



## KUNKLE MODEL 537 SAFETY RELIEF VALVE

SAFETY AND RELIEF PRODUCTS

A safety relief valve that meet ASME section IV and XIII, 'HV', for low pressure hot water boilers and is National Board certified



### FEATURES

- Extra heavy construction helps provide long life.
- Top guided disc assembly incorporates resilient seal in seating area.
- Isolating diaphragm protects working parts from corrosion caused by discharged liquid.
- Pivot between disc and spring designed to correct misalignment and compensates for spring side thrust.
- Heavy duty lift lever.
- Tested and inspected for pressure setting and leakage.

### GENERAL APPLICATION

These valves serve the dual purpose of relieving overpressure created by thermal expansion under normal firing conditions and overpressure in the form of water or steam created in over-firing due to failure of electrical or other controls on hot water boilers, heat exchangers and generators.

### TECHNICAL DATA

Connections: FNPT  
Temperature range: -20 to 250°F (-29 to 121°C)  
Pressure range: 15 to 160 psig (1.0 to 11 barg)  
Code: ASME IV and XIII (HV Designator)



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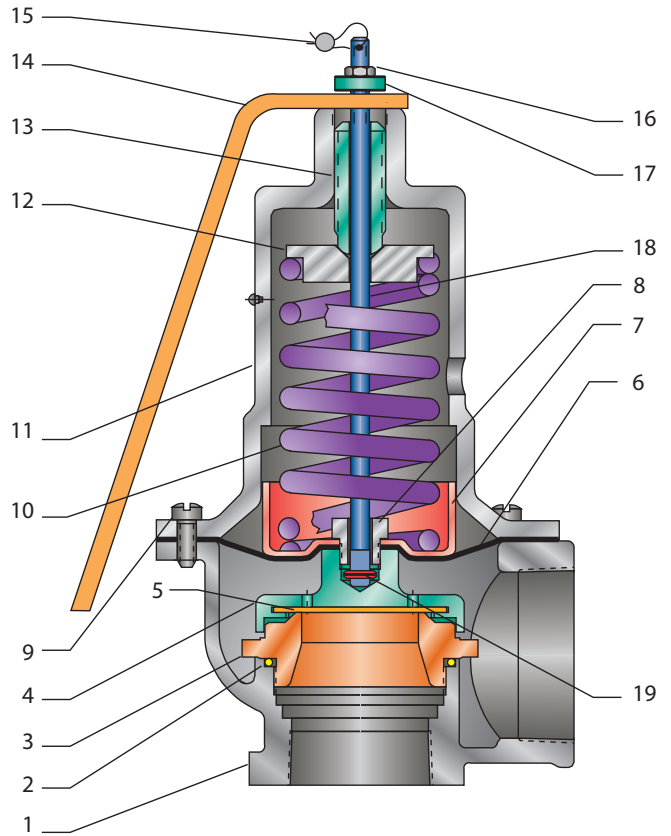
## SAFETY AND RELIEF PRODUCTS

### MODEL 537

No.	Part name	Materials
1	Body	<sup>(1)</sup>
2	Seat O-ring	NBR <sup>(2)</sup>
3	Seat	Bronze, B584 alloy 84400 <sup>(2)</sup>
4	Disc holder	Brass, B16 <sup>(3)</sup>
5	Insert	Ethylene propylene (EPDM)
6	Diaphragm	NBR/nylon
7	Guide	Brass, B36 alloy C26000 <sup>(4)</sup>
8	Lock nut	Brass, B16
9	Screw	SS
10	Spring	SS, A313-631
11	Bonnet	<sup>(1)</sup>
12	Spring step	Brass, B16
13	Compression screw	Brass, B16
14	Lever	Steel, zinc plated
15	Seal and wire	Lead seal and SS wire
16	Lift washer nut	SS
17	Lift washer	SS
18	Stem	SS, A479-316
19	Spring pin	SS

