



# SAFETY SHIELDS FOR FLANGES AND VALVES

KLINGER Finland Oy



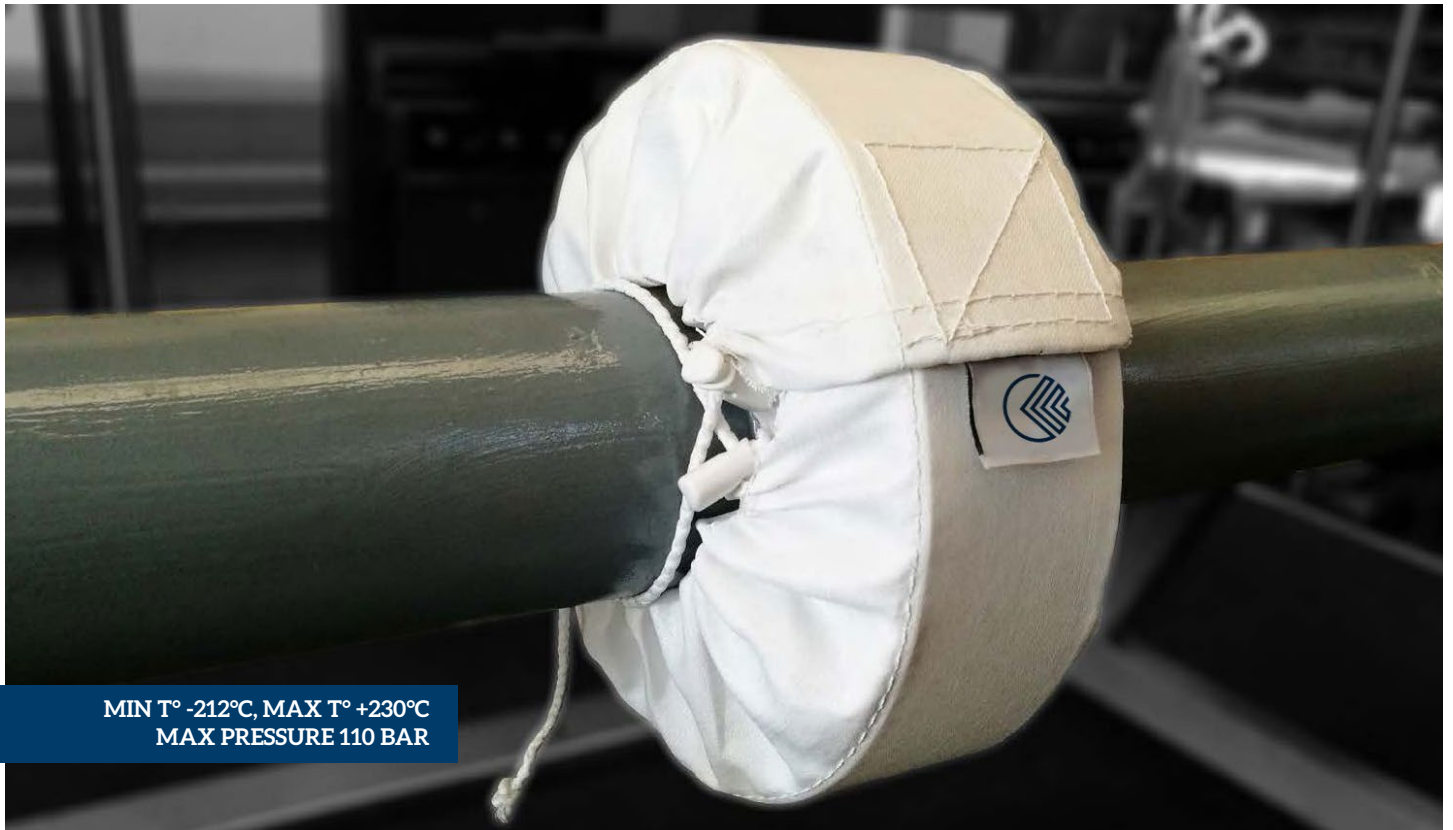
**SECURE SPRAY-OUT PROTECTION**

**HIGH TEMPERATURE AND HIGH  
PRESSURE RESISTANT**

**CERTIFIED PRODUCTS**

# FLANGE SAFETY SHIELDS

SUPERSAFE® LINE



MIN T° -212°C, MAX T° +230°C  
MAX PRESSURE 110 BAR

## SUPERSAFE® 100% PTFE

**Main material:** 100% PTFE;

**Seams material:** expanded PTFE GORE-TEX® TR yarn, flameproof, with ultimate tensile strength 70N;

**Locking system:** velcro with 50 monofilament 2 hooks/cm<sup>2</sup>; ultimate tensile strength 20 daN/cm; Triple layer manufactured with internal reinforcement and double seam;

100% PTFE safety locking cord, with KEMILON safety ends;

Available in standard (UNI EN, ASME) and custom widths;

Certified for SOLAS Ch.II-2 and IMO MSC/Circ. 647 by:

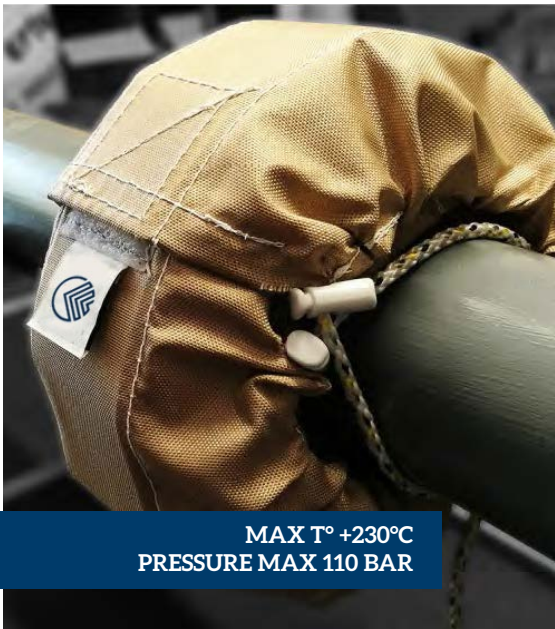
- DNV
- ABS
- BUREAU VERITAS

**RINA certified for:** protective effectiveness tests for the body of the safety shield, at different pressure and temperature values; protective effectiveness tests for locking system of the safety shield, at different pressure and temperature values; failure tensile test.

**Resistant to:**

- chemical products
- high temperature
- high pressure





MAX T° +230°C  
PRESSURE MAX 110 BAR

## SUPERSAFE® ST

**Main material:** porous glass fiber Vetrarte 200/C with PTFE coated yarn by yarn;

**Seams material:** seams in expanded PTFE GORE-TEX® TR yarn, flameproof, with ultimate tensile strength 70N;

**Locking system:** velcro with 50 monofilament hooks/cm<sup>2</sup>; T° MAX +230°C; ultimate tensile strength 20 daN/cm;

Triple layer manufactured with internal reinforcement and double seam; 100% PTFE safety locking cord, with KEMLON safety ends;

Certified for SOLAS Ch.II-2 and IMO MSC/Circ. 647, by:

- DNV
- ABS
- BUREAU VERITAS



RINA certified for safety shield protective effectiveness with high temperature and pressure.



MAX T° +60°C  
PRESSURE MAX 30 BAR

## SUPERSAFE® PVC

**Main material:** 100% polyester fabric with PVC impregnated and specific weight 520 g/m<sup>2</sup>, ultimate tensile strength 2100 kg/5 cm, water resistant, thickness 0,25 mm, solvents and hydrocarbons resistant;

**Seams material:** seams in expanded PTFE GORE-TEX® TR yarn, flameproof, with ultimate tensile strength 70N;

**Locking system:** velcro with 50 monofilament hooks/cm<sup>2</sup>; T° MAX +230°C;

ultimate tensile strength 20 daN/cm;

Triple layer manufactured with internal reinforcement and double seam;

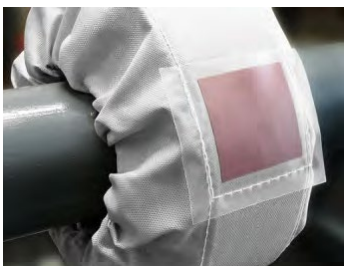
100% PTFE safety locking cord, with KEMLON safety ends;

Recommended for process lines in chemical industries, without critical temperature and chemical resistance conditions.

