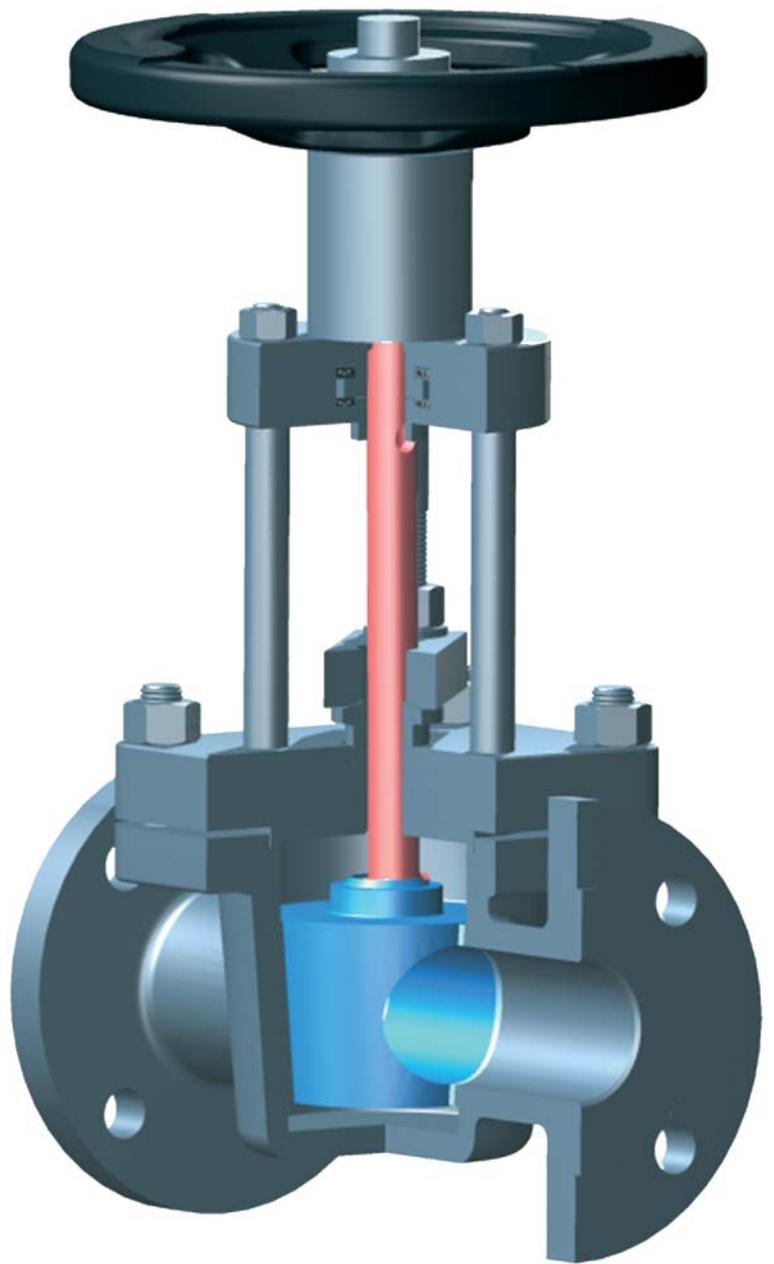


**STRACK**



**Strack Liftplug Valve  
Strackschieber**

**STRACK**

## Liftplug Valve Applications & Product Range

The STRACK Liftplug non-lubricated metal seated plug valve was developed over 80 years ago to solve problems with existing valves in catalyst cracking service.



### Liftplug Valves are available in:

- Sizes 1/2" (DN15) to 32" (DN800)
- ASME Classes 150 to 2500, PN 16 to 400
- Flanged ends and butt weld ends
- Temperatures: -196°C to 650°C

### Materials:

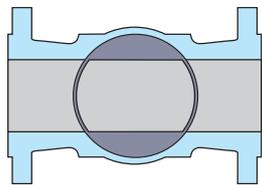
- WCB, LCC, WC1, WC6, WC9, C5
- CF3, CF3C, CF3M, CF8, CF8M, CN7M
- Duplex 4A, 6A, 6Mo
- Hastelloy, Monel, Inconel, Titanium and other special alloys

### Operator Options

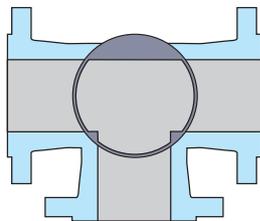
Handwheel and lever, LiftTorque operator, Gear, Automated

