STOCK

For more info check out pages 18-19

FlareLok®

LOCK THAT LEAK

THE FUTURE OF REFRIGERANT LOSS MITIGATION



MADE IN THE USA

FlareLok® is designed for the 45° SAE connection, and has several key features to ensure the most reliable leak prevention

- The Proprietary LOCTITE® coating formula over a Copper Base designed for all refrigerants including A2L, CFC, HCFC & HFC based Refrigerants & Refrigeration Oils
- Manufactured with locking indents to ensure a SNUG and CENTERED fit on every installation
- Multiple Sealing Rings provide added leak stopping power

With over 1,000,000 installations, FlareLok® is a favorite among Refrigeration Technicians. With the upgraded design and new A2L approved formula, FlareLok® continues to lead the way in performance and reliability!

COMPATIBLE WITH:

- A2L REFRIGERANTS
- ALL CFC, HCFC & HFC REFRIGERANTS
- MINERAL OILS
- ALKYL BENZENE OILS
- POE OILS
- PVE OILS

EASY TO INSTALL

STEP 1:

Apply correct sized FlareLok® to male portion of flare by snapping into place. The FlareLok® should be centered and secure on the fitting.

STEP 2:

Applying a light coat of oil or Nylog® to the FlareLok® surface is permitted but not required.

STEP 3:

When tightening the flare connection, you will feel resistance due to the FlareLok® thickness, but continue tightening to achieve suggested torque value for the size of product used.

Once assembled, the FlareLok® becomes the best long-term, leak-free, flare connection in the industry.



MAXIMUM TORQUE SETTINGS

PIPE	APPROX. TORQUE
Ø 1/4"	10-13 ft-lbs
Ø 3/8"	22-30 ft-lbs
Ø 1/2"	36-39 ft-lbs
Ø 5/8"	45-55 ft-lbs
Ø 3/4"	66-88 ft-lbs

SINGLE SIZE 6 PACK

OLD SIGMA PART NO.	NEW SIGMA PART NO.	DESCRIPTION	STOCK TIP	BARCODE	POPULARITY
SEFT-BP-04	SE-FLPK-02	Sigma FlareLok - 1/4" 6 pcs/pk	4-8	812181030185	HIGH
SEFT-BP-06	SE-FLPK-03	Sigma FlareLok - 3/8" 6 pcs/pk	4-8	812181030192	HIGH
SEFT-BP-08	SE-FLPK-04	Sigma FlareLok - 1/2" 6 pcs/pk	2-4	812181030208	MEDIUM
SEFT-BP-10	SE-FLPK-05	Sigma FlareLok - 5/8" 6 pcs/pk	2-4	812181030215	MEDIUM
SEFT-BP-12	SE-FLPK-06	Sigma FlareLok - 3/4" 6 pcs/pk	0-1	812181030222	LOW

MINI-SPLIT KIT BAG PACK (TWO EACH/PACK)

OLD SIGMA PART NO.	NEW SIGMA PART NO.	DESCRIPTION	STOCK TIP	BARCODE	POPULARITY
SEFT-KIT-2X3	SE-FLKIT-02X03	Sigma FlareLok Kit - 1/4" x 3/8"	4-8	812181030239	HIGH
SEFT-KIT-2X4	SE-FLKIT-02X04	Sigma FlareLok Kit - 1/4" x 1/2"	4-6	812181030246	HIGH
SEFT-KIT-2X5	SE-FLKIT-02X05	Sigma FlareLok Kit - 1/4" x 5/8"	2-4	812181030253	MEDIUM
SEFT-KIT-3X4	SE-FLKIT-03X04	Sigma FlareLok Kit - 3/8" x 1/2"	0-1	812181030260	LOW
SEFT-KIT-3X5	SE-FLKIT-03X05	Sigma FlareLok Kit - 3/8" x 5/8"	0-1	812181030277	LOW
SEFT-KIT-4X5	SE-FLKIT-04X05	Sigma FlareLok Kit - 1/2" x 5/8"	0-1	812181030284	LOW

MULTI-PAK KITS

OLD SIGMA PART NO.	NEW SIGMA PART NO.	DESCRIPTION	STOCK TIP	BARCODE	POPULARITY
SEFT-BPM	SE-FLKIT-MULTI	Sigma FlareLok - 1/4" thru 5/8" (2 of Each Size)	4-6	812181030291	HIGH
SEFT-KIT-60PC	SE-FLKIT-MEGA	FlareLok Keeper Kit 60 pc: 20 pcs each: 1/4 & 3/8" and 10 pcs each: 1/2" & 5/8" In plastic container	1-2	812181030307	HIGH

BOX/BULK PACK

OLD SIGMA PART NO.	NEW SIGMA PART NO.	DESCRIPTION	QTY/Box	BARCODE
SEFT-BX-04	SE-FLBX-02	Sigma FlareLok - 1/4" x 100	100	812181030314
SEFT-BX-06	SE-FLBX-03	Sigma FlareLok - 3/8" x 100		812181030321
SEFT-BX-08	SE-FLBX-04	Sigma FlareLok - 1/2" x 100		812181030338
SEFT-BX-10	SE-FLBX-05	Sigma FlareLok - 5/8" x 100		812181030345
SEFT-BX-12	SE-FLBX-06	Sigma FlareLok - 3/4" x 100		812181030352

LIQUID LEVEL INDICATORS – HORIZONTAL



MECHANICAL GAUGE

Dial Action	Magnetic
Output Voltage	N/A
Output Current	N/A

This style also available in high-pressure model.

LIQUID LEVEL INDICATOR

The Mechanical Liquid Level indicators are used for accurate gauging of refrigerant levels in a horizontal receiver. The dial reads percent of pump down capacity of the receiver: when the pointer indicates 100%, the receiver is 80% full of liquid.

Float, Gasket, Screws, and Assembly Dial are included.



INDIC58A-**

AC Voltage	240 VAC Only
Current	1.0 Amp Inductive
Max Watts	75 Watts

LIQUID LEVEL ALARM

The Electronic Liquid-Level Alarm is a single pole, single throw switch on which contacts close upon the decrease of the liquid level at 20% pumpdown. The indicator pointer, or switch contacts, are on the outer side and are operated by a small magnet which follows the position of the inner magnet. There is no connection, except the magnetic field, between the inside and outside. Internal gears and bearings are stainless steel. In case of external damage, the indicator dial or switch cartridge may be replaced from outside—the refrigerant charge is not disturbed.



INDIC210A-**

Input Voltage	110 or 220 V
Resistance	15 Ohms
Output	Step 24VDC Max

LIQUID LEVEL INDICATOR WITH ALARM

The indicator with alarm output, includes selectable low-level point provides a relay circuit that closes at one of five user selectable levels from 10–50%. The relay circuit can be used to drive a variety of applications from alarms to pumps. Each indicator-alarm uses highly reliable and accurate, three wire, voltage divider technology to send the level signal to the level alarm, relay circuitry. The connector built into the indicator-alarm mates with a standard Packard automotive type, rubber sealed connector for easy installation.

DIAMETER	PART NUMBER
6-5/8"	INDIC283A
8-5/8"	INDIC111A
10-3/4"	INDIC76A
12-3/4"	INDIC85A
14"	INDIC94A
16"	INDIC102A
18"	INDIC483A
20"	INDIC490A
24"	INDIC497A

DIAMETER	PART NO.
6-5/8"	INDIC58A-658
8-5/8"	INDIC58A-858
10-3/4"	INDIC58A-1034
12-3/4"	INDIC58A-1234
14"	INDIC58A-14
16"	INDIC58A-16
18"	INDIC58A-18
20"	INDIC58A-20
24"	INDIC58A-24

DIAMETER	PART NO.
6-5/8"	INDIC210A-658
8-5/8"	INDIC210A-858
10-3/4"	INDIC210A-1034
12-3/4"	INDIC210A-1234
14"	INDIC210A-14
16"	INDIC210A-16
18"	INDIC210A-18
20"	INDIC210A-20
24"	INDIC210A-24

LIQUID LEVEL INDICATORS – VERTICAL



NOMENCLATURE FOR ORDERING

SP1 - 60 PS D 12 R404A

PREFIXES:

SPO = 0v-5v output
 SP1 = 1v-6v output

FITTING STYLE:

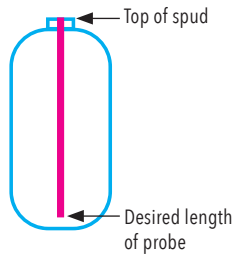
PS = 3/4" NPT Stand-alone
 RS = Rotolock Stand-alone

REFRIGERANT/OIL:

R12 POE
 R22 MIN = Mineral
 R134A AKL = Alkybenzene
 R236FA
 R404A
 R407A
 R407C
 R407F
 R410A
 R422D
 R502
 R507 same as R507A
 R513A
 R744 same as CO2

ACTIVE PROBE LENGTH:

= Inches



OPTIONS:

D = Display Only
 N = No Display

OPTIONS:

= With Cable
 (Length of cable in feet.
 Standards lengths 12,
 33 feet.)

NOTES

- All units are shipped with metal cover and gasket unless equipped with display.
- All units are shipped with DIN connector and cable.
- Probes are delivered calibrated to the Refrigerant/Oil called out on purchase order.
- Probe lengths are measured from the top of the spud on the receiver to within 1/2" of the bottom of the receiver. NPT threads models take into account 3/4" thread engagement into the receiver. Lengths to be to the lower whole number.

HORIZONTAL LL INDICATOR REPLACEMENT & SERVICE PARTS

PART NO.	DESCRIPTION	PKG QTY
SE-995-02	Gasket 995, Gasket for Liquid Level Indicators & Alarms – 2 pack	2 pcs/pack
SE-995-05	Gasket 995, Gasket for Liquid Level Indicators & Alarms – 5 pack	5 pcs/pack
SE-995-10	Gasket 995, Gasket for Liquid Level Indicators & Alarms – 10 pack	10 pcs/pack
SE-995-KIT	Gasket 995, Gasket and Bolts Kit for Indicators & Alarms	1 gasket + 4 bolts
SE-995-KIT-E	Gasket 995, Gasket and Bolts Kit for Electronic Indicators & Alarms	1 gasket + 4 bolts
SE-995-BULK	Gasket 995, Gasket for Liquid Level Indicators & Alarms – Bulk	Any

IMPORTANT NOTE
 The Stainless Steel Hex Head Cap Bolts are designed for the Indicator to meet the overall Pressure Rating of the assembly. Extreme caution must be used if replacing with other style bolts.



SE-995-02



SE-995-05



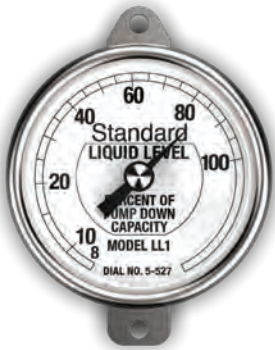
SE-995-10



SE-995-KIT

DIAL MASTER CHART – REPLACEMENT DIALS

In stock and ready to ship. Please pay attention to wire colors and wire order on base.



INDIC21A

Dial Action	Magnetic
Output Voltage	N/A
Output Current	N/A
Dial Increments	0 to 100%
Operating Temp	-40°F to +158°F
Approx Wire Lead	N/A
X-Ref Number	5-527 or LL-1



INDIC49A

AC Voltage	240 VAC Only
Current	1.0 Amp Inductive
Max Watts	75 Watts
SPST Switch	Low Amp Triac
Operating Temp	-40°F to +158°F
Approx Wire Lead	N/A
X-Ref Number	M6253



INDIC238A

AC Voltage	110 or 220V
Nom Resistance	15 Ohms +/-5%
Wattage	1/4 Watt
Output	Step Output 24 VDC
Operating Temp	-40°F to +158°F
Approx Wire Lead	6 Inches
X-Ref Number	5AUNS03024P



INDIC245A

Blank-Off Plate

The INDIC245A is a simple blank-off plate. It is often used when service is required but the system needs to stay running, or when LL control is removed. The unit is supplied with correct mounting bolts and 995 gasket.

