Quick Response to Inquiries
Inquiries from our distributors are normally answered within 24 hours. Our reply will include technical and commercial details. This quick response is possible due to our computerized management system and close collaboration among our staff.

Customized Items
Inquiries for the availability or development of items for your special applications are most welcome. Our R&D and Marketing development team will study your inquiries in detail and provide a result sent to you immediately.

Delivery
Once received all orders are entered into our computer system, from which the computer system can be traced at all times. Standard items are normally delivered off the shelf. Even non-standard items are handled efficiently by our computer system, thus enabling the shortest delivery time. Urgent orders are specially taken care of until they are shipped by our Speed-Up System.

Small Orders
Hy-Lok appreciates small orders as much as large orders. Orders for even a single fitting will be accepted and delivered with careful attention. Our Master Distributor in your area will be of help to you. Non-standard small orders are being handled by the Head Office through our Master Distributor.

Technical Advice
Our technical staff is always at our customer’s disposal, and ready to help. Feel free to contact us or our distributors. We will be pleased to offer you the best solutions or discuss possible ways to improve your technology by the use of our standard or special products.
## Quality Control Program

**Quality cannot be sacrificed by any means.**

All **Hy-Lok** valves, **Hy-Lok** tube fittings, **Hy-Lok** threaded and clean fittings and **Bite** type fittings are manufactured under our strict Quality Control Program. We have obtained ISO 9001 Certificate and Quality System Certificate from ASME. We also have certificates from Det Norske Veritas (DNV) and Germanischer Lloyd (GL).

**Furthermore, we are one of a few valve and fitting manufacturers in the world holding the Nuclear Certificates as material manufacturer and supplier. These certificates cannot be obtained overnight. They are the results of our extensive and continuing efforts for quality control, covering virtually all our activities, product design, material procurement, manufacturing, cleaning and packaging, inspection, testing, and after-sales services.**

### Raw Material Management

The base materials are one of the key factors determining the quality of valves and fittings which manufacturing processes involves forging, fine machining, heat treatment, etc. Using poor quality base materials can affect the quality, reliability, and service life of the products. **Hy-Lok** products are made from the highest quality materials obtained from the most reliable suppliers around the world. Material Certificates are readily available upon request from us or from the base material suppliers. Our efficient, stock of raw materials enables a short delivery.

**HCT (Heat Code Tracability)**

**Hy-Lok** has implemented a Heat Code Tracability system. Our HCT is unique because it not only contains the raw material information, but also more detailed process and technical information. If necessary, each product can be traced back for the verification of materials, processes, etc.

### Close Dimensional Control

**At Hy-Lok**, all dimensions are closely checked and controlled by each operator according to our special in-process-quality-control procedures separate from the QC inspection. This is done accurately with inspection gauges which are specially designed and periodically calibrated. Each operator knows whether the process is in exact control or not. Defects or problems, if any, are detected and corrected on the spot immediately. By doing so, we have achieved the following:

- Dimensional Tolerance of 1/1,000 inch
- Threads tolerance acc 2A, 2B, as per ASME B1.1

In addition, we have minimized the failure rate and downtime and maximized pass rate and productivity, which in turn has made our products most competitive in price.

In order to keep gas or liquids clean, the inner surface of the fittings must be smooth. The inner surface of each **Hy-Lok** valves and fittings is fine machined and tested with special instruments.

### Interchangeability?

You know the answer why Germanischer Lloyd and Garwood issue certificates.

### Prices

We fully understand that cost reduction is essential for our clients as well as for us. Maintaining the highest quality at the lowest price is one of our key objectives. We buy top quality raw materials, we pay competitive salaries and wages, we use the latest C’NC machines, we provide considerable resources for quality control, but we offer the most competitive price.

### Guess How?

To achieve this, we have made major efforts to improve the production process, to update our computer system, target marketing, highly effective management during the last 20 years. We have also kept close collaboration among staff and with the material suppliers and our subcontractors. All our efforts have resulted in lower manufacturing cost and less overhead, hence price competitiveness. This enables us to offer the lowest price for the highest quality.