### Body Options

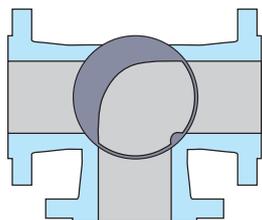
2-port, 3-port, multi-port upon request



Straight Pattern



T-Pattern



L-Pattern

## Liftplug Valve Features, Advantages & Benefits

STRACK Liftplug Valves provide a number of advantages compared to other valve types:

### Simple robust design

- Only three major components

### 100% round port

- Low resistance coefficient like a pipe section
- Minimal energy loss
- Piggable

### Operation with plug lifted off the seat

- Low torque operation lifted off the seat
- Reduced actuator cost
- No seat friction and wear
- High durability

### Thrust-seated plug

- High seat tightness

### Protected seats in open and closed position

- Zero abrasion or deposits on seat surfaces
- Long seat life

### No lubrication necessary

- Tight shut-off without continuous maintenance
- No contamination of process medium

### Metal-to-metal seat

- Long seat life
- Suitable for high temperature applications

### Hardfaced seat surfaces

- Different seat material for varying applications

### Double mechanical barrier

- Double Block & Bleed capable
- Bi-directional sealing
- Fire-safe

### Top entry design

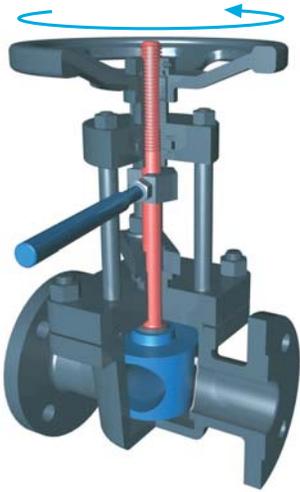
- Easy, low cost maintenance

The above features make the STRACK Liftplug Valve especially suitable for fluids containing solids as frequently found in polymer, slurry, coker and cracking applications.



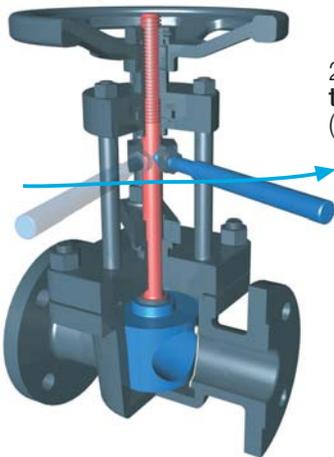
## Liftplug Valve opening procedure

Handwheel and lever is the standard valve operation. Valve operation without the lever as well as automation of liftplug valves requires the STRACK LiftTorque Operator.

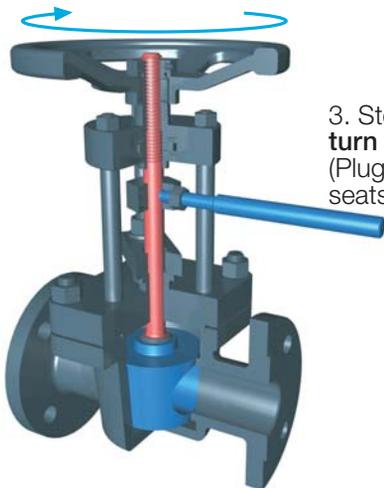


opening procedure

1. Step  
**turn handwheel left**  
(Plug lifts off seats)



2. Step  
**turn lever 90°**  
(Plug turns 90°)



3. Step  
**turn the handwheel right**  
(Plug presses back into seats)

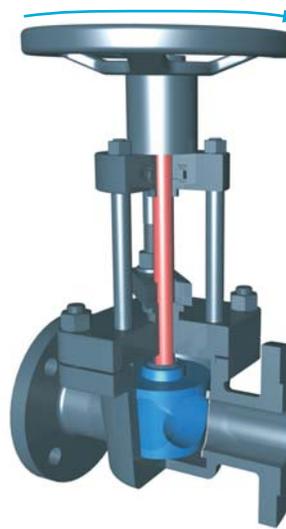
## Liftplug Valve opening procedure with automatic gear box

The STRACK LiftTorque Operator is a mechanism that transforms 1.25 turns on its shaft into a sequence of lifting, turning, and reseating the valve's stem and plug. This means that the handwheel operation for opening

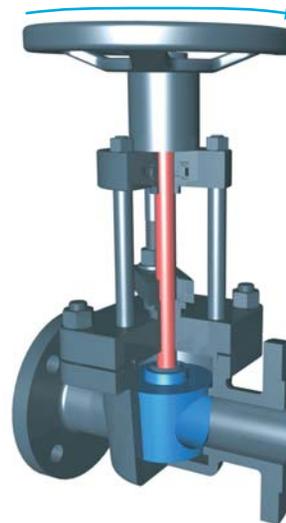


and closing is equivalent to that of other rising stem valves.