## ACCESSORIES

All SUPERSAFE® safety shields models are available in standard (UNI EN, ASME) and custom sizes.

SUPERSAFE® ST, SUPERSAFE® 100% PTFE and SUPERSAFE® PVC models could be completed with accessories:



Leakage indicator



"drain" leakage pipe in 100% PTFE mod. 1 (Ø ext. 16 mm) for rubber pipes



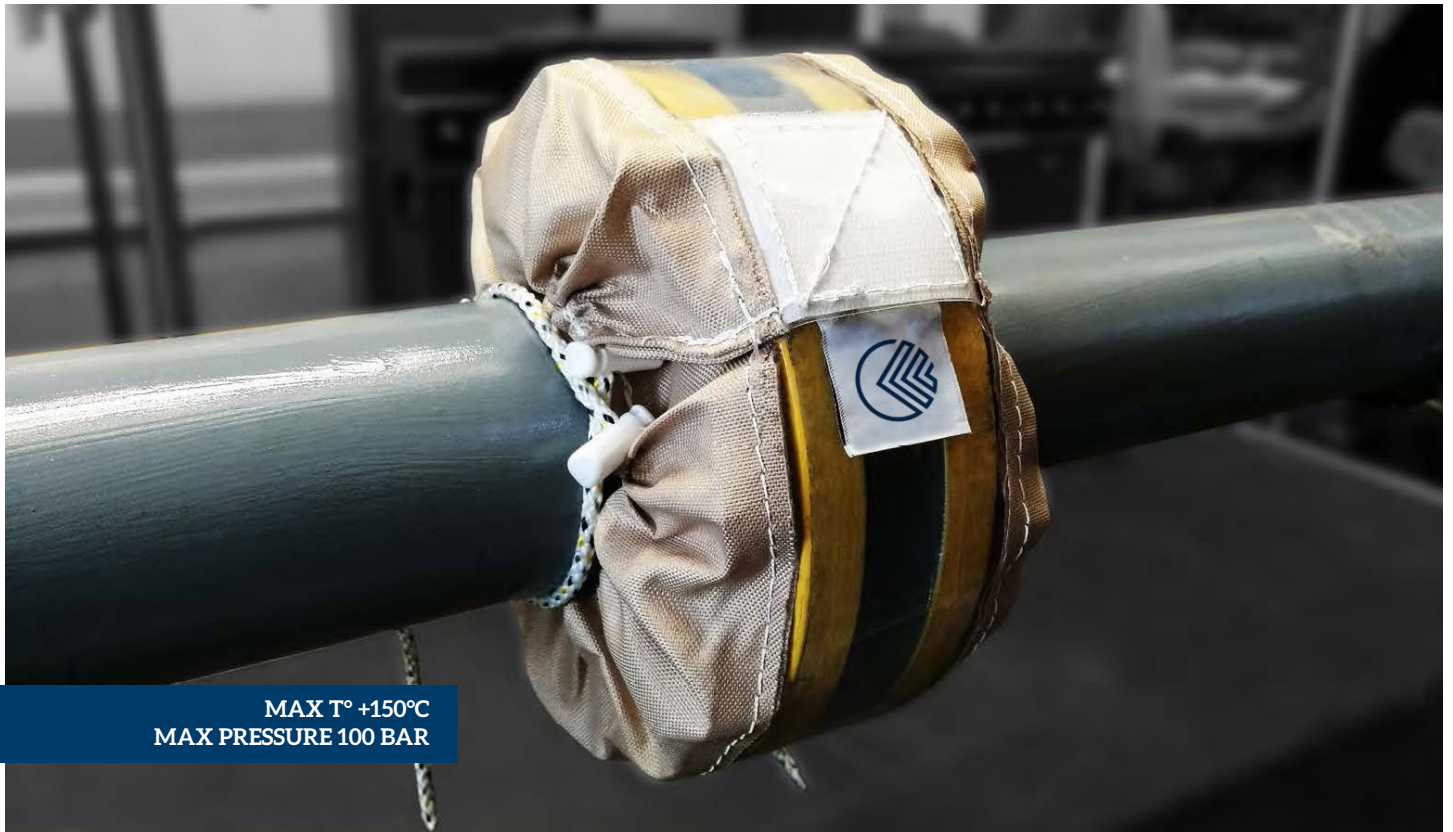
smooth "drain" leakage pipe in 100% PTFE mod. 2 (Ø ext. 12 mm)



antitamper kit (nylon band, steel or nylon/steel lock)

# FLANGE SAFETY SHIELDS

SUPERSAFE® /GARD LINE



MAX T° +150°C  
MAX PRESSURE 100 BAR

## SUPERSAFE® ST/GARD

**Main material:** porous glass fiber Vetrarte 200/C with PTFE coated yarn by yarn;

**Additional material:** transparent central band 3 in 100% PTFE/FEP, density 2,14 gr/cm<sup>3</sup>, thickness 0,5 mm;

**Seams material:** expanded PTFE GORE-TEX® TR yarn, flameproof, with ultimate tensile strength 70N;

**Locking system:** velcro with 50 monofilament 2 hooks/cm ; ultimate tensile strength 20 daN/cm;

Triple layer manufactured with internal reinforcement and double seam;

100% PTFE safety locking cord, with KEMILON safety ends;

Available in standard (UNI EN, ASME) and custom widths;

PVC label, with installation instructions;

Certified for SOLAS Ch.II-2 and IMO MSC/Circ.647 by:

- DNV
- ABS
- BUREAU VERITAS

**RINA certified for: protective effectiveness tests for the body of the safety shield, at different pressure and temperature values; protective effectiveness tests for locking system of the safety shield, at different pressure and temperature values; failure tensile test.**



# SUPERSAFE® 100% PTFE/GARD

**Main material:** 100% PTFE;

**Additional material:** transparent central band in 100% PTFE/FEP, density 2,14 gr/cm<sup>3</sup>, thickness 0,5 mm;

**Seams material:** seams in expanded PTFE GORE-TEX® TR yarn, flameproof, with ultimate tensile strength 70N;

**Locking system:** velcro with 50 monofilament hooks/cm<sup>2</sup>; T° MAX +230°C; ultimate tensile strength 20 daN/cm;

Triple layer manufactured with internal reinforcement and double seam; 100% PTFE safety locking cord, with KEMLON safety ends;

Certified for SOLAS Ch.II-2 and IMO MSC/Circ. 647 by:

- DNV
- ABS
- BUREAU VERITAS
- RINA



# SUPERSAFE® PVC/GARD

**Main material:** 100% polyester fabric with PVC impregnated and specific weight 520 g/m<sup>2</sup>, ultimate tensile strength 2100 kg/5 cm, water resistant, thickness 0,25 mm, solvents and hydrocarbons resistant;

**Additional material:** transparent central band in 100% PTFE/FEP, density 2,14 gr/cm<sup>3</sup>, thickness 0,5 mm;

**Seams material:** seams in expanded PTFE GORE-TEX® TR yarn, flameproof, with ultimate tensile strength 70N;

Locking system: velcro with 50 monofilament hooks/cm<sup>2</sup>; T° MAX +230°C; ultimate tensile strength 20 daN/cm;

Triple layer manufactured with internal reinforcement and double seam; 100% PTFE safety locking cord, with KEMLON safety ends;

Recommended for process lines in chemical industries, without critical temperature and chemical resistance conditions.