GLOBAL VALVES & Engineering … your partner for the future
**FITTING**

**Hy-Lok Tube Fittings**
- Compression type design.
- Double ferrule design.
- Low torque assembly.
- Positive leak free seal after assembly and reassembly.
- Heat code traceability for SS316 and Alloy 400.
- Size range from 1/16 thru 2 (2mm thru 38mm) O.D tubing.
- Variety of end connections and patterns.
- Sure ring against overtight and gap gauge for inspection gap.
- Hydraulic swaging tools (EZY-MAT) are provided for easy installation.
- Standard materials are SS316, brass and Monel, others are available upon request.

**Clean Fittings**
- Automatic tube weld and butt weld design.
- Mini and long tube end design.
- Mechanical seal design for metal gasket face seal fittings.
- Heat code traceability.
- High purity internal surface with BA (and EP grade).
- Ultrasonic precision cleaning with dionized (DI) water.
- High purity gas supply device and perfect leak free service from critical vacuum to positive pressure.
- Size range from 1/8’ through 1” O.D tubing.
- Standard materials are 316L snd VAR stainless steel.

**ZCO O-Ring Face Seal Fittings**
- Zero clearance design and vacuum to high pressure.
- Wide temperature range up to 550i.
- Easy installation and maintenance.
- O-Ring 70 durometer fluorocarbon is standard on ZCO bodies.
- Safety leak test ports design.
- Variety of end connections and shapes.
- ZCO assemblies are made up of three basic components with body, gland and nut.
- Heat code traceability for all components.
- Standard materials are SS316 for bodies, glands and nuts, SS316L for Automatic tube weld fittings.

**Instrument Thread Fittings**
- Precision pipe fittings for instrumentation and highest process control.
- Available in thread and weld fittings.
- Precision thread construction to ensure leak-free and reliable systems.
- All socket weld ports are tapered socket speeds layout for proper tube fit and tube alignment.
- Many different connections and configurations.
- Straight bodies are machined from bar-stock based on ASTM/ASME specifications.
- Size range from 1” thru 2” NPT and from 1/8” thru 1” weld fittings.
- Working pressure calculated in accordance with power piping code ANSI B31.1 and refinery piping code ANSI B31.3.
- Standard materials are SS316, brass and carbon steel.

**HP Series High Pressure Fittings**
- Pressure rating up to 60,000psig(4,130bar) at 100°F(38°C).
- Sour gas service available.
- Connection sizes are available from 1/8” to 1” tube O.D.
- Coned and threaded design.
- Medium & High Pressure Connection Standard.
- Basic components are body, gland and collar, tubing.
- Variety of range including elbows, tees and crosses all others.
- Standard length of tubings are available from stock are specified length is available as an option.
- Standard materials are high tensile 316 stainless steel for bodies and gland, collar or 17-4PH stainless steel.
Bite Type Tube Fittings acc. to SAE/JISIKS
• Single ferrule bite type design.
• Pressure rating up to 250kgf/cm² (3500psig).
• Without significant distortion of the inside tube diameter.
• Variety of end connections and patterns.
• Many different connections and configurations.
• Standard materials are carbon steel, brass and stainless steel.
• Swaging tools (manual and electric) for easy installation.
• More economical fitting.
• Size range from 1/8 thru 2 (4mm thru 50mm) O.D tubing and piping.

Bite Type Tube Fittings acc. to DIN 2353
• Single ferrule bite type design.
• Pressure rating up to PN 630bar at 120°C.
• Without significant distortion of the inside tube diameter.
• Separated three kinds of LL and L, S series according to normal pressure.
• 2-cutting edges design for carbon steel.
• 2-cutting edges and stop edge design for stainless steel.
• Fittings and accessories are manufactured in accordance with DIN 2353.
• Stud ends and tapped holes in accordance with DIN specification are available.
• Standard materials are zinc plated carbon steel and stainless steel 316, brass.
• Size range from 4mm through 50mm O.D.
• Swaging tools are available for easy installation.

