

# VIGILEX<sup>®</sup>

SAFETY PROTECTION By **STIF**

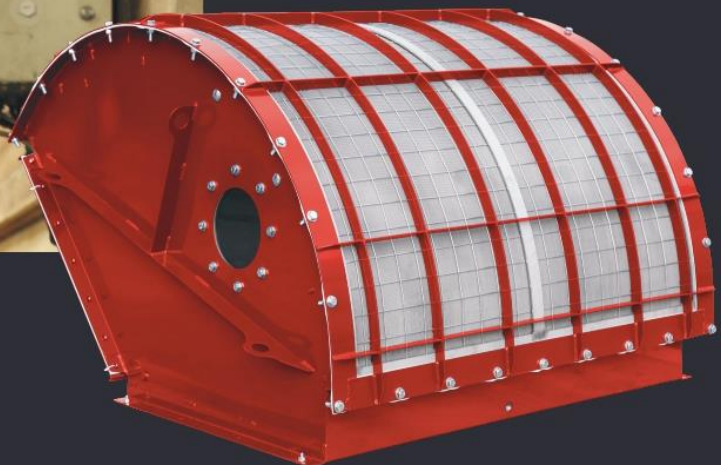
## EXPLOSION PROTECTION

### INSTALLATION AND USE INSTRUCTIONS

# VIGIFLAMVQ HW<sup>®</sup> & VQ LW<sup>®</sup>



### FLAMELESS EXPLOSION VENTING DEVICES



components for your success

English

# The VIGIFLAM VQ is according to the ATEX EN 16009.

Before starting the installation, please read this document carefully.

- 1) **Safety informations**
- 2) **Standards and certificates**
- 3) **Operating characteristics**
- 4) **Installation zone**
- 5) **Installation of the VIGIFLAM VQ HW & LW**
- 6) **Burst detector**
- 7) **Marking**
- 8) **General dimensions**
- 9) **Maintenance**



## **Caution:**

It is essential that all instructions in this manual must be understood and followed precisely to ensure proper operation of the equipment. In case of any questions ( e.g. on individual installation situation ) please contact STIF company.

## **1) Safety Information**

The VIGIFLAM VQ HW and VQ LW is a high capacity system which decreases the immense energy during a dust explosion or gas. Any kind of product damage can lead to a malfunction. The risk of a dust explosion or gas explosion can occur in the environment of the protected vessel or in the production room.

Due to this safety function following restrictions are mandatory for a safe use.

### **Features:**

#### **Dust**

Kst value: Following the features of the explosion vent panel of kind VIGILEX® VL or VL-R or VL-HV or VL-R-HV or VD or VD-HV or VFlex used.

Dust kind : Organic dust.

#### **Gas**

Kg value: Following the features of the explosion vent panel of kind VIGILEX® VL or VL-R or VL-HV or VL-R-HV or VD or VD-HV or VFlex used.

Gas kind : gas group: IIA and not hybride mixing

#### **Safety features**

If the discharge is ATEX zone : 21 or 22

- MIE = minimum ignition energy : MIE > 10 mJ,
- MIT = minimum ignition temperature : MIT > 400 °C,

If the discharge zone is out of ATEX zone

- MIE = minimum ignition energy : MIE > 1 mJ,
- MIT = minimum ignition temperature : MIT > 250 °C,

Particule size: - DV0.1 ≥ 6 µm

Pmax : - ≤ 10 bar

#### **Vent panel**

Static activation pressure (Pstat) : according to the characteristics of the VIGILEX® explosion vent panels.



If the VIGIFLAM VQ HW and VQ LW are delivered without a panel, one must be installed. Only vent panels from the VIGILEX® range (INERIS 15ATEX0001X certificate) are authorized.

#### **Vessel to be protected**

Max pressure VQ HW: Pred max < 2.3 bar until VIGIFLAM VQ size: 586x920 (5360cm<sup>2</sup>)  
Pred max < 1.85 bar until VIGIFLAM VQ size: 1130x1130 (12720cm<sup>2</sup>)

Max pressure VQ LW: Pred max < 0.5 bar until VIGIFLAM VQ size: 1130x1130 (12720cm<sup>2</sup>)

Max process temperature: ≤ +140°C (The maximum operating temperature is limited by the maximum temperature of the opening detector used).

## 2) Standards and certificates

The discharge system is according to following standards

- EN 16009-2011 Flameless explosion venting devices
- INERIS 14ATEX0049X UE type examination certificate according to EN 16009-2011

Production according to the quality standards:


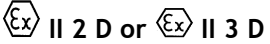
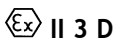
- INERIS 08ATEXQ406 Production quality assurance Notification
- ISO9001-2015 Quality management systems

Take care that the dimensions of the necessary venting area are according to the following guidelines and standards respectively.

- EN 14491-2012 Dust explosion venting protective systems.
- EN 14994-2007 Gas explosion venting protective systems.
- EN 14797-2007 Explosion venting devices.
- NFPA 68-2007 Standard on Explosion Protection by Deflagration Venting.
- VDI 3673 Pressure venting of dust explosions.
- VDI 2263 BI.3 Pressure shock resistant vessels and apparatus.

## 3) Operating characteristics

Device ATEX marking :

-  II GD Relate to the equipment you want protect ( silo, filter, process device... ).
-  II 2 D or  II 3 D Relate to the discharge area of explosion gases (see marking §7, page 10).

