

# INSTALLATION, MAINTENANCE AND OPERATION MANUAL OF SAFETY RELIEF VALVE





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### **1. GENERAL**

These general installation and maintenance instructions are provided by Pneucon Valves Pvt Ltd to its customers as general guidance for the handling, storage, and installation of Safety Relief Valves. Safety Relief Valves are critical components in pressurized systems that ensure the safety of personnel and property. Always follow all manufacturer and industry standards recommendations relating to proper installation, testing, maintenance, and reconditioning.

This should not be considered an exhaustive manual and it does not cover the full maintenance and repair of valves. Certain configurations, applications, and usages may not be covered. If there is specific- information needed that is not covered in this manual, the customer is advised to contact Pneucon Valves Pvt Ltd. The purchaser should also contact Pneucon valve regarding any possible changes in information or specifications.

To ensure reliable and safe operation of Safety Relief Valve, installation, testing, maintenance, adjustment, and repair shall only be performed by qualified personnel having the required skills and training. No repair, assembly, adjustment or testing performed by individuals other than Pneucon valve authorize member representatives shall be covered by the warranty extended by Company to its customers. All applicable regulations, directives, codes and standards shall be adhered to when performing these activities. Failure to follow proper test procedures or failure to use proper test equipment will lead to incorrect test results, damage to the valve and will invalidate the warranty.

Likewise, use of parts in any maintenance or repair activity other than factory-supplied OEM parts will invalidate the warranty extended by Pneucon valves to its customers. Incorrect selection or application of Pneucon Valves on the part of the customer is not covered by the warranty extended by company to its customers

These general instructions have been provided not only to ensure the proper installation and maintenance of safety relief valve, but also to provide for the safety of personnel who handle our products. Failure to follow these procedures could result in severe bodily harm or even death.



## **2. SAFETY WARNING**

## 🛕 DANGER

- When the valve is under pressure, do not place any part of your body near or in the path of the outlet of the main valve or other discharge areas. Doing so will result in serious injury or death upon valve discharge.
- If a test gag is provided with the valve, it must be removed prior to installation. Failure to do so will result in equipment failure, serious injury or death in the instance of an overpressure event.

## WARNING

- Never attempt to remove, adjust, maintain, or repair a Safety Relief Valve while it is installed in a pressurized system unless you have been properly trained to do so. Doing so may result in serious injury or death.
- Ensure proper isolation of any energy sources and residual pressures by complying with all local, state and country-specific regulations/ directives applying to energy control procedures (lockout/tagout).
- Ensure that the Safety Relief Valve and system is at an ambient temperature before inspecting, servicing, or repairing. The valve, system, and contents may be extremely hot or cold. Failure do so may result in serious injury.
- The discharge from the main valve outlet or any other vents should be piped or vented to a safe location to eliminate the potential for serious injury or damage during relief operation.
- Prior to valve disassembly, ensure that proper controls are implemented to address potential exposures to hazardous substances, including gases, liquids, or process by products contained in or contaminating the valve. Consult applicable Material Safety Data Sheets (MSDS) and established exposure limits for the substances expected to be present to ensure proper exposure controls are implemented. Failure to do so could result in serious injury or illness.
- To ensure the valve is free to operate, check the inlet and outlet piping for potential obstructions which may exist as a result of process fluid solidification, polymerization or other system problems. Failure to do so could render the valve inoperable, leading to serious injuries or damage in the event of system over-pressurization.
- Use extreme caution when inspecting a Safety Relief Valve for leakage. Always stay clear of the valve outlet during seat leakage testing as the valve can suddenly open fully causing serious injury. Doing so could result in serious burn, chemical or injection injury.
- Use all appropriate personal protective equipment to protect against process hazards, including but not limited to, pressurization, temperature extremes, noise, and chemical hazards. Failure to do so could result in serious injury or death.

## **CAUTION**

• Always use the appropriate tools, and in the correct manner, for adjustment or servicing of valves. Failure to do so could result in injury.

