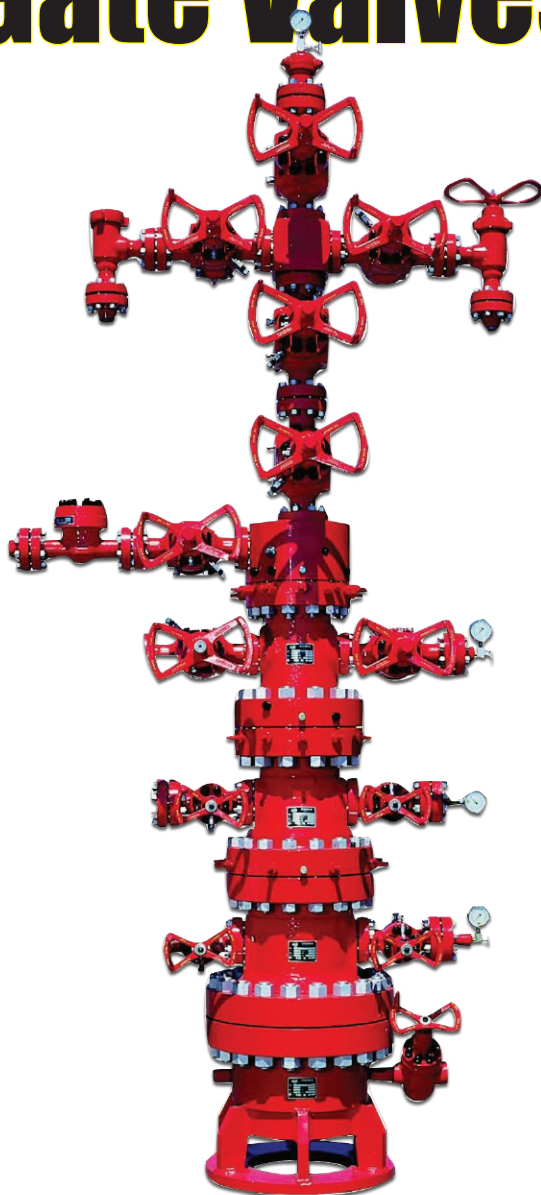




# Wellhead & Gate Valves



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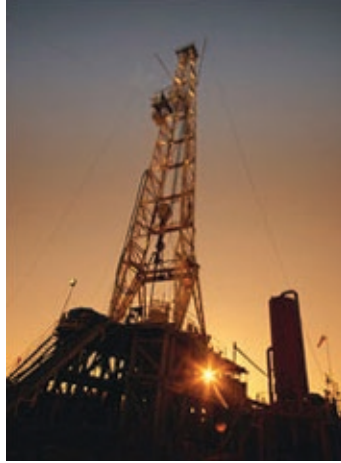
Since our inception in 1962, Stream-Flo Industries Ltd. has been a leader and innovator in the oilfield equipment sector. Our pacesetter role was established from the first days of our operation. Stream-Flo's first wellhead and oil field products were perfected and marketed in response to a need for quality products specialized to the immediate Western Canadian environment. Now, more than 45 years later, Stream-Flo continues to be an industry leader. Our Crown line of products is recognized worldwide for its quality and reliability.

Responding to our customer requirements and specialized industry developments, a highly skilled and professional team of engineers, designers, technicians and oil and gas specialists work in tandem with the energy industry to develop, design and produce leading edge solutions and quality products.

#### APPLICATIONS:

- Sweet gas production
- Sour gas production
- Artificial Lift Wellhead systems
- Reciprocating and Screw pumps
- SAGD
- Electrical Submersible pumps
- Small shallow low pressure reservoirs
- Custom designs

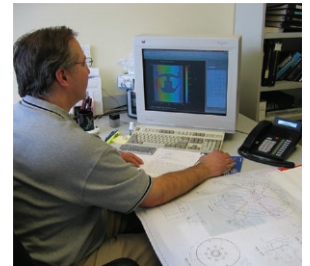
## YOUR SOLUTION FOR QUALITY WELLHEAD & GATE VALVE SYSTEMS



Stream-Flo's Crown wellhead and gate valve products are used in numerous applications throughout the world, spanning the continents from the deserts of North Africa to the northern climates of Siberia and to our own backyard in Western Canada. Our line of Crown wellhead and gate valve equipment encompasses the complete range of high pressure, high temperature and critical service applications.

### GLOBAL SUPPLIER

With roots in Alberta, Stream-Flo has service centres and representatives throughout Western Canada. Stream-Flo has also earned a solid reputation as a global supplier. We are worldwide with interests in Jakarta, Houston, Aberdeen, Abu Dhabi and the rest of the world including the US, Europe, Africa, South America and southeast Asia. Backed by a large inventory, we are ready to meet the demand.