**Tab.1**

Discharge ATEX zone :

VIGIFLAM VQ HW & VQ LW can discharge in ATEX zone 21 & 22 when the equipment to be protected has a maximum L/D ratio of 3.2, the dust concentration is  $\leq 300\text{g/m}^3$  and the particle size  $\leq 50\mu\text{m}$ .

**Protected vessel volume by device :  $V_{\text{max,FV}}$**

Size	170x470	270x458	300x500	305x610	350x650	490x590	610x610	457x890	586x920
<b>ATEX 21 &amp; 22</b>	2,0 m <sup>3</sup>	3,1 m <sup>3</sup>	3,7 m <sup>3</sup>	4,6 m <sup>3</sup>	5,6 m <sup>3</sup>	7,2 m <sup>3</sup>	9,2 m <sup>3</sup>	10,0 m <sup>3</sup>	13,4 m <sup>3</sup>
<b>Not ATEX</b>	2,1 m <sup>3</sup>	3,3 m <sup>3</sup>	4,0 m <sup>3</sup>	5,0 m <sup>3</sup>	6,1 m <sup>3</sup>	7,8 m <sup>3</sup>	10,0 m <sup>3</sup>	11,3 m <sup>3</sup>	15,0 m <sup>3</sup>
<b>VQ HW</b>	<b>Pred.max</b>	<b>&lt;2,3 bar</b>							
	<b>Pstat.max</b>	$\leq 500$ mbar							
<b>VQ LW*</b>	<b>Pred.max</b>	<b>&lt;0.5 bar</b>							
	<b>Pstat.max</b>	$\leq 300$ mbar							

Size	645x1130	920x920	1130x1130
<b>ATEX 21 &amp; 22</b>	18,0 m <sup>3</sup>	21,0 m <sup>3</sup>	21,0 m <sup>3</sup>
<b>Not ATEX</b>	18,0 m <sup>3</sup>	21,0 m <sup>3</sup>	21,0 m <sup>3</sup>
<b>VQ HW</b>	<b>Pred.max</b>	<b>&lt;1,85 bar</b>	
	<b>Pstat.max</b>	$\leq 500$ mbar	
<b>VQ LW*</b>	<b>Pred.max</b>	<b>&lt;0.5 bar</b>	
	<b>Pstat.max</b>	$\leq 300$ mbar	

\* the VIGIFLAM VQ LW is equipped with two inspection windows (Pred, max <0.5bar).

The VIGIFLAM VQ HW & VQ LW is designed to protect a maximum volume, with an efficiency according to the size of the panel, the L / D ratio of the volume to be protected, the concentration and the particle size of the dust concerned. If the features of your use are different, please contact STIF staff.



**The device, as well as the installation, remain the responsibility of the company that operates it**

## 4) Installation zone

The STIF technical department is at your disposal to define the best installation position of the VIGIL'Ex VQ on the equipment.

The ultimate responsibility for the safety of the installation and operation of this equipment lies with the installation contractor and owner.



The EN 16009 standard indicates that: the k ratio of the volume of the room relative to the volume of the enclosure to be protected must be verified. To minimize this ratio the building can be equipped with a large decompression surface.

$$k = \frac{\text{Room volume}}{\text{Volume of the protected enclosure}}$$

Factor K		* Pred = Pressure resistance of the protected enclosure										
		0,3bar	0,4bar	0,5bar	0,6bar	0,8bar	1,0bar	1,2bar	1,5bar	1,8bar	2,0bar	2,3bar
Max overpressure in the workshop	10 mbar	≥ 30	≥ 40	≥ 50	≥ 60	≥ 80	≥ 100	≥ 120	≥ 150	≥ 180	≥ 200	≥ 230
	20 mbar	≥ 15	≥ 20	≥ 25	≥ 30	≥ 40	≥ 50	≥ 60	≥ 75	≥ 90	≥ 100	≥ 115
	50 mbar	≥ 5	≥ 7	≥ 9	≥ 11	≥ 15	≥ 20	≥ 25	≥ 30	≥ 35	≥ 40	≥ 45



\* Make sure that the calculated vent area is large enough to respect the Pred.max of VIGIFLAM VQ HW or VQ LW depending on the model used (see Tab. 1).

Overpressure in the workshop: 20mbar Limit of resistance of glazing and lighting / 50mbar Limit of risk of irreversible injury

Example: If vessel Pred = 0.5bar & Local overpressure = 20mbar max, then Local volume ≥ 25x vessel volume

The installation of the VIGIFLAM VQ HW and VQ LW shall be in such way that no dust deposits in front of the bursting panel occur. Vertical or upward installations should be preferred.

The VIGIFLAM VQ HW and VQ LW safety zone from the vessel, must be marked in the venting direction. This zone shall not be entered during operation of the system. The safety zone can be reduced to reduce to 0.5m on the sides and by protection shields or similar means.

Inside this area it is forbidden to install flammable or temperature sensitive equipment.

The distance of the VIGIFLAM VQ HW and VQ LW to walls or nearby equipment must be a minimum of 0.5m to guarantee the total venting and the function of the VIGIFLAM VQ HW and VQ LW.

Safety zone: See diagram below.

