Eshteal Arak Industrial Engineering Company is the only manufacturer of high-capacity rotary cup burners in the country, and these burners are used by all boiler companies in the country . Among the unique products produced by this company are power valves that are designed for saturated and superheated steam lines. This product was prouced for the first time in the country in 2014 in the Mobarake steel complex and at a pressure of 70 bar It has been used successfully Eshteal Arak Industrial Engineering Company has been modernizing its production lines since 2003 and is currently equipped with more than 98 machines, 61 of which are CNC lathes and milling centers (referred to at the end), stepped into the field of producing products with modern sophisticated technology It should be mentioned that this company has succeeded in obtaining the knowledge-based badge on burners and valves during two consecutive periods, and in order to enhance the brand and satisfy customers, the necessary standards such as ISIRI 7595, ISIRI 7594, ISO 3834, ISO 9001:2015 and implemented 5S

تعالارآ ESHTEAL ARAK

This valve is a reliable pressure relief valve for industrial applications involving variable back pressure. The design and options provide maximum versatility and premium performance.

This value is available in the size of  $\frac{34''}{4}$ 

#### **Pressure relief Valve**



## **ESHTEAL ARAK**

INDUSTRIAL ENGINEERING CO. Manufacturer of burners, valves and precision tools for steam boilers

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# **Pressure Relief Valve**

Type TSV

## Description

TSV is a reliable pressure relief valve for industrial applications involving variable back pressure. The design and options provide maximum versatility and premium performance. Maximum back pressure in liquid applications is 70 % of set pressure. The maximum back pressure in vapor and gas applications is 50% of set pressure. For liquid thermal relief applications, maximum back pressure is 90 % of set pressure.

Maximum back pressure is 400 psig.



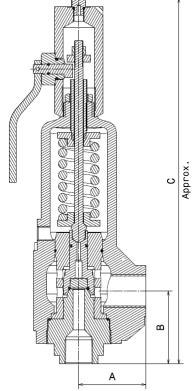
# **Applications**

TSV pressure relief valve has a simplified, single trim design with superior application versatility. This valve provides overpressure protection for low and Medium flow applications in refineries, chemical and petrochemical plants, power plant auxiliary systems, and pulp and paper mills.

## **Dimensions and pipe connections**

#### Threaded connections

Orifice area		70.96 mm <sup>2</sup>
Inlet thread type		NPT 3/4" (female)
Outlet thread type		NPT 1" (female)
Center to face	Α	62.5 mm
	В	67.8 mm
Height	С	345 mm





#### **Pressure/temperature rating**

Maximum set pressure	103 barg	
Maximum Temperature	204 °C	

## **Capacities**

The capacities listed in the following tables are based on discharging to atmospheric pressure.

For applications involving back pressure these capacities must be multiplied by the back pressure correction factor determined from the applicable curve shown on Bottom.

## **Air Capacities**

Capacity in standard cubic meters of air per minute at 16°C and 10% overpressure.

Set Pressure	Capacity	
(barg)	Capacity	
10	9.7	
20	18.5	
30	27.4	
40	36.3	
50	45.2	
60	54.1	
70	63	
82	73.6	
94	84.3	
103	92.3	

1.0 0.9 0.8 Flow correction factor, K<sub>b</sub> 0.7 0.6 0.5 0.4 10 20 30 40 50 Back pressure - Percent Back pressure (gage) x 100 Set pressure (gage)

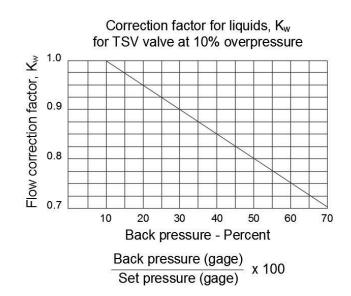
Correction factor for vapors and gases, K<sub>h</sub> for TSV valve at 10% overpressure



#### **Water Capacities**

Capacity in liters per minute of water at 21°C and 10% overpressure.

Diff. Pressure ∆P* (bar)	Capacity
10	141
20	199
30	244
40	282
50	315
60	345
70	373
82	404
94	432
103	452



\*Differential Pressure (ΔP) equals inlet pressure (set pressure plus overpressure) at flowing conditions minus back pressure.

## **Material**

Item	Part name	Material
	i di t name	
1	Base	Stainless Steel
2	Cylinder	Cast Steel
3	Disk Insert	Stainless Steel
4	Disk Holder	Stainless Steel
5	Spindle Nut	Steel
6	Guide	Stainless Steel
7	Spindle	Stainless Steel
8	Spring	Stainless Steel
9	Spring Washer	Stainless Steel
10	Adjusting Bolt	Stainless Steel
11	Adjusting Nut	Steel
12	Сар	Steel
13	Cam	Stainless Steel
14	Lever	Steel
15	Cam Sleeve	Stainless Steel
16	Cap Plug	Steel

