# **SUPERLOK®**



SUPERLOK is best quality product

Tube and Pipe Fittings Instrumentation and Process Valves





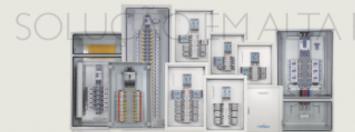


















## 21c Global Company We will become the world's best technological company





# Profile & History

**■** 1988 ~ 2003

 $2004 \sim 2006$ 

 $2007 \sim 2008$ 

- · Established GyeongPoong Machinery Co. · Changed the Company name to "BMT Co., Ltd"
- Designated as a "Clean Company" by Ministry of Labor
   Introduced ERP (Enterprise Resource Planning) SYSTEM
- Designated as a Fitting & Valve supplier by SAMSUNG ELECTRONICS
- . Designated as a "New Technology Venture Business" by Small and Medium Business Administration (SMBA)
- Designated as a "Superior Technology Company" by Korea Technology Credit Guarantee Fund (KOTEC)

· Accredited as a "Promising Company" by an Industrial bank of Korea (KIUP)

· Certified an "Innovation Business Company" by Government

· Built and moved a new main factory and office to Noksan Industrial Complex in Busan

- Established an R&D Institute.
   Awarded "The Grand Prix of the Busan Enterprises" in the Technical Field.
- Made a manager contract with Dong Yang Securities Co. regarding IPO.
- Registered a Patent and a Design of MCPD (Molded Case Power Distributor) and began an Electric business.
- . Started to supply SUPERLOK product to KHNP (Korea Hydro & Nuclear Power company), HI and DSME, SK Energy and GS-Caltex, and GS EC.
- · Registered as an official Supplier in SHI (Samsung Heavy Industries)
- Registered as an official Supplier in DSME (Daewoo Shipbuilding & Marin Engineering)
- Registered as an official Supplier in SK Corporation , GS-Caltex (Oil Refining, Crude Oil, Petroleum, Lubricants, Chemicals) and GS Engineering & Construction Corp.
- Registered as an official Supplier in Petronas Gr. Malaysia and started supply of SUPERLOK Double block & Bleed Valves and others
- Acquired the Nippon Kaiji Kyokai Certificate for Approval Mechanical Joint.
- Registered as an Official Supplier in Hyundai Heavy Industries (HHI).
- Have received the 40 and 199 pieces orders from the end-user, Petronas Carigali in Malaysia.
- Registered as an Official Vendor in Total Pazflor FPSO Project by Total S.A. for providing SUPERLOK Valves.(Total Pazflor FPSO Project to DSME)
- Registered as an Official Vendor in SK Engineering & Construction(SKEC).

2009 ~

 Completed developing the STANDARD Distribution Panel, "SPIDER", of 50 & 100 AF Plan to develop and mass-produce SPIDER for 225 AF by the end. of this year Plan to advance in the Use for World-major Circuit Breakers such as ABB, Merlin Gerin, Siemens, GE and Mitsubishi as one of the BMT Core Tasks

## Certification

#### <Fitting & Valve DIV.>

- ASME (American Society of Mechanical Engineers) 'N' Stamp
- ABS (American Bureau of Shipping)
- Lloyd (Lloyd's Register of Shipping)
- DNV (Det Norske Verita/Norwegian Assoc.)
- GL (Germanischer Lloyd)
- API (American Petroleum Institute)
- KEPIC (Korea Electric Power Industry Code)
- ISO 9001 (Renewal, 2006)
- ISO 14001 (Environmental Management System)
- OHSMS 18001 (Occupational Health and Safety Management System)
- Acquired the Nippon Kaiji Kyokai Certificate for Approval Mechanical Joint.
- Acquired Q-Class Certificate of KHNP's Qualified Supplier(KHNP:Korea Hydro & Nuclear Power Co.,Ltd).





