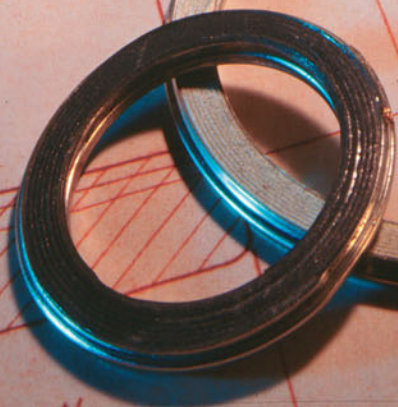
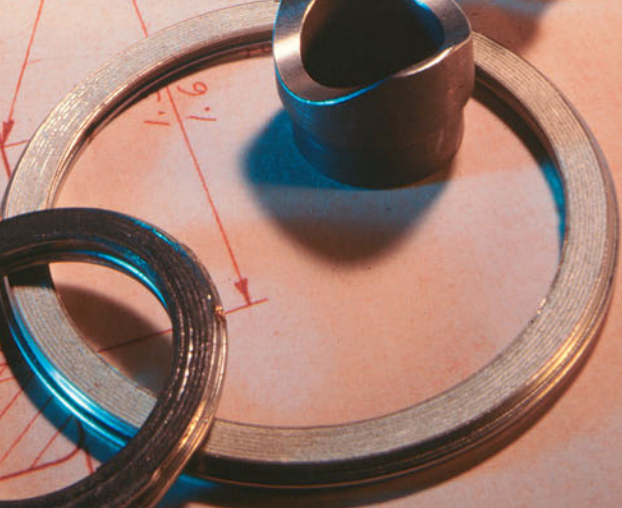
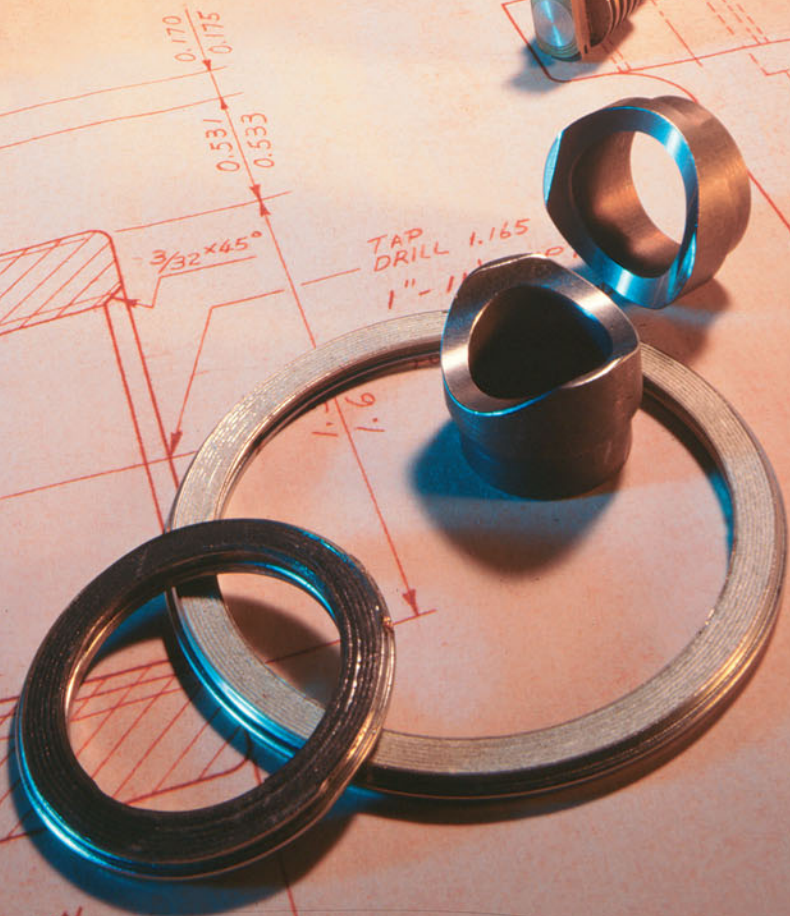
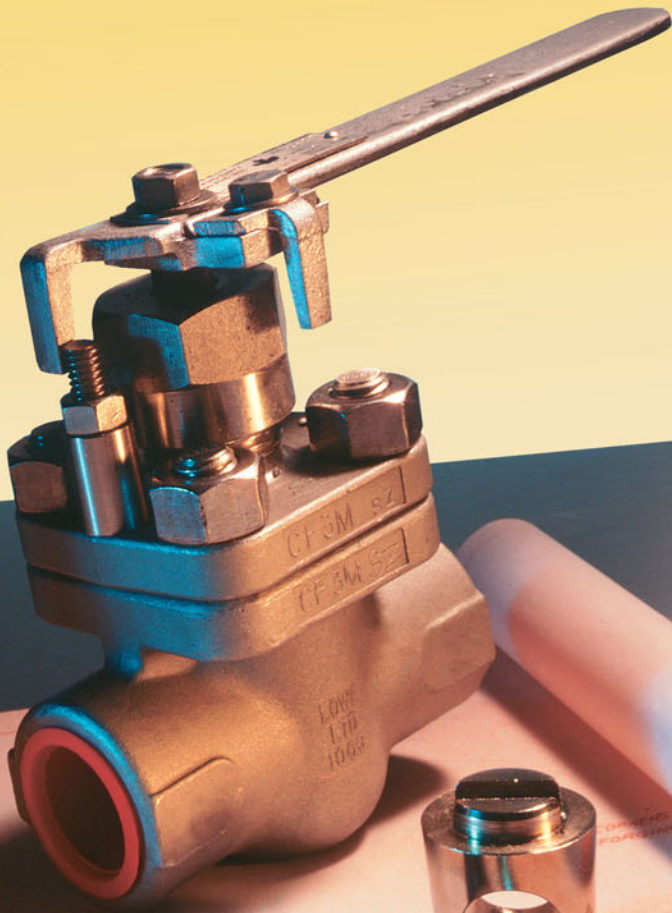




