

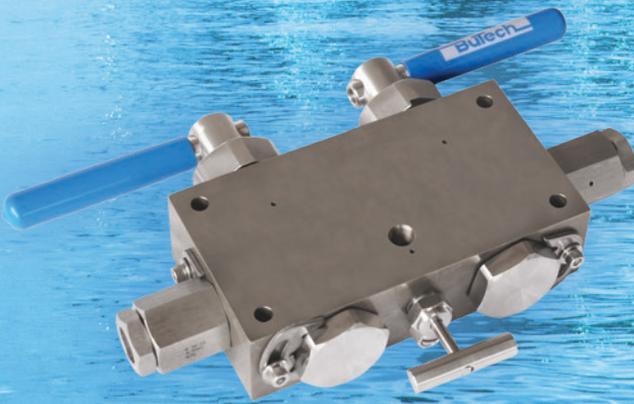
# BuTech®

Delivering Peak Performance

*High-pressure liquid and gas flow control solutions for the oil and gas industry's harshest environments*



BuTech  
CAT# C-3811-03-20-20-20B  
MAWP 15,000 PSIG @ 72 F  
HT# A11890  
PG 138172 316CW  
BODY# C-1768-01-B0  
SERIAL NO. 234658-003



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SERIAL NO. 234658-003

# BuTech®

A leading brand of high pressure valves, tubing, fittings and accessories, takes a proactive stance on the design, development and production of new and existing products to meet the critical requirements of the most severe applications in the oil and gas industry.

BuTech's subsea, relief, needle, ball, and double block and bleed valves, and assemblies are installed in some of the oil and gas industry's most challenging applications. From ball valves for delayed coker units to subsea valves performing in the harsh environments of the deepest offshore waters, BuTech leads the industry in performance, safety, and reliability.

## Applications in the Oil & Gas Industry

- Down-hole control systems on off-shore drilling platforms
- Hydraulic and pneumatic piping
- Control panels
- Test Stands
- Instrumentation Circuits
- Gauge shut-off and vent
- High purity systems
- Gas analysis
- Moderate vacuum systems
- Chemical Injection Modules

# BUTECH SUBSEA VALVES

BuTech subsea valves meet performance, safety and reliability expectations in the deepest water and some of the harshest environments in the offshore oil and gas industry. As wells have become deeper BuTech has been a leader at developing new and innovative ways to control the increasing temperature and pressure requirements at these greater depths.

## Features & Benefits

- API 6A , 19th ed., ISO 10423:2003 PR2, Annex F/PSL3G qualified valves available
- Internally pressure tested to 20,000 psi (1379 Bar)
- Externally tested to 14,000' (4200 Meters) depth
- Typical service life guarantee of 25 years
- Custom designed for instrumentation, process control and chemical injection applications Remote operated vehicle (ROV) capabilities in template control panels, subsea wellheads and christmas trees
- Manufactured to meet the requirements of NACE MR0175, API Spec 6A & 17D, ASME, ANSI and various others
- Trouble free operation in a variety of media including hydrogen sulfides, corrosion inhibitors, paraffin thinners, hydraulic fluids and other harsh chemicals

## Standard Materials of Construction

BuTech Subsea Ball Valves may be produced in any machinable metal with special seal materials.

*Please consult factory for custom requirements.*

Standard materials include:

- 316 cold-worked stainless steel
- Super Duplex

## Considerations in Selecting the Proper Subsea Valve

- Pressure/temperature rating
- End connections
- Service conditions and fluids
- Performance requirements
- Material compatibility
- Flow pattern required
- Customer specifications
- Needle or ball valve
- Orifice size needed
- Flow requirements
- Dimensional envelope and weight
- Method of operation
- Service life expectancy
- Handle configuration