#### SAFETY INSTRUCTIONS

- It is the responsibility of the customer and user of Pneucon Valves to properly train their personnel on all required maintenance procedures and safety standards to prevent injuries.
- Pneucon Valves can provide comprehensive training on the maintenance and repair of all products. Contact to Pneucon Valves Sales person or the factory.

## NOTICE

• Improper handling, storage, installation and maintenance of a SRV can cause damage to the valve and will invalidate the warranty. Please follow all recommended procedures.

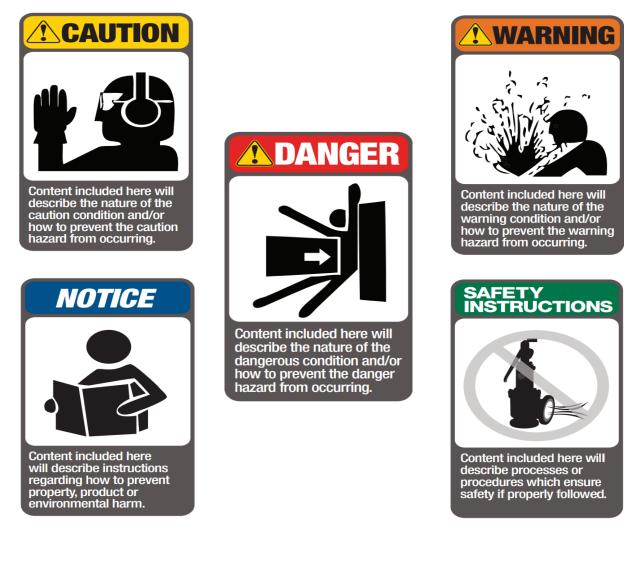


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You will find safety warnings and instruction labels in this manual. These have been included to ensure your safety and must be followed. Safety labels are vertically oriented rectangles as shown in the samples below. These labels consist of three panels inside a border. Each safety label will communicate the following three key pieces of information using narrative and pictorials.

- The nature and severity of the hazard.
- The consequence of the hazard, if not avoided.
- The precautions and measures required to avoid the hazard.

The top panel of the safety label illustrates the signal word (DANGER, WARNING, or CAUTION) which communicates the severity of the hazard, per the explanations to the bottom. The center panel contains a pictorial which communicates the nature of the hazard and the possible consequence of hazard if not avoided. In some cases, the pictorial may depict the precautions or measures required to avoid the hazard. The bottom panel will then contain the remaining narrative information needed to ensure all three key pieces of information have been conveyed.





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## **3. STORAGE AND HANDLING**

#### 3.1 STORAGE

- a. Check the packaging or name plate as per order number, after that Safety Relief Valve must be placed in clean and dry place, vertical position in order to avoid damaged and misalignment of inside trim parts, due to weight.
- b. Valves should be closed off properly at both Inlet and Outlet flanges. Particular care should be taken to keep Inlet flange absolute clean, in order to avoid foreign particles contamination.
- c. Cleanliness is essential to the satisfactory operation and tightness of safety relief valve. Flanged Valves should be securely bolted to pallets in vertical position and keep away from dirt and other forms of contamination. For threaded Type valve careful handling should be consider to avoid damage to thread.
- d. If the valve is going to be stored prior to installation (typically up to 2 months) it should be in a clean, dry and heated environment in the crate (or on the pallet) on which it was delivered.
- e. If the value is going to be stored prior to installation for longer than 2 months please contact Pneucon Value for recommendations based on the planned length of time to be stored.

#### **3.2 HANDLING**

#### 1. Improper handling

During shipment, maintenance or installation. This improper handling of the Safety Relief Valve can cause a change of set pressure, damage to lifting lever. Generally one should checked seat tightness on maintenance shop floor before initial use and usually checked after subsequent cleaning, repairing or testing, after the transit is delivery from manufactures.

#### 2. During Shipment

As safety Relief Valve are more precise instruments with very close tolerances and critical dimensions. Accordingly, commercial carriers transport truck sometimes subject to improper handling which may result valve leakage during service. This improper handling may also expose to inlet valve to dirt or other foreign particles that could damages the valve seating surface the first time the valve opens and cause leakage thereafter.

