MARINE INDUSTRY PRODUCT CATALOG

Effective January 2020

Victaulic®

VICTAULIC® SOLUTIONS FOR SHIPBUILDING AND MARINE PIPING SYSTEMS

Since the first patent in 1919, Victaulic has delivered innovative pipe joining solutions that help customers succeed worldwide. Look inside many of the world's most recognizable ships and vessels, and you'll find Victaulic® solutions at work making bold design innovations possible, speeding time to completion, allowing for unpredictable seismic movements and setting the stage for scalability.

From concept to commissioning, Victaulic provides the technologies and services necessary to simplify your next project.

Ship Owners

- Bring your ship to sea faster with speedier installation time. Up to 50% faster than competitive joining methods allowing you to complete projects faster.
- Reduce downtime on system retrofits or expansions
- Reduce the number of welded pipe joints with the use of mechanical couplings
- Maintaining a sustainable marine environment
- Victaulic® piping system solutions provide a flame free installation, avoiding toxic fumes and fire watch, and only requires a visual inspection to confirm proper installation
- Reduce noise and vibration transmission from pumps, engines and other components

TABLE OF CONTENTS

Naval Engineers

- Visual confirmation of a proper installation
- Accommodate system expansion and contraction
- Accommodate unique space requirements due to the small product footprint
- Reduce weight by 50% when compared to flanged components
- Attenuate system noise and vibration

Shipyards and Contractors

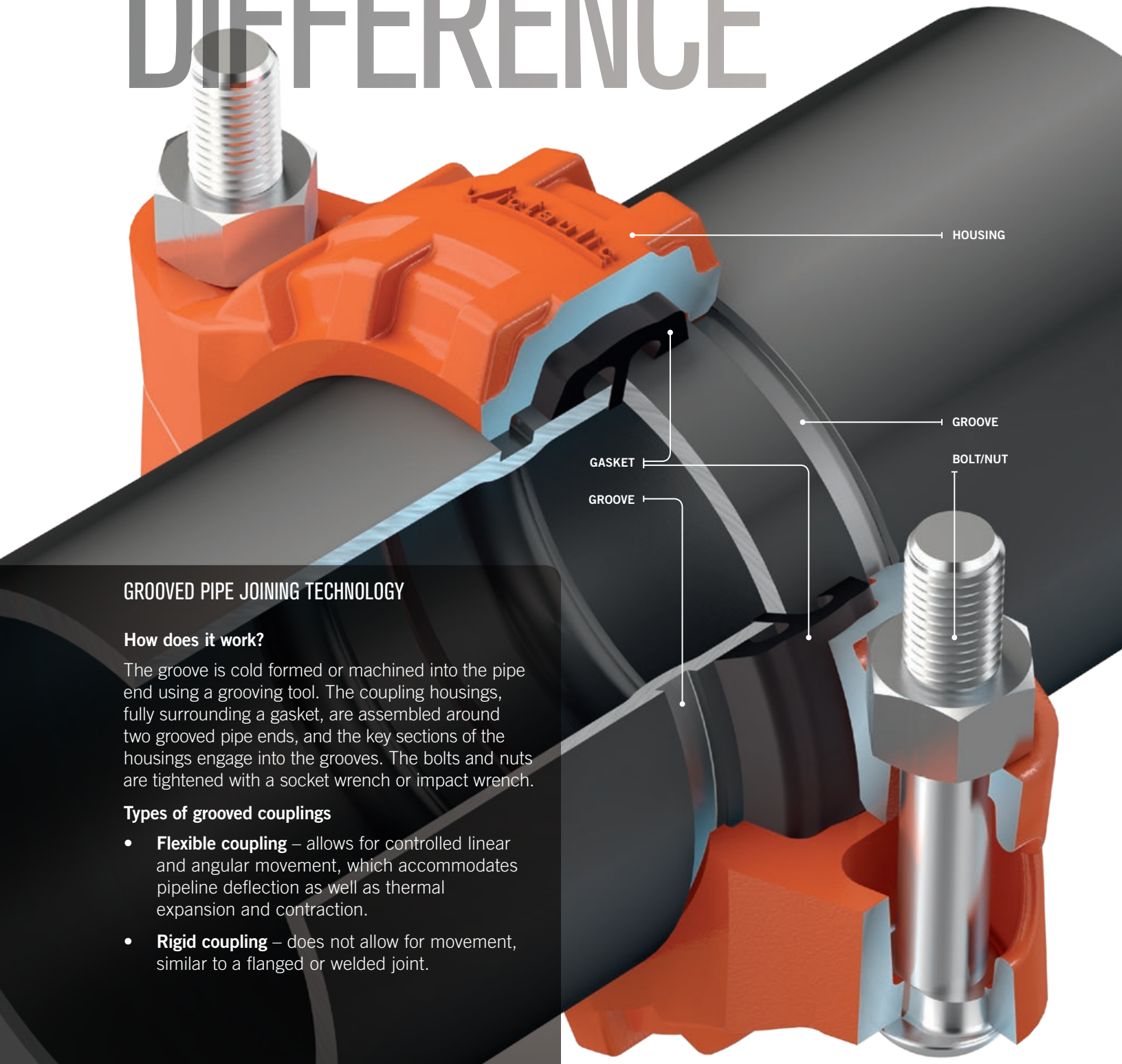
- Reduced installation time helps to meet or even beat project deadlines
- Improve work site safety and ease system alignment
- Ease material handling in confined spaces
- Only two bolts necessary up to 24" | DN600
- Easier scheduled or day-to-day maintenance

See MB-560 for complete list of applications and systems

Products Tested and Type Approved by IACS Members

ABS · Bureau Veritas · CCS China Classification Society 中国船级社 · CRS · DNV·GL · KR · LR · RINA

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

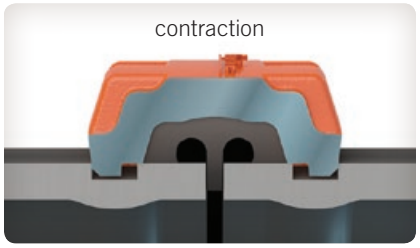
- **Flexible coupling** – allows for controlled linear and angular movement, which accommodates pipeline deflection as well as thermal expansion and contraction.
- **Rigid coupling** – does not allow for movement, similar to a flanged or welded joint.

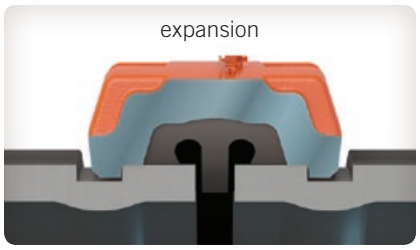
At the core of all of the benefits that Victaulic® solutions bring to a project – such as productivity, safety, design flexibility and quality – are the unique features of our products.

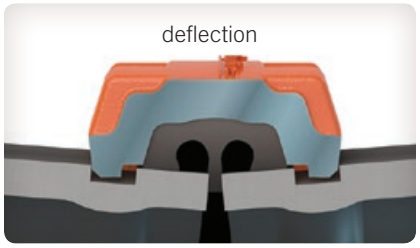
VICTAULIC GROOVED END PIPING SYSTEMS PROVIDE:

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.