## SUBSEA BALL VALVES

- Rapid quarter turn action provides quick open/close action for easy ROV or diver operation
- Independent spring-loaded seals for full differential pressure
- Trunnion mounted ball design and blowout proof stem for maximum safety
- Externally sealed design for depths to 14,000 feet (4200 meters)
- Easy mounting for ROV, diver or remote actuation
- Unlimited replaceable end connection capabilities for installation versatility
- Double barrier o-rings or cup seal options to prevent the ingress of seawater
- Full port flow path through valve to minimize pressure drop
- Bi-directional flow capabilities
- Special seal materials available for variety of services
- Special alloys available for extreme service
- PEEK® seats to offer resistance to chemicals, heat and wear/ abrasion
- Optional mounting patterns and interfaces
- 3/8", 1/2" & 1" 2-way design, 3/16", 3/8" & 1/2" 3-way design, 3/8" 4-way configurations available



## SUBSEA NEEDLE VALVES

- Non-rotating, non-rising stem prevents galling and scoring
- Metal to metal seating
- Stem packing below threads prevents thread galling and fouling
- Positive gland locking device
- Special alloys available for extreme service
- Stem packing for temperatures up to 650°F (343°C)
- Bracket or panel mounting
- Externally sealed design for depths to 14,000' (4200 meters)
- Wide variety of end connections and actuation handles

### Connection Availability

- Low Pressure - compression sleeve
- Medium Pressure - coned & threaded
- High Pressure - coned & threaded
- Pipe - NPT threads
- Also available: API, flange, zero clearance, socket weld, butt weld, SAE, JIC, BSP, ISO and others



# DOUBLE BLOCK AND BLEED VALVES

BuTech's Double Block and Bleed Ball Valve combines two isolating ball valves and a central needle bleed valve into one compact manifold. BuTech also offers double block and bleed needle valves and single block and bleed needle valves in various sizes and materials for higher flows, higher pressures or for sour gas applications.

## Features and Benefits

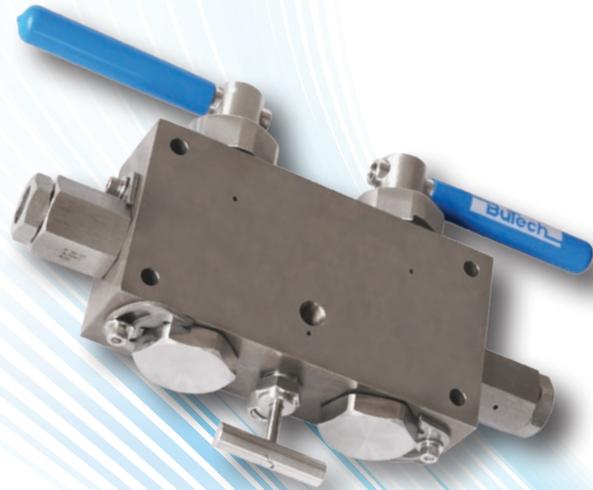
- Pressures to 20,000 PSI (1380 bar) at 72°F (22°C)
- Available with Needle Valves or Ball Valves, or a combination of both
- Compact Design
- Manual Lever or Actuator Activated
- Minimized leakage points
- Reduced Installation costs and maintenance requirements

## Standard Materials of Construction

BuTech Double Block and Bleed Valves may be produced in any machinable metal with special seal materials. *Please consult factory for custom requirements.*

