RIDART s.r.l.

SAFE THAN EVER

ATEX &

Safety Device

Summary

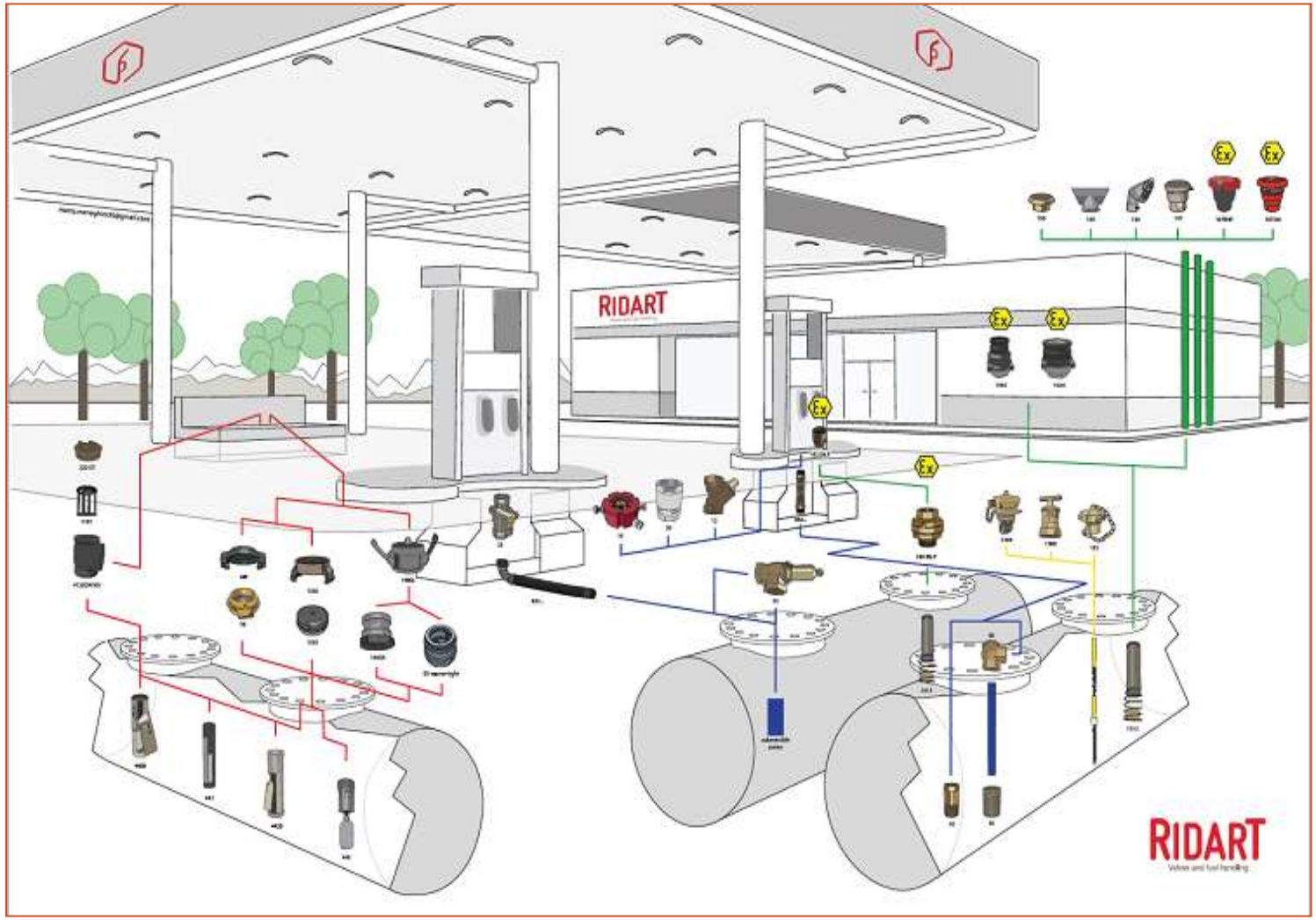
- ATEX Directive 2014/34/EU
- Plant General Overview
- Manhole detail
- Vapor Recovery Line
- Ribbon Coil
- Marking Atex products
- Overfill Prevent Valve
- www.ridart.it/support

ATEX Directive 2014/34/EU

- The **ATEX Directive 2014/34/EU** covers equipment and protective systems intended for use in potentially explosive atmospheres. The directive defines the essential health and safety requirements and conformity assessment procedures, to be applied before products are placed on the EU market. It is aligned with the new legislative framework policy, and it is **applicable from 20 April 2016, replacing the previous Directive 94/9/EC**
- This Directive **complements the responsibilities of manufacturers under Directive 2014/34/EU by setting out the responsibilities of employers**. For its implementation, see the non-binding guide to good practice for implementing Directive 1999/92/EC.
- The **Atex "workplace" Directive 1999/92/EC** deals with the minimum requirements for improving the level of health and safety protection of workers potentially at risk from explosive atmospheres. A potentially explosive atmosphere exists when a mixture of air gases, vapors, mists, or dusts combine in a way that can ignite under certain operating conditions.
- Equipment and protective system intended for use in potentially explosive atmospheres (ATEX) cover a range of products, including those used on fixed offshore platforms, petrochemical plants, mines, and flour mills, amongst others.

