

Pressure Relief Valve

Description

ES TSV is a relief valve with have full nozzle design in standard .The max. allowable back pressure in liquid applications is 70% of set pressure; in vapor and gas applications is 50% and for liquid thermal relief applications is 90% of set pressure. max. back pressure rating is 400 psig (27.58 bar g). ES TSV is designed according to ASME sec 8.

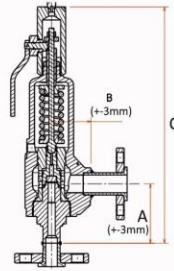
Applications

ES TSV is suitable for:
Boilers and pressure vessels acc. to ASME sec 8.

Sizes and Limiting Conditions

Specification- Flanged Connection

Series ES with orifice 0.07 in² (47.7 mm²)



Valve style	Connection size (in)		Std. ANSI Lap Joint stub End Flanges		Max set pressure at 37.8°C		Max outlet pressure		Approx. Dimension (mm)			Approx. weight (kg)
	inlet	outlet	inlet	outlet	psig	barg	psig	barg	A	B	C	
ES 131	¾"	1"	150	150	285	19.65	285	19.65	117	121	371	8
ES 132	¾"	1"	300	150	740	51.02	285	19.65	117	121	371	9
ES 133	¾"	1"	600	150	1480	102.04	285	19.65	117	121	371	9
ES 134	¾"	1"	1500	300	1500	103.44	400	27.58	143	127	397	11

Specification- Flanged Connection

Series ES with orifice 0.11 in² (70.96 mm²)

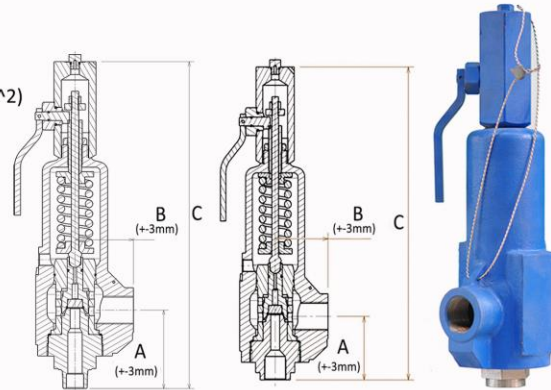
Valve style	Connection size (in)		Std. ANSI Lap Joint stub End Flanges		Max set pressure at 37.8°C		Max outlet pressure		Approx. Dimension (mm)			Approx. weight (kg)
	inlet	outlet	inlet	outlet	psig	barg	psig	barg	A	B	C	
ES 231	¾"	1"	150	150	285	19.65	285	19.65	117	121	371	8
ES 232	¾"	1"	300	150	740	51.02	285	19.65	117	121	371	9
ES 233	¾"	1"	600	150	1480	102.04	285	19.65	117	121	371	9
ES 234	¾"	1"	1500	300	1500	103.44	400	27.58	143	127	397	11

Dimensions are approximate and in mm.

Pressure Relief Valve

Threaded connection : NPT

serie ES with orifice 0.074 in² (47.7 mm²)



Valve style	Connection size (in)		Min set pressure		Max set pressure		Max outlet pressure		Temperature range(°c)	Approx. Dimension (mm)			Approx. weight (kg)
	inlet	outlet	psig	barg	psig	barg	psig	barg		A	B	C	
ES 13M	¾"	1"	50	3.45	1500	103.44	400	27.58	-28/+204	86	64	340	6
	¾"	1"	50	3.45	1500	103.44	400	27.58					
ES 13F	¾"	1"	50	3.45	1500	103.44	400	27.58	-28/+204	70	64	324	6
	¾"	1"	50	3.45	1500	103.44	400	27.58					

Threaded connection : NPT

serie ES with orifice 0.11 in² (70.96 mm²)