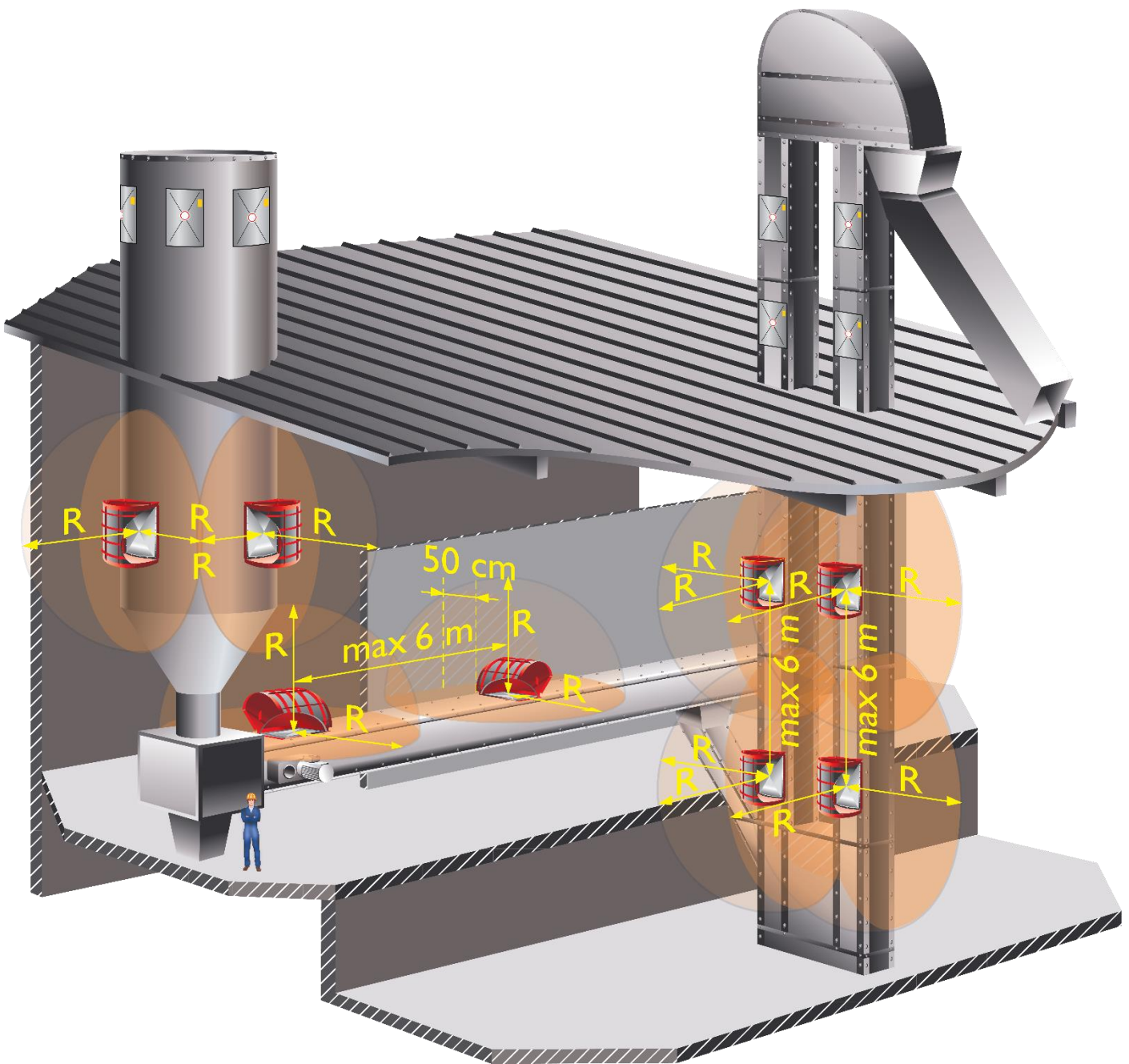
The venting process can be effect through units inside the zone (e.g. beam of the building baffle plates). In order to determine the influence on the venting process, please contact STIF experts.

Beyond the safety zone a short term exposition of dust during the venting process is possible. In single cases depending on the product harmful fumes products may occur. If there are any questions please contact STIF for assistance. A general statement is impossible on this topic.

## Safety zone near the VIGIFLAM VQ HW & VQ LW.

The safety distance to be observed in front of the VIGIFLAM VQ HW or VQ LW filter (discharge zone) is defined according to the volume of the enclosure to be protected. In some cases, it is also necessary to consider the particle size distribution of the dust. The various safety distances to be observed are as follows (**R = radius of the discharge of the combustion gases from the explosion**):

- **$R \geq 2m$**  if the volume is  $\leq 10m^3$
- **$R \geq 3m$**  if the volume is  $> 10m^3$
- **$R \geq 5m$**  if the dust particule size is following below features:
  - more than 35% of dust particules have characteristic diameter  $\leq 50\mu m$
  - $50\mu m \leq Dv0.9 \leq 250\mu m$





## 5) Installation of the VIGIFLAM VQ HW or VQ LW



The handling of the VIGIFLAM VQ HW or VQ LW should be carried out using the attachment points available on the sides.

### Connection flange:

Check that the dimensions of the support flange correspond to those of the VIGIFLAM VQ HW or VQ LW (fixing holes + opening; see page 11/12). Clean the surface of the support flange, then glue the frame gasket supplied with the VIGIFLAM VQ HW or VQ LW on the support flange (the frame gasket supplied by STIF consists of 4 elements).

Position the VIGIFLAM VQ HW or VQ LW on the support flange equipped with the previously glued frame gasket, then proceed to its fixing according to the instructions in step A. Then proceed to install the VIGILEX vent panel inside the VIGIFLAM VQ HW or VQ LW following the instructions in step B.

### A) First step :

Attach the body of the device to the support flange of the enclosure to be protected using only the holes on the two outer parts of the body (2x green flanges).

