



The FM Global Research Campus

HYDRAULICS LABORATORY







Hydraulics Laboratory

- > A 22,300-ft.² (2,070-m²) laboratory test area
- > Seven vertical turbine pumps capable of producing a combined flow of 10,000 gal. (38,000 L) per minute at 125 psi (8.6 bar), or 3,500 gal. (13,200 L) per minute at 250 psi (17.2 bar)
- > High-pressure flow capability of 750 gal. (2,840 L) per minute at 500 psi (34.5 bar)
- > 100,000-gal. (380,000-L) water supply

Fire is the leading cause of property loss worldwide, yet it's been proven that devastating fire loss is, indeed, preventable with the proper sprinkler protection. By establishing performance criteria and through rigorous testing, engineers and researchers at the Hydraulics Laboratory play a major role in FM Approvals' certification of devices used for cost-effective fire protection.

Projects undertaken at the Hydraulics Laboratory, whether conducted for a client or for a sprinkler manufacturer seeking certification from FM Approvals, are driven by the needs of industry and by our clients' desire for fire protection that is effective, affordable and flexible. Sprinkler performance capabilities are scientifically understood and empirically tested so that, in the final analysis, there is no question about a system's effectiveness.

The laboratory houses both wet- and dry-lab test areas where engineers and technicians perform various hydraulic, mechanical and environmental tests on fire protection system components and related devices, such as sprinklers, couplings and valves. Tests such as these, often conducted under conditions that replicate our clients' fire protection systems, ensure the devices will work as intended when properly installed and maintained; and the cost of testing and development is kept to a minimum in an effort to make reliable products available at an affordable price.

At left: The main floor of the wet lab of the Hydraulics Laboratory, the central artery for testing the operational features of fire systems. Above: 1. Hundreds of automatic sprinkler models, such as this one, have been tested and FM Approved. 2. A distribution test measures sprinkler water density. 3. A multiple-sprinkler test underway.



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