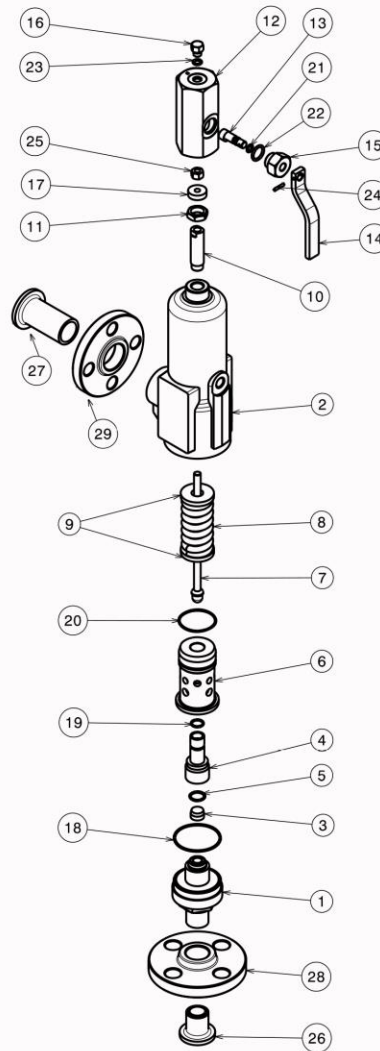
Valve style	Connection size (in)		Min set pressure		Max set pressure		Max outlet pressure		Temperature range(°c)	Approx. Dimension (mm)			Approx. weight (kg)
	inlet	outlet	psig	barg	psig	barg	psig	barg		A	B	C	
ES 23M	¾"	1"	50	3.45	1500	103.44	400	27.58	-28/+204	86	64	340	6
	¾"	1"	50	3.45	1500	103.44	400	27.58					
ES 23F	¾"	1"	50	3.45	1500	103.44	400	27.58	-28/+204	70	64	324	6
	¾"	1"	50	3.45	1500	103.44	400	27.58					

Dimensions are approximate and in mm.

Pressure Relief Valve

Material

Num.	Part name	Material
1	Base	Stainless steel
2	Cylinder	Steel casting
3	Disk insert	Stainless steel
4	Disk holder	Stainless steel
5	O-Ring seat	Viton
6	Guide	Stainless steel
7	Spindle	Stainless steel
8	Spring	Stainless steel
9	Spring Washer	Stainless steel
10	Adjustment bolt	Stainless steel
11	Adjustment bolt nut	Alloy steel
12	Cap	Alloy steel
13	Cam	Stainless steel
14	Lever	Alloy steel
15	Cam sleeve	Stainless steel
16	Cap plug	Alloy steel
17	Spindle nut	Alloy steel
18	O-Ring cylinder	Viton
19	O-Ring piston	Viton
20	O-Ring guide	Viton
21	O-Ring cam	Viton
22	O-Ring cam sleeve	Viton
23	O-Ring cap plug	Viton
24	Lever pin	Steel
25	Lock nut	Steel
26	Lap joint stub end (inlet)	Stainless steel
27	Lap joint stub end (outlet)	Alloy steel
28	Inlet flange	Alloy steel
29	Outlet flange	Alloy steel



Note: Numbers 26, 27, 28 and 29 are available in flange type.

Pressure Relief Valve

Capacities for water

in liters per minute at 21 C and 10% over pressure

Differential pressure Delta P (bar g)	Effective Area (mm ²)		Differential pressure Delta P (bar g)	Effective Area (mm ²)	
	47.74	70.96		47.74	70.96
10	94.9	141	60	232	345
20	134.2	199	76	261	389
30	164	244	94	291	432
50	212	315	112	317	472

delta p = inlt pressure - back pressure

How to order

Connection type : MNPT*FNPT - FNPT*FNPT - 150RF*150RF - 300RF*150RF - 600RF*150RF - 1500RF*150RF

size : ¾" * 1

working pressure & tempreture (barg),(C)

set pressure:---(barg)

condition of gas or liquid medium