





## CONTINUING EDUCATION

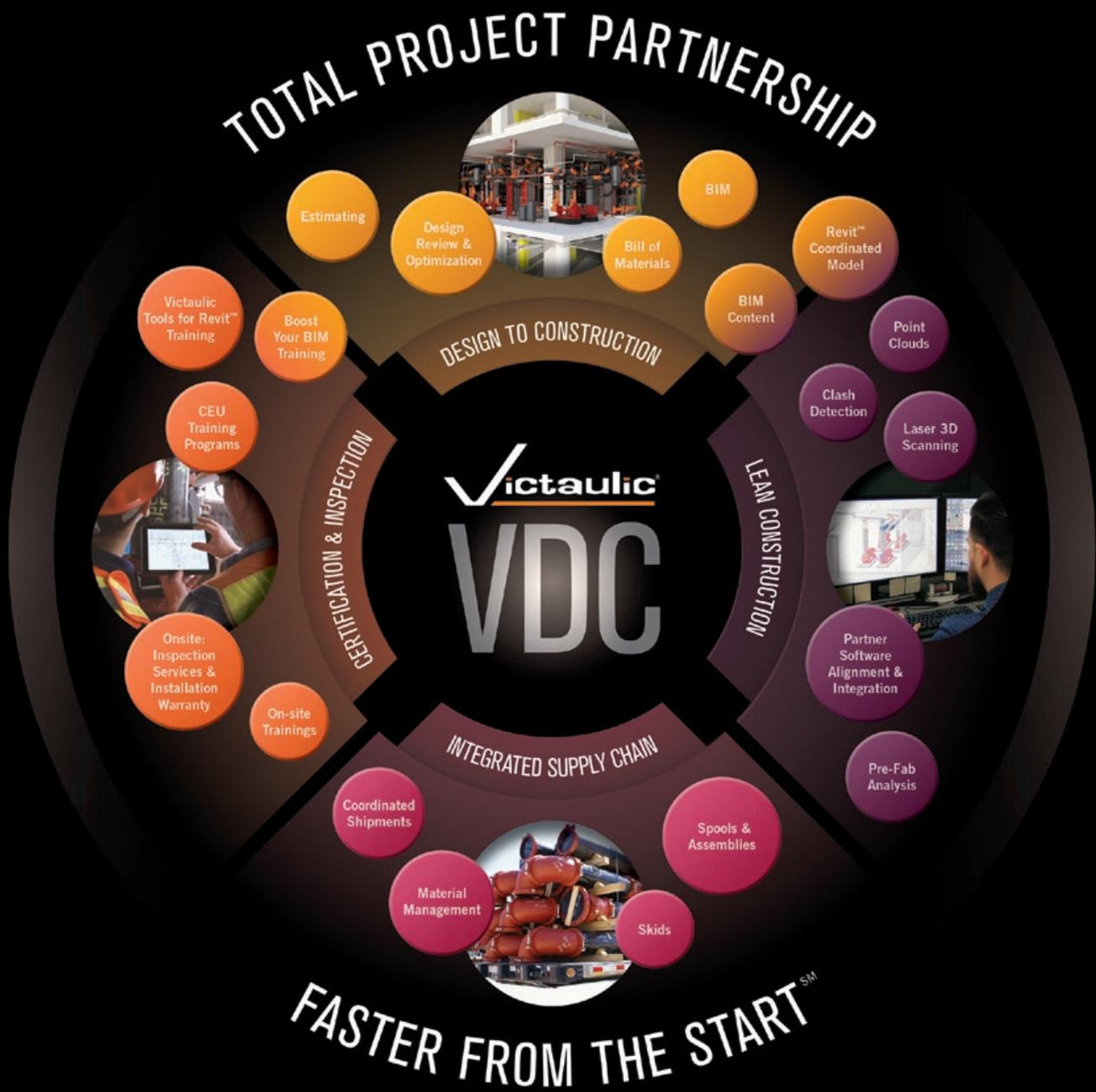
Victaulic offers a wide variety of continuing education courses. From one-hour seminars to full-day events, these courses provide education on key industry concepts and Victaulic® solutions. Continuing education courses are created for owners, engineers, contractors, the inspection community, and anyone seeking to expand their knowledge of Victaulic and the industry surrounding the pipe joining and flow control markets.

For more information on the Victaulic® University Continuing Education courses or to schedule your training, please contact your local sales representative.



