

# MODEL 5500

## PILOT OPERATED PRESSURE RELIEF VENT WITH PIPE-AWAY



MODEL 5500

### OVERVIEW

The Pilot Operated Model 5500 conservation pressure vent with pipe-away is intended for use where pressure relief is required and the relieving vapors must be piped away and not emitted into the atmosphere.

### SPECIAL FEATURES

**Easy Inspection:** The Model 5500 incorporates the same rugged design found in all Valve Concepts venting devices - they're made to last. The main valve seat can easily be inspected without affecting the set point. The pilot assembly uses standard o-rings. Maintenance is easy and less expensive.

**Maintains Accurate Settings:** The standard minimum setting is 4 inches WC on all sizes. Maximum pressure setting is 15 psig. A certified test certificate is included with each vent verifying the accuracy.

**Condensate Drainage:** Self-draining housing body and drip rings keep condensate away from seating surfaces, preventing freezing, binding and clogging.

**Air-Cushioned Seating:** Air-cushion seating provides tight sealing to reduce evaporation losses. The pallets have outer guiding and center stabilizing stem to provide self alignment and tight seating.

### TECHNIQUE

A pallet in the vent housing opens and closes permitting relief necessary, under working conditions, to avoid tank damage. A flanged side connection is provided for easy pipe-away of vapors, eliminating their emission into the atmosphere, and allowing compliance with applicable regulations.



#### LINE SIZES AVAILABLE

2" (DN50), 3" (DN80), 4" (DN100),  
6" (DN150), 8" (DN200), 10" (DN250),  
12" (DN300)



#### END CONNECTIONS

FLANGED



#### COMMON APPLICATIONS

WHERE PRESSURE RELIEF IS  
REQUIRED AND RELIEVING VAPORS  
MUST BE PIPED AWAY



#### DESIGN PRESSURE

MULTIPLE SET PRESSURE RANGES  
AVAILABLE

## STANDARD/GENERAL SPECIFICATIONS

**Spring Ranges:**

Available in Sizes 2" through 12". Carbon and stainless steel vents have raised face flanges, aluminum vents have flat face flanges to mate with ASME150, PN10, or PN16 flanged connections.

**Painting:**

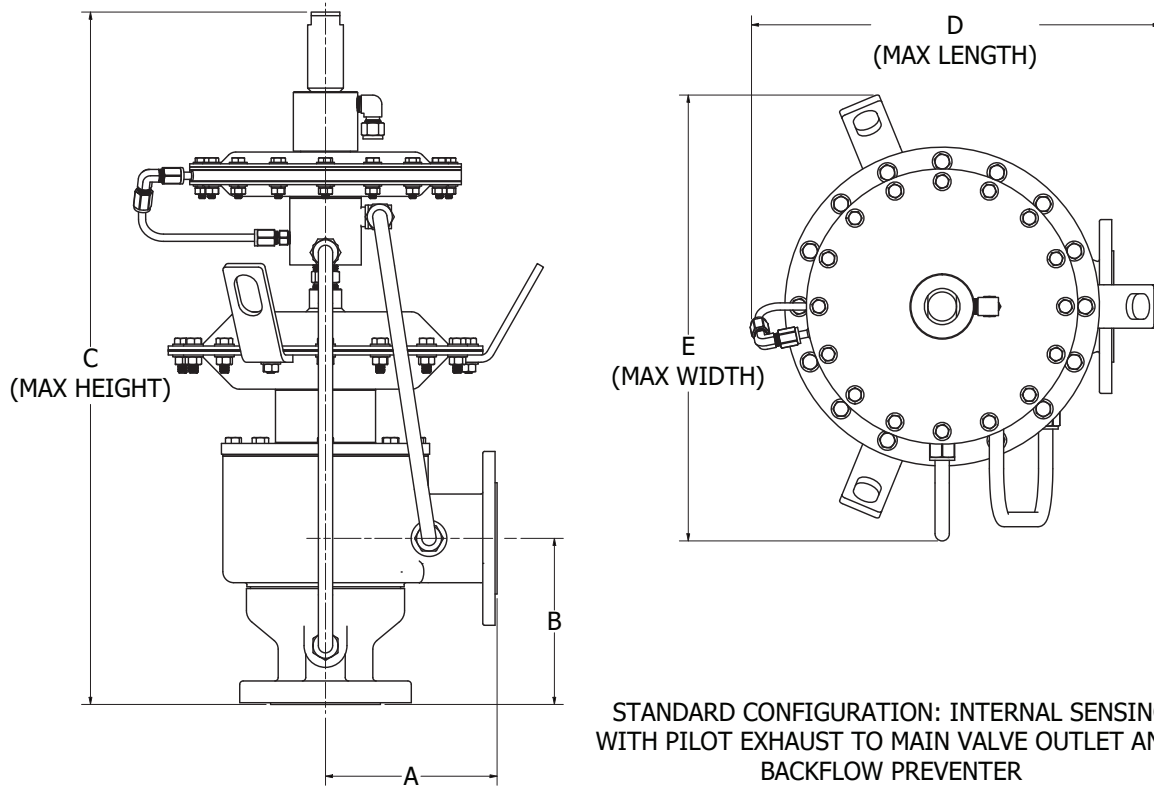
All carbon steel surfaces are epoxy coated VCI blue per Cashco specification S-1777. Flange mating surfaces, threaded holes, and corrosion resistant parts are excluded. Non-coated surfaces have lubricant applied for corrosion prevention.

