

MODEL 5200

PILOT OPERATED PRESSURE/VACUUM VENT WITH PIPE-AWAY

OVERVIEW

The Pilot Operated Model 5200 vent provides pressure and vacuum relief in applications that require vapors to be piped away.

SPECIAL FEATURES

**Maintains
Accurate
Settings:**

The Pilot Operated Model 5200 provides bubble tight (no leakage) up to 95% of set pressure or 0.5" WC, whichever is greater and less than 1 SCFH at 90% of setting on the vacuum side of the vent. A certified test certificate is included with each vent verifying the accuracy of both the pressure and vacuum setting and leakage.

**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

The Model 5200 has a pilot operated pressure side which permits tank operating pressures closer to the maximum allowable operating pressure. This provides a more positive control over vapor generation inherent in fluids with higher vapor pressures. The vacuum side of the vent is weight loaded and allows intake of air when necessary to remain within the vacuum design rating of the tank.



MODEL 5200



LINE SIZES AVAILABLE

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



END CONNECTIONS

FLANGED



COMMON APPLICATIONS

APPLICATIONS THAT REQUIRE
VAPORS TO BE PIPED AWAY



DESIGN PRESSURE

MULTIPLE SET PRESSURE & VACUUM
RANGES AVAILABLE

STANDARD/GENERAL SPECIFICATIONS

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.

Table 1 - Metallic Materials			
Component	ALUM	CS	316 SST
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 ¹	15 psig/1 Barg		
Temperature Rating	-325/400°F	-20/400°F	-325/400°F
	-198/204°C	-28/204°C	-198/204°C
¹ Derated to 0.5 Bar for PED 2014/68/EU			

Table 2 - Soft Good Materials				
Component	FFKM1	FFKM2	FKM	EPDM
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

Table 3 - Pilot Range Springs	
in WC	(mbar)
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)
PSIG	(Barg)
3.2 to 15.0 psig	(0.22 to 1.03 bar)

Table 4(a) Vacuum Set Point Limits (oz/in ²)		
Line Size (NPS)	MIN ₁	MAX ₂
2"	0.5	34.5
3"	0.5	36.6
4"	0.5	38.2
6"	0.5	32.9
8"	0.5	39.2
10"	0.5	32.5
12"	0.5	36.3

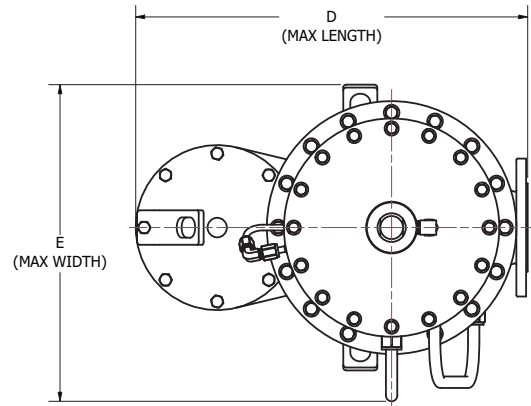
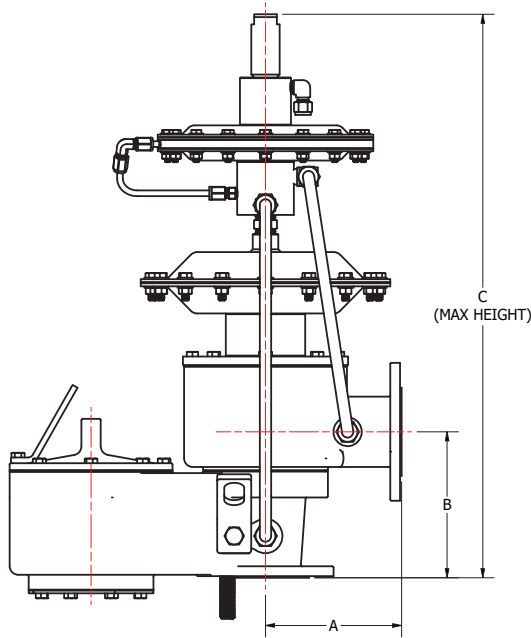
Table 4(b) Vacuum Set Point Limits (mBar)		
Line Size (DIN)	MIN ₁	MAX ₂
50	2.2	149
80	2.2	158
100	2.2	165
150	2.2	142
200	2.2	169
250	2.2	140
300	2.2	156