#### 3. During maintenance

As Safety Relief Valve is precise item manufacture to extremely close tolerance. Improper handling can degrade these tolerances, destroy the basic valve alignment on which the fine, exacting performance characteristic of the device generally depend.

#### **4. VISUAL INSPECTION**

Whenever there is problem with valves, Inspection should be made from manufacture repairs shop with technician guideline, unless corrosion, deposits, or condition are seen in Safety Relief Valve. Results of this inspection should be noted on appropriate forms.

- a. The flange, for evidence of pitting, roughening, or decreases in the width of seating surface.
- b. The spring, for evidence of corrosion or cracking and for the correct pressure range at the valve operating pressure and temperature.
- c. The position of the set screw and operating in the bonnet.
- d. Inlet and Outlet area checked for any evidence of foreign material or corrosion.
- e. The External surface, for any indication of corrosive atmosphere or mechanical damage.
- f. Checked for body wall thickness, valve components and material should be checked as per tag information and specification card.

#### **5. PRE INSALLATION**

- 1. In preparation for the installation sufficient clearance above and around the valve and actuator should ideally be provided for access and maintenance purposes.
- 2. Prior to installation, the space in the pipe work in which the Safety Relief Valve is to be installed should be checked to be in accordance with the GA drawing supplied with the valve or to the recognized international standard for face to face dimensions.

## WARNING

WARNING

WARNING



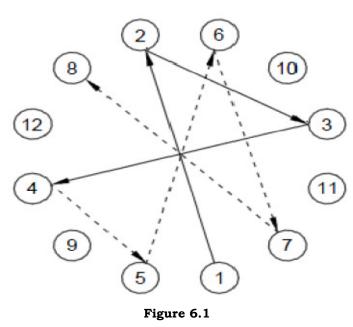
- 3. The end caps or other protection devices should not be removed from the equipment until the time of installation, in order to help avoid any damage to the flanges and also prevent the ingress of dirt or foreign particles.
- 4. The pipe work in which the Safety Relief Valve is going to be installed should be flushed prior to operation of the valve, considered the internal trim parts prior to the flushing process should be made, to prevent any subsequent foreign particles or blockage within the trim. For this requirement please contact Pneucon Valve for a more detailed procedure.
- 5. The adjacent pipe work must be free of dirt, pipe scale, welding slag and all other foreign objects. Safe operation of the valve could be impaired by the ingress of line debris or foreign matter.
- 6. Testing must only be performed using the correct test fluids. Air, gas and vapor service valves must be tested using air as the test fluid. Liquid service valves should be tested on water and steam service valves must be tested on steam.
- 7. Set pressure testing must be performed first, followed by seat leakage testing. Seat leakage testing is performed at 90% of set pressure. For valves set at 50 psig (3.45 barg) or below, the test pressure is 5 psig (0.35 barg) below the set pressure.
- 8. If qualified personnel and proper test equipment are not available the pre-installation testing should be skipped

## 6. INSALLATION



Pressure relief valve performance can be adversely affected by improper installation. To ensure good performance and safe operation of the valve these guidelines should be followed. Failure to do so could result in valve failure, serious injury or death.

- a. Safety Relief Valve should be mounted in vertical upright position. Installation of a safety Relief Valve in other than vertical upright position may adversely affect its operation. For any other mounting position should be consulted to manufacturer, since mounting in other position may cause a shift in the set pressure and reduction in the degree of seat tightness.
- b. Care should be taken before mounting of valve, nozzle should be thoroughly cleaned to remove any foreign material that may causes leakage. If provided with inlet and outlet threads check threading by visual inspection.
- c. Gaskets used shall be dimensionally correct for the specific flanges, they should fully clear the Safety Relief Valve Inlet and Outlet Opening.
- d. Tightening of bolts to mounting position for inlet and outlet flange as below Fig 6.1





