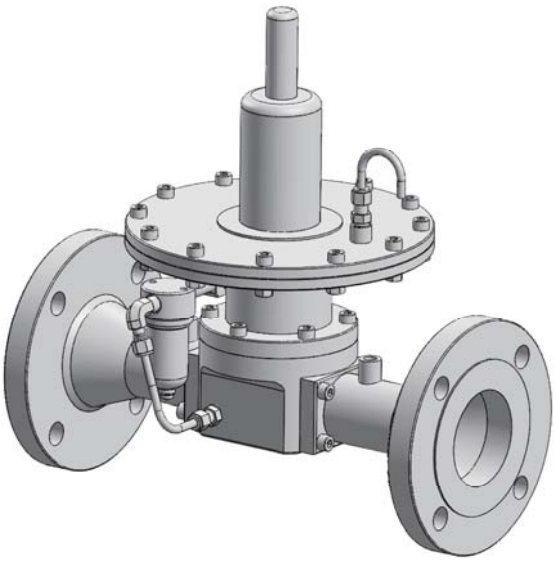
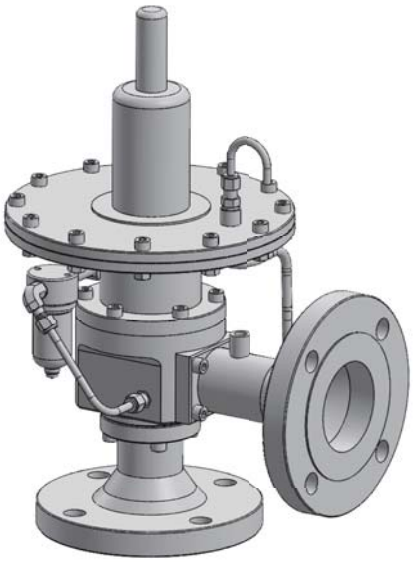
Tank Blanketing Valves

Help maintain the vapor space in a non-flammable condition.



INLINE. *Type R3180 Tank Blanketing Valve*



ANGLE. *Type R3180 Tank Blanketing Valve*

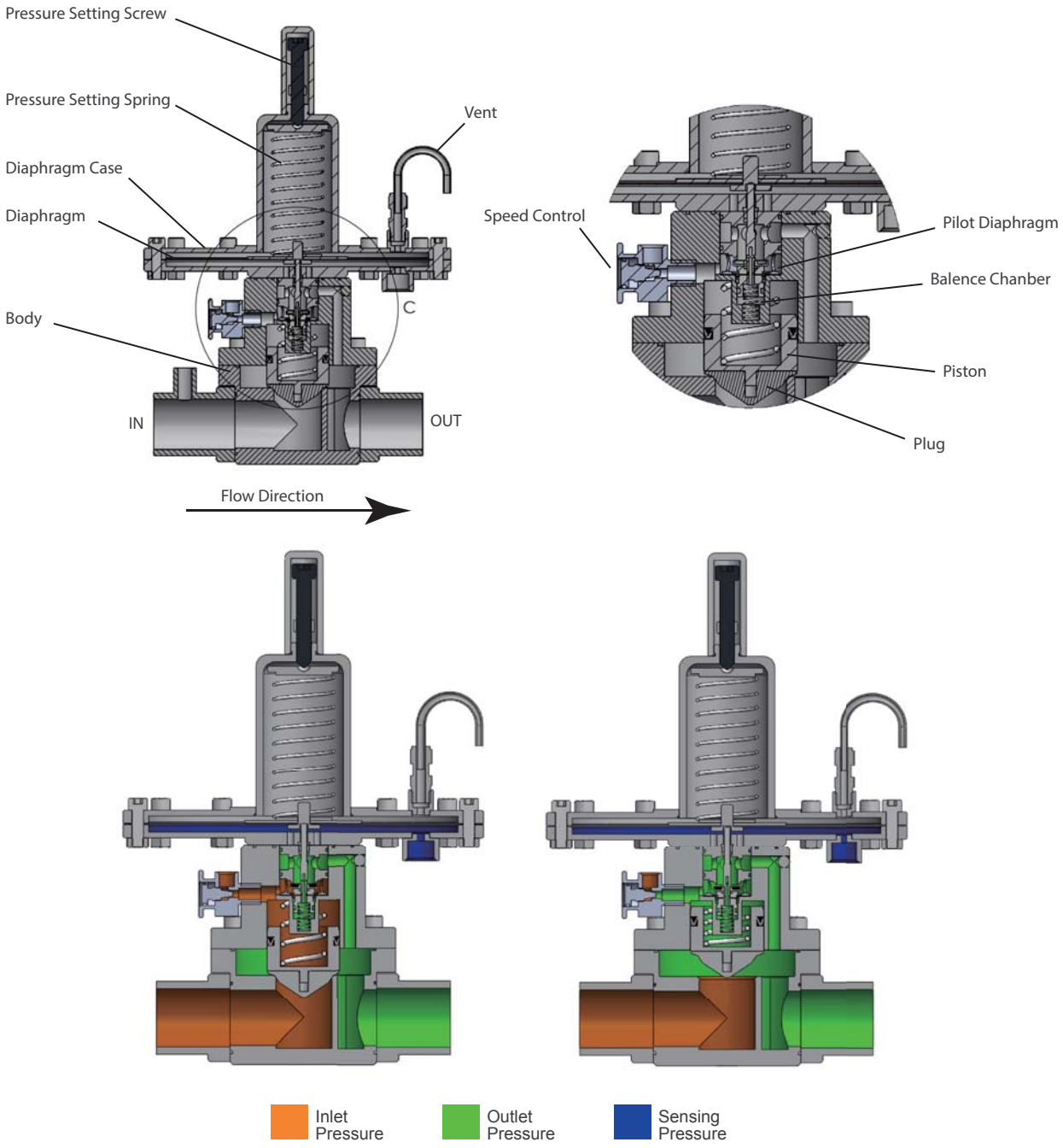
[FEATURES]