OPTION SPECIFICATIONS

STANDARD VACUUM PROTECTION SCREEN - 304 stainless steel, 4x4 welded mesh.

FLAME SCREEN - 304 stainless steel, 30x30 woven mesh

DIMENSIONS



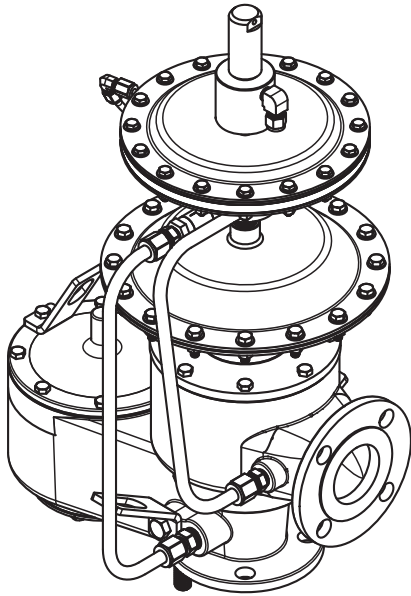
STANDARD CONFIGURATION: INTERNAL
SENSING WITH PILOT EXHAUST TO MAIN VALVE
OUTLET AND BACKFLOW PREVENTER

Dimensions (in.) Aluminum, Carbon Steel and Stainless Steel							
IN x OUT	A	B	C	D	E (diam)	Weight* (lbs.)	
						Alum	CS/SST
2" x 2"	6	6 3/8	24 1/2	17 1/4	11	60	97
2" x 3"	6 3/16	6 15/16	24 1/2	17 1/2	11	62	100
3" x 3"	6 1/2	8 1/16	26 3/4	18 13/16	11	70	122
3" x 4"	6 1/2	8 9/16	26 3/4	18 13/16	11	72	126
4" x 4"	8	9 9/16	34 9/16	24 3/8	16 1/2	112	197
4" x 6"	8	10 9/16	34 9/16	24 3/8	16 1/2	113	198
6" x 6"	9	11 1/16	37 3/8	28 1/16	24	198	316
6" x 8"	9	12 1/4	37 7/16	28 1/16	24	206	330
8" x 10"	11 1/16 ¹	15 9/16	42 1/4	34 9/16	24	244	433
10" x 12"	12 1/4	16 1/2	43 1/2	39 13/16	24	326	571
12" x 14"	14	19 1/4	47 11/16	44 5/8	24	327	665

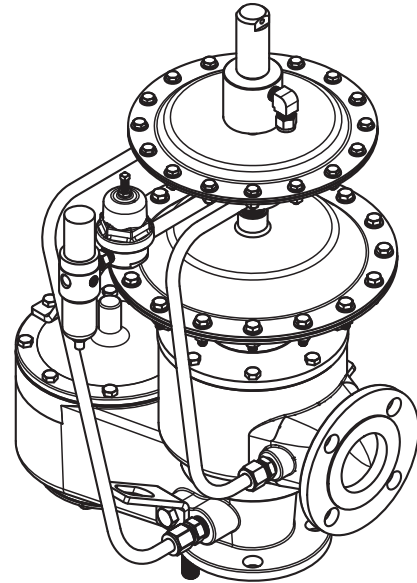
* Estimated weight based on minimum setpoints. Weight will increase with higher setpoints and packaging.
¹ Aluminum only. Carbon steel and stainless steel are 14 in (355mm).