- e. Safety Relief Valve may contain sharp surface. Proper personal protective equipment (PPE) should be used. Before installing a valve, depressurize the system.
- f. Install valve close to the pressure source so that inlet pressure loss is no more than 3% of set pressure.
- g. To avoid reducing the valve's actual capacity, be sure piping connected to the valve's inlet/outlet connections is equal to or larger than the valve connections.
- h. Avoid installing valves close to equipment that can cause pressure fluctuations, such as compressor discharge lines. Install valves away from equipment that may cause turbulence, such as reducing stations, orifice plates/nozzles, and other valves and fittings.
- i. Make sure all inlets and outlet piping is properly supported to avoid putting excessive load on the valve. Provide drainage from the discharge piping or valve body.
- j. On valves with bellows, remove plastic shipping plugs from the bonnet and vent in a safe direction. Do not pipe bonnet vents to a pressurized system that would introduce back pressure.
- k. Test levers are provided on some valves to allow the user to manually verify that the valve trim is free to move. Test levers should only be pulled when system pressure is greater than 75% of set pressure in order to avoid potential damage to the valve. In addition the valve should never be carried by the test lever as this can move the disc off the seat resulting in damage to both parts.

## 7. DISMANTLING OF SAFETY RELIEF VALVE

#### A. General Information

Consolidated SRV's can be easily disassembled for inspection , the reconditioning of seats or the replacement of internal parts. Appropriate set pressure can be established after reassembly .

- 1. Before starting to disassembly the valve, be sure there is no material/fluid pressure in the vessel.
- 2. Many pressure vessels that are proctected by consolidated Safety Relief Valves contain dangerous materials.
- 3. Decontamination and clean the valve inlet and outlet and all external surface in accordance with the cleaning and decontaminating recommendation in the appropriate material safety data sheet.
- 4. Parts from one valve should not be interchanged with parts from another valve.

NOTICE					
Part	Parts	Total			
No	Name	Qty			
1	Body	1			
2	Bonnet	1			
<u>3</u> 4	Body Stud	4 - 12			
4	Stud nut	4 - 12			
5	Nozzle	1			
6	Lifting head	1			
7	Disc	1			
8	Spindle	1			
9	Spindle Guide	1			
10	Spring Plate	2			
11	Spring	1			
12	Spacer Ring	1			
13	Adjuster Screw	1			
14	Lock Nut	1			
15	Gasket for Body	1			
16	Gasket for Cap	1			
17	Gasket for Nozzle	1			
18	Gasket for Bonnet	1			
19	Ball	1			
20	Slotted Pin for (7 & 8)	1			
21	Сар	1			
22	Lever Shaft	1			
23	Packing Nut	1			
24	Lever	1			
25	Leankage	1			
26	Lankage Bush	1			
27	Spindle Bush	1			
28	Split Pin	2			
29	Slotted Pin for (27)	1			
30	Lever Hex Nut	1			
31	Gasket for (23)	1			
	Table 7.1	•			



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#### 1. Lever Type:

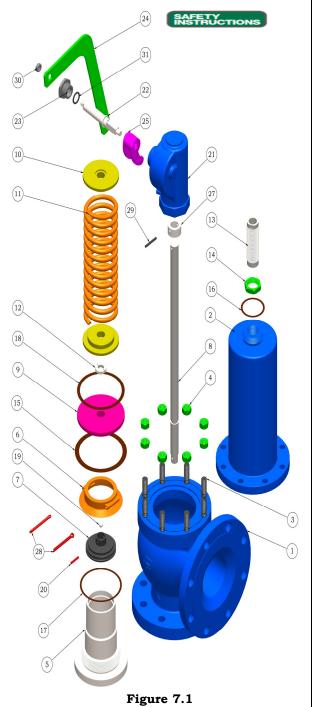
- a. Firstly place Safety Relief Valve at vertical upward positon mounted on clamp, remove the lever hande (24) from lever shaft (22), then untighten packing nut (23) & remove the Gasket (31).
- b. Unscrewed the cap (21). Then remove Slotted Pin from Spindle Bush (27) and Spindle (8) and then remove gasket for cap (16).
- c. Measure the position of Adjuster Screw (13) and record before removal.Measure from the top of the screw to the

Adjusting Screw Locknut (14) then remove the lock nut and adjuster screw. Clean the old grease with grease removal liquid.