#### SUPERLOK TUBE FITTINGS



#### APPLICATIONS

Process Instrumentation, High Temperature and Cryogenic service, High pressure service, Vacuum service.

#### SPECIFICATIONS

- The Working pressure of SUPERLOK Tube Fittings are limited by the Working pressure of tubing.
- Working Temperature Range: -320°F to 1200°F(-196°C to 649°C)

#### 37° FLARED TUBE FITTINGS (SAE J514)



#### APPLICATIONS

Hydraulic system.

#### SPECIFICATIONS

- Maximum Working Pressure 8700psi(600bar)@100°F(38°C):With O-Ring Type.
- 5000psl(345bar)@100°F(38°C):Without O-Ring Type. And according to SAE J514
- Working Temperature Range: up to 800°F(427°C)

#### INSTRUMENT THREAD FITTINGS



#### APPLICATIONS

Process, power, instrumentation and general plumbing.

#### SPECIFICATIONS

- Maximum Working pressure: 10000psi(689bar)@100°F(38°C)
- Working Temperature Range: -320°F to 1000°F (-196°C to 537°C)

#### HIGH PRESSURE FITTINGS



#### APPLICATIONS

High pressure equipment, Pumping system, Hydraulic Intensifier, Water blasting, Test stands.

#### SPECIFICATIONS

- Maximum Working pressure: up to 60000psi(4137bar)
- Working Temperature Range: -100°F to 600°F (-73°C to 315°C)

#### BITE TYPE TUBE FITTINGS (DIN2353)



#### APPLICATIONS

Hydraulic, Compressed Air, Fuel Heating, Auto Motive

#### SPECIFICATIONS

- Maximum Working pressure: Very Light (LL) Series PN 100bar Light (L) Series PN 315bar Heavy (S) Series PN 630bar
- Working Temperature Range: up to 800°F(427°C)

#### BITE TYPE TUBE FITTINGS (JIS B2351)



#### APPLICATIONS

Hydraulic, Compressed Air, Fuel Heating, Auto Motive.

#### SPECIFICATIONS

- Maximum Working pressure: 3600psi(25Mpa / 254kg/cril / 248bar)
- Working Temperature Range: -4°F to 482°F (-20°C to 250°C)

#### FORGED FITTINGS



#### APPLICATIONS

Mainly for the purpose of power plant, oil and gas field.

#### SPECIFICATIONS

- Maximum Working pressure: 15NB to 1100NB in 2000LBS, 3000LBS, 6000LBS, 9000LBS
- Working Temperature Range: up to 1000°F (538°C)

#### HOSE CONNECTORS & PUSH-ON HOSE FITTINGS



#### APPLICATIONS

Air break system, Air conditioning system, Automotive Industry.

#### SPECIFICATIONS

- Maximum Working pressure: 350psi(24bar)@100°F(38°C)
- Working Temperature Range: -40°F to 212°F(-40°C to 100°C)

#### O-RING FACE SEAL FITTINGS



#### APPLICATIONS

High Pressure Hydraulic System

- Maximum Working pressure: 14000 psi (965bar) @100 °F(38°C)
- Working Temperature Range: -13 °F to 392 °F (-25°C to 200°C)



#### SUPERLOK TUBE FITTINGS



#### APPLICATIONS

Process Instrumentation, High Temperature and Cryogenic service, High pressure service, Vacuum service.

#### SPECIFICATIONS

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#### SPECIFICATIONS

- Maximum Working Pressure.
   8700psl(600bar)@100°F(38°C):With O-Ring Type.
   5000psl(345bar)@100°F(38°C):Without O-Ring Type. And according to SAE J514
- Working Temperature Range: up to 800°F(427°C)

#### INSTRUMENT THREAD FITTINGS



#### APPLICATIONS

Process, power, Instrumentation and general plumbing.

