



# Power generation



## Challenge

Protecting substations, electrical switch rooms, control rooms, data communications and other critical areas.

## Solution

SAPPHIRE® 25 bar systems.

## Application

Protecting critical operational infrastructure in cramped conditions.

## Vital fire protection for critical power generation infrastructure

Power stations and power generation facilities incorporate a wide range of critical and ancillary services and buildings to ensure continued operations and plant uptime. Away from the primary power circuit, boiler and turbine system, vital facilities such as substations, cable voids, control rooms, data communications and backup systems must be effectively protected against fire risk. Selecting the right solution to protect this critical plant infrastructure is key.

The SAPPHIRE system is an environmentally-friendly clean agent system, with zero Ozone Depletion (ODP) and negligible Global Warming Potential (GWP). It uses 3M™ Novec™ 1230 Fire Protection Fluid, a clear, odourless fluid that vaporises upon discharge and absorbs heat to suppress the fire rapidly. This results in less damage to critical equipment, facilitating a much shorter recovery time and reduced downtime. Safe for use in occupied areas, the SAPPHIRE system protects occupants and critical infrastructure, while delivering effective asset protection for power generation facilities.

The GEM® SAPPHIRE system is most effective when used with the automatic AUTOPULSE detection and control system to introduce the clean agent rapidly. This detection system is used to actuate a single, fixed fire suppression or alarm system based on inputs received from fire detection devices. The detection circuits can be configured using cross, counting, independent or priority-zone concepts.

Both automatic and manual actuators are available for release of the agent into the hazard area through fixed piping and nozzles. Six nozzle sizes are available to provide the correct flow of agent in either 180 or 360 degree horizontal discharge patterns. For large hazards, cylinders can be connected to a common manifold.

The GEM SAPPHIRE system carries UL listing, FM and Marine approvals. The system can be designed to meet the requirements of EN 15004, ISO 14520 and NFPA 2001, with components approved to provide the highest quality fire suppression system.