

## INDUSTRY

### VALVES

Pyroalliance designs and produce a variety of Emergency Safety Devices. They are designed as the last resort when unexpected events happen and human intervention/access is limited.

The pyrotechnic based product, by nature, offers a very high level of reliability and unmatched performances in a small footprint. They can remain in "stand by" mode for years before solicitation and react as good as the day it was installed.

The present set of valves, completely hermetic before operation, allows opening or closing a fluid or gas flow in a pipe.

The valve is reusable after replacement of consumable parts (frangible tubing, cartridge, piston...)

All our products are designed and manufactured under Pyroalliance design authority.  
For ATEX use, please contact Pyroalliance for specific references.

## VALVES PRODUCT LINE

### Operation mode

Pyrotechnical valves are designed to open or close fluids circuits at very high speeds.

After receiving a low voltage electrical order, the pyrotechnic compound will generate a gas pressure inducing the translation of an inner piston that will break and displace a mechanical piece to another position. This allows the flow path opening (normally closed valve) or closing (normally open valve). This is a very robust design with only a few components allowing extreme reliability.

All characteristics such as response time, intensity, firing, operating temperature, material types can be customized (NRE may apply).

### Benefits

- Hermetically closed before operation.
- Actuation time below 5 ms.
- Low activation current.
- No external effects.
- Can operate on battery (even remotely).
- Reusable with its reconditioning kit.
- Does not require any maintenance during operational life time.

### Applications

- Oil and Gas infrastructures.
- Emergency fire protection systems.
- Nuclear reactor cooling systems opening.
- Chemical chambers depressurization.

[For more information please contact us.](#)  
[Visit our website: www.pyroalliance.com](http://www.pyroalliance.com)



Fire suppression setup – Source Pyroalliance

### Technical specifications

Inner pipe diameter:	50, 100 or 150 mm
Authorized fluids:	Liquid or gas (No liquid downstream!!)
Service pressure:	40 bars upstream 10 bars downstream (gas)
Operating time:	≤ 5 ms
Reliability:	Very high
Redundancy:	One to two cartridges with independent circuits.
Weight:	From 3.5 to 85kg (Depends on the size and materials: stainless steel, cast-iron, aluminium, etc.)

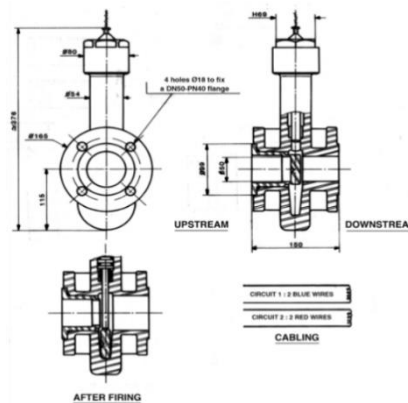
*As a reminder, these standard products were not designed to be compliant with the requirements of the directive 94/9/CE ATEX. They must NOT be used in explosive atmosphere. ATEX compliant products exist at Pyroalliance, please contact us in case of need*

# VALVES PRODUCT LINE

Electrical specification		Qualification / Environmental conditions	
Firing energy	1,5 mJ to 2mJ / $\Omega$	Operating temperature:	-40°C / +60°C
Normal firing current	$\geq 1A$ / 10ms	Storage temperature	+10°C to +30°C
Ohmic resistance	$2\pm 0,4 \Omega$	Storage life time (pyrotechnics)	5 years
Test & measuring current	$\leq 0,010A$	Operation life time (pyrotechnics)	3 years

Available references	Spare parts	
	Cartridges	Refurbishment kits content : piston, canon, breakable tube
MV2050AA0100* (Valve $\varnothing$ 50mm) MV2850AA0100* (Valve $\varnothing$ 50mm)	MV2050AA00300* GC2350AA00100* MV2850AA00200*	MV2050AA0600*
MV1499AA00100 (Valve $\varnothing$ 100mm)	MV1499AA00200*	MV1499AA00500*
MV3154AA00100* (Valve $\varnothing$ 150mm)	GC1500AA00200*	GC1500AA00600*

\*Latest reference index



## Classification Product

- NATO Description: Cartridges, Power Device
- Number UN: 0323
- Storage class: 1.4S

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## HEALTH, SAFETY, ENVIRONMENT CERTIFICATIONS

ENVIRONMENT AND PYROTECHNIC  
SAFETY CERTIFYING BODIES



**BUREAU  
VERITAS**  
NF EN ISO 14001

## CERTIFICATIONS QUALITÉ



Site de la Touche Tizon

[www.pyroalliance.com](http://www.pyroalliance.com)



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