### LEADING EDGE TECHNOLOGY & PRODUCT INNOVATIONS

Our technology is second-to-none. Supported by one of the largest engineering departments in Canada, Stream-Flo utilizes the most advanced 3-D computer design and analysis techniques available. The Engineering Department also has the latest in computer technology including software systems in CAD/CAM 3-D Design, Finite Element Analysis and Fluid Flow Analysis.



### PROGRESSIVE RESEARCH AND DESIGN

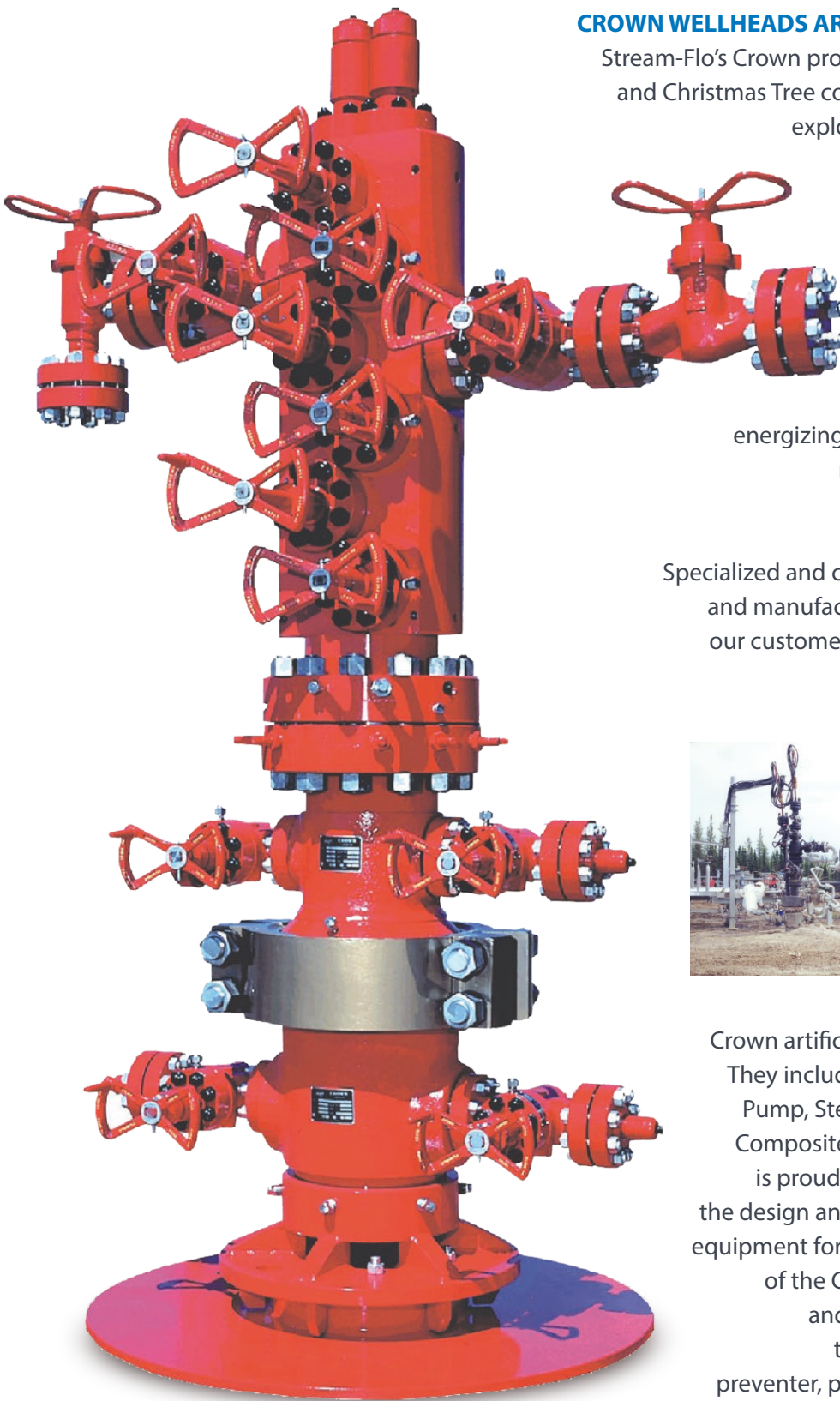
The R&D Group within the Engineering Department is continuously developing new equipment designs and improvements for more efficient products.

We are equipped in-house with environmental chambers, high-pressure pumps and hyperbaric chambers to do extensive testing on all our equipment to ensure reliability and quality performance in the field.

## CROWN WELLHEADS ARE DEVELOPED WITH UNIQUE FEATURES

Stream-Flo's Crown products include a complete line of Wellhead and Christmas Tree components for use in upstream oil and gas exploration and reproduction. Our equipment ranges from 2000 to 15,000 psi working pressure and is designed for single and multiple completions, high and low temperatures, and for all types of service conditions. We provide a variety of sealing options to suit all types of conditions and requirements. These include our self-energizing or externally energized elastomeric seals, nonelastomeric and metal seal options for Crown wellhead components.

