



# New Plug Valves



**Non-Lubricated**



**Extended Packing Plug Valves**

**Sleeved Plug Valves**

**Lined Plug Valves**

**Double Block & Bleed Plug Valves**

**Lubricated Plug Valves**



**UNGGUL  
PRAKARSA  
PRISMA**





OS VALVE

# **DOUBLE BLOCK & BLEED PLUG VALVES**

---



## STRUCTURE OF DOUBLE BLOCK & BLEED PLUG VALVE Non-Lubricated

This system is designed to relieve excess pressure rise in the body cavity of a closed valve due to ambient temperature causing expansion of the liquid in the valve. The relief valve is set to open at 25 PSI on all valves, regardless of their working pressure. With the Double Seal valve closed, the relief valve will open at 25 PSI above upstream pressure. This system functions only when the Double Seal valve is closed and the isolation valve is open.

### ◆ PLUG VALVE' s characteristic and merits

#### 1. Completely no leakage.

- ① PLUG & Tapered pipe of the Teflon Sleeve uses the contact method giving absolutely no leakage problems compared to other Process Valves.
- ② Stem Seal structure has secured the security design and gives absolutely no leakage characteristic of magnet powered type.
- ③ Weather Proof Type characteristic has been added. The steam seal parts of products of other enterprises leaks and after long usage corrosion takes place in the sealing but our product has used the sealing structure in the stem part and the covering part which gives absolutely no leakage for longtime use eventually increasing the life span of the product. (Top Seal structure)

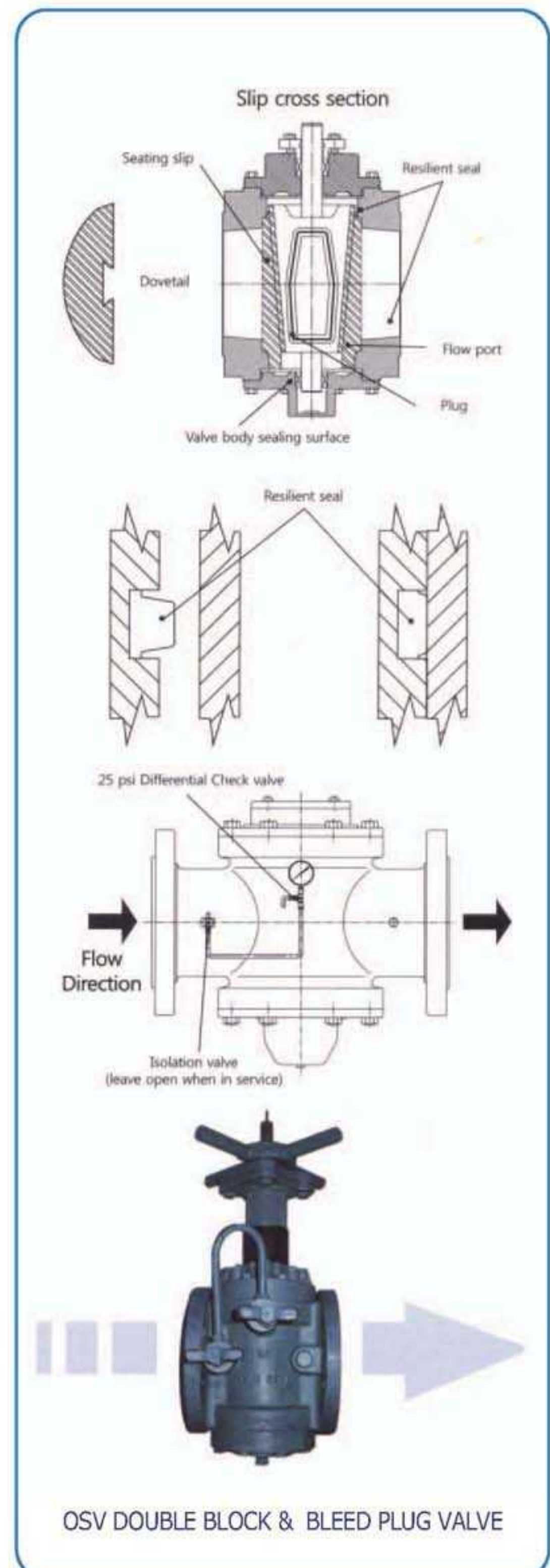
#### 2. No dead space in the valve.