## Metal Seated Valves





A patented, precision quarter turn valve with many of the advantages of other valves - without the disadvantages.

The spiral action disc sits in tapered ground seats creating bubble and drop-tight closure. Disc contact is only with the stem connection and the seats never the body!

Features such as the low torque one quarter turn operation, wear compensating adjustments, back seating, actuator compatibility ...are an integral part of every valve.

Carbon and stainless steel. threaded or socket welds ends are standard in sizes 1/4" through 2". Flanged valves in ANSI 150 lb. to 1500 lb. configurations

Non-lubricated, no plastics or springs or sealing compounds. Disassembly is not required for welded installations.

NOTE: Valve must be in full open position prior to welding the valve into a line. Allow the entire valve to completely cool prior to operating.

Intrinsically fire safe, all steel construction, full static grounding integral metal to metal backseat and blow-out proof stem.

NOTE: Valves to API 607-Rev. 4 are Uni-Directional valves - please specify when ordering

Conservatively rated, deep packing gland, seats out of flow in the full open position ... long life.

The LOWE Valve is a high pressure, high temperature valve.

Available in:

Standard Handles - Oval or Straight

Lockable Handles - Available

## LOWE Valve Means:

Yes to metal to metal sealing  
bubble tight shut off

Yes to non-lubricated operation

Yes to full CSA approvals

Yes to low torque quarter turn operation

Yes to actuator compatibility

Yes to intrinsically fire safe, all steel construction

Yes to full static grounding

Yes to integral metal to metal backseat

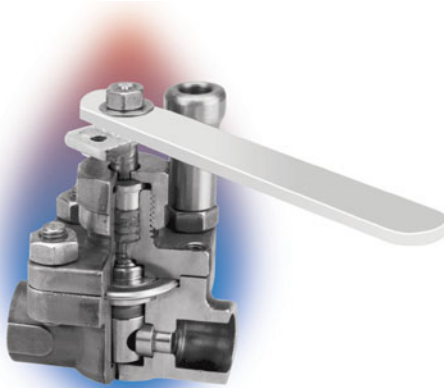
Yes to blowout proof system