<b>Table 1 - Metallic Materials</b>			
<b>Component</b>	<b>ALUM</b>	<b>CS</b>	<b>316 SST</b>
Body	ALUM	CS	316 SST
Cover	ALUM	CS	316 SST
Spacer	CS	CS	316 SST
Pilot Actuator Cases	CS	CS	316 SST
Actuator Cases	CS	CS	316 SST
Seat Ring	ALUM or 316 SST	316 SST	316 SST
Remaining Parts	SST	SST	SST
Pressure Rating <sup>1</sup>	15 psig/1 Barg		
Temperature Rating	-325/400°F	-20/400°F	-325/400°F
	-198/204°C	-28/204°C	-198/204°C
<sup>1</sup> Derated to 0.5 Bar for PED 2014/68/EU			

<b>Table 2 - Soft Good Materials</b>				
<b>Component</b>	<b>FFKM1</b>	<b>FFKM2</b>	<b>FKM</b>	<b>EPDM</b>
Pilot Diaphragm	FEP	FEP	FEP	FEP
Pilot Gaskets	FEP/EPTFE	FEP/EPTFE	FEP/EPTFE	FEP/EPTFE
Pilot O-ring	FFKM1	FFKM	FKM	EPDM
Actuator Diaphragm	FEP	FEP	FKM	EPDM
Main Body Seals	FEP/EPTFE	FEP/EPTFE	FKM	EPDM
Working Temperature	-22/400°F	-40/400°F	-15/300°F	-55/212°F
	-30/204°C	-40/204°C	-16/149°C	-48/100°C

<b>Table 3 - Pilot Range Springs</b>	
<b>in WC</b>	<b>(mbar)</b>
4.0" to 12.0"	(9.9 to 29.9)
12.1" to 18.0"	(30.0 to 44.8)
18.1" to 36.0"	(44.9 to 89.4)
36.1" to 41.7"	(89.5 to 103.5)
41.8" to 86.0"	(103.6 to 214)
<b>PSIG</b>	<b>(Barg)</b>
3.2 to 15.0 psig	(0.22 to 1.03 bar)

## DIMENSIONS



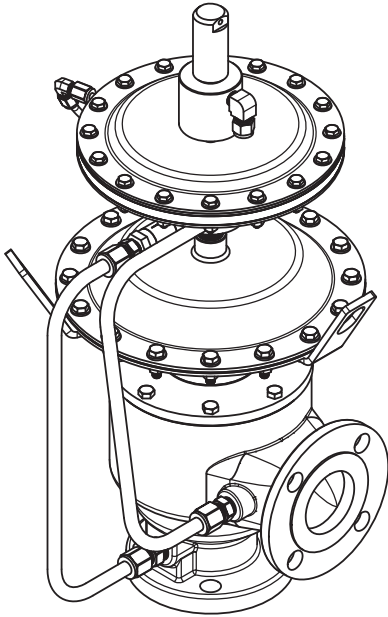
**STANDARD CONFIGURATION: INTERNAL SENSING  
WITH PILOT EXHAUST TO MAIN VALVE OUTLET AND  
BACKFLOW PREVENTER**