The passage ways of the valve have no extra space like other Process valve allowing full control and open/close function, semi - permanent life span.

#### 3. No need of maintenance and repair

Having no extra space there is no worry that the moving materials are clogged up inside the pipe.

- ① The Seal pressure made by the abrasion of the Teflon sleeve is re - controlled by the Cover of ADJ. Bolt for semi - permanent sealing.
- ② Inside the Body of the port is a Metal lip with Self-cleaning function which can control all sticky and solid materials.
- ③ Top entry type allowing maintenance in on-line status possible. Valve which doesn't need much maintenance.





# DOUBLE BLOCK & BLEED PLUG VALVE HOW THIS VALVE WORKS

Non-Lubricated



## 1) CLOSING

The smaller sizes of Double Seal Valves are handwheel operated and large valves have enclosed weatherproof gearing, but operate in the same manner, requiring proportionately more turns. Turning the operator rotates the plug 90 degrees, aligning the seating slips.



## 2) COMPRESSING

Turned further, the plug lowers, forcing the seals against the body and compressing them to fit into grooves. With the slip solidly against the body, a secondary metal-to-metal seat forms on both sides of each seal providing double protection. During compressing, the wedging action of the plug forces the seating slips against the valve body.



## 3) OPENING

During opening, the dovetails pull the slips away from the body. The plug is guided by upper trunnion and then the plug is rotated 90 degrees, aligning the seating slips. In the open position, the seals are completely out of the low.



## CHARACTERISTIC OF DOUBLE BLOCK & BLEED PLUG VALVE Non-Lubricated

### ◆ Completely no leakage.

A valve selection is very important in petroleum industry. A wrong valve selection causes the decrease of income, the pollution of product and the increase of product line maintenance cost. In multi-product systems, the valves should stand cycle variation of frequent and cut off completely in up-stream sealing and down sealing. The double block and bleeding valve is developed for satisfying a demand fact of metering station, tank farm marine loading docks, blending plant.

### ◆ Completely no abrasion.

DBB valves can do complete isolation without leakage in a design pressure, and the valve is designed so that a seal doesn't make contact with body of the valve the body during valve opening or closing of the valve. At the last moment of the closing operation, when the seal makes contact with the body, the existing force only consists of a pressure force. A shearing force doesn't be suspended. In all opening, handle operations, the seal is in separated form body, and maintain this state during plug rotation. This takes the abrasion of the seal away and extends the life span.

### ◆ Double block & bleed

In DBB there are up-stream seals, down-stream seals, and bleed points for each other. So one valve can substitute for two valves and one spool piece, drain. The spool drain sends leakage fluid of valve to tank. The bleed system in this valve is installed to ensure zero leakage.

### ◆ Complete interception

When the valve is closed, a seat place is in serfed in around plug and body port. An elastic quality of seal is compressed inside groove completely. It is a simple design without using a spring, line pressure, seal differential or brute force for fixing a seal. A sealing of DBB is perfect and can substitute for line blind.

### ◆ Quick and easy operation

DBB looks like a gate valve, and the operation of DBB is like a ball valve, but it is called a plug valve. Like this, DBB uses only the merit of each valve for complete sealing. The operation mechanism of DBB is an easy operation by minimum rotation.

### ◆ It is possible to repair on-line?

It is possible to inspect and substitute a seal in on-line DBB

This valve is designed for an easy use substitution and decrease at minimum repair cost.

### ◆ Operation without a shock

The operation mechanism of DBB is a self locking method, so the force of the fluid from the line doesn't rotate a plug. There aren't plug slaw, line shock and the risk of worker injury. In large size valves it isn't no necessity for attaching gear for catching the shock of line force. Because of this properties, it is changed that petroleum industry business of whole the world like DBB for good efficiency, long life, easy maintenance and low maintenance cost during usage.