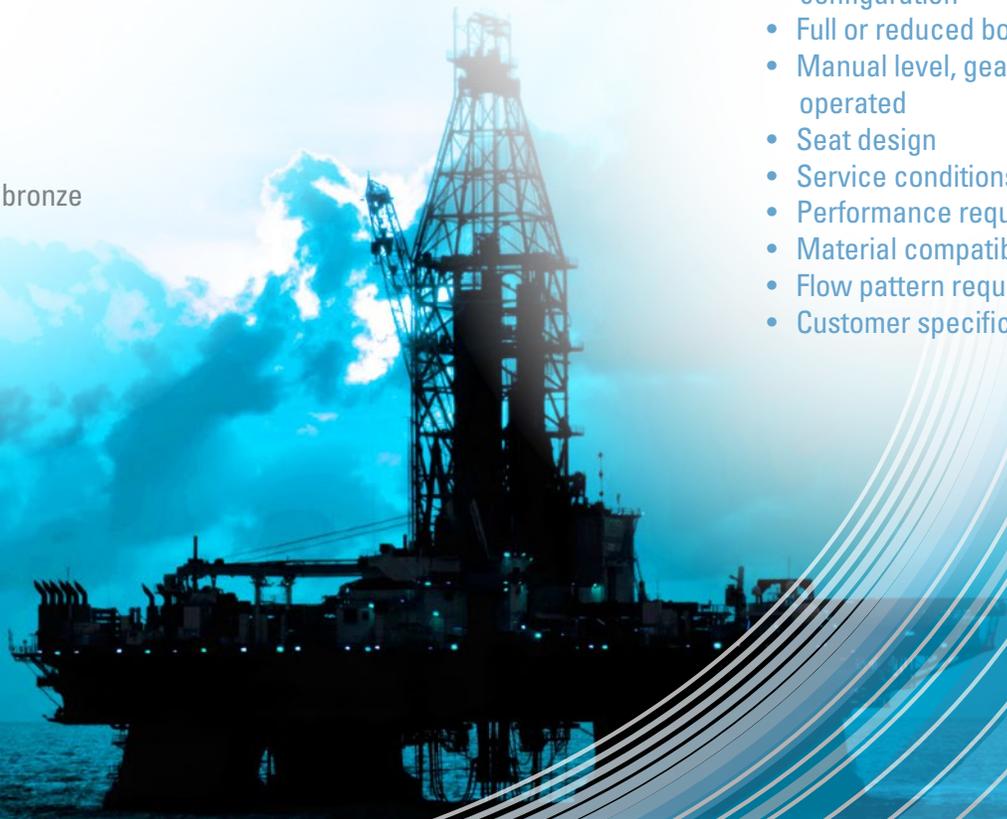
Standard materials include:

- Stainless steel
- Monel
- Hastelloy
- Titanium
- Inconel
- Bronze
- Aluminum bronze



## Considerations in Selecting the Proper Double Block and Bleed Valve

- Ball, gate, globe, or needle configuration
- Full or reduced bore
- Manual level, gear, or actuator operated
- Seat design
- Service conditions and fluids
- Performance requirements
- Material compatibility
- Flow pattern required
- Customer specifications



# BUTECH BALL VALVES

BuTech ball valves are available in 2-, 3-, 4- and 5-way designs with an infinite combination of connections. They are available with special seal materials, can be machined from metal for extreme applications, and can be fitted with pneumatic or electric actuators for remote control.

## Features and Benefits

- Pressures to 20,000 PSI (1380 bar) at 72°F (22°C)
- Pressure loaded seats assure positive sealing
- Blowout-proof stem and ball provides maximum safety
- Choice of replaceable connections for installation versatility
- Straight-through flow path minimizes pressure drop
- Quarter-turn operation accommodates quick open and close needs
- Flow indicating handle indicates valve position at a glance
- Bi-directional flow capabilities



## Standard Materials of Construction

BuTech Ball Valves may be produced in any machinable metal with special seal materials. *Please consult factory for custom requirements.*

Standard materials include:

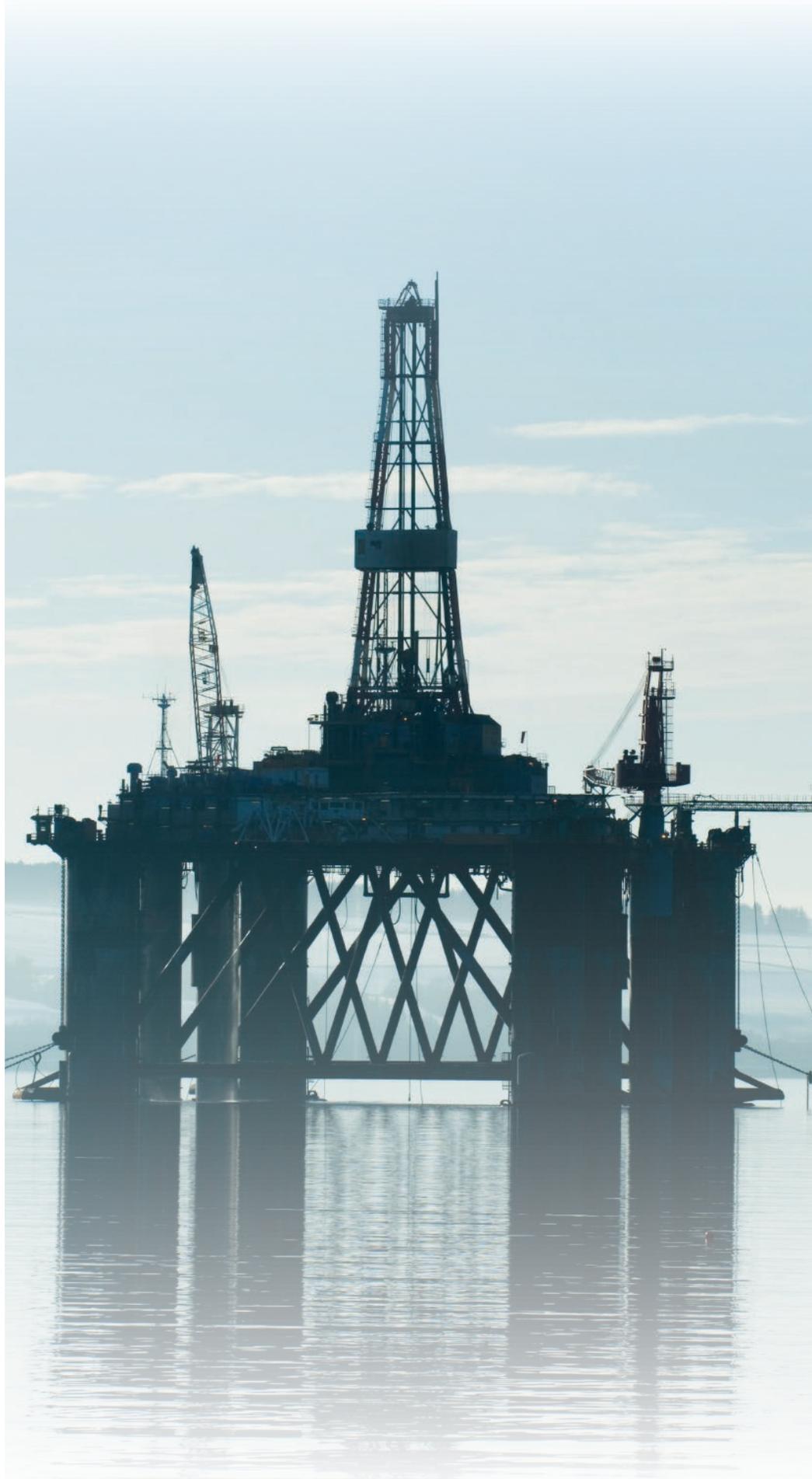
- 316 cold-worked stainless steel
- 17-4PH
- PEEK®
- Viton
- Virgin PTFE
- Glass-filled PTFE

## Considerations in Selecting the Proper Ball Valve

- Full or reduced bore
- Flow configurations
- Operating temperature
- Fluids suitability
- Connection requirements
- Seal material
- Pneumatic or electric actuators required for remote control

## Connections

- Male and female NPT
- Low-pressure compression fittings
- Medium and high-pressure tubes
- Medium and high-pressure female
- JIC 37° flare
- SAE O-ring boss
- Socket-weld
- Butt-weld
- Metric connections
- Zero clearance



# RELIEF VALVES

BuTech's Double Block and Bleed Ball Valve combines two isolating ball valves and a central needle bleed valve into one compact manifold. BuTech also offers double block and bleed needle valves and single block and bleed needle valves in various sizes and materials for higher flows, higher pressures or for sour gas applications.