PROPORTIONAL OUTPUT DIALS:



INDIC824-102A

Input Voltage	8-24 VDC
Output Voltage	1-2 V
Output Current	+/- 10ma
Dial Increments	0 to 100%
Operating Temp	-40°F to +175°F
Wire Order L-R	Black, Blue, Red
Approx Wire Lead	15 Inches
X-Ref Number	5ANBS03024



INDIC824-106A

Input Voltage	8-24 VDC
Output Voltage	1-6 V
Output Current	+/- 10ma
Dial Increments	0 to 100%
Operating Temp	-40°F to +175°F
Wire Order L-R	Black, Blue, Red
Approx Wire Lead	15 Inches
X-Ref Number	5ANCS03024



INDIC824-545A

Input Voltage	8-24 VDC
Output Voltage	0.5-4.5 V
Output Current	+/- 1ma
Dial Increments	0 to 100%
Operating Temp	-40°F to +175°F
Wire Order B-T	Red, Blue, Black
Approx Wire Lead	12 Inches
X-Ref Number	5AAKS03023



INDIC832-545A

Input Voltage	8-32 VDC
Output Voltage	0.5-4.5 V
Output Current	+/- 1ma
Dial Increments	E, 1/4, 1/2, 3/4, F
Operating Temp	-40°F to +175°F
Wire Order B-T	Red, Green, Black
Approx Wire Lead	12 Inches
X-Ref Number	5AAKS02770

SIGHT GLASSES

A SIGHT GLASS INDICATES THE LIQUID LEVEL INSIDE THE RECEIVER BY WAY OF A VIEW PORT.

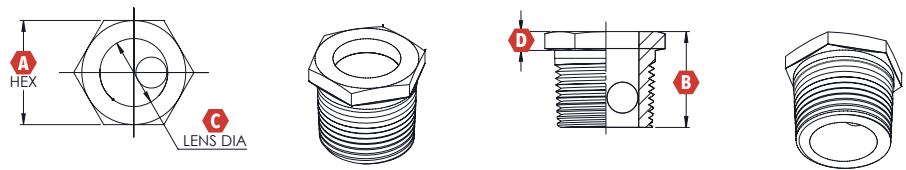


Features Include:

- Nickel plated steel body
- Hermetically sealed viewing lens
- American standard tapered pipe thread
- Maximum temperature of 300°F (148°C)
- Suitable for most standard refrigerants
- Usable with most industrial fluids that are non-corrosive to glass + steel



DIMENSIONS IN INCHES REFERENCE



SIGHT GLASSES

SIGMA PART NO.	THREAD SIZE	DIMENSIONS IN INCHES				PSI
		A	B	C	D	
SG04	1/2" MPT	.938	.958	.563	.219	675/1000
SG06	3/4" MPT	1.125	1.063	.750	.310	1000
SG08	1" MPT	1.375	1.324	.938	.380	1000
SG10	1-1/4" MPT	1.750	1.378	1.188	.410	1000
SG16	2" MPT	2.50	1.423	1.630	.406	1000
SG12A	1-1/4"-12 Female ROTOLock Connection	1.375	N/A	.750	.625	500

* SG12 w/ Rotolock Connection comes with Teflon Seal-SE-24592



SIGMA DISPLAY PLAN-O-GRAM OFFERING

The Sigma Plan-O-Gram is a proven winner for product display at a wholesaler sales location. It defines the quality of the items and also showcases items that a technician may not be aware are available to them.

The Plan-O-Gram highlights the most popular items starting with the FlareLok®, followed by a heavy offering of the most popular Service Valve Caps available.

Technician essential items like Teflon Seals and Rotolock Adapters find a home here, along with extremely popular replacement parts for Glass Doors from companies like Anthony and Hussmann.

Sigma also offers a Plan-O-Gram model that is less "refrigeration heavy". Speak with a Sigma Representative for more information.

Remember, Sigma fills a gap that you might not know that you have!



Left: The Sigma CapFinder (SE-CF-01) assists a technician in identifying a replacement service valve cap.



Right: Hard to find items at the wholesaler include liquid level control dials and Torque Masters for Anthony Glass doors.

SIGMA ENGINEERING ADAPTERS

The Sigma Engineering Adapters are of the highest quality and Made in the USA. They are supplied to both OEM and Wholesale customers around the world.

Our units are direct replacements for your Copeland or Tecumseh items, and our service and inventory are second to none.

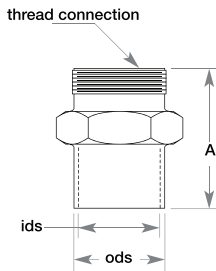
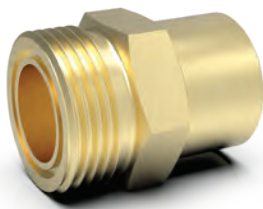
FOR THE WHOLESALE/DISTRIBUTOR:

Each unit is individually offered in high quality packaging and labeled for ease of identifying. Each label contains cross reference information to aid the sales people and customers alike. All units are shipped WITH a Teflon Seal.

FOR THE OEM CUSTOMER:

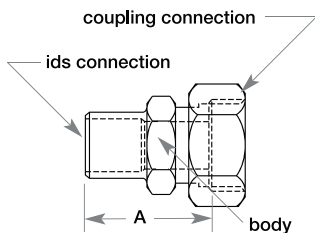
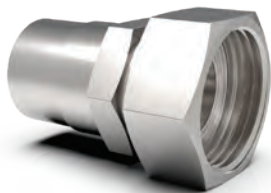
Each unit is shipped in production/bulk-pack style, to minimize production floor waste. Teflon Seals are included for each unit. Individually packaged units available at no additional cost upon request.

ROTOLOCK BRASS STUB ADAPTERS



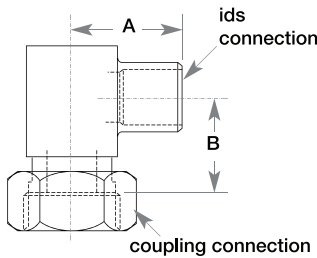
SIGMA PART NO.	CONNECTIONS			DIMENSION "A"	TEFLON SEAL PART NO.	COPELAND X-REF
	IDS	ODS	THREAD			
BA03X06A	3/8	1/2	3/4"-16	1-5/16	TS-24590	
BA03X08A	3/8	1/2	1"-14	1-5/16	TS-24591	998-0034-14
BA04X08A	1/2	5/8	1"-14	1-5/16	TS-24591	998-0034-15
BA05X08A	5/8	7/8	1"-14	1-5/16	TS-24591	998-0034-16
BA05X10A	5/8	7/8	1-1/4"-12	1-9/16	TS-24592	
BA06X10A	5/8	3/4	1-1/4"-12	1-9/16	TS-24592	998-0034-01
BA07X10A	7/8	1-1/8	1-1/4"-12	1-9/16	TS-24592	998-0034-02
BA09X10A	1-1/8	1-3/8	1-1/4"-12	1-9/16	TS-24592	
BA09X14A	1-1/8	1-3/8	1-3/4"-12	1-11/16	TS-24593	998-0034-03
BA11X14A	1-3/8	1-5/8	1-3/4"-12	1-11/16	TS-24593	998-0034-04
BA13X18A	1-5/8	1-7/8	2-1/4"-12	1-7/8	TS-24594	998-0034-06

ROTOLOCK STRAIGHT SWIVEL ADAPTERS

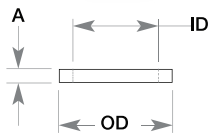


WORKING PRESSURE 700 PSIG
ZINC PLATED STEEL

SIGMA PART NO.	SIGMA PART NO.	CONNECTIONS		DIMENSION "A"	TEFLON SEAL PART NO.	COPELAND X-REF
		IDS	COUPLING			
SA03A	SA03X06A	3/8	3/4"-16	1-9/32	TS-24590	
SA04A	SA04X08A	1/2	1"-14	1-7/32	TS-24591	998-0034-18
SA05A	SA05X08A	5/8	1"-14	1-9/32	TS-24591	998-0034-17
SA06A	SA06X10A	3/4	1-1/4"-12	1-23/32	TS-24592	998-0034-07
SA07A	SA07X10A	7/8	1-1/4"-12	1-23/32	TS-24592	998-0034-08
SA09A	SA09X10A	1-1/8	1-1/4"-12	1-31/32	TS-24592	998-0034-09
SA09X14A	SA09X14A	1-1/8	1-3/4"-12	2-7/16	TS-24593	998-0034-10
SA11A	SA11X14A	1-3/8	1-3/4"-12	2-7/16	TS-24593	998-0034-13
SA13X14A	SA13X14A	1-5/8	1-3/4"-12	2-1/2	TS-24593	
SA13X18A	SA13X18A	1-5/8	2-1/4"-12	2-7/16	TS-24594	998-0034-12



WORKING PRESSURE 700 PSIG
ZINC PLATED STEEL



ROTOLOCK ANGLE SWIVEL ADAPTERS

The Sigma Engineering Angle Adapters are of the highest quality and Made in the USA. They are supplied to both OEM and Wholesale customers around the world.

- This type of Adapter is commonly used in Tandem Compressor piping kits. They can also be used in general refrigeration piping to allow quick removal of components.
- For the Wholesaler/Distributor; each unit is offered in high quality packaging and labeled for ease of identifying. Each label contains cross-reference information to aid the sales people and customers alike. All units are shipped WITH a Teflon Seal.
- For the OEM customer; each unit is shipped in production/bulk-pack style, to minimize production floor waste. Teflon Seals are included for each unit. Individually packaged units available at no additional cost upon request.

OLD SIGMA PART NO.	NEW SIGMA PART NO.	CONNECTIONS		DIMENSION "A"	DIMENSION "B"	TEFLON SEAL PART NO.
		IDS	COUPLING			
AA03A	AA03X06A	3/8	3/4"-16	1-5/16	1/2	TS-24590
AA04A	AA04X08A	1/2	1"-14	1-3/32	17/32	TS-24591
AA05A	AA05X08A	5/8	1"-14	1-3/32	19/32	TS-24591
AA07A	AA07X10A	7/8	1-1/4"-12	1-9/16	5/8	TS-24592
AA09A	AA09X10A	1-1/8	1-1/4"-12	1-13/16	1	TS-24592
AA11A	AA11X14A	1-3/8	1-3/4"-12	2-3/16	1	TS-24593
AA13A	AA13X14A	1-5/8	1-3/4"-12	2-1/8	1-3/4	TS-24593

COMPRESSOR ADAPTERS

These adapters bolt to a semi-hermetic compressor body and then allow use of a RotoLock style service valve. Included with the Adapter are Bolts, Gasket, and Teflon Seal.

SIGMA PART NO.	THREAD	BOLT CENTER	TEFLON SEAL	GASKET PART NO.	COPELAND PART NO.
FA13BCX10A	1-1/4"-12	2-Bolt 1-5/8" BC	TS-24592	GASKE-2158-00	998-0036-02
FA22BCX14A	1-3/4"-12	2-Bolt 2-3/4" BC	TS-24593	GASKE-2234-00	998-0036-00

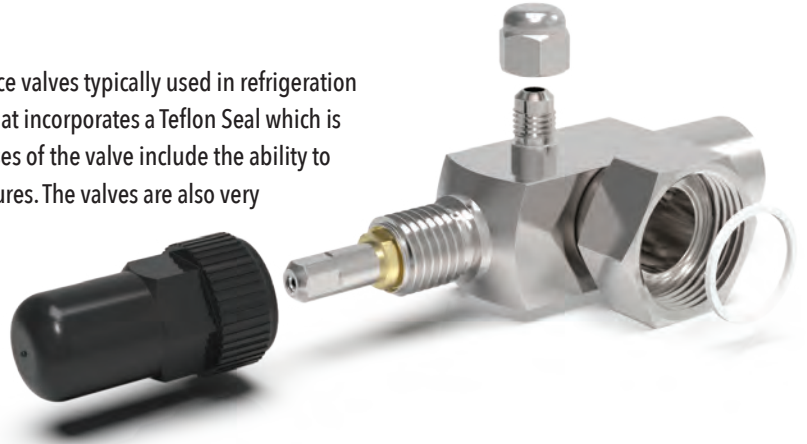
TEFLON SEALS

Teflon seals are provided with each valve. The Teflon Seal should be installed only after all soldering is completed. Teflon Seals can be ordered separately. Convenient kits are pictured below, but they can also be bulk/single pack ordered.

SIGMA PART NO.	DIMENSIONS (INCHES)				PKG QTY	COPELAND PART NO.
	ID	OD	A	THREAD USE		
SE-24590-06	7/16	9/16	1/16	3/4"-16 ROTOLOCK	6	020-0028-01
SE-24591-06	5/8	3/4	1/16	1"-14 ROTOLOCK	6	020-0028-00
SE-24592-06	7/8	1	1/16	1-1/4"-12 ROTOLOCK	6	020-0028-02
SE-24593-04	1-3/8	1-1/2	1/16	1-3/4"-12 ROTOLOCK	4	020-0028-03
SE-24594-04	1-7/8	2	1/16	2-1/4"-12 ROTOLOCK	4	020-0941-00
SE-TS-KIT	Multi-Pack Kit, Contains 3 of each 24590, 24591, 24592, 23593				12	

ROTOLOCK VALVES

Rotolock Valves, sometimes spelled "Rotalock" are Zinc Plated service valves typically used in refrigeration systems. The actual Rotolock connection is a threaded connection that incorporates a Teflon Seal which is the main seal in preventing leaks in the connection. The primary uses of the valve include the ability to access the refrigeration system for charging and evacuation procedures. The valves are also very handy as they provide ease of removing equipment such as a compressor due to the threaded connection.