DBB valve for complete sealing and the axis makes metal rotation pushing up the valve plug opening the entrance to 90 degrees. The process works in a counter process especially designed for the operation.



PLUG  
SLIP BACK FACE  
SLIP FRONT FACE  
VITON O-RING



BODY



BOTTOM COVER



# DBB PLUG VALVE FOR BLEED SYSTEM

## Non-Lubricated

### Hand bleed valve

It is the most simple method among bleed systems that is worked by hand. When the plug is closed, we open the bleed valve for seeing that sealing is maintained tightly. Before opening the plug, we close bleed valve. <caution 1> A bleed exit faces down vertically and a fluid falls on a fixed hollow and storage, so you prevent privately if the fluid is dangerous or scatters out of sight. You must pay attention to goose neck type the prevents the leakage of body fluid.

### Thermal relief to upstream \*\*

When the plug is closed, a thermal relief valve releases the fluid to upstream automatically, if the fluid in closing state does a thermal expansion. A relief valve is adapted for operating at 25psi pressure.

### Thermal relief to atmosphere \*\*

It is like a thermal relief to upstream, but it is mediated a fluid emits when the pressure is over 50 psi and the place of emission is waiting not upstream.

### Hand bleed valve that has thermal relief \*\*

A hand bleed valve shows a complete sealing and a thermal relief valve makes it possible that any thermal expansion is emitted to upstream safely and automatically. The relief valve is adapted for operating at 25 psi pressure. A relief valve is adapted for opening at 25 psi pressure in all valve. A relief valve in plug-closed is opened when the pressure of upstream is over 25 psi. This system operates only when the plug is closed and the isolation valve is opened. The thermal relief system is designed for decreasing the excess pressure of the body hole in the closed valve. This excess pressure is made when the fluid in the valve expands by high surround temperature. <caution 2> All automatic DBB need a pressure decrease system in the body. If not, the opening is difficult or a fluid sticks in the closed state.

