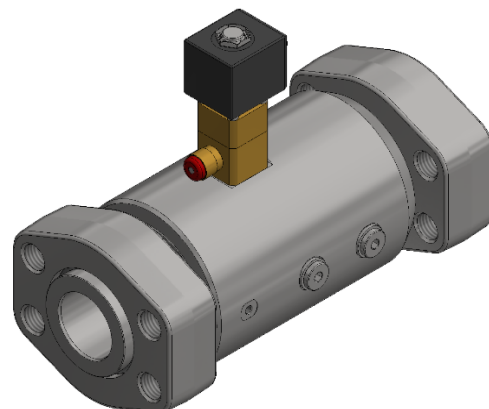


**ZSV-50 Sol-man 24VDC*****Item numbers covered by this datasheet***

325150	ZSV-50 Sol-man 24VDC
325171	ZSV-50 Sol-man 24VDC Kit

***Related components***

325230	ZSV-50 Orifice assembly
325230-8	ZSV-50 Orifice assembly Calibrated
321010	ZSV Switch Kit Coil & Position

***General***

The ZSV-50 valve is a selector valve for use in INERGEN suppression systems. It can be activated electrically and/or manually. The valve is an axial valve with a sliding ring that is opened by the pilot pressure supplied through the electrical/manual operator. The valve will not open until the discharge valve of the system is activated and the pipe system starts being pressurised. When the valve is opened, it will remain fully open as long as it is pressurised and closes automatically when the pressure drops below approx. 1-3bar.

To increase safety a monitoring pressure of 1 to 20bar can be applied to the pipe section leading to the selector valves to verify the integrity of the closed pipe system and all connected valves.

The valve features also one port for pressure monitoring of the downstream pipe pressure (high when the valve is opened) and one port for pilot opening pressure (if more valves lead to the same zone the valve can be activated by a pilot pressure).

***Specifications***

Temperature	-20°C to 50°C
Materials	Plated steel, brass
Weight	17.4 kg
<b><u>Electrical</u></b>	
Voltage	24VDC
Power	13W
Cable connection	DIN 43650, 3 spades
Ingress protection class	IP 65 with connector
Ground connection	M6
<b><u>Mechanical</u></b>	
Pressure [MPa]	
Work	30.0 MPa
Proof (burst)	>100 MPa
Activation pressure	Must be equal to system pressure
Connections	
Pipe	6000Psi 2" SAE J flanges with M20 thread
Pipe pressure	ISO228/1 - G1/4 (EN837)
Pilot activation	ISO228/1 - G1/4 (EN837)
Ground	M6
Flow way	Ø44, 1520mm <sup>2</sup>

**Document:**

Intec 325150 ZSV-50

**Category:**

SV-CiV System

Id: OLRA

Rev:2017.12.18



Vølundsvej 17  
DK- 3400 Hillerød  
Tel +45 7022 2769  
www.fire-eater.com

1

2

3

4

5

6

7

8

9

**Marking**

Fire Eater Logo

Arrow indicating flow direction

"ZSV-50"

"Inert gas, 30.0MPa, -20° to 50°C"

"Sn. 123456-123"

**Dimensions**

All dimensions are in mm.