- d. Unscrew the Stud Nut (4) of Bonnet (2) as per Fig 6.1 from the Body (1). Then remove Bonnet gasket (18).
- e. Start Removing parts from Top spring plate (10), Spring (11), Bottom Spring plate (10), Spacer Ring (12), Spindle guide (09), Body Gasket (15), and lastly unpin the Disc (7) assembly from Spindle (8).
- f. Dismantle Disc (7) with Retainer disc (6) by simply unpluging Slotted pins (28).
- g. Hold the body upside down now remove Inlet Nozzle (5) and Nozzle gasket (17) lastly.

#### 2. Screwed Type:

- a. Firstly place safety relief valve at vertical upward positon, unscrewed the Cap (21) then remove gasket of cap (16) assembley from Bonnet (2).
- b. Then follow same procedure for dismantaling the same as that of lever type arrangement.



**Note:-** Handle nozzle and disc with proper care and protection as from foregien particles and damages.



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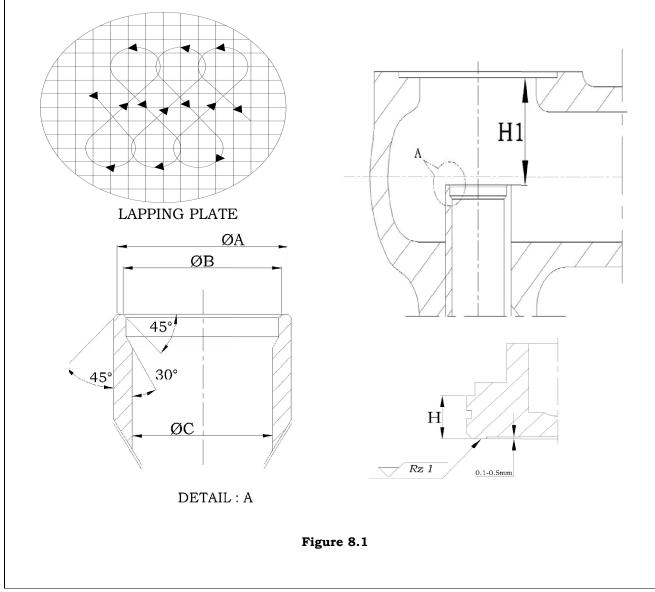
WARNING

### 8. MAINTENANCE

The maintenance recommendation for a Safety Relief Valve in order to keep whole processes line of plant and industrial process sing equipment from excitation of pressure from the control valves devices. One need to check Safety Relief Valve at regular internal of time for smooth and ease process of line. It is generally more economical and effective to perform a shop inspection/overhaul in the shop at the required intervals than on its equipment. However, when a valve operates in non-fouling service, experience may indicate that inspection of the valve while on the equipment is safe and suitable. When suitable safety precautions have been taken for the inlet and outlet block valves may be closed, and the bonnet of the valve may be removed for immediate inspection, testing, and any minor repairs by a qualified person. When major repairs are indicated, the valve should be sent to the Pneucon Valves.

#### Metal seat Design Machining the base seat

The base seat may be lapped or machined if necessary to verify that the seat is free from indentions, scratches, high spots, etc. Base surface of disc and nozzle contact should be flat and mirror finish.





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**Lapping:** Is process in which Nozzle seat area and Disc is moved on glass plate. Mixing the monocrystalline diamond powder together with oleic acid on the glass plate and then lap the Nozzle and the Disc. Lapping is performed by slight 8 type circular motion and rotating it slowly with uniform pressure apply.

Avoid debris, rocks any contamination during the process of lapping. Keep a firm grip on the part to prevent the possibility of dropping it. Replace the compound frequently after wiping off the old mixture.

Continue the process till Mirror finish and flat surface without shadow. Both Nozzle and Disc should be clean with lint free cloth and cleaning fluid.