[VictaulicUniversity.com](http://VictaulicUniversity.com)



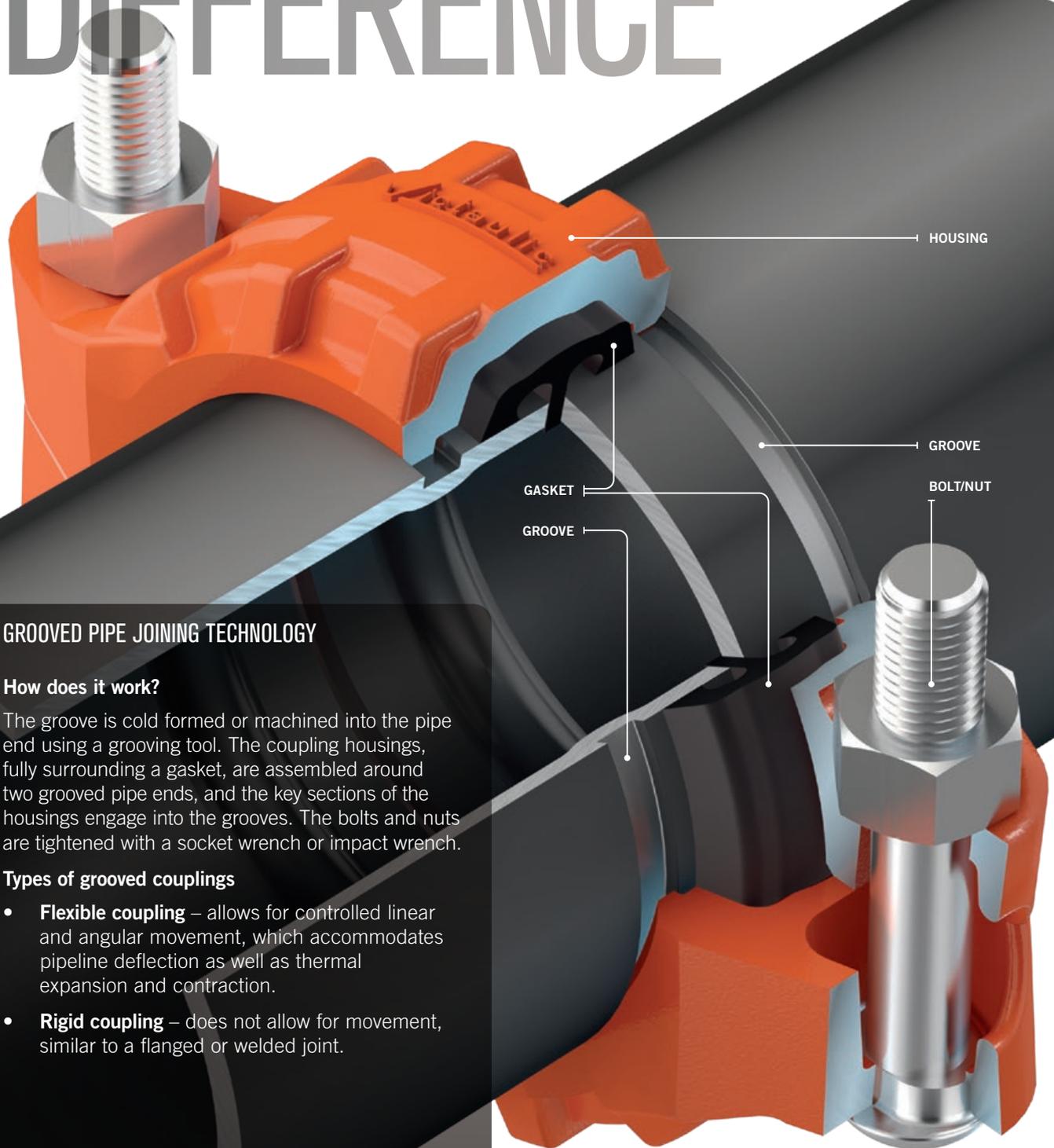


# VIRTUAL & DESIGN CONSTRUCTION

**PROVIDING SERVICES WHEN YOU NEED THEM, AT ANY STAGE OF YOUR PROJECT**

With customized services tailored to the entire scope of the construction timeline, Victaulic is your trusted source for industry leading deliverables – on your schedule. For more information please contact your local Victaulic Representative.