D1 Ø44

D2 Ø66

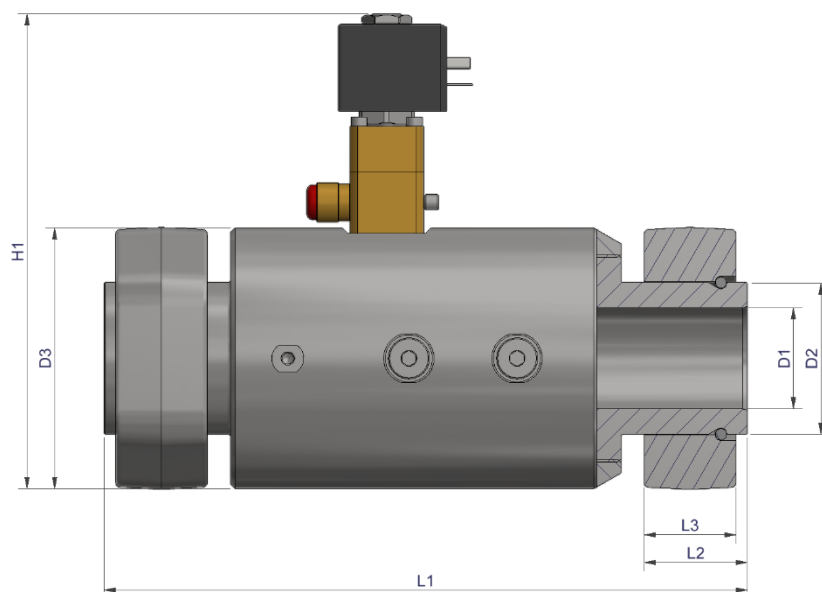
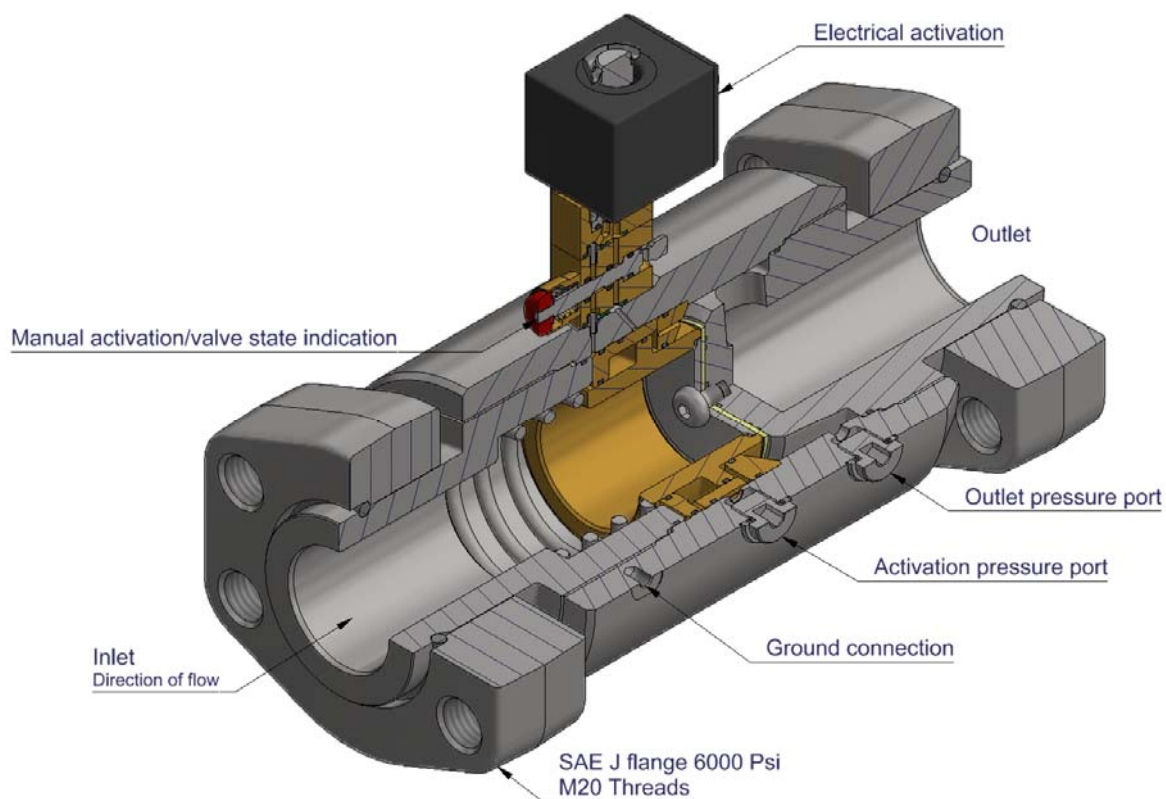
D3 Ø113.5

L1 280  
(290 with orifice)

L2 45

L3 40

H1 206

**Section drawing****Document:**

Intec 325150 ZSV-50

**Category:**

SV-CiV System

Id: OLRA

Rev:2017.12.18



Vølundsvej 17  
DK- 3400 Hillerød  
Tel +45 7022 2769  
www.fire-eater.com

1

2

3

4

5

6

7

8

9

**Assembly**

The ZSV-50 is shipped with the operator valve separated to avoid transport damage. The operator valve is screwed on to the valve body by the supplied 4 screws.

