VICTAULIC® SOLUTIONS
FOR THE UPSTREAM OIL INDUSTRY
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Production Manifold
Prefabricated Header
“USING VICTAULIC’S PRE-FABRICATED DESIGN APPROACH HAS GREATLY IMPROVED CONSTRUCTION EFFICIENCIES AND HAS DECREASED THE AMOUNT OF FIELD TIME. REDUCING THE AMOUNT OF TIME ON LOCATION NOT ONLY SAVES MONEY, BUT HELPS TO MITIGATE THE CHANCE OF A SAFETY INCIDENT OCCURRING.”

Justin Crump, Facilities Engineer
Fastest and Safest Joining Method Available:

10X FASTER THAN WELDING

6X FASTER THAN FLANGING

FEATURE NO LOOSE PARTS DURING INSTALLATION
VICTAULIC UTILIZES VERTICALLY INTEGRATED MANUFACTURING TECHNIQUES TO CREATE AND MAINTAIN QUALITY, RELIABILITY AND REPUTATION. EACH STEP OF THE MANUFACTURING PROCESS IS CONTROLLED AND MONITORED BY VICTAULIC. ACHIEVE ON-TIME, ON-BUDGET COMPLETION AND THE HIGHEST SAFETY STANDARDS ON INSTALLATION.

Gasket Reliability

Victaulic’s gasket process includes controlling raw materials selection, developing and compounding exclusive gasket materials, and ensuring the highest possible quality through state of the art material testing and validation processes. Victaulic incorporates the combined efforts of their Material Technologists, Design Engineers, Process Control Engineers, Quality Assurance Engineers and Manufacturing Professionals to be the only grooved coupling manufacturer that is fully vertically integrated in gasket development and production.

- Durometer/Hardness: ASTM D2240 Testing
- Tensile Strength and Elongation: ASTM D412
- Compression Set: ASTM D395
- Stress Relaxation: Victaulic® Proprietary Tests and ISO 3384
- Volume Swell: ASTM D471
- Accelerated Aging: ASTM D573
In order to increase productivity, minimize rework and keep the crew safe, your Victaulic sales representative provides thorough on-site training.

Key Objectives

- Tooling Steps and Safety
- Proper Pipe Preparation
- Product Installation
- Documentation

Additional Benefit

Bilingual Trainers available at every job site.
Valve Testing

Victaulic puts each product through substantial testing requirements before going to market. These procedures test reliability and durability of the joints. General list of test performed:

- Pressure Tests
- Pressure Cycling Tests
- Flexure
- Vibration
- Water Hammer
- Vibration/Pulsation
- Low and High Temperature Exposure
- Fire
- Air Pressure
- Vacuum

“WE WERE ABLE TO SAVE THOUSANDS OF DOLLARS IN MATERIAL EXPENDITURE AND LABOR COSTS WHILE LOWERING RISK FACTORS.”

Stacey Cunningham, Purchasing Manager
EVERY STEP OF THE WAY

FROM PRE-CONSTRUCTION TO COMMISSIONING

Victaulic ensures speed to market, drastically reducing fabrication time and increased global availability and deliveries through lean manufacturing techniques and the support of Victaulic employees on a world wide scale.

Installation Process

Grooved
- Groove Pipe
- Stage grooved pipe and fittings
- Center gasket, seat housing in grooves
- Bolt couplings metal-to-metal
- Grooved joint is complete

Threaded
- Start die on end of pipe
- Apply cutting oil
- Cut threads
- Reverse machine once completed
- Wipe pipe clean
- Apply PTFE or Pipe dope
- Insert threads into fitting

Flanged
- Weld, Braze or Thread flange to pipe
- Insure flange is clean and free of burrs
- Mate up bolts
- Install two bolts opposite each other for retaining gasket
- Slip gasket between flanges
- Tighten remaining bolts in star pattern
- Apply load gradually
- Tighten to full torque level until nuts cease to move

Welded
- Put on safety gear
- Prep weld area
- Set up machine
- Clean metal before welding
- Set the joint
- Start the weld
- Build up a weld pool
- Fill bevel between pipe ends
- Repeat until fully filled

65% MORE MAN-HOURS ON AVERAGE NEEDED FOR WELDED INSTALLATIONS OVER GROOVED.
Victaulic® grooved systems have been the system of choice since 1919.

