

# KUNKLE

## ASME Section IV, Low Pressure Steam and Hot Water Boilers, "HV" National Board Certified, Safety Relief Valves

### Features

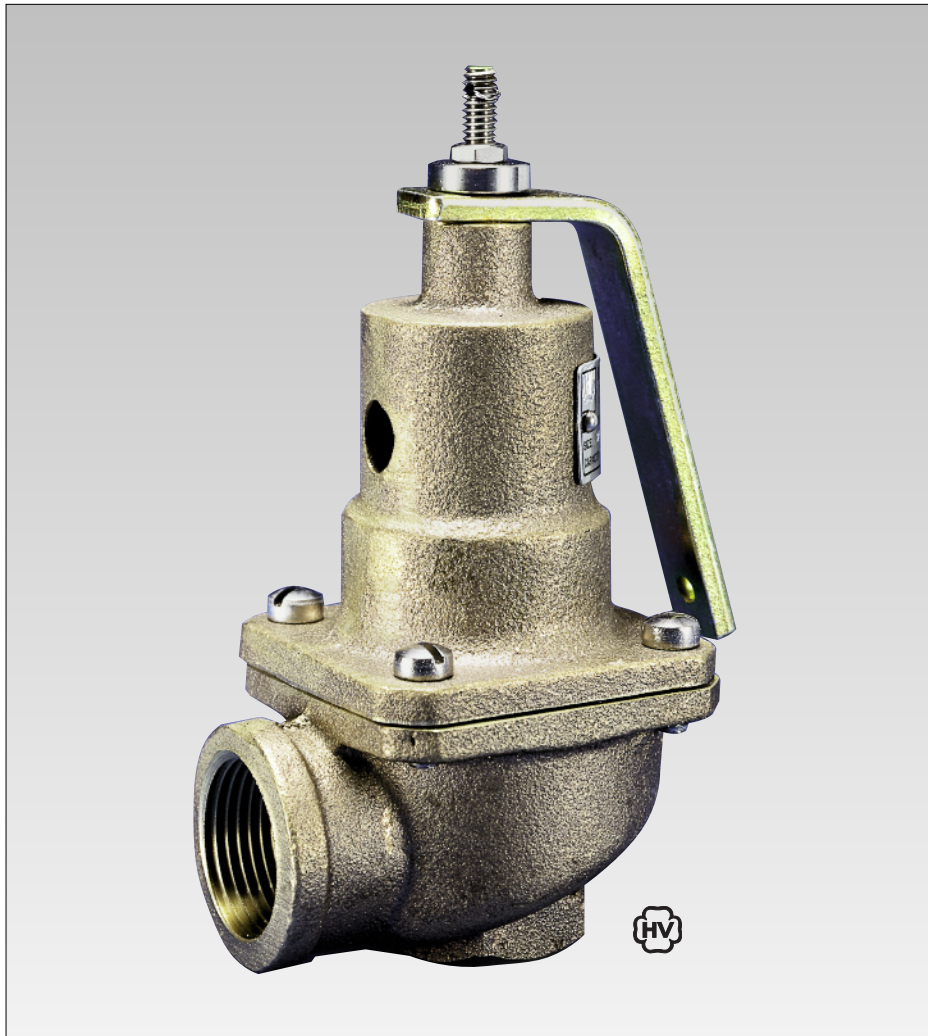
- Extra heavy construction helps provide long life.
- Top guided disc assembly incorporates resilient seal in seating area.
- An isolating diaphragm protects working parts from corrosion caused by discharged liquid.
- Pivot between disc and spring designed to correct for misalignment and compensates for spring side thrust.
- These safety relief valves serve the dual purpose of relieving (1) overpressure created by thermal expansion under normal "on" and "off" firing conditions, and (2) overpressure in the form of water or steam created in over-firing due to failure of electrical or other controls.
- Each Kunkle valve is tested and inspected for pressure setting and leakage.

### Applications

Hot water boiler, heat exchangers and generators.