- a. Check that O-rings are located in the operator part as per drawing in "Replaceable parts"
- b. Tighten the 4 screws to app 3 Nm

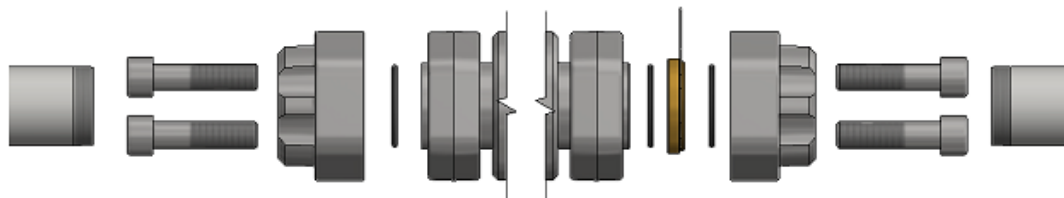
**Installation**

The ZSV-50 valve is installed in the pipe system using 6000Psi SAE J flanges. Standard SAE J flanges with O-rings will fit the valve, making it possible to adapt the valve to the desired connection type. The valve is intended to be installed with a distribution pipe system in the inlet side, which is rated for the full cylinder pressure. On the outlet of the valve, an orifice is mounted to reduce the outlet pressure to the desired level for the zone pipe system.

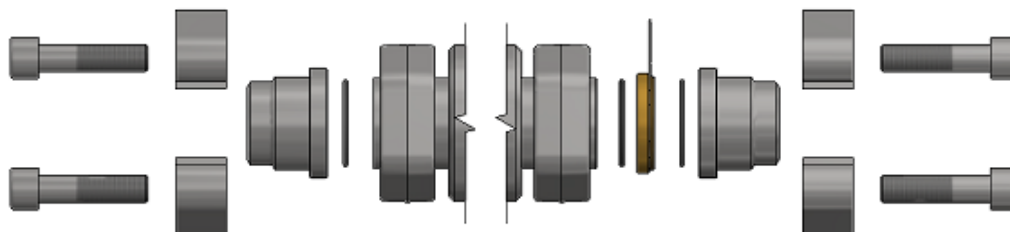
Item 325171 is supplied with adaptors for 2" NPT thread, an orifice kit, connector and cable for electrical activation. Alternatively, other SAE flange types such as retain ring flanges or standard split flanges can be used.

Connection examples:

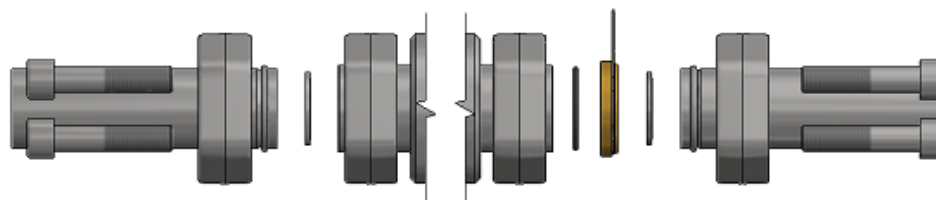
SAE flange with thread and o-ring seal (supplied with item 325171)