- High sensitivity
- Self-contained
- Fully balanced pilot control
- Angle or in-line body option
- Stainless steel body
- PTFE + glass fiber diaphragm
- External sensing for all models
- Pilot pressure filter included for all model
- Pilot orifice adjustable
- Flanged connector for varity of connecting
- Supply pressure fluctuations does not affect set point
- Fully balanced pilot control

[INTRODUCTION]

Tank blanketing is the process of using a gas, such as nitrogen, to maintain a slightly positive pressure in an enclosed storage tank. Tank blanketing prevents a stores product from vaporizing into the atmosphere, reduces product combustibility, and prevents oxidation or contamination of the product by reducing it's exposure to air.Tank blanketing is utilized with various products, including: adhesives, pharmaceuticals, pesticides, fertilizers, fuels, inks, photographic chemicals, and food additives.

[PRINCIPLE OF OPERATION]



[MERTERIAL CHART]

Body & Housing	Diaphragm Case	Tubing	Bolt / Nut	Spring	Diaphragm	Plug
Stainless Steel 316	Stainless Steel 316	Stainless Steel 316	Stainless Steel 304/316	Stainless Steel	PTFE+ Glassfiber	PTFE
					Stainless Steel 316	Nitrile
					Nitrile	

[FLOW RATE]

INLET PRESSURE		CAPACITIES IN SCFH (Nm³/h) OF NITROGEN							
Psig (bar)	kPa	Ø13 SCFH	C_V = 3.5 Nm³/h	Ø20 SCFH	C_V = 7.7 Nm³/h	Ø25 SCFH	C_V = 12.8 Nm³/h	Ø38 SCFH	C_V = 25.7 Nm³/h
25 (1.72)	172	3564	100	7972	225	13736	388	31126	879
30 (2.07)	207	4058	114	9018	254	15814	446	35208	994
40 (2.76)	276	5413	152	11128	314	19852	560	43710	1234
50 (3.45)	345	6483	183	14390	406	24372	688	53245	1504
60 (4.14)	414	7500	211	15083	426	27789	785	62680	1770
70 (4.48)	483	8493	239	19011	537	32360	914	72027	2034
80 (5.52)	552	9610	271	21964	620	37198	1050	81066	2290
90 (6.21)	621	10598	299	24588	694	41283	1166	90883	2567
100 (6.90)	690	11666	329	27217	768	45854	1295	100218	2831
110 (7.58)	758	12772	360	29458	832	49933	1410	109607	3096
120 (8.27)	827	13743	388	31176	880	54012	1525	118997	3361
130 (8.96)	896	14634	413	34541	975	56753	1603	128386	3626
140 (9.65)	965	15654	442	36970	1044	61584	1739	137776	3892
150 (10.3)	1034	16827	475	39700	1121	66249	1871	147165	4157

