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HOW P.E.P. SAFETY SHIELDS PROTECT...

Safety shields prevent sprayouts by interposing an impregnable barrier between the chemical flowing through the piping system and the external environment. To provide this protection, P.E.P. Shields are manufactured in various materials that resist the hazardous or toxic chemicals commonly used in process industries at varying temperatures and pressures. By selecting the appropriate material for an application, virtually all situations can be safeguarded.

To select the proper safety shield, it is necessary to be familiar with the *physical characteristics* of the special materials that are used in the manufacture of P.E.P. Safety Shields and to correlate this information with the chemical, temperature and pressure rating within the piping system.

P.E.P. Safety Shields can be divided into three major groups:

- SPRA-GARD® Shields
- ECONO-GARD® Shields
- Metal Safety Shields

Each group contains shields that are manufactured from different materials. Each type can be fabricated in any size to accommodate any piping system. While this selection is sufficient to handle most applications, special safety shields also can be customized on request.

P.E.P. Safety Shields have been designed and manufactured with many essential quality characteristics. A detailed explanation of these quality features may be found in the P.E.P. SAFETY SHIELD MANUAL. A free copy is available on request.

P.E.P. Safety Shields are manufactured for all pipe connections:

- Flanges
- Hose Couplings
- Couplings
- Pumps
- Valves of all kinds
- Heat Exchangers
- Unions
- Instruments
- Expansion Joints

- Pressure Vessels
- Tees
- Customized Connections
- Flow Meters
- Elbows
- Clamps

SAFETY SHIELDS FOR PIPE CONNECTIONS

PHYSICAL CHARACTERISTICS*

CONDITIONS	SPRA-GARD® SHIELDS**				ECONO-GARD® SHIELDS**		METAL SHIELDS		
	TFE	VUE	PPL	SAR	PE	PVC (RED/WHITE)	GALVANIZED	"304"	"316"
TEMPERATURE									
° F (MAX.)	450	300	225	175	140	140	800	2650	2650
(° C)	(232)	(150)	(107)	(79)	(60)	(60)	(427)	(1454)	(1454)
PRESSURE									
PSI	1650	1000	1100	1000	350	435	3000***	3000***	3000***

* Chemical resistance data available on request

** Shields are inhibited against UV degradation

*** With steel bands

"ONLY THE BEST IS ALWAYS SAFE"

P.E.P. VUE-GARD® SAFETY SHIELD

- "See-Thru" shield permits easy inspection of pipe joints
- Fabricated of specially designed TFE-coated fiberglass and clear ECTFE
- OSHA "orange" border provides high visibility
- Over-lap design protects against frontal and lateral sprayouts



- Durable P.E.P. construction plus the ability to "See Thru" supports a safe work environment
- Independent laboratory tested to assure quality
- Designed for all pipe connections: flanges, [valves](#) , [expansion joints](#) , [threaded connections](#) , etc.
- Also manufactured with a threaded TFE [drain nipple](#)
- Special fabrication for flow indicators, pressure vessels, heat exchangers and various instruments used in process industries
- Available in ANSI, DIN, JIS and BS standards
- Physical Characteristics:
 - Temperatures up to 300° F
 - Pressure resistance up to 1000 PSI
 - Broad spectrum chemical resistance, especially to most corrosives and organic solvents

P.E.P. VUE-DRAIN-GARD® SAFETY SHIELD

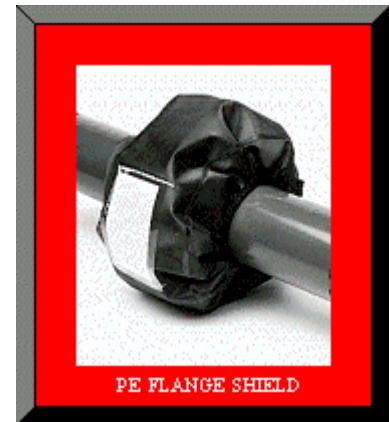
- Contains all the features and benefits of the [VUE-GARD®](#) ("See-Thru") Shield
- Provides visual inspection of pipe joints
- Allows recapture of toxic chemicals from leaking flanges and valves
- Broad spectrum chemical resistance, especially to most corrosives and organic solvents
- Crafted of specially designed TFE-coated fiberglass and clear ECTFE
- OSHA "orange" border provides high visibility
- Durable P.E.P. construction plus the ability to "See Thru" supports a safe work environment
- Incorporated TFE nipple accommodates a connection for retrieval and secondary containment
- Permits insertion of a "sniffer" to read fugitive emissions
- Independent laboratory tested to assure quality
- Also manufactured in "304" and "316" Stainless Steel
- Fabricated for standard and customized sizes to meet special requirements
- Available in ANSI, DIN, JIS and BS standards
- [Physical Characteristics](#) vary with each P.E.P. material