## ACCESSORIES

All SUPERSAFE® /GARD safety shields models are available in standard

SUPERSAFE® ST/GARD, SUPERSAFE® 100% PTFE/GARD and SUPERSAFE® PVC/GARD models could be completed with



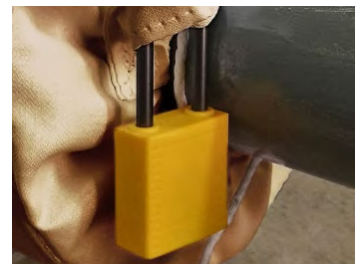
"drain" leakage pipe in 100% PTFE mod. 1 (Ø ext. 16 mm) for rubber pipes



smooth "drain" leakage pipe in 100% PTFE mod. 2 (Ø ext. 12 mm)



antitamper kit (nylon band, steel or nylon/steel lock)



# FLANGE SAFETY SHIELDS

SUPERSAFE® LINE



MAX T° +230°C  
MAX PRESSURE 110 BAR

CONFORM TO THE NORMS  
OF USE AT EXPLOSIVE  
ATMOSPHERE ATEX  
(European Directive 94/9/ce)

## SUPERSAFE® ATEX

Safety shield **for ATEX environmentals** (European Directive 94/9/CE, potential explosive atmosphere environmental, 0-1-2 and 20-21-22 areas, according to CEI 31-30 and CEI 31-66 specifications);

Every single component of SUPERSAFE ATEX presents **antistatic property**;

**Low surface resistance value** ( $3,2 \text{ k}\Omega < 10^9 \text{ k}\Omega$  in accordance to EN 60079-0:2009 standard) for high electrical conductivity;

Manufactured in glass fabric, with each fiber yarn coated by a special black PTFE formula;

Suitable to avoid electrostatic bunching;

Specifically designed to provide **high resistance to chemical substances and extreme temperatures**;

Manufacture in triple layer with internal antiacid reinforce and double sewed;

Available in standard sizes and in custom sizes.

# SPECIAL PROPERTIES SUPERSAFE® ATEX



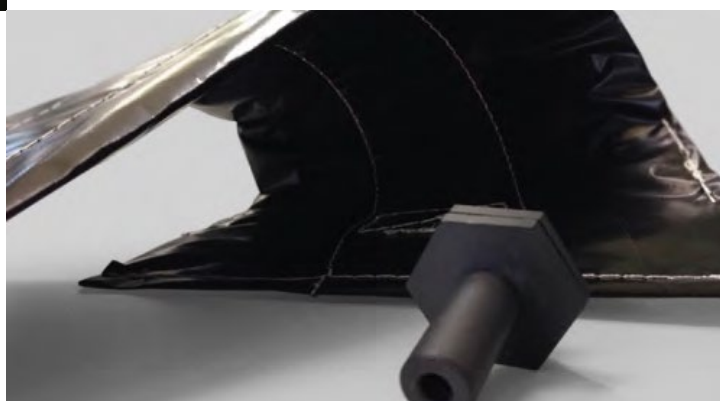
**Locking system:** stretch SILVER-AS lockup in polyamide fabric silver impregnated. Silver filaments allow electrostatic charge dissipation.

SAFELON B-AS **safety locking cord**,  
in high quality braided carbon fiber



**Conductive sewed yarn** I-tech 20, manufactured with polyamide continuous and polyester-stainless steel joint filaments.

Available on request with **DRAIN leakage pipe** in carbon-graphite with low surface resistance for high electrical conductivity



SUPERSAFE® ATEX safety shields are available in standard (UNI EN, ASME) and custom sizes

# FLANGE SAFETY SHIELDS

SUPERSAFE HP®



MAX T° +785°C  
MAX PRESSURE 270 BAR

CONFORM TO THE NORMS  
OF USE AT EXPLOSIVE  
ATMOSPHERE ATEX  
(European Directive 94/9/ce)

## SUPERSAFE HP®

Safety shields **100% stainless steel** AISI 316L (DIN 1.4401) thickness 0,5 mm;

**Internal stainless steel wire mesh**, welded every 4 cm, that works like a „filter“ to absorb the leakage and distribute it around the flange circumference to shut down the pressure and reduce kinetic energy of the leakage;

**Rapid locking system** in stainless steel welded in 4 point, spaced of 1 cm;

Custom-made width (50mm - 75mm - 100mm - 150mm);

Perfectly adapts to round, oval and square flanges;

Pressure resistance and protective effectiveness up to 270 bar;

Temperature resistance **certified** up to +846°C;

Certified for SOLAS Ch.II-2 and IMO MSC/Circ. 647 by:

- ABS
- BUREAU VERITAS

RINA certified for: protective effectiveness tests for the body of the safety shield, at different pressures and temperatures; protective effectiveness tests for the body of the locking system of the safety shield, at different pressures and temperatures; failure tensile tests;

**API FIRE TEST** 6FB certified ;

RINA **certified for JET FIRE** protective effectiveness; ATEX (European Directive 94/9/CE) conformity, to be used in potential explosive atmosphere environmental (0-1-2 and 20-21-22 areas, according to CEI 31-30 and CEI 31-66 specifications);

Conformity to EN10204/3.1B.



ABS



# SUPERSAFE HP DRAIN FLEX®

**Main material:** 100% INOX Steel AISI 316L (DIN 1.4404), thickness 0.5 mm;  
**Additional material:** 100% expanded PTFE with adhesive substrate to stick on the safety flange shield;  
 MAX pressure certified - 76 bar;  
 MAX temperature +270°C;  
 Locking by M6 bolts INOX steel A4;  
 Standard width: 50 mm.; other widths are available by request;  
 Drain pipe, male threaded 1/4" Gas;  
 Test report and inspection report for protective effectiveness and drain capability by RINA;  
 BUREAU VERITAS certified for SOLAS Ch.II-2 and IMO MSC/Circ. 647;  
 Available with antitampering locking system.



## TEST RESULTS OF EFFICACY AND SAFETY OF CAPACITY DRAIN

Pressure, bar	10	20	30	40	50	76
Conveyed fluid, %	99,91	99,86	99,96	99,89	99,93	99,82



MAX T° +270°C  
 MAX PRESSURE 76 BAR



# SUPERSAFE HP DRAIN PYRO®

**Main material:** 100% INOX Steel AISI 316L (DIN 1.4404), thickness 0.5 mm;  
**Additional material:** High temperature graphite joint sealant with carbon fiber and lamina reinforcement;  
 MAX pressure certified - 76 bar;  
 MAX temperature +785°C;  
 Locking by M6 bolts INOX steel A4;  
 Standard width: 50 mm.; other widths are available by request;  
 Drain pipe, male threaded 1/4" Gas;  
 Test report and inspection report for protective effectiveness and drain capability by RINA;  
 BUREAU VERITAS certified for SOLAS Ch.II-2 and IMO MSC/Circ. 647;  
 Test report for jet fire protective effectiveness with RINA inspection report;  
 Test report for protective effectiveness and drain capability;  
 Available with antitampering locking system.