# THE VICTAULIC® DIFFERENCE



## GROOVED PIPE JOINING TECHNOLOGY

### How does it work?

The groove is cold formed or machined into the pipe end using a grooving tool. The coupling housings, fully surrounding a gasket, are assembled around two grooved pipe ends, and the key sections of the housings engage into the grooves. The bolts and nuts are tightened with a socket wrench or impact wrench.

### Types of grooved couplings

- **Flexible coupling** – allows for controlled linear and angular movement, which accommodates pipeline deflection as well as thermal expansion and contraction.
- **Rigid coupling** – does not allow for movement, similar to a flanged or welded joint.



At the core of all of the benefits that Victaulic® solutions bring to a project – such as productivity, safety, design flexibility and quality – are the unique features of our products.

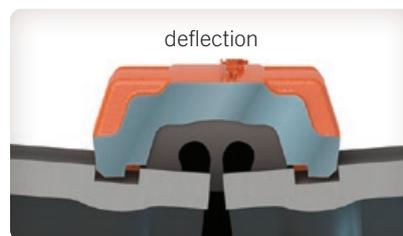
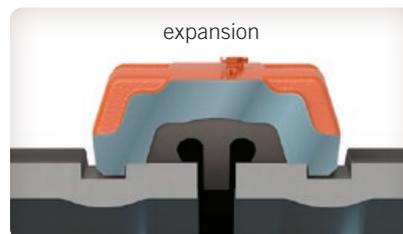
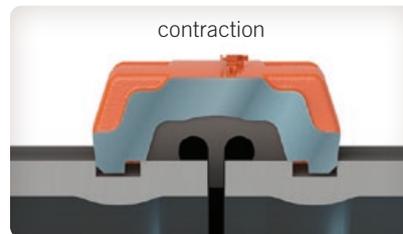
**VICTAULIC GROOVED END PIPING SYSTEMS PROVIDE:**



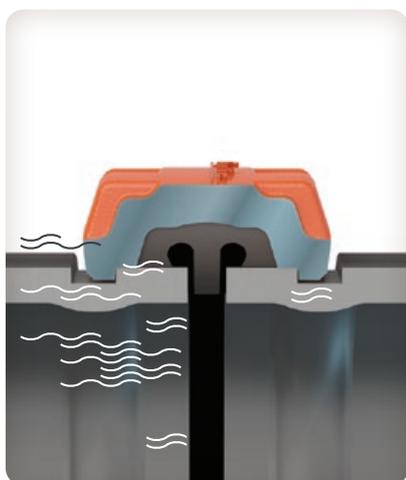
**Easy system maintenance and expansion** – through simple coupling disassembly that allows for easy access.



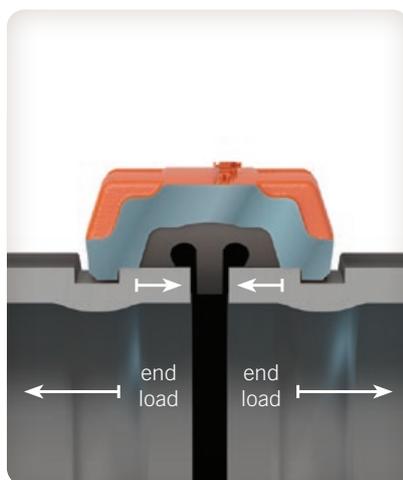
**Alignment ease** – through a design that allows for full rotation of the pipe and system components before tightening.



**Flexibility** – with the inherent axial movement and deflection properties of flexible couplings in a groove system. May be used to accommodate pipeline thermal expansion and contraction, misalignment and settlement, and seismic stresses.



**Noise and vibration attenuation** – by isolating the transference of vibration at each joint.



**Self restrained pipe joints** – couplings engage the pipe grooves to hold the pipes against full pressure thrust loads without the need for supplemental restraints.



**Rigidity** – with an angled bolt pad design that provides positive clamping of the pipe to resist torsional and flexural loads.

OGS

AGS

VBSP

Hole Cut

Plain End

Stainless Steel

Potable Water

Shouldered Steel

Ductile Iron

High Performance

Hydronic Balancing

HDPE

Aquamine™ PVC

CPVC/PVC

Specialty

Tools

Gaskets, Seals and O-Rings

Design Data

Reference Guide

## Design Data

### Introduction

This Victaulic® General Catalog has been written for the piping system installer, designer, specification writer and owner as a basic reference guide for data about *Victaulic* mechanical piping methods. This catalog is organized to provide information in the context and form most readily usable. For easy identification of major sections of interest, see the condensed table of contents on pg. i, for a quick reference guide, see pg. 166. For more detailed information, [download Design Data 26.01](#).