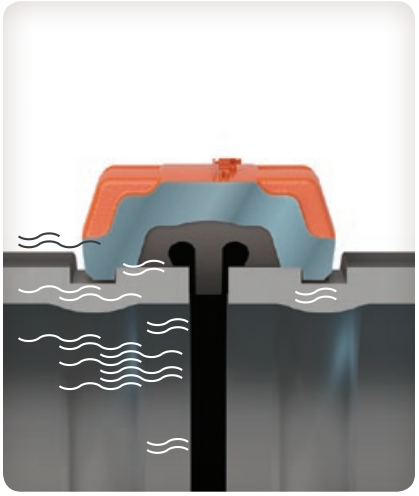




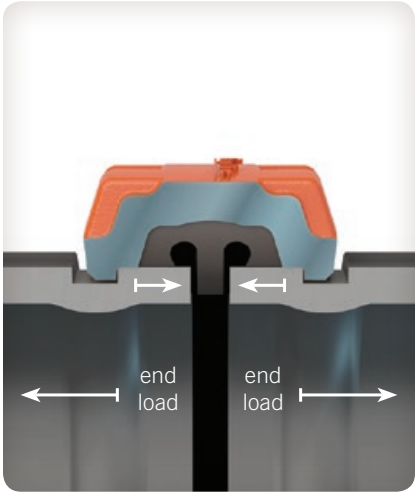


Flexibility – with the inherent axial movement and deflection properties of flexible couplings in a groove system. May be used to accommodate pipeline thermal expansion and contraction, misalignment and settlement, and seismic stresses.

***Victaulic* gaskets** – unlike flanged systems which are manufactured with asbestos material, *Victaulic* gaskets are not and have a much longer life cycle than the standard flanged gasket.



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.

The Victaulic® grooved piping system is the most versatile, economical, and reliable piping system available. It is up to three times faster to install than welding, easier and more reliable than threading or flanging, resulting in lower total installed cost. The system is designed for roll grooved or cut grooved standard pipe or roll grooved light wall pipe. Also, pipe end preparation is fast and easy. It can be done on the job site or in the shop with a variety of Victaulic grooving tools.

Installation-Ready Cross Section

Coating and Material Options

Victaulic offers a complete line of couplings, fittings and valves designed to maintain piping integrity in corrosive seawater applications. Coatings/material may vary per application, please reference the product submittal for specified options.

Note: *Victaulic* stainless steel products do not have IACS Member Type Approvals and are for use on non-essential systems only. For use on non-essential on board systems, please contact Victaulic for more information.

Painted Ductile Iron

Galvanized Steel

Stainless Steel

Pressure ratings on product submittals are for commercial use. Marine pressure ratings vary by agency and can be found in each product entry.

QuickVic™ Rigid Coupling

STYLE 107N

Download publication 06.23 for complete information

- Angled bolt pad housing design provides rigidity
- Sizes from 2–12" | DN50–DN300
- Pressures up to 232 psi | 1600 kPa | 16 bar
- For coating options, see pg. 4

Products Tested and Type Approved by IACS Members:

See the Victaulic® **IACS Member Certificates** for specific application information

QuickVic™ Flexible Coupling

STYLE 177N

Download publication 06.24 for complete information

- Flexible pipe joint which allows for expansion, contraction and deflection
- Sizes from 2–8" | DN50–DN200
- Pressures up to 232 psi | 1600 kPa | 16 bar
- For coating options, see pg. 4

Products Tested and Type Approved by IACS Members:

See the Victaulic® **IACS Member Certificates** for specific application information

Zero-Flex™ Rigid Coupling

STYLE 07

Download publication 06.02 for complete information

- Angled bolt pad housing design provides rigidity
- Sizes from 1–12" | DN25–DN300
- Pressures up to 232 psi | 1600 kPa | 16 bar
- For coating options, see pg. 4
- For sizes 14–24" | DN350–DN600, **download publication 20.02** for information on AGS Style W07

Products Tested and Type Approved by IACS Members:

See the Victaulic® **IACS Member Certificates** for specific application information

Flexible Coupling

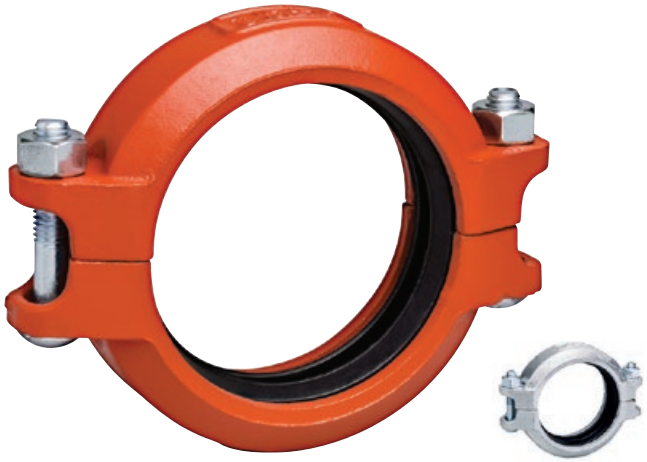
STYLE 77

Download publication 06.04 for complete information

- Flexible pipe joint which allows for expansion, contraction and deflection
- Sizes from ¾–24" | DN20–DN600
- Pressures up to 232 psi | 1600 kPa | 16 bar
- For coating options, see pg. 4
- May be used on FRP/GRP pipe
- For sizes 14–24" | DN350–DN600, download publication 20.03 for information on AGS Style W77

Products Tested and Type Approved by IACS Members:

See the Victaulic IACS Member Certificates for specific application information



Flexible Coupling

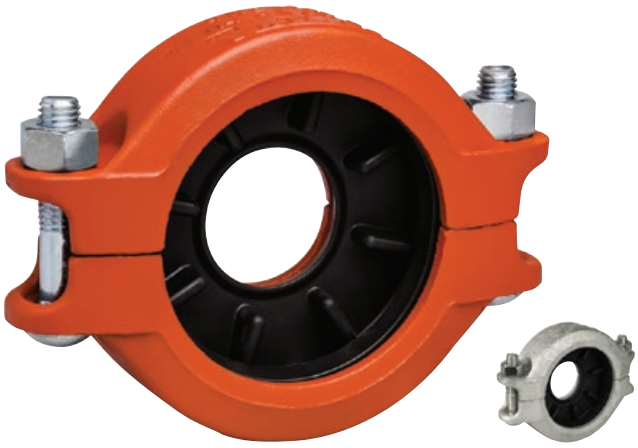
STYLE 75

Download publication 06.05 for complete information

- Lightweight coupling for moderate pressures
- Flexible pipe joint which allows for expansion, contraction and deflection
- Sizes from 1–8" | DN25–DN200
- Pressures up to 232 psi | 1600 kPa | 16 bar
- For coating options, see pg. 4

Products Tested and Type Approved by IACS Members:

See the Victaulic IACS Member Certificates for specific application information



Reducing Coupling

STYLE 750

Download publication 06.08 for complete information

- Replaces two couplings and a reducing fitting
- Sizes from 2–10" | DN50–DN250
- Pressures up to 232 psi | 1600 kPa | 16 bar
- For coating options, see pg. 4