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#### APPLICATIONS

 $High \ pressure \ equipment, Pumping \ system, Hydraulic Intensifier, Water \ blasting, Test \ stands.$ 

#### SPECIFICATIONS

- Maximum Working pressure: up to 60000psi(4137bar)
- Working Temperature Range: -100°F to 600°F (-73°C to 315°C)

#### BITE TYPE TUBE FITTINGS (DIN2353)



#### APPLICATIONS

Hydraulic, Compressed Air, Fuel Heating, Auto Motive

#### SPECIFICATION!

Maximum Working pressure: Very Light (LL) Series PN 100bar
 Light (L) Series PN 315bar

Heavy (S) Series PN 630bar

Working Temperature Range : up to 800°F (427°C)

#### BITE TYPE TUBE FITTINGS (JIS B2351)



#### APPLICATIONS

Hydraulic, Compressed Air, Fuel Heating, Auto Motive.

#### SPECIFICATIONS

- Maximum Working pressure: 3600psi(25Mpa / 254kg/pfl / 248bar)
- Working Temperature Range: -4°F to 482°F (-20°C to 250°C)

#### FORGED FITTINGS



#### APPLICATIONS

Mainly for the purpose of power plant, oil and gas field.

#### SPECIFICATIONS

- Maximum Working pressure: 15NB to 1100NB in 2000LBS, 3000LBS, 6000LBS, 9000LBS
- Working Temperature Range: up to 1000°F (538°C)

#### HOSE CONNECTORS & PUSH-ON HOSE FITTINGS



#### APPLICATIONS

Air break system, Air conditioning system, Automotive Industry.

#### SPECIFICATIONS

- Maximum Working pressure: 350psi(24bar)@100°F(38°C)
- Working Temperature Range: -40°F to 212°F(-40°C to 100°C)

#### O-RING FACE SEAL FITTINGS



#### APPLICATIONS

High Pressure Hydraulic System

- Maximum Working pressure: 14000 psi (965bar) @100 °F(38°C)
- Working Temperature Range: -13 °F to 392 °F (-25°C to 200°C)

#### **CLEAN FITTING**



#### APPLICATIONS

Industry ultra-pure and high-purity gas line, Vacuum delivery system

#### SPECIFICATIONS

- Maximum Working pressure : 8500 psi (585 bar) @ 100°F (38°C)
- Working Temperature Range: up to 1000°F (537°C)



# Valve Series

#### **BALL VALVE SBV120 SERIES**



#### APPLICATIONS

Control Sampling system, Process Instrument.

#### SPECIFICATIONS

- Maximum Working pressure : 3000 psi (207bar) @ 70°F(21°C)
- Working Temperature Range: 50°F to 150°F (10°C to 66°C)

#### BALL VALVE SBV210 SERIES



#### APPLICATIONS

Pneumatic System, Instrument System.

#### SPECIFICATIONS

- Maximum Working pressure: 1000psl (69 bar) @ 70°F(21°C)
- Working Temperature Range: 0°F to 450°F (-17°C to 232°C)

#### BALL VALVE SBVH360 SERIES



#### APPLICATIONS

High Pressure Instrument system, Hydraulic system.

#### SPECIFICATIONS

- Maximum Working pressure: 10000 psi @ 70°F (21°C)
- Working Temperature Range: -22°F to 265°F (-30°C to 130°C)

#### DIN TYPE BALL VALVES



#### APPLICATIONS

Hydraulic Lines

#### SPECIFICATIONS

- Maximum Working pressure : 7200 psi (496bar) @ 70°F(21°C)
- Working Temperature Range : -4°F to 210°F (-20°C to 100°C)

#### HIGH PRESSURE FORGED BALL VALVES SBVF360 SERIES



#### APPLICATIONS

High pressure Instrument Lines, OIL & GAS Production.

#### SPECIFICATIONS

- Maximum Working pressure: 6000 psi (414 bar) @ 70°F(21°C)
- Working Temperature Range:
- -65"F to 450"F(-54"C to 232"C) with PEEK seat -65"F to 350"F(-54"C to 177"C) with PCTFE seat

#### TRUNNION BALL VALVES



#### APPLICATIONS

Instrument Air lines, GAS & CNG Industry, Sampling.

