

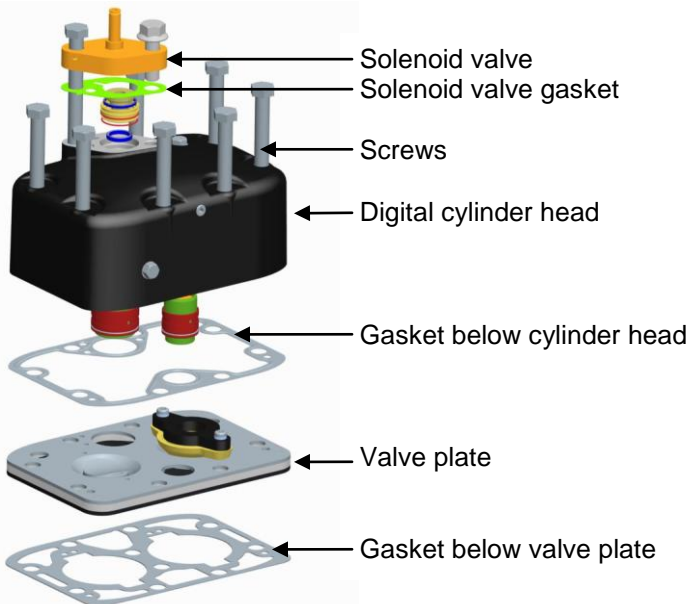
ASSEMBLING A DIGITAL CONVERSION KIT ON A STREAM® COMPRESSOR

1 Introduction

Copeland® Stream® 4M & 6M compressors can be retrofitted for enhanced modulation performance. Once a Copeland Stream 4M or 6M compressor is upgraded with the Digital kit, the compressor can unload up to 33 or 67% on a 6M or 50% on a 4M, allowing the system to match its capacity more precisely to the desired load of the refrigeration system.

2 Conversion kit

The conversion kit is made of the following parts (note that a coil is needed to activate the Digital solenoid valve):



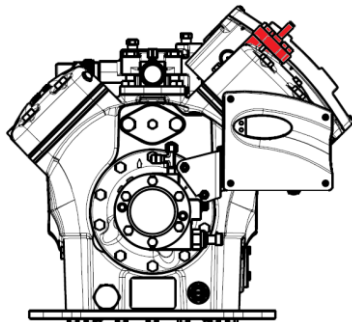
| Compressors | Conversion kit Ident Number |
|--------------------------------|-----------------------------|
| 4MF, 4ML, 4MM, 4MT 6MM, 6MT | 3010691 |
| 4MA, 4MH, 4MI, 4MJ 6MI, 6MJ | 3010704 |
| 4MU 6MU | 3010715 |
| 4MK 6MK | 3010726 |

| Voltage | Coil with cables kit Ident Number |
|---------|-----------------------------------|
| 24 VAC | 3185480 |
| 120 VAC | 3185491 |
| 230 VAC | 3185504 |

3 Digital position

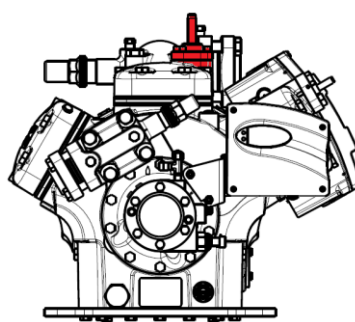
When a Digital conversion kit is installed on a Standard Stream compressor, the position of the Digital head should match the following description:

4M



Digital head on the right cylinder bank

6M



Digital head on the central* cylinder bank

* The position of the Digital head for subsequent installation is different from its position when originally fitted on Digital Stream compressors.

4 Digital kit installation

As you work through the procedures below, make sure that you keep all the parts removed from the compressor or mounted to the compressor, including bolts and studs. Some of the parts will be reused for the upgrade. The existing compressor head, valve plate and corresponding gaskets will not be reused.

4.1 Digital kit installation on a new compressor

1. Depressurize compressor.
2. Note the location of any studs on the head.
3. Remove the cylinder head bolts.
4. Tap the head to break it loose from the valve plate.
5. Remove dowel pins and center bolt. Save dowel pins for Digital head and valve plate installation. The center bolt will NOT be needed for Digital head and valve plate installation.
6. Lightly tap up on the tab or on the side of the valve plate to loosen and remove valve plate. Use caution not to damage the compressor deck surface.
7. Check that the pistons travel up and down freely by pressing down on each of the cylinders.
8. Scrape any gasket material from the compressor deck; take care to keep any debris from entering suction passages of the body or cylinder bores and make sure not to damage the compressor deck.
9. Select the proper valve plate gasket for the bore size of the compressor.
10. Lightly coat both sides of the new valve plate gasket with assembly oil. Position the valve plate gasket with dowel pins and ports. Install valve plate gasket.
11. Inspect new valve plate for handling damage and install.
12. Visually inspect pistons in head for loose debris. **NOTE:** The Digital head has two internal pistons, one protrudes farther out than the other. This is intentional. **CAUTION: DO NOT REMOVE PISTONS FROM INSIDE HEAD!**
13. Install the Digital cylinder head. Take care not to damage the solenoid stem mounted on the compressor head. Install the longer head stud into the solenoid valve flange.
14. Relocate existing stud bolts (if equipped) to their correct location to mount components/head fan.
15. Finger-tighten bolts and torque evenly in crossing pattern to 129-149 Nm.
16. Evacuate compressor.
17. Leak test compressor.
18. Install Digital solenoid coil, solenoid bracket, and conduit on solenoid valve stem.
19. If the compressor is equipped with a head fan, install fan bracket and head fan.

4.2 Digital kit installation on an existing system with a Standard Stream

If the Digital conversion kit has to be mounted on a compressor that is already installed, the procedure will be nearly the same except for the following additional steps:

- First of all, prepare compressor for a head change, per industry standards:
 - front seat suction service valve;
 - pump down compressor;
 - disconnect power to compressor;
 - front seat discharge service valve and oil supply valve (if applicable);
 - depressurize compressor.
- Remove any high-pressure connections from the head and the head fan (if applicable).
- **Follow steps 2 to 7.**
- Inspect the valves and the valve plate for any damage, eg, broken reeds, and check if there is any existing system issue that needs to be addressed.
- **Follow steps 8 to 15.**
- Evacuate compressor and reopen all the necessary valves to compressor per industry standards.
- **Follow procedure 17 to 19.**