## TEST RESULTS OF EFFICACY AND SAFETY OF CAPACITY DRAIN

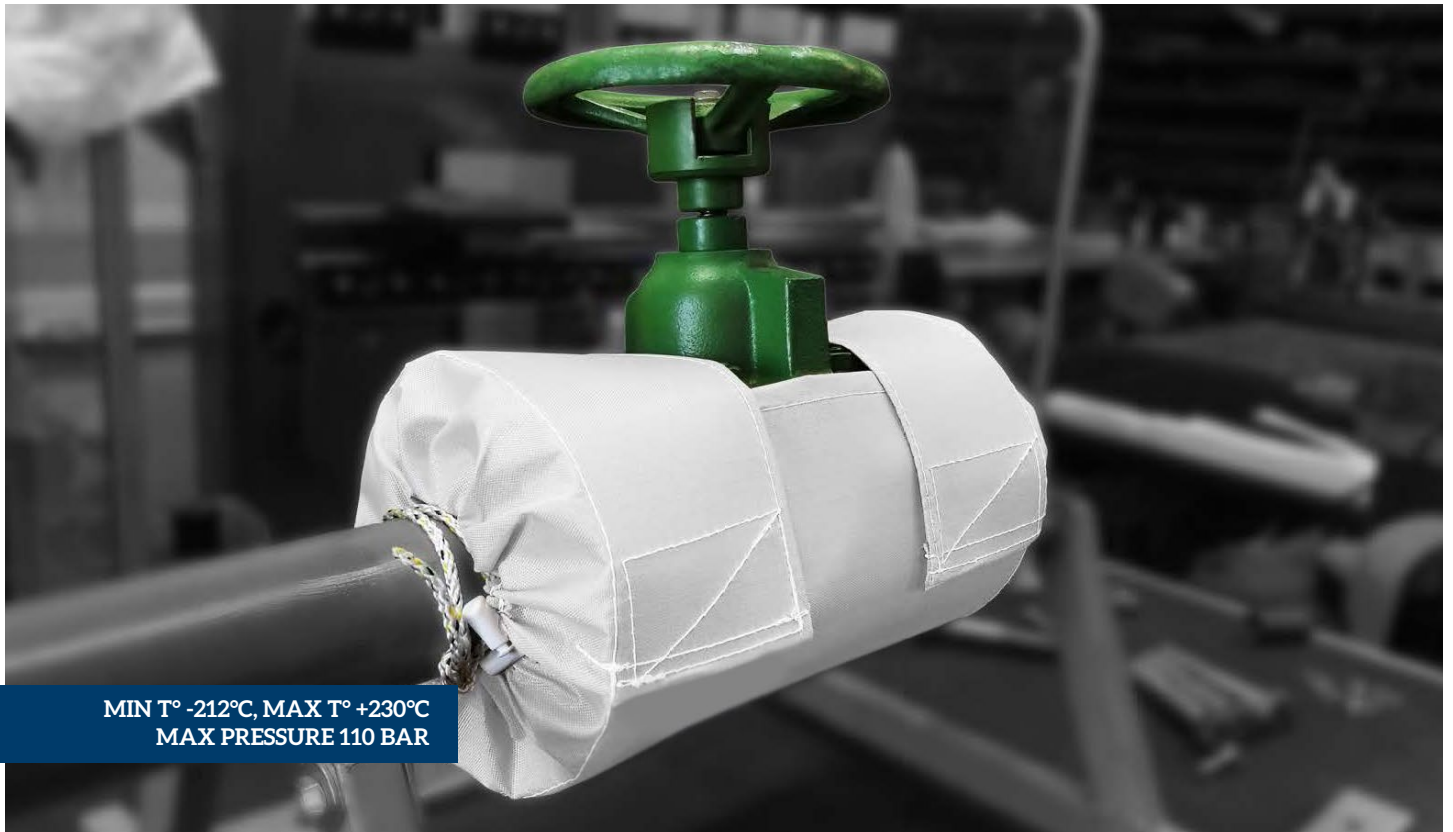
Pressure, bar	10	20	30	40	50	76
Conveyed fluid, %	99,86	99,85	99,69	99,52	99,57	99,42



MAX T° +785°C  
 MAX PRESSURE 76 BAR

# VALVE SAFETY SHIELDS

## V-SUPERSAFE® 100% PTFE



MIN T° -212°C, MAX T° +230°C  
MAX PRESSURE 110 BAR

## V-SUPERSAFE® 100% PTFE FOR DIAPHRAGM VALVE

**Main material:** 100% PTFE;

**Seams material:** expanded PTFE GORE-TEX®

TR yarn, flameproof, with ultimate tensile strength 70N;

**Locking system:** velcro with 50 monofilament 2 hooks/cm;  
ultimate tensile strength 20 daN/cm;

Triple layer manufactured with internal reinforcement  
and double seam;

100% PTFE safety locking cord, with KEMLON safety ends;

Available in standard (UNI EN, ASME) and custom widths;

PVC label, with installation instructions;

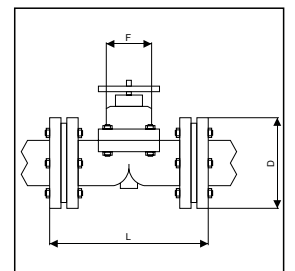
Certified for SOLAS Ch.II-2 and IMO MSC/Circ. 647 by:

- DNV
- ABS
- BUREAU VERITAS

RINA certified for: protective effectiveness tests for the body  
of the safety shield, at different pressure and temperature  
values; protective effectiveness tests for locking system  
of the safety shield, at different pressure and temperature  
values; failure tensile test.

To order V-SUPERSAFE 100% PTFE for  
diaphragm valves the following  
sizes are required:

L = distance between flanges;  
D = maximum flanges circumference;  
F = handwheel base circumference.



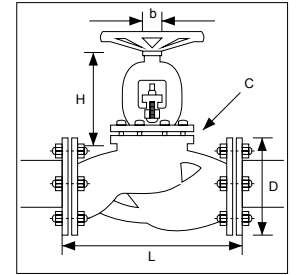


T° MIN -212°C, T° MAX +230°C  
MAX PRESSURE 110 BAR

## V-SUPERSAFE® 100% PTFE FOR GATE VALVE

The V-SUPERSAFE 100% PTFE for gate valves is manufactured in two pieces, one is to protect flanges and the other is for the bonnet, to joint during installation to cover completely the valve. To order V-SUPERSAFE 100% PTFE for gate valves the following sizes are required:

- L = distance between flanges;
- C = base bonnet circumference;
- D = max flanges circumference;
- b = base handwheel circumference;
- H = distance between bonnet base and handwheel base.

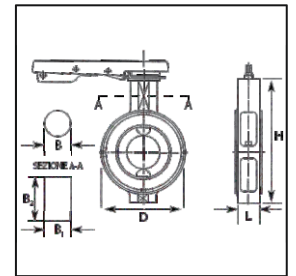


T° MIN -212°C, T° MAX +230°C  
MAX PRESSURE 110 BAR

## V-SUPERSAFE® 100% PTFE FOR BUTTERFLY VALVE

To order V-SUPERSAFE 100% PTFE for butterfly valves the following sizes are required:

- L = distance between flanges;
- D = maximum flanges circumferences;
- H = distance between the base of the valve and the base of the lever;
- B = A-A section circumference;
- or
- B<sub>1</sub>, B<sub>2</sub> = length of the A-A section sides.

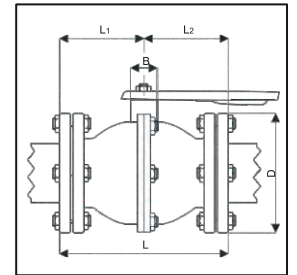


T° MIN -212°C, T° MAX +230°C  
MAX PRESSURE 110 BAR

## V-SUPERSAFE® 100% PTFE FOR BALL VALVE

To order V-SUPERSAFE 100% PTFE for ball valves the following sizes are required:

- L = distance between flanges;
- L = distance between one flange and the axis of the 1 shaft of the lever;
- L = distance between the other flange and the axis of 2 the shaft of the lever;
- D = maximum flanges circumference;
- B = base-lever circumference.



## ACCESSORIES

All V-SUPERSAFE® valve safety shields models are available in standard (UNI EN, ASME) and custom sizes

The valve safety shield V-SUPERSAFE 100% PTFE model could be completed with accessories:



# VALVE SAFETY SHIELDS

V-SUPERSAFE® 100% PTFE/GARD



## V-SUPERSAFE® 100% PTFE/GARD FOR GATE VALVE

**Main material:** 100% PTFE;

**Seams material:** expanded PTFE GORE-TEX®

TR yarn, flameproof, with ultimate tensile strength 70N;

**Locking system:** velcro with 50 monofilament 2 hooks/cm;  
ultimate tensile strength 20 daN/cm;

Triple layer manufactured with internal reinforcement  
and double seam;

100% PTFE safety locking cord, with KEMILON safety ends;

Available in standard (UNI EN, ASME) and custom widths;

PVC label, with installation instructions;

Certified for SOLAS Ch.II-2 and IMO MSC/Circ. 647 by:

- DNV
- ABS
- BUREAU VERITAS

RINA certified for protective effectiveness of the safety shield  
at different pressure and temperature values.