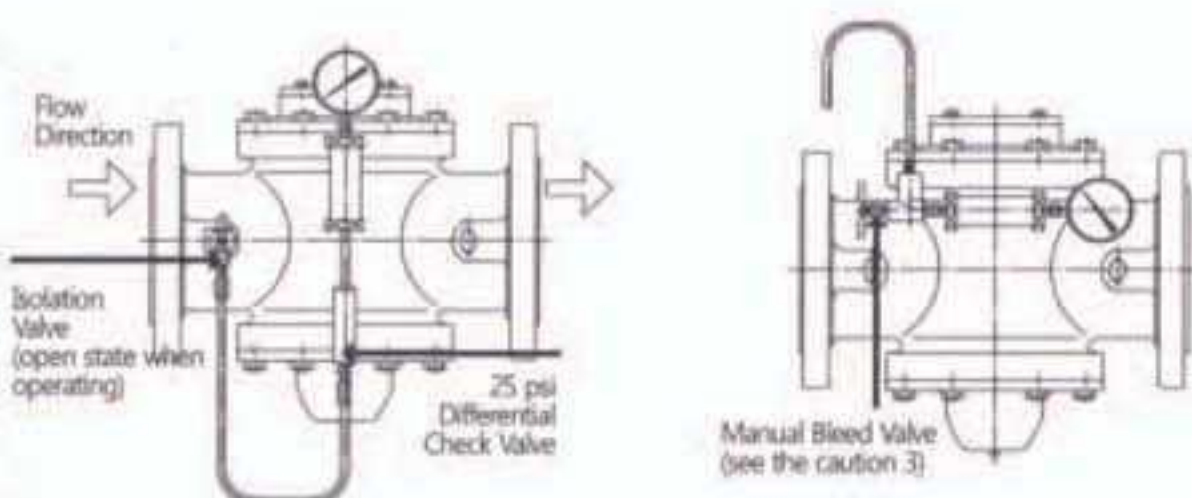
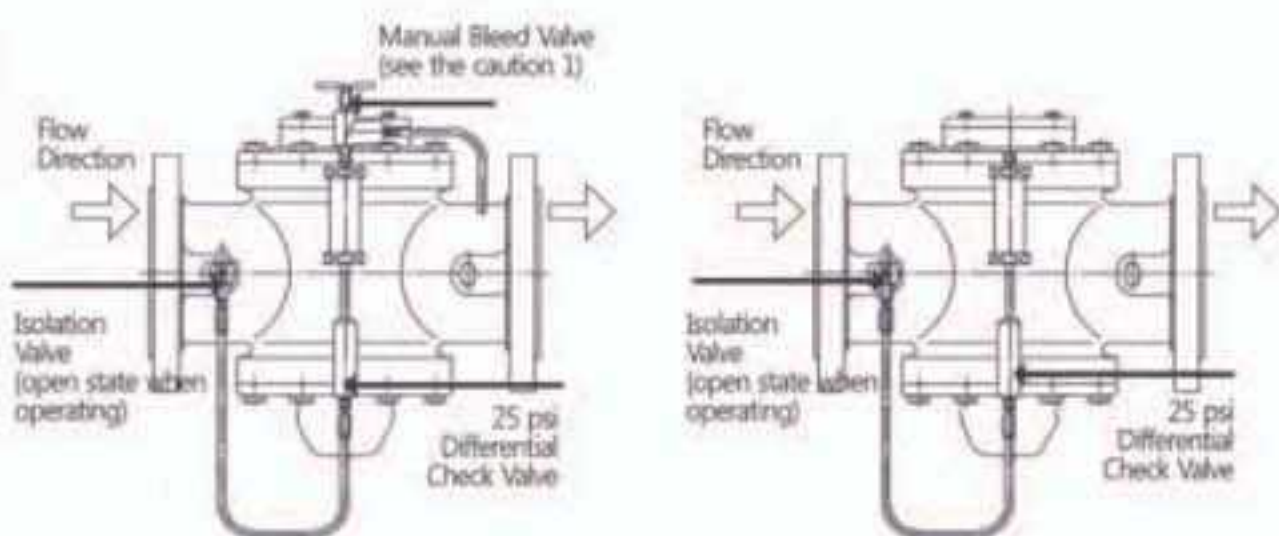
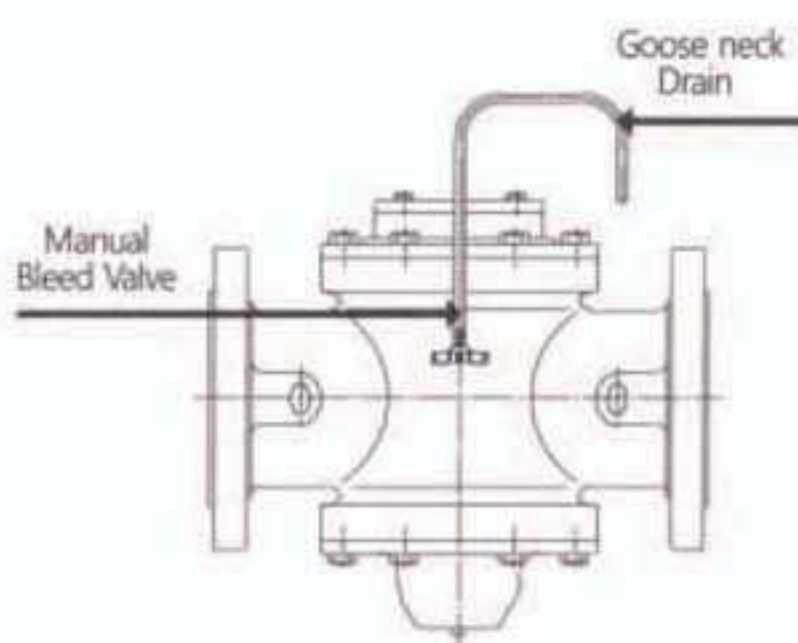
Automatic body bleed valve The cheek valve that is operated by a plunger opens a bleed valve by a coupling cam during the plug valve closing. At this moment the plug of valve can be operated by hand or electric actuator. This system provides a complete automatic system by removing the factor that a human needs to intervene in checking the seal. An isolation valve that is a selection can be fixed in open state to prevent the mistake of checking sealing by human and prove the perfections of DBB valve.

