



INSTALLATION, OPERATION AND MAINTENANCE INSTRUCTIONS

HELICAL FIN REMOVABLE HEADER TYPE: R, RP, RC, RCP

PLATE FIN REMOVABLE HEADER TYPE: WR & WRC

FOR USE WITH WATER OR GLYCOL



Type R, RC, RP & RCP
(Helical Fins)



Type WR & WRC
(Plate Fins)



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**INSTALLATION, OPERATION AND MAINTENANCE INSTRUCTIONS FOR
HELICAL FIN REMOVABLE HEADER TYPE R, RC, RP, RCP COILS
AND PLATE FIN REMOVABLE HEADER TYPE WR & WRC COILS
FOR USE WITH WATER OR GLYCOL**

Type R, RC, RP, RCP, WR, and WRC coils have removable bolted header boxes to allow access for inspection and cleaning of the inside of tubes. Due to vibrations caused during shipment, it is recommended that the header bolts be re-tightened prior to pressurizing the coil as bolted and gasketed joints may relax during shipping & handling. Tighten header bolts starting at center of the longest span using 20 ft-lb torque in a crossing pattern as shown in figure A below, repeat tightening sequence in 10 ft-lb increments until 50 ft-lb is achieved.

Aerofin removable header water coils may be installed with the casings level or pitched towards the headers. The coils should be firmly and adequately supported with a minimum of three supports; one at the center and one at each end of the coil. If coils are to be stacked vertically, the upper coils must be independently supported so that the weight of the upper coils does not rest on the bottom coil, unless the coils have been purchased and fabricated with additional bracing for stacking. Coils should be securely fastened to or inside the duct or unit. All ducts or unit walls should be adequately insulated and sealed to prevent sweating and minimize heat losses. Flashing should be used to prevent by-pass of air around fin surface.

The most common ways to regulate the cooling load are by the use of a control valve and/or dampers. For better control of the fluid flow, the control valve should be installed in the return piping.

When dehumidification of the air is present drain pans should be provided on the leaving air side of each coil to collect condensate. At 500 FPM, the drain pan should extend a minimum of 8" inch beyond the base of the coil, 12" inch at 525 FPM and 16" inch at 550 FPM. At higher velocities moisture eliminators may be used. When coils are stacked vertically, each coil should have a separate drain pan.

Air filters should be located on the entering air side of the coil to filter out oil, dust, lint and soil which could foul the fin surface of the coil.

A strainer should be provided on the entering water side of the coil for filtering out foreign particles.

Piping should be adequately insulated to prevent sweating and minimize heat losses.

The coils should be vented either through the vent ports provided on each header or through the return piping.

To completely drain the coils, remove the vent and drain plugs from headers, when airflow is horizontal and from the lowest point for vertical airflow. To insure complete drainage, disconnect the lower connection from piping and drain through the connection. When coils using water are not in operation and freezing temperatures are expected, to insure proper protection of the coils, remove water from the coils as described in Aerofin Bulletin CA-194 entitled "Protection of Water Coils to Prevent Freezing Damage", and leave drains open or add anti-freeze similar to Prestone™ (Ethylene Glycol) as mentioned in this bulletin.

Maintenance Instructions

External Cleaning of Coils:

Fins should be either steam cleaned or sprayed with non-corrosive solvents or cleaners such as Simple Green™ to remove oil, lint, dust, and soil. Direct high-pressure blast on fin surface should be avoided.

Internal Cleaning of Coils:

The header boxes are held in place by ½”-13 bolts. Loosen all bolts and remove all bolts except the four corner bolts of the header box. Before removal of the remaining bolts mark the location of the header box for proper re-assembly later. Secure the header box to a hoist or jack stand to support the header box weight before removing the final four bolts and remove the header box. Header box may need to be separated from the tube plate using a right angle or gooseneck pry bar. Use care not to gouge or scratch the gasket surface of the tube plate or header box when using the pry bar.

The tubes may be internally cleaned by using a ½” inch diameter nylon brush attached to a flexible shaft or bar. If using electric or pneumatic powered drill to rotate the brush, rotate the brush at a low speed. Do not force an oversize brush inside the tubes and rotate the brush at a stationary position as this may reduce the tube wall thickness. Dress down the brush if necessary to give a snug fit inside the tube. Flush the inside of the tubes with clean water after brushing.

Before re-assembly of the header box, clean any remaining gasket material from the tube plate and the header box.

Inspect the header box and tube plate for signs of corrosion. If the tube plate or the header box has corrosion that has significantly reduced the wall thickness or the header box the coil may need to be replaced.

Replacement baffle/partition and perimeter gaskets may be purchased from Aerofin Corporation. The gaskets may be attached to the header box using gasket dressing for ease of assembly. Re-assemble the header box to the tube plate using all bolts and tighten bolts in sequence using calibrated torque wrench starting at 20 ft-lb and repeat in 10 ft-lb increments until 50 ft-lb torque is achieved on all bolts.

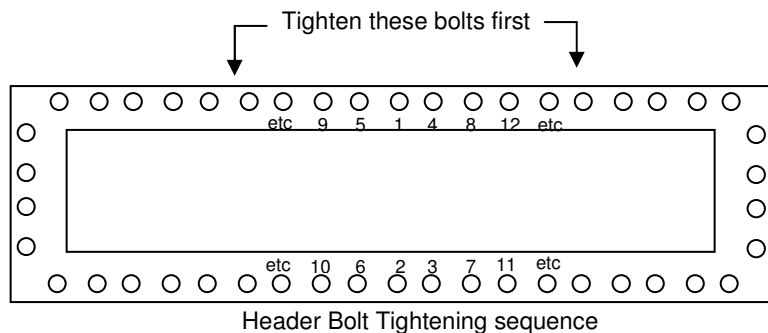


Figure A

Spare Parts

Replacement header gaskets may be purchased from Aerofin. Please provide the coil Type (R, RP, WR or RC, RCP, WRC), coil tube face, coil row and circuit for each size of removable header coil along with quantity. Additional useful information would be the previous Aerofin sales order number for the coils. There are two types of gaskets, the perimeter pressure seal gasket and the internal baffle compartment seal gasket.

Type R, RP, and WR coils have removable headers on each end of these coils. Two sets of header gaskets are required per coil for these coils. Type RC, RCP, and WRC coils have removable headers on the connection end only and require only one perimeter gasket per coil along with internal baffle compartment gasket.

You may also purchase replacement coils from Aerofin.

Please contact us at the home office at (434) 845-7081 or visit our website at <http://www.aerofin.com> for the location of the nearest Aerofin regional sales office.