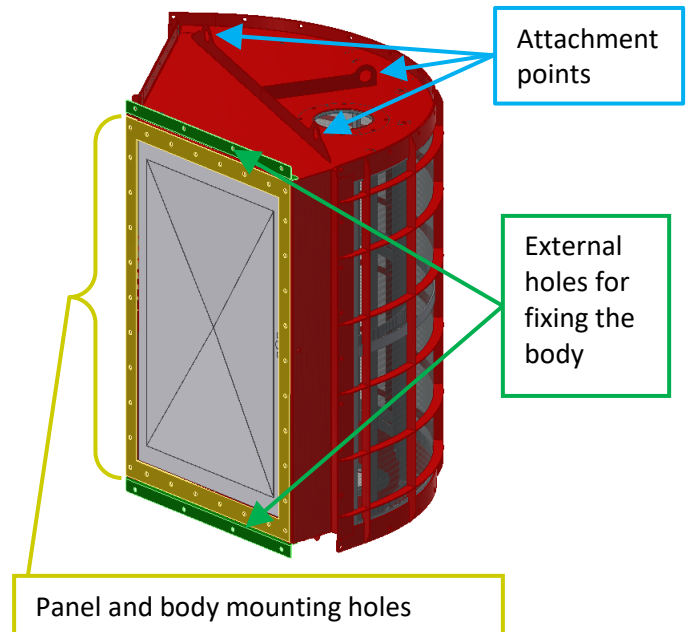
### B) Second step :

Place the VIGILEX vent panel inside the body of the VIGIFLAM VQ HW or VQ LW and secure the two elements together on the support flange.

The VIGILEX vent panel can be installed in two ways inside the body:

- By the back door (picture A).
- By the filtration area, after removing the filter and the two interior supports (picture B).

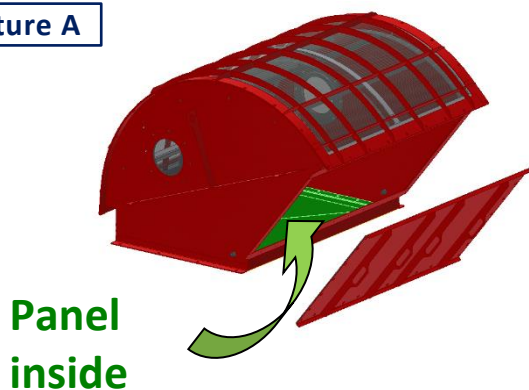
Panel drilling diagram ( see paragraph 8 or drawing on request, [www.vigilex.eu](http://www.vigilex.eu) ).



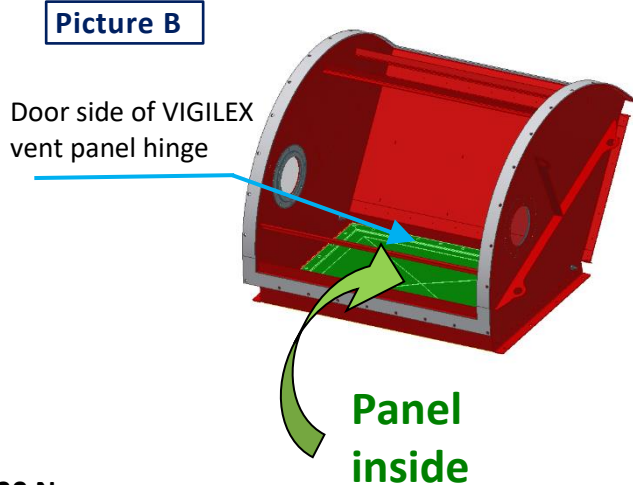
Position the panel hinge on the same side as the rear access door of the VIGIFLAM VQ HW or VQ LW to ensure that the opening of the membrane does not obstruct the flame arrester filter and thus prevent the explosion of the explosion (figure B).

To fix the VIGIFLAM VQ HW or VQ LW, you will need **M10x30** type bolts. These are the same bolts we use for the single panels. It is recommended to use A2 stainless steel bolts, in order to maintain good resistance over the long term.

Picture A



Picture B

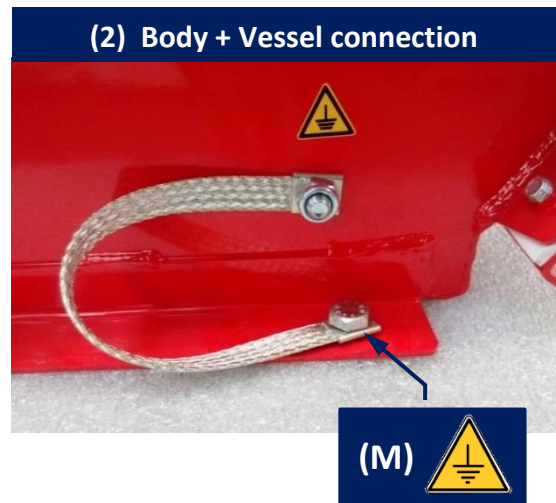


### The tightening force of the bolts is 20 Nm.

( Use a torque wrench) After tightening the bolts to 20N.m, check that the seal between the support flange and the VIGIFLAM VQ HW or VQ LW is perfect (crushed gasket, no mechanical gap).



The VIGIFLAM VQ HW & VQ LW are fitted with two conductivity braids for earthing. The panel should be connected to the device body (1) and the device body to the enclosure (2). The end of the ground braid item (M) must be connected to the metal enclosure either by a bolt or by a welded stud. In both cases, the mechanical bonding surface must be free of paint. After assembly, check that the VIGIFLAM VQ HW or VQ LW is properly connected to earth.