### Important Information

*Victaulic* standard grooved pipe couplings are designed for use with pipe grooved to meet *Victaulic* groove specifications and *Victaulic* grooved end fittings, valves, and related grooved end components only. They are not intended for use with plain end pipe and/or fittings. *Victaulic* plain end couplings are designed for use only with plain end or beveled end steel pipe (unless otherwise indicated) and *Victaulic* plain end fittings. ***Victaulic* plain end couplings must not be used with grooved end or threaded end pipe and/or fittings. Nor are they intended for use with Advanced Groove System (AGS) components used on 14–78" | DN350–DN1950 pipe sizes.**

Pipe must be prepared to meet *Victaulic* specifications outlined for each specific product style. Performance data listed herein is based on proper pipe preparation. The proper gasket must be selected for the service intended. **It should be noted that there are various services for which *Victaulic* gaskets are not recommended. Reference should always be made to the latest *Victaulic* Seal Selection Guide ([download publication 05.01](#)) for specific gasket service recommendations and for a listing of services which are not recommended. Gaskets for *Victaulic* products always must be lubricated for proper assembly.** Gasket lubricant must meet manufacturer's specifications. Thorough lubrication of the gasket exterior, including the lips and/or pipe ends and housing interiors, is essential to prevent gasket pinching. Lubrication assists proper gasket seating and alignment during installation.

*Victaulic* has a complete line of tools for preparing pipe to *Victaulic* specifications. Use of these tools is recommended in preparing pipe to receive *Victaulic* products. Always read and understand the Tool Operating Instructions supplied with every *Victaulic* tool prior to using any tools. All data contained herein, is subject to change without notice.

### Notice

The technical and performance data, weights, dimensions and specifications published in this catalog supersede all previously published data.

*Victaulic* maintains a policy of continual product improvement and, therefore, reserves the right to change product specifications, designs, and standard equipment without notice and without incurring obligation.

For the most up-to-date *Victaulic* product information, please visit [victaulic.com](http://victaulic.com).

The material presented in this catalog is intended for piping design reference in utilization of *Victaulic* products for their intended application. It is not intended as a substitute for competent, professional assistance which is an obvious requisite to any specific application.

### Design

Reference should always be made to design information available at no charge on request from *Victaulic*. Good piping practices should always prevail. Specific pressures, temperatures, external or internal loads, performance standards and tolerances must never be exceeded. Many applications require recognition of special conditions, code requirements and use of safety factors. Qualified engineers must make these decisions.

While every effort has been made to ensure its accuracy, *Victaulic*, its subsidiaries and affiliated companies, make no express or implied warranty of any kind respecting the information contained in this catalog or the material referred to herein.

Anyone making use of the information or material contained herein does so at their own risk and assumes any and all liability resulting from such use.

### Installation

Reference should always be made to the specific *Victaulic* Field Installation Handbook or Manual for the product you are installing.

Handbooks and Manuals are included with each shipment of *Victaulic* products for complete installation and assembly data, and are available in PDF format on our website at [victaulic.com](http://victaulic.com).



OGS

## Warranty

AGS

We warrant all products to be free from defects in materials and workmanship under normal conditions of use and service. Our obligation under this warranty is limited to repairing or replacing at our option at our factory any product which shall within one year after delivery to original buyer be returned with transportation charges prepaid, and which our examination shall show to our satisfaction to have been defective.

VBSP

Hole Cut

THIS WARRANTY IS MADE EXPRESSLY IN LIEU OF ANY OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. THE BUYER'S SOLE AND EXCLUSIVE REMEDY SHALL BE FOR THE REPAIR OR REPLACEMENT OF DEFECTIVE PRODUCTS AS PROVIDED HEREIN. THE BUYER AGREES THAT NO OTHER REMEDY (INCLUDING, BUT NOT LIMITED TO, INCIDENTAL OR CONSEQUENTIAL DAMAGES FOR LOST PROFITS, LOST SALES, INJURY TO PERSON OR PROPERTY OR ANY OTHER INCIDENTAL OR CONSEQUENTIAL LOSS) SHALL BE AVAILABLE TO HIM.