Dimensions (in.)						Weight (lbs)	
Aluminum, Carbon Steel and Stainless Steel						Alum	CS / SST
IN x OUT	A	B	C	D	E		
2" x 2"	6	5 3/4	23 7/8	14 5/16	14 5/8	48	72
2" x 3"	6 3/16	6 5/16	23 7/8	14 5/16	14 5/8	50	75
3" x 3"	6 1/2	6 15/16	25 5/8	14 7/16	14 5/8	55	90
3" x 4"	6 1/2	7 7/16	25 5/8	14 7/16	14 5/8	56	93
4" x 4"	8	8 13/16	33 3/4	18 3/8	19 3/16	96	161
4" x 6"	8	9 3/4	33 13/16	18 3/8	19 3/16	96	161
6" x 6"	9	10 5/16	36 11/16	25 7/8	25 1/6	155	241
6" x 8"	9	11 1/2	36 7/8	25 7/8	25 5/16	156	249
8" x 10"	11	13 3/4 <sup>1</sup>	40 7/8	25 7/8	25 9/16	201	325
10" x 12"	12 1/4	15 5/8	42 5/8	25 7/8	24 11/16	252	410
12" x 14"	14	21 3/16	49 11/16	26	25 3/8	331	633

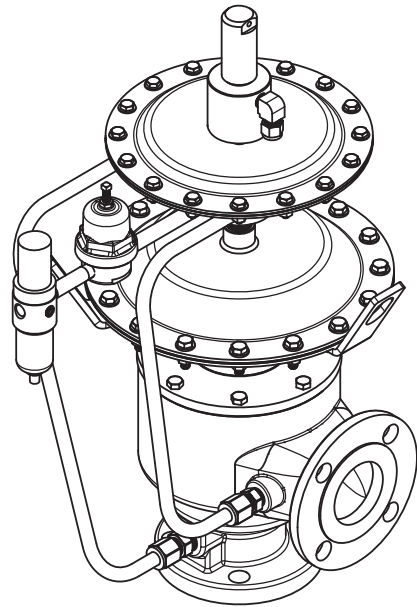
\* Estimated weight based on minimum setpoints. Weight will increase with higher setpoints and packaging.  
<sup>1</sup> Aluminum only. Carbon steel and stainless steel are 14in (355mm).

Dimensions (mm)						Weight (kg)	
Aluminum, Carbon Steel and Stainless Steel						Alum	CS / SST
IN x OUT	A	B	C	D	E		
50 x 50	152	146	606	364	371	22	33
50 x 80	157	160	606	364	371	23	34
80 x 80	165	176	651	367	371	25	41
80 x 100	165	189	651	367	371	25	42
100 x 100	203	224	857	467	487	44	73
100 x 150	203	248	859	467	487	43	73
150 x 150	229	262	932	657	639	70	109
150 x 200	229	292	937	657	643	71	113
200 x 250	279	332 <sup>1</sup>	1038	657	649	91	148
250 x 300	311	397	1083	657	627	114	186
300 x 350	356	538	1262	660	645	150	287

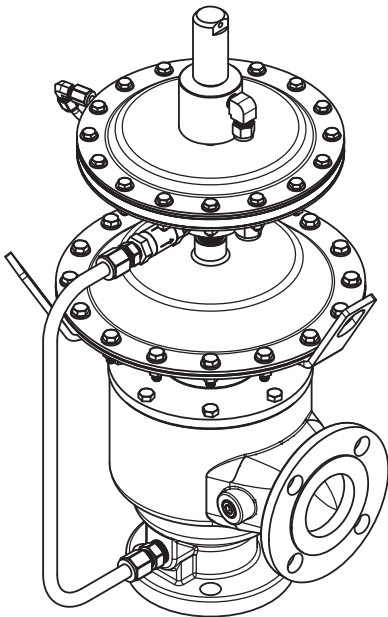
\* Estimated weight based on minimum setpoints. Weight will increase with higher setpoints and packaging.  
<sup>1</sup> Aluminum only. Carbon steel and stainless steel are 14in (355mm).