Dimensions (in.) Aluminum, Carbon Steel and Stainless Steel							
IN x OUT	A	B	C	D	E (diam)	Weight* (lbs.)	
						Alum	CS/SST
(50) x (50)	152	162	622	438	279	27	44
(50) x (80)	157	176	622	445	279	28	45
(80) x (80)	165	205	679	478	279	32	55
(80) x (100)	165	217	679	478	279	33	57
(100) x (100)	203	243	878	619	419	51	89
(100) x (150)	203	268	878	619	419	51	90
(150) x (150)	229	281	949	713	610	90	143
(150) x (200)	229	311	951	713	610	93	150
(200) x (250)	280 ¹	395	1073	878	610	110	196
(250) x (300)	311	419	1105	1011	610	148	259
(300) x (350)	356	489	1211	1133	610	148	302

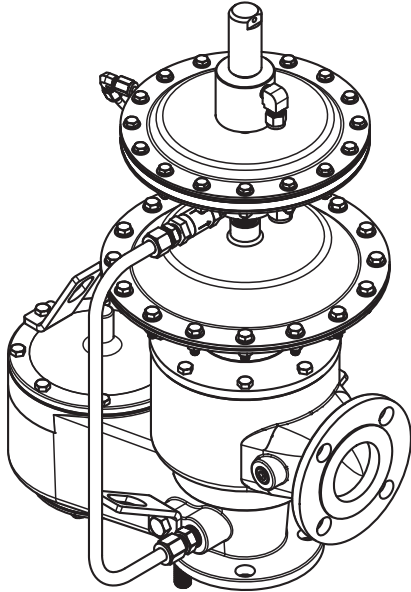
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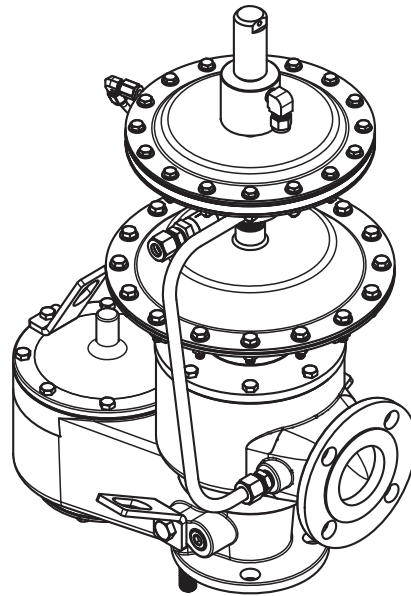
STANDARD CONFIGURATION: INTERNAL
SENSING WITH PILOT EXHAUST TO MAIN VALVE
OUTLET AND BACKFLOW PREVENTER



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

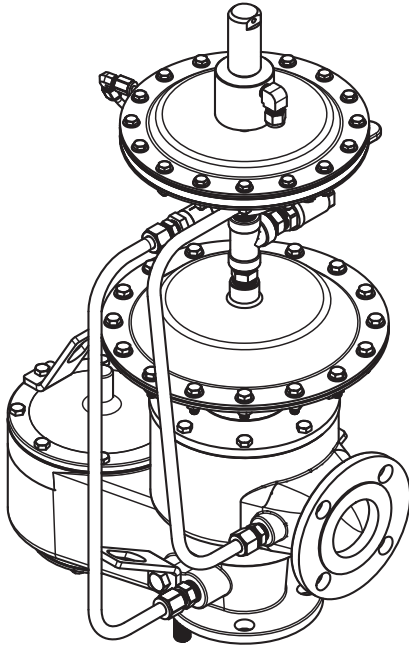


OPTION 1: Internal Sensing With
Pilot Exhaust To Atmosphere
And Backflow Preventer