Products Tested and Type Approved by IACS Members:

See the Victaulic® IACS Member Certificates for specific application information

Vic-Flange Adapter

STYLE 741

Download publication 06.06 for complete information

- ANSI Class 125 and 150, Australian Standard Table E, and PN10/16 flanges
- Sizes from 2–24" | DN50–DN600
- Pressures up to 232 psi | 1600 kPa | 16 bar
- For coating options, see pg. 4

Products Tested and Type Approved by IACS Members:

ABS CCS DNV·GL LR

See the Victaulic **IACS Member Certificates** for specific application information

Fittings

Download publication 07.01 for complete information on OGS grooved end fittings for carbon steel pipe

- Standard fitting pressure ratings conform to ratings of installed coupling
- All fittings supplied with grooves or shoulders for fast installation
- Fittings available from ¾–24" | DN20–DN600
- For coating options, see pg. 4

Products Tested and Type Approved by IACS Members:

ABS BUREAU VERITAS CCS DNV·GL LR

See the Victaulic® **IACS Member Certificates** for specific application information

No. 10
90° Elbow

No. 11
45° Elbow

No. 12
22½° Elbow

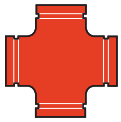
No. 13
11¼° Elbow

No. 20
Tee

No. 25
Grooved Branch Reducing Tee

No. 30
45° Lateral

No. 33
True Wye



No. 35
Cross

No. 50
Concentric Reducer

No. 60
Cap

Vic-300™ MasterSeal™ Butterfly Valve

SERIES 761

Download publication 08.20 for complete information

- Designed for bi-directional, dead end services to full working pressure
- Multiple seat, disc material and handle options available
- Sizes from 2–12" | DN50–DN300
- Pressures up to 232 psi | 1600 kPa | 16 bar
- Not for use where Fire Resistance compliance is required

Products Tested and Type Approved by IACS Members:

See the Victaulic® IACS Member Certificates for specific application information

High Pressure *Vic-Check* Valve

SERIES 716H

Download publication 08.08 for complete information

- Provides leak-free sealing under conditions as low as 5 ft. | 1.5 m of head
- Sizes from 2–3" | DN50–DN80
- Pressures up to 232 psi | 1600 kPa | 16 bar
- Not for use where Fire Resistance compliance is required

Products Tested and Type Approved by IACS Members:

See the Victaulic IACS Member Certificates for specific application information

Vic-Check Valve

SERIES 716

Download publication 08.08 for complete information

- Provides leak-free sealing under conditions as low as 5 ft. | 1.5 m of head
- Sizes from 2½–12" | 73.0 mm–DN300
- Pressures up to 232 psi | 1600 kPa | 16 bar
- Not for use where Fire Resistance compliance is required

Products Tested and Type Approved by IACS Members:

See the Victaulic IACS Member Certificates for specific application information

Vic-Ball Valve

SERIES 726

Download publication 08.23 for complete information

- High pressure standard port NACE MR-01-75-compliant ball valve
- Available without a handle, or with a lever or gear operator
- Sizes from 1½–6" | DN40–DN150
- Pressures up to 232 psi | 1600 kPa | 16 bar
- Not for use where Fire Resistance compliance is required

Products Tested and Type Approved by IACS Members:

CCS

See the Victaulic® **IACS Member Certificates** for specific application information

Vic-Strainer Tee Type

SERIES 730

Download publication 09.02 for complete information

- Lighter than flanged Y-type strainers and provides straight-through flow for lower pressure drop
- Sizes from 1½–12" | DN40–DN300
- Pressures up to 232 psi | 1600 kPa | 16 bar
- For coating options, see pg. 4

Products Tested and Type Approved by IACS Members:

CCS

See the Victaulic **IACS Member Certificates** for specific application information

Vic-Strainer Wye Type

SERIES 732

Download publication 09.03 for complete information

- Provides straight-through flow for lower pressure drop
- Sizes from 2–12" | DN50–DN300
- Pressures up to 232 psi | 1600 kPa | 16 bar
- For coating options, see pg. 4

Products Tested and Type Approved by IACS Members:

ABS CCS

See the Victaulic **IACS Member Certificates** for specific application information

As the marine industry continues to expand, so does the need for Advanced Groove System (AGS) products. Victaulic offers the W77 AGS flexible coupling for systems 14–24" | DN350–DN600. Our large diameter piping solutions provide strength and dependability in addition to speed, making them an excellent choice over welding. Other advantages AGS joints provide over welded joints include no flame installation, superior seismic-shock resistance and a union at every joint for easy adjustment, system maintenance or system expansion.

AGS Rigid Coupling

STYLE W07

Download publication 20.02 for complete information

- First flat-pad, metal-to-metal, rigid coupling to be offered in this size range
- Sizes from 14–50" | DN350–DN1250
- Pressures up to 232 psi | 1600 kPa | 16 bar
- For coating options, see pg. 4
- For original groove sizes 1–12" | DN25–DN300 (Style 07), download publication 06.02; For original groove featuring Installation-Ready™ technology sizes 2–12" | DN50–DN300 (Style 107N), download publication 06.23

Products Tested and Type Approved by IACS Members:

ABS, BV, LR

See the Victaulic IACS Member Certificates for specific application information

AGS Flexible Coupling

STYLE W77

Download publication 20.03 for complete information

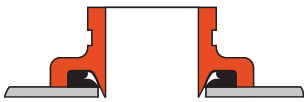
- Unique wedge-shaped key profile increases allowable pipe end separation
- Sizes from 14–24" | DN350–DN600
- Pressures up to 232 psi | 1600 kPa | 16 bar
- For coating options, see pg. 4
- May be used on FRP/GRP pipe
- For original groove sizes ¾–24" | DN20–DN600 (Style 77), download publication 06.04; For original groove couplings featuring *Installation-Ready* technology sizes 2–8" | DN50–DN200 (Style 177N), download publication 06.24

Products Tested and Type Approved by IACS Members:

DNV·GL, BV

See the Victaulic IACS Member Certificates for specific application information

Victaulic developed the hole cut piping system concept to enable a fast and easy mid-pipe outlet solution that would not require welding. The system allows for a direct branch connection at any location where a hole can be cut in the pipe. Gaskets are molded to conform to the outer diameter of the pipe and provide a pressure-responsive seal. Victaulic® hole cut products are positioned on the pipe using a locating collar (Style 920 and 920N).



Mechanical-T Bolted Branch Outlet and Cross Assemblies

STYLE 920/920N

Download publication 11.02 for complete information

- Provides a direct branch connection at any location where a hole can be cut in the pipe
- Available as a tee or cross outlet with female threaded or grooved ends
- Sizes from 2–8" | DN50–DN200
- Pressures up to 232 psi | 1600 kPa | 16 bar
- For coating options, see pg. 4
- For hole cutting tools, see pg. 21

Products Tested and Type Approved by IACS Members:

ABS · BUREAU VERITAS · CCS · DNV·GL

See the Victaulic **IACS Member Certificates** for specific application information

Vic-Press™ for Schedule 10S Stainless Steel

The revolutionary *Vic-Press* for Schedule 10S system provides quick, easy and safe installation and maintenance. It has the integrity to stand up to the demands of shipboard applications by providing a positive mechanical interlock between the pipe and the fitting. The *Vic-Press* for Schedule 10S press-to-connect system joins off-the-shelf ASTM A-312 stainless steel pipe.