#### SPECIFICATIONS

- Maximum Working pressure: 10000 psi (689 bar) @ 100°F(38°C)
- Working Temperature Range: 0°F to 250°F (-17°C to 121°C)

#### SWING-OUT BALL VALVES



#### APPLICATIONS

Instrument Air lines, chemical process, Oil and Gas Production.

- Maximum Working pressure: 3000 psi (207 bar) @ 100°F(38°C)
- Working Temperature Range: -20°F to 450°F (-29°C to 232°C)

#### FLANGED BALL VALVES



#### APPLICATIONS

Hydraulic system, Chemical, petrochemical, Oil and Gas production.

#### SPECIFICATIONS

- Maximum Working pressure: ANSI Class150 to Class2500
- Working Temperature Range: -20°F to 400°F(-29°C to 204°C)

#### SAE FLANGED BALL VALVES



#### APPLICATIONS

Hydraulic system.

#### SPECIFICATIONS

- Maximum Working pressure: up to 6000psi(414bar) @100°F (38°C)
- Working Temperature Range: -4°F to 210°F (-20°C to 100°C)

#### KEY OPERATION VALVES (Ball & Needle)



#### APPLICATIONS

Pneumatic System, Instrument System & Isolation ,General service

#### BALL VALVE SPECIFICATIONS

- Maxdmurn Working pressure: 1000psi (69 bar) @ 70°F(21°C)
   6000psi (414 bar) @ 70°F(21°C)
- Working Temperature Range: 0°F to 450°F (-17°Cto 232°C)

#### NEEDLE VALVE SPECIFICATIONS

- Maximum Working pressure: 5000 psi (345 bar) @ 100°F(38°C)
- Working Temperature Range: -65°F to 450°F (-54°C to 232°C)

#### PLUG VALVES



#### APPLICATIONS

Instrument Air Lines , Refinery pilot plant.

#### SPECIFICATIONS

- Maximum Working pressure: 3000 psi (207 bar) @ 100°F(38°C)
- Working Temperature Range : -10°F to 400°F (-23°C to 204°C)

#### RISING PLUG VALVES



#### APPLICATIONS

Line which contain small solid impurities, instrument lines which contain viscous fluids or slurries, System which require flow regulation and full flow capabilities.

#### SPECIFICATIONS

- Maximum Working pressure: 6000 psi (414 bar) @ 100°F(38°C)
- Working Temperature Range: -10°F to 400°F (-23°C to 204°C)

#### INTEGRAL BONNET NEEDLE VALVES



#### APPLICATIONS

Instrument Isolation, General service, Test valve.

#### SPECIFICATIONS

- Maximum Working pressure: 5000 psi (345 bar) @ 100°F(38°C)
- Working Temperature Range: -65°F to 450°F (-54°C to 232°C)

#### UNION BONNET NEEDLE VALVES



#### APPLICATIONS

High temperature and pressure Radioactive Service, Condensates.

#### SPECIFICATIONS

- Maximum Working pressure: 6000 psi (414 bar) @ 100°F(38°C)
- Working Temperature Range: -65°F to 450°F(-54°C to 232°C) with PTFE packing
   Up to 1200°F(649°C) with Graphite packing

#### HIGH PRESSURE NEEDLE VALVES



#### APPLICATIONS

High pressure service, Instrument Isolation.

- Maximum Working pressure: up to 10000psi(689bar) @ 100°F(38°C)
- Working Temperature Range: -65°F to 450°F(-54°C to 232°C) with PTFE packing Up to 1200°F(649°C) with Graphite packing

#### INTEGRAL BONNET BAR STOCK NEEDLE VALVES



#### APPLICATIONS

Instrument Isolation, General service, Test Valves.