ROTOLOCK IDENTIFICATION PROCEDURE

STEP 1: BODY TYPE

Rotolock Valves are classified as Horizontal Rotolocks (Fig 1) or as Vertical Rotolocks (Fig 2). The primary difference is the location of the threaded Rotolock connection on the valve itself. The Horizontal Rotolock is typically mounted on a compressor, or vertical receiver or accumulator. The typical use for a Vertical Rotolock is on a horizontal receiver.



Fig 1 - Horizontal



Fig 2 - Vertical

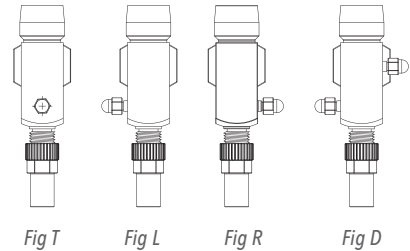
STEP 2: IDENTIFY CONNECTIONS

Rotolock connections are available in multiple sizes and are determined by the inside diameter of the connection for refrigerant flow. When replacing a Rotolock Valve, it is important to replace with the exact ROTOLOCK thread size of the old valve to properly fit the threaded adapter fitting. The second connection on the valve is typically a flare (SAE) connection or a solder (IDS) connection.



STEP 3: SERVICE PORTS

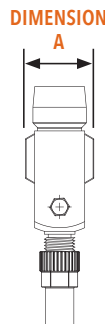
All valves are supplied with at least one 1/4" SAE gauge port. This single port is primarily used for charging and evacuation and its location can vary. (Fig T, Fig L, & Fig R.) Many Rotolock Valves are supplied with a secondary 1/4" SAE gauge port and the configuration most commonly seen is in the Fig D below. This gauge port is most commonly connected via a copper line or flexible hose to a pressure control device.



FIELD REPLACEMENT

Replacing a valve in the field is not always easy due to lack of access. Use this simple chart to help identify your Rotolock connection size and give to your local Refrigeration Wholesaler.

DIMENSION A	ROTOLOCK SIZE
7/8"	3/4"-16
1-1/8"	1"-14
1-3/8"	1-1/4"-12
2"	1-3/4"-12
2-1/2"	2-1/4"-12



SIGMA ROTOLOCK NOMENCLATURE

H05X10SDA

ROTOLOCK FITTING:

- H** = Horizontal Rotolock Configuration
- V** = Vertical Rotolock Configuration
- BA** = Brass Adapter
- SA** = Straight Adapter
- AA** = Angle Adapter

FITTING SIZE:

- 03** = 3/8"
- 04** = 1/2"
- 05** = 5/8"
- 06** = 3/4"
- 07** = 7/8"
- 09** = 1-1/8"
- 11** = 1-3/8"
- 13** = 1-5/8"
- 17** = 2-1/8"
- 21** = 2-5/8"
- 25** = 3-1/8"

CHECK DIGIT

- ROTOLOCK/THREAD SIZE:**
- 06** = 3/4"-16
- 08** = 1"-14
- 10** = 1-1/4"-12
- 14** = 1-3/4"-12
- 18** = 2-1/4"-12

CONNECTION TYPE:

- F** = SAE Flare
- S** = Solder

SERVICE PORT(S):

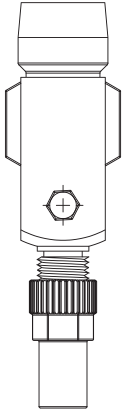
- T** = Top
- L** = Left
- R** = Right
- D** = Dual

ASSEMBLY:

- A** = Includes Teflon Seal & Packaging

HORIZONTAL ROTOLOCK VALVES

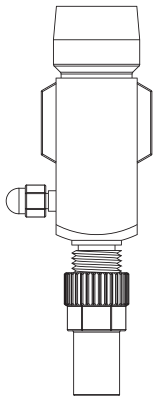
TOP PORT



		OLD	NEW					
	SIGMA PART NO.	SIGMA PART NO.	CONN SIZE	ROTOLOCK CONNECTION	TEFLON SEAL PART NO.	BOTTOM CAP PART NO.	COPELAND X-REF	TECUMSEH X-REF
	H03FTA	H03X06FTA	3/8 SAE	3/4"-16	TS-24590	SE-RCAP-01P		K32-10
	H04X06FTA	H04X06FTA	1/2 SAE	3/4"-16	TS-24590	SE-RCAP-01P		K32-14
	H04FTA	H04X08FTA	1/2 SAE	1"-14	TS-24591	SE-RCAP-01P		K32-19
	H05FTA	H05X08FTA	5/8 SAE	1"-14	TS-24591	SE-RCAP-01P		
	H03STA	H03X06STA	3/8 IDS	3/4"-16	TS-24590	SE-RCAP-01P		K32-16
	H04STA	H04X08STA	1/2 IDS	1"-14	TS-24591	SE-RCAP-01P		
	H05STA	H05X08STA	5/8 IDS	1"-14	TS-24591	SE-RCAP-01P		K32-13
	H06STA	H06X10STA	3/4 IDS	1-1/4"-12	TS-24592	SE-RCAP-02P		K32-25
	H07X08STA	H07X08STA	7/8 IDS	1"-14	TS-24591	SE-RCAP-01P		
	H07STA	H07X10STA	7/8 IDS	1-1/4"-12	TS-24592	SE-RCAP-02P		
	H09SX08TA	H09X08STA	1-1/8 IDS	1"-14	TS-24591	SE-RCAP-02P		
	H09STA	H09X10STA	1-1/8 IDS	1-1/4"-12	TS-24592	SE-RCAP-02P		
	H11STA	H11X14STA	1-3/8 IDS	1-3/4"-12	TS-24593	SE-RCAP-03P	998-0510-46	
	H13STA	H13X14STA	1-5/8 IDS	1-3/4"-12	TS-24593	SE-RCAP-03P	998-0510-66	
	H13X18STA**	H13X18STA**	1-5/8 IDS	2-1/4"-12	TS-24594	SE-RCAP-04P	998-0510-68	

**Valve has 3/8" SAE Service Port

LEFT PORT



		OLD	NEW					
	SIGMA PART NO.	SIGMA PART NO.	CONN SIZE	ROTOLOCK CONNECTION	TEFLON SEAL PART NO.	BOTTOM CAP PART NO.	COPELAND X-REF	TECUMSEH X-REF
	H02X06FLA	H02X06FLA	1/4 SAE	3/4"-16	TS-24590	SE-RCAP-01P		K32-2
	H03FLA	H03X06FLA	3/8 SAE	3/4"-16	TS-24590	SE-RCAP-01P		K32-5
	H04X06FLA	H04X06FLA	1/2 SAE	3/4"-16	TS-24590	SE-RCAP-01P		K32-1
	H04FLA	H04X08FLA	1/2 SAE	1"-14	TS-24591	SE-RCAP-01P	998-0510-58	
	H05FLA	H05X08FLA	5/8 SAE	1"-14	TS-24591	SE-RCAP-01P		
	H02X06SLA	H02X06SLA	1/4 IDS	3/4"-16	TS-24590	SE-RCAP-01P		K32-21
	H03SLA	H03X06SLA	3/8 IDS	3/4"-16	TS-24590	SE-RCAP-01P		
	H04SLA	H04X08SLA	1/2 IDS	1"-14	TS-24591	SE-RCAP-01P		K32-12
	H05SLA	H05X08SLA	5/8 IDS	1"-14	TS-24591	SE-RCAP-01P		K32-11
	H06SLA	H06X10SLA	3/4 IDS	1-1/4"-12	TS-24592	SE-RCAP-02P	998-0510-38	
	H07SLA	H07X10SLA	7/8 IDS	1-1/4"-12	TS-24592	SE-RCAP-02P	998-0510-39	
	H09SLA	H09X10SLA	1-1/8 IDS	1-1/4"-12	TS-24592	SE-RCAP-02P	998-0510-47	
	H11SLA	H11X14SLA	1-3/8 IDS	1-3/4"-12	TS-24593	SE-RCAP-03P		

NOTES:

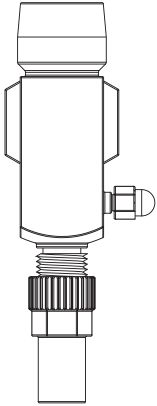
Aluminum or Brass Service Port Caps; Aluminum is standard.

Plastic Stem Caps are standard. Steel or Brass Caps with Copper Seal are available as a separate item.

All valves include a 1/4" SAE Access Port. This Port is used for System Charging and Evacuation.

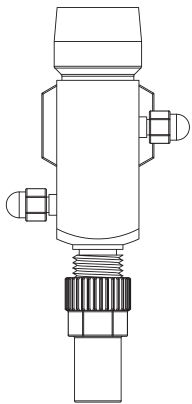
HORIZONTAL ROTOLOCK VALVES (CONTINUED)

RIGHT PORT



OLD SIGMA PART NO.	NEW SIGMA PART NO.	CONN SIZE	ROTOLOCK CONNECTION	TEFLON SEAL PART NO.	BOTTOM CAP PART NO.	COPELAND X-REF	TECUMSEH X-REF
H03FRA	H03X06FRA	3/8 SAE	3/4"-16	TS-24590	SE-RCAP-01P		
H04FRA	H04X08FRA	1/2 SAE	1"-14	TS-24591	SE-RCAP-01P		
H05FRA	H05X08FRA	5/8 SAE	1"-14	TS-24591	SE-RCAP-01P	998-0510-56	K32-8
H03SRA	H03X06SRA	3/8 IDS	3/4"-16	TS-24590	SE-RCAP-01P		
H04SRA	H04X08SRA	1/2 IDS	1"-14	TS-24591	SE-RCAP-01P		
H05SRA	H05X08SRA	5/8 IDS	1"-14	TS-24591	SE-RCAP-01P		
H05X10SRA	H05X10SRA	5/8 IDS	1-1/4"-12	TS-24592	SE-RCAP-02P	998-0510-93	K32-9
H06X10SRA	H06X10SRA	3/4 IDS	1-1/4"-12	TS-24592	SE-RCAP-02P		K32-25
H07SRA	H07X10SRA	7/8 IDS	1-1/4"-12	TS-24592	SE-RCAP-02P	998-0510-94	K32-4
H07X14SRA	H07X14SRA	7/8 IDS	1-3/4"-12	TS-24593	SE-RCAP-03P	998-0510-37	
H09SRA	H09X10SRA	1-1/8 IDS	1-1/4"-12	TS-24592	SE-RCAP-02P		K32-17
H09X14SRA	H09X14SRA	1-1/8 IDS	1-3/4"-12	TS-24593	SE-RCAP-03P	998-0510-02	
H11SRA	H11X14SRA	1-3/8 IDS	1-3/4"-12	TS-24593	SE-RCAP-03P	998-0510-46	
H11X18SRA	H11X18SRA	1-3/8 IDS	2-1/4"-12	TS-24594	SE-RCAP-03P	998-0510-67	

DUAL PORT



STEEL STEM CAPS ARE STANDARD ON DUAL PORT VALVES

OLD SIGMA PART NO.	NEW SIGMA PART NO.	CONN SIZE	ROTOLOCK CONNECTION	TEFLON SEAL PART NO.	BOTTOM CAP PART NO.	COPELAND X-REF	TECUMSEH X-REF
H03FDA	H03X06FDA	3/8 SAE	3/4"-16	TS-24590	SE-RCAP-01S	998-0510-42	K32-7
H04X06FDA	H04X06FDA	1/2 SAE	3/4"-16	TS-24590	SE-RCAP-01S		K32-3
H04FDA	H04X08FDA	1/2 SAE	1"-14	TS-24591	SE-RCAP-01S	998-0510-40	K32-15
H05FDA	H05X08FDA	5/8 SAE	1"-14	TS-24591	SE-RCAP-01S	998-0510-41	K32-18
H02X06SDA	H02X06SDA	1/4 IDS	3/4"-16	TS-24590	SE-RCAP-01S		K32-23
H03X06SDA	H03X06SDA	3/8 IDS	3/4"-16	TS-24590	SE-RCAP-01S		K32-6
H03SDA	H03X08SDA	3/8 IDS	1"-14	TS-24591	SE-RCAP-01S	998-0510-97	K32-20
H04X06SDA	H04X06SDA	1/2 IDS	3/4"-16	TS-24590	SE-RCAP-01S		K32-22
H04SDA	H04X08SDA	1/2 IDS	1"-14	TS-24591	SE-RCAP-01S	998-0510-98	
H05SDA	H05X08SDA	5/8 IDS	1"-14	TS-24591	SE-RCAP-01S	998-0511-00	K32-24
H05X10SDA	H05X10SDA	5/8 IDS	1-1/4"-12	TS-24592	SE-RCAP-02S	998-0510-69	
H06X08SDA	H06X08SDA	3/4 IDS	1"-14	TS-24591	SE-RCAP-01S	998-0511-02	
H06SDA	H06X10SDA	3/4 IDS	1-1/4"-12	TS-24592	SE-RCAP-02S		
H07X08SDA	H07X08SDA	7/8 IDS	1"-14	TS-24591	SE-RCAP-01S	998-0510-89	
H07SDA	H07X10SDA	7/8 IDS	1-1/4"-12	TS-24592	SE-RCAP-02S	998-0510-90	
H09SDA	H09X10SDA	1-1/8 IDS	1-1/4"-12	TS-24592	SE-RCAP-02S	998-0510-99	

NOTES:

Aluminum or Brass Service Port Caps; Aluminum is standard.

