



**Maintaining the integrity of pipelines, including flanges and valves in an Oil&Gas production facility is essential in a potential fire. Durable passive fire protection of valves and flanges is therefore critical to maintain the desired level of safety in plants containing highly flammable and explosive hydrocarbons under pressure.**

Benarx Epoxy Box is a robust high-performance product designed to maintain the fire integrity of the piping system. It is thoroughly tested and have a proven track record in the toughest conditions from the harsh arctic to the warm tropic climate. The Benarx F Epoxy box can be custom made to fit any geometry around the valves, actuators or flanges. The prefabricated design with superior mechanical properties saves valuable installation time. The Benarx Epoxy Box can also be lined with thermal and/or acoustic insulation material for combination classes.

### **Benarx Epoxy Box**

Jet fire tested and certified for up to 170 minutes

Hydrocarbon fire tested and certified for up to 240 Minutes

Prefabricated design eliminates wet pfp application on site and reduces HSE risk

High performance product thoroughly tested for explosion loads, ageing, acoustic reduction and static electricity

Low Life Cycle Cost, long life time, fast installation and easy removal for inspection

Proven track record in the toughest conditions from the cold harsh arctic to the warm tropic climate

## Product overview

### Fire protection

Benarx Epoxy Box is a prefabricated fire insulation product with additional thermal and acoustic properties. In a potential fire, the product forms an insulating char when exposed to the heat. This mechanism in combination with the Benarx design, protects the equipment from high temperatures, explosions and both hydrocarbon- and jet fires. The construction is specifically designed to achieve exceptional fire, thermal and acoustic properties.

### Design

The product consists of a perforated stainless steel core covered with intumescent epoxy, waterproofing substance and protective paint. Benarx Epoxy Box has a proven track record of its solid construction through several projects worldwide. The box withstands heavy mechanical impact and maintains the mechanical integrity of the system through its life cycle. The modular solution with quick release locks allows for easy removal and reassembly for inspection and maintenance

### Increases on-site efficiency

The box design consists of modules, assembled with eccentric locks, which makes the box very installation friendly. The design allows for a fast and easy installation, and disassembly where inspection and maintenance are required. The Benarx Epoxy Box can also be fitted inspection ports for convenient access to maintenance points



## Benarx product performance and properties

Property	Method	Value
Maintain stability and integrity of equipment in a jet fire caused by high pressure natural gas	ISO 22899-1 increased - 350 kW/m <sup>2</sup>	68 minutes
	ISO 22899-1 - 250 kW/m <sup>2</sup>	170 minutes
Safeguard stability and integrity of equipment at hydrocarbon fire	IMO Resolution. A 754 (18)	102 minutes
	BS 476:20:1987	240 minutes
Ability to withstand heavy explosion loads	Gas explosion test	1,2 bar
Age simulation performance test	ISO 20340	4200 hours exposure
Approved for use in all hazardous gas groups	EN 13463-1 Annex C	No electrical discharge
Sound reduction	ISO 15665	Class A (10dB)
		Class B (20dB)