Pipe Fittings for JIS/ANSI
• Manufactured in accordance with ASME B16.11 or BS3799 or JIS B2316.
• Class 2000(S80), 3000(S160), 6000(XXS) for threaded fittings.
• Class 3000(S80), 6000(S160), 9000(XXS) for socket welding fittings.
• Permanent and reliable connections.
• Strong, full section forgings used for shapes.
• Available in popular sizes and configurations.
• Standard materials are stainless steel, carbon steel and alloy steel.
• Size range from 1/8 through 4” piping.
• Condensate pots and swaged nipples are available upon request.

Hose Fittings for JIS/SAE
• Flared fitting designed in accordance with JIS and SAE standard.
  30, 37, 45 Flared design.
• 30 Flared fitting designed for pressure rating up to 5000psig (350bar) at 100°F (38°C).
• 37 Flared fittings limit pressure depend on tube wall thickness.
• 45 Flared fittings mainly for copper tube connection below 1500psig.
• Flaring equipment is necessary for flaring tube to use 31, 45 Flared fittings.
• 30 Flared fitting, for Hose Connection, is designed with flared male and female type.
• 37 Flare fittings are available with O-ring on the sealing surface.
• Variety of end connections include MS/SAE straight thread, NPT/ISO male and female threads.
• Size range from 1/4(6mm) thru 2 (50mm) tubing, hose and piping connections.
• Material is available in stainless steel, brass and carbon steel.

Hose Connectors and Push-On Hose Fittings
• Quick and easy installation, reusable.
• No needs clamps and special tools for push-on hose fittings.
• Hy-Lok tube adapter available.
• Provide leak-free service.
• Save time and cost.
• Standard materials are 316 stainless steel and brass.
• Pressure and temperature ratings depend on hose materials.
NV Series Internal Bonnet Needle Valves
- Pressure rating up to 5,000 psig (340 bar) at 100°F (38°C).
- Temperature rating from -65°F to 450°F (-54°C to 232°C) with standard PTFE packing, and up to 600°F (315°C) with optional PEEK packing.
- Integral bonnet with one piece body available with straight and angle patterns.
- Panel mounting nut allows easy mounting standard.
- Variety of stem tips include vee tip standard, available regulating, and soft seat with PCTFE as an option.
- Size range from 1/8 thru 3/4” tubing and piping.
- Variety of end connections include Hy-Lok tube fittings, male/female NPT and ISO threads.
- Body material is available in 316 stainless steel, alloy 400 and brass.

SV Series Integral Bonnet Bar Stock Needle Valves
- Pressure rating up to 6,000 psig (413 bar) at 100°F (38°C).
- Temperature rating from -65°F to 450°F (-54°C to 232°C) with standard PTFE packing and up to 600°F (315°C) with optional PEEK packing.
- Compact and rugged body design.
- Body is made of extrude bar stock and available in straight and angle patterns.
- Variety of stem tips including standard vee tip and regulating, soft seat with PCTFE as an option.
- Size range from 1/8 thru 1/2” tubing and piping.
- Variety of end connections include Hy-Lok tube fittings, male/female NPT and ISO threads.
- Body materials are available in 316 Stainless Steel and alloy 400.

SVH Series High Pressure Needle Valves
- Pressure rating up to 10,000 psi (689 bar) at 100°F (38°C).
- Temperature rating from -65°F to 450°F (-54°C to 232°C) with standard PTFE packing and up to 600°F (315°C) with optional PEEK packing.
- Metal seal bonnet-to-body construction ensures safety.
- Back seating provides anti-blown out of stem.
- Rugged body is machined from barstock and straight pattern standard, angle pattern as an option.
- Size range from 1/4” thru 3/4” piping.
- Compact design with orifice from 0.125” to 0.2” (3.2mm to 5.0mm).
- Variety of stem tip include non-rotating vee tip standard, available ball tip as an option.
- Variety of end connections include Hy-Lok tube fittings, male/female NPT and ISO threads.
- Body material is 316 stainless steel standard.