Plain End

Victaulic neither assumes nor authorizes any person to assume for it any other liability in connection with the sale of such products.

**This warranty shall not apply to any product which has been subject to misuse, negligence or accident, which has been repaired or altered in any manner outside of a Victaulic factory or which has been used in a manner contrary to Victaulic instructions or recommendations. Victaulic shall not be responsible for design errors due to inaccurate or incomplete information supplied by Buyer or its representatives.**

Items purchased by Victaulic and resold will have the original equipment manufacturer's warranty extended to Victaulic customers.

Stainless Steel

Potable Water

Shouldered Steel

Ductile Iron

High Performance

## California Proposition 65

Victaulic has determined that a California law, commonly known as Proposition 65, requires the following warnings for products sold in, or into, California. All Victaulic® products meet or exceed the requirements of the applicable performance and safety standards, including (where applicable), the Safe Drinking Water Act and NSF-61.

### For all Victaulic painted ductile iron products:



**WARNING:** The external painted surfaces of these products can expose you to trace amounts of chemicals, including BBP, which are known to the State of California to cause birth defects or other reproductive harm. For more information go to [www.p65warnings.ca.gov](http://www.p65warnings.ca.gov).

### For all Victaulic products ordered with specialty gaskets of Grades V and M2:



**WARNING:** Grades V and M2 can expose you to trace amounts of chemicals, such as ethylene thiourea, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to [www.p65warnings.ca.gov](http://www.p65warnings.ca.gov).

### For all Victaulic products made of or containing brass components:



**WARNING:** Brass components, even those manufactured from "low lead" or "no lead" brass can expose you to trace amounts of chemicals, such as lead, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to [www.p65warnings.ca.gov](http://www.p65warnings.ca.gov).

HDPE

Aquamine™ PVC

CPVC/PVC

Specialty

Tools

Gaskets, Seals and O-Rings

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## Regulatory Compliance

Victaulic piping system products are tested and certified for a wide range of applications. Victaulic engages with many certifying authorities, approval bodies, and standards organizations globally, and maintains product certifications and strict compliance to applicable codes, standards, and directives, relevant to specific industries and markets.

## PRODUCT CERTIFICATIONS:

### Fire Protection

ACTIVFIRE – ActivFire Register of Fire Protection Equipment (Australia)

AON – AON New Zealand

CCCF – China Compulsory Certification for Fire Protection Products (China)

CFPSC – Chinese Fire Protection Safety Center (Taiwan)

CNBOP – Centrum Naukowo-Badawcze Ochrony Przeciwpozarowej (Poland)

CNPP – Centre National de Prévention et de Protection (France)

CSFM – California State Fire Marshall (USA)

CTPC – Consiliul Technic Permanent Pentru Constructii (Romania)

EMI – Építésügyi Minőségellenőrző Innovációs (Hungary)

FESC – Fire Equipment and Safety Center of Japan

FDNY – Fire Department, City of New York (USA)

FM – FM Approvals (USA)

HDB – Housing Development Board (Singapore)

KFI – Korea Fire Institute

KFSD – Kuwait Fire Service Directorate

LPCB – Loss Prevention Certification Board (UK)

SBSC – Svensk Brand- & Säkerhetscertifiering AB (Sweden)

TFRI – Tianjin Fire Research Institute of Ministry of Public Security (China)

TSU – Technický Kúšobný Ústav Piešťany, š.p. (Slovakia)

TZUS – Technický a Zkušební Ústav Stavební Praha, s.p. (Czech Republic)

UAE CD – United Arab Emirates Civil Defense

UKRFIRECERT – State Certification Center (Ukraine)

UL – Underwriter's Laboratories, LLC (USA)

ULC – Underwriter's Laboratories of Canada

VdS – Verband der Schadenverhütung GmbH (Germany)

VKF – Vereinigung Kantonaler Feuerversicherungen (Switzerland)

Zagrebinspekt (Croatia)

### Potable Water

ARPA – Agenzia Regionale per la Protezione dell'Ambiente (Italy)

Belgaqua – Belgische Federatie voor de Watersector (Belgium)

DVGW – Deutscher Verein des Gas- und Wasserfaches e.V. (Germany)

Eurofins – ACS : Attestation de Conformité Sanitaire (France)

HZJZ – Hrvatski zavod za javno zdravstvo (Croatia)

INSP – Institutul Național De Sănătate Publică (Romania)

KWWA – Korea Water and Wastewater Works Association

NSF – NSF International (USA)