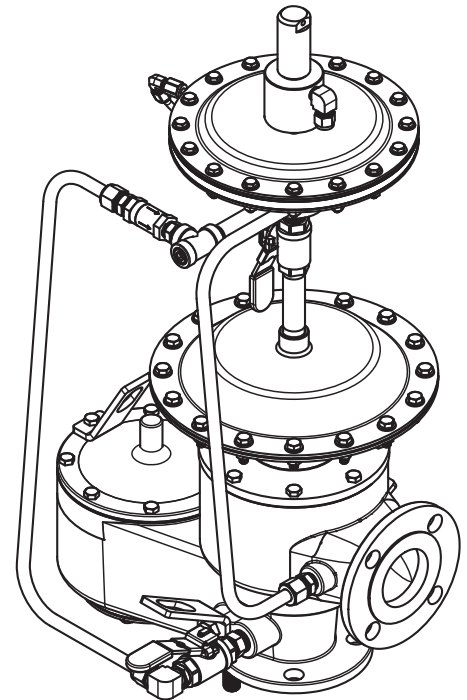


OPTION 2: Remote Sensing With
Pilot Exhaust To Main Valve Outlet
And Backflow Preventer

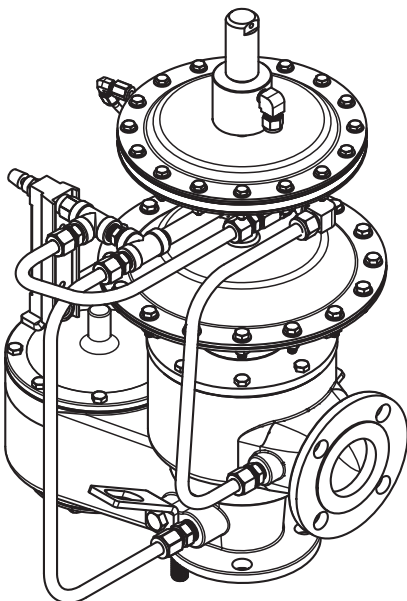
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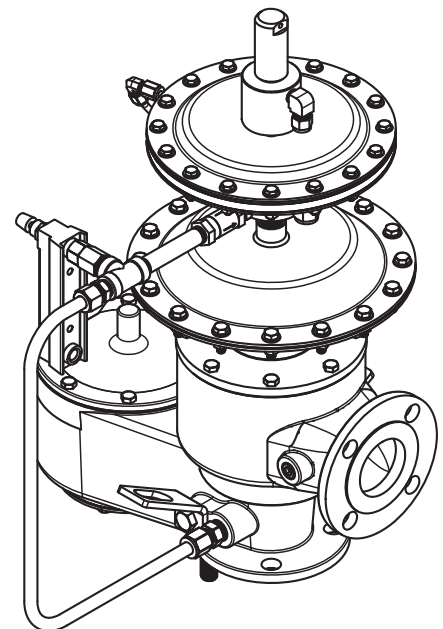
OPTION 3: Internal Sensing With Pilot Exhaust To Main Valve Outlet, Backflow Preventer, And Manual Blowdown Valve



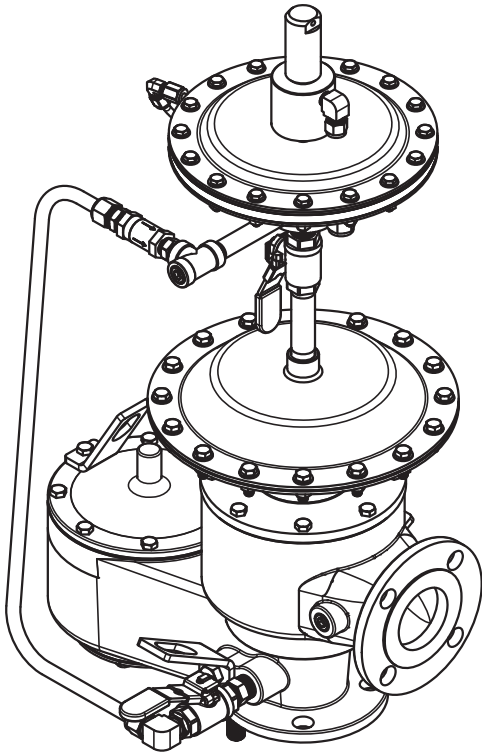
OPTION 5: Internal Sensing With Pilot Exhaust To Main Valve Outlet, Backflow Preventer, And Field Test Connection