## 6) Burst detector

The VIGIFLAM VQ HW & VQ LW must be equipped with an ATEX II 2 D or ATEX II 3 D certified rupture detector. This detector can be connected to an audible or visual alarm system and informs the user if the panel has opened under the force of pressure or vacuum.

During installation, it must be checked that the ATEX marking on the detector corresponds to the one indicated on the VIGIFLAM VQ HW or VQ LW. Indeed, the ATEX marking of the VIGIFLAM VQ HW or VQ LW determines the classification of the explosion discharge zone in ATEX zone 21 and/or 22 dust, namely :

- ATEX marking on the VIGIFLAM VQ  $\text{Ex}$  II D &  $\text{Ex}$  II 2 D → used a ATEX detector  $\text{Ex}$  II 1 D or  $\text{Ex}$  II 2 D
- ATEX marking on the VIGIFLAM VQ  $\text{Ex}$  II D &  $\text{Ex}$  II 3 D → used a ATEX detector  $\text{Ex}$  II 2 D or  $\text{Ex}$  II 3 D

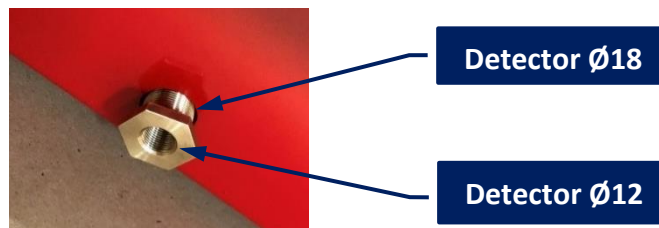
The maximum temperature of use of VIGIFLAM VQ HW and VQ LW is limited by the maximum temperature of the opening detector used:  $\leq + 140^{\circ} \text{C}$



If the VIGIFLAM VQ HW or VQ LW is delivered without a detector, one must be installed by applying the recommendations described above.

The VIGIFLAM VQ HW & VQ LW can be fitted with  $\varnothing 18$  or  $\varnothing 12$  burst detectors. On the other hand, for the  $\varnothing 12$  it is necessary to add a brass adapter to change from  $\varnothing 18$  to  $\varnothing 12$  (see picture C).

Picture C



The range of the standard detectors consists of the following four models :

- 6.1 Inductive detector  $\varnothing 18$  ATEX  $\text{Ex}$  II 1 D - 24 V DC ( $\leq +140^{\circ}\text{C}$ )
- 6.2 Inductive detector  $\varnothing 18$  ATEX  $\text{Ex}$  II 2 D - 12...48 V DC
- 6.3 Inductive detector  $\varnothing 18$  ATEX  $\text{Ex}$  II 3 D - 12...48 V DC
- 6.4 Breakable detector  $\varnothing 12$  ATEX  $\text{Ex}$  II 2 D -  $< 24$  V DC



It is possible to use another detector model provided that it is equivalent to the recommendations described above.

## 6.1. Inductive detector Ø18 (≤ +140°C): ATEX II 1 D

Connection of IGEXHa detector + IKMb 122 Ex amplifier

### Amplifier IKMb 122 Ex :

Supply voltage : 24V DC ±10%  
 Ambiante temperature : -20°C < Ta < +60°C  
 Marking : II (1) D [Ex ia Da] IIIC

### Detector IGEXHa :

Maximum values :  
 Ui = 12.6 V  
 Ii = 15.9 Ma  
 Pi = 50mW  
 Ci = 66.2 nf  
 Li = 1.2 mH  
 IP68

Dust/ water tightness index :  
 Ambiante temperature : -25°C < Ta < +140°C  
 Cable : 2m FEP - 2 wires 0,34 mm<sup>2</sup>

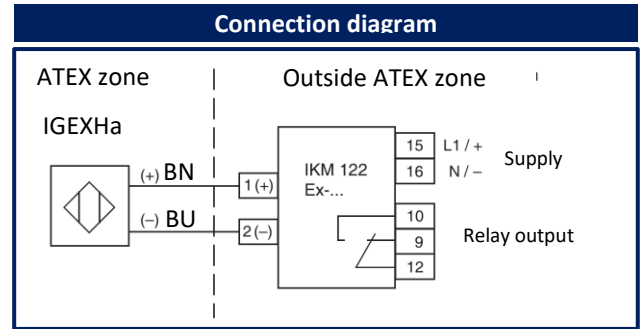
ATEX marking : II 1 D\_Ex ia IIIC T145°C Da  
 ATEX/IECEx certificate: EPS 17ATEX1173X / EPS 17.0087X



Electrical connection diagram : +BN, -BU

Straighten the target of the panel (ref.A) by adjusting the detection range to ≤ 4mm (see photo).

As part of a secure circuit, in accordance with the EU type examination certificate, a preventive inspection visit must be planned (inspection frequency to be defined according to site conditions), in order to detect any anomaly in the control system. break detection (panel target out of range of detector,...).