#### SPECIFICATIONS

- Maximum Working pressure: 6000 psi (414 bar) @ 100°F(38°C)
- Working Temperature Range: -65°F to 450°F (-54°C to 232°C)

#### MANIFOLD VALVES



#### APPLICATIONS

Pressure & Differential Pressure Instrumentation.

#### SPECIFICATIONS

- Maximum Working pressure: 6000 psi (414 bar) @ 100°F(38°C)
- Working Temperature Range: 65°F to 450°F (-54°C to 232°C) with PTFE packing up to 1200°F (649°C) with Graphite packing

#### TOGGLE VALVES



#### APPLICATIONS

Instrument Line, Pneumatic system.

#### SPECIFICATIONS

- Maximum Working pressure: 300 psi (20.7 bar) @ 100°F(38°C)
- Working Temperature Range: -20°Fto 200°F (-29°C to 93°C) with PTFE stem tip

#### **RELIEF VALVES**



#### APPLICATIONS

Prevent over pressure to protect.

#### SPECIFICATIONS

- Maximum Working pressure: SRVL-300 psi (21 bar) @ 100°F(38°C)
   SRVH-6000 psi (414 bar) @ 100°F(38°C)
- Working Temperature Range: -10°Fto 400°F (-23°C to 204°C)
- Opening Pressure: SRVL: 10psi(0.69 bar) to 250 psi (17.2bar)
   SRVH: 225psi(15.5 bar) to 6000 psi (414 bar)

#### CHECK VALVES



#### APPLICATIONS

Instrument Lines, Prevent reversed flow, un-directional flow control.

#### SPECIFICATIONS

- Maximum Working pressure: 3000 psi (207 bar) @ 70°F(21°C)
- Cracking Pressure: 1/3 psi (0.03 bar) to 100 psi(6.9 bar)
- Working Temperature Range: -10°F to 375°F (-23°C to 191°C)

#### HIGH PRESSURE & ADJUSTABLE CRACKING PRESSURE CHECK VALVES



#### APPLICATIONS

Prevent Reversed flow, High Pressure characteristics.

#### SPECIFICATIONS

- Maximum Working pressure: up to 6000 psi (414 bar) @ 100°F(38°C)
- Cracking Pressure: 1/3 psi (0.03 bar) to 25 psi(1.7 bar)
- Working Temperature Range: -10°F to 375°F (-23°C to 191°C)

#### GAUGE & GAUGE ROOT VALVES



#### APPLICATIONS

Pressure Gauge , primary isolation.

#### SPECIFICATIONS

- Maximum Working pressure: 6000 psi (414 bar) @ 100°F(38°C)
- Working Temperature Range: 65°F to 450°F (-54°C to 232°C) with PTFE packing up to 1200°F(649°C) with Graphite packing

#### **EXCESS FLOW VALVES**



#### APPLICATIONS

Fuel system, Gas system, Hydraulic & Pneumatic system.

- Maximum Working pressure: up to 6000psi(414bar)@100°F(38°C)
- Working Temperature Range : up to 400°F(204°C)

#### **DOUBLE BLOCK & BLEED VALVES**



#### APPLICATIONS

Process piping isolation points, Direct mount to Instruments, Vents and drains.

#### **SPECIFICATIONS**

- Maximum Working pressure: Class 150 to Class 2500
- · Working Temperature Range:
- -58°Fto 400°F(-50°C to 204°C) for stainless steel and duplex valve assemblies
- -50°Fto 400°F (-46°C to 204°C) for carbon steel valve assemblies

#### **BLEED & PURGE VALVES**



#### APPLICATIONS

Venting & purging of Instrument system, Hydraulic & Pneumatic system.

#### **SPECIFICATIONS**

- Maximum Working pressure: up to 10000psi(689bar) @100°F (38°C)
- Working Temperature Range: -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

#### WATER REGULATORS





#### APPLICATIONS

Water Pressure Reducing system.