To order V-SUPERSAFE 100% PTFE/  
GARD for gate valves the following  
sizes are required:

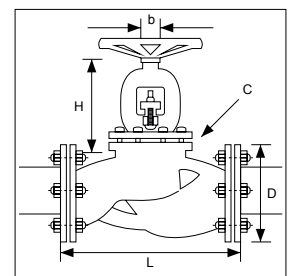
L = distance between flanges;

C = base bonnet circumference;

D = max flanges circumference;

b = base handwheel circumference;

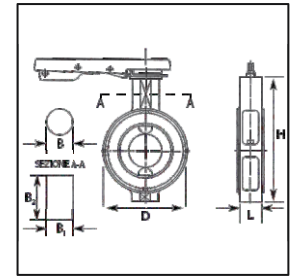
H = distance between bonnet  
base and handwheel base.



## V-SUPERSAFE® 100% PTFE/ GARD FOR BUTTERFLY VALVE

To order V-SUPERSAFE 100% PTFE/GARD for butterfly valves the following sizes are required:

- L = distance between flanges;
- D = maximum flanges circumferences;
- H = distance between the base of the valve and the base of the lever;
- B = A-A section circumference;
- or
- $B_1, B_2$  = length of the A-A section sides.

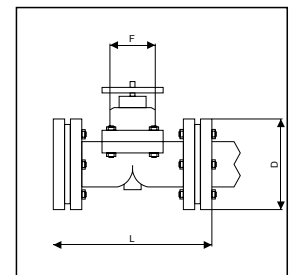


T° MAX +150°C  
MAX PRESSURE 100 BAR

## V-SUPERSAFE® 100% PTFE/ GARD FOR DIAPHRAGM VALVE

The safety valve V-SUPERSAFE 100% PTFE/GARD for diaphragm valves, manufactured in a single piece, completely protects the valve except the handwheel. To order V-SUPERSAFE 100% PTFE/GARD for diaphragm valves the following sizes are required:

- L = distance between flanges;
- D = maximum flanges circumference;
- F = handwheel base circumference.

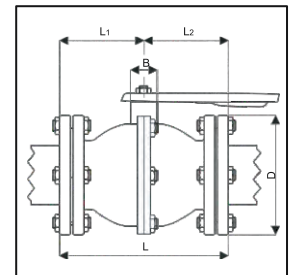


T° MAX +150°C  
MAX PRESSURE 100 BAR

## V-SUPERSAFE® 100% PTFE/ GARD FOR BALL VALVE

To order V-SUPERSAFE 100% PTFE/GARD for ball valves the following sizes are required:

- L = distance between flanges;
- L = distance between one flange and the axis of the 1 shaft of the lever;
- L = distance between the other flange and the axis of 2 the shaft of the lever;
- D = maximum flanges circumference;
- B = base-lever circumference.

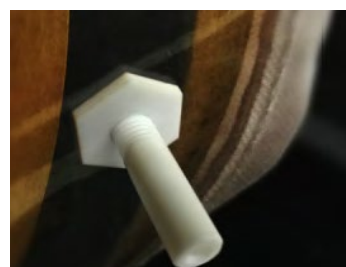
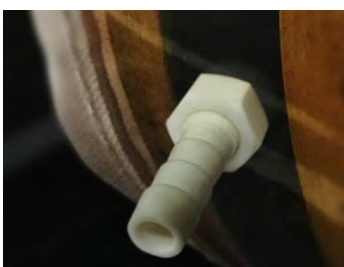


T° MAX +150°C  
MAX PRESSURE 100 BAR

## ACCESSORIES

All V-SUPERSAFE GARD valve safety shields models are available in standard (UNI EN, ASME) and custom sizes

The valve safety shield V-SUPERSAFE® 100% PTFE/GARD model could be completed with accessories:



# VALVE SAFETY SHIELDS

## V-SUPERSAFE® ST



MAX T° +230°C  
MAX PRESSURE 110 BAR

## V-SUPERSAFE® ST FOR BUTTERFLY VALVE

**Main material:** porous glass fiber Vetrarte 200/C with PTFE coated yarn by yarn;

**Seams material:** expanded PTFE GORE-TEX® TR yarn, flameproof, with ultimate tensile strength 70N;

**Locking system:** velcro with 50 monofilament 2 hooks/cm ; ultimate tensile strength 20 daN/cm; Triple layer manufactured with internal reinforcement and double seam; 100% PTFE safety locking cord, with KEMLON safety ends; Available in standard (UNI EN, ASME) and custom widths; Certified for SOLAS Ch.II-2 and IMO MSC/Circ. 647 by:

- DNV
- ABS
- BUREAU VERITAS

RINA certified for protective effectiveness of the safety shield at different pressure and temperature values.

To order V-SUPERSAFE ST for butterfly valves the following sizes are required:

L = distance between flanges;

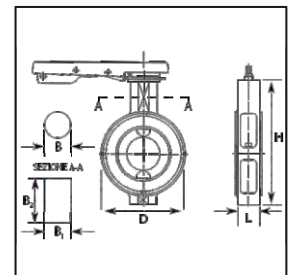
D = maximum flanges circumferences;

H = distance between the base of the valve and the base of the lever;

B = A-A section circumference;

or

$B_1, B_2 = A-A$  section sides length.



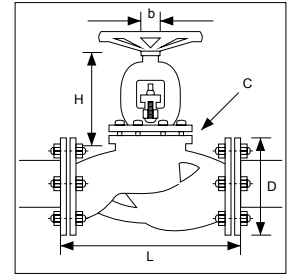


**T° MAX +230°C  
MAX PRESSURE 110 BAR**

## V-SUPERSAFE® ST FOR GATE VALVE

The V-SUPERSAFE ST for gate valves is manufactured in two pieces, one is to protect flanges and the other is for the bonnet, to joint during installation to cover completely the valve. To order V-SUPERSAFE ST for gate valves the following sizes are required:

L = distance between flanges; C = base bonnet circumference; D = max flanges circumference; b = base handwheel circumference; H = distance between bonnet base and handwheel base.



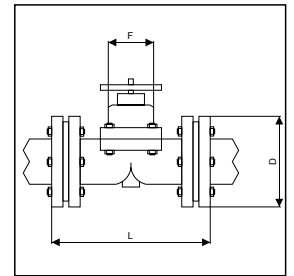
**T° MAX +230°C  
MAX PRESSURE 110 BAR**

## V-SUPERSAFE® ST FOR DIAPHRAGM VALVE

The safety valve V-SUPERSAFE ST for diaphragm valves, manufactured in a single piece, completely protects the valve except the handwheel.

To order V-SUPERSAFE ST for diaphragm valves the following sizes are required:

L = distance between flanges;  
D = maximum flanges circumference;  
F = handwheel base circumference.

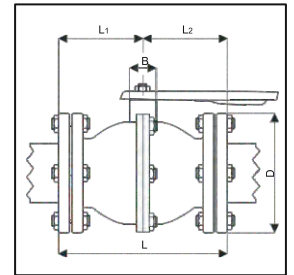


**T° MAX +230°C  
MAX PRESSURE 110 BAR**

## V-SUPERSAFE® ST FOR BALL VALVE

To order V-SUPERSAFE ST for ball valves the following sizes are required:

L = distance between flanges;  
L = distance between one flange and the axis of the 1 shaft of the lever;  
L = distance between the other flange and the axis of 2 the shaft of the lever;  
D = maximum flanges circumference;  
B = base-lever circumference.