[API 2000 VALVE SIZING]

TANK CAPACITY		DEMAND FLOW RATE	
GALLONS	m³	SCFH	Nm³/h
1,050,000	4000	24,000	643
1260000	5000	28,000	750
1470,000	6000	31,000	831
1680,000	7000	34,000	911
1890,000	8000	37,000	992
2100,000	9000	40,000	1072
2520,000	10,000	44,000	1179
2940,000	11,000	48,000	1286
3360,000	13,000	52,000	1394
3780,000	14,000	56,000	1501
4200,000	16,000	60,000	1608
5040,000	19,000	68,000	1822
5880,000	22,000	75,000	2010
6720,000	25,000	82,000	2198
6720,000	29,000	90,000	2412

[SPECIFICATION]

PRESSURE RAITNG	
Maximum Inlet Pressure	400 psig (27.5bar)
Maximum Operating Pressure	150 psig (10.3bar)
Diaphragm Proof Pressure	-127 mmAq to 15 psig (X1 ~ X4)
	-5 psig to 250 psig (P1 ~ P2)
Pressure Registration	Extenal

MATERIAL TEMPERATURE CAPABILITIES	
Polytetrafluoroethene (PTFE)	-28˚F to 180˚F (-18˚C to 82˚C)
Nitrile-Butadiene Rubber (NBR)	-20˚F to 180˚F (-29˚C to 82˚C)
Ethylenepropylene (EPDM/FDA)	-20˚F to 212˚F (-29˚C to 100˚C)
Fluorocarbon (FKM)	-28˚F to 212˚F (-18˚C to 100˚C)
Perfluoroelastomer (FFKM)	-20˚F to 212˚F (-29˚C to 100˚C)

END CONNECTION STYLE	
Tread NPT	1/2" ~2"
Flange ANSI	1/2" ~ 4", 150lb
Flange DIN	DN15 ~ DN100, PN16

APPROXIMATE WEIGHT (WITHOUT FLANGE PACKAGE)

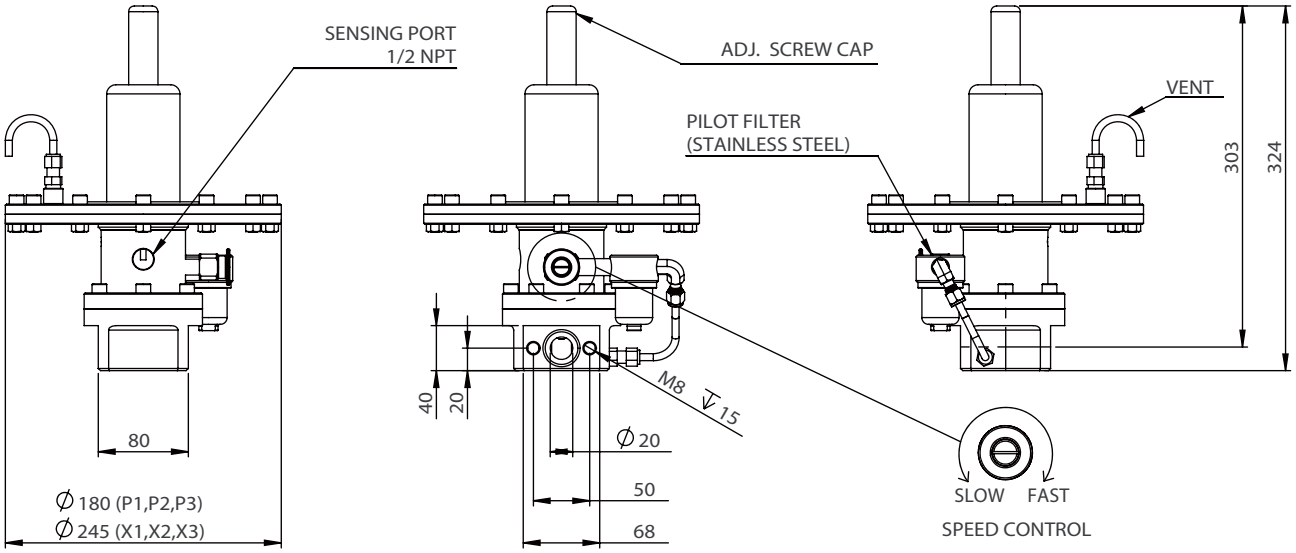
30 pounds (13.5kg)

ACCURACY

