



# SMT WELDTEC



Simple or multi-purpose safety devices:

- Non-return valve
- Flame arrestor
- Temperature sensitive cut off valve
- Fast-action shut-off device

## **SUMMARY:**

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These products are tested on a regular basis  
(acetylene explosion test) by an independent body (BAM).  
Product in compliance with the PED 97/23/EC directive.



**SMT**  
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## FLAME ARRESTOR WITH FAST ACTION SHUT-OFF DEVICE 10HD-N



**10**  
**HD-N**

The 10HD-N is a multi-purpose safety device for high-pressure acetylene pipes.

It is equipped with:

- A fast-action automatic shut-off device, which cuts off the gas supply under the effect of an explosion due to the decomposition of the acetylene or a flash back.
- A flame arrester, which prevents a flame from propagating in either direction.

Applications:

-This safety device is designed for use in high-pressure acetylene pipes or frames.

-The 10HD-N is used in plants that manufacture acetylene as follows:

Between the compressor and the filler manifold, in places where there is a risk of explosion, according to TRAC (Acetylene – Calcium Carbide Technical Rules) 207 no. 5.1 (German Law)

Before the filling station distribution unit and each filler clamp according to TRAC (Acetylene – Calcium Carbide Technical Rules) 209 no. 4.2 and 4.3 (German Law).

### STANDARD SPECIFICATIONS:

Gas used	acetylene C <sub>2</sub> H <sub>2</sub>
Maximum operating pressure	25 bar
Inlet connection	M 24 x 1.5 male or G3/4 male
Outlet connection	M 24 x 1.5 male or G3/4 male
Body material	brass
Total length	240, 348, 370, 450 mm
Weight	2.65 kg
Body diameter (maximum)	42 mm
BAM certification no.	BAM 0492

**This product is tested on a regular basis (acetylene explosion test) by an independent body (BAM). Product in compliance with the PED 97/23/EC directive.**

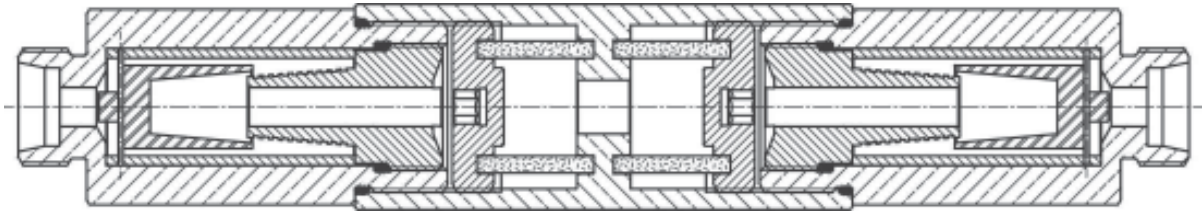
## PRESSURE LOSSES

Flow rate Kv = 0.31

## OPTIONS

- A repair kit (ref. 2200 0599 0001) is available from SMT. Only original SMT parts are to be used for refurbishment.
- The inlet and outlet connections can be modified using adapters.
- Available in several lengths:

Description	Length	Connections (inlet/outlet)
Flash back arrestor 10HD-N	240 mm	V 24 x 1.5 male
Flash back arrestor 10HD-N	348 mm	V 24 x 1.5 male
Flash back arrestor 10HD-N	370 mm	G 3/4 male according to ISO 228
Flash back arrestor 10HD-N	450 mm	G 3/4 male according to ISO 228



## ORDER INFORMATION

- Inlet and outlet connections
- Flash back arrestor length



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## TEMPERATURE SENSITIVE CUT-OFF VALVE DF50



DF  
**50**

### TEMPERATURE SENSITIVE CUT-OFF VALVE FOR HIGH PRESSURE ACETYLENE PIPES

The DF50 is a safety device equipped with only a fuse.

This device automatically shuts off the acetylene supply in the event of a flash back when a preset temperature was reached.

#### Applications:

- This safety device is designed to be used in high pressure acetylene pipes or frames.
- Located on high-pressure acetylene pipes, for example, before the pressure regulator in accordance with ISO 14114.

### STANDARD SPECIFICATIONS

Gas used	acetylene C <sub>2</sub> H <sub>2</sub>
Maximum operating pressure	25 bar
Inlet connection	G2 male according to ISO 228
Outlet connection	G2 male according to ISO 228
Body material	dichromate steel
Total length	136 mm
Weight	1.9 kg
Body diameter (maximum)	61 mm
BAM certification no.	BAM 0592

**This product is tested on a regular basis (acetylene explosion test) by an independent body (BAM). Product in compliance with the PED 97/23/EC directive.**

### OPTIONS

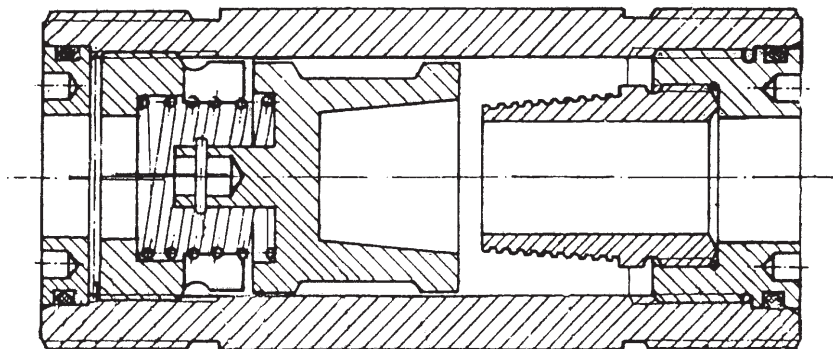
- A repair kit (ref. 2300 0099 0001) is available from SMT. Only original SMT parts are to be used for refurbishment.
- The inlet and outlet connections can be modified using adapters.

### ORDER INFORMATION

- Inlet and outlet connections.

### PRESSURE LOSSES

- Flow rate:  $K_v = 4.48$





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## NON RETURN VALVE, FLASH BACK ARRESTOR WITH FAST-ACTION SHUT OFF DEVICE DF3L

The DF3L is a multi-purpose safety device for high-pressure acetylene pipes.

It is equipped with:

- A fast-action automatic shut-off device, which cuts off the gas supply under the effect of an explosion due to decomposition of the acetylene or a flash back.
- A non-return valve, which prevents gas from flowing in the opposite direction to the normal flow.
- A flame arrestor, which prevents a flame from propagating in either direction.

DF  
**3L**



### Applications:

- Filling of acetylene cylinder according to TRAC (Acetylene – Calcium Carbide Technical Rules) 209 No. 4.2 and 4.3. point 3 (German law).

Located on the removable pipe, between the distribution pipe and the container to be filled, it can be installed horizontally, vertically or at an angle.

- Drawing from the high pressure side of acetylene units as defined in ISO 14114

- For its non-return function, the DF3L device is located immediately downstream of the cylinder or cylinder frame.

- For its fast-action automatic shut-off function, the DF3L is located upstream of the pressure regulator of the cylinder or central unit.

### STANDARD SPECIFICATIONS

Gas used	acetylene C <sub>2</sub> H <sub>2</sub>
Maximum operating pressure	25 bar
Inlet connection	G3/8 female according to ISO 228
Outlet connection	G1/2 male according to ISO 228
Body material	brass
Total length	85 mm
Weight	0.33 kg
Hex. flat	30 mm
Inside diameter of pipe during drawing	maximum ø10 mm

This product is tested on a regular basis (acetylene explosion test) by an independent body (BAM). Product in compliance with the PED 97/23/EC directive.

## PRESSURE LOSSES

Supply pressure (bars gauge)	5	10	15	20	25
Q (Nm <sup>3</sup> /h N <sub>2</sub> )	Outlet pressure (bars gauge)				
1	4,68	9,76	14,76	19,80	24,80
3	4,24	9,51	14,58	19,70	24,60
5	3,24	9,00	14,26	19,40	24,40
10		7,02	13,00	18,50	23,70
15		3,00	11,34	17,20	22,80

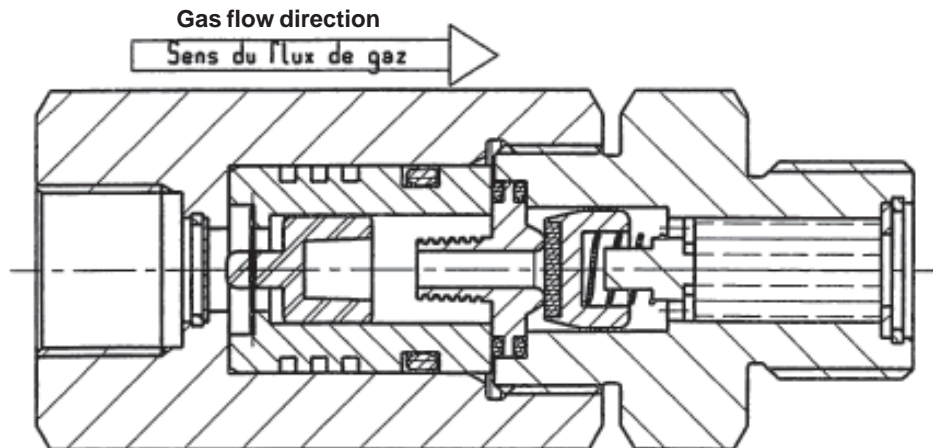
Q(Nm<sup>3</sup>/h acetylen)=1,03 Q (Nm<sup>3</sup>/h N<sub>2</sub>)

## OPTIONS

- A repair kit (ref. 2300 0299 0001) is available from SMT. Only original SMT parts are to be used for refurbishment.
- The inlet and outlet connections can be modified using adapters.

## ORDER INFORMATION

- Inlet and outlet connections







**SMT**  
**WELDTEC**

## FLASH BACK ARRESTOR WITH TEMPERATURE SENSITIVE CUT OFF VALVE 50MD



50  
MD

The 50MD is a multi-purpose safety device for medium pressure acetylene pipes. It is equipped with:

- A temperature sensitive cut off valve, which automatically shuts off the acetylene supply in the event of a flash back whenever a preset temperature is reached.
- A flame arrestor, which prevents a flame from propagating in either direction.

Applications:

- This safety device is designed for use in medium pressure acetylene pipes.
- Located on the pipe downstream of the pressure regulator in accordance with ISO 14114, it can be used in the acetylene filling plants on medium pressure pipes.

### STANDARD SPECIFICATIONS

Gas used	acetylene C <sub>2</sub> H <sub>2</sub>
Maximum operating pressure	1.5 bar
Inlet connection	G2 male in accordance with ISO 228
Outlet connection	G2 male in accordance with ISO 228
Body material	dichromate steel
Total length	325 mm
Weight	6.5 kg
Body diameter (maximum)	90 mm
BAM certification no.	BAM 0792

**This product is tested on a regular basis (acetylene explosion test) by an independent body (BAM). Product in compliance with the PED 97/23/EC directive.**

### **PRESSURE LOSSES**

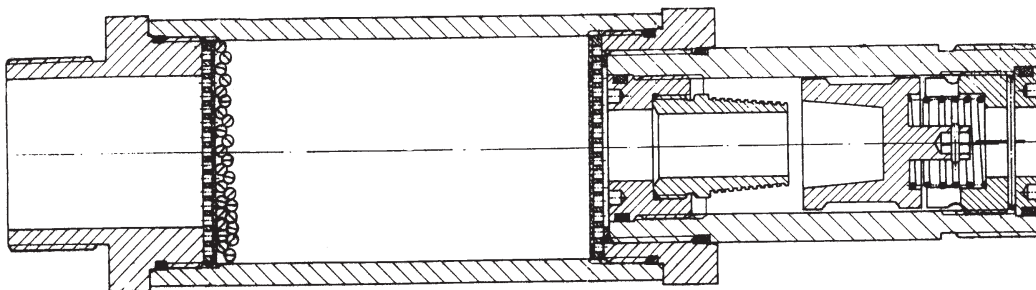
- Flow rate: Kv = 1.64

### **OPTIONS**

- A repair kit (ref. 2200 0100 0001) is available from SMT. Only original SMT parts are to be used for refurbishment.
- The inlet and outlet connections can be modified using adapters.

### **ORDER INFORMATION**

- Inlet and outlet connections.





**SMT**  
**WELDTEC**

## FLASH BACK ARRESTOR WITH TEMPERATURE SENSITIVE CUT OFF VALVE 50MD-DF50



50  
**MD-DF50**

The 50MD–DF50 is a multi-purpose safety device for medium pressure acetylene pipes. It is equipped with:

- A temperature sensitive cut off valve, which automatically shut off the propagation of acetylene in either direction in the event of a flash back whenever a preset temperature is reached.

- A flame arrestor, which prevents a flame from propagating in either direction.

Applications:

- This safety device is designed for use in medium pressure acetylene pipes and is located on the pipe downstream of the pressure regulator.

- It can be used in the acetylene filling plants on medium pressure pipes.

### STANDARD SPECIFICATIONS

Gas used	acetylene C <sub>2</sub> H <sub>2</sub>
Maximum operating pressure	1.5 bar
Inlet connection	G2 male in accordance with ISO 228
Outlet connection	G2 male in accordance with ISO 228
Body material	dichromate steel
Total length	440 mm (with welding pipe inserts and rotating nuts)
Weight	8.5 kg (with welding pipe inserts and rotating nuts)
Body diameter (maximum)	90 mm
BAM certification no.	BAM 0792 and BAM 0592

Note: The ARPF is supplied in standard version with 2 welding pipe inserts (inside diameter = 25 mm, thickness = 4.5 mm) and 2 rotating nuts.

**This product is tested on a regular basis (acetylene explosion test) by an independent body (BAM). Product in compliance with the PED 97/23/EC directive.**

### **PRESSURE LOSSES**

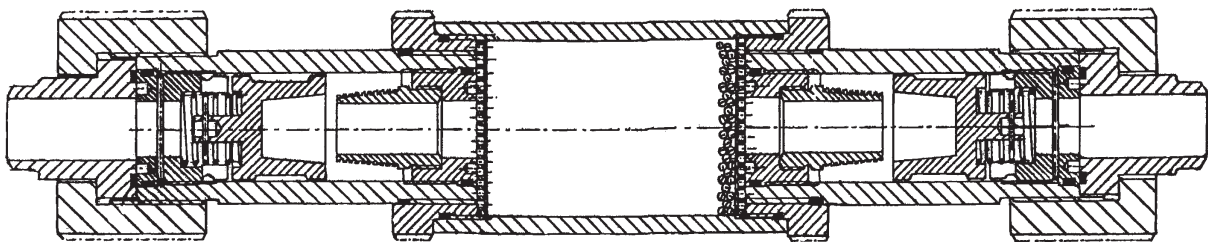
- Flow rate: Kv = 1.32

### **OPTIONS**

- Two repair kits (ref. 2300 0099 0001 and 2200 0100 0001) are available from SMT. Only original SMT parts are to be used for refurbishment.
- The inlet and outlet connections can be modified using adapters.

### **ORDER INFORMATION**

- Inlet and outlet connections.





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## FAST-ACTION SHUT OFF DEVICE DF10



DFE  
**10**

The DF10 is a FAST-ACTION SHUT OFF DEVICE FOR HIGH-PRESSURE ACETYLENE PIPES

This device automatically cuts off the acetylene supply in the event of acetylene decomposition.

Applications:

-This safety device is designed for use in high-pressure acetylene pipes and frames and is located on the high-pressure acetylene pipe downstream of the pressure regulator in accordance with ISO 14114.

### STANDARD SPECIFICATIONS

Gas used	acetylene C <sub>2</sub> H <sub>2</sub>
Maximum operating pressure	25 bar
Inlet connection	G3/4 male in accordance with ISO 228
Outlet connection	G3/4 male in accordance with ISO 228
Body material	brass
Total length	110 mm
Weight	0.7 kg
Body diameter (maximum)	36 mm on flats
BAM certification no.	BAM 0392

**This product is tested on a regular basis (acetylene explosion test) by an independent body(BAM). Product in compliance with the PED 97/23/EC directive.**

### PRESSURE LOSSES

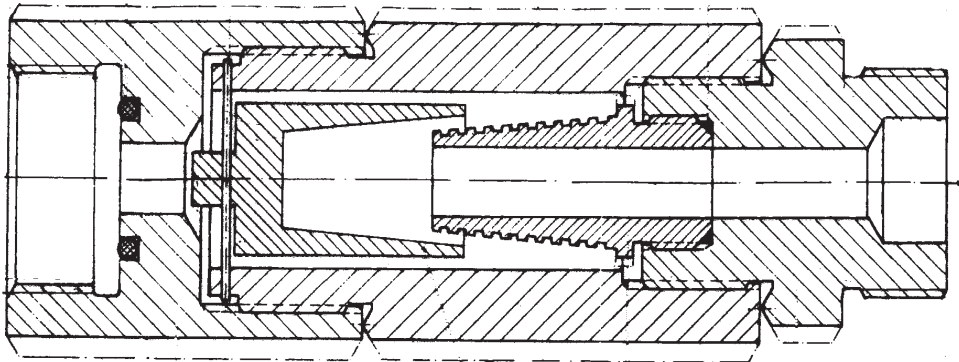
- Flow rate:  $K_v = 0.74$

### OPTIONS

- A repair kit (ref. 2300 0100 0001) is available from SMT. Only original SMT parts are to be used for refurbishment.
- The inlet and outlet connections can be modified using adapters.

### ORDER INFORMATION

Inlet and outlet connections.





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## FLASH BACK ARRESTOR WITH TEMPERATURE SENSITIVE CUT OFF VALVE 50HD



50  
HD

The 50HD is a multi-purpose safety device for high-pressure acetylene pipes. It is equipped with:

- A temperature sensitive cut off valve, which automatically shuts off the acetylene supply in both directions in the event of a flash back whenever a preset temperature is reached and in the event of acetylene decomposition.
- A flame arrestor, which prevents a flame from propagating in either direction.

Applications:

- This safety device is designed for use in high-pressure acetylene pipes or frames and is located on the high-pressure acetylene pipe, downstream of the pressure regulator in accordance with ISO 14114
- This device is used in plants that manufacture acetylene between the compressor and the dryer.

### STANDARD SPECIFICATIONS

Gas used	acetylene C <sub>2</sub> H <sub>2</sub>
Maximum operating pressure	25 bar
Inlet connection	G2 male in accordance with ISO 228
Outlet connection	G2 male in accordance with ISO 228
Body material	dichromate steel
Total length	398 mm
Weight	7.4 kg
Body diameter (maximum)	77 mm
BAM certification no.	BAM 0692

This product is tested on a regular basis (acetylene explosion test) by an independent body (BAM). Product in compliance with the PED 97/23/EC directive.

### PRESSURE LOSSES

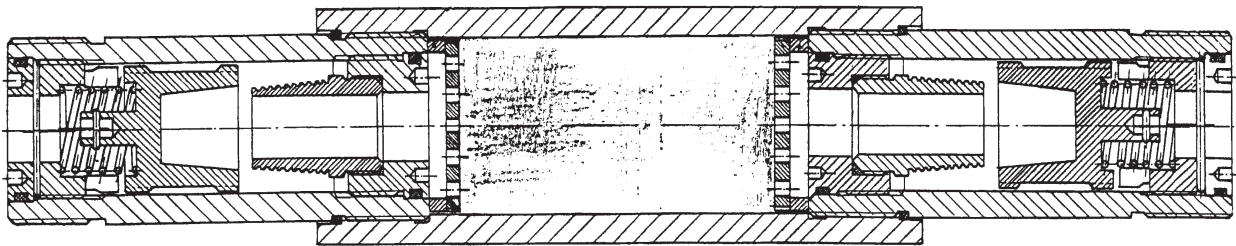
- Flow rate:  $K_v = 1$

### OPTIONS

- A repair kit (ref. 2200 0299 0001) is available from SMT. Only original SMT parts are to be used for refurbishment.
- The inlet and outlet connections can be modified using adapters.

### ORDER INFORMATION

Inlet and outlet connections.







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