No to washers

No to sealing compound

No to disassembly prior to inline welding

No to maintenance requirements



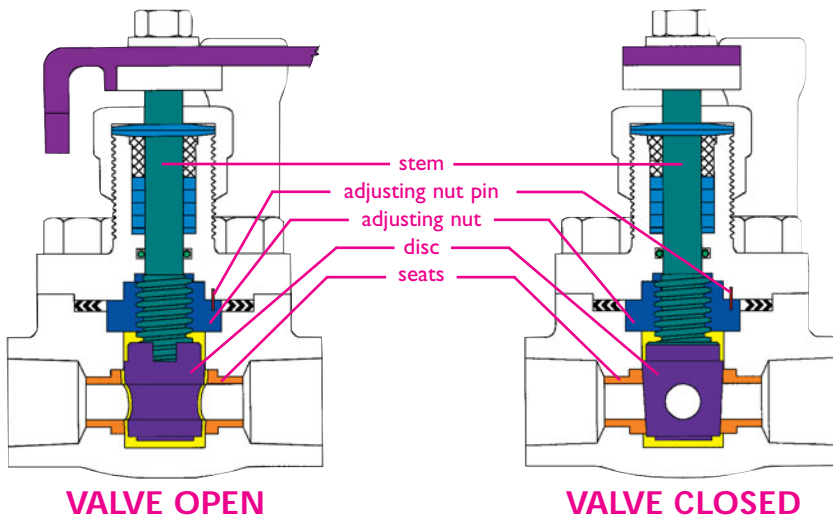
## What It Is

The LOWE Valve is a new concept utilizing a patented spiral motion to open and close, combined with some of the desirable features of Gate, Ball and Plug valves without the disadvantages. It is not the same as any other valve although some characteristics resemble other types, and consequently the LOWE Valve assembly, operation are different from other types of valves.

## How It Operates

The patented spiral closing and opening of the LOWE Valve is accomplished by using a threaded stem in a threaded adjusting nut.

When the hand lever is rotated a quarter turn clockwise, the stem rotates and at the same time moves down spirally causing the rotor to perform the same motion and achieve shut-off valve position.



The operating torque will be found to be very low until the point of closure is reached at the end of the quarter turn.

When the hand lever is moved counter-clockwise the reverse to the above occurs and the disc is lifted spirally up. The total motion of the disc up or down is small e.g. 0.025" on a 1/2" valve.

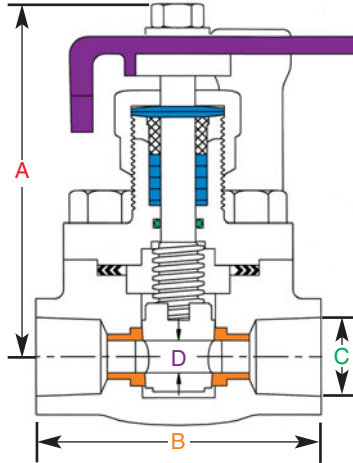
The rotor sits in a metallic tapered ground seat effecting bubble tight closure. It will be noted that the rotor is in contact only with the end of the stem and the two seats. It never touches the body.



### Standard Bore

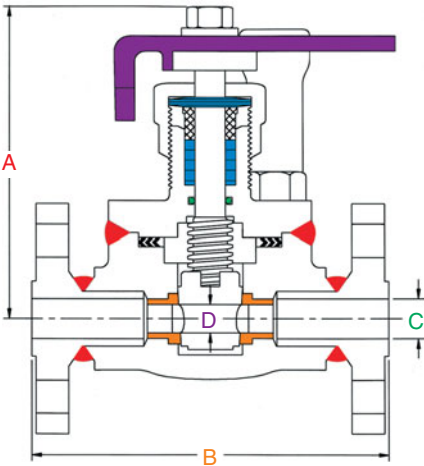
	A	B	C	D	
VALVE SIZE	CENTRE TO TOP	END TO END	S.W. BORE	PORT DIAMETER	WEIGHT LBS.
1/2"	3 5/8	3 1/4	0.855	0.375	3 1/4
3/4"	4	3 1/2	1.065	0.500	3 1/2
1"	4 3/4	4 1/4	1.330	0.750	6
1 1/2"	5 3/4	5 1/2	1.915	1.250	17
2"	6 1/4	6	2.406	1.500	22