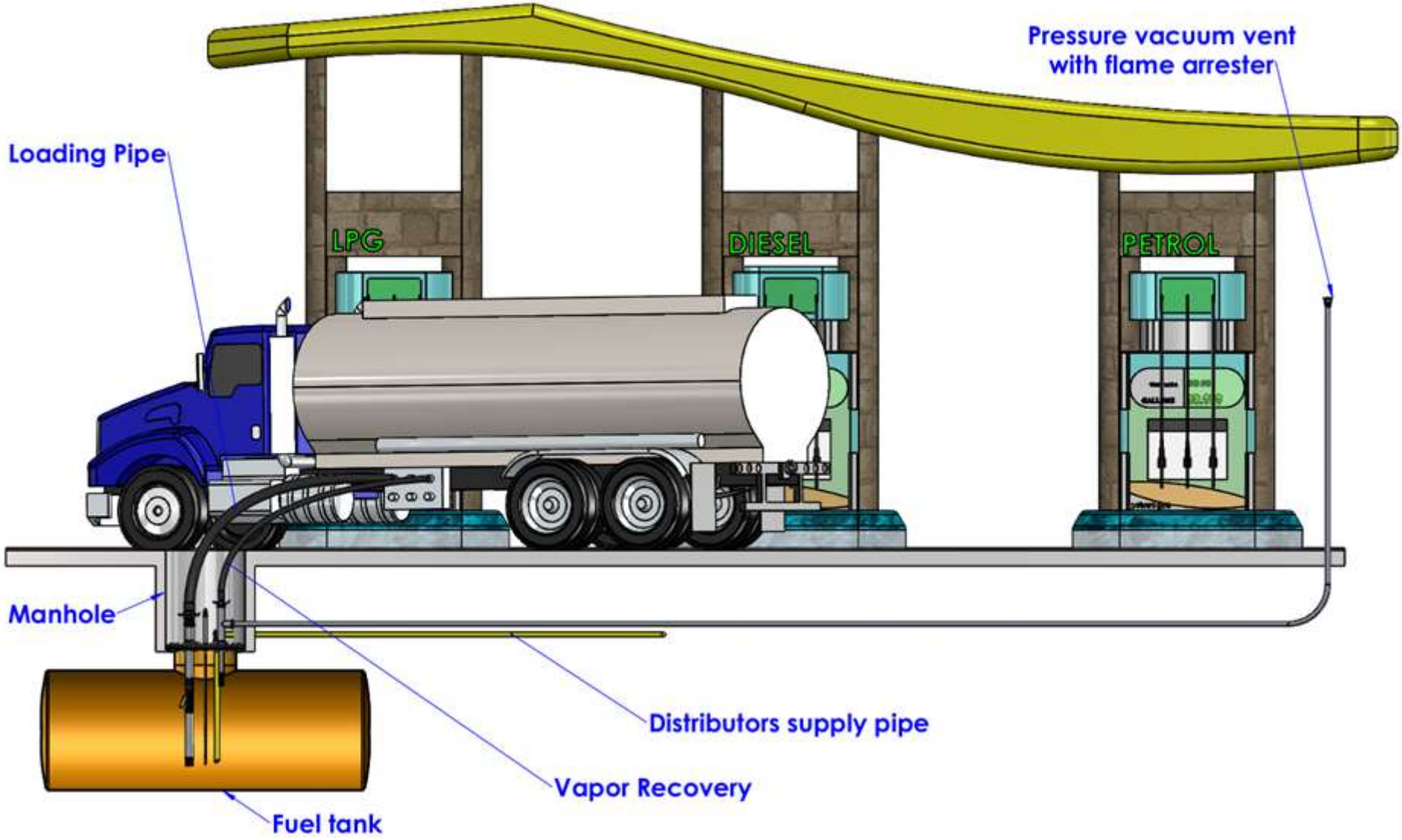
SAFETY DEVICE

Plant General Overview

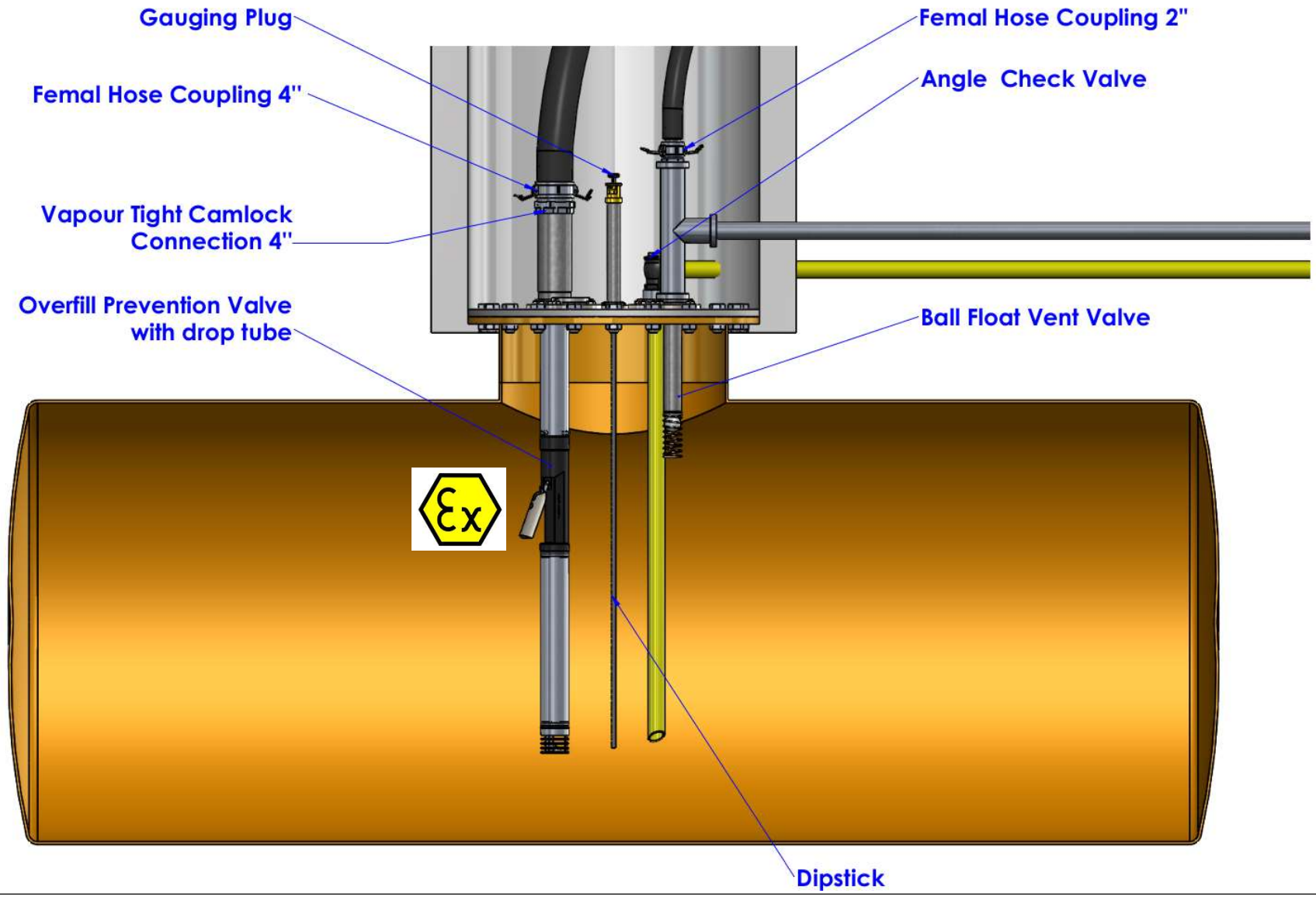


SAFETY DEVICE

Plant General Overview



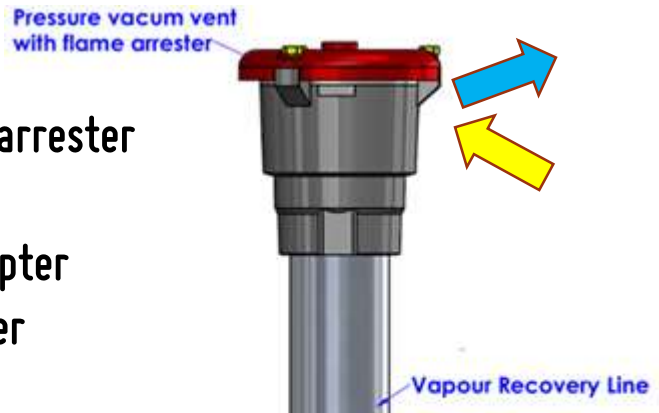
Manhole


Gauging Plug
Femal Hose Coupling 4"
Vapour Tight Camlock Connection 4"
Overfill Prevention Valve with drop tube
Femal Hose Coupling 2"
Angle Check Valve
Ball Float Vent Valve
Dipstick