## ACCESSORIES

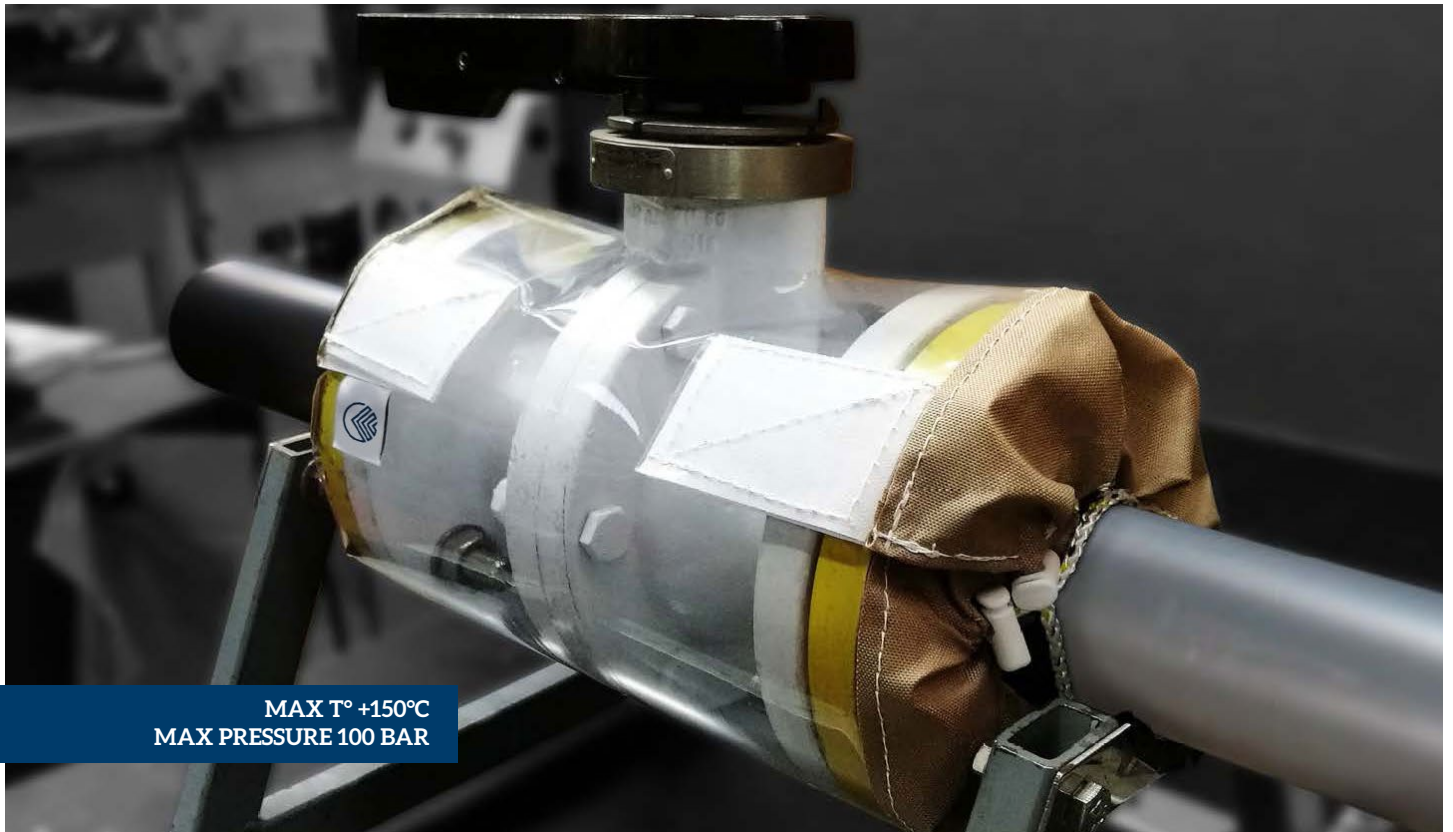
All V-SUPERSAFE valve safety shields models are available in standard (UNI EN, ASME) and custom sizes

The valve safety shield V-SUPERSAFE® ST model could be completed with accessories:



# VALVE SAFETY SHIELDS

## V-SUPERSAFE® ST/GARD



MAX T° +150°C  
MAX PRESSURE 100 BAR

## V-SUPERSAFE® ST/GARD FOR BALL VALVE

**Main material:** porous glass fiber Vetrarte 200/C with PTFE coated yarn by yarn;

**Additional material:** transparent central band 3 in 100% PTFE/FEP, density 2,14 gr/cm, thickness 0,5 mm;

**Seams material:** expanded PTFE GORE-TEX® TR yarn, flameproof, with ultimate tensile strength 70N;

**Locking system:** velcro with 50 monofilament 2 hooks/cm; ultimate tensile strength 20 daN/cm; Triple layer manufactured with internal reinforcement and double seam;

100% PTFE safety locking cord, with KEMLON safety ends; Available in standard (UNI EN, ASME) and custom widths; Certified for SOLAS Ch.II-2 and IMO MSC/Circ. 647 by:

- DNV
- ABS
- BUREAU VERITAS

RINA certified for protective effectiveness of the safety shield at different pressure and temperature values.

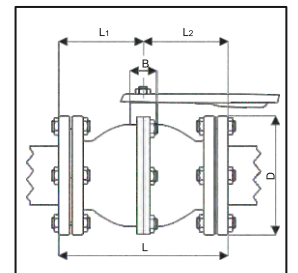
To order V-SUPERSAFE ST/GARD for ball valves the following sizes are required:

L = distance between flanges;

L = distance between one flange and the axis of the shaft 1 of the lever;

L = distance between the other 2 flange and the axis of the shaft of the lever;

D = maximum flanges circumference;

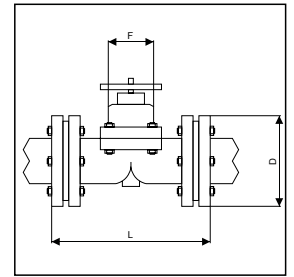


## V-SUPERSAFE® ST/GARD FOR DIAPHRAGM VALVE

The safety valve V-SUPERSAFE ST/GARD for diaphragm valves, manufactured in a single piece, completely protects the valve except the handwheel.

To order V-SUPERSAFE ST/GARD for diaphragm valves the following sizes are required:

- L = distance between flanges;
- D = maximum flanges circumference;
- F = handwheel base circumference.

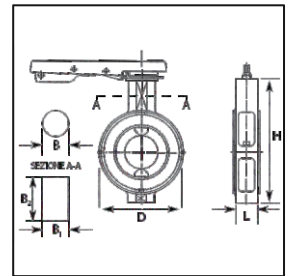


T° MAX +150°C  
MAX PRESSURE 100 BAR

## V-SUPERSAFE® ST/GARD FOR BUTTERFLY VALVE

To order V-SUPERSAFE ST/GARD for butterfly valves the following sizes are required:

- L = distance between flanges;
- D = maximum flanges circumferences;
- H = distance between the base of the valve and the base of the lever;
- B = A-A section circumference;
- or
- B<sub>1</sub>, B<sub>2</sub> = length of the A-A section sides.

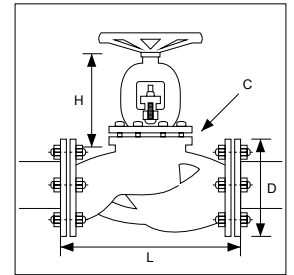


T° MAX +150°C  
MAX PRESSURE 100 BAR

## V-SUPERSAFE® ST/GARD FOR GATE VALVE

The V-SUPERSAFE ST/GARD for gate valves is manufactured in two pieces, one is to protect flanges and the other is for the bonnet, to joint during installation to cover completely the valve. To order V-SUPERSAFE ST/GARD for gate valves the following sizes are required:

- L = distance between flanges; C = base bonnet circumference;
- D = max flanges circumference; b = base handwheel circumference; H = distance between bonnet base and handwheel base.