### Hand bleed valve that has a gauge-only if the fluid is liquid.

A hand bleed valve connected to a gage is used if you don't want an emission to atmosphere. A gauge always indicates the pressure of body hole and is used for measuring the tightness of sealing in many valve size. You may consult OSV about the pressure change that can occur in the closed state of DBB valve. specific size valve. After time passed, the pressure of body may be changed by heat, so a leakage indication can be wrong by this.

### Thermal relief valve that has a gauge-only if the fluid is liquid.

The thermal relief valve for decreasing the pressure of the body that can occur by heat change is used by connecting a gauge for indicating the tightness of the seal. There isn't an emission to the atmosphere. So it is no necessity water receiver system the emission pressure is adapted to 25 psi. <caution 3> When the plug is closed, the cam opens the automatic bleed and the fluid can exit. When the valve is closed completely, the ejecting fluid must stop if the out fluid is dangerous, it is necessary a proper water receiver system.





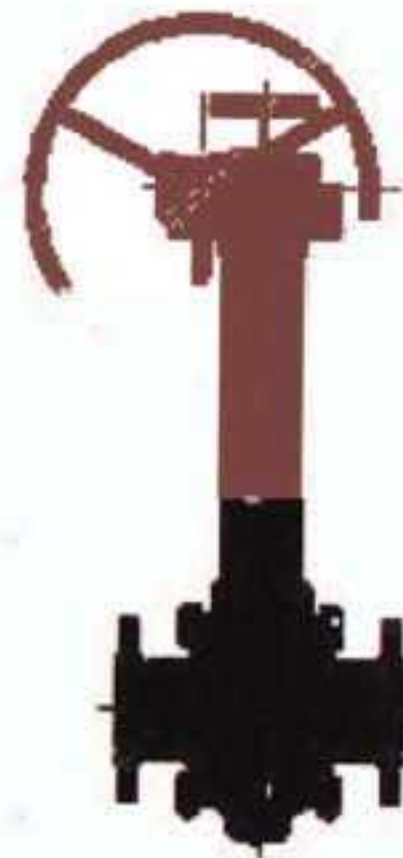
## THE DEFINITE CHOICE OF THE OPERATION TOOL. OPERATOR OF DOUBLE BLOCK & BLEED PLUG VALVE **Non-Lubricated**

### ◆ Feature

Various operation tools can be supplied in attaching valve as the demand of customer. At order, please indicate a operation tool that is a demand for the operating condition of the valve, and contact with an OSV sales engineer for the definite choice of the operation tool.