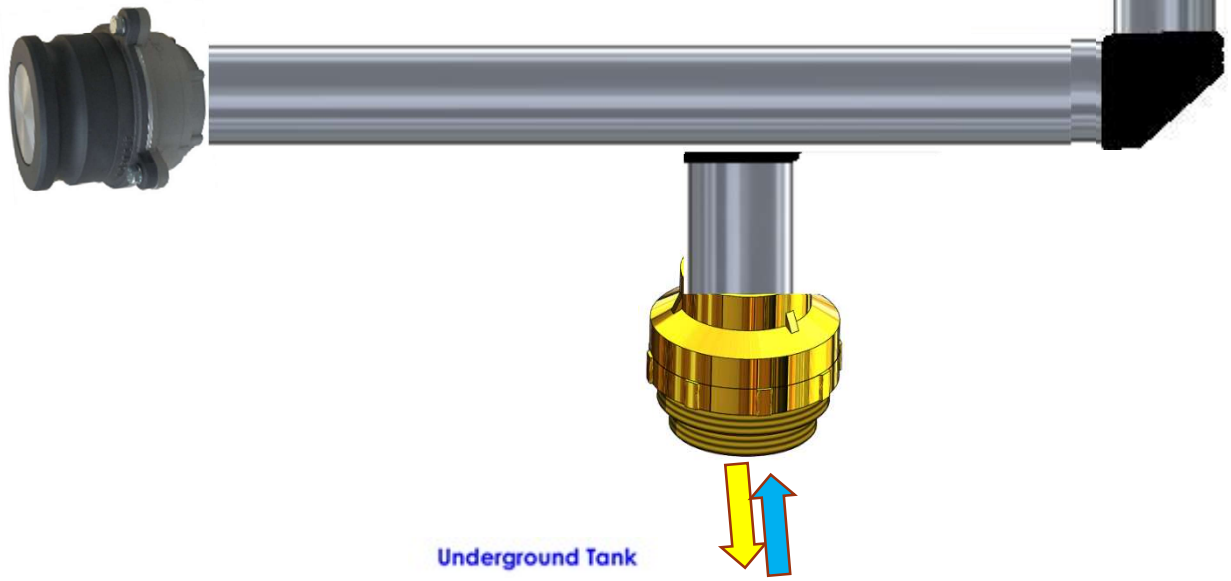
Vapor Recovery Line

SAFETY DEVICE:

- 197 EN P pressure vacuum vent with flame arrester (end of-line)
- 1524 EN P or 1534 EN P vapor recovery adapter
- 180 EN-P or 181 EN P in-line flame arrester



Tank truck quick connection for vapor recovery

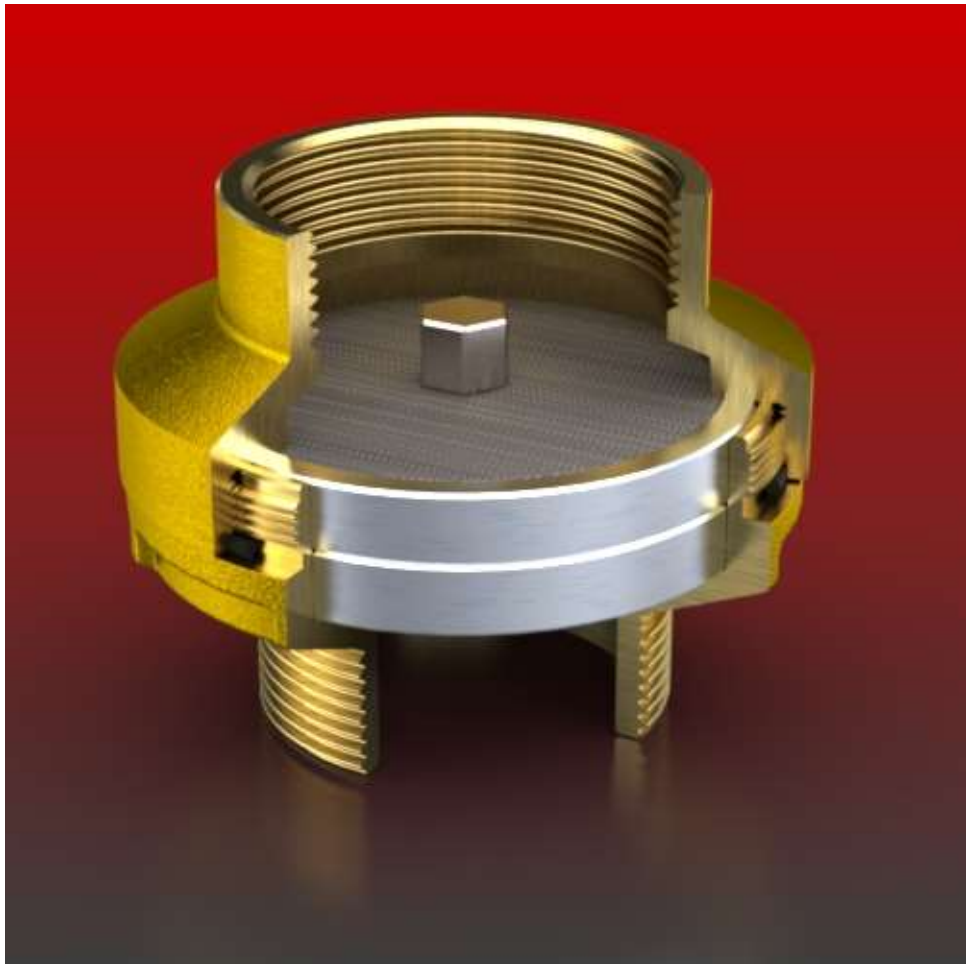


In-Line Flame Arrester

MODEL	CODE	DIMENSION	PROTECTED SIDE	TYPE
425 EN-P 	425-50 EN P	2"	BIDIRECTIONAL	Housing with flanged connection Flanges and seals on request
	425-80 EN P	3"	3" e 4" side with metal support for ribbon coil	
	425-150 EN P	4"		
180 EN-P 	086920 EN P	1"F x 1"F	BIDIRECTIONAL	Threaded connection
	086910 EN P	2"M x 2"F	Female Thread	
	086880 EN P	4"M x 4"F		
182 EN-P 	182-25T EN P	1"F x 1"M	Side with inspection holes	Connection and inspection port threaded
181 EN-P 	086855 EN P	3"M x 3"F	Female Thread	Flanged connection
330 EN-P 	085691 EN P	1"M x 1"F	Male Thread	Housing with nut for ribbon coil fixing
	085694 EN P	1"1/2M x 1"1/2F		
	085696 EN P	2"M x 2"F		
	085760 EN P	3"M x 3"F		
	085790 EN P	4"M x 4"F		
1010 EN-P 	094940 EN P	2"F x 2"F AL	Floater-side	Equipped with floater to stop fluid overflowing
	094945 EN P	2"F x 2"F OT		
1524 EN-P 	1524 EN-P	3"F x 4"cam-lock	Female Thread 3"	Cam-Lock connection
	1534 EN-P	3"F x 3"cam-lock		