T° MAX +150°C  
MAX PRESSURE 100 BAR

## ACCESSORIES

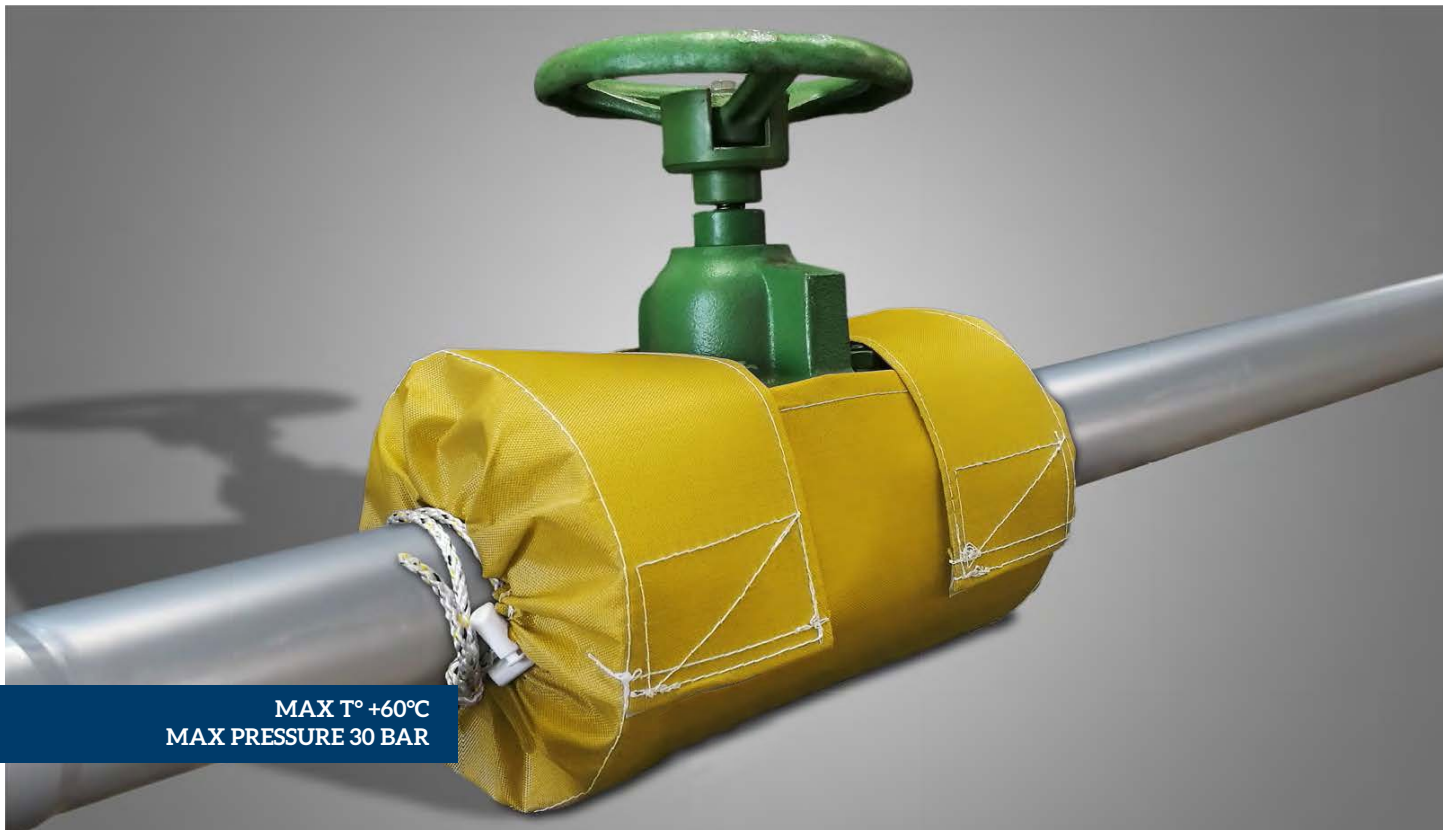
All V-SUPERSAFE GARD valve safety shields models are available in standard (UNI EN, ASME) and custom sizes

The valve safety shield V-SUPERSAFE ST/GARD model could be completed with accessories:



# VALVE SAFETY SHIELDS

V-SUPERSAFE® PVC



## V-SUPERSAFE® PVC FOR DIAPHRAGM VALVE

**Main material:** 100% polyester fabric with PVC impregnated and specific weight 520 g/ml , ultimate tensile strength 2100 kg/5 cm, water resistant, thickness 0,25 mm, solvents and hydrocarbons resistant;

**Seams material:** seams in expanded PTFE GORE-TEX® TR yarn, flameproof, with ultimate tensile strength 70N;

**Locking system:** velcro with 50 monofilament 2 hooks/cm ; T° MAX +230°C; ultimate tensile strength 20 daN/cm;  
Triple layer manufactured with internal reinforcement and double seam;  
100% PTFE safety locking cord, with KEMLON safety ends;  
Recommended for process lines in chemical industries, without critical temperature and chemical resistance conditions.

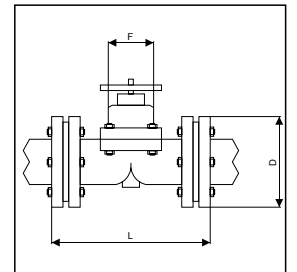
The safety valve V-SUPERSAFE PVC for diaphragm valves, manufactured in a single piece, completely protects the valve except the handwheel.

To order V-SUPERSAFE PVC for diaphragm valves the following sizes are required:

L = distance between flanges;

D = maximum flanges circumference;

F = handwheel base circumference





T° MAX +60°C  
MAX PRESSURE 30 BAR

## V-SUPERSAFE® PVC FOR BUTTERFLY VALVE

To order V-SUPERSAFE PVC for butterfly valves the following sizes are required:

L = distance between flanges;

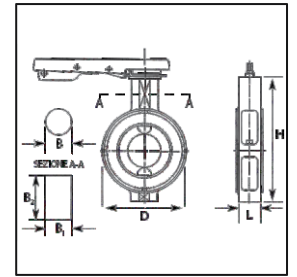
D = maximum flanges circumferences;

H = distance between the base of the valve and the base of the lever;

B = A-A section circumference;

or

B<sub>1</sub>, B<sub>2</sub> = length of the A-A section sides.



T° MAX +60°C  
MAX PRESSURE 30 BAR

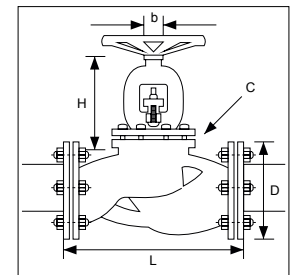
## V-SUPERSAFE® PVC FOR GATE VALVE

The V-SUPERSAFE PVC for gate valves is manufactured in two pieces, one is to protect flanges and the other is for the bonnet, to joint during installation to cover completely the valve. To order V-SUPERSAFE PVC for gate valves the following sizes are required:

L = distance between flanges; C = base bonnet circumference;

D = max flanges circumference; b =

base handwheel circumference; H = distance between bonnet base and handwheel base.



T° MAX +60°C  
MAX PRESSURE 30 BAR

## V-SUPERSAFE® PVC FOR BALL VALVE

To order V-SUPERSAFE PVC for ball valves the following sizes are required:

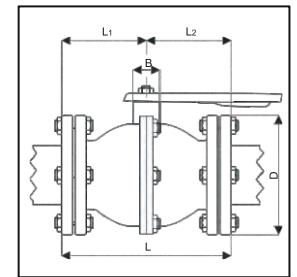
L = distance between flanges;

L = distance between one flange and the axis of the 1 shaft of the lever;

L = distance between the other flange and the axis of 2 the shaft of the lever;

D = maximum flanges circumference;

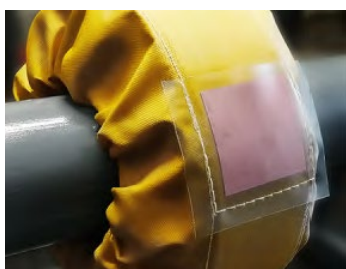
B = base-lever circumference.