### Series 800 & 900



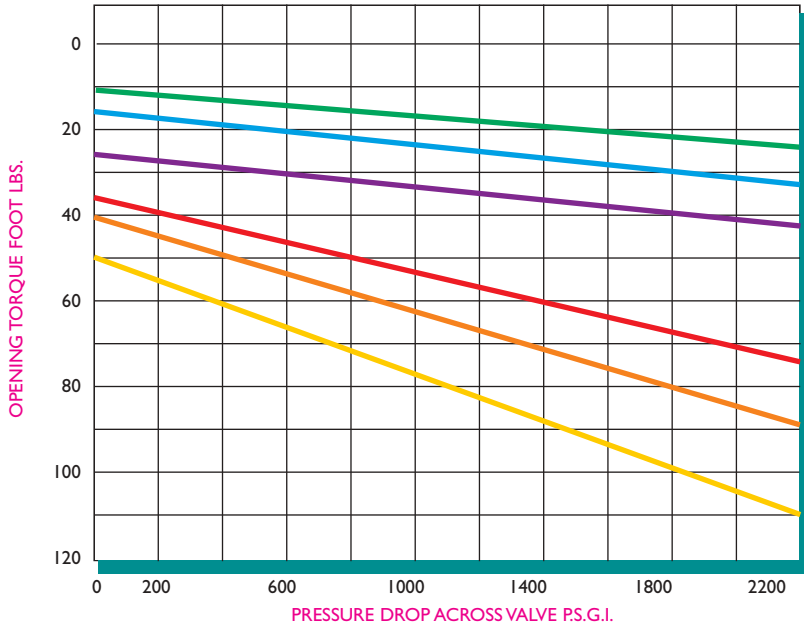
### Full Bore

	A	B	C	D	
VALVE SIZE	CENTRE TO TOP	END TO END	S.W. BORE	PORT DIAMETER	WEIGHT LBS.
1/4"-3/8"	3 5/8	3 1/4	0.690	0.375	3 1/4
1/2"	4	3 1/2	0.855	0.500	3 1/2
3/4"	4 3/4	4 1/4	1.065	0.750	6
1"	5 3/4	5 1/2	1.330	1.250	17
1 1/4"	5 3/4	5 1/2	1.675	1.250	17
1 1/2"	6 1/4	6	1.915	1.500	22



VALVE Size	150 ANSI			300 ANSI			600 ANSI			900 ANSI			1500 ANSI		
	A	B	Wt.	A	B	Wt.	A	B	Wt.	A	B	Wt.	A	B	Wt.
1/2"	3 5/8	4 1/4	7	3 5/8	5 1/2	7	3 5/8	6 1/2	9	3 5/8	8 1/2	11	4 1/8	8 1/2	15
3/4"	4	4 5/8	8	4	6	9	4	7 1/2	10	4	9	13	4 1/2	9	18
1"	4 3/4	5	11	4 3/4	6 1/2	13	4 3/4	8 1/2	14	4 3/4	10	17	5 1/4	10	23
1 1/2"	5 3/4	6 1/2	25	5 3/4	7 1/2	30	5 3/4	9 1/2	32	5 3/4	12	36	5 3/4	12	36
2"	6 1/4	7	32	6 1/4	8 1/2	37	6 1/4	11 1/2	40	6 1/4	14 1/2	45	7	14 1/2	55

### Opening & Closing Torque – General Guideline



Three factors effect the opening or break-away torque:

1. Tightness of packing gland
2. Closing torque
3. Pressure drop across the valve

Optimum closing torques are given at 0 pressure drop across the valve. In many services these can be reduced up to 50%.

If closing torques are increased, opening torques will increase proportionately.

FULL BORE	STANDARD BORE	STEM RISE CLOSED TO OPEN
3/8	1/2	0.025
1/2	3/4	0.031
3/4	1	0.042
1	1 1/4	0.042
1 1/4	1 1/2	0.042
1 1/2	2	0.042

**NOTE:** When mounting actuators, provision must be made for rise of stem.

#### CV FACTOR

Represents the flow of water through the valve in U.S. gallons per minute at 1 psi pressure drop at 60°F.