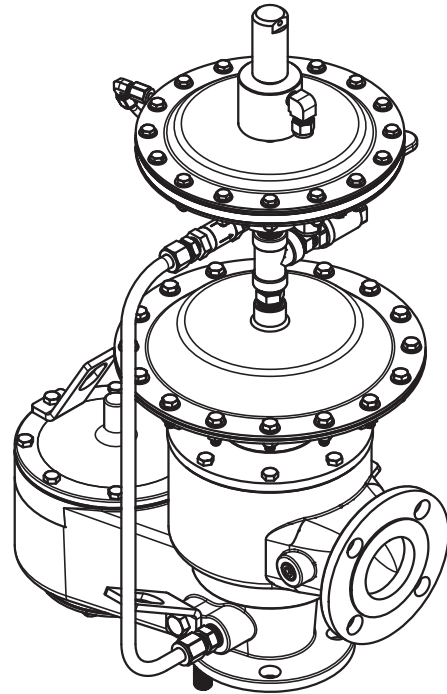
OPTION 6: Internal Sensing With Pilot Exhaust To Main Valve Outlet, Backflow Preventer, And Rotometer To Purge Pilot Sense And Discharge Lines



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

5200 Series PRODUCT CODE

02/15/24

5	2	POS 3	POS 4	POS 5	D	POS 7	POS 8	POS 9	POS 10	POS 11	POS 12	0	0	0	0	0	0
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POSITION 3 - FLANGE CLASS	
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 MATERIAL / SEAT RING TYPE		
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	With Air Assist
		CODE	
4 - 12	(10 - 30)	3	C
12.1 - 18	(30.1 - 45)	6	D
18.1 - 36	(45.1 - 90)	7	E
36.1 - 42	(90.1 - 105)	8	F
42.1 - 86	(105.1 - 214)	9	J
3.1 - 15 psi	(0.2 - 1 Bar)	H	K

POSITION 10 - WEIGHT MATERIAL	
Material	CODE
Standard	0
Stainless Steel	S

POSITION 9 - VACUUM SET POINT		
Weight Loaded		
oz/in ²	(mBar)	CODE
0.5 - 0.75	(2.1 - 3.2)	2
0.76 - 8	(3.3 - 34)	3
8.1 - MAX	(34.1 - MAX)	4
See Table 4 for vacuum set point limits.		
Spring Loaded		
psi	(mBar)	CODE
1.25 - 4	(86 - 276)	6
4.1 - 6	(276.1 - 414)	7
6.1 - 8	(414.1 - 552)	8
8.1 - 10	(552.1 - 689)	9
10.1 - 12	(689.1 - 827)	A
12.1 - 13	(827.1 - 896)	B
13.1 - 15	(896.1 - Bar)	C

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

POSITION 12 - OPTION	
OPTION	CODE
Standard Vacuum Protection Screen	0
Flame Screen	F

*** For information on ATEX see pages 19 & 20 on the IOM.**

Cashco, Inc.
P.O. Box 6
Ellsworth, KS 67439-0006
PH (785) 472-4461
Fax. # (785) 472-3539
www.cashco.com
email: sales@cashco.com
Printed in U.S.A. 5200-TB

Cashco GmbH
Handwerkerstrasse 15
15366 Hoppegarten, Germany
PH +49 3342 30968 0
Fax. No. +49 3342 30968 29
www.cashco.com
email: germany@cashco.com

Cashco do Brasil, Ltda.
Al.Venus, 340
Indaiatuba - Sao Paulo, Brazil
PH +55 11 99677 7177
Fax. No.
www.cashco.com
email: brazil@cashco.com