GB Series Union Bonnet Needle Valves
- Pressure rating up to 6,000 psi (413 bar) at 100°F (38°C).
- Temperature rating from -65°F to 450°F (-54°C to 232°C) with standard PTFE packing, and up to 1,200°F (648°C) with optional Grafoil packing.
- Metal seal bonnet-to-body construction ensures safety.
- Back seating provides anti-blown out of stem.
- Panel mounting nut allows easy mounting standard.
- Variety of stem tips include non-rotating vee tip standard, available ball, soft seat and regulating tip as an option.
- Size range from 1/8” thru 1” tubing and piping.
- Variety of end connections include Hy-Lok tube fittings, male/female NPT and ISO threads and socket weld ends.
- Body material is available in 316 stainless steel, alloy 400 and carbon steel.
**RP Series Rising Plug Valves**

- Pressure rating up to 6,000psig (413bar) at 100F (38CC).
- Temperature rating from -20F to 250F (-29CC to 121CC) with Derin seat standard, and up to 400F (204CC) optional PEEK seat.
- Internal stem seal prevent the entry of foreign materials into the actuating threads.
- Non-rotating stem tip ensures positive sealing minimizing seat wear-out.
- Robust body design with safety bonnet locking plate.
- Orifice in straight flow path ensures max. Cv.
- Derlin cone seat is standard for easier replacement and PEEK is also available as an option.
- Sour gas service available.
- Guage port available as an option.
- Variety of end connections include male/female NPT, ISO, BSP threads and female Hy-Lok tube fitting.
- Body material is 316 stainless steel standard.

**M Series Manifolds & Gauge Valves**

- Pressure rating up to 6,000psig (413bar) at 100F (38CC).
- Temperature rating from -65F to 450F (-54CC to 232CC) with standard PTFE packing, and up to 1,200F (648C) with optional Grafoil packing.
- Available in 2-Valves, 3-Valves and 5-Valves manifold designs.
- Available in one and 3 outlet ports gauge valves design.
- Bonnets are locked with locking plate to prevent accidental disengagement from body.
- Available in remote and direct mount design.
- Available special order in configuration and sizes.
- Sour gas service available.
- Size range from 1/2’ thru 1’ piping for gauge and root valves and 1/2 piping for manifolds only.
- Variety of end tips include non-rotating vee tip standard, available ball and soft tip with PCTFE as options.
- Body material is available in 316 stainless steel, alloy 400 and carbon steel.

**102 Series High Pressure Ball Valves**

- Pressure rating up to 6,000psig (413bar) for stainless steel body and up to 3,000psig (207bar) for brass body at 70F (21CC).
- Temperature rating from -65F to 350F (-54t to 1 70CC) with PCTFE seats.
- Floating ball design ensures leak proof shut-off at high pressure.
- Retainer with PCTFE seats are replaceable.
- Support and end packing is replaceable and machined from PTFE.
- Handle with arrow indicates flow direction, allows quick operation and low torque with 1/4 turn.
- Panel mounting nut allows easy valve mounting.
- Orifice is maximized for minimal pressure drop with Cv, 0.23 to 1.6.
- Variety of end connections include Hy-Lok tube fittings, male/female NPT and ISO threads.
- Body material is available in 316 stainless steel and brass.

**105 Series High Pressure Ball Valves**

- Pressure rating up to 10,000psig (689bar) at 100F (38CC).
- Temperature rating from -22F to 265F (-30CC to 130CC) with PVDF seats and from -65F to 500F (-54CC to 260'C) with PEEK seats.
- Robust body is available in diverse patterns include 2-way straight and angle, bottom entry and side entry 3-way.
- Panel mounting and locking devices are available as an option.
- Internally loaded stem (20 with shoulder to prevent stem blow-out.
- Floating ball design ensures leak proof shut-off at high pressure.
- Max. orifice to minimize the pressure drop.
- Sour gas service available.
- Size range from 1/4” thru 1” tubing and piping. Variety of end connections include Hy-Lok tube fittings, male/female NPT and ISO threads.
- Body material is available in 316 stainless steel and alloy 400.
110 Series Ball Valves
Pressure rating up to 1,000psig (69bar) at 70°F (21 CC).
- Temperature rating up to 450°F (232 C) with reinforced Teflon standard.
- Compact design.
- Hexagon body for high structural strength.
- Tight shut-off flow torque and 1/4 turn quick operation.
- Size range from 1/8 to 1 (3mm thru 25mm) tubing and piping.
- Silicon-free available for painting system under 3/8” only with butterfly handle.
- Variety of end connections include Hy-Lok tube fittings, male/female NPT and ISO threads.
- Body material is available in 316 stainless steel and brass.