#### Series 800

VALVE SIZE	STANDARD BORE	FULL BORE
1/4"-3/8"	-	9
1/2"	9	16
3/4"	16	35
1"	35	60
1 1/4"	60	94
1 1/2"	94	115
2"	115	-

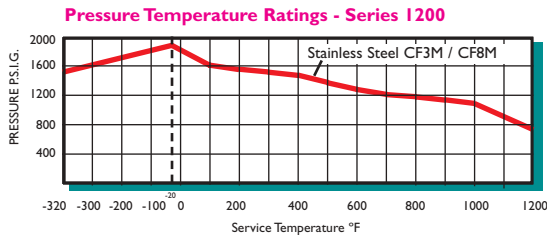
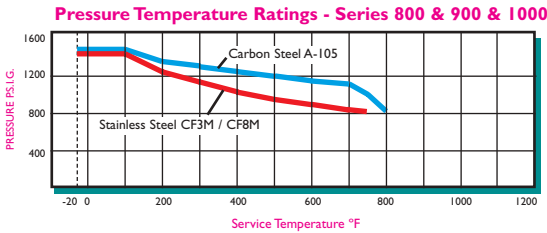


## Standard List of Materials - Valves to 600 lbs ANSI

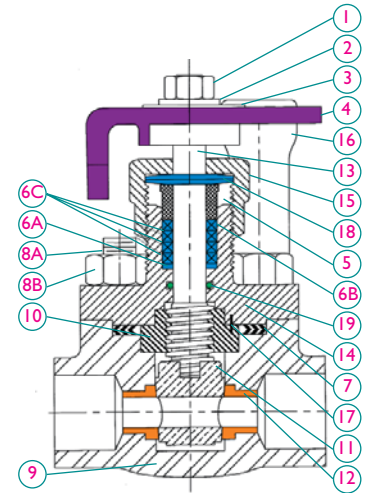
No.	Part Description	Series 800 / 900 - Carbon Steel	Series 1000 - Stainless Steel
1	Lever Nut	Steel - Commercial	S.S. 316.....ASTM A276
2	Lever Lock Washer	Steel - Commercial	S.S. 18-8.....ASTM A276
3	Name Plate	Anodized Aluminum	Stainless Steel.....ASTM A276
4	Hand Lever	Malleable Iron.....ASTM A47	Malleable Iron.....ASTM A47
5	Gland Bushing	S.S.416.....ASTM 582	S.S. 316L.....ASTM A276
6A	Sliding Ring	Steel - Commercial	S.S. 316L.....ASTM A276
6B	Packing - Braided	Braided Carbon Fiber Filament	Braided Carbon Fiber Filament
6C	Packing Ring	Pure Die Formed Graphite	Pure Die Formed Graphite
7	Gasket	S.S. 316 Spiral Wound-Non Asb.	S.S. 316 Spiral Wound-Non Asb.
8A	Cap Screw-Body/Bonnet	B-7.....ASTM A193	S.S. 316.....ASTM 193/194 B8M/H8M
8B	Nut for Stud	2H.....ASTM A194/194M	SS316 H8M.....ASTM A194/194M
9	Body	Carbon Steel.....ASTM A105	S.S. CF3M.....ASTM A351
10	Seal Nut	S.S. 416HT.....ASTM 582	S.S. 316L.....ASTM A276
11	Disc	S.S. 440HT.....ASTM 582	S.S. 316 Hardchromed.....ASTM A276
12	Seat	S.S. 416HT.....ASTM 582	CG6 MMn.....ASTM A743
13	Stem	S.S. 416HT.....ASTM 582	S.S. 316L.....ASTM A276
14	Bonnet	Carbon Steel.....ASTM A105	S.S. CF3M.....ASTM A351
15	Gland Nut	Carbon Steel.....ASTM A105	S.S. 316L.....ASTM A276
16	Stop Pin	Carbon Steel.....1030-SAE	S.S. 18-8.....ASTM A276
17	Adjusting Nut Pin	Carbon Steel.....1020-SAE	S.S. 316L.....ASTM A276
18	Conical Washers	Optional	Optional
19	O-Ring	Optional	Optional