**Note:** Always keep surrounding clean and use proper cloths for removing mixture and cleaning purpose.

When the base seat cannot be repaired by lapping, it can be machined using the below Dimension

ØC		REINISHING OF SEAT			<b>REFINISHING OF DISC</b>	
	SEAT DEPTH	TOLERANCE	ØA [mm]	AD [mm]	BOUNDARY	TOLERANCE
[mm]	H1 [mm]	FOR H1 [mm]	ØA [mm]	ØB [mm]	HEIGHT H [mm]	FOR H [mm]
23	34.5	+0.5	26.8-0.2	26+0.2	9.1	-0.2
29	46.8	+0.5	34_0.2	32+0.2	10.1	-0.25
37	54.8	+0.5	42.4-0.2	41+0.2	10.1	-0.25
60	68.5	+0.5	71-0.3	68.8 <sup>+0.3</sup>	11.1	-0.3
74	110	+0.5	86-0.3	82+0.3	14	-0.4
92	118	+0.5	104-0.3	98 <sup>+0.3</sup>	17.1	-0.4
98	112	+0.5	108-0.3	103-0.3	15.1	-0.4
125	151	+0.5	135-0.3	130-0.3	15.1	-0.4
165	220	+0.5	185-0.4	175+0.4	18.1	-0.5

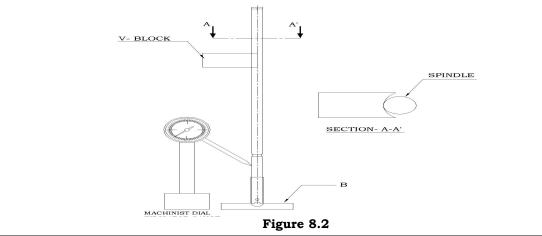


#### Machining The Disc Seat

When disc cannot be repairing from lapping it can be machine as shown in table above, note that minimum thickness is counted as 5 mm. Machining dimensions are shown above.

#### **Checking of Spindle Concentricity**

- 1. It is important that the spindle of Safety Relief Valve be straight in order to transmit the spring load to the disc without lateral binding. Over gagging is one of the common causes of bent spindles.
- 2. V- support set up
  - a. The ball pointed spindles should be placed in a piece of material "B" that has been recesses to permit free rotation of the spindle.
  - b. Support the V- block "A" placed near the upper end of the spindle
  - c. Apply a Machinist's dial Indicator at approximately 45° to the outer edge of the spacer ring at "C", Rotate the spindle. The total indicator reading should not exceed 0.13 mm. Straighten the spindle, if necessary





## 9. INPECTION AND PART REPLACEMENT

#### A. Nozzle

The base should be replaced if:

- In Metal seated- seat if surface is found corroded, worn out, scratched, leaks are too wide which cannot be remachine. Directly replace the Nozzle parts.
- If one found threads are galled off, torn, stripped.

#### **B. Metal Seat Disc**

The metal seat disc should be replaced if:

- If the seat surface is damaged beyond the lapping & machining limits.
- When height H is less than minimum dimensions.

#### C. Bonnet

The bonnet should be replaced if:

- Threads of adjuster screw and cap is torn, stripped, or galled.
- Condition is porous, corroded or distorted.
- The step for spindle guide is worn out, scatted, corroded, or leaks.

#### D. Spindle Guide

- The spindle guide should be replaced if:
- The inside surface is worn, egged or galled.
- Base and Bonnet seating surface are scratched, nicked, corroded or leaks.
- Hole dimension is out of tolerance and Guide height dimension is out of tolerance.

#### E. Spindle

The spindle should be replaced if:

- The spindle get bent beyond the limit 0.13mm to 0.4mm.
- Spacer ring grove get corroded, pitted, egged.

#### G. Spring

The spring should be replaced if:

- The ends are not ground flat and parallel.
- The coils are bent, pitted, or unevenly spaced.
- The spring cannot be properly identifed.

#### H. Spacer ring

The spacer ring should be replaced if:

- The surface is galled, pitted or scratched.
- Corrosion effect the centering of the spring.

#### I. Adjusting screw

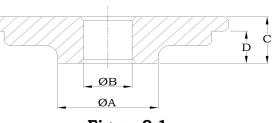
The Adjusting screw should be replaced if:

- Threads are torn, stripped or galled.
- Spacer surface are galled, pitted, or scratched.
- Across flats are damaged or rounded.