"ONLY THE BEST IS ALWAYS SAFE"

P.E.P. ECONO-GARD® SAFETY SHIELD

- Three ply plastic lamination provides tensile and burst strength
- Core of non-woven cloth enhances resistance to tear
- Crafted by intensive heat sealing methods
- Over-lap feature prevents lateral blowout
- Indicating patch color change alerts presence of a leak
- Replaceable pH indicating patch allows reuse
- Laboratory tested to assure quality
- Choice of two P.E.P. materials:
 - Polyethylene (PE)
 - Polyvinyl Chloride - Red and White (PVC)
- Designed for all pipe connections: flanges, valves, expansion joints, threaded connections, etc.
- Available in ANSI, DIN, JIS and BS Standards
- [Physical Characteristics](#) vary with each P.E.P. material



"ONLY THE BEST IS ALWAYS SAFE"

P.E.P. VALVE-GARD® SAFETY SHIELD

- Specialized safety shields for valves
- Customized for all valve styles:
 - check, ball, plug, diaphragm, butterfly, gate and globe
- Provides protection for the complete valve
- Multi-layered construction creates an impregnable barrier to arrest sprayout
- Over-lap feature prevents lateral blowout
- Replaceable pH indicating patch allows reuse
- Indicating patch color change alerts presence of a leak
- Fabricated of non-flammable/non-combustible material and tie-down cords
- Laboratory tested to assure quality
- Choice of six P.E.P. materials:
 - TFE
 - TFE/ECTFE ("See-Thru" Shield permits direct visualization -- no need for indicating patch)
 - Polypropylene (PPL)
 - Galvanized Steel (no indicating patch)
 - "304" Stainless Steel (no indicating patch)
 - "316" Stainless Steel (no indicating patch)
- Available in ANSI, DIN, JIS and BS Standards
- [Physical Characteristics](#) vary with each P.E.P. material



ABCs of VALVE-GARD® Shields

"ONLY THE BEST IS ALWAYS SAFE"

THE ABC'S OF ORDERING.....P.E.P. VALVE-GARD® SAFETY SHIELDS

Ordering begins simply by identifying basic information about the valve: the pipe size; the type of valve; its connection if flanged, threaded, or socket weld; its pressure rating (PSI); the valve manufacturer and the model number of the valve, if available.

Valve-Gard® Materials

Shields can be fabricated from a variety of materials. SPRA-GARDS® - TFE, VUE-GARD® (TFE/ECTFE), Polypropylene (PPL), and Metal - Galvanized and Stainless Steel. To select the appropriate material for a VALVE-GARD®, it is necessary to know:

- The chemical flowing through the valve
- The temperature of the chemical
- The pressure rating



P.E.P. VALVE-GARD® Shields

TFE & PPL VALVE-GARD® SHIELDS

- Multi layered construction creates an impregnable barrier to stop sprayout
- Over-lap feature prevents lateral blowout
- Replaceable pH indicating patch allows reuse
- Laboratory tested to assure quality

VUE-GARD® VALVE-GARD® SHIELDS

- See-thru shield permits rapid visual inspection of pipe joints
- Constructed of a specially designed TFE-coated fiberglass and clear-TFE type film
- Can be fabricated with a port to permit insertion of a "sniffer" to read fugitive emissions
- May be customized for use in special applications

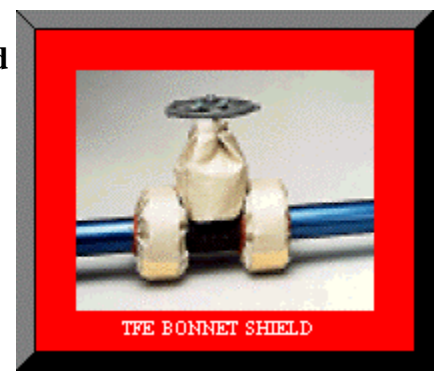
METAL VALVE-GARD® SHIELDS

- Overlapping slotted edge prevents lateral blowout
- Spacer rods create flow space to dissipate pressure
- Available with anti-mist mesh liner
- Choice of 304 Stainless or 316 Stainless Steel