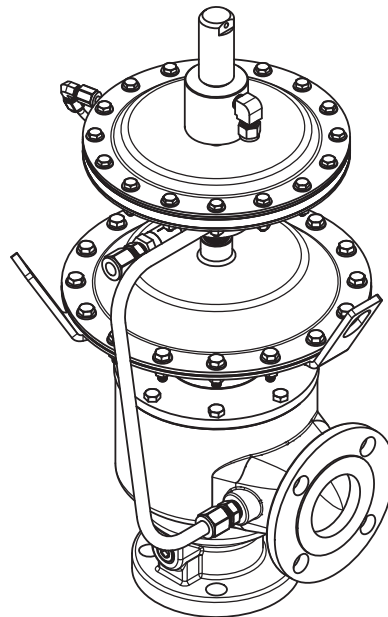
STANDARD CONFIGURATION: INTERNAL SENSING WITH PILOT EXHAUST TO MAIN VALVE OUTLET AND BACKFLOW PREVENTER



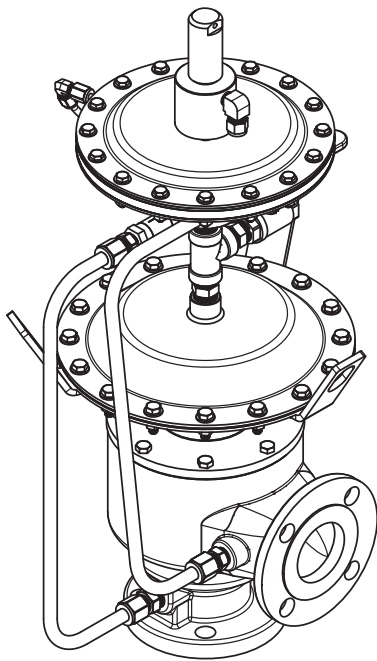
STANDARD CONFIGURATION: INTERNAL SENSING WITH PILOT EXHAUST TO MAIN VALVE OUTLET AND BACKFLOW PREVENTER; WITH AIR ASSIST



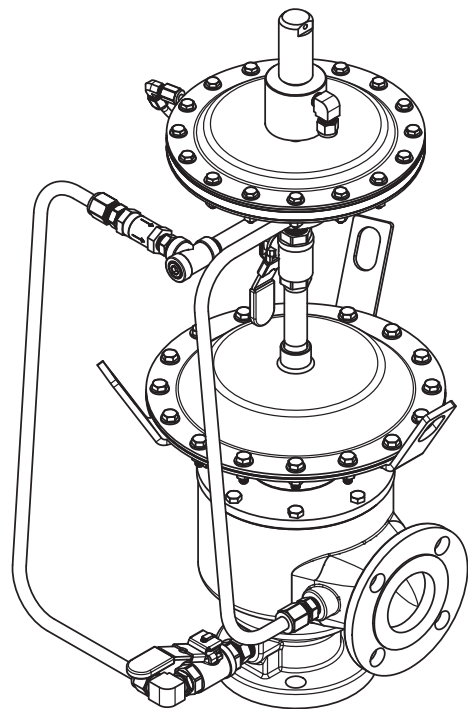
OPTION 1: Internal Sensing With Pilot Exhaust To Atmosphere And Backflow Preventer



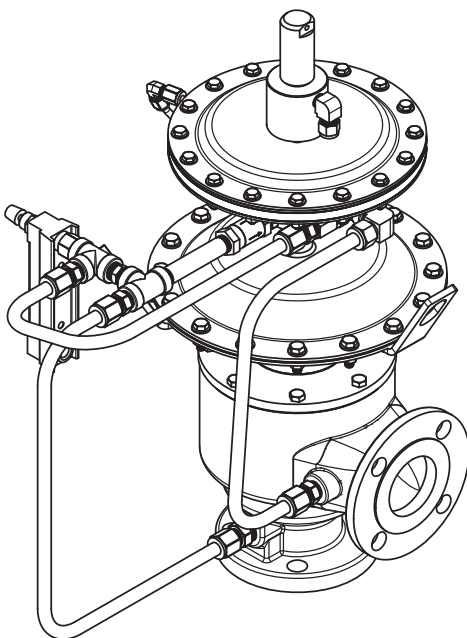
OPTION 2: Remote Sensing With Pilot Exhaust To Main Valve Outlet And Backflow Preventer