SAFETY DEVICE: IN-LINE FLAME ARRESTER
Safety distance Lu=50 * diameter

In-line flame arrester



Mod. 180 EN P

SAFETY DEVICE: IN-LINE FLAME ARRESTER

Vapor Recovery Adapter

Mod. 1524 EN P

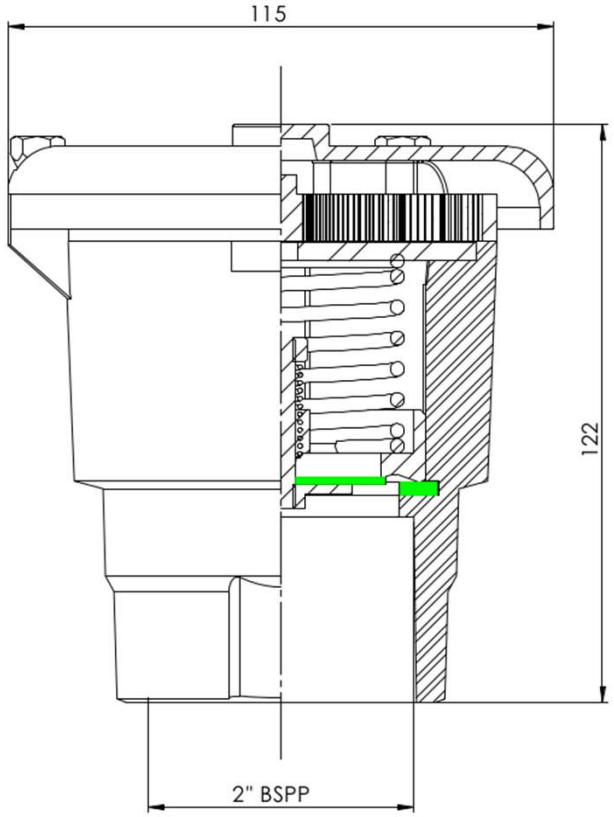
SAFETY DEVICE: IN-LINE FLAME ARRESTER

End Of-Line Flame Arrester

IMAGE	FAMILY	THREAD	SPRING	PLATE
	197 EN P	2"	YES	YES
	197 SM		NO	YES
	197 VENT e 190 EN P		NO	NO
	197 EN-P	4" + reduction 3"	YES	YES
	197 SM		NO	YES
	197 VENT e 190 EN P		NO	NO
	197 EN-P	6"	YES	YES
	197 SM		NO	YES
	197 VENT e 190 EN P		NO	NO