Please contact factory for bill of materials for valves to ANSI Class 1500



List of Parts / Series 1200		
No.	Part Description	High Temperature
1	Lever Nut	316 SS ASTM A276
2	Lever Lock Washer	18 - B SS
3	Name Plate	Stainless Steel
4	Hand Lever	M.I. ASTM A47
5	Gland Bushing	316 L SS ASTM A276
6	Packing Rings	Crbn. Filament Graphite
7	Gasket	316 SS & MICA
8A	Stud	304 SS
8B	Nut	316 SS
9	Body	CF3M SS ASTM A351
10	Seal Nut	316L SS ASTM A276
11	Disc	Stellite 6
12	Seat	Nitronic 60 ASTM A479
13	Stem	17 - 4 PH - SS
14	Bonnet	CF3M SS ASTM A351
15	Gland Nut	316L SS ASTM A276
16	Stop Pin	18 - B SS ASTM A276
17	Adjustable Nut Pin	316L SS ASTM A276
18	Conical Washer	300 SS



## APPLICATIONS

- ▲ Air Lines - Sand Blasting
- ▲ Ammonium Isolation \*
- ▲ Atomizing Steam
- ▲ Bauxite Flow
- ▲ Boiler Blowdown
- ▲ Boiler Feedwater Bypass
- ▲ Brine & Lime Slurries \*
- ▲ Burner Front
- ▲ Chlorinated Organics \*\*
- ▲ Coke Oven - Steam & Gas Lines
- ▲ Condensate Drain
- ▲ Corrosive Atmosphere
- ▲ Cryogenics
- ▲ Dowtherm
- ▲ Dry Chlorine
- ▲ Fire Protection - Drain Line Valves
- ▲ Flash Steam Recirculation
- ▲ Fuel Feed Bypass
- ▲ Grate Blowing Steam Lines
- ▲ High Pressure Water Slitters \*
- ▲ Hot Catalyst Service
- ▲ Hot Oil
- ▲ Hydraulic Fluid
- ▲ Isolation Valves in Drip Lines
- ▲ Liquid SO<sub>2</sub> \*\*
- ▲ Natural Gas
- ▲ Nitrogen service - Vacuum
- ▲ Nuclear Waste Feed Water \*
- ▲ Oil Vacuum Service
- ▲ PFO Boiler Feed \*
- ▲ Quick Opening Blowdown Service
- ▲ Salt Water
- ▲ Saturated Steam
- ▲ SO<sub>3</sub> Gas-Boiler Drain \*\*
- ▲ Soap Slurry
- ▲ Steam with 64% Caustic
- ▲ Stock Feeds - Pulp
- ▲ Styrene Gas
- ▲ Sulphur Heat - Steam Trace Bypass
- ▲ Super Heated System
- ▲ Thermal Fluid Service
- ▲ Water & Scale

\* Stainless Steel

\*\* Service Restrictions

General Service
Combustible Gases
Steam & Hot Gases
Chlorine
Hot Liquids

All valves are colour coded so they may be identified at a distance.

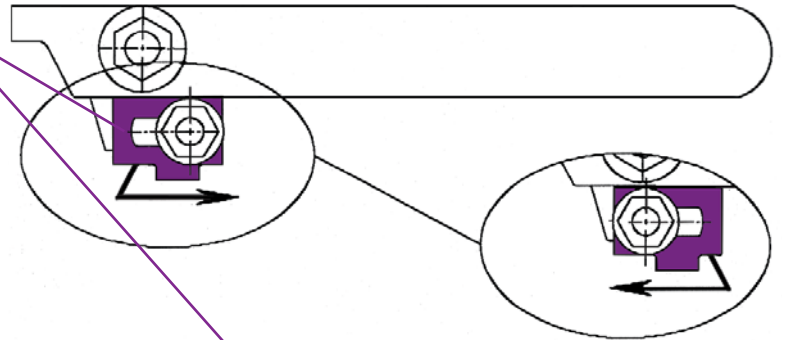


LOWE Valve with "Oval" handle & adjustable travel stop.