SAE Split flange, weld adapter and o-ring seal



Retain ring flange and bonded seal

**Document:**

Intec 325150 ZSV-50

**Category:**

SV-CiV System

Id: OLRA

Rev: 2017.12.18

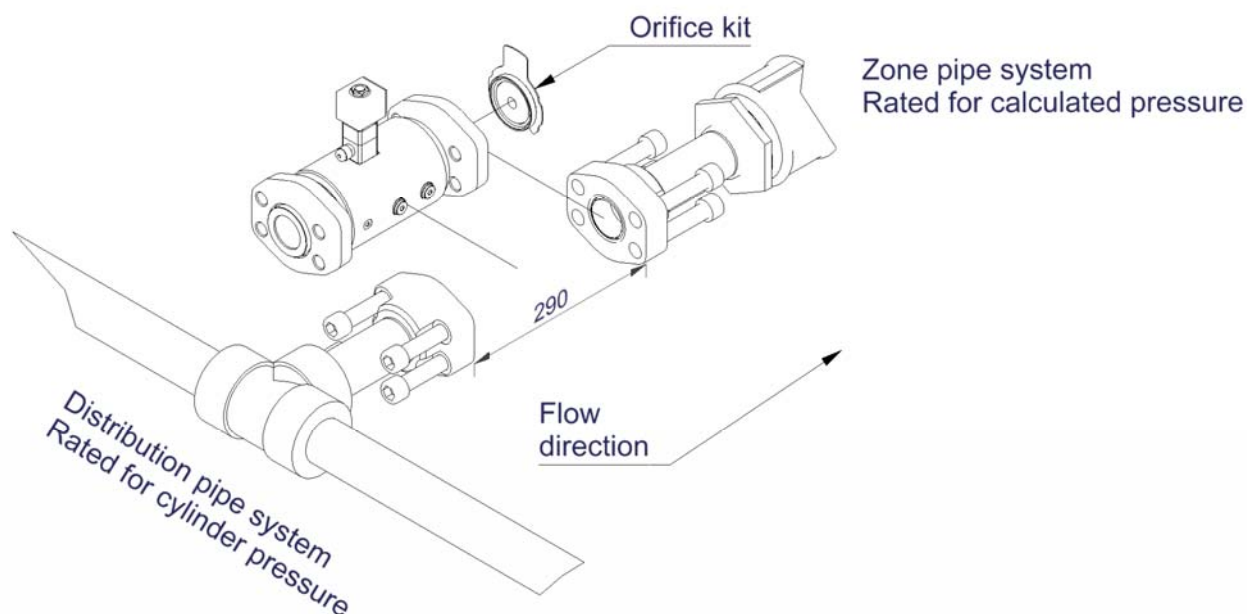


Vølundsvej 17  
DK- 3400 Hillerød  
Tel +45 7022 2769  
www.fire-eater.com

1  
2  
3  
4  
5  
6  
7  
8  
9

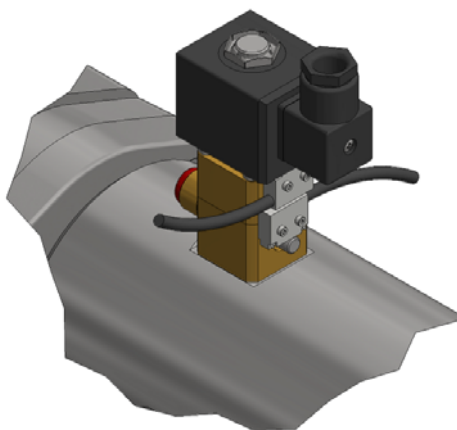
## Installation

1. Make sure the seals and sealing surfaces are clean and in good condition
2. Adaptors to the pipe system are attached to the pipe system. The flanges must be placed at a distance of 290mm.
3. The valve, including a calibrated orifice kit, is connected to the system using M20 screws.
4. Connect the activation cable to the coil.



## Switch kit

It is possible to add the "ZSV Switch Kit Coil & Position" to the valve in order to monitor the manual actuator position and/or the placement of the solenoid coil. The kit contains a micro switch with cable and mounting screws.