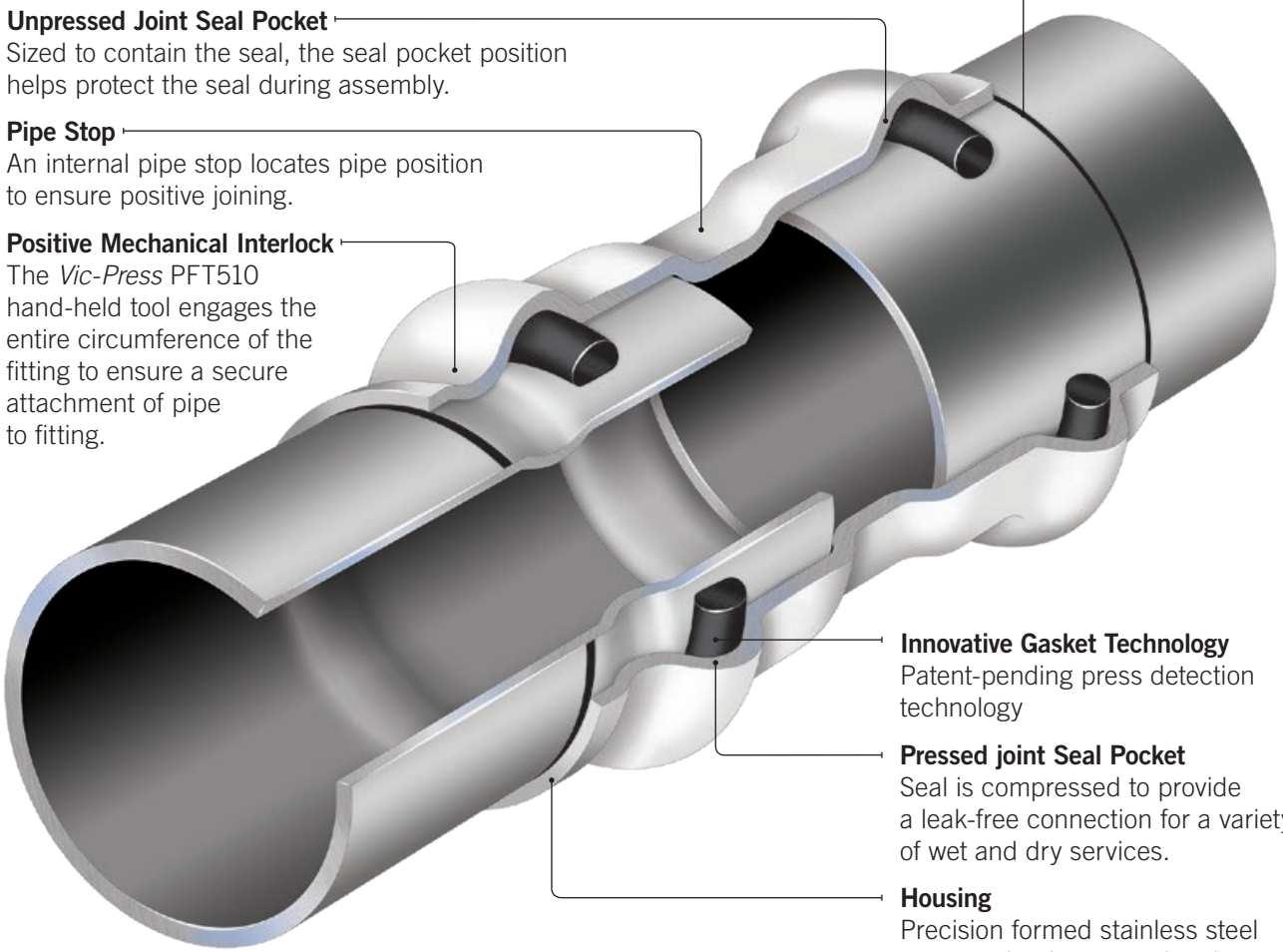
Vic-Press systems are ideal for compressed air, instrument air, eye wash stations and a variety of other systems. Unlike welded systems *Vic-Press* is environmentally friendly, completely eliminating the noxious fumes and hazardous conditions associated with welding.

Insertion Mark
A witness mark made by installer prior to installation allows for visual verification that the pipe has been fully inserted for proper installation.

Unpressed Joint Seal Pocket
Sized to contain the seal, the seal pocket position helps protect the seal during assembly.

Pipe Stop
An internal pipe stop locates pipe position to ensure positive joining.

Positive Mechanical Interlock
The *Vic-Press* PFT510 hand-held tool engages the entire circumference of the fitting to ensure a secure attachment of pipe to fitting.



Innovative Gasket Technology
Patent-pending press detection technology

Pressed joint Seal Pocket
Seal is compressed to provide a leak-free connection for a variety of wet and dry services.

Housing
Precision formed stainless steel construction incorporating the pipe stop and seal.

Products Tested and Type Approved by IACS Members:

ABS · BUREAU VERITAS · DNV·GL · LR

See the Victaulic® **IACS Member Certificates** for specific application information

Vic-Press™ For Schedule 10S Stainless Steel Type 316

Download publication 18.11 for complete information

- Fast, easy, reliable way to join small diameter Schedule 5S or 10S Type 316/316L stainless steel
- Meets ASME requirements for ANSI Class 150 systems
- Sizes from ½–2" | DN15–DN50
- Pressures up to 232 psi | 1600 kPa | 16 bar
- Approvals vary per product

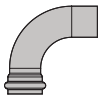
Connection Key

P Press
F Female Thread
M Male Thread
T Plain End
L Flanged
G Grooved

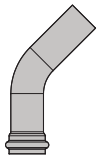
Style P507
Standard Coupling
(P×P)

Style P508
Slip Coupling
(P×P)

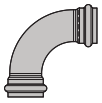
Style P560
End Cap



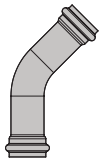
Style P562
90° Street Elbow
(P×T)



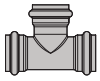
Style P563
45° Street Elbow
(P×T)



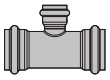
Style P568
Short Tangent 90° Elbow
(P×P)



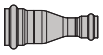
Style P571
45° Elbow
(P×P)



Style P572
Tee
(P×P×P)



Style P573
Tee with Reducing Branch
(P×P×P)

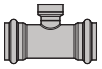


Style P574
Concentric Reducer
(P×P)

Style P575
Flange Adapter
(P×L)

Style P576
Male Threaded Adapter
(P×M)

Style P577
Transition Nipple
(G×T)



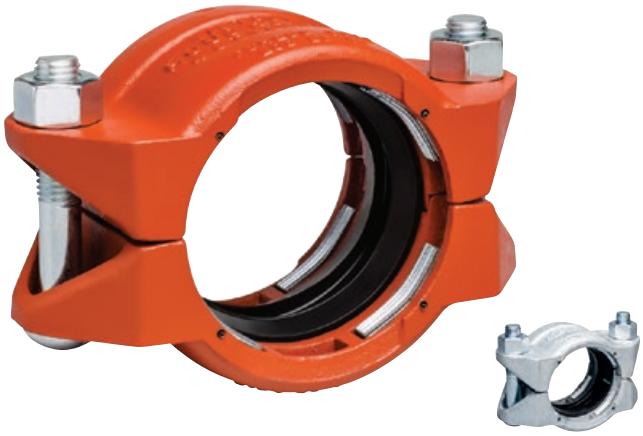
Style P578
Tee with Threaded Branch
(P×P×F)

Style P579
Female Threaded Adapter
(P×F)

PFT510
Vic-Press Tool,
pg. 21

The Victaulic® plain end piping method is ideal for maintenance and repairs as well as new systems such as roof drains, slurries, tailings and oil field services. *Roust-A-Bout* couplings and plain end fittings are UL and ULC Listed for fire protection services.

