



Instructions

Universal Scroll Compressors Installation

Replacing Danfoss Scroll Compressors

General
Danfoss Universal Replacement Scrolls have the same capacity, connection locations and foot-prints as Danfoss Scrolls.

Replacement Procedure
1. Be sure the system is properly cleaned before installing the new compressor. Failure to remove moisture, acid and other contaminants from the system will result in repeat compressor failures. As a minimum, replace filter-driers, inspect electrical components for damage and ensure the moisture indicator is reading "dry".
2. Follow all recommendations in Danfoss instruction FRCC.PI.003 for proper removal and installation of the compressor.

3. If the compressor being removed is in a tandem, trio or quarto configuration, the integrity of the existing pipe must be maintained. The piping included tees and restrictors that ensure proper oil return to the compressors. If this piping is damaged, contact the Danfoss factory for replacement parts at 1-888-DANFOSS (1-888-326-3677)
4. If the existing compressor has rotolock connections, the service valves or solder sleeves will have to be removed from the piping before the new compressor can be installed.

Danfoss Scroll Model (from Nameplate)	Universal Replacement Scroll
SM115S3CC	SM115-3QAI
SM115S4CC	SM115-4QAI
SM125S3CC	SM125-3QAI
SM125S4CC	SM125-4QAI
SM175S3CC	SM175-3QAI
SM175S4CC	SM175-4QAI
SM185S3CC	SM185-3QAI
SM185S4CC	SM185-4QAI

Replacing non-Danfoss Scroll Compressors

General
Danfoss Universal Replacement Scrolls have nearly the same capacity as other Commercial Air Conditioning Scrolls in the marketplace. Connection positioning and mounting hole locations will vary by manufacturer. Use the template included with this kit to locate the mounting holes for the Universal Replacement Scroll. Suction and discharge line modifications may also be needed and should be done so as to avoid any significant additional pressure drops across the system.

Replacement procedure for single compressors
1. Be sure the system is properly cleaned before installing the new compressor. Failure to remove moisture, acid and other contaminants from the system will result in repeat compressor failures.

As a minimum, replace filter-driers, inspect electrical components for damage and ensure the moisture indicator is reading "dry".
2. Ensure all electrical components (contactors, fuses, crankcase heaters, etc) are appropriately sized for the new compressor being installed. Motor data for the Universal Replacement Scroll can be found on the compressor Nameplate.
3. Some Commercial Scroll compressors are manufactured with internal motor protection, or with a solid-state module mounted in the compressor's electrical box. The Universal Replacement Scroll is manufactured with an internal thermostat to protect the compressor against excessive temperatures. There is no protection against a high amp draw. An external overload must be used.

4. Follow all recommendations in Danfoss instruction FRCC.PI.003 for proper removal and installation of the compressor.
5. If the existing compressor has rotolock connections, the service valves or solder sleeves will have to be removed from the piping before the new compressor can be installed.

Replacement procedure for multiple compressor circuits
Danfoss Universal Replacement Scrolls can only be used in multiple compressor circuits in certain situations. Contact the Danfoss factory for technical assistance at 1-888-DANFOSS (1-888-326-3677).

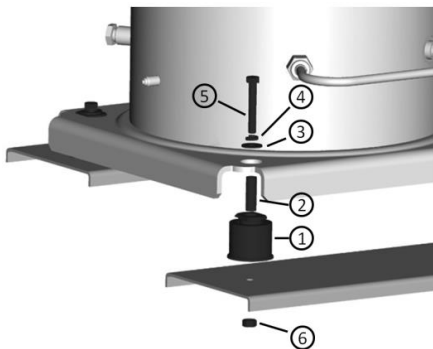
Compressor Installation Instruction

Compressor Mounting

Composition of compressor mounting kits (Supplied with the compressor)

Ref.	Description	Qty.
①	Rubber grommet	4
②	Sleeve for grommet	4
③	Flat washer	4
④	Spring washer	4
⑤	Screw HM8	4
⑥	Nut HM8	4
⑦	Restrictor 1- 3/8"	1
⑧	Restrictor 1- 5/8"	1
⑨	Spacer	1

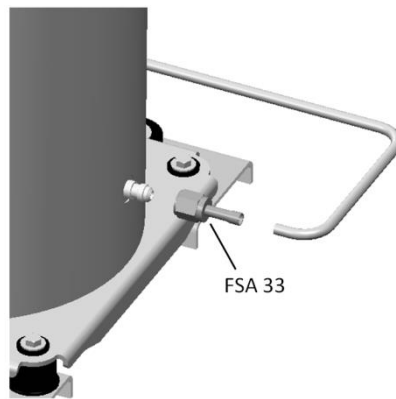
The bolts size for these compressors is HM8. These bolts must be tightened to a torque of 21Nm. The bolts, washers, and nuts are supplied with the compressor mounting kits.



Oil Equalization Connection

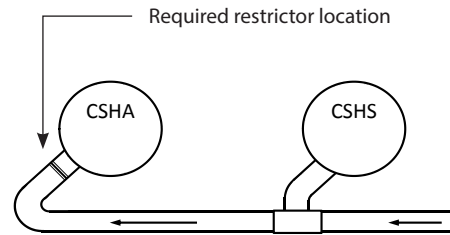
The SM115-125-175-185 are equipped with a 3/8" oil equalization fitting. When two or more compressors are mounted in parallel, the FSA33 flare adapter must be used to connect the oil equalization line to the compressor oil equalization fitting. The bolts size for these compressors is HM8. These bolts must be tightened to a torque of 21Nm. The bolts, washers, and nuts are supplied with the compressor mounting kits.

FSA33: Danfoss code number 023U801466



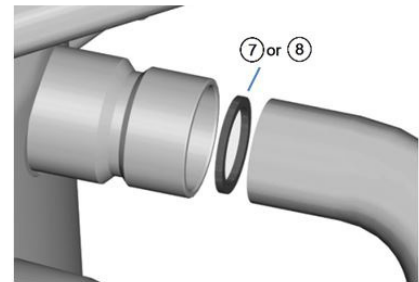
Suction Line Restrictor

In CSHA-CSHS manifolded compressor assemblies only, a restrictor must be placed in the suction fitting of the replacement compressor when the replacement is "downstream" of any CSHS compressor.



The 1-3/8" restrictor is used for SM115-125 units, the 1-5/8" restrictor is used for SM175-185. The restrictors are supplied with the compressors.

The use of a restrictor is not necessary when CSHA is installed in first upstream position or all compressors in the manifold set are CSHA models.



Place restrictor into suction connection, then braze suction line into place