SAFETY DEVICE: END OF-LINE FLAME ARRESTER
Only for Vertical use

Pressure-Vacuum Vent

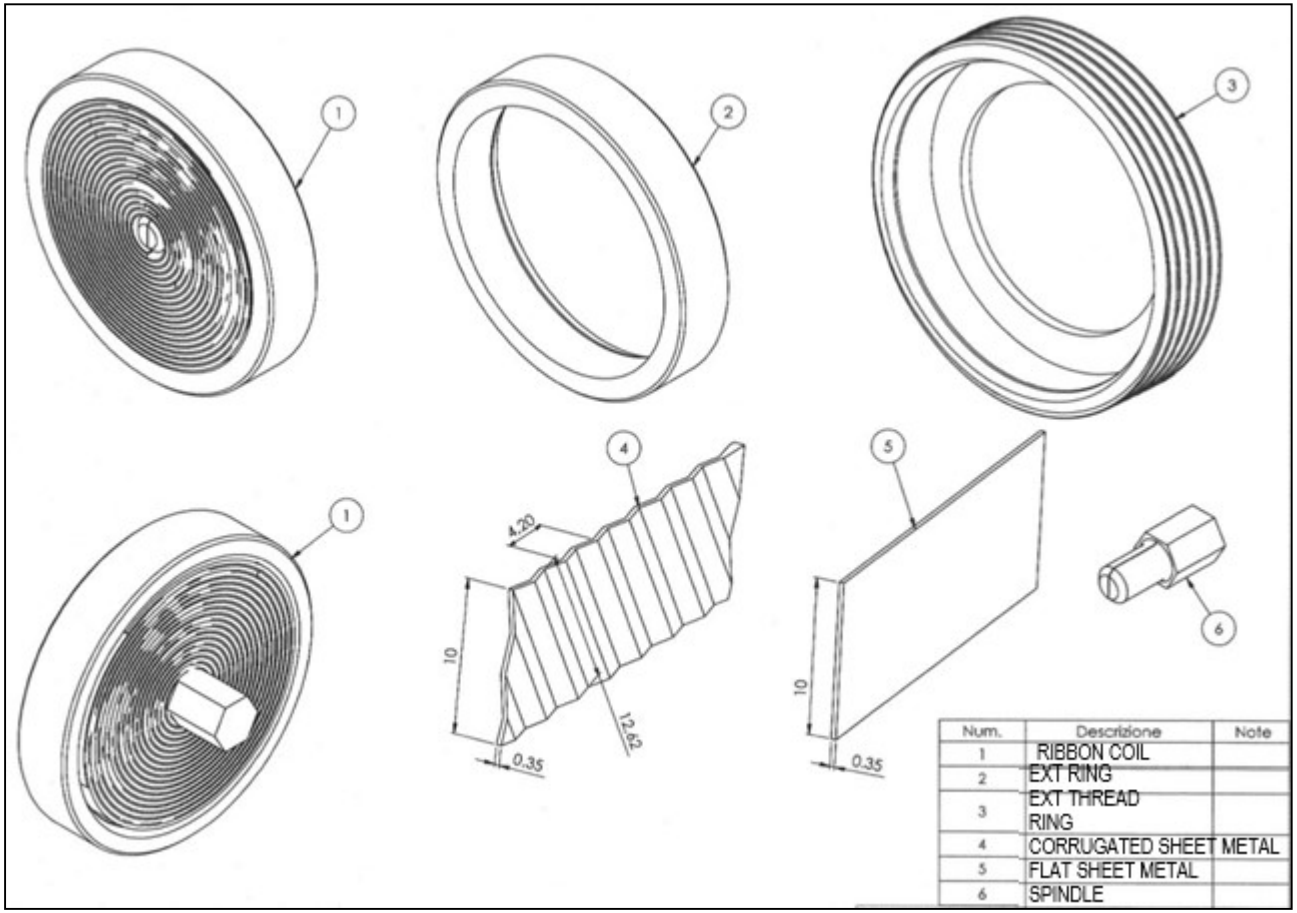


Mod. 197 EN P

ON REQUEST 2" BSPP MALE

SAFETY DEVICE: END-OF-LINE FLAME ARRESTER
Only for Vertical use

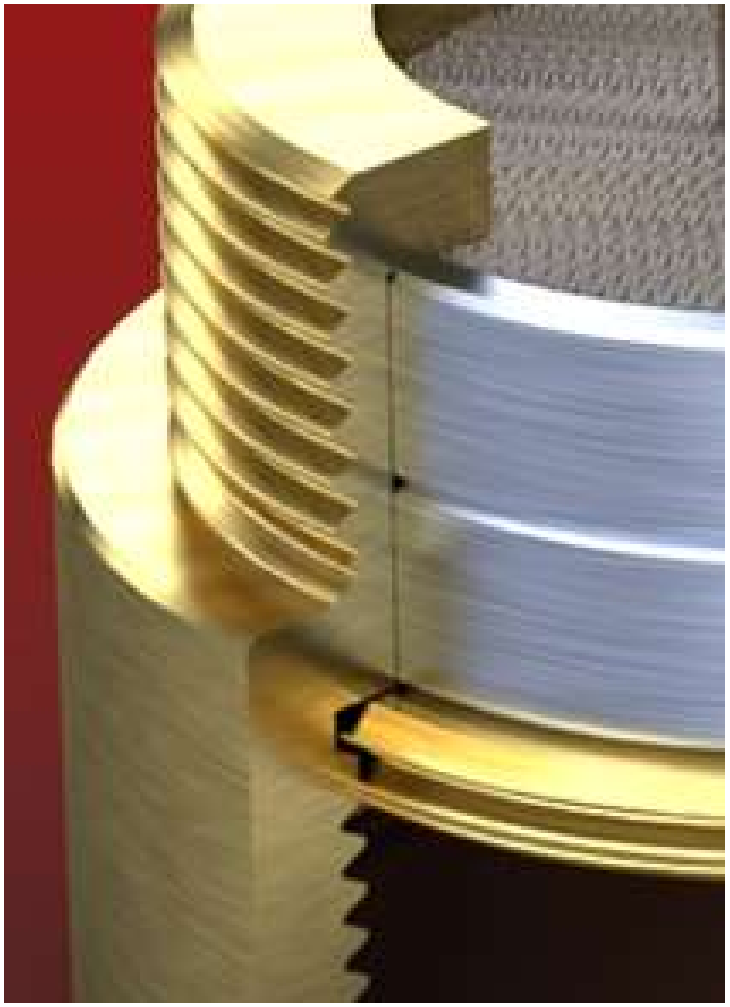
Ribbon-coil



Num.	Descrizione	Note
1	RIBBON COIL	
2	EXT RING	
3	EXT THREAD RING	
4	CORRUGATED SHEET METAL	
5	FLAT SHEET METAL	
6	SPINDLE	

SAFETY DEVICE: FLAME ARRESTER

Device=housing & ribbon-coil



- Ribbon coil-housing fully interference pairing
- Visual check 1:1
- Pressure test 1:1
- Flow test
- Quality at First!
- 100% protection device conformity

Conformity test of the GAP

- GROUP gas IIB3
- MESG >= 0,65 mm (lunghezza 25 mm)
- 12,5 mm minimum passage
- Triangle height 0,35 mm
- Triangle base 4,2 mm

- 0,5 mm PASSAGE
- 0,6 mm NON-PASSAGE

  G II B3
- 0,3 mm PASSAGE
- 0,4 mm NON-PASSAGE

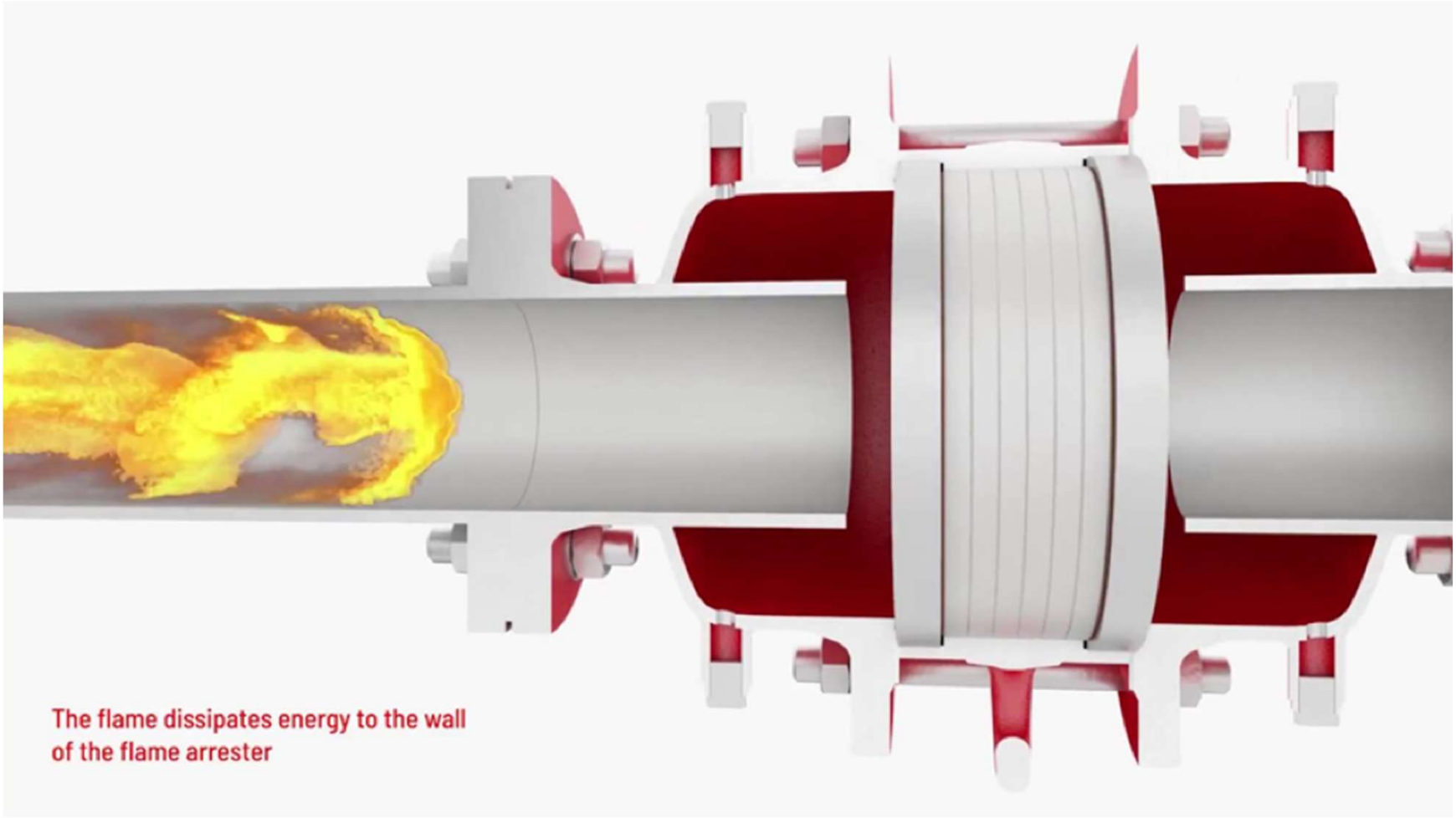
  G II C (hydrogen)