## Document:

Intec 325150 ZSV-50

## Category:

SV-CiV System

Id: OLRA

Rev: 2017.12.18

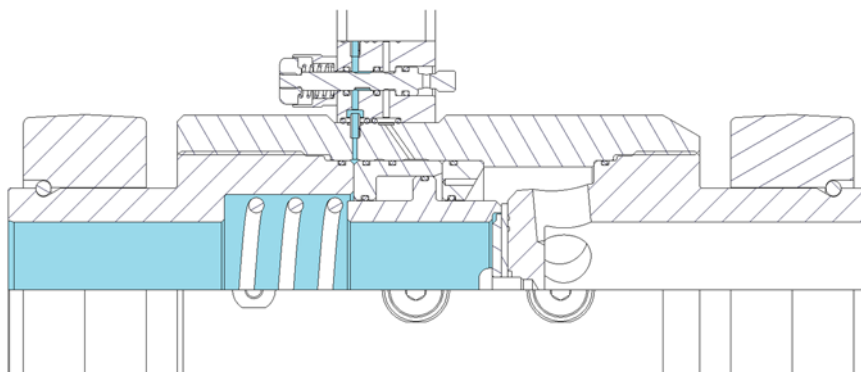


Vølundsvej 17  
DK- 3400 Hillerød  
Tel +45 7022 2769  
www.fire-eater.com

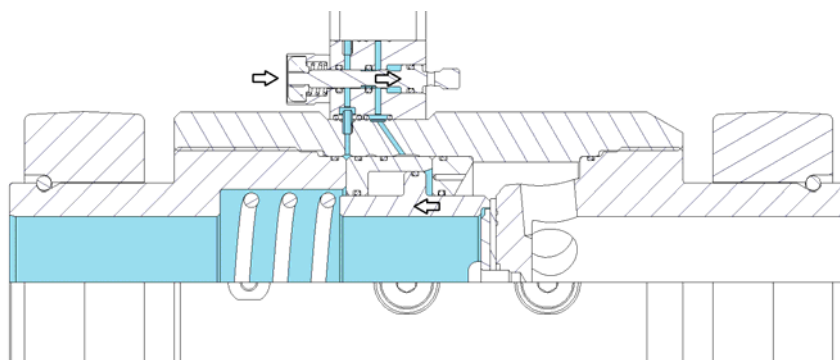
1  
2  
3  
4  
5  
6  
7  
8  
9

**Operating**

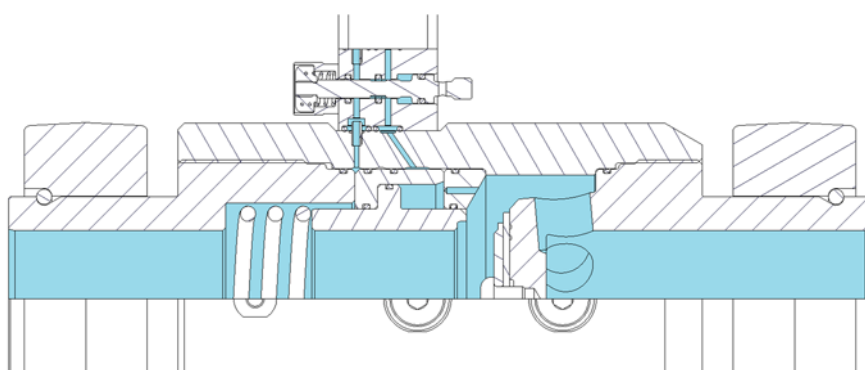
The valve is pilot operated and needs pressure on the inlet side in order to function correctly. The valve will not open mechanically if activated when inlet pressure is absent. The valve can be activated electrically by energizing the solenoid valve or manually by pushing the red button. The red button also serves as an indication of the valve state, as it is forced to stay in open position when the ZSV-50 valve is pressurized and open. When the system pressure drops below 0.5MPa the spring will start closing the valve and the button will return to its initial position.



Valve closed - inlet pressurized



Activation by solenoid valve or by push button - the button is forced to stay in activated position and the main piston is pressed open.



Valve in fully open position - when the system pressure falls below 0.3MPa the spring will start closing the valve.