### NOTES

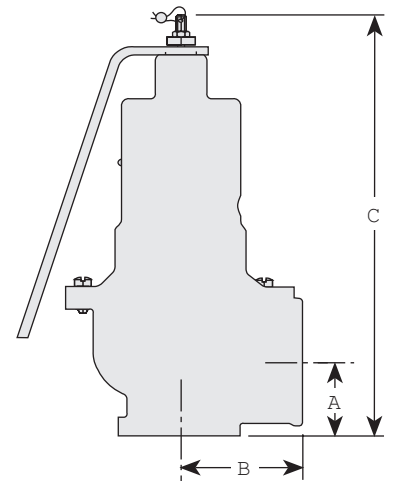
- 3/4" and 1": bronze, B584 alloy 84400.  
1 1/2" and 2": cast iron, A126 class A/B.
- 3/4" and 1" sizes have an integral seat. 1 1/2" and 2" sizes have an insert seat above a NBR O-ring body seal.
- 1 1/2" size: brass, B283 alloy 37700.  
2" size: bronze, B584 alloy 84400.
- 3/4" size: brass, B16.



### SPECIFICATIONS

Size	Inlet	Outlet	Dimensions, in			Weight, lb
			A	B	C	
3/4"	1"	1 1/4"	1 5/16	1 7/8	6 1/8	2
1"	1 1/4"	2"	1 5/16	2 3/8	7 1/8	5
1 1/2"	2"	2 1/2"	1 3/4	2 5/16	10 1/8	12
2"	2 1/2"	3"	2 1/8	3 7/16	11 3/4	22

Dimensions are for reference only.



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### Capacities

#### ASME SECTION IV AND XIII STEAM (Hot water boiler)

Set pressure (psig)	Orifice area, in <sup>2</sup>							
	¾"		1"		1½"		2"	
	(0.533 in <sup>2</sup> )		(0.833 in <sup>2</sup> )		(1.767 in <sup>2</sup> )		(3.142 in <sup>2</sup> )	
	lb/h	BTU/h	lb/h	BTU/h	lb/h	BTU/h	lb/h	BTU/h
15	690	690278	1079	1078802	2288	2288408	4069	4069144
20	812	811962	1269	1268976	2692	2691813	4786	4786461
30	1055	1055329	1649	1649323	3499	3498623	6221	6221095
40	1299	1298696	2030	2029670	4305	4305434	7656	7655729
50	1542	1542064	2410	2410017	5112	5112244	9090	9090363
60	1785	1785431	2790	2790364	5919	5919055	10525	10524997
70	2029	2028798	3171	3170711	6726	6725865	11960	11959631
80	2272	2272165	3551	3551058	7533	7532676	13394	13394265
90	2516	2515533	3931	3931405	8339	8339486	14829	14828899
100	2759	2758900	4312	4311752	9146	9146296	16264	16263533
110	3002	3002267	4692	4692098	9953	9953107	17698	17698167
120	3246	3245634	5072	5072445	10760	10759917	19133	19132801
125	3367	3367318	5263	5262619	11163	11163323	19850	19850119
130	3489	3489002	5453	5452792	11567	11566728	20567	20567436
140	3732	3732369	5833	5833139	12374	12373538	22002	22002070
150	3976	3975736	6213	6213486	13180	13180349	23437	23436704
160	4219	4219103	6594	6593833	13987	13987159	24871	24871338

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### SELECTION GUIDE

<b>Example:</b>	<b>0537</b>	<b>-</b>	<b>D</b>	<b>01</b>	<b>-</b>	<b>H</b>	<b>M</b>	<b>0160</b>
<b>Model</b>	<b>0537</b>							
<b>Connection size</b>								
<b>D</b>	¾" inlet x 1" outlet							
<b>E</b>	1" inlet x 1¼" outlet							
<b>G</b>	1½" inlet x 2" outlet							
<b>H</b>	2" inlet x 2½" outlet							
<b>Variation</b>								
<b>01</b>	Catalog standard							
<b>Design revision</b>								
Indicates non-interchangeable revision								
<b>-</b>	Original design (connection sizes E, G and H)							
<b>A</b>	Revision A (connection size D)							
<b>Service</b>								
<b>H</b>	Steam ASME section IV and XIII - hot water							
<b>Spring material</b>								
<b>M</b>	SST							
<b>Set pressure</b>								
<b>0015</b>	15 psig							
<b>0160</b>	160 psig							

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