#### J. Cap

The cap should be replaced if:

- The threads are torn, stripped, or galled.
- Condition is porous, corroded, or distored.





#### **Remachining Dimensions**

VALVE SIZE		•	A D	С	D
INLET	OUTLET	A	В	±0.25	±0.2
1"	2"	$25^{\pm 0.18}$	$12^{\pm 0.18}$	13	9
1.1/2"	3"	$25^{\pm 0.18}$	$16^{\pm 0.18}$	14	11
2"	3"	$25^{\pm 0.18}$	$16^{\pm 0.18}$	14	11
3"	4"	30 <sup>±0.25</sup>	$20^{\pm 0.25}$	14	10
4"	6"	$45^{\pm 0.25}$	$24^{\pm 0.25}$	19.5	13
6"	8"	45 <sup>±0.25</sup>	24 <sup>±0.25</sup>	28	18
6"	10"	$55^{\pm 0.30}$	$31^{\pm 0.25}$	35	20
8"	12"	60 <sup>±0.30</sup>	$31^{\pm 0.25}$	64	58.5
(Rest dimensions are in mm)					

Table 9.1



NOTICE





SAFETY

#### K. Lever Linkage

- The lever leakage parts should be replaced if:
- Mechanism is jam, corroded, galled.
- Linkage tip is damaged or torn off.

#### L. Gaskets (Body, Bonnet, Nozzle, Cap, Lever Assembly)

The gasket should be replaced if:

- At every interval of maintenance Inlet and Outlet Gasket Should be replaced.
- During reassembly of valves all gasket should be replaced as per dimensions.

#### Reassembly

#### 1. Lever Type:

- 1. Clean the Trim Parts before assembly such as Spindle, Spacer Ring, spring, Adjusting screw, Disc, Spindle Guide.
- 2. Apply small amount of Lubricate non-copper based (Veedol) on the Nozzle (5) thread then tighten it to Body (1) Inlet Side, place gasket (17) in-between it.
- 3. Place on Clean surface and apply small amount of grease into the Disc holder where Spindle is going to settle.
- 4. Assembly of Retainer Disc (6) with Disc (7) by plugging slotted pins (28), then insert it ball (19) and on it spindle (8).
- 5. Lock Both Disc and Spindle with Slotted Pin (20).
- 6. Now stable sub assembly vertically inside the body, then sandwich Spindle Guide (09) with Body Gasket (15) and Bonnet gasket (18).
- 7. Now wired two halves of spacer ring (12) to the groove provided, add small amount of lubricate to it.
- 8. Lubricate Spring Plate (10) bore so to slide easily during operation, Settle down the Spring Plate on Spacer Ring (12).
- 9. Check and Inspect Spring (11) as per code then rest in on Spring Plate (10). Then again placed second spring plate (10) on top on spring (11).
- 10. Now apply Lubricate grease to Body Stud (3) and tighten it to body, then cover the spring sub assembly with Bonnet (2) and tighten it with the nut as per size.
- 11. Apply lubricate grease to Bonnet (2) threading areas and Adjusting screw (13), start tightening the Adjusting screw up to the marking done before dismantling.
- 12. Secure the Adjusting screw (13) with Lock nut (14) firmly.
- 13. Before that place Linkage (25) inside the Cap (21), secure it with Lever shaft (22), put packing gasket (31), then tighten it with packing nut (23).
- 14. Now put Cap gasket (16) on Bonnet (2), and then tighten the Cap (21) firmly.
- 15. Lastly put Lever Handle (24) on Lever Shaft (22) then tighten it with Lever hex nut (30) it with

#### 2. Screw Type:

- 1. In Screw Type follow same procedure of reassembly as that of lever type (1-12) steps.
- 2. Lastly put Cap gasket (16) on Bonnet (2), and then tighten the Cap (21) firmly.