SAFETY DEVICE: FLAME ARRESTER

Ribbon-coil NON COMPLIANT

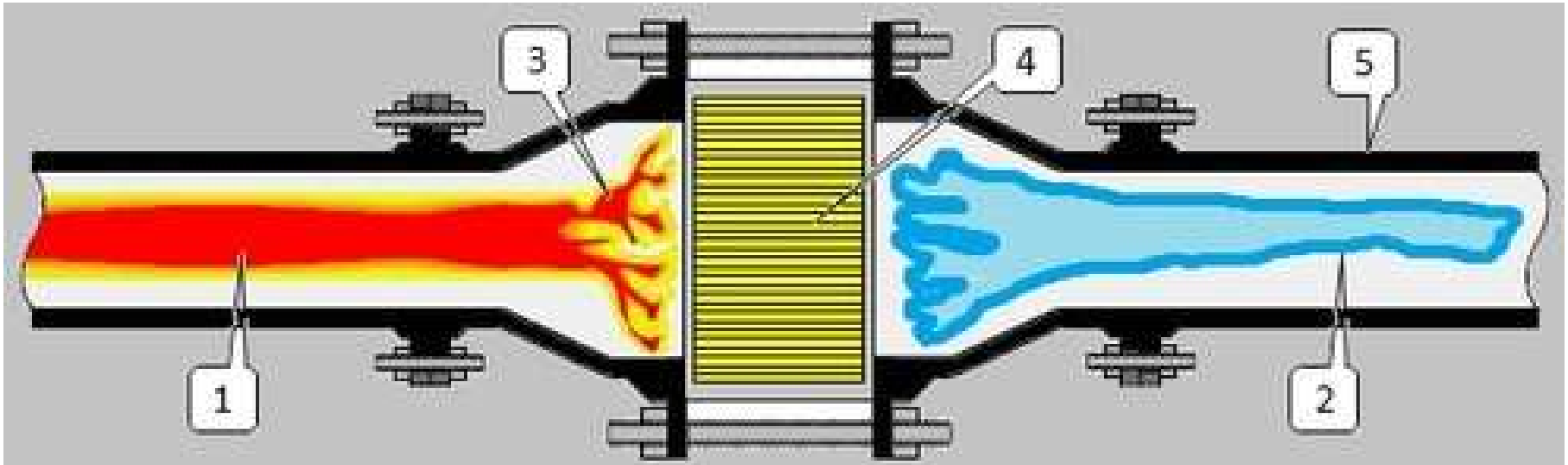
SAFETY DEVICE: FLAME ARRESTER

Deflagration - Detonation



SAFETY DEVICE: IN-LINE FLAME ARRESTER
Safety distance Lu=50 * diameter

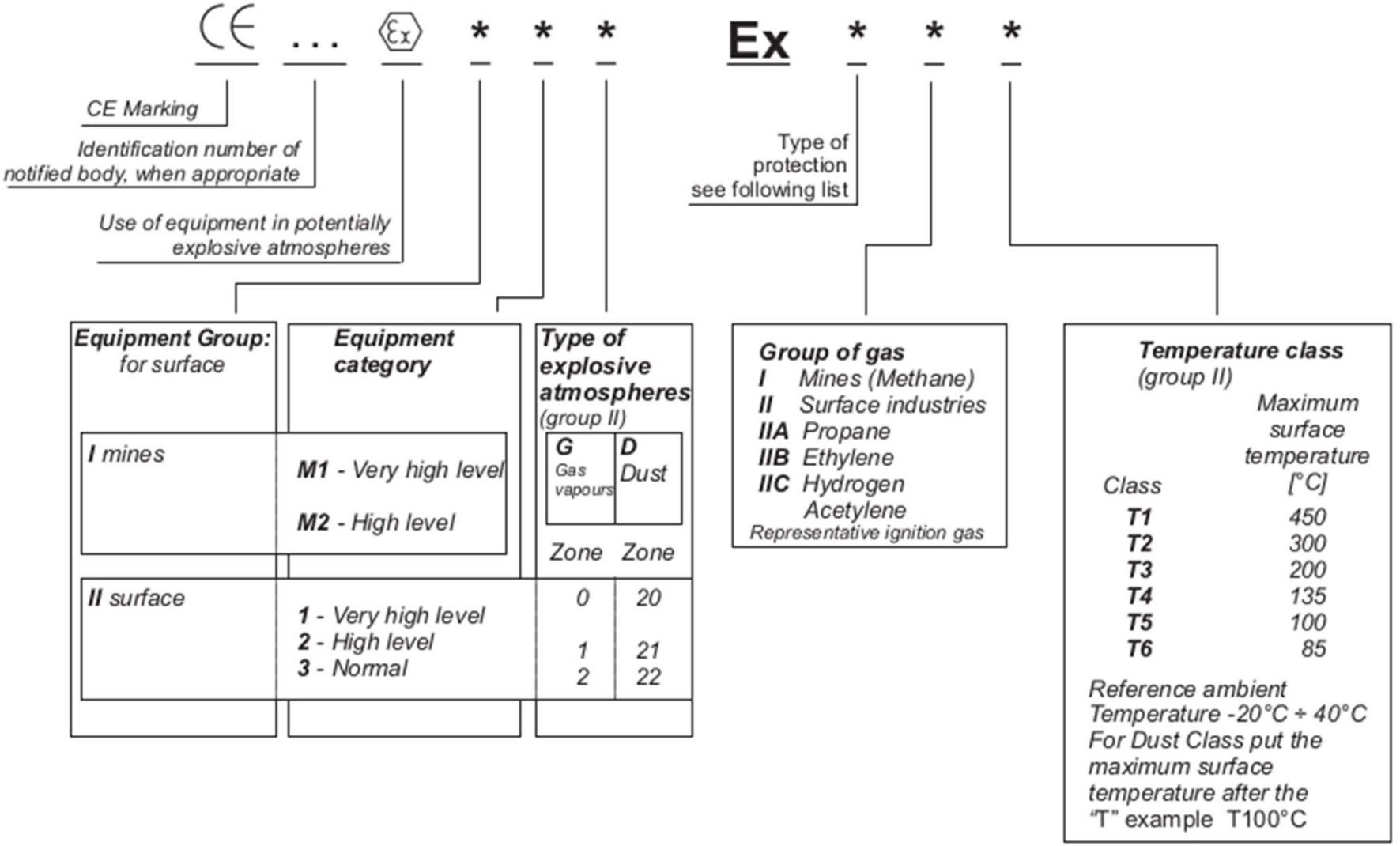
FLAME ARRESTER



1. Exposed Side 2. Protected Side 3. Flame stabilized on arrester element
4. Flame arrester element absorbs and quenches flame front 5. Piping

SAFETY DEVICE: IN-LINE FLAME ARRESTER
Safety distance Lu=50 * diameter

Marking ATEX products



Marking ATEX products

Gruppo Apparecchiatura *group of container*	I	IIA				IIB		IIC
gas o vapore *gas or vapour*	Metano (grisou) *Methane (firedamp)*	Ammoniaca Metano ind. Gas d'altoforno Ossido di Carbonio Propano Butano Pentano Esano Eptano Iso-ottano Decano Benzene Xilene Cicloesano Acetone Etil-metil-chetone	*Ammonia* *Industrial methane* *Blas-furnace gas* *Carbon monoxide* *Propane* *Butane* *Pentane* *Esane* *Eptane* *Iso-octane* *Decane* *Benzene* *Xilene* *Cyclohexane* *Acetone* *Ethyl-methyl-ketone*	Acetato di metile acetato di etile Acetato di n-propile Acetato di n-butile Acetato di amile Cloroetilene Metanolo Etanolo iso-Butanolo n-Butanolo Alcool amilico Nitrito di etilene	*Methyl acetate* *Ethyl acetate* *Normal propyl acetate* *Normal butyl acetate* *Amyl acetate* *Cloroethylene* *Methanol* *Ethanol* *Iso Butanol* *Normal Butanol* *Amyl alcohol* *Ethyl nitrite*	Buta1:3-diene Etilene Etere dietilico Ossido di etilene Gas di città (gas illuminante) Gas di forno a coke	*Buta 1:3-diene* *Ethylene* *Diethyl ether* *Ethylene oxide* *Town gas* *Coke-oven gas*	Idrogeno Acetilene *Hydrogen* *Acetylene*

Marking our ATEX products

- Fittings, Valves and generic components are not safety device marked:

"  II 3 G"

"  II 2 G"

- Overfill prevent valves are safety devices marked:

"  II 1 G c IIB"

"  II 1 G c IIB X"

- Flame-arrestor are safety devices marked :

"  G IIB3 e G IIC "