## Features and Benefits

- Pressures ranging from 1,500psi (103 bar) to 60,000psi (4138 bar)
- Multiple part and seal options available
- All stainless steel construction
- Compact design
- Adjustable in the field from 1,500psi (103 bar) to 20,000psi (1379 bar) and 20,000psi (1379 bar) to 60,000psi (4138 bar)

## Standard Materials of Construction

BuTech Relief Valves may be produced in any machinable metal with special seal materials. *Please consult factory for custom requirements.*

Standard materials include:

- Standard carbon steel
- Low temperature carbon steel
- Stainless steel
- Monel
- Hastelloy
- Titanium
- Inconel
- Bronze
- Aluminum bronze



## Considerations in Selecting the Proper Relief Valve

- Manual over-ride options
- Automated set-pressure operation
- Trim design options
- Service conditions and fluids
- Performance requirements
- Material compatibility
- Flow pattern required
- Customer specifications

## Connections

- Male and female NPT
- Low-pressure compression fittings
- Medium and high-pressure tube ends
- Medium and high-pressure female
- JIC 37° flare
- SAE O-ring boss
- Socket-weld
- Butt-weld
- Metric connections



## BUTECH ZERO CLEARANCE ASSEMBLES

BuTech's Double Block and Bleed Ball Valve combines two isolating ball valves and a central needle bleed valve into one compact manifold. BuTech also offers double block and bleed needle valves and single block and bleed needle valves in various sizes and materials for higher flows, higher pressures or for sour gas applications.

### Features and Benefits

- Rating: Up to 15,000 psi (1030 bar)
- Temperature: Services from -20°F (28°C) to 550°F (288°C)
- Soft Seal: Incorporates an o-ring for sealing purposes; optional o-rings such as Viton, Buna and Kalrez are available for special applications
- Simplifies tubing layouts and skid size by reducing the number of connections and elbows needed to allow for easy servicing of valves.
- Ease of Assembly: There is no coning and threading or welding to be performed. Simply lube the threads, attach to the mating part and tighten. Allows easy installation where space is limited.
- Ease of Disassembly: In the event that a valve or component requires removal from the system, simply loosen the "backnuts" and remove the component as shown. This eliminates the need to dismantle several components to extract a single component.

### Standard Materials of Construction

BuTech Ball Valves may be produced in any machinable metal with special seal materials. *Please consult factory for custom requirements.*

Standard materials include:

- 316 cold-worked stainless steel
- 17-4PH
- PEEK®
- Viton
- Virgin PTFE
- Glass-filled PTFE