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10. TROUBLESHOOTING				
PROBLEMS	REASON	CORRECTIVE ACTION		
Excessive leakage when valve closed	Worn or damaged Disc or Nozzle surface	Do lapping first, if not resolve then slightly machine,even if not resolve replace to new one		
	Adjuster screw height if not perfect	Height adjusting till leakage issue is solve		
	Spring compression issue	If by adjuster screw problem is not solved, then replace to the new one		
Valve operation not smooth	Gland flange over tightened	Loosen gland flange nuts and retighten to finger tight		
	Inadequate Fluid supply	Check Fluid supply as per Set Pressure		
	Spring faulty	Replaced spring as per		
	Improper lapping	Do proper lapping		
Excessive noise	Loose supports	Tighten the supports sufficiently		
	Damaged trim assembly	Replace the trim parts		
Valve travel	Spring compreesion issue	Check the hieght of spring due to continously operation		
range less than	Excess adjuster screw tightening	Adjust as per set pressure requirement		
corresponding input signal	Test gag setting	Tighten the test gag as per safety and operation requirement		
range				

## 11. DESIGN AND MANUFACTURING STANDARD

Design standard		Safety Relief Valves	
		All Series	
Flow Equation	Sizing, selection of Safety Relief Valve	API 520 PART I	
		CROSBY	
		IBR ACT1923	
Body design	Indian Boiler Act 1923 & regulations, 1950	IBR 2005	
	Centers to Face Flange Dimension	API 526	
	Body Flanges , pipe Flange Fitting	ANSI B16.11/1980	
	Valves Flange, Threaded and Welding	ANSI B16.34/1979	
	Material study	Cambridge Engg Dept	
	Seat Tightness of Safety Relief Valve	API 527	
Quality	Quality Standards for Steel Casting	SP55	
	Quality Management Systems Requirements (second revision)	ISI/ISO 9001: 2015	
Testing	Valve Capacity Test procedure	ANSI/ISA-75-02/1988	
	Hydrostatic testing Procedure	ISA-75.19.01	
Inspection	In Service ,Rating ,Repair and Alteration	API 510	
	Piping Inspection Code: In-service Inspection, Rating, Repair, and Alteration of	API 570	
	Piping Systems,	AI1 370	
	Inspection of pressure Relieving Devices	API 576 (4 <sup>th</sup> Edition)	
	Tank Inspection, Repair, Alteration, and Reconstruction	API 653	
	Design and Construction of Large, Welded, Low-pressure Storage Tanks	API 620	



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## **Pneucon Valves Service**

#### Real Valve behind Every Valve

Pneucon valve are following standards as well as doing aftermarket engineering works as per customer requirement. Once our valve is supply our expertise are expertise keep touch with client and aware of your plant safety.

**Responsive:** Pneucon valves and its Expertise understand the need to quickly and efficiently respond to customer needs.

• **Global Access** - Expertise work with and in our extensive representative network, providing support to all global regions.

• **24/7 Valve Service and Replacement** - Expertise offer quick, localized testing and repair of valves, or the prompt installation of new Farris ASME certified valves.

**Experienced:** Pneucon valves recognizes the value of having pressure Safety relief valve experts as close to the customer as possible. This is accomplished through comprehensive training offered at the factory or on-site. Expertise sales personnel and technicians are able to provide valuable experience to their customers.

• Valve Expertise - Every technician is technically supported by expertise, a leader in valve design.

• **Factory Trained Technicians** - Fast technicians go through mandatory training consisting of Practical and lecture training on safety relief valves, repair procedures and applicable codes and standards. The result is a team of highly skilled technicians capable of handling both routine and complex pressure relief valve requirements around the world.

• **OEM parts** - Company use only OEM parts, restoring valves to OEM specifications. All valves are assembled and tested to ASME standards.

**Dedicated:** Company have committed to large investments in inventory, equipment and certifiations to better support the customers in their territory.

• **Local Inventory** - Every engineering vendors carries a large inventory of new safety relief valves and spare parts, backed by a web-based global inventory to draw from.

• **ASME Certification** - Company carry all the required certifications to assemble, set and test Pneucon valves.

• **IBR Certification** - Company have IBR certification issued by The Indian Boiler Regulation act 1950 for Pressure Vessel Inspectors to effectively and efficiently repair all pressure relief valves where applicable.

