



**Ingersoll-Rand**

# CLOSED LOOP DRY FLUID COOLERS

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## I-R CLOSED LOOP - DRY FLUID COOLERS

### GENERAL INFORMATION

#### GENERAL DESCRIPTION

Ingersoll-Rand Dry Fluid Coolers are self-contained fluid cooling systems designed especially for use with water-cooled compressors. In addition, the design is ideally suited for other water-cooled industrial equipment and processes.

The **I-R FLUID COOLER** is a closed cooling system capable of removing the heat rejected by small, medium, and large air compressors, typically from 50,000 BTU/HR to 1,000,000 BTU/HR and beyond.

#### Operation

The I-R Fluid Cooler operates by extracting heat from the closed cooling circuit. The coolant passes through the intercooler, aftercoolers, oil coolers, and

cylinder jackets of the compressor, picking up the heat generated by the compressor.

The coolant then flows through a pump, which directs it to the coil module. In the coil, the heat is given up to atmosphere. This is accomplished by blowing ambient air over the coil while the coolant flows through the aluminum finned copper tubes. The coolant is then re-circulated to the compressor.

#### I-R Dry Cooler Payback

The true value of an I-R System to the customer is dependent upon the cost comparison between his present operating costs for equipment cooling versus the operating costs for cooling with an I-R Dry Cooler System.

The important factors to the customer are the return on his investment in an I-R System and the payback period required. These factors are directly dependent on the customer's water and sewer costs, equipment duty cycle, water usage rate, and I-R System equipment cost. All of these factors are variable and unique to each user's application.

Environmental concerns are also important factors when selecting a cooling system. Many cities and states have regulations limiting the amount of heat, water, and chemicals, which can be discharged into the sewers and rivers. The I-R System can eliminate all water consumption and waste, thereby eliminating expensive disposal costs and possibly fines.