112 Series Ball Valves
- Pressure rating up to 3,000psig (201bar) at 70SF (21 CC).
- Temperature rating from 50°F to 150°F (10CC to 65CC) with PTFE seats and packings.
- One piece body is available in 2-way straight angle and 3-way, 4-way patterns.
- Vent to atmosphere available.
- Panel mounting nut allow easy valve mounting.
- Packing bolt allows easy packing adjustment with valves in-line.
- Encapsulating ball seats are uniformly forced to form tight seals against ball and body cavity, and virtually allow no dead volume.
- Integral ball-stem is machined from barstock and best suited to encapsulating ball seats.
- Size range from 1/8” thru 3/4” tubing and piping.
- Variety of end connections include Hy-Lok tube fittings, male/female NPT and ISO threads.
- Body material is available in 316 stainless steel, brass and alloy 400.

115 Series Ball Valves
- Pressure rating up to 7,200psig (500bar) at 70°F (21 C).
- Temperature rating from -4°F to 210°F (-20 C to 100CC) with POM-MoS2 seats standard.
- Rugged body construction is machined from barstock.
- Handles can be fitted in 8 positions with 45 increments available up to DN25.
- Locking device is available as an option.
- Indicator on washer allow easy identification of flow direction.
- Max orifice range from DN4 to DN80.
- Ball seats are available in POM-MoS2 standard and PTFE as an option.
- Floating ball is machined from bar stock.
- Size range from 1/8” thru 3” piping and tubing.
- Variety of end connections include DIN 2353 L & S series, male/female DIN/ISO/BSP and NPT threads.
- Body material is available in 316 stainless steel and carbon steel.

T Series Trunnion Ball Valves
- Pressure rating up to 10,000psig (689bar) at 100 °F(37 SC).
- Temperature rating from 0 °F to 250 °F(-17 C to 121 °C) with standard components.
- Rugged body is machined from bar stock and available in 2-way and 3-way patterns.
- Compact and max. flow design and low operating torque.
- 2-way “shut-off” and 3-way “switching” models.
- Spring loaded seats ensure positive sealing in pressure and temperature cycling.
- Handle with arrow indicates flow direction and black standard.
- Stem bearing is PEEK standard.
- Blowout-proof trunnion ball with PTFE coated standard.
- Variety of end connections including Hy-Lok tube fittings, male/female NPT and ISO threads.
**P Series Plug Valves**
- Pressure rating up to 3,000psig (207bar) at 70°F (21°C).
- Temperature rating from -10°F to 400°F (-23°C to 204°C) with PTFE coated Viton seal standard.
- Rugged body is machined from bar stock.
- Small and compact design.
- Easy maintenance and cleaning.
- Minimum torque and quick operation with 1/4 turn.
- Replacable seal and plug.
- PTFE coated Viton seal is used for max. service life.
- Teflon coated plug has throttling function.
- Orifice for Cv 1/4 to 7.0 is maximized for minimal pressure drop.
- Sizes are available up to 1/2 tubing and piping.
- Variety of end connections include Hy-Lok tube fittings, male/female NPT and ISO threads.
- Body material is available in 316 stainless steel and brass.

**700 Series Instrument Check Valves**
- Pressure rating up to 3,000psig (207bar) at 70°F (21°C).
- Temperature rating from -10°F to 375°F (-23°C to 191°C) with Viton 0-ring standard.
- 0-Ring provides leak tight shut-off.
- Back stopped poppet design prevents the spring from being overstressed.
- Variety of springs are available for the cracking pressure in the range from 1/3 psi to 100 psi.
- Wide range of body sizes allows Cv choices from 0.16 to 8.8.
- Suitable for gas and liquids.
- Variety of end connections include Hy-Lok tube fittings, male/female NPT and ISO threads.
- Body material is available in 316 stainless steel, brass and alloy 400.