## ACCESSORIES

All V-SUPERSAFE valve safety shields models are available in standard (UNI EN, ASME) and custom sizes

The valve safety shield V-SUPERSAFE PVC model could be completed with accessories:



# VALVE SAFETY SHIELDS

V-SUPERSAFE® PVC/GARD



MAX T° +60°C  
MAX PRESSURE 30 BAR

## V-SUPERSAFE® PVC/GARD FOR BUTTERFLY VALVE

**Main material:** 100% polyester fabric with PVC impregnated and specific weight 520 g/ml, ultimate tensile strength 2100 kg/5 cm, water resistant, thickness 0,25 mm, solvents and hydrocarbons resistant;

**Additional material:** transparent central 3 band in 100% PTFE/FEP, density 2,14 gr/cm<sup>3</sup>, thickness 0,5 mm;

**Seams material:** seams in expanded PTFE GORE-TEX® TR yarn, flameproof, with ultimate tensile strength 70N;

**Locking system:** velcro with 50 monofilament 2 hooks/cm ; ultimate tensile strength 20 daN/cm;

Triple layer manufactured with internal reinforcement and double seam;

100% PTFE safety locking cord, with KEMLON safety ends;

Recommended for process lines in chemical industries, without critical temperature and chemical resistance conditions.

The safety valve, V-SUPERSAFE PVC/GARD for butterfly valves manufactured in a single piece, completely protects the valve except the handwheel. To order V-SUPERSAFE PVC/GARD for butterfly valves the following sizes are required:

L = distance between flanges;

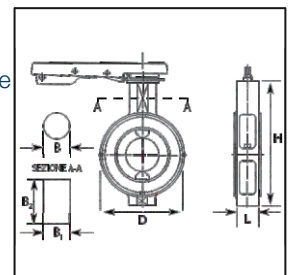
D = maximum flanges circumferences;

H = distance between the base of the valve and the base of the lever;

B = A-A section circumference;

or

B<sub>1</sub>, B<sub>2</sub> = length of the A-A section sides.





T° MAX +60°C  
MAX PRESSURE 30 BAR

## V-SUPERSAFE® PVC/GARD FOR BALL VALVE

To order V-SUPERSAFE PVC/GARD for ball valves the following sizes are required:

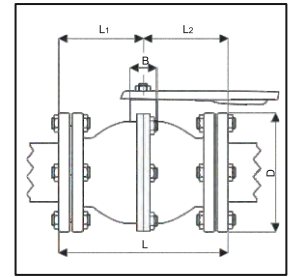
L = distance between flanges;

L = distance between one flange and the axis of the 1 shaft of the lever;

L = distance between the other flange and the axis of 2 the shaft of the lever;

D = maximum flanges circumference;

B = base-lever circumference.

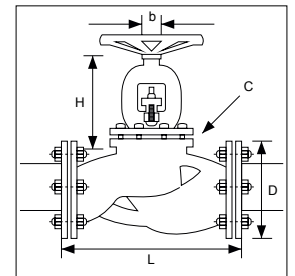


T° MAX +60°C  
MAX PRESSURE 30 BAR

## V-SUPERSAFE® PVC/GARD FOR GATE VALVE

The V-SUPERSAFE PVC/GARD for gate valves is manufactured in two pieces, one is to protect flanges and the other is for the bonnet, to joint during installation to cover completely the valve. To order V-SUPERSAFE PVC/GARD for gate valves the

following sizes are required: L = distance between flanges; C = base bonnet circumference; D = max flanges circumference; b = base handwheel circumference; H = distance between bonnet base and handwheel base.



T° MAX +60°C  
MAX PRESSURE 30 BAR

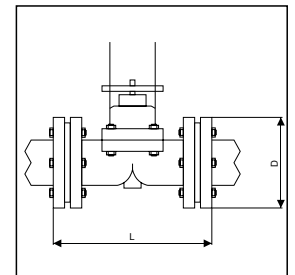
## V-SUPERSAFE® PVC/GARD FOR DIAPHRAGM VALVE

The safety valve V-SUPERSAFE PVC/GARD for diaphragm valves, manufactured in a single piece, completely protects the valve except the handwheel. To order V-SUPERSAFE PVC/GARD for diaphragm valves the following sizes are required:

L = distance between flanges;

D = maximum flanges circumference;

F = handwheel base circumference.



## ACCESSORIES

All V-SUPERSAFE valve safety shields models are available in standard (UNI EN, ASME) and custom sizes

The valve safety shield V-SUPERSAFE PVC/GARD model could be completed with accessories:



# FLANGE & VALVE SAFETY SHIELDS

## CHEMICAL & THERMAL RESISTANCE

Fluid	+25°C	+60°C	+100°C	+180°C	+230°C	> 550°C
Acetic acid (5%)		PVC		PTFE/GARD ST/GARD	PTFE ST ATEX	SUPERSAFE HP
Acetic acid (50%)	PVC			PTFE/GARD ST/GARD	PTFE ST ATEX	SUPERSAFE HP
Acetic acid (80%)				PTFE/GARD ST/GARD	PTFE ST ATEX	SUPERSAFE HP
Acetone				PTFE/GARD ST/GARD	PTFE ST ATEX	SUPERSAFE HP
Acetylene				PTFE/GARD ST/GARD	PTFE ST ATEX	SUPERSAFE HP
Ammonia				PTFE/GARD ST/GARD	PTFE ST ATEX	SUPERSAFE HP
Calcium carbonate		PVC		PTFE/GARD ST/GARD	PTFE ST ATEX	SUPERSAFE HP
Calcium hydroxide		PVC		PTFE/GARD ST/GARD	PTFE ST ATEX	SUPERSAFE HP
Calcium sulphate		PVC		PTFE/GARD ST/GARD	PTFE ST ATEX	SUPERSAFE HP
Chromic acid (50%)				PTFE/GARD ST/GARD	PTFE ST ATEX	SUPERSAFE HP
Chromic acid (100%)				PTFE/GARD ST/GARD	PTFE ST ATEX	
Formaldehyde (50%)				PTFE/GARD ST/GARD	PTFE ST ATEX	
Formic acid	PVC			PTFE/GARD ST/GARD	PTFE ST ATEX	SUPERSAFE HP
Glucose		PVC		PTFE/GARD ST/GARD	PTFE ST ATEX	SUPERSAFE HP

Hydrochloric acid (20-35%)		PVC		PTFE/GARD ST/GARD	PTFE ST ATEX	
Hydrochloric acid (50%)	PVC			PTFE/GARD ST/GARD	PTFE ST ATEX	
Hydrofluoric acid (30-50%)	PVC			PTFE/GARD ST/GARD	PTFE ST ATEX	
Hydrofluoric acid (100%)					PTFE ST ATEX	
Naphtha		PVC		PTFE/GARD ST/GARD	PTFE ST ATEX	SUPERSAFE HP
Nitric acid (30-50%)		PVC		PTFE/GARD ST/GARD	PTFE ST ATEX	SUPERSAFE HP
Oleum				PTFE/GARD ST/GARD	PTFE ST ATEX	SUPERSAFE HP
Petrol		PVC		PTFE/GARD ST/GARD	PTFE ST ATEX	SUPERSAFE HP
Phenol (5%)	PVC			PTFE/GARD ST/GARD	PTFE ST ATEX	SUPERSAFE HP
Phenol (100%)				PTFE/GARD ST/GARD	PTFE ST ATEX	SUPERSAFE HP
Phosphoric acid (50-80%)		PVC		PTFE/GARD ST/GARD	PTFE ST ATEX	SUPERSAFE HP
Potassium hypochlorite		PVC		PTFE/GARD ST/GARD	PTFE ST ATEX	SUPERSAFE HP
Sodium carbonate		PVC		PTFE/GARD ST/GARD	PTFE ST ATEX	SUPERSAFE HP
Sodium hydroxide (0-50%)		PVC		PTFE/GARD ST/GARD	PTFE ST ATEX	SUPERSAFE HP
Sodium hydroxide (>50%)		PVC		PTFE/GARD ST/GARD	PTFE ST ATEX	
Sulfuric acid (<60%)		PVC		PTFE/GARD ST/GARD	PTFE ST ATEX	SUPERSAFE HP
Sulfuric acid (>60%)				PTFE/GARD ST/GARD	PTFE ST ATEX	SUPERSAFE HP
Urea		PVC		PTFE/GARD ST/GARD	PTFE ST ATEX	SUPERSAFE HP

For more information please contact us at: [www.klinger.fi](http://www.klinger.fi)