ÖVGW – Österreichische Vereinigung für das Gas- und Wasserfach (Austria)

PZH – Państwowy Zakład Higieny (Poland)

RUVZPP – Regionálny úrad verejného zdravotníctva so sídlom v Poprad (Slovakia)

SAI Global – WaterMark (Australia)

SPAN – Suruhanjaya Perkhidmatan Air Negara (Malaysia)

SVGW – Schweizerischer Verein des Gas- und Wasserfaches (Switzerland)

UL – Underwriter's Laboratories, LLC – NSF 61/372 (USA)

WRAS – Water Regulations Advisory Scheme (UK)

ZUOVA – Zdravotní ústav se sídlem v Ostravě (Czech Republic)

### Maritime

ABS – American Bureau of Shipping

BV – Bureau Veritas (France)

CCG – Canadian Coast Guard (Canada)

CRS – Croatian Register of Shipping (Croatia)

CCS – China Classification Society (China)

DNV GL – Det Norske Veritas-Germanischer Lloyd (Norway)

KRS – Korean Register of Shipping (Korea)

LR – Lloyd's Register of Shipping (UK)

RINA – Registro Italiano Navale (Italy)

USCG – US Coast Guard

### HVAC

CSTB – Centre Scientifique et Technique du Bâtiment (France)

ITB – Instytut Techniki Budowlanej (Poland)

Sercons Europe BV (Russia)

### Plumbing

IAPMO – International Association of Plumbing & Mechanical Officials (USA)

NSF – NSF International (USA)

## COMPLIANCE:

### Codes and Standards Compliance

ANSI – American National Standards Institute

API – American Petroleum Institute

APSAD – Assemblée Plénière Société Assurance Dommage (France)

AS/NZS – Standards Australia and Standards New Zealand (AU & NZ)

ASME – American Society of Mechanical Engineers (USA)

ASTM International (USA)

AWWA – American Water Works Association

CSA – CSA Group (Canada)

GOST R – Gosstandart (Russia)

IBC – International Building Code (USA)

ICC – International Code Council (USA)

IMC – International Mechanical Code (USA)

IPC – International Plumbing Code (USA)

IRC – International Residential Code (USA)

ISO – International Organization for Standardization (Global)

MSS – Manufacturer's Standardization Society (USA)

NACE – National Association of Corrosion Engineers (USA)

NFPA – National Fire Protection Association (USA)

UPC – Uniform Plumbing Code (USA)

WSAA – Water Services Association of Australia

### Pressure Equipment Safety

(2014/68/EU) PED – Pressure Equipment Directive (Europe)

CSA B51 – "Boiler, Pressure Vessel, and Pressure Piping Code" (Canada)

CRN – Canadian Registration Numbers per CSA B51

CU TR 032/2013 – Customs Union Technical Regulation "On Safety of Pressurized Equipment" (EAC)

### Chemical Safety / Recycling

BVB – Byggsvarubedomningen Service AB (Sweden)

(EC/1907/2006) REACH – Registration, Evaluation, Authorization, and Restriction of Chemicals (Europe)

(2011/65/EU) RoHS2 – Restriction of Hazardous Substances Directive (Europe)

(2012/19/EU) WEEE – Waste Electrical and Electronic Equipment Directive (Europe)

SundaHus – SundaHus i Linköping (Sweden)

### Building Services

(EU/305/2011) CPR – Construction Products Regulation (Europe)

NBC – National Building Code (Canada)

### Explosive Environments

(2014/34/EU) ATEX – Equipment and protective systems for potentially explosive atmospheres (Europe)

### Seismic

OSHDP – Office of Statewide Health Planning and Development (USA)

PSB – TÜV SÜD PSB (Singapore)

### Tools and Machinery Safety

(2006/42/EC) MD – Machinery Directive (Europe)

(2014/35/EU) LVD – Low Voltage Directive (Europe)

(2014/30/EU) EMC – Electromagnetic Compatibility Directive (Europe)

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# ENGINEERING CONFIDENCE INTO EVERY BUILD

Since 1919, Victaulic's innovative solutions and design services continue to increase construction productivity and reduce risk, ensuring projects are completed safely, on time and within budget. With more than 4,000 employees and 55 international facilities, Victaulic helps customers in 120 countries succeed in the global construction industry. Learn more about how our solutions engineer confidence into every build at [victaulic.com](http://victaulic.com).



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