Victaulic plain end couplings are primarily designed for use on standard weight steel pipe (Schedule 40), but may be used on light wall steel or other metallic pipe, such as aluminum or stainless steel. They are not intended for use on plastic pipe, plastic-coated pipe or brittle pipe, such as cement-lined or cast iron. Nor are they intended for use on pipe with a surface hardness greater than 150 Brinell.



Roust-A-Bout Plain End Coupling

STYLE 99

Download publication 14.02 for complete information

- Grips to provide a strong component for joining plain and beveled end pipe and fittings
- Not designed for use with plastic pipe
- Sizes from 1 – 18" | DN25 – DN450
- Pressures up to 232 psi | 1600 kPa | 16 bar
- For coating options, see pg. 4

Products Tested and Type Approved by IACS Members:

ABS · BUREAU VERITAS · DNV·GL · LR

See the Victaulic **IACS Member Certificates** for specific application information

It's never been easier to install Victaulic® grooved piping solutions into marine piping systems. *Victaulic* couplings, fittings and valves are compatible and incorporated into several grooved system designs with IACS Member Type Approved components such as Wager air vents, IMI TA balancing valves and Vatec suction pipe inlet nozzles.

Wager Air Vent
Wager Air Vents restrict backflow into the system. When partnered with *Victaulic* couplings and fittings repairs are easily accomplished.

IMI TA Manual Balancing Valves with Grooved Ends
To reduce the weight and footprint of the system, IMI TA grooved end valves can be easily joined with *Victaulic* mechanical couplings.

Delta-Y Assembly
For use on bulk cement/barite systems commonly found on offshore platforms, the Delta-Y assembly reduces space required for flanged and welded delta installation.

"Elephant Foot" (Suction Pipe Inlet Nozzle)
Victaulic solutions are compatible with suction pipe inlet nozzles to ease maintenance when emptying tanks.

Box Coolers
Victaulic grooved pipe-joining solutions eliminate space constraints, ease access for clean up operations and reduce time out of service.

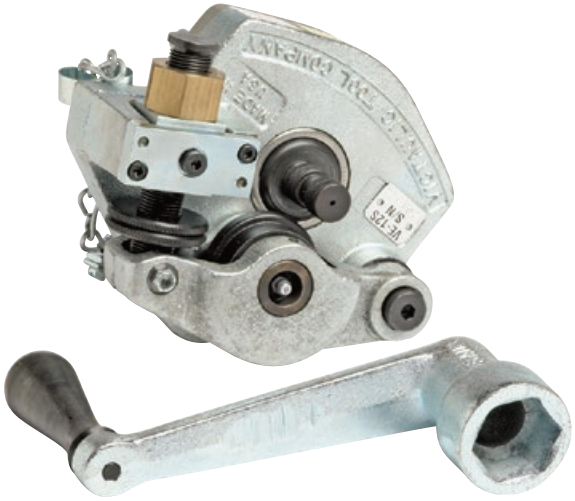
Mud Box Strainers
Fitted into machinery space bilge suction piping, these coarse strainers are oriented in tight hard to reach areas. Mud box strainers can easily be removed and replaced when joined with *Victaulic* couplings.

Pipe Preparation Tools

Victaulic is the world's leading developer of pipe preparation tools. These tools simplify pipe end preparation and are available for pipe sizes ranging from ½–24" | DN15–DN600 and pipe wall thicknesses up to Schedule 80 for sizes ½–6" | DN15–DN150.

Victaulic® tools are available for field use, fab shop environments and ship board applications. As with our pipe joining technologies, *Victaulic* tools make pipe end preparation faster, easier and safer.

Additionally, Victaulic offers hole cutting, pipe cut-off, pressing tools and a variety of accessories.

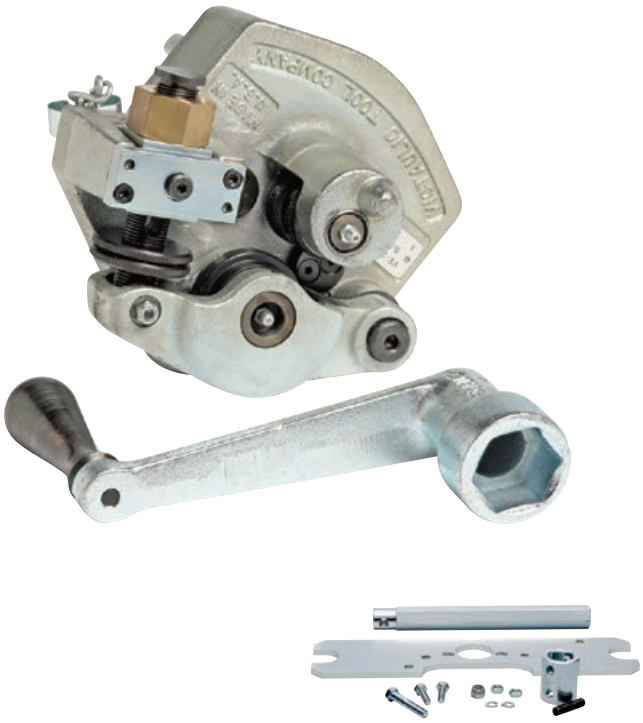


Field Portable Roll Grooving Tools

VE12 GROOVE IN-PLACE

Download publication 24.01 for complete information

- Roll grooves ¾–2" | DN20–DN50 pipe
- For manual grooving of Schedule 5, 10 and 40 steel; stainless steel; aluminum and PVC pipe (size dependent)
- Tool is manually operated using the supplied handle
- Enhanced tracking rolls allow bi-directional grooving
- Power Requirements: None
- Weight: 17 lbs. | 8 kg