## 6.2. Inductive detector Ø18 : ATEX II 2 D

Supply voltage : Ue 12...48 V DC  
 Current max : Ie 200 mA  
 Dust/ water tightness index : IP67  
 Output TOR : NO  
 Type output TOR : PNP  
 Ambiante temperature : -20°C < Ta < +60°C  
 Cable : 10m - 3 wires 0,34 mm<sup>2</sup>

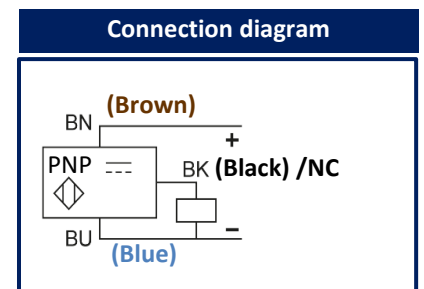
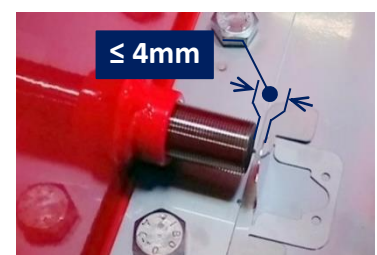
Marquage ATEX : II 2 D\_Ex tb IIIC T85°C Db  
 Certificat ATEX/IECEx : INERIS 04ATEX0022 / INE 17.0006



Electrical connection diagram : +BN, -BU, Charge BK/BU

Straighten the target of the panel (ref.A) by adjusting the detection range to ≤ 4mm (see photo) to operate in positive safety (contact closed).

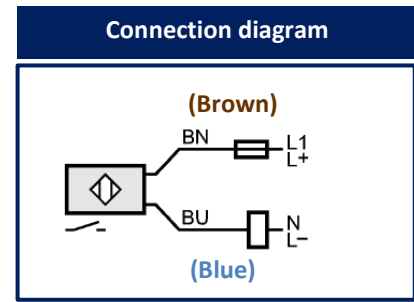
As part of a secure circuit, in accordance with the EU type examination certificate, a preventive inspection visit must be planned (inspection frequency to be defined according to site conditions), in order to detect any anomaly in the control system. break detection (panel target out of range of detector,...).





### 6.3. Inductive detector Ø18 : ATEX $\text{Ex}$ II 3 D

Supply voltage :	Ue 20...250 V AC/DC
Protection Class :	II
Output current (to maintain)	AC : 150mA / DC : 10mA
Output current (to inrush current)	2.2 A (<20ms / <0.5 Hz)
Dust/ water tightness index :	IP67
Output :	NO
Switching frequency:	AC : 25Hz / DC : 50Hz
Ambiente temperature :	-20°C<Ta<+60°C
Cable :	2m – 2 wires 0,5 mm <sup>2</sup>



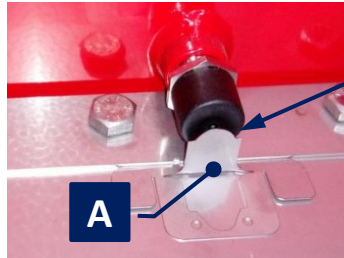
ATEX marking : II 3 D\_Ex tc IIIC T80°C Dc X



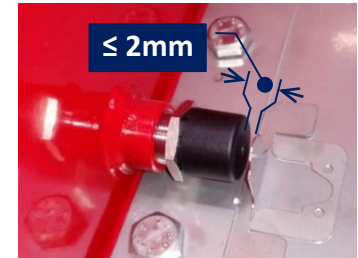
Electrical connection diagram: + BN, -BU, Connect a miniature fuse in series with the load according to IEC60127-2, ≤2 A fast

After adding the protective cap to the end of the detector, straighten the target on the panel (ref.A) by adjusting the detection range to ≤2mm (see photo) to operate in positive safety (contact closed).

As part of a secure circuit, in accordance with the EU type examination certificate, a preventive inspection visit must be planned (inspection frequency to be defined according to site conditions), in order to detect any anomaly in the control system. break detection (panel target out of range of detector,...).



Protective cap



### 6.4. Breakable detector Ø12 : ATEX $\text{Ex}$ II 2 D

Supply voltage :	Ue < 24V DC
Current max :	Ie < 50 mA
Internal resistance :	0 Ohm
Dust/ water tightness index :	IP65
Breaking (in static force) :	≥ 2,2 Nm
Breaking limit (impact energy) :	≥ 0,12 J
Ambiente temperature :	-25°C<Ta<+80°C
Cable :	2m - 2 wires 0,34 mm <sup>2</sup>

ATEX marking : II 2G Ex ib IIC T4 Gb  
II 2D Ex ib IIIC T85°C Db  
IBExU 05ATEX1035

ATEX certificate :

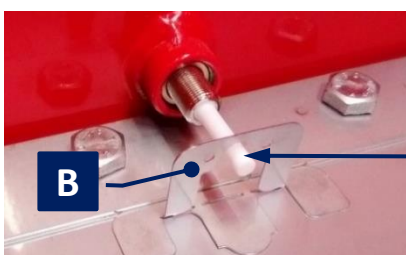
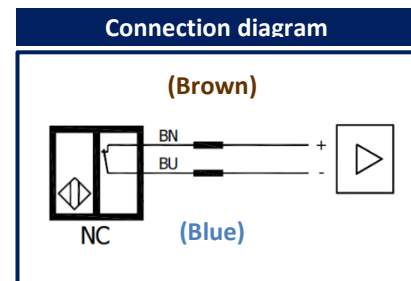


Electrical connection diagram : +BN, -BU

The installation of the breakable detector in an ATEX zone necessarily requires supplying it with an intrinsic safety barrier certified ATEX.

Position the white tube of the detector through the target of the panel (ref.B), protruding at least 5mm (see photo).