"ONLY THE BEST IS ALWAYS SAFE"

P.E.P. BONNET SHIELD

- Designed especially for gate and globe valves and large diaphragm valves
- Shields the two areas vulnerable to leaks -- upper portion or bonnet and the lower portion that may be flanged or threaded
- Connecting flanges are fitted with standard [flange safety shields](#)
- Indicating patch color change alerts presence of a leak
- Replaceable pH indicating patch allows reuse
- Fabricated of non-flammable/non-combustible material and tie-down cords
- Independent laboratory tested to assure quality
- Fabricated in seven P.E.P. materials:
 - TFE
 - TFE/ECTFE (permits direct visualization -- no need for indicating patch)
 - Polypropylene (PPL)



- Polyethylene (PE)
- Polyvinyl Chloride - Red and White (PVC)
- "304" Stainless Steel (no indicating patch)
- "316" Stainless Steel (no indicating patch)
- Available in ANSI, DIN, JIS and BS standards
- Physical Characteristics vary with each P.E.P. material

Dimensional Information

Dimensional Information for P.E.P. Valve Bonnet Shield

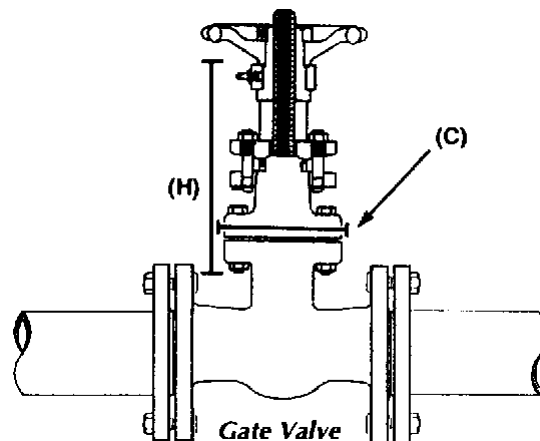
Valve Bonnet Shields are specially designed for gate and globe valves. In some instances, Bonnet Shields are used for large diaphragm valves.

To order P.E.P. Valve Bonnet Shields, in addition to the required basic information, two measurements of the valve are essential: Height (H) and Circumference (C).



(H) is the measurement from the base of the valve bonnet to the underside of the valve handle.

(C) is the measurement around the valve bonnet gasket.



These measurements plus the material for fabrication make up the order code.
EXAMPLE: A TFE Bonnet Shield for a 2" gate valve with H=8" and C=16" has the code: TFE 816.

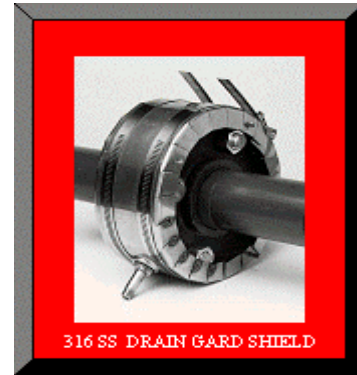
Custom P.E.P. VALVE-GARD® Safety Shields

P.E.P. provides custom shields for special valve configurations.

"ONLY THE BEST IS ALWAYS SAFE"

P.E.P. DRAIN-GARD® SAFETY SHIELD

- Designed for systems carrying hazardous chemicals or corrosives when capture and retrieval are required
- Threaded nipple accommodates hose or pipe connection to receptacle for liquid retrieval and secondary containment
- Confines sprayout within safety shield
- Manufactured in "304" and "316" Stainless Steel (Suitable for high pressure and temperature systems)
- Crafted for flanges and valves
- Metal Shields are quickly installed - only a screwdriver required
- Also fabricated as a "See-Thru" (TFE/ECTFE) Shield -- [VUE-DRAIN-GARD®](#) Safety Shield
- Available in ANSI, DIN, JIS and BS Standards
- [Physical Characteristics](#) vary with each P.E.P. material



[LINED DRAIN-GARD®](#) Shield

"ONLY THE BEST IS ALWAYS SAFE"