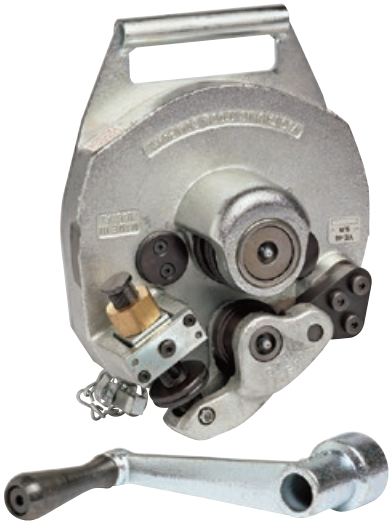


Field Portable Roll Grooving Tools

VE26 GROOVE IN-PLACE

Download publication 24.01 for complete information

- Roll grooves 2–6" | DN50–DN150 pipe
- For manual grooving of Schedule 5, 10 and 40 steel; stainless steel; aluminum and PVC pipe; K, L, M, DWV, A, B and D copper tube (size dependent)
- Tool is manually operated using the supplied handle
- Enhanced tracking rolls allow bi-directional grooving
- Optional power drive kit available to alternately groove pipe using a Ridgid™ 300 power drive. Newer tools with serial numbers ending in "C" are compatible with the Power Drive Kit; tools which do not contain the "C" suffix will require retrofit to accept the Power Drive Kit; contact Victaulic for details.
- Power Requirements: None
- Tool Weight: 22 lbs. | 10 kg
  Optional Power Drive Kit Weight: 7 lbs. | 3 kg



Field Portable Roll Grooving Tools

VE46 GROOVE IN-PLACE

Download publication 24.01 for complete information

- Roll grooves 3½–6" | DN90–DN150 pipe
- For manual grooving of Schedule 5, 10 and 40 steel; stainless steel and aluminum pipe; Schedule 40 – 80 PVC pipe (size dependent)
- Tool is manually operated using the supplied handle
- Enhanced tracking rolls allow bi-directional grooving and help to hold the tool on the pipe end during the roll grooving process
- Optional power drive kit available to alternately groove pipe using a Ridgid™ 300 power drive. Newer tools with serial numbers ending in "C" are compatible with the Power Drive Kit; tools which do not contain the "C" suffix will require retrofit to accept the Power Drive Kit; contact Victaulic for details.
- Power Requirements: None
- Tool Weight: 28 lbs. | 13 kg
  Optional Power Drive Kit Weight: 7 lbs. | 3 kg

Field Fabrication Roll Grooving Tools

STYLE VE206

Download publication 24.01 for complete information

- Roll grooves 1¼–6" | DN32–DN150
- For grooving of Schedule 5, 10 and 40 steel and stainless steel pipe; K, L, M and DWV copper tube (size dependent)
- Tool head mounts to any tripod stand with a Ridgid™ 300 bolt pattern or the flat bed of a work truck
- Hydraulic hand pump can be mounted on either side of the tool for right or left hand operation
- Supplied with Victaulic® tool carry bag for accessory storage
- Power Requirements: compatible with multiple power drive units: Ridgid™ 300, Ridgid™ 700 and REMS Amigo 2
- Weight: 165 lbs. | 75 kg

Field Fabrication Roll Grooving Tools

VE416FS

Download publication 24.01 for complete information

- Roll grooves 2–16" | DN50–DN400 pipe
- For grooving of Schedule 5, 10, 40 and 80 steel; stainless steel; aluminum and PVC pipe; K, L, M and DWV copper tube (size dependent)
- VE416FS is designed for field grooving of OGS pipe and should not be used for continuous field production grooving; for field production grooving capabilities
- Equipped with a pipe stabilizer for 6–16" | DN150–DN400 pipe sizes to control pipe sway
- Groove depth adjuster allows for easy adjustment for initial groove diameter
- The fully-motorized, semi-automatic, electrohydraulic tool comes complete with safety guards and safety foot switch
- Power Requirements: Ridgid™ 300 Power Drive
- Weight: 240 lbs. | 109 kg

Field Fabrication Roll Grooving Tools

VE416FSD/VE417FSD

Download publication 24.01 for complete information

- Roll grooves 2–16" | DN50–DN400 pipe
- For grooving of Schedule 5, 10, 40 and 80 steel; stainless steel; aluminum and PVC pipe; K, L, M and DWV copper tube (size dependent)
- VE416FSD/VE417FSD is designed for field grooving of OGS pipe and should not be used for continuous field production grooving; for field production grooving capabilities
- Groove depth adjuster allows for easy adjustment for initial groove diameter
- Completely self-contained unit with integral gear motor, safety foot switch and power cord/plug
- The fully-motorized, semi-automatic, electrohydraulic tool comes complete with safety guards and safety foot switch
- Power Requirements: VE416FSD is provided with 110 volt, 15 amp for integral gear motor; VE417FSD is provided with 220 volt, 8 amp service
- Weight: 340 lbs. | 154 kg

Plant/Shop Fabrication Roll Grooving Tools

VE460

Download publication 24.03 for complete information

- Roll grooves 4–24" | DN100–DN600 pipe with Original Groove System (OGS)
- For grooving of Schedule 5, 10, 40 and 80 steel; stainless steel; aluminum and PVC pipe (size dependent)
- Roll grooves 14–60" | DN350–DN1500 pipe with Advanced Groove System (AGS)
- For grooving of .250–.500 wall carbon steel; Schedule 5S and 10S stainless steel (size dependent)
- The fully-motorized, semi-automatic, electrohydraulic tool comes complete with safety guards and safety foot switch
- Enhanced tracking rolls help to keep the pipe on the tool during the roll grooving process
- Support bases are required to groove pipe sizes 26" | DN650 and larger. Each support base is 12" | 305 mm in height and corresponds with a range of allowable pipe sizes it can groove
- Power Requirements: 220/440 volt, 3-phase, 60 hertz standard; the tool can also be supplied in various voltages, contact Victaulic for details
- 3-phase requires tool power to be hard wired by a local certified electrician
- Weight: 1500 lbs. | 680 kg

Hole Cutting Tools

HCT904/HCT908

Download publication 24.01 for complete information

- One-piece hole cutting tool designed to cut holes up to 2¾" | 70 mm in carbon and stainless steel pipe; for pipe sizes up to 8" | DN200
- Allows use of *Mechanical-T* outlets, strapless outlets, and strapless thermometer outlets
- HCT904 Power Requirements: 220 volt, single phase, 60 hertz, 10 amp
- HCT908 Power Requirements: 110 volt, single phase, 60 hertz, 7 amp
- Weight: 23 lbs. | 10 kg

Hole Cutting Tools

VHCT900

Download publication 24.01 for complete information

- Three-piece hole cutting tool designed to cut holes up to 4½" | 120 mm in diameter for *Mechanical-T* outlets, strapless outlets, and strapless thermometer outlets
- Base unit clamps quickly onto the pipe in vertical, horizontal or overhead positions
- Available extended chain for 10–24" | DN250–DN600 pipe
- Power Requirements: grounded 120 volt, single phase, 60 hertz, 10 amp electrical supply (220 volt, single phase, 60 hertz, 5 amp available on request)
- Weight: 36 lbs. | 16 kg

Vic-Press™ Tools

PFT510

Download publication 24.01 for complete information

- Designed for securing Vic-Press™ Schedule 10S products onto Schedule 10S stainless steel pipe
- Tool package includes: (1) PFT510 tool, (2) 18V Lithium Ion batteries, (1) battery charger, (1) tool carrying case, (1) jaw carrying case, (1) each of jaws sized ½" | DN15, ¾" | DN20, 1" | DN25, 1½" | DN40, and 2" | DN50, and (1) adapter jaw
- Not compatible with PFT505 and/or PFT509 tools/components
- Power Requirements: Battery pack 110 volt, 60 cycle, 6.5 amp (optional 220 volt)
- Weight: 21 lbs. | 9.5 kg (PFT510 with 1" | DN25 jaw)