As part of a secure circuit, in accordance with the EU type examination certificate, a preventive inspection visit must be planned (inspection frequency to be defined according to site conditions), in order to detect any anomaly in the control system. rupture detection (panel target offset, white tube PTFE degraded,...).



5mm white tube protrusion after target "B"




Brass adapter Ø18 > Ø12

## 7) Marking :

- The marking of VIGIFLAM VQ HW and VQ LW complies with the requirements of the ATEX Directive 2014/34 / EU.


### Protection of ATEX equipment :

The first ATEX marking on the label means that the VIGIFLAM VQ HW and VQ LW are devices dedicated to the protection of equipment (silo, filter, machine, etc.) subjected to an explosive atmosphere of dust or gas.

① →  II GD

### ATEX discharge area :

The second ATEX marking on the label means that the VIGIFLAM VQ HW and VQ LW have the possibility of discharging the combustion gases of the explosion in ATEX zone 21 and / or dust 22.







 During installation, check that the ATEX marking of the detector corresponds to that indicated on the VIGIFLAM VQ HW or VQ LW. Indeed, the ATEX marking of VIGIFLAM VQ HW or VQ LW determines the classification of the explosion discharge zone as ATEX 21 and / or 22 dust zone.

② →  II 2 D or  II 3 D

### Discharge area out of area :

In the event that the combustion gases from the explosion are discharged outside the ATEX zone, the discharge is possible without restriction.

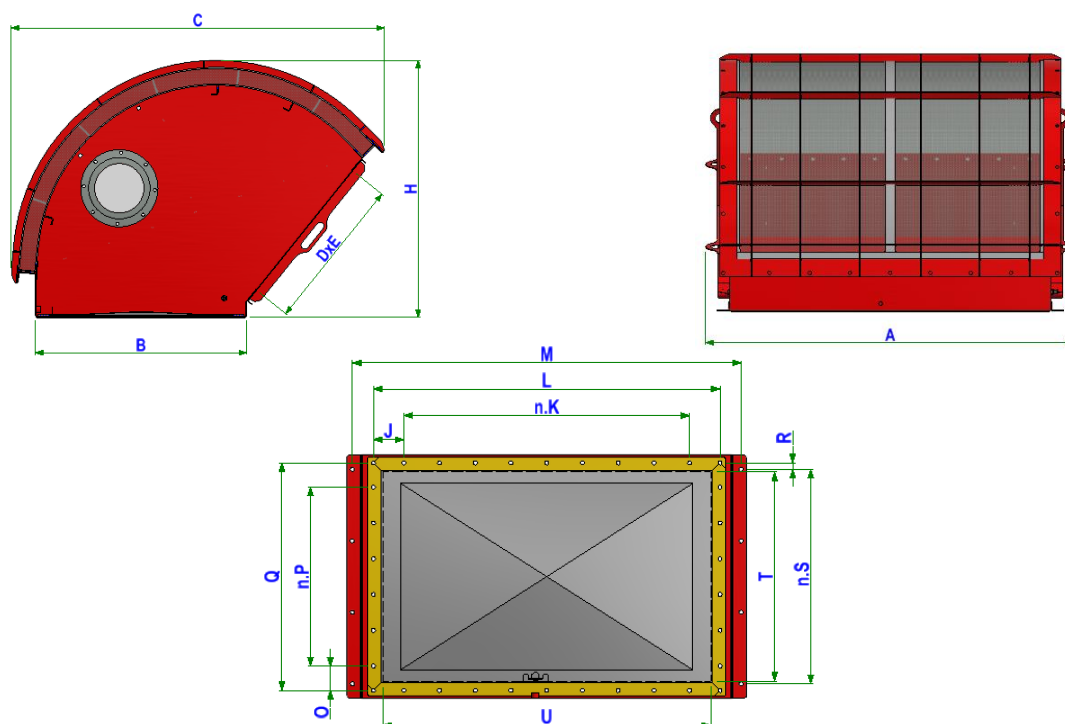
Example of marking to VIGIFLAM VQ HW 1130 x 1130 :

VIGIFLAMVQ®			
CE - 0080 - INERIS 14 ATEX 0049 X - EN16009			
① →	ENCEINTE PROTÉGÉE: PROTECTED VESSEL	 II GD	 VOIR INSTRUCTIONS SEE INSTRUCTIONS
② →	ZONE DE DÉCHARGE: DISCHARGE AREA	 II 2 D	
TYPE:	VQ-HW	SIZE:	1130x1130
AREA:	12 720cm <sup>2</sup>	N°SERIAL:	999999-010-01 / 999999-999999
YEAR:	2020	N°ITEM:	57VQA17LA30B3B34 - 3020
MATERIAL:	Steel / Stainless steel		
Kst max:	Suivant/according to : dp/dt ≤500 bar/s		
Kg max:	Suivant/according to : dp/dt ≤130 bar/s	Gas:	IIA
Pstat:	100 mbar ±15% Min:85mbar Max:115mbar	@	22 °C
Pmax:	10 bar	Pred max:	1.85 bar
			20N.m
<b>stif</b> Z.A. de la Lande - 49170 Saint-Georges-sur-Loire - FRANCE Tel: +33 2 41 72 16 82 - Fax: +33 2 41 39 32 12 - E mail: sales@stifnet.com - Web: www.vigilex.eu			