- Level sensors marked " II 2 G EEx ia IIC T6 IP66" and " II 1 G EEx ia IIC T6«

- Equipment and components of category 2 marked " II 2 G Ex d IIC T6 Gb" and

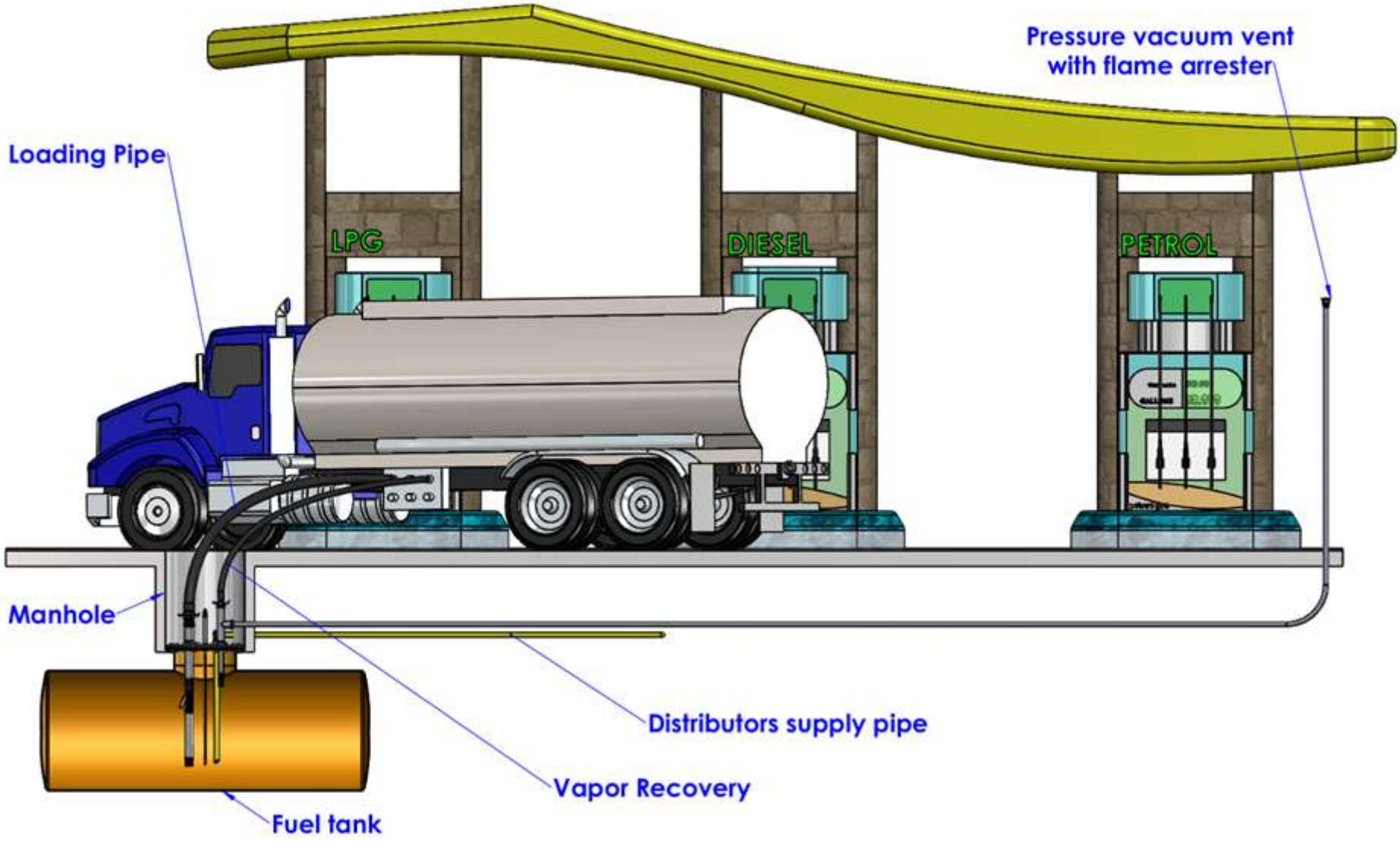
" II 2 D Ex tb IIIC T85 ° C Db IP86"

Marking IN-LINE

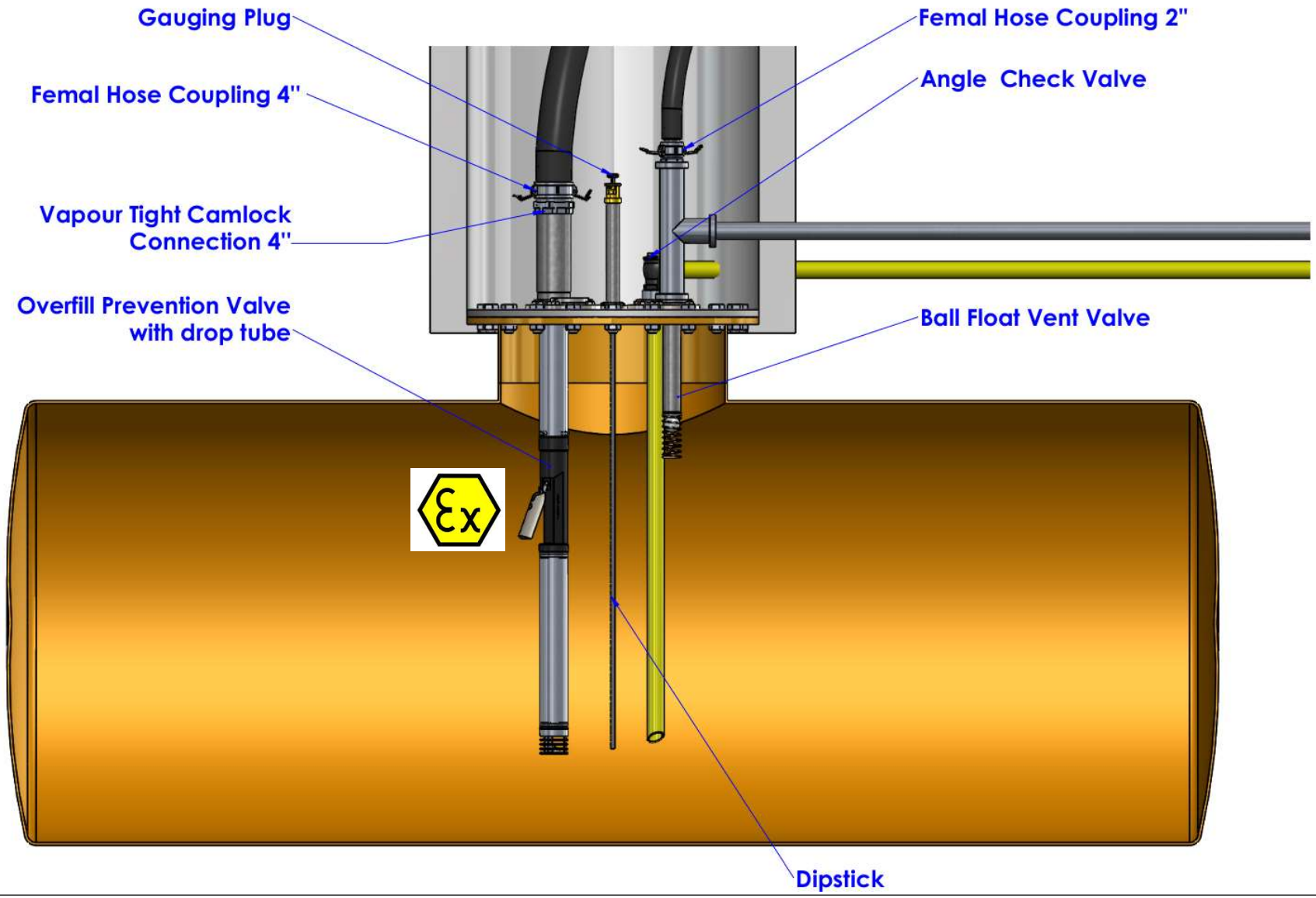
SAFETY DEVICE: IN-LINE FLAME ARRESTER
Safety distance Lu=50 * diameter