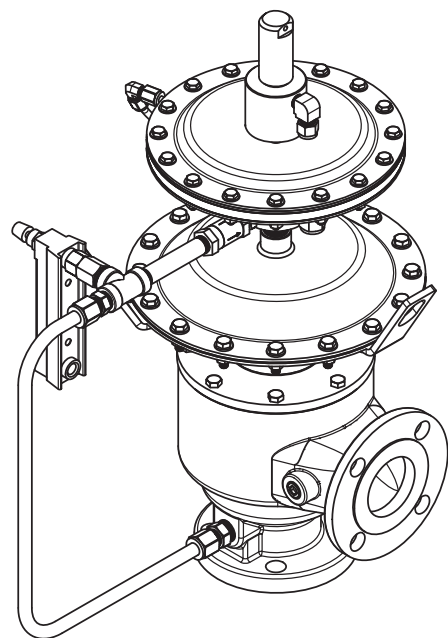
OPTION 3: Internal Sensing With Pilot Exhaust To Main Valve Outlet, Backflow Preventer, And Manual Blowdown Valve



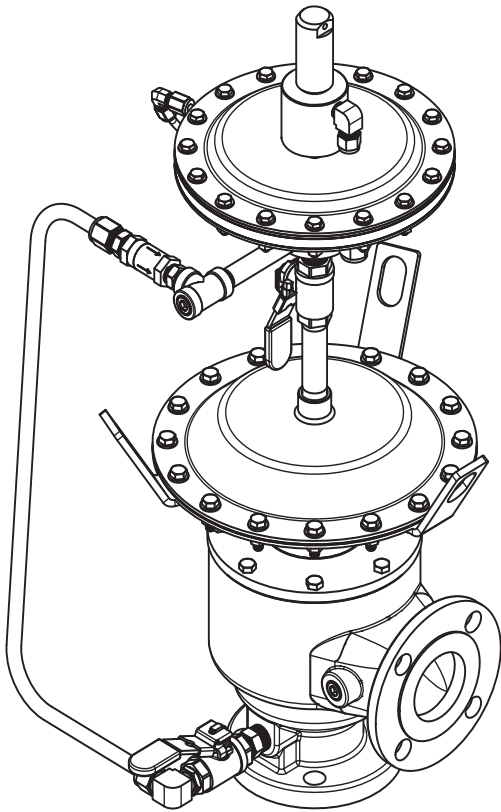
OPTION 5: Internal Sensing With Pilot Exhaust To Main Valve Outlet, Backflow Preventer, And Field Test Connection



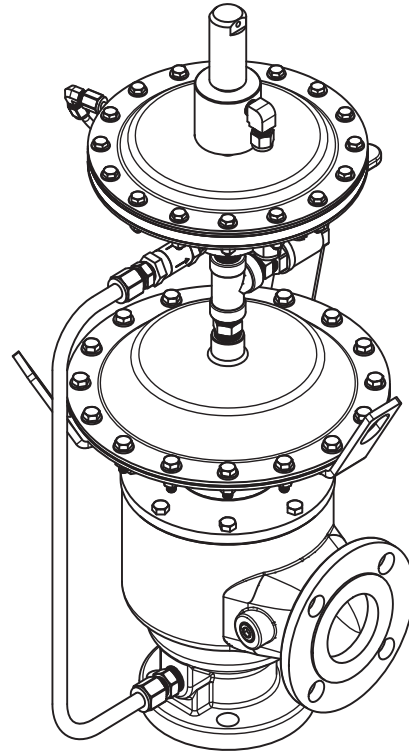
OPTION 6: Internal Sensing With Pilot Exhaust To Main Valve Outlet, Backflow Preventer, And Rotometer To Purge Pilot Sense And Discharge Lines