P.E.P. EXPANDO-GARD® SAFETY SHIELD

- Specialized safety shield for expansion joints
- Vaaler award winning product
- Designed to accommodate dimensional changes of the joint
- Indicating patch color change alerts presence of a leak
- Provides all features/benefits of the [SPRA-GARD®](#) Shield
- Multi-layered construction creates an impregnable barrier to arrest sprayout
- Over-lap feature prevents lateral blowout
- Indicating patch color change alerts presence of a leak
- Replaceable pH indicating patch allows reuse
- Fabricated of non-flammable/non-combustible material and tie-down cords
- Laboratory tested to assure quality
- Manufactured in three P.E.P. materials:



- TFE
- TFE/ECTFE (permits direct visualization -- no need for indicating patch)
- Polypropylene (PPL)
- Available in ANSI, DIN, JIS and BS standards
- Physical Characteristics vary with each P.E.P. material

EXPANDO-GARD® Shield

"ONLY THE BEST IS ALWAYS SAFE"

FOR DEMANDING PROCESS APPLICATIONS: LINED DRAIN-GARD® SAFETY SHIELDS

PREVENT DANGEROUS SPRAYOUTS OF HAZARDOUS CHEMICALS

ENSURE ENVIRONMENTAL SAFETY IN THE WORKPLACE



Stainless Steel LINED DRAIN-GARD® Safety Shields

- Fabricated of 24 gauge "304" or "316"
- Fitted with special gasket liners, such as BUNA-N, inside the shield
- Slips over existing pipe installations and is drawn tightly over the outside diameter of the flange by stainless steel straps
- Chemical liquid or vapor leaks channeled between flanges to nipple for collection
- Installs quickly, only a screwdriver required
- Available in most gasket materials
- An alarm may be attached at the end of the nipple
- Available in ANSI and DN sizes

P.E.P. SAFETY SHIELDS FOR THREADED PIPE JOINTS

- Specialized safety shields for elbows, couplings, unions and tees
- Indicating patch color change alerts presence of a leak
- Replaceable pH indicating patch allows reuse
- Fabricated of non-flammable/non-combustible material and tie-down cords
- Choice of five P.E.P. materials:
 - TFE
 - TFE/ECTFE (permits direct visualization -- no need for indicating patch)
 - Polypropylene (PPL)
 - Polyethylene (PE)
 - Polyvinyl Chloride (PVC)



- Available in ANSI, DIN, JIS and BS standards
- [Physical Characteristics](#) vary with each P.E.P. material

P.E.P. CUSTOM SHIELDS

- Specially designed for:
 - Hoses - Flexible metal and other materials
 - Heat Exchangers
 - Pressure Vessels
 - Pumps
 - Clamps
 - Instruments
- Manufactured in all P.E.P. materials:
 - TFE
 - TFE/ECTFE (permits direct visualization -- no need for indicating patch)
 - Polypropylene (PPL)
 - Polyethylene (PE)
 - Polyvinyl Chloride (PVC)
 - Galvanized Steel
 - "304" Stainless Steel
 - "316" Stainless Steel
- Available in ANSI, DIN, JIS and BS Standards
- [Physical Characteristics](#) vary with each P.E.P. material

P.E.P. NAVY SPRAY SHIELDS

- Specially designed for use in engineering spaces on naval and commercial vessels
- Fabricated to conform to various military specifications worldwide
- Prevent contact of flammable liquid on hot surfaces and the dripping of fluid into electrical switchboards/components
- Information required to manufacture a navy spray shield:
 1. pipe size
 2. type of fitting to be covered
 3. and/or the dimensions of any special fitting
- Easily installed around the fitting and secured tightly by lacing wire
- Is economical, maintenance-free and contributes to engine room safety
- Life-saving devices on merchant, naval and passenger vessels in many countries

"ONLY THE BEST IS ALWAYS SAFE"

INSTALLATION OF P.E.P. SAFETY SHIELDS

Installing a P.E.P. Safety Shield is both simple and rapid, usually requiring less than a minute. Whether a shield is placed over a flange, valve or fitting, the method of installation is the same. All P.E.P. Safety Shields are wrap-arounds. While the fabric shields are fastened securely around the pipe with tie-down cords with a square knot, the metal shields are held in place firmly by metal screws or bands.

All shields are shipped directly from the P.E.P. plant ready for installation. Each package of shields includes installation instructions for quick reference. Fabric shields require no tools and the metal shields need only the use of a Phillips screwdriver.

Contact Us

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