Marking END OF-LINE

Max 90% tank loading



Overfill prevent valve



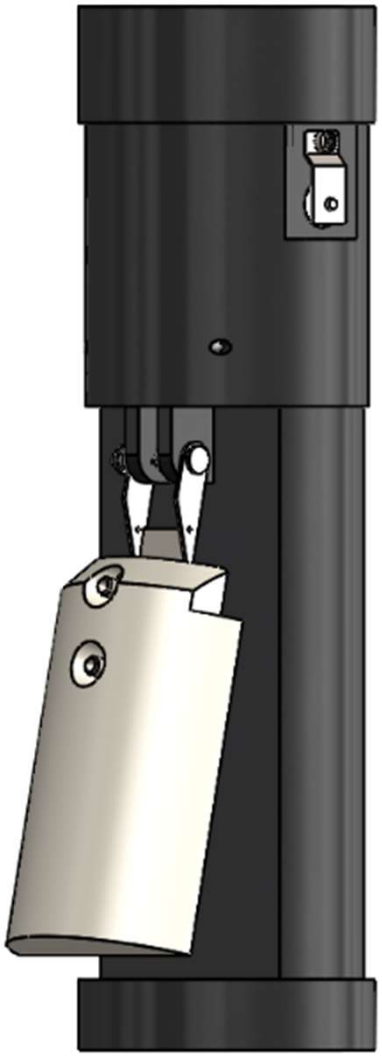
Overfill Prevent Valve

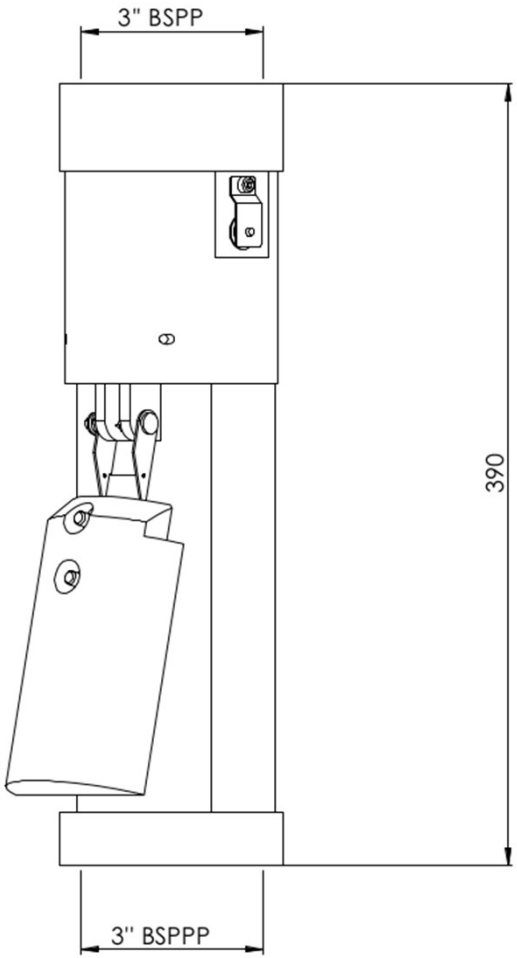
SAFETY DEVICE

ONLY VERTICAL USE
(EXCEPT Mod. 442 OR)

CLOSING LEVEL IS ABOUT
HALF HEIGHT

90% MAX of CAPACITY
example
Tank's Ø 2,480 m valve need 50
cm top tube

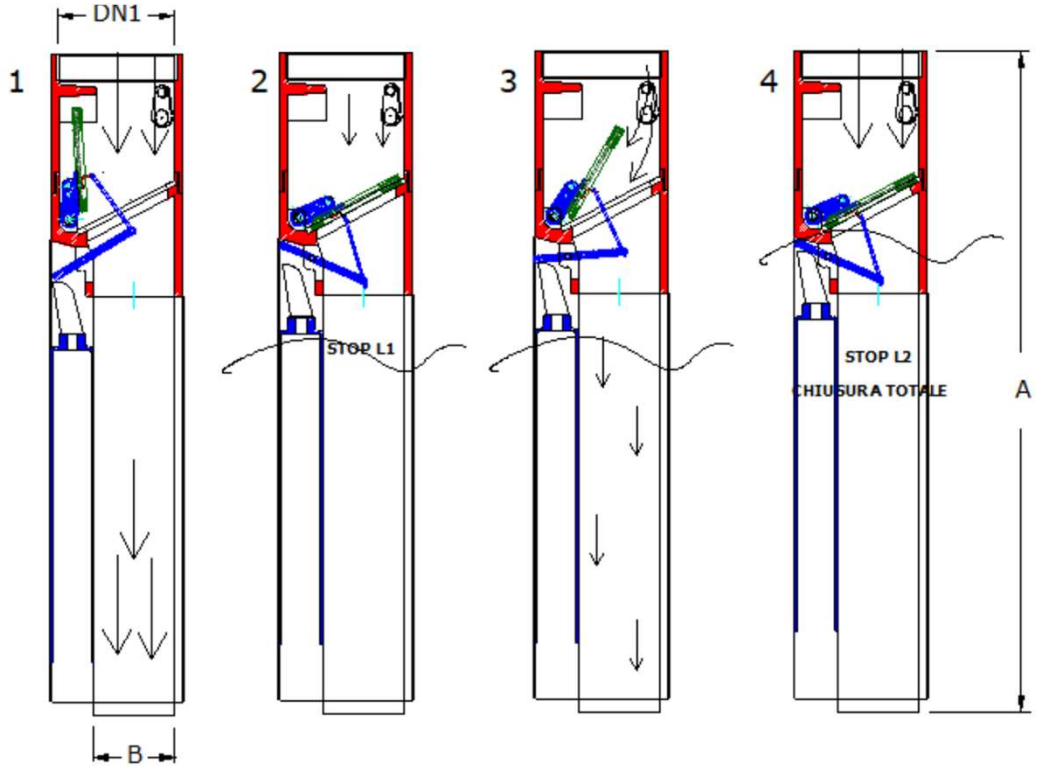




Mod. 442 B

Overfill Prevention Valve

STAINLESS STEEL SAFETY DEVICE



Mod. 442-80 SS

www.ridart.it/support

- DECLARATION of CONFORMITY CE
- USER MANUALS
- PRODUCTION QUALITY CERTIFICATIONS
- CE-TYPE CERTIFICATIONS
- STORED TECHNICAL FILES
- TESTING CERTIFICATE
- TESTING PRODUCTS