Specialized and critical service equipment can be designed and manufactured through close consultation between our customers and our highly trained and experienced personnel for unique requirements.



Crown artificial lift wellhead systems are also available. They include products such as Electrical Submersible Pump, Steam Assisted Gravity Drainage (SAGD) and Composite Pumping Tree (CPT) systems. Stream-Flo is proud to be recognized as the industry leader in the design and development of custom SAGD wellhead equipment for heavy oil applications. The unique design of the CPT was conceived, developed, introduced and patented by Stream-Flo. It combines the tubing head adapter, production blow-out preventer, pumping tree and studded-top connection into one solid compact unit. The result is a stable and secure product that provides distinct advantages over traditional pumping Christmas tree arrangements.





## THE PRODUCTION PROCESS

Stream-Flo's manufacturing department processes the product from the raw material stage to the final assembly and testing. Highly skilled technicians and state-of-the-art computer controlled machines within our manufacturing and production departments are an integral part of the process. Our superior reputation for serving our customers and responding to their unique oilfield and environmental needs has made us a leader in this highly technical and everchanging industry.



## WHERE YOU NEED US, WHEN YOU NEED US

Stream-Flo Industries Ltd. has distribution and service centres located throughout the world. Around-the-clock service and quick access to an extensive inventory of spare parts is available with our convenient 24-hour on-call service at all of our locations.

Continuous product development has been the driving force behind Stream-Flo's growth throughout the years. Together with well-trained personnel, an established Quality Assurance Program, an advanced manufacturing facility and close cooperation with our customers, Stream-Flo has become an internationally recognized leader in the energy sector.

Stream-Flo Industries Ltd. is a 100% Canadian privately-owned and operated company. For more information, please call, e-mail, or visit us at [www.streamflo.com](http://www.streamflo.com).

## CROWN WELLHEAD BASIC SPECIFICATIONS

### PRODUCT:

- Casing Heads
- Casing Hangers
- Primary Packoffs
- Tubing Heads
- Secondary Packoffs
- Tubing Hangers
- Tubing Head Adapters
- Composite Pumping Trees
- Gate Valves

### PRESSURE RATINGS:

- 2000 to 15,000 psi working pressure

### TEMPERATURE RANGE:

- -75° to +650° F  
(-59° to +343° C)

### CONNECTIONS:

- Flanged
- Threaded
- Studded
- Clamp-Hub
- Slip-On Weld
- Union

### TRIMS:

- Sweet/General Service
- Sour/NACE Service
- CO<sub>2</sub>
- Water Flood
- CRA (Corrosion Resistant Alloys)

### SPECIFICATION COMPLIANCE:

- ISO 9001
- API 6A & Q1
- NACE MR-01-75

## CROWN GATE VALVES

Stream-Flo Crown Gate Valve products feature a full bore/thru-conduit design, sealing without lubrication, in-line repairability and protected long-life seats. As well, our wide range of standard Gate Valve models can also be equipped with single or double-acting hydraulic and pneumatic actuators with manual override, fail-safe closed or open systems to meet your requirements. Crown Gate Valves are available for all types of applications including Wellhead, Christmas Tree, ESD, and Choke and Kill Manifold systems.

Crown Gate Valves incorporate 3 main gate designs:

### SOLID SLAB GATE



This design is made for demanding choke and kill manifold applications and for use as a safety shut-off valve operated by an hydraulic or pneumatic actuator. It incorporates a bi-directional design with a floating gate which moves parallel to the seats and effects a tight seal under differential line pressure. A backseating feature allows the stem bearing or packing to be reenergized or replaced under pressure.



### PARALLEL EXPANDING GATE

Expanding gates give an extraordinarily high mechanical seating seal force which acts simultaneously against both seats. The seating force is not affected by line pressure fluctuations or vibrations.

### SPLIT GATE



Features a metal-to-metal seal between the gate and seat. It is enhanced by a sealing compound that fills a groove around the seat bore to prevent leaks. The parallel non-wedging gates allow the stem to be left non-stressed in either the opened or closed condition. Fully-skirted seats provide a continuous protection of the sealing surfaces of the gates. A backseating feature also allows reenergizing or replacement of the stem bearing or packing under pressure.



## CROWN GATE VALVE BASIC SPECIFICATIONS

### GATE DESIGNS:

- Solid Slab
- Parallel Expanding
- Split

### BODY DESIGNS:

- Cast
- Forged
- Composite
- Recessed

### BORE SIZES:

- 1<sup>13</sup>/<sub>16</sub>" to 6<sup>3</sup>/<sub>8</sub>"

### PRESSURE RATINGS:

- 2000 to 15,000 psi working pressure

### END CONNECTIONS:

- API flanged ends
- Threaded ends
- Clamp-Hub ends
- Union

### TEMPERATURE RANGE:

- -75° to +650° F  
(-59° to +343° C)

### TRIMS:

- Sweet/General Service
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