Tool Accessories

VAPS112 ADJUSTABLE PIPE STAND

Download publication 24.01 for complete information

- Designed for supporting pipe to be roll grooved
- Turnstile design allows pipe to be spun around for grooving of both pipe ends without dismounting pipe from stand
- Forward/traverse movement
- Capacity: ¾ – 12" | DN20 – DN300 pipe
- Load rating: 1,075 lbs. | 490 kg
- Vertical stroke: The legs adjust from 8½" | 216 mm to achieve table height of 23" | 584 mm
- Minimum pipe height from floor: 23" | 584 mm on 12" | DN300 pipe and 21" | 533 mm on 1" | DN25 pipe
- Weight: 190 lbs. | 86 kg

Tool Accessories

VAPS224 ADJUSTABLE PIPE STAND

Download publication 24.01 for complete information

- Designed specifically for supporting pipe to be roll grooved
- Self-standing, heavy-duty unit permits free pipe rotation and traversing on ball transfers
- Capacity: 2 – 24" | DN50 – DN600 pipe
- Load rating: 1,800 lbs. | 816 kg
- Vertical stroke: 23" | 584 mm
- Minimum pipe height from floor 13" | 325 mm on 24" | DN600 pipe
- Maximum pipe height from floor 38" | 965 mm on 2" | DN50 pipe
- Weight: 260 lbs. | 118 kg

Tool Accessories

VAPS1672 ADJUSTABLE PIPE STAND

Download publication 24.01 for complete information

- Designed specifically for supporting pipe to be roll grooved
- Self-standing, heavy duty unit permits free pipe rotation and traversing on ball transfers
- Designed for use with VE460 grooving tools
- Capacity: 16 – 72" | DN400 – DN1800 pipe
- Load rating: 10,000 lbs. | 4535 kg
- Vertical Stroke: 17" | 425 mm
- Minimum pipe height from floor 16" | 406 mm on 72" | DN1800 pipe
- Maximum pipe height from floor 28" | 711 mm on 16" | DN400 pipe
- Weight: 480 lbs. | 218 kg

Tool Accessories

PT100A, PT101 AND PT102A

Download publication 24.01 for complete information

- Go/No-Go pocket-sized steel tapes for taking circumferential measurements of pipe
- Go/No-Go side can be used to check cut or roll grooved pipe for conformance to Victaulic® grooved pipe specifications
- Tapes notched on the lead end to allow proper overlap within the groove for more accurate measurement
- PT100A contains Go/No-Go markings for use with ¾ – 24" | DN20 – DN600 pipe; tape marked with 0.01" | 0.25 mm increments on the opposite side
- PT-101 contains Go/No-Go markings for use with DN20 – DN600 pipe; tape marked with 0.25 mm increments on the opposite side
- PT102A contains Go/No-Go markings for use with Original Groove System sizes 8 – 12" | DN200 – DN300 and Advanced Groove System sizes 14 – 72" | DN350 – DN1800; tape marked in 0.02" | 0.5 mm increments on the opposite side

Vic™-Lube

GASKET LUBRICANT

Download submittal 05.02 for complete information

- To ensure easy assembly and service be sure to include plenty of Victaulic® lubricant
- Available in a box of (12) 4 fluid ounce | 114 milliliter tubes or in 1 quart | 946 milliliters containers
- Not compatible for use with HDPE pipe

Design Data

Introduction

This Victaulic® Marine Catalog has been written for the piping system installer, marine architect, 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. 1, for a quick reference guide, see pg. 29. 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**.

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**.

California Proposition 65

Victaulic has determined that a California law, commonly knows 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**.

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

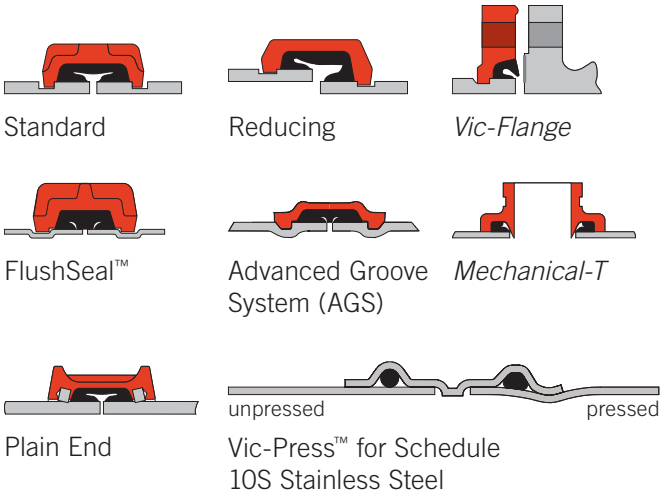
	**WARNING:** Grades V and M2 can expose you to trace amounts of chemicals, such as ethylene thiourea, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to **www.p65warnings.ca.gov**.

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 of other reproductive harm. For more information go to **www.p65warnings.ca.gov**.

Victaulic offers a broad variety of synthetic rubber gaskets suitable for a wide range of applications. Victaulic® gaskets provide high- and low-temperature limits, tensile strength, chemical resistance and shelf life.

Nitrile Grade T (Type A) gaskets are DNV-GL and LR Type approved with Style 07, 75, and 77 couplings along with the Style 741 flange adapter, tested according to requirements of ISO 19921 and applicable as per requirements of IACS member rules.



Gasket Materials

Victaulic offers a wide variety of elastomeric gaskets for a broad range of applications. For most water applications, the *Victaulic* Grade "E" EPDM (ethylene propylene diene monomer) gasket compound is compatible. *Victaulic* Grade "E" material has premium performance properties with respect to aging and resistance to heat and hot water. Heat aging tests at +250°F | +121°C conducted on this material show essentially no change in physical properties. This situation is further enhanced when this rubber is subjected to an essentially non-oxidative environment, such as a gasket in a water piping system. For example, aging tests in a non-oxidative atmosphere show essentially no change in physical properties of this material even when tested at temperatures up to +350°F | +177°C.

Since water has no deteriorating effect on the elastomer, temperature is the only limiting factor to be considered in determining the life expectancy of the elastomer in water service. The superior performance of the Grade "E" elastomer permits its use for hot water service up to +230°F | +110°C. The Grade "E" gasket is superior to previous gasket materials by all performance barometers, including high and low temperature limits, tensile strength, chemical resistance and shelf life.

The Grade T "Type A" gasket may be specified for oil related services, including air with oil vapor, this gasket may be specified for temperatures rated up to +180°F | +82°C. For water related services, this gasket may be specified for temperatures rated up to +150°F | +66°C. For oil free, dry air services, this gasket may be specified for temperatures rated up to +140°F | +60°C. ISO 19921:2005(E) compliant fire resistant material in accordance with DNV and LR.