### Pressure and Temperature Limits

15 to 160 psig  
-20° to 250°F



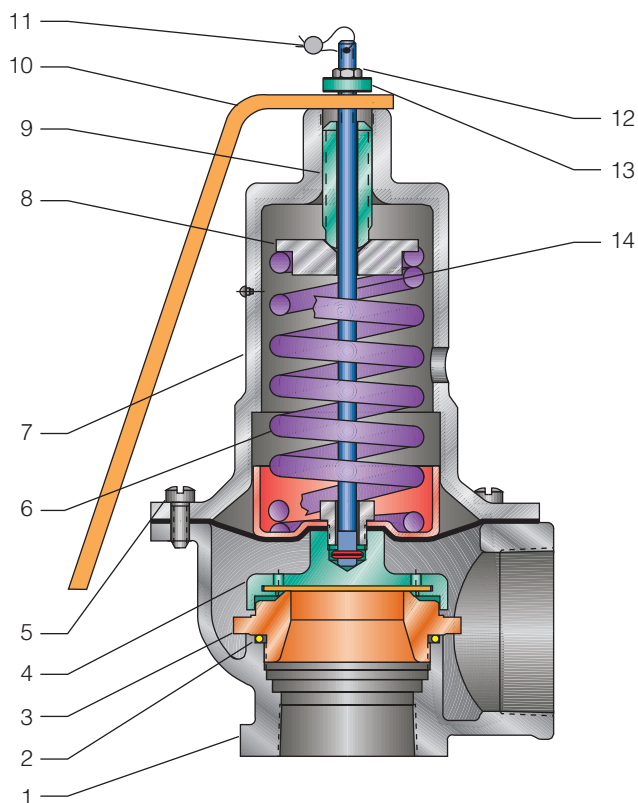
### Parts and Materials

#### Model 537

No.	Part Name	Materials
1	Body	1
2	Seat O-ring	BUNA-N <sup>2</sup>
3	Seat	Bronze, B584 Alloy 84400 <sup>2</sup>
4	Disc Holder	Bronze, B584 Alloy 84400
	Insert	Ethylene Propylene (EPDM)
	Diaphragm	BUNA-N/Nylon
	Guide	Brass, B36 Alloy C26000
	Lock Nut	Brass, B16
5	Screw	SS
6	Spring	SS, A313-631
7	Bonnet	1
8	Spring Step	Brass, B16
9	Compression Screw	Brass, B16
10	Lever	Steel, Zinc Plated
11	Seal and Wire	Lead seal and SS wire
12	Lift Washer Nut	SS
13	Lift Washer	SS
	Stem	SS, A479-316
14	Spring Pin	SS
	Disc Locknut	Brass

#### Notes

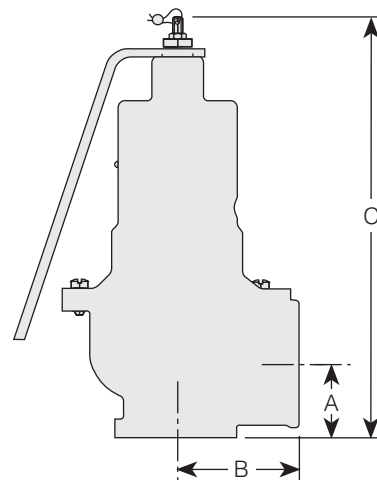
- <sup>3</sup>/<sub>4</sub>" and 1": Bronze, B584 Alloy 84400  
1<sup>1</sup>/<sub>2</sub>" and 2": Cast Iron, A126 Class A/B
- D and E orifice sizes have an integral seat.  
G and H orifice sizes have an insert seat  
above a BUNA-N O-ring body seal.



#### Specifications

Inlet	Size Outlet	Dimensions, in			Weight (lb)
		A	B	C	
<sup>3</sup> / <sub>4</sub> "	1"	<sup>15</sup> / <sub>16</sub>	<sup>17</sup> / <sub>8</sub>	<sup>6</sup> / <sub>8</sub>	2
1"	1 <sup>1</sup> / <sub>4</sub> "	<sup>15</sup> / <sub>16</sub>	<sup>23</sup> / <sub>8</sub>	<sup>7</sup> / <sub>8</sub>	5
1 <sup>1</sup> / <sub>2</sub> "	2"	<sup>13</sup> / <sub>4</sub>	<sup>215</sup> / <sub>16</sub>	<sup>10</sup> / <sub>8</sub>	12
2"	2 <sup>1</sup> / <sub>2</sub> "	<sup>2</sup> / <sub>8</sub>	<sup>39</sup> / <sub>16</sub>	1 <sup>13</sup> / <sub>4</sub>	22

Dimensions are for reference only.



## Capacities

## ASME Section IV Steam (Hot Water Boiler)

Set Pressure (psig)	Orifice Area, in <sup>2</sup>							
	3/4"		1"		1 1/2"		2"	
	(0.533 in <sup>2</sup> ) lb/h	BTU/h	(0.833 in <sup>2</sup> ) lb/h	BTU/h	(1.767 in <sup>2</sup> ) lb/h	BTU/h	(3.142 in <sup>2</sup> ) lb/h	BTU/h
15	690	689608	1078	1077755	2286	2286186	4065	4065193
20	811	811173	1268	1267744	2689	2689200	4782	4781814
30	1054	1054304	1648	1647721	3495	3495227	6215	6215055
40	1297	1297435	2028	2027699	4301	4301254	7648	7648296
50	1541	1540566	2408	2407677	5107	5107281	9082	9081537
60	1784	1783697	2788	2787655	5913	5913308	10515	10514779
70	2027	2026828	3168	3167632	6719	6719335	11948	11948020
80	2270	2269959	3548	3547610	7525	7525362	13381	13381261
90	2513	2513090	3928	3927588	8331	8331389	14815	14814502
100	2756	2756221	4308	4307565	9137	9137417	16248	16247744
110	2999	2999352	4688	4687543	9943	9943444	17681	17680985
120	3242	3242483	5068	5067521	10749	10749471	19114	19114226
125	3364	3364049	5258	5257510	11152	11152484	19831	19830847
130	3486	3485614	5447	5447498	11555	11555498	20547	20547467
140	3729	3728745	5827	5827476	12362	12361525	21981	21980708
150	3972	3971876	6207	6207454	13168	13167552	23414	23413950
160	4215	4215007	6587	6587432	13974	13973579	24847	24847191

### Model Number/Order Guide

Model Number Position	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Example	0	5	3	7	—	D	0	1	—	H	M	0	1	6	0
<b>Model</b>	0537														
<b>Inlet Size</b>	D - 3/4" E - 1" G - 1 1/2" H - 2"														
<b>Variation (01 to 99)</b>	01 - Catalog Standard														
<b>Design Revision</b>	Indicates non-interchangeable revision. Dash (-) if original design.														
<b>Service</b>	H - Steam ASME Section IV - hot water														
<b>Spring Material</b>	M - SST														
<b>Set Pressure</b>	15 psig (0015) 160 psig (0160)														

## KUNKLE

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