OPTION 7: Internal Sensing With Pilot Exhaust To Atmosphere, Backflow Preventer, And Rotometer To Purge Pilot Sense Line



**OPTION 8: Internal Sensing With Pilot Exhaust To Atmosphere, Backflow Preventer, And Field Test Connection**



**OPTION A: Internal Sensing With Pilot Exhaust To Atmosphere, Backflow Preventer, And Manual Blowdown Valve**

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# 5500 Series PRODUCT CODE 01/12/24

**55** POS 3 POS 4 POS 5 **D** POS 7 POS 8 **00** POS 11 POS 12 **000000**

POSITION 3 - FLANGE CONNECTION	
Class	CODE
ASME 150	A
PN16	B
PN10	C

POSITION 4 - FLANGE SIZE	
NPS (DIN)	CODE
2" x 2" - (50) x (50)	2
2" x 3" - (50) x (80)	H
3" x 3" - (80) x (80)	3
3" x 4" - (80) x (100)	J
4" x 4" - (100) x (100)	4
4" x 6" - (100) x (150)	K
6" x 6" - (150) x (150)	6
6" x 8" - (150) x (200)	L
8" x 10" - (200) x (250)	8
10" x 12" - (250) x (300)	A
12" x 14" - (300) x (350)	B

POSITION 5 - BODY / SEAT RING MATERIAL		
BODY MATERIAL	SEAT RING MATERIAL	
	ALUM	316 SST
Aluminum	1	4
Carbon Steel	-	5
316 Stainless Steel	-	6

POSITION 7 - PILOT SEAT / PALLET DIAPH. / ACT. DIAPH.	
Materials	CODE
FFKM 1 / FEP / FEP	C
EPDM / EPDM / EPDM	E
FFKM 2 / FEP / FEP	K
FKM / FKM / FKM	V

POSITION 8 - PRESSURE SET POINT			
SET POINT RANGE		PILOT CONSTRUCTION	
INCHES OF WC	(mBar)	STD	W/ AIR ASSIST
		CODE	
4.0" - 12.0"	(9.953 - 29.861)	3	C
12.1" - 18.0"	(30.110 - 44.791)	6	D
18.1" - 36.0"	(45.041 - 89.583)	7	E
36.1" - 41.7"	(89.832 - 103.768)	8	F
41.8" - 86.0"	(104.016 - 214.005)	9	J
3.2 - 15.0 PSIG	(220.632 - 1034.213)	H	K

POSITION 11 - OPTIONS (Opt. 2 - 6 Pilot Exhaust to Main Valve Outlet)		Std
Sensing Configuration & Accessory Options		CODE
Standard:	Internal Sensing With Pilot Exhaust To Main Valve Outlet And Backflow Preventer	0
Option 1:	Internal Sensing With Pilot Exhaust To Atmosphere And Backflow Preventer	1
Option 2:	Remote Sensing With Pilot Exhaust To Main Valve Outlet And Backflow Preventer	2
Option 3:	Internal Sensing With Pilot Exhaust To Main Valve Outlet, Backflow Preventer, And Manual Blowdown Valve	3
Option 5:	Internal Sensing With Pilot Exhaust To Main Valve Outlet, Backflow Preventer, And Field Test Connection	5
Option 6:	Internal Sensing With Pilot Exhaust To Main Valve Outlet, Backflow Preventer, And Rotometer To Purge Pilot Sense & Discharge Lines	6
Option 7:	Internal Sensing With Pilot Exhaust to Atmosphere, Backflow Preventer, And Rotometer To Purge Pilot Sense Line	7
Option 8:	Internal Sensing With Pilot Exhaust to Atmosphere, Backflow Preveter, And Field Test Connection	8
Option A:	Internal Sensing With Pilot Exhaust to Atmosphere, Backflow Preventer, And Manual Blowdown Valve	A

POSITION 12 - FLAME SCREEN	
OPTION	CODE
No Flame Screen (STD)	0
With Outlet Flame Screen	F

**\* For information on ATEX see pages 18 & 19 on the IOM.**

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