### Connections

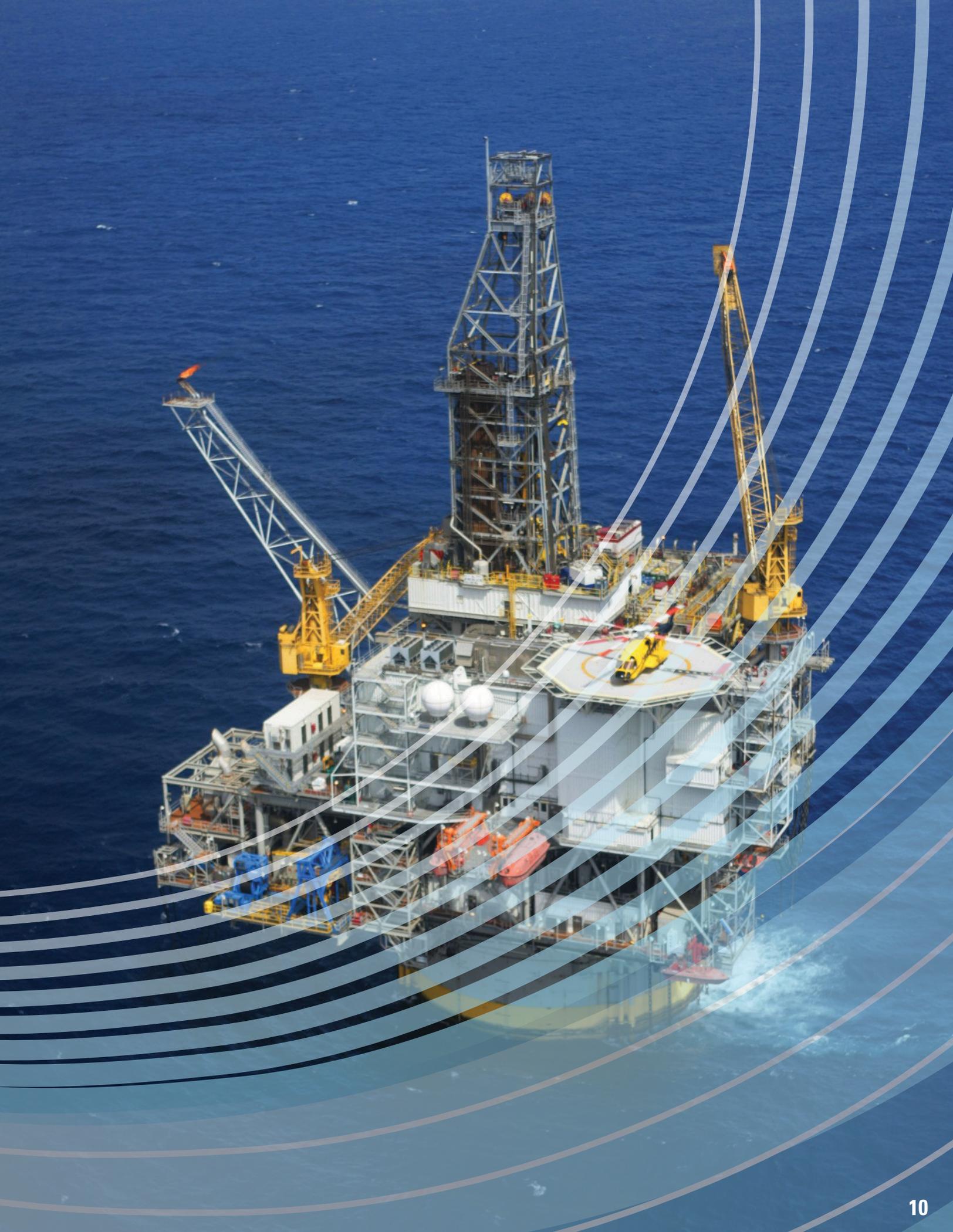
- Available in a wide range of connections including:
- Male and female NPT
- Socket weld
- Butt weld
- Coned
- Threaded

# ADDITIONAL BUTECH PRODUCTS FOR THE OIL AND GAS MARKET

- Tubing
- Manifolds
- Tubing
- Coning and threading tooling
- Check valves (top-side & subsea)
- Anti vibration collet glands
- Complete line of elbows, tees, crosses and adapters for all pressures

Please call [814-833-4904](tel:814-833-4904), [800-743-2720](tel:800-743-2720) or email [sales@haskel.com](mailto:sales@haskel.com) for more information concerning your specific application requirements. Challenge us to develop a custom designed valve that will exceed your expectations in performance, value, and quality.

**BuTech products are manufactured by Haskel International, Inc., known throughout the world as the most customer-focused, value-driven provider of engineered, high pressure liquid and gas handling equipment. With a quality system that is ISO 9001/2008 accredited since 1997, Haskel customers are assured of the highest quality products available.**



For more information on our high-pressure products,  
visit [butech-valve.com](http://butech-valve.com) or contact your local BuTech representative.



*BuTech is part of Ingersoll Rand. Ingersoll Rand (NYSE:IR) advances the quality of life by creating comfortable, sustainable and efficient environments. Our people and our family of brands— including Club Car®, Ingersoll Rand®, Thermo King® and Trane®—work together to enhance the quality and comfort of air in homes and buildings; transport and protect food and perishables; and increase industrial productivity and efficiency. We are committed to a world of sustainable progress and enduring results.*

**BuTech**

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