QR access code  
to the instructions  
on the Internet

## 8) General dimensions :

VQ HW VQ LW	Nominal panel size	Nominal panel area	Weight VQ HW	Weight VQ LW	Fixing Bolt Nbr
170x470	170 x 470 mm / 7 x 19 inch	0,0785 m <sup>2</sup> / 0,845 sq ft	59 kg	48 kg	20 M10x30
270x458	270 x 458 mm / 11 x 18 inch	0,1220 m <sup>2</sup> / 1,315 sq ft	74 kg	60 kg	22 M10x30
300x500	300 x 500 mm / 12 x 20 inch	0,1480 m <sup>2</sup> / 1,595 sq ft	82 kg	67 kg	24 M10x30
305x610	305 x 610 mm / 12 x 24 inch	0,1840 m <sup>2</sup> / 1,980 sq ft	96 kg	79 kg	26 M10x30
350x650	350 x 650 mm / 14 x 26 inch	0,2250 m <sup>2</sup> / 2,425 sq ft	101 kg	84 kg	26 M10x30
490x590	490 x 590 mm / 19 x 23 inch	0,2870 m <sup>2</sup> / 3,085 sq ft	123 kg	94 kg	32 M10x30
610x610	610 x 610 mm / 24 x 24 inch	0,3695 m <sup>2</sup> / 3,975 sq ft	147 kg	112 kg	32 M10x30
457x890	457 x 890 mm / 18 x 35 inch	0,4040 m <sup>2</sup> / 4,349 sq ft	152 kg	117 kg	34 M10x30
586x920	586 x 920 mm / 23 x 36 inch	0,5360 m <sup>2</sup> / 5,770 sq ft	178 kg	136 kg	42 M10x30
645x1130	645x1130 mm/ 25 x 44 inch	0,7250 m <sup>2</sup> / 7,804 sq ft	240 kg	222 kg	34 M10x30
920x920	920 x 920 mm/ 36 x 36 inch	0,8425 m <sup>2</sup> / 9,070 sq ft	641 kg	317 kg	50 M10x30
1130x1130	1130x1130 mm/ 44 x 44 inch	1,2720 m <sup>2</sup> / 13,694 sq ft	802 kg	442 kg	62 M10x30



VQ HW VQ LW	T	U	A	B	C	D	E	H	J	n. K	L	M	O	n. P	Q	R	n. S
170x470	168	468	748	268	588	582	195	490	110	3x100	520	638	70	1x80	220	35	1x150
270x458	268	456	736	368	750	570	275	580	74	4x90	508	626	110	1x100	320	35	1x250
300x500	298	498	774	398	796	612	302	604	75	4X100	550	668	75	2x100	350	25	1X300
305x610	303	608	884	403	796	722	302	604	76	5x101,6	660	778	76	2x102	356	28	1x300
350x650	348	648	924	448	868	762	339	645	-	7x100	700	818	-	4x100	400	50	1x300
490x590	488	588	864	588	1095	702	452	765	70	5x100	640	758	70	4x100	540	20	2x250
610x610	608	608	884	708	1255	722	528	876	-	6x110	660	778	-	6x110	660	30	3x200
457x890	455	888	1163	555	1076	1002	465	755	114	$101+(5x102)+101$	940	1058	102	3x101	507	3.5	2x250
586x920	584	918	1194	684	1220	1032	498	850	85	8x100	970	1088	68	5x100	636	18	3x200
645x1130	643	1128	1403	753	1462	1242	691	958	147.5	6x150	1195	1298	130	3x150	710	10	3x230
920x920	918	918	1340	1020	2151	1032	900	1315	85	8x100	970	1088	85	8x100	970	25	4x230
1130x1130	1128	1128	1600	1240	2385	1242	1100	1542	90	10x100	1180	1298	90	10x100	1180	20	6x190

All holes are  $\varnothing 12$  and require M10x30 type bolts

## 9) Maintenance

The VIGIFLAM VQ HW and VQ LW do not require any maintenance. However, the exterior of the filter must be kept clean, free from dust deposits. If dust accumulates, it should be removed during system shutdown using a soft brush and / or vacuum cleaner. The frequency of inspections depends largely on the specific environmental conditions. After the initial installation, the system should be inspected once a month. If there is no deposit of dust, the inspection interval can be gradually extended, with a minimum of once a year. During this inspection, it is necessary to check on the VIGIFLAM VQ LW (Pred 0.5bar) that the safety glass windows are not damaged. In the event of a crack or impact at least on one of the two safety glasses, the process protected by VIGIFLAM VQ LW must be shut down until the safety glass (s) are replaced.

In order to guarantee the cleanliness of the filter, STIF offers, as an option, a protective textile cover (VIGIFLAM cover). By design, this cover is tearable, so that the explosion gases can be expelled quickly.

The cover protects the filter from dust.



**This device must be kept dry, cleaning with water is not allowed.**

If VIGIFLAM VQ HW or VQ LW is activated, the installation must be immediately de-energized by the burst detector. A visual and / or acoustic alarm must be triggered to warn staff to leave the building for safety reasons.



**Procedure to follow in case of activation**

The building must be evacuated without delay. The person responsible for safety must be informed immediately. Once the situation is under control and any danger of burns or secondary explosions has been ruled out, contact STIF, indicating the serial number of the VIGIFLAM VQ HW or VQ LW for further advice.

The rupture panel must be replaced exclusively by a new STIF panel.

A instruction to replace can be provided on request

The essential safety instructions, in the event of a risk of fire or explosion, must always be observed.

If in any doubt regarding the installation, we invite you to contact your dealer.



**Failure to follow all or part of the instructions will result in the total voiding of the warranty.**

# VIGILEX®

SAFETY PROTECTION

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2022.05 — Document non contractuel — Conception / réalisation: AVANTI