#### SPECIFICATIONS

- Maximum Working pressure: up to 220 psi(15.1 bar) @ 100°F(38°C)
- Reducing Pressure Range: 8psi (0.6 bar) to 60psi (4.1bar)
- Working Temperature Range: up to 176°F(80°C)



# **Others**

#### HYDRAULIC FLANGES (SAE J518, ISO 6162)





#### APPLICATIONS

High pressure hydraulic system.

#### SPECIFICATIONS

- Maximum Working pressure: 6000 psi (414 bar) @ 100°F(38°C)
- Working Temperature Range: -13% to 392% (-25% to 200%) with sealing material FKM

#### **FLANGES**



#### APPLICATIONS

Petroleum, Power plant, Chemical, Boiler heat, Exchanger, Shipbuilding, Construction.

#### SPECIFICATIONS

- ANSI/ASME, BS, DIN, JIS, MSS
- CLASS 150, 300, 400, 600, 900, 1500, 2500

#### MICRON IN-LINE FILTERS



#### APPLICATIONS

Protection of instrument system.

#### SPECIFICATIONS

- Maximum Working pressure: 3000 psi (207 bar) @ 100°F(38°C)
   Working Temperature Range: -20°F to 900°F (-29°C to 482°C)
- Filtering Range: 1 to 90 Micron

#### VACUUM CLAMPS & ISO-KF COMPONENTS



#### APPLICATIONS

Vacuum system.

#### SPECIFICATIONS

- Vacuum rated to 1x10<sup>a</sup> Torr
- Leak rating: 1x10<sup>4</sup> std cc/s
- Maximum Working Temperatur: 200°C with sealing material VITON

#### QUICK CONNECTORS



#### APPLICATIONS

All types of Instruments, Control panels, Hydraulic and Pneumatic system, Test stands, Gas supply system.

#### SPECIFICATIONS

- Maximum Working pressure: 3000 psi (207 bar) @ 100°F(38°C)
- Working Temperature Range: -10°F to 400°F (-23°C to 204°C)

#### FLEXIBLE METAL HOSES



#### APPLICATIONS

High Vibration, Misalignment, Piping Works for expansion, Moveable Equipment.

- Maximum Working pressure: 1600 psi (110 bar) @ 70°F(21°C)
- Working Temperature Range: up to 1000°F(538°C)



# INTEGRATION TUBE FITTING Inaugurate a new era of fitting.

INTEGRATION TUBE FITTING is easy to confirm 1-1/4 turns with tightening inspection device.

To order, add as a suffix to the SUPERLOK tube fitting ordering number.

Example: SUI-8-SS (Union 1/2" + Tightening inspection device)

### Difficulties in installation existing Tube Fittings

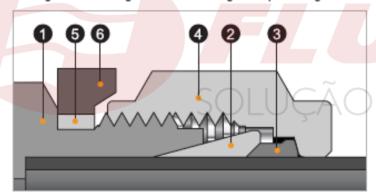
- Difficult to check 1-1/4 turns
- Use Inspection Gap Gauge to ensure sufficient pull-up installation
- Need Inspection Gap Gauge to assure fitting has been sufficiently pulled up.
- Difficult to check with Inspection Gap Gauge in limited spaces.
- These problems could cause poor installation and leakage.

### Integration fittings features

- No Inspection Gap Gauge is required.
- Easy to ensure sufficient tightening without additional tools
- Easy to install and increase the installation effciency
- Easy to ensure accurate fitting of all components
- Prevent leakage by poor installation
- Applicable to Bite type fitting as well as tube fitting

#### Structure

- Integration Tube Fitting is designed to insert tightening inspection device between the nut and the body before assembly
- Integration Tube Fitting consists of Check ring and Inspection ring



No.	COMPONENT
1 /	BODY
2	FRONT FERRULE A BACK FERRULE
4	NUT
5	CHECK RING
6	INSPECTION RING

#### Installation Procedure







BMT BR-2(2010.03.29) -