WRENCH  
OPERATOR



GEAR  
OPERATOR



CHAINWHEEL  
OPERATOR



ELECTRIC  
ACTUATOR

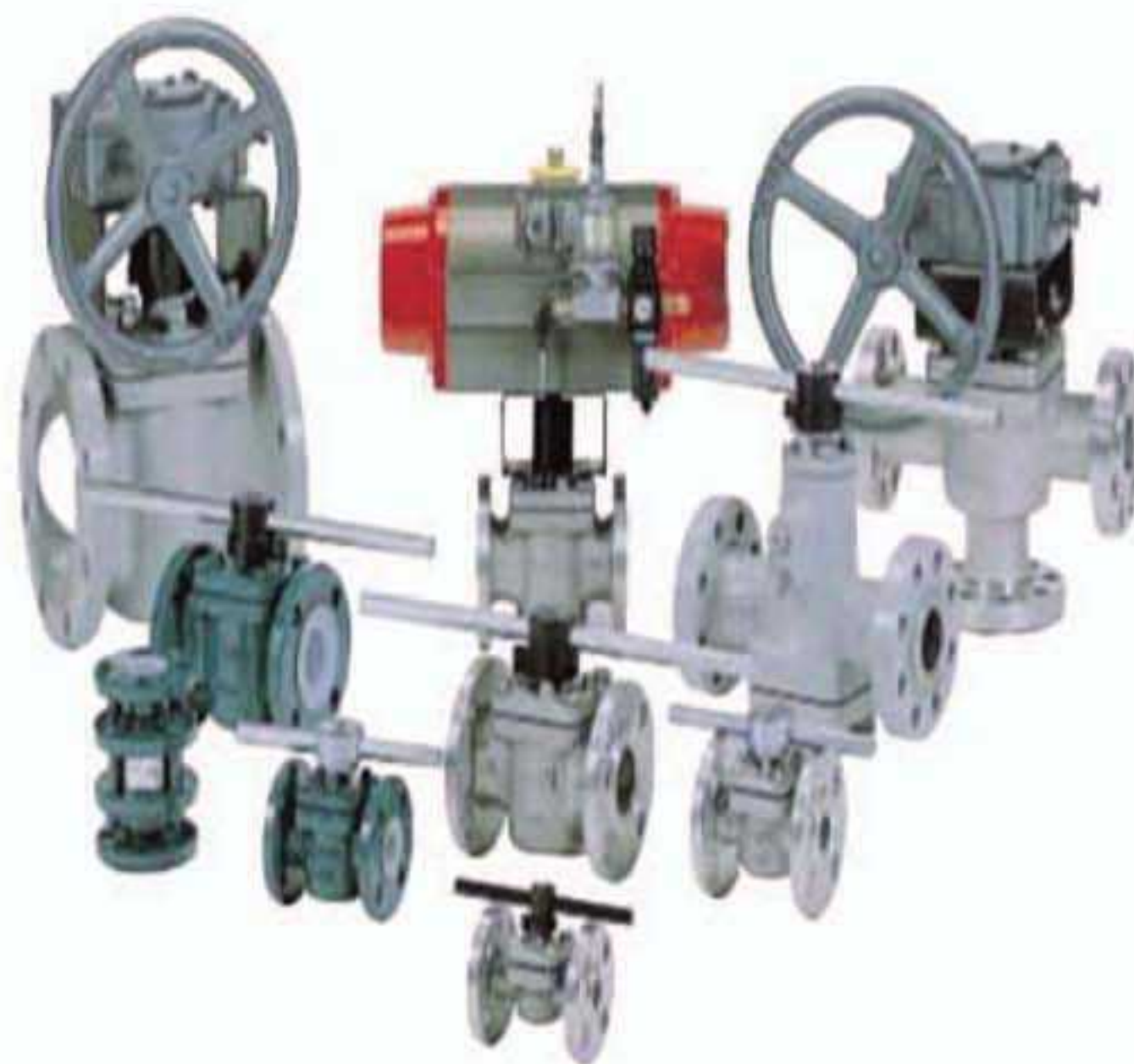


PNEUMATIC  
ACTUATOR



HYDRAULIC  
ACTUATOR





## PRODUCT SYSTEM

- Chemical Plants
- Fats, Oils, Fatty Acid and Detergent Plants
- Power Plants-Fossil Fuel
- Breweries & Distilleries
- Electrical Component Plants
- Foundries
- Power Plant-Nuclear
- Coke By-Products Plants
- Food Processing Plants
- Paint & Paint Product Plants
- Textile Industry
- Steel & Other Metal Processing Plants
- Rubber & Synthetic Rubber Products Plants
- Petroleum Products & Handling Systems
- Pulp & Paper Plants
- Pharmaceutical Plants
- Water Treatment-Purification



## PT. Unggul Prakarsa Prisma

Intercon Plaza Blok D8-9, Srengseng, Kembangan, Jakarta Barat - Indonesia

Phone: +62 21-5890 1302

Web : [www.unggulpp.com](http://www.unggulpp.com)