## Adjustable Travel Stop/Lever

This feature allows for the re-setting of the travel - rotation of the stem. This allows for the rotor to travel "further" down causing the tightening between the seats and the rotor in the closed position to increase.

This action can result in the added feature, of activating a renewed bubble tight closure. The reverse can be performed to reduce torque on the closure or to create a desired leak rate through the valve.



## Live Loaded Packing

The conical washers, under the gland nut and resting upon the gland bushing, keep washers flexed. Resulting in the creation of automatic adjustments for normal wear as well as seal expansion and contraction from temperature fluctuations. This feature keeps the packing rings constantly loaded.

## Live Loaded O-Ring Stem Seal

The "Bonnet" housing a O-Ring creates a primary "soft" seal between valve bonnet and valve stem. Excellent for light combustible gases and fluid applications.

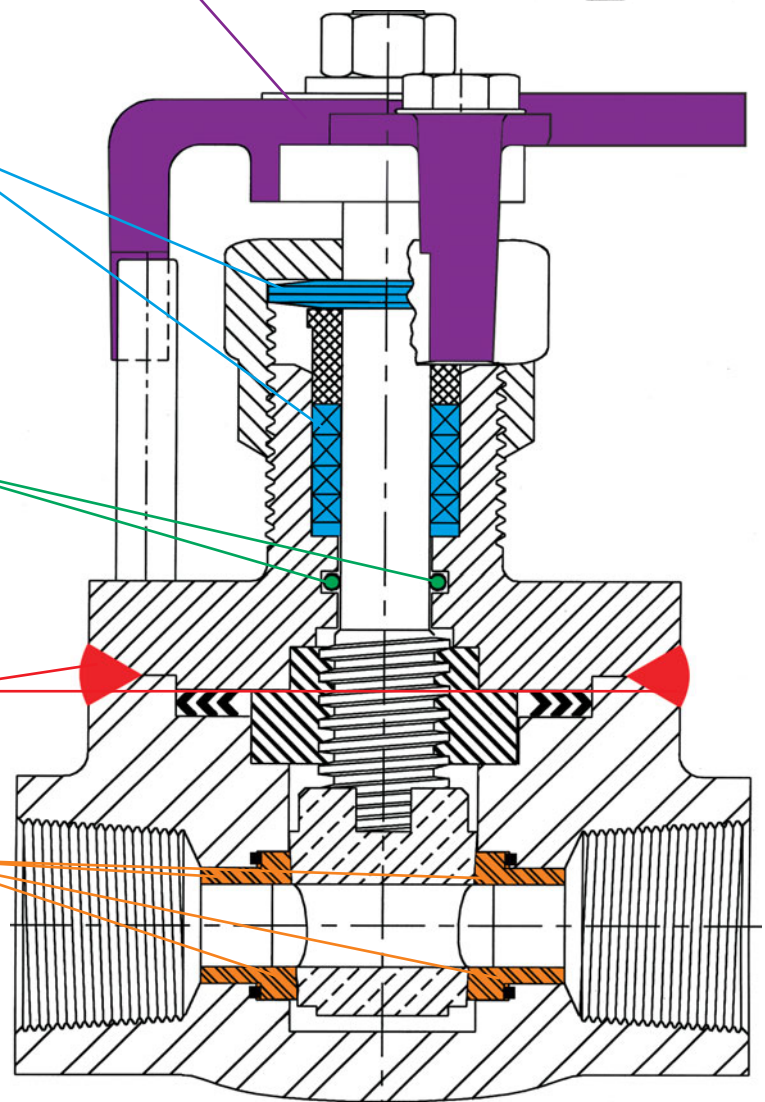
## Welded Bonnet

This added safety feature eliminates the possibility of bonnet to body external leakage.

## Live Loaded Seats

By means of an entrapped Live O-Ring behind the seats, this creates a continuous "seal" and "push". This feature provides a "constant" contact at all travel positions, between the seats and rotor. Thus, creating a wiping and cleaning action between the seats and rotor surfaces, which may have experienced a build-up of media. Allows for consistent operating torques. **A radical added feature to it's existing patented design.**

*NOTE: O-Rings selection per service media and conditions.*



## Optional Steam Jacketed Valves