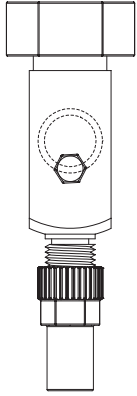
Plastic Stem Caps are standard. Steel or Brass Caps with Copper Seal are available as a separate item.

All valves include a 1/4" SAE Access Port. This Port is used for System Charging and Evacuation.

The secondary gauge ports supplied on the Dual Port valves include a port intended for use with Pressure Controls.

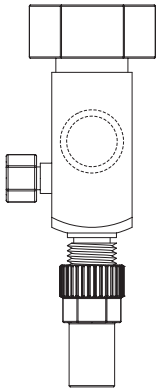
VERTICAL ROTOLOCK VALVES

TOP PORT



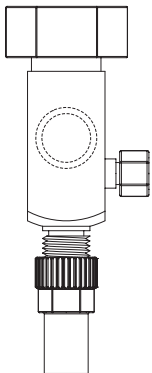
OLD SIGMA PART NO.	NEW SIGMA PART NO.	CONN SIZE	ROTOLOCK CONNECTION	BODY SIZE	TEFLON SEAL PART NO.	BOTTOM CAP PART NO.	BEST MATCH BRASS ADAPTER
V03FTA	V03X06FTA	3/8 SAE	3/4"-16	3/4 hex	TS-24590	SE-RCAP-01P	BA03X06A
V04FTA	V04X08FTA	1/2 SAE	1"-14	7/8 sq	TS-24591	SE-RCAP-01P	BA04X08A
V05FTA	V05X08FTA	5/8 SAE	1"-14	7/8 sq	TS-24591	SE-RCAP-01P	BA05X08A
V03STA	V03X06STA	3/8 IDS	3/4"-16	3/4 hex	TS-24590	SE-RCAP-01P	BA03X06A
V04STA	V04X08STA	1/2 IDS	1"-14	7/8 sq	TS-24591	SE-RCAP-01P	BA04X08A
V05STA	V05X08STA	5/8 IDS	1"-14	7/8 sq	TS-24591	SE-RCAP-01P	BA05X08A
V06STA	V06X10STA	3/4 IDS	1-1/4"-12	7/8 sq	TS-24592	SE-RCAP-02P	BA06X10A
V07STA	V07X10STA	7/8 IDS	1-1/4"-12	1-1/8 sq	TS-24592	SE-RCAP-02P	998-0510-49
V09STA	V09X10STA	1-1/8 IDS	1-1/4"-12	1-1/8 sq	TS-24592	SE-RCAP-03P	BA09X10A
V11STA	V11X14STA	1-3/8 IDS	1-3/4"-12	1-3/8 sq	TS-24593	SE-RCAP-02P	BA11X14A

LEFT PORT



OLD SIGMA PART NO.	NEW SIGMA PART NO.	CONN SIZE	ROTOLOCK CONNECTION	BODY SIZE	TEFLON SEAL PART NO.	BOTTOM CAP PART NO.	BEST MATCH BRASS ADAPTER
V03FLA	V03X06FLA	3/8 SAE	3/4"-16	3/4 hex	TS-24590	SE-RCAP-01P	BA03X06A
V04FLA	V04X08FLA	1/2 SAE	1"-14	7/8 sq	TS-24591	SE-RCAP-01P	BA04X08A
V05FLA	V05X08FLA	5/8 SAE	1"-14	7/8 sq	TS-24591	SE-RCAP-01P	BA05X08A
V03SLA	V03X06SLA	3/8 IDS	3/4"-16	3/4 hex	TS-24590	SE-RCAP-01P	BA03X06A
V04SLA	V04X08SLA	1/2 IDS	1"-14	7/8 sq	TS-24591	SE-RCAP-01P	BA04X08A
V05SLA	V05X08SLA	5/8 IDS	1"-14	7/8 sq	TS-24591	SE-RCAP-01P	BA05X08A
V06SLA	V06X10SLA	3/4 IDS	1-1/4"-12	7/8 sq	TS-24592	SE-RCAP-02P	BA06X10A
V07SLA	V07X10SLA	7/8 IDS	1-1/4"-12	1-1/8 sq	TS-24592	SE-RCAP-02P	998-0510-49
V09SLA	V09X10SLA	1-1/8 IDS	1-1/4"-12	1-1/8 sq	TS-24592	SE-RCAP-02P	BA09X10A
V11SLA	V11X14SLA	1-3/8 IDS	1-3/4"-12	1-3/8 sq	TS-24593	SE-RCAP-03P	BA11X14A

RIGHT PORT



OLD SIGMA PART NO.	NEW SIGMA PART NO.	CONN SIZE	ROTOLOCK CONNECTION	BODY SIZE	TEFLON SEAL PART NO.	BOTTOM CAP PART NO.	BEST MATCH BRASS ADAPTER
V03FRA	V03X06FRA	3/8 SAE	3/4"-16	3/4 hex	TS-24590	SE-RCAP-01P	BA03X06A
V04FRA	V04X08FRA	1/2 SAE	1"-14	7/8 sq	TS-24591	SE-RCAP-01P	BA04X08A
V05FRA	V05X08FRA	5/8 SAE	1"-14	7/8 sq	TS-24591	SE-RCAP-01P	BA05X08A
V03SRA	V03X06SRA	3/8 IDS	3/4"-16	3/4 hex	TS-24590	SE-RCAP-01P	BA03X06A
V04SRA	V04X08SRA	1/2 IDS	1"-14	7/8 sq	TS-24591	SE-RCAP-01P	BA04X08A
V05SRA	V05X08SRA	5/8 IDS	1"-14	7/8 sq	TS-24591	SE-RCAP-01P	BA05X08A
V06SRA	V06X10SRA	3/4 IDS	1-1/4"-12	7/8 sq	TS-24592	SE-RCAP-02P	BA06X10A
V07SRA	V07X10SRA	7/8 IDS	1-1/4"-12	1-1/8 sq	TS-24592	SE-RCAP-02P	998-0510-49
V09SRA	V09X10SRA	1-1/8 IDS	1-1/4"-12	1-1/8 sq	TS-24592	SE-RCAP-02P	BA09X10A
V11SRA	V11X14SRA	1-3/8 IDS	1-3/4"-12	1-3/8 sq	TS-24593	SE-RCAP-03P	BA11X14A

All items on this page can be ordered individually or by case quantity.

CAP MASTER CHART

Caps shown actual size • Match your cap and place your order • In stock and ready to ship

Visit website for **additional information** and for **more caps not shown**



SE-RCAP-10S
SE-RCAP-10SB
Material: Steel
Height: 1-1/2"
Thread: 7/8"-18



SE-RCAP-20B
SE-RCAP-20BB
Material: Brass
Height: 1-1/2"
Thread: 11/16"-20



SE-RCAP-01B Brass
SE-RCAP-01BB Brass
SE-RCAP-01S Steel
SE-RCAP-01SB Steel
Height: 1-3/8"
Thread: 3/4"-16



SE-RCAP-01P
SE-RCAP-01PB
Material: Plastic
Height: 1-7/16"
Thread: 3/4"-16



SE-RCAP-02P
SE-RCAP-02PB
Material: Plastic
Height: 1-7/8"
Thread: 3/4"-16



SE-RCAP-02B Brass
SE-RCAP-02BB Brass
SE-RCAP-02S Steel
SE-RCAP-02SB Steel
Height: 1-7/8"
Thread: 3/4"-16



SE-RCAP-03B Brass
SE-RCAP-03BB Brass
SE-RCAP-03S Steel
SE-RCAP-03SB Steel
Height: 2-1/4"
Thread: 1"-14



SE-RCAP-03P
SE-RCAP-03PB
Material: Plastic
Height: 2-3/8"
Thread: 1"-14



SE-RCAP-04B
SE-RCAP-04BB
Material: Brass
Height: 2-5/16"
Thread: 1-1/16"-18



SE-RCAP-04P
SE-RCAP-04PB
Material: Valox
Height: 2-3/16"
Thread: 1-1/16"-18



SE-RCAP-05P
Material: Plastic
Height: 2-3/16"
Thread: 1-1/8"-16 UNC



SE-RCAP-06P
SE-RCAP-06PB
Material: ABS
Height: 2-3/16"
Thread: 1-3/8"-12



SE-RCAP-06B
SE-RCAP-06BB
Material: Brass
Height: 2-1/8"
Thread: 1-3/8"-12



SE-RCAP-08P
SE-RCAP-08PB
Material: Valox
Height: 3-1/8"
Thread: 1-5/8"-12



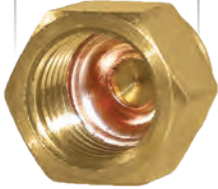
SE-RCAP-08B
SE-RCAP-08BB
Material: Brass
Height: 2-7/8"
Thread: 1-5/8"-12

CAP MASTER CHART

Caps shown actual size • Match your cap and place your order • In stock and ready to ship

Visit website for **additional information** and for **more caps not shown**

MUST HAVE!
SUPERMARKET LEAK STOPPER



SE-SCAP-CB45.**
Material: Brass/Cu Bonnet
THIS CAP ONLY-NOT ACTUAL SIZE
Thread: 1/4" SAE

PART NO.	DESCRIPTION
SE-SCAP-CB45-6	6 pcs CB45 CAP
SE-SCAP-CB45-10	10 pcs CB45 CAP
SE-SCAP-CB45-25	25 pcs CB45 CAP
SE-SCAP-CB45-100	100 pcs CB45 CAP



SE-RCAP-RB100
Material: Brass
Height: 1-11/16"
Thread: 1-7/8"-18 UNF
Cap for WATTS Ball Valve RB100
Found on Kaiser Warren Racks between Suction Header and Accumulator.



SE-RCAP-22P
SE-RCAP-22PB
Material: Valox
Height: 2-1/32"
Thread: M22 x 1.5 METRIC



SE-RCAP-24P
SE-RCAP-24PB
Material: Valox
Height: 2-5/16"
Thread: M24 x 2 METRIC



SE-RCAP-53P
SE-RCAP-53PB
Material: Valox
Height: 2-3/16"
Thread: M27 x 2 METRIC



SE-RCAP-53A
SE-RCAP-53AB
Material: Aluminum
Height: 2-3/4"
Thread: M27 x 2 METRIC



SE-RCAP-54P
SE-RCAP-54PB
Material: Valox
Height: 2-5/8"
Thread: M36 x 1.5 METRIC



SE-RCAP-54B
SE-RCAP-54BB
Material: Brass
Height: 2-5/8"
Thread: M36 x 1.5 METRIC



SE-RCAP-13BBV
Material: Brass
Height: 1-3/8"
Thread: 1-5/16"-18 UNEF
Cap for old HENRY 1-5/8" Ball Valves 900 Series and more. Hard to find!



SE-CF-01
Cap Finder Thread Identifying Tool.
A must for Supermarket Rack Technicians.



SE-RCAP-KIT
Very popular Service Valve Cap Kit. Includes 19 Different Cap Part Numbers. Never be Cap Stranded again!