1. Step  
**turn handwheel left**  
(Plug lifts off seats)



2. Step  
**turn handwheel left**  
(Plug turns 90°)



3. Step  
**turn handwheel left**  
(Plug presses back into seats)

## Liftplug Valves with LiftTorque Operators and actuators



The STRACK LiftTorque Operator also allows the automation of the Liftplug Valve with a pneumatic, electric, or hydraulic actuator.



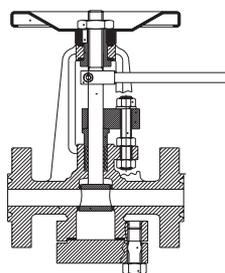
Liftplug Valve with automatic gear box and pneumatic actuator.

## Liftplug Valve Options & Versions

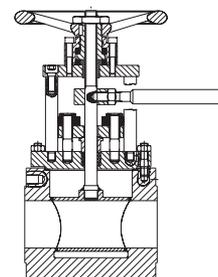
STRACK Liftplug Valves can be customized to meet specific needs.

### Options include:

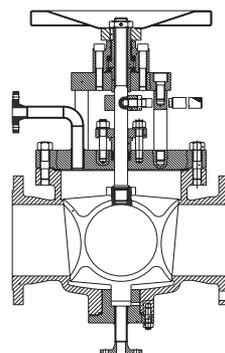
- Heating jackets
- Stem extensions
- Purging and flushing
- Special gland packing designs
- Extended bonnets for cryogenic service
- 3-way design for dual relief valve application



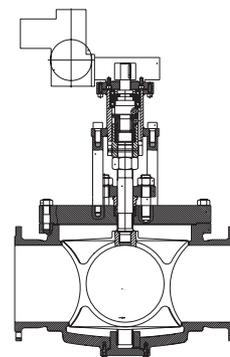
High pressure version



Short version



Flushing  
Purging



With electric actuator

### Purging

A clean fluid at a higher pressure than the process in the cavity around the plug prevents leakage of process fluid through the valve seats into the valve body cavity. Lifting of plug during cycling causes the purging fluid to flush the seats, thereby cleaning them and maintaining seat integrity.

### Flushing

A compatible fluid at a pressure below process pressure is supplied into the cavity around the plug to clean the valve body cavity. The process fluid/deposits introduced into the cavity during cycling is flushed out through the bottom drain. Supply and drain lines for the flushing fluid should be isolated prior to valve cycling.

### Locations

for purge/flush connections as per MSS SP-45





The STRACK Lift Plug Valves adopts the shut off function of ball, globe and gate valves. It combines the fundamental advantages of the conventional shut off valves.

In its application the STRACK Lift Plug Valve provides:

- functional efficiency
- high durability
- safety
- economic efficiency

Liftplug Valves are successfully used in many industries including

**Petroleum Refining Industry:**

Cracking  
Coking units  
Catalyst – F.C.C. units  
Slurry oil

**Chemical Process Industry:**

Polymer plants  
MDI units  
Chlorides service  
High temperature service

**Transport & Distribution:**

Pipelines  
Tank Farms

**and Off-Shore applications**

**Fluids**

- fluids
- fluids with solids
- gases
- gases with solids
- chemical products
- petrochemical products
- aggressive fluids
- abrasive fluids
- acids
- basis
- suspensions
- crystallizing fluids
- highly viscous fluids
- cryogenic fluids

**Applicable construction standards:**

Liftplug Valves are designed to comply with API 599 and API 600 where applicable and are tested to API 598.

## Other STRACK Products

High pressure gate, globe and check Valves

Gates, Globes, Checks as per API, ASME, DIN, ISO, PED

Bottom Outlet Valves

Oblique Globe Valves with seat lapping feature for abrasive service

Gates, Globes, Checks for HF Acid service

Forged Steel Valves with bolted bonnet and bonnetless design

Bellows Sealed Gate and Globe Valves



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