**APPLICATIONS:**
- Bulk Systems
- Central Gathering Facilities
- Desilters/Desanders
- Electric Treater Hook-ups
- Flow Lines
- Free Water Knockout
- Gun Barrel
- Heater Treaters
- Injection Lines
- Mud Lines
- Produced Water Lines
- Production Headers
- Salt Water Disposal
- Secondary Recovery
- Separator/Water Knockout
- Skim and Volume Tanks
- Suction/Discharge Manifolds
- Tank Battery
- Tank Hook-ups
- Tertiary Recovery
- Well Head Hook-ups

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**QEP Energy Company** Mandaree, North Dakota

QEP faced tight construction schedules due to increased drilling activity as well as having other jobs in various stages of construction. Working with our Victaulic® Virtual Design and Construction (VDC) group and local contractors and consultants, the treaters were constructed off-site and installed in the field using a minimum number of field joints.

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**Tesoro Oil Refinery** Los Angeles, California

Due to increasing demands and more stringent environmental regulations Tesoro had to install and replace a water loop that circled the refinery. After a thorough study of various joining methods Victaulic was selected because of the breadth of product from a single supplier and because of the safety advantages of the system.

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**Atlas Resources Hammon** Jacksboro, Texas

Prior to construction, the contractor knew the project would face challenges associated with schedule constraints. Fusing HDPE pipe is very time consuming. New Victaulic HDPE products and prefab options offered a controlled cost and vastly reduced completion date.

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**Chesterfield Oil Battery** Hobbs, New Mexico

For Apache Corporation construction of a new oil battery provided the opportunity to evaluate the best pipe joining methods for oil and water lines. Apache required a system that was not only dependable, but also easy to maintain. When it came time to specify and purchase the piping system Apache selected Victaulic.

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**J. Cleo Thompson Means** Andrews, Texas

Constructing a central tank battery and five new satellite locations at its oil handling facility required coordinated construction schedules to ensure the system went on-line and was receiving oil as quickly as possible. Working with the Victaulic VDC team to create detailed drawings and a comprehensive materials list allowed the project to finish ahead of schedule.

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**West Fire Energy** Snipe Lake, Saskatchewan, Canada

Speed was of paramount importance to Westfire Energy when installing for brand new well headers. Past experience with threaded joints led Westfire on a search for faster joining technologies. Using Victaulic Installation-Ready™ Style 107 rigid couplings allowed the system to be installed in half the time.
SYSTEM SOLUTION FOR HDPE PIPE

INSTALLATION-READY™ MECHANICAL PIPE JOINING FOR HIGH-DENSITY POLYETHYLENE

Style 905 Installation-Ready™ Plain End Coupling
For joining plain end HDPE systems. Dual rows of stainless steel teeth sink into HDPE pipe and don’t let go. Available for sizes 2–14" IPS | 63–355 mm ISO.

Style 907/W907 Installation-Ready Transition Coupling
Provides a single transition from plain end HDPE pipe to grooved pipe, valves or fittings. The Style 907 gives you access to the entire Victaulic® toolbox of existing grooved products such as valves, strainers and fittings. Available in sizes 2–14" IPS | 63–355 mm ISO.

Style 904 Installation-Ready Flange Adapter
Provides a single transition from plain end HDPE pipe to flanged piping system components. Available for sizes 3–8" IPS HDPE pipe to ANSI Class 150 Flange.

Full Flow, Plain End HDPE Fittings
2–8" IPS | 63–225 mm ISO plain end HDPE connections.
A full complement of couplings, fittings, and valves are available for all your HDPE system needs.

**Style 908 Double Grooved Coupling**
The large diameter solution for joining HDPE pipe systems, the Style 908 coupling brings speed and strength to the table. Available in sizes 8–36" IPS | 250–900 mm ISO.

**CG3000 Cut Grooving Tool**
The CG3000 tools are designed to cut groove 8–36" IPS | 250–900 mm ISO HDPE pipe. Providing the only grooved pipe end solution for joining large diameter HDPE pipe, these tools face and groove the end of the pipe in preparation for installation.