**700H Series High Pressure Compact Check Valves**
- Pressure rating up to 6,000psig (413bar) at 70°F (21°C).
- Temperature rating from -10°F to 400°F (-23°C to 204°C) with Viton seat standard.
- Size range from 1/8 thru 1" tubing and piping.
- 0-ring poppet design for replaceable high integrity seal.
- Tight shut-off and accurate cracking pressure.
- Cracking pressure includes 1/3, 1, 5, 10, 25psi.
- Max flow design up to Cv4.7 from 0.67 to 4.7.
- Suitable for gas and liquids.
- Special applications are available in sour gas and fluorocarbon free.
- Variety of end connections including Hy-Lok tube fittings, male/female NPT and ISO threads.
- Body materials are available in 316 Stainless Steel Carbon Steel and alloy.

**RV Series Relief Valves**
- Pressure rating up to 3,000psig (207bar) at 70°F (21°C) for RV1 low pressure, and up to 6,000psig (413bar) at 170°F(21°C) for RV2 high pressure.
- Temperature rating from -10°F to 400°F (-23°C to 200°C) with Viton seal standard.
- Orifice is 4.8mm(0.19in) standard.
- Cracking pressure range from 10psig to 250psig for RV1 series and from 250psig to 6,000psig for RV2 series.
- One spring adjustable over entire cracking pressure range for RV1 series.
- Compact design for installation in small space.
- Cracking pressure adjustable externally.
- Lock wire capability to maintain pressure relief setting.
- Variety or port connections.
- Body material is 316 stainless steel standard.
FT Series Micron Tee Filters
- Pressure rating up to 6,000 psig (413 bar) at 70°F (21°C) for stainless steel, and up to 3,000 psig (207 bar) at 70°F (21°C) for brass.
- Temperature rating from -20°F to 400°F (-29°C to 204°C) with Viton seal.
- Replacement of filter elements in line.
- Compact and robust integral union bonnet design.
- Particle trapping for clean fluid.
- Effective filtration area 1.73 sq. in. for all sizes.
- Filtering range in 1, 10, 50, 100, and 150 micron.
- Bypass cap is available with 1/4" female NPT port.
- Variety of end connections include Hy-Lok tube fittings, male/female NPT and ISO threads.
- Body material is available in 316 stainless steel and brass.

Fl Series Micron In-line Filters
- Pressure rating up to 3,000 psig (207 bar) at 70°F (21°C).
- Temperature rating from -20°F to 400°F (-29°C to 204°C) with PEEK seal.
- Replaceable filter element.
- Compact inline design.
- Particle trapping for clean fluid.
- Effective filtration area from 0.46 sq. in. to 1.71 sq. in.
- Filtering range in 1, 10, 50, 100, and 150 micron.
- Variety of end connections include Hy-Lok tube fittings, male/female NPT and ISO threads.
- Body material is available in 316 stainless steel and brass.

Bleed & Purge Valves
- Pressure rating up to 10,000 psig (689 bar) at 100°F (38°C) Temperature rating from -65°F to 850°F (-54°C to 454°C) with stainless steel, from -20°F to 450°F (-29°C to 232°C) with carbon steel, from -65°F to 500°F (-54°C to 260°C) with alloy R-405.
- Back stop screw prevents accidental removal of stem.
- Stem thread and tips are chrome-plated for maximum service life.
- Size range from 1/8" thru 1/2" tubing and piping system.
- Variety of end connections including Hy-Lok tube fittings, male/female NPT and ISO threads.
- Pressure rating up to 4,000 psig (216 bar) for 316 stainless steel and up to 3,000 psig (207 bar) for Carbon Steel 100°F (38°C).
- Temperature rating from -65°F to 600°F (-54°C to 311°C) with Stainless Steel, from -65°F to 400°F (-54°C to 204°C) with brass, from -20°F to 350°F (-29°C to 176°C) with carbon steel.
- Vent hole is bleeds excessive liquid or gas from system lines.
HY-LOK NETWORK

Branch (or Master Inventory)  Distributor

For more Information, visit  http://www.hy-lok.com

CERTIFICATES & TYPE APPROVALS

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