Gasket/Seal/O-Ring Data

Victaulic offers a variety of elastomeric gaskets/seals/o-rings for the widest range of applications. To assure the maximum life for the service intended, proper gasket selection and specification in ordering is essential. The foremost consideration is temperature, along with concentration of product, duration of service and continuity of service. Temperatures beyond the compatibility limits have a degrading effect on the polymer.

Services listed are General Service Guidelines only. It should be noted that there are services for which these gaskets/seals/o-rings are not compatible. Reference should always be made to the latest Gasket Chemical Services Guide (**download publication GSG-100**) for specific service guidelines and for a listing of services which are not compatible.

Gasket guidelines apply only to *Victaulic* gaskets, seals and o-rings. Guidelines for a particular service do not necessarily imply compatibility of the coupling housing, related fittings or other components for the same service.

These guidelines do not apply to rubber-lined or rubber seal valves or other rubber-lined products. *Victaulic* gaskets are clearly marked as part of the mold with the gasket size, style and compound for easy identification.

Gasket Lubricant

Thorough lubrication of the gasket exterior, including the sealing lips and/or pipe ends and housing interiors, is essential for proper installation. Use *Victaulic* lubricant for installation. Other compatible material, such as silicone and others may be used on Grades "E" gaskets. *Victaulic* lubricant is available in a box of (12) 4 fluid ounce | 114 milliliter tubes or in 1 quart | 946 milliliters containers.

ALWAYS USE LUBRICANT FOR PROPER COUPLING ASSEMBLY.

Valve Seals

Victaulic Gasket Selection Guide (05.01) does not include Victaulic seals for valves. Refer to the individual *Victaulic* valve submittal for information on the seals available for each valve.

CAUTION

- **To ensure maximum product performance for the intended service, always specify the proper elastomer or seal material. Refer to the "Gasket Selection" and Chemical Services" sections located within this document.**
- **For specific chemical and temperature compatibility, always refer to the "Gasket Chemical Services Guide — Long Report" (GSG-100), which can be downloaded at victaulic.com.**

Failure to select and specify the proper elastomer or seal material for the intended service may cause joint failure, resulting in property damage.

Standard Gaskets — IPS

Grade [1]	Temp. Range [1]	Compound	Color Code	General Service Guidelines
E	–30°F to +230°F –34° C to +110° C	EPDM	Green Stripe	May be specified for hot water service within the specified temperature range plus a variety of dilute acids, oil-free air and many chemical services. UL Classified in accordance with ANSI/NSF 61 for cold +73°F | +23°C and hot +180°F | +82°C potable water service and ANSI/NSF 372. **NOT COMPATIBLE FOR USE WITH PETROLEUM SERVICES.**
T (Type A) [2]	–20°F to +180°F –29° C to +82° C	Nitrile	Gray Gasket	May be specified for oil related services, including air with oil vapor, this gasket may be specified for temperatures rated up to +180°F | +82°C. For water related services, this gasket may be specified for temperatures rated up to +150°F | +66°C. For oil free, dry air services, this gasket may be specified for temperatures rated up to +140°F | +60°C.
T	–20°F to +180°F –29° C to +82° C	Nitrile	Orange Stripe	May be specified for petroleum products, hydrocarbons, air with oil vapors, vegetable and mineral oils within the specified temperature range. **Not compatible for use with hot, dry air over +140°F | +60°C and water over +150°F | +66°C. NOT COMPATIBLE FOR USE WITH HOT WATER SERVICES.**

[1] For specific chemical and temperature compatibility, refer to the Gasket Selection Guide (05.01) which includes the Gasket Chemical Services Short Report or refer to the Gasket Chemical Services Guide Long Report (GSG-100) located on victaulic.com. The information shown defines general ranges for all compatible fluids.

[2] The Grade T Type A gasket is fire resistant and only available on Style 07, 75, 77 couplings and Style 741 *Vic-Flange* adapter.

Vic-Press™ Seals

Grade	Temp. Range [1]	Compound	Color Code	General Service Guidelines
H	–20° F to +210° F –29° C to +98° C	Hydrogenated Nitrile Butadiene Rubber (HNBR)	Two Orange Stripes	May be specified for hot petroleum/water mixtures, hydrocarbons, air with oil vapors, vegetable and mineral oils, engine oil and transmission oil. UL Classified in accordance with ANSI/NSF 61 for cold +73°F | +23°C and hot +180°F | +82°C potable water service and ANSI/NSF 372.
	Standard Seal: *Vic-Press* products will ship with Grade "H" seal unless otherwise specified on order.			
E	–30° F to +250° F –34° C to +121° C	EPDM	Green Stripe	May be specified for hot water service, dilute acids, oil-free air, chemical services. UL Classified in accordance with ANSI/NSF 61 for cold +73°F | +23°C and hot +180°F | +82°C potable water service and ANSI/NSF 372. **NOT COMPATIBLE FOR USE WITH PETROLEUM OR STEAM SERVICES.**

[1] For specific chemical and temperature compatibility, refer to the Gasket Selection Guide (05.01) which includes the Gasket Chemical Services Short Report or refer to the Gasket Chemical Services Guide Long Report (GSG-100) located on victaulic.com. The information shown defines general ranges for all compatible fluids.

Warranty

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.

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.

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.

Vessels and Rigs all over the world have already taken advantage of the benefits that accompany the employment of Victaulic® products in a wide range of applications.

Whether you are constructing a new ship or looking to simplify repairs, conversions and retrofits, reduce your down time with faster installation. Getting your vessel out in service as quickly and safely as possible is as important to you as it is to us.

For more information on these case studies please reference the *Victaulic* Marine Systems Brochure (MB-560).

Celebrity Eclipse

With a limited window of time for repairs, contractor, Servyman del Estrecho S.L., relied on *Victaulic* piping solutions to meet the operator's demanding time schedule. By employing *Victaulic* couplings and fittings, Servyman del Estrecho S.L. was able to finish the whole installation in three hours; meeting and beating the project deadline.

McAllister

When a tug owned by one of the oldest family owned-marine towing companies was in need of a quick repair the best long term solution was *Victaulic* rigid couplings. Robert E. McAllister was able to avoid drydock and was back at sea in a little over an hour.

La Superba

One of the world's largest and fastest luxury cruise ferries, La Superba can house 2,920 passengers and 1,000 vehicles. The owners of the ferry cruise needed a world class piping solution. Noise and vibration attenuation, as well as ease of installation and maintenance, made Victaulic a natural choice.

John W. Brown Liberty Ship

World War II Liberty Ship tests longevity of grooved piping systems**.** To address the sudden need for supplies overseas during World War II, the United States government launched an emergency shipbuilding program in 1941 that resulted in the construction of 2,700 cargo ships. Dubbed Liberty ships, these vessels were designed as economically and quickly built cargo steamers that formed the backbone of a massive sealift of troops, arms, materiel and ordnance to every theater of the war. Liberty ships, like the Brown, were not expected to last much longer than five years, but the 441-foot-6-inch-long Brown looks and sails almost exactly as she did at the end of the war and the Victaulic products installed are still holding water after more than 70 years. In fact, the vessel still sails today on living history tour cruises in Baltimore, Maryland.

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.

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