**Style 926 Mechanical-T**
This Mechanical-T spigot outlet provides a grooved outlet for direct connection to grooved steel pipe, valves, fittings or other equipment.

Simple, hole-cut branch connections for HDPE systems. Available for 10–32" IPS with 4" outlets and 26–48" IPS with 6" outlets.

For ISO sizes please reference publication 11.07.

**Style 906 Installation-Ready™ Knife Gate Valve**
This knife gate valve is designed for use on fluid lines containing solids, slurry, and/or abrasive media. All wear parts can be replaced in-line without removing the valve from the system. Available for 3–8" IPS HDPE.
When used in corrosive environments, the Victaulic® System Solution for HDPE pipe with couplings, fittings and valves will reduce overall construction costs and provide a reliable system for the life of your facility.
Challenge: Constructing a facility with HDPE pipe

Solution: Utilizing Victaulic® System Solutions for HDPE allows the full containment system to be constructed from HDPE pipe. Reduce your construction time and material handling by eliminating fusion from the job site.

“VICTAULIC COUPLINGS
SAVE TIME AND MONEY”

Bruce Allen, Production Foreman
Separators

Products used: Pressure ratings

- HP-70 Couplings: 1000 psi | 6895 kPa | 69 bar
- HP-70ES Couplings: 2500 psi | 17237 kPa | 172 bar
- 107N Installation-Ready™ Couplings: 750 psi | 5171 kPa | 52 bar
- Series 727 Ball Valves: 1500 psi | 10342 kPa | 103 bar
- Series 712 Check Valves: 1000 psi | 6895 kPa | 69 bar
- Series 713 Check Valves: 1000 psi | 6895 kPa | 69 bar

Flow Lines

Products used: Pressure ratings

- HP-70 Couplings: 1000 psi | 6895 kPa | 69 bar
- HP-70ES Couplings: 2500 psi | 17237 kPa | 172 bar
- 107N Installation-Ready™ Couplings: 750 psi | 5171 kPa | 52 bar
- Style 905 HDPE Couplings: 1000 psi | 6895 kPa | 69 bar
- Style 907 HDPE to Carbon Steel: 1000 psi | 6895 kPa | 69 bar
- Transition Couplings: 1000 psi | 6895 kPa | 69 bar

Why Use Victaulic On Your Next Project?

- Quick and easy joint alignment
- Visual verification of joint integrity
- Designed for buried services
- Pre-grooved pipe available from select pipe manufacturers
- Installation in rain, sleet, snow, wind, blowing dust, cold weather, hot weather — adverse conditions do not stop installations.
**Well Heads/Production Manifold**

**Products used : Pressure ratings**

- HP-70ES Couplings : 2500 psi | 17237 kPa | 172 bar
- Style 107N Installation-Ready™ Couplings : 750 psi | 5171 kPa | 52 bar
- Series 727 Ball Valves : 1500 psi | 10342 kPa | 103 bar
- Series 712 Check Valves : 1000 psi | 6895 kPa | 69 bar
- Series 713 Check Valves : 1000 psi | 6895 kPa | 69 bar

**Storage Tanks**

**Products used : Pressure ratings**

- HP-70 Couplings : 1000 psi | 6895 kPa | 69 bar
- HP-70ES Couplings : 2500 psi | 17237 kPa | 172 bar
- Style 107N Installation-Ready™ Couplings : 750 psi | 5171 kPa | 52 bar
- Series 761 Butterfly Valves : 300 psi | 2068 kPa | 21 bar

**Heater Treaters**

**Products used : Pressure ratings**

- HP-70 Couplings : 1000 psi | 6895 kPa | 69 bar
- HP-70ES Couplings : 2500 psi | 17237 kPa | 172 bar
- Style 107N Installation-Ready™ Couplings : 750 psi | 5171 kPa | 52 bar
- Series 727 Ball Valves : 1500 psi | 10342 kPa | 103 bar
- Series 712 Check Valves : 1000 psi | 6895 kPa | 69 bar
- Series 713 Check Valves : 1000 psi | 6895 kPa | 69 bar