



FIRE SHELTER

1 Application

In the event of a fire, emergency “shut down” (ESD) valves and their actuators must be protected against heat exposure in chemical and petrochemical plants. In an emergency, the actuators must remain operable for a minimum of 15 minutes after the outbreak of a fire. More stringent requirements such as 30, 60 min., or higher are also possible.

For these applications INTERTEC has developed a patented protective shelter system fully tested by a certified 3rd party agency to meet UL 1709.

2 Features

- Corrosion resistant using GRP (glass reinforced synthetic materials) externally and internally
- Custom designed and sized to fit each individual valve and actuator application
- Split base plate to fit around valve shaft
- Factory designed and supplied support frame
- Complete shelter removal allows full access to repair or replace actuator
- Optional access doors for service and maintenance
- Standard details for tubing and electrical penetrations
- Fabricated to meet the fire protection standards and time/temperature curve requirements of UL1709
- Tested and certified by MPA-Dresden

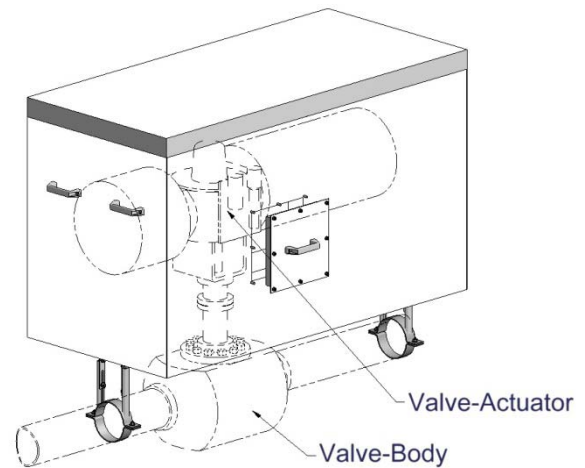
3 Description

The shelters are made of a special GRP/mineral wool/GRP sandwich design that are suited for harsh outdoor applications. They offer superior resistance against corrosion and protect the valve actuators from overheating in fires, as well as the ability to offer frost or freeze protection in cold climates.

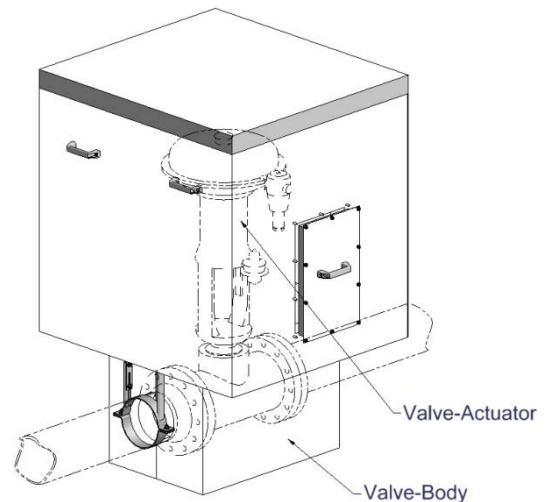
The shelters are individually designed and sized for each application to ensure a proper fit around the actuator. Therefore all the associated controls and instruments can also be protected inside the cover.



Fire Shelter for Valve- Actuator



Fire Shelter for Valve- Actuator and Valve-Body

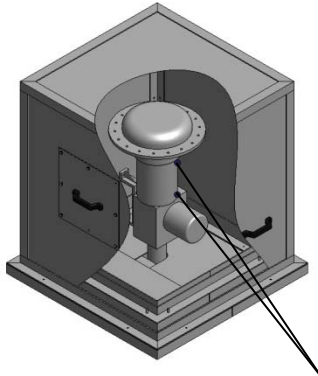


Fire Shelter for Valve-Actuator and Valve-Body

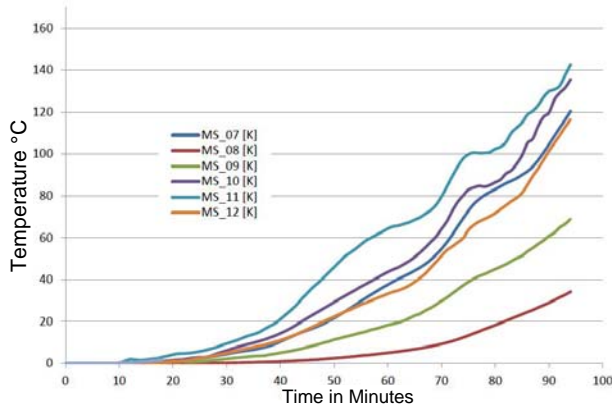


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4 UL1709 Test Data/Results



Surface temperature- measuring point (MS_7/MS_8) on the test sample



MS_07- MS_12: Surface temperature measured on the inside top surface

The chart shows that the maximum allowable temperature of 60°C on the test sample surface was not reached until well after 30 minutes.

The test chamber temperature was at 1200°C (as per UL 1709)



Valve Fire Shelter in test chamber at 1200°C/ 2000°F



Valve Fire Shelter after test >60 min. at 1200°C /2000°F



Valve Fire Shelter before start of test



Valve Fire Shelter Internally after >60min. at 1200°C/2000°F