SERVICE VALVES FLANGE STYLE



SIGMA PART NO.	CONN SIZE	FLANGE SIZE BOLT CENTER	BODY SIZE	ACCESS PORTS QTY/POS	BOTTOM CAP PART NO.	COPELAND X-REF
2F03FLA-SB	3/8 SAE	2 Bolt 1-5/8	Steel 3/4 Hex	1 - Left	SE-RCAP-01P	998-0510-26
2F03FRA-SB	3/8 SAE	2 Bolt 1-5/8	Steel 3/4 Hex	1 - Right	SE-RCAP-01P	
2F04FLA-SB	1/2 SAE	2 Bolt 1-5/8	Steel 7/8 Sq	1 - Left	SE-RCAP-01P	998-0510-22
2F04FRA-SB	1/2 SAE	2 Bolt 1-5/8	Steel 7/8 Sq	1 - Right	SE-RCAP-01P	998-0510-24
2F05FLA-SB	5/8 SAE	2 Bolt 1-5/8	Steel 7/8 Sq	1 - Left	SE-RCAP-01P	998-0510-23
2F05FRA-SB	5/8 SAE	2 Bolt 1-5/8	Steel 7/8 Sq	1 - Right	SE-RCAP-01P	998-0510-25
2F03SLA-SB	3/8 IDS	2 Bolt 1-5/8	Steel 3/4 Hex	1 - Left	SE-RCAP-01P	998-0510-36
2F03SRA-SB	3/8 IDS	2 Bolt 1-5/8	Steel 3/4 Hex	1 - Right	SE-RCAP-01P	998-0510-35
2F04SLA-SB	1/2 IDS	2 Bolt 1-5/8	Steel 7/8 Sq	1 - Left	SE-RCAP-01P	998-0510-34
2F04SRA-SB	1/2 IDS	2 Bolt 1-5/8	Steel 7/8 Sq	1 - Right	SE-RCAP-01P	998-0510-32
2F05SLA-SB	5/8 IDS	2 Bolt 1-5/8	Steel 7/8 Sq	1 - Left	SE-RCAP-01P	998-0510-31
2F05SRA-SB	5/8 IDS	2 Bolt 1-5/8	Steel 7/8 Sq	1 - Right	SE-RCAP-01P	998-0510-33



SIGMA PART NO.	CONN SIZE	FLANGE SIZE BOLT CENTER	BODY TYPE	ACCESS PORTS QTY/POS	BOTTOM CAP PART NO.	COPELAND X-REF	CARLYLE X-REF KIT
2F03FDA-BB	3/8 SAE	2 Bolt 1-5/8	Brass Flare	Left & Right	SE-RCAP-01B	998-0510-15	
2F04FDA-BB	1/2 SAE	2 Bolt 1-5/8	Brass Flare	Left & Right	SE-RCAP-01B	998-0510-16	
2F05FDA-BB	5/8 SAE	2 Bolt 1-5/8	Brass Flare	Left & Right	SE-RCAP-01B	998-0510-17	06DA660-059
2F03SDA-BB	3/8 IDS	2 Bolt 1-5/8	Brass Solder	Left & Right	SE-RCAP-01B	998-0510-04	
2F04SDA-BB	1/2 IDS	2 Bolt 1-5/8	Brass Solder	Left & Right	SE-RCAP-01B	998-0510-05	
2F05SDA-BB	5/8 IDS	2 Bolt 1-5/8	Brass Solder	Left & Right	SE-RCAP-01B	998-0510-06	06DA660-060



SIGMA PART NO.	CONN SIZE	FLANGE SIZE BOLT CENTER	BODY TYPE	ACCESS PORTS QTY/POS	BOTTOM CAP PART NO.	COPELAND X-REF	CARLYLE X-REF KIT
2F06STA-BB	3/4 IDS	2 Bolt 1-5/8	Brass Solder	1 - Top	SE-RCAP-04P	998-0510-14	
2F07STA-BB	7/8 IDS	2 Bolt 1-5/8	Brass Solder	1 - Top	SE-RCAP-04P	998-0510-12	06DA660-061
2F07X14STA-BB	7/8 IDS	2 Bolt 1-3/4	Brass Solder	1 - Top	SE-RCAP-04P		06DA660-062
2F09STA-BB	1-1/8 IDS	2 Bolt 1-5/8	Brass Solder	1 - Top	SE-RCAP-04P	998-0510-13	
2F09X14STA-BB	1-1/8 IDS	2 Bolt 1-3/4	Brass Solder	1 - Top	SE-RCAP-04P		06DA660-064

SERVICE VALVES FLANGE STYLE



SIGMA PART NO.	CONN SIZE	FLANGE SIZE BOLT CENTER	BODY TYPE	ACCESS PORTS QTY/POS	BOTTOM CAP PART NO.	COPELAND X-REF
2F07STA-FU	7/8 IDS	2 Bolt 2-3/4	Brass Flange Union	1 - Top	SE-RCAP-04P	998-0510-10
2F09STA-FU	1-1/8 IDS	2 Bolt 2-3/4	Brass Flange Union	1 - Top	SE-RCAP-04P	998-0510-09
2F11STA-FU	1-3/8 IDS	2 Bolt 2-3/4	Brass Flange Union	1 - Top	SE-RCAP-04P	998-0510-11



SIGMA PART NO.	CONN SIZE	FLANGE SIZE BOLT CENTER	BODY TYPE	ACCESS PORTS QTY/POS	BOTTOM CAP PART NO.	COPELAND X-REF	CARLYLE X-REF KIT
4F09STA-BB	1-1/8 IDS	4 Bolt 2-1/2	Brass Solder	1 - Top	SE-RCAP-04P		06DA660-063
4F11STA-BB	1-3/8 IDS	4 Bolt 2-1/2	Brass Solder	1 - Top	SE-RCAP-04P	998-0510-08	06DA660-065
4F13STA-BB	1-5/8 IDS	4 Bolt 2-1/2	Brass Solder	1 - Top	SE-RCAP-04P	998-0510-21	06EA660-090



SIGMA PART NO.	CONN SIZE	FLANGE SIZE BOLT CENTER	BODY TYPE	ACCESS PORTS QTY/POS	BOTTOM CAP PART NO.	COPELAND X-REF	CARLYLE X-REF KIT
4F17SDA-BB	2-1/8 IDS	4 Bolt 3-1/16	Brass Solder	2 - Top	SE-RCAP-04P	998-0510-01	06EA660-091



SIGMA PART NO.	CONN SIZE	FLANGE SIZE BOLT CENTER	BODY TYPE	ACCESS PORTS QTY/POS	BOTTOM CAP / PART NO.	COPELAND X-REF
4F13STA-CIA	1-5/8 IDS	4 Bolt 2-1/2	Brass Solder	1 - Top	SE-RCAP-04P	998-0510-07

This item is a lower cost option of the Cast Iron Valve 4F13STA-CI, which is Copeland PN **998-0510-07**.



SIGMA PART NO.	CONN SIZE	FLANGE SIZE BOLT CENTER	BODY TYPE	ACCESS PORTS QTY/POS	BOTTOM CAP PART NO.	COPELAND X-REF	CARLYLE X-REF KIT
4F13STA-CI	1-5/8 IDS	4 Bolt 2-1/2	Cast Iron	1 - Top	SE-RCAP-53P*	998-0510-07	
4F17STA-CI	2-1/8 IDS	4 Bolt 3-1/16	Cast Iron	1 - Top	SE-RCAP-54P*	998-0510-20	06EA660-091
4F21STA-CI	2-5/8 IDS	4 Bolt 3-7/8	Cast Iron	1 - Top	SE-RCAP-54P*	998-0510-19	
4F25STA-CI	3-1/8 IDS	4 Bolt 3-7/8	Cast Iron	1 - Top	SE-RCAP-54PL*	998-0510-18	

* See **CAP MASTER** Chart for cross reference to ensure correct replacement. Cast Iron Caps are obsolete.

Note about Metric Caps: The newer cast iron valves will have a Metric thread for the bottom cap. The old caps will not fit the new valves and the new caps will not fit the old valves. Sigma has inventory ALL cap sizes, so please refer to the **CAP MASTER** sheet to identify your needs.

ANTHONY PARTS



SE-TMR-SLV (SINGLE PACK)
SE-TMR-SLV-6 (6 PACK)

Reversible Torque Master: **Silver**
 Anthony PN: **02-10568-0001**



SE-TMR-BLK (SINGLE PACK)
SE-TMR-BLK-6 (6 PACK)

Reversible Torque Master: **Black**
 Anthony PN: **02-10568-0003**



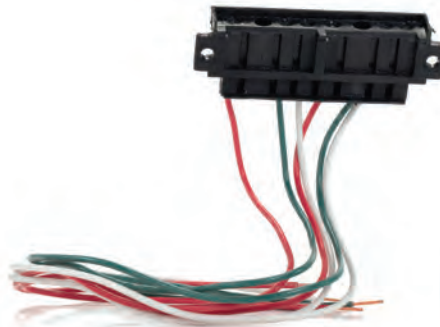
SE-TR-29-HEX (SINGLE PACK)
SE-TR-29-HEX10 (10 PACK)

29" Torque Rod with Hex Base
 Anthony PN: **02-10308-0007**



SE-EHPR-3-SGL

Hinge Pin Receptacle L/R: **3-Wire**
 Anthony PN: **60-12376-0001/0002**



SE-EHPR-6-DBL

Hinge Pin Receptacle L/R: **6-Wire**
 Anthony PN: **60-12377-0001**



SE-HP-L-SLV

Hinge Pin with Leads: **Silver**
 Anthony PN: **60-10847-0003**



SE-HP-L-BLK

Hinge Pin with Leads: **Black**
 Anthony PN: **60-10847-0004**



SE-DHO-ANTH

Door Hold Open Assembly with Hardware
 Anthony PN: **02-14649-0001**

HUSSMANN PARTS



SE-BASEP-KIT-HUSS

Hussmann Base Plate Kit
Hussmann PN: **3090935KT**



SE-TR-33LH-HUSS

33" Hussmann Torque Rod LH Only
Hussmann PN: **0428627**



SE-HPTOP-HUSS

Hussmann Top Hinge Plate Kit
Hussmann PN: **3090933KT**



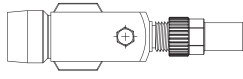
SE-DHO-HUSS

Hussmann Door Hold Open Kit
Hussmann PN: **3090937KT**

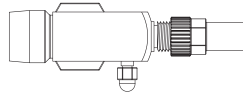
GEMTRON DOOR REPAIR NOW AVAILABLE

SIGMA PART NO.	DESCRIPTION	GEMTRON CROSS REFERENCE NO.
SE-TA-SLV-GEM	Gemtron Torque Adjuster Black	44QLASM20-BLK
SE-TA-BLK-GEM	Gemtron Torque Adjuster Silver	44QLASM20
SE-TR-29-GEM	Gemtron Torque Rod 29"	44QLASM1
SE-DHO-GEM	Gemtron Hold Open Assembly Kit	79-44-THOLD-2
SE-HP-L-BLK-GEM	Gemtron Top Hinge Pin w/ leads - Black	44QLASM21-1HPBK-B
SE-HP-L-SLV-GEM	Gemtron Top Hinge Pin w/ leads - Silver	44QLASM21-1HPBK-S
SE-EHPR-SGL-GEM	Gemtron Hinge Pin Receptacle - Single	44QL30-2-HP
SE-EHPR-DBL-GEM	Gemtron Hinge Pin Receptacle - Double	44QL28-2-HP

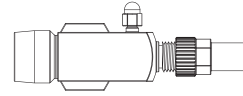
CROSS REFERENCE ROTOLOCK VALVES



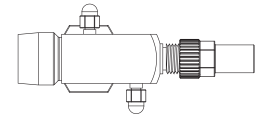
STYLE 1



STYLE 2



STYLE 3



STYLE 4

COPELAND KIT NO.	SIGMA PART NO.	TECUMSEH X-REF	BODY STYLE	TEFLON SEAL PART NO.	BOTTOM CAP PLASTIC	BOTTOM CAP STEEL	BEST MATCH BRASS ADAPTER	
998-0510-02	H09X14SRA	K32-15	Style 3	TS-24593	SE-RCAP-03P	SE-RCAP-03S	BA09X14A	
998-0510-37	H07X14SRA		Style 3	TS-24593	SE-RCAP-03P	SE-RCAP-03S	BA09X14A	
998-0510-38	H06X10SLA		Style 2	TS-24592	SE-RCAP-02P	SE-RCAP-02S	BA06X10A	
998-0510-39	H07X10SLA		Style 2	TS-24592	SE-RCAP-02P	SE-RCAP-02S	BA07X10A	
998-0510-40	H04X08FDA		K32-18	Style 4	TS-24591	SE-RCAP-01P	SE-RCAP-01S	BA04X08A
998-0510-41	H05X08FDA			Style 4	TS-24591	SE-RCAP-01P	SE-RCAP-01S	BA05X08A
998-0510-42	H03X06FDA		K32-7	Style 4	TS-24590	SE-RCAP-01P	SE-RCAP-01S	BA03X06A
998-0510-43	H03X06SDA			Style 4	TS-24590	SE-RCAP-01P	SE-RCAP-01S	BA03X06A
998-0510-44	H04X08SDA			Style 4	TS-24591	SE-RCAP-01P	SE-RCAP-01S	BA04X08A
998-0510-45	H05X08SDA		K32-8	Style 4	TS-24591	SE-RCAP-01P	SE-RCAP-01S	BA05X08A
998-0510-46	H11X14SRA			Style 3	TS-24593	SE-RCAP-03P	SE-RCAP-03S	BA11X14A
998-0510-47	H09X10SLA			Style 2	TS-24592	SE-RCAP-02P	SE-RCAP-02S	BA09X10A
998-0510-49	V07X10STA			Style 1	TS-24592	SE-RCAP-02P	SE-RCAP-02S	BA07X10A
998-0510-51	H09X10SDA			Style 4	TS-24592	SE-RCAP-02P	SE-RCAP-02S	BA09X10A
998-0510-52	H07X08SDA			Style 4	TS-24591	SE-RCAP-01P	SE-RCAP-01S	BA05X08A
998-0510-56	H05X08FRA	K32-4		Style 3	TS-24591	SE-RCAP-01P	SE-RCAP-01S	BA05X08A
998-0510-58	H03X08FLA			Style 2	TS-24591	SE-RCAP-01P	SE-RCAP-01S	BA03X08A
998-0510-66	H13X14STA			Style 1	TS-24593	SE-RCAP-03P	SE-RCAP-03S	BA11X14A
998-0510-67	H11X18SRA			Style 3	TS-24594	SE-RCAP-03P	SE-RCAP-03S	BA13X18A
998-0510-68	H13X18STA	K32-20	Style 1	TS-24594	SE-RCAP-04P	SE-RCAP-04B	BA13X18A	
998-0510-69	H05X10SDA		Style 4	TS-24592	SE-RCAP-01P	SE-RCAP-01S	BA05X10A	
998-0510-89	H07X08SDA		Style 4	TS-24591	SE-RCAP-01P	SE-RCAP-01S	BA05X08A	
998-0510-90	H07X10SDA		Style 4	TS-24592	SE-RCAP-02P	SE-RCAP-02S	BA07X10A	
998-0510-93	H05X10SRA		K32-9	Style 3	TS-24592	SE-RCAP-01P	SE-RCAP-01S	BA05X10A
998-0510-94	H07X10SRA			Style 3	TS-24592	SE-RCAP-02P	SE-RCAP-02S	BA07X10A
998-0510-97	H03X06SDA			Style 4	TS-24590	SE-RCAP-01P	SE-RCAP-01S	BA03X06A
998-0510-98	H04X08SDA	K32-24	Style 4	TS-24591	SE-RCAP-01P	SE-RCAP-01S	BA04X08A	
998-0510-99	H09X10SDA		Style 4	TS-24592	SE-RCAP-02P	SE-RCAP-02S	BA09X10A	
998-0511-00	H05X08SDA		Style 4	TS-24591	SE-RCAP-01P	SE-RCAP-01S	BA05X08A	
998-0511-02	H06X08SDA		Style 4	TS-24591	SE-RCAP-01P	SE-RCAP-01S	BA05X08A	

CROSS REFERENCE SERVICE VALVES (FLANGE STYLE)



COPELAND KIT NO.	SIGMA PART NO.	CARLYLE KIT NO.	BODY STYLE	SERVICE PORT	BOTTOM CAP PLASTIC	STEEL CAP (S) BRASS CAP (B) ALUM CAP (A)
998-0510-04	2F03SDA-BB		Brass Body	Dual	SE-RCAP-01P	SE-RCAP-01B
998-0510-05	2F04SDA-BB		Brass Body	Dual	SE-RCAP-01P	SE-RCAP-01B
998-0510-06	2F05SDA-BB	06DA660-060	Brass Body	Dual	SE-RCAP-01P	SE-RCAP-01B
998-0510-07	4F13STA-CI		Cast Iron	Top	SE-RCAP-53P	SE-RCAP-53A
998-0510-08	4F11STA-BB	06DA660-065	Brass Body	Top	SE-RCAP-04P	SE-RCAP-04B
998-0510-09	2F09STA-FU		Brass Body	Top	SE-RCAP-04P	SE-RCAP-04B
998-0510-10	2F07STA-FU		Brass Body	Top	SE-RCAP-04P	SE-RCAP-04B
998-0510-11	2F11STA-FU		Brass Body	Top	SE-RCAP-04P	SE-RCAP-04B
998-0510-12	2F07STA-BB	06DA660-061	Brass Body	Top	SE-RCAP-04P	SE-RCAP-04B
998-0510-13	2F09STA-BB		Brass Body	Top	SE-RCAP-04P	SE-RCAP-04B
998-0510-14	2F06STA-BB		Brass Body	Top	SE-RCAP-04P	SE-RCAP-04B
998-0510-15	2F03FDA-BB		Brass Body	Dual	SE-RCAP-01P	SE-RCAP-01B
998-0510-16	2F04FDA-BB		Brass Body	Dual	SE-RCAP-01P	SE-RCAP-01B
998-0510-17	2F05FDA-BB	06DA660-059	Brass Body	Dual	SE-RCAP-01P	SE-RCAP-01B
998-0510-18	4F25STA-CI		Brass Body	Top	SE-RCAP-54PL	SE-RCAP-54AL
998-0510-19	4F21STA-CI		Cast Iron	Top	SE-RCAP-54P	SE-RCAP-54A
998-0510-20	4F17STA-CI	06EA660-091	Cast Iron	Top	SE-RCAP-54P	SE-RCAP-54A
998-0510-21	4F13STA-BB	06EA660-090	Brass Body	Top	SE-RCAP-04P	SE-RCAP-04B
998-0510-22	2F04FLA-SB		Steel Body	Left	SE-RCAP-01P	SE-RCAP-01S
998-0510-23	2F05FLA-SB		Steel Body	Left	SE-RCAP-01P	SE-RCAP-01S
998-0510-24	2F04FRA-SB		Steel Body	Right	SE-RCAP-01P	SE-RCAP-01S
998-0510-25	2F05FRA-SB		Steel Body	Right	SE-RCAP-01P	SE-RCAP-01S
998-0510-26	2F03FLA-SB		Steel Body	Left	SE-RCAP-01P	SE-RCAP-01S
998-0510-31	2F05SLA-SB		Steel Body	Left	SE-RCAP-01P	SE-RCAP-01S
998-0510-31	2F05SRA-SB		Steel Body	Right	SE-RCAP-01P	SE-RCAP-01S
998-0510-32	2F04SRA-SB		Steel Body	Right	SE-RCAP-01P	SE-RCAP-01S
998-0510-33	2F05SLA-SB		Steel Body	Left	SE-RCAP-01P	SE-RCAP-01S
998-0510-34	2F04SLA-SB		Steel Body	Left	SE-RCAP-01P	SE-RCAP-01S
998-0510-35	2F03SRA-SB		Steel Body	Right	SE-RCAP-01P	SE-RCAP-01S
998-0510-36	2F03SLA-SB		Steel Body	Left	SE-RCAP-01P	SE-RCAP-01S
998-0511-01	4F17SDA-BB		Brass Body	Dual Top	SE-RCAP-04P	SE-RCAP-04B

FUSIBLE PLUGS & FUSIBLE UNIONS

Our Fusible Plugs and Fusible Unions are the highest quality in the HVAC/R market. They are available in Single Packs, but also available in bulk packaging.



FUSIBLE PLUGS

PART NO.	THREAD SIZE	MELTING TEMP	PKG QTY
PLUG-110	1/8 MPT	168°F	Single
PLUG-148	1/8 MPT	210°F	
PLUG-153	1/4 MPT	210°F	
PLUG-175	3/8 MPT	210°F	
PLUG-166	1/8 MPT	283°F	
PLUG-421	1/4 MPT	283°F	
PLUG-337	3/8 MPT	283°F	



FUSIBLE UNIONS

PART NO.	CONNECTIONS	MELTING TEMP	PKG QTY
UNION-154	1/4 SAE 1/4 MPT	210°F	Single
UNION-184	3/8 SAE 3/8 MPT	210°F	
UNION-58	3/8 SAE 1/2 MPT	210°F	
UNION-319	3/8 SAE 5/8-18 UNF	210°F	
UNION-44	1/4 SAE 1/4 MPT	283°F	
UNION-76	3/8 SAE 3/8 MPT	283°F	

CHANGEOVER VALVE ADAPTER

PART NO.	CONNECTIONS
BA07X04P	7/8" IDS 1/2" MPT



The BA07X04P is built like a tank and replaces the thin copper fitting used between the changeover valve and the receiver. This one will not crack and is great for Refrigeration Rack overhauls!

RELIEF VALVES

PART NO.	CONNECTIONS	PRESSURE SETTING	BODY STYLE
VALVE-58	3/8 MPT 3/8 SAE	350 PSI	Angle
VALVE-67	3/8 MPT 3/8 SAE	400 PSI	
VALVE-771	3/8 MPT 3/8 SAE	450 PSI	
VALVE-5026	3/8 MPT 3/8 SAE	600 PSI	
VALVE-5033	3/8 MPT 3/8 SAE	675 PSI	
VALVE-94	1/2 MPT 5/8 SAE	350 PSI	Angle
VALVE-102	1/2 MPT 5/8 SAE	400 PSI	
VALVE-764	1/2 MPT 5/8 SAE	450 PSI	
VALVE-5057	1/2 MPT 5/8 SAE	675 PSI	
VALVE-5040	1/2 MPT 5/8 SAE	600 PSI	Straight



PROTECTION NOTES

- Relief valves are installed in a refrigeration system primarily to protect the vessel in the event of fire or other emergency high pressure condition.
- Fusible unions and plugs protect only in the event of fire.
- The 5/8"-18 UNF union or plug seats in a special 3/8" coupling with a copper zinc coated flare gasket, exactly as an SAE flare fitting. A conventional 3/8" MPT pipe threaded union, plug, or safety valve will also seal on the dryseal pipe thread of the coupling if ever necessary. All systems must have a relief valve or fuse plug installed in order to comply with the ANSI B9.1 code.

ACCESSORY SERVICE ITEMS FOR CONDENSERS & RECEIVERS

PART NO.	DESCRIPTION	APPLICATION	DIMENSIONS
ZN 60	Zinc Plate Anode	6-5/8" Dia. Condenser	6" OD x .250"
ZN 65		6-5/8" Dia. Condenser	6-5/8" OD x .250"
ZN 85		8-5/8" Dia. Condenser	8-5/8" OD x .250"
ZN 105		10-3/4" Dia. Condenser	10-3/4" OD x .250"
ZN 122	Zinc PLUG Anode	3/4"-10 UNC Plug Thread	1/2" Dia x 2-3/8" Long
ZN 3332		3/8" NPT Plug Thread	3/8" Dia x 1" Long



ZN PLATE ANODE



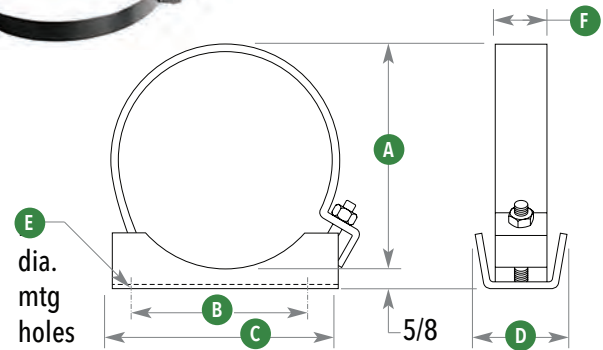
ZN 122 PLUG ANODE



ZN 3332 PLUG ANODE

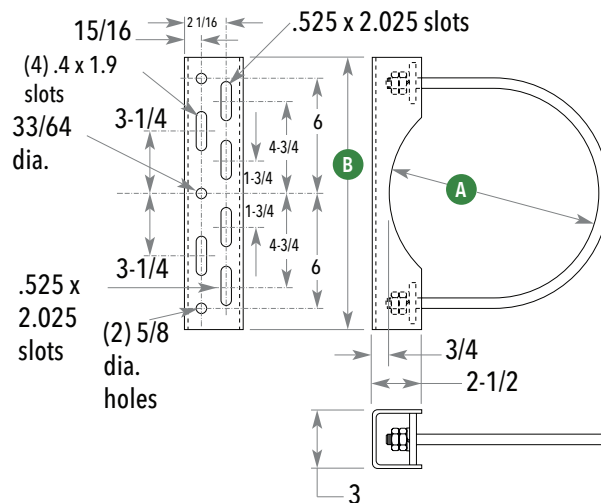
UNIVERSAL

PART NO.	DIMENSIONS (INCHES)					
	A	B	C	D	E	F
5A	5	5-1/2	7	2-9/16		
6A	6	5-1/2	7	2-9/16		
6B	6-5/8	5-1/2	7	2-9/16	7/16	1-1/16
8B	8-5/8	8	9	2-7/8		
10B	10-3/4	10	11	3-5/16		
12B	12-3/4	11-5/8	13	4-1/8		
14B	14	13 1/4	14-1/2	4-1/8	9/16	1-1/2
16B	16	15-3/4	17	4-1/8		



COMPRESSOR/CONDENSER

PART NO.	DIMENSIONS (INCHES)	
	A	B
BR1	6	14
BR3	6-5/8	
BR5	8-5/8	
BR7	10-3/4	
BR9	12-3/4	24
BR10	14	
BR11	16	
BR12	18	
BR13	20	



GASKETS & ENDPLATES FOR CHILLER BARRELS & CONDENSERS

We are the official source for all of the Gaskets, Heads, and Parts for the Standard Refrigeration line of heat exchangers. This includes current products, as well as legacy products. The Gaskets on the following pages are still manufactured by Sigma Engineering and are readily available. Our technical support team can assist you in selecting the proper item and we can also assist with installation instructions and torque recommendations.



EVAPORATORS - GASKET CROSS REFERENCE

MODELS	FRONT (GASKET)	REAR (GASKET)	SINGLE CIRCUIT	DUAL CIRCUIT	QUAD CIRCUIT
TX2	2865	2865	Fig. A	NA	NA
TX3	2865	2865	Fig. A	NA	
TX5	2872	2872	Fig. A	NA	
TX6	2872	2872	Fig. A	NA	
TX7.5	2872	2872	Fig. A	NA	
TX10	2872	2872	Fig. A	Fig. C	
TX12	2889	2889	Fig. A	Fig. C	
TX15	2889	2889	Fig. A	Fig. C	
TX20	2889	2889	Fig. A	Fig. C	
TX25	2889	2889	Fig. A	Fig. C	
TXC30	2218	2218	Fig. B	Fig. D	
TXC40	2227	2227	Fig. B	Fig. D	
TXC50	2227	2227	Fig. B	Fig. D	
TXC60	2227	2227	Fig. B	Fig. D	
TXC75	2227	2227	Fig. B	Fig. D	
TXC100	4892	4804	Fig. A	Fig. C	
TXC120	4892	4804	Fig. A	Fig. C	
TXC150	3549	3549	NA	Fig. C	
TXC175	5169	5169	NA	Fig. D	
TXC200	5169	5169	NA	Fig. D	
TXC250	3675	3675	NA	Fig. C	
TXC300	3637	3637	NA	Fig. C	
TXC400	3637	4878	NA	Fig. C	
TXC500	3532	3532	NA	Fig. D	

FIGURE A SINGLE CIRCUIT DUAL PASS

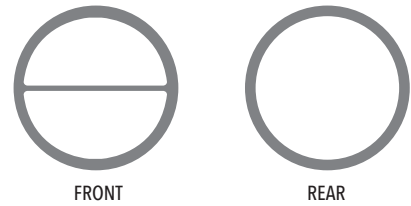


FIGURE B SINGLE CIRCUIT FOUR PASS

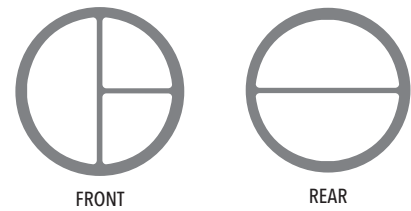


FIGURE C DUAL CIRCUIT DUAL PASS

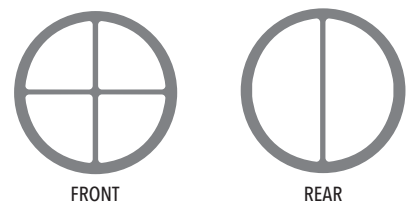
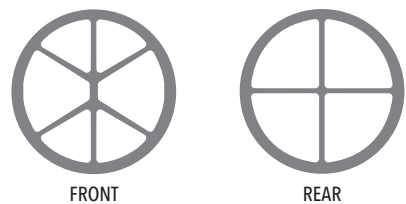


FIGURE D DUAL CIRCUIT FOUR PASS



SST – GASKET AND ENDPLATES CROSS REFERENCE

MODELS	FRONT GASKET	REAR GASKET	FRONT ENDPLATE	REAR ENDPLATE
SST 75A	3156	346	4304	30
SST 75	337	346	49	30
SST 100A	3163	3149	5040	5026
SST 100	175	184	67	58
SST 150	175	184	67	58
SST 200A	3101	3170	5819	76
SST 200	193	201	85	76
SST 300A	3101	3170	5819	76
SST 300	193	201	85	76
SST 500A	3118	2584	5938	4047
SST 500	210	229	120	21
SST 750A	3118	2584	5938	4047
SST 750	210	229	12	21
SST 755A	3118	2584	5938	4047
SST 755	238	247	12	21
SST 1000A	1723	2953	6605	4047
SST 1000	238	247	12	21
SST 1500A	1723	2953	5576	4047
SST 1501	2977	2584	175	4047
SST 1555A	2591	2984	5907	4180
SST 1555	256	265	193	184
SST 2005A	2591	2984	5914	4180
SST 2005	256	265	148	184
SST 2026A	2591	2984	5914	4180
SST 2026	256	265	148	184
SST 2505A	2591	2984	6205	4180
SST 2505	256	265	148	184
SST 2527A	2591	2984	6205	4180
SST 2527	256	265	148	184
SST 3005A	2591	2984	6205	4180
SST 3005	256	265	148	184
SST 3028A	2591	2984	6205	4180

MODELS	FRONT GASKET	REAR GASKET	FRONT ENDPLATE	REAR ENDPLATE
SST 3028	256	265	148	184
SST 30-460M	166	111	166	157
SST 3505A	2591	2984	6205	4180
SST 35-520M	166	111	201	157
SST 4005A	111	120	210	238
SST 40-610M	111	120	210	238
SST 4505A	111	120	210	238
SST 45-680M	111	120	210	238
SST 5005A	111	120	247	238
SST 50-760M	111	120	210	238
SST 5505A	111	120	247	238
SST 55-850M	111	120	210	238
SST 6005A	111	120	247	238
SST 60-940M	111	120	247	238
SST 7005A	111	120	247	238
SST 70-1060M	111	120	247	238
SST 8005A	111	120	247	238
SST 80-1200M	111	120	247	238
SST 100-1408A	120	120	2245	2245
SST 100-1500M	111	120	247	238
SST 120-1408A	120	120	2245	2245
SST 126-1905M	120	120	3994	3994
SST 150-1410A	120	120	2245	2245
SST 150-2250M	2254	2254	1039	1039
SST 200-1412A	120	120	4335	4335
SST 200-3000M	2263	2263	1048	1048
SST 250-3750M	1679	1679	1057	1057
SST 300-4500M	1688	1688	1066	1066
SST 350-5250M	1688	1688	1066	1066
SST 400-6000M	2290	2290	1921	1921
SST 500-7500M	2290	2290	1921	1921

This chart is to be used for reference purposes only.
For replacement parts contact customer service with your condenser model and serial numbers.

HSE/HP/CA/MSE – GASKET AND ENDPLATES CROSS REFERENCE

MODELS	FRONT GASKET	REAR GASKET	FRONT ENDPLATE	REAR ENDPLATE
HSE 2	337	346	6412	30
HSE 3	175	184	6717	5026
HSE 5	3718	3170	6229	76
HSE 7	3718	3170	5552	76
HSE 10	3718	3170	5552	76
HSE 15	445	247	5495	21
HSE 20A	2953	2584	5707	4047
HSE 20	1723	1732	2227	21
HSE 25A	2953	2584	5707	4047
HSE 25	1723	1732	2227	21
HSE 30A	1741	2984	5583	4180
HSE 30	1741	1750	2236	4180
HSE 40A	1741	2984	6900	4180
HSE 40	1741	1750	2236	4180
HSE 50A	1741	2984	6900	4180
HSE 50	1741	1750	2236	4180
HSE 60	111	120	247	238
HSE 70	111	120	247	238
HSE 80	111	120	247	238
HSE 100	120	120	2245	2245
HSE 125	120	120	2245	2245
HSE 150	2254	2254	1039	1039
HSE 200	2263	2263	1048	1048
HSE 250	1679	1679	1057	1057
HSE 300	1688	1688	1066	1066
HSE 350	1688	1688	1066	1066
HSE 400	2290	2290	1921	1921
HSE 450	2290	2290	1921	1921
HSE 500	2290	2290	1921	1921

This chart is to be used for reference purposes only. For replacement parts contact customer service with your condenser model and serial numbers.

MODELS	FRONT GASKET	REAR GASKET	FRONT ENDPLATE	REAR ENDPLATE
HP 10	Call/Contact Customer Service			
HP 15				
HP 20				
HP 30				
HP 40				
HP 50				
HP 60				
HP 80				

MODELS	FRONT GASKET	REAR GASKET	FRONT ENDPLATE	REAR ENDPLATE
CA 050	355	364	2876	2885
CA 075	238	247	2911	2902
CA 100	238	247	2911	2902
CA 150	256	265	2920	2948
CA 200	445	247	2894	2902
CA 300	373	265	2939	2948

MODELS	FRONT GASKET	REAR GASKET	FRONT ENDPLATE	REAR ENDPLATE
MSE 100	3163	3149	6436	300
MSE 200	3163	3149	6436	300
MSE 300	355	364	6386	337
MSE 500	355	364	6386	337
MSE 750	436	364	6281	4461
MSE 1005	436	364	6281	4461
MSE 1500	445	2584	5752	4104
MSE 2005	1723	2953	5752	4104
MSE 2505	1723	2953	5752	4104
MSE 3006	1723	2953	6467	4104
MSE 3305	1741	2984	6481	5114
MSE 4005	1741	2984	6481	5114
MSE 4505	1741	2984	6481	5114
MSE 5005	1741	2984	6481	5114
MSE 6505	111	120	2542	5233
MSE 7505	111	120	2542	5233
MSE 100Hp	4092	4092	120	120
MSE 120Hp	4092	4092	120	120

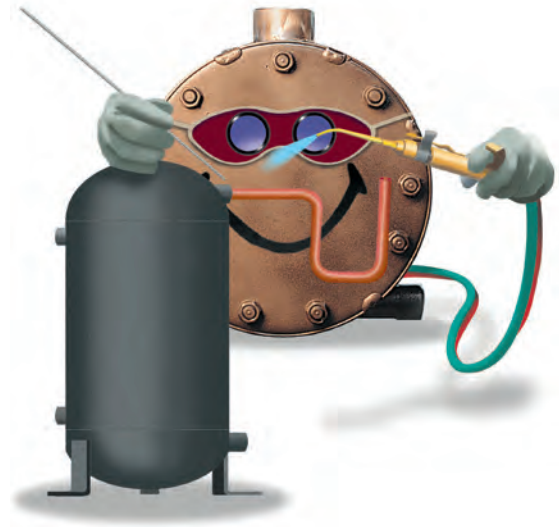
This chart is to be used for reference purposes only. For replacement parts contact customer service with your condenser model and serial numbers. MSE models with zinc anode may require a special rear endplate. Please Call/Contact Customer Service.

ELT/KHX - GASKET AND ENDPLATES CROSS REFERENCE

MODELS	FRONT GASKET	REAR GASKET	FRONT ENDPLATE	REAR ENDPLATE
ELT 100A	5057	5064	3055	3073
ELT 150A	5057	5064	3055	3073
ELT 200A	5057	5057	3055	3154
ELT 300A	2191	2209	3253	3280
ELT 500A	2191	2209	3253	3280
ELT 800A	2461	2470	3451	3482
ELT 1000A	2461	2470	3451	3482
ELT 50	2092	2100	3046	3064
ELT 75	2092	2100	3046	3064
ELT 100	2092	2100	3046	3064
ELT 150	2092	2100	3046	3064
ELT 200	2092	2092	3424	3424
ELT 300	2191	2209	3262	3280
ELT 500	2191	2209	3262	3280
ELT 800	2461	2470	3475	3482
ELT 1000	2461	2470	3475	3482

MODELS	FRONT GASKET	REAR GASKET	FRONT ENDPLATE	REAR ENDPLATE
KH 11/2X	698A	698B	1840	1796
KH 2X	698A	698B	1840	1796
KH 3X	698A	698B	1840	1796
KH 5X	706A	706B	1859	1813
KH 71/2X	724A	724B	1868	1831
KH 10X	724A	724B	1868	1831

This chart is to be used for reference purposes only. For replacement parts contact customer service with your condenser model and serial numbers.



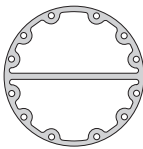
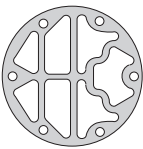
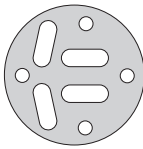
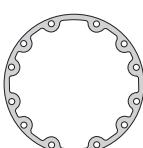
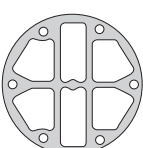
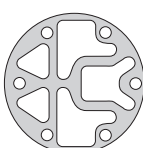
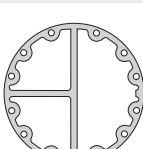
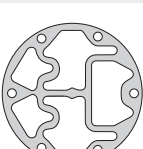
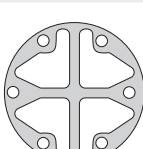

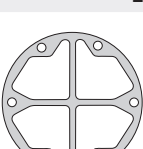
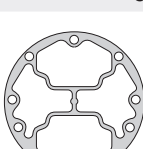
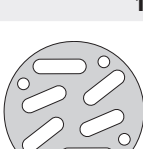
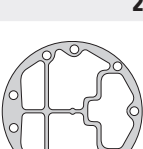
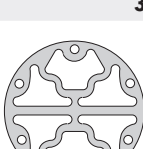
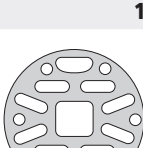
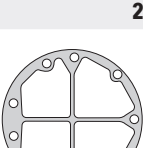
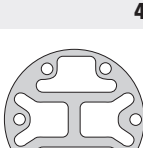
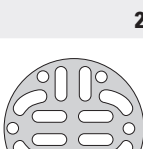
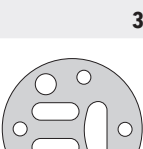

ENDPLATE REPLACEMENT

We still offer EndPlates for all Stan-Ref Chiller Barrels and Water Cooled Condensers. Simply provide us with your model and serial number and we will identify for you.

Or you can visit our website and find all of the Line Drawings of the EndPlates for easy identification.

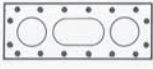
www.sigmaengineeringllc.com

GASKETS ID

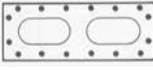
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<p>120</p> <p>12-3/4" Dia. 12 Studs</p>		<p>229</p> <p>8-5/8" Dia. 6 Studs</p>		<p>355</p> <p>6-5/8" Dia. 12 Studs</p>	
<p>166</p> <p>12-3/4" Dia. 12 Studs</p>		<p>238</p> <p>8-5/8" Dia. 6 Studs</p>		<p>364</p> <p>6-5/8" Dia. 6 Studs</p>	
<p>175</p> <p>6" Dia. 4 Studs</p>		<p>247</p> <p>8-5/8" Dia. 6 Studs</p>		<p>373</p> <p>10-3/4" Dia. 9 Studs</p>	
<p>184</p> <p>6" Dia. 4 Studs</p>		<p>256</p> <p>10-3/4" Dia. 9 Studs</p>		<p>382</p> <p>8-5/8" Dia. 6 Studs</p>	
<p>193</p> <p>6-5/8" Dia. 6 Studs</p>		<p>265</p> <p>10-3/4" Dia. 9 Studs</p>		<p>436</p> <p>6-5/8" Dia. 6 Studs</p>	
<p>201</p> <p>6-5/8" Dia. 6 Studs</p>		<p>337</p> <p>5" Dia. 4 Studs</p>		<p>445</p> <p>8-5/8" Dia. 12 Studs</p>	

GASKETS ID

689A



689B



706A



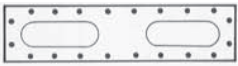
706B



724A

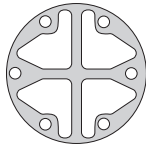


724B



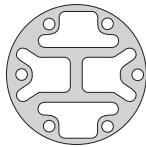
1057

6-5/8" Dia.
6 Studs



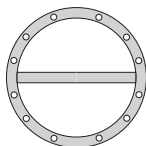
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6-5/8" Dia.
6 Studs



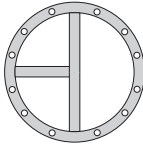
1462

10-3/4" Dia.
12 Studs



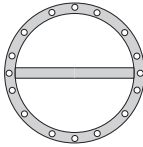
1471

8-5/8" Dia.
12 Studs



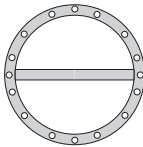
1480

12-3/4" Dia.
12 Studs



1499

14" Dia.
12 Studs



1679

19-11/16" Dia.



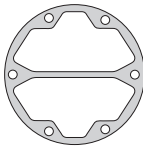
1688

21-11/16" Dia.



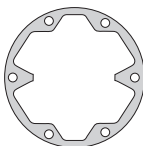
1723

8-5/8" Dia.
6 Studs



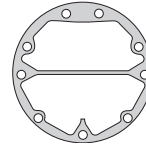
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8-5/8" Dia.
6 Studs



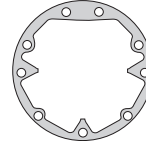
1741

10-3/4" Dia.
9 Studs



1750

10-3/4" Dia.
9 Studs



2092

1-3/16" x 9-1/16"



2100

1-3/16" x 6-5/16"



2191

2-9/16" x 15-3/4"



2209

2-9/16" x 15-3/4"



2254

14-11/16" Dia.



GASKETS ID

2263

16-11/16"
Dia.

2984

10-3/4" Dia.
9 Studs

3718

6-5/8" Dia.
6 Studs

2290

25" Dia.

3101

6-5/8" Dia.
6 Studs

5057

1-3/16" x 9-1/16"

2461

3-1/4" x 20-1/4"

3118

8-5/8" Dia.
6 Studs

2470

3-1/4" x 13-1/2"

3149

6" Dia.
4 Studs

2584

8-5/8" Dia.
6 Studs

3156

5" Dia.
4 Studs

2591

10-3/4" Dia.
9 Studs

3163

6" Dia.
4 Studs

2953

8-5/8" Dia.
6 Studs

3170

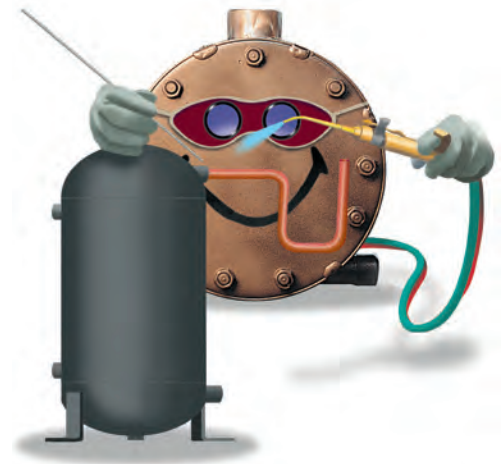
6-5/8" Dia.
6 Studs

ENDPLATE REPLACEMENT

We still offer EndPlates for all Stan-Ref Chiller Barrels and Water Cooled Condensers. Simply provide us with your model and serial number and we will identify for you.

Or you can visit our website and find all of the Line Drawings of the EndPlates for easy identification.

www.sigmaengineeringllc.com



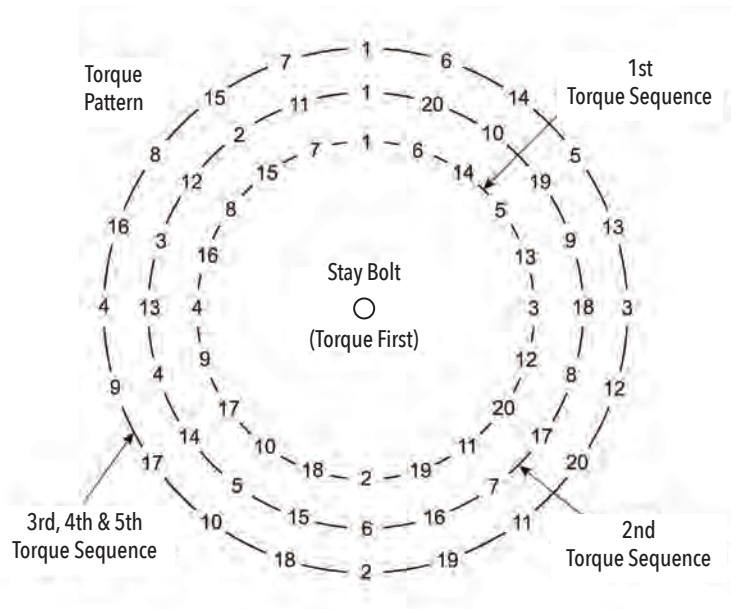
FLARELOK® TORQUE SPECS

PIPE SIZE	APPROX TORQUE
Ø 1/4"	11-13 ft-lbs
Ø 3/8"	24-30 ft-lbs
Ø 1/2"	36-39 ft-lbs
Ø 5/8"	47-55 ft-lbs
Ø 3/4"	66-88 ft-lbs

ROTOLOCK TORQUE SPECS

ROTOLOCK SIZE	TEFLON SEAL	SEATING TORQUE
3/4"-16	TS-24590	10-20 ft-lbs
1"-14	TS-24591	15-25 ft-lbs
1-1/4"-12	TS-24592	20-30 ft-lbs
1-3/4"-12	TS-24593	30-40 ft-lbs
2-1/4"-12	TS-24594	40-55 ft-lbs

CHILLER BARREL TORQUE PROCEDURE



There are numerous bolt patterns used on our evaporators. Illustrated above is the torque sequence of a 20 bolt head. If the unit that you are working on does not match use the written instructions below.

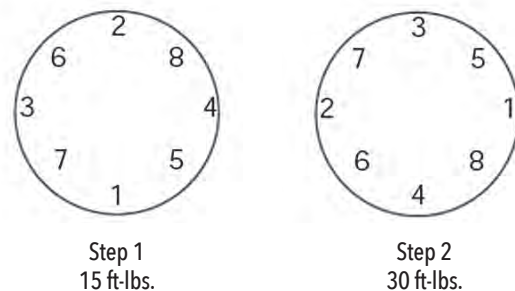
1. Start at a top bolt or 12 o'clock and torque bolt.
2. Move 180 degrees to a bottom bolt or 6 o'clock and torque bolt.
3. Move 90 degrees to a bolt at 9 o'clock and torque bolt.
4. Move 180 degrees to a bolt at 3 o'clock and torque bolt.
5. Go back to the top and move clockwise one bolt and start the sequence over. Continue using the steps outlined above, using the torque steps listed in the chart.

CONDENSER ENDPLATE TORQUE

	TORQUE STEP 1	TORQUE STEP 2	TORQUE STEP 3
SST*, HSE*, CA, and MSE with 1/2"-20 brass nuts (Not HP units)	15	30	NA
HP with 1/2"-20 brass nuts	15	35	NA
HP with 1/2"-20 steel nuts	CONTACT FACTORY		
ELT, TNT, SWT w/1/4"-20 nuts	4	8	NA
ELT, SWT with 5/16"-18 nuts	7	15	NA
KHX with 5/16"-24 nuts & bolts	7	15	NA

*For 150 ton & larger HSEs, 126 ton & larger SSTs and all AMCs use head bolt torque chart.

Sample torque sequence for SST, HSE, CA and MSE.
Use criss-cross pattern for all bolt configurations.



CONDENSER HEAD BOLT TORQUE

BOLT DIAMETER	WRENCH SIZE	TORQUE STEP 1	TORQUE STEP 2	TORQUE STEP 3
3/8"	9/16" HEX	15	30	NA
1/2"	3/4" HEX	30	50	70
5/8"	15/16" HEX	34	70	120
3/4"	1-1/8" HEX	40	90	140

Always tighten bolts in a criss-cross sequence, i.e. start at the top, go to the bottom, then left and right. Go to the top again and move one bolt clockwise and start sequence again.

All Torque values are expressed in foot/pounds.

Tighten the head bolts following the torque pattern sequence shown to the final torque in two steps.



Refrigeration Solutions

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