**Document:**

Intec 325150 ZSV-50

**Category:**

SV-CiV System

Id: OLRA

Rev:2017.12.18

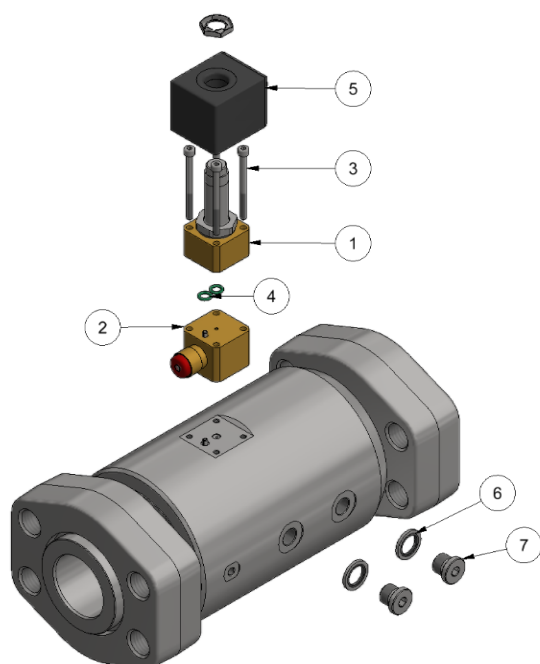


Vølundsvej 17  
DK- 3400 Hillerød  
Tel +45 7022 2769  
www.fire-eater.com

1  
2  
3  
4  
5  
6  
7  
8  
9

**Replaceable parts**

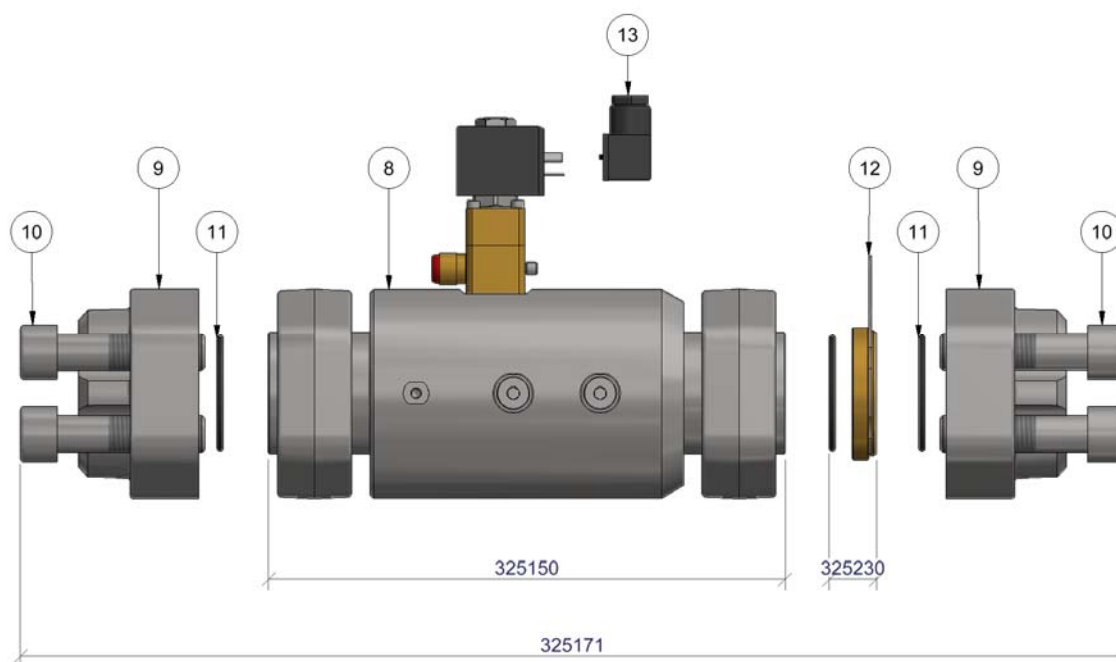
Item 325150



## Recommended replacement parts

Pos.	Item	Description	Material
ITEM 325150			
1	307464	ZmNUP Solenoid Operator	Brass, Steel
2	307480	Zm valv man assembly	Brass
3	3320505	Screw M4x50	Stainless steel
4	2061182	O-ring 6.07x1.78	Elastomer
5	307462	ZmNUP Solenoid 24V	-
6	777003	Bonded seal 1/4"	Steel
7	4342000	Plug 1/4 BSP st	Steel
ITEM 325171			
8	325150	ZSV-50 Sol-man 24VDC	-
9	325310	Flange SAE 2" NPT F	Steel
10	3360805-8	Screw M20x80 10.9 Galv	Steel
11	2568351	O-ring 56.75x3.53	Elastomer
12	325230	ZSV-50 Orifice assembly	Brass
13	178204313	Cable 2x0.75 IEC331 w DIN43650	

Item 325171



## Document:

Intec 325150 ZSV-50

## Category:

SV-CiV System

Id: OLRA

Rev:2017.12.18



Vølundsvej 17  
DK- 3400 Hillerød  
Tel +45 7022 2769  
www.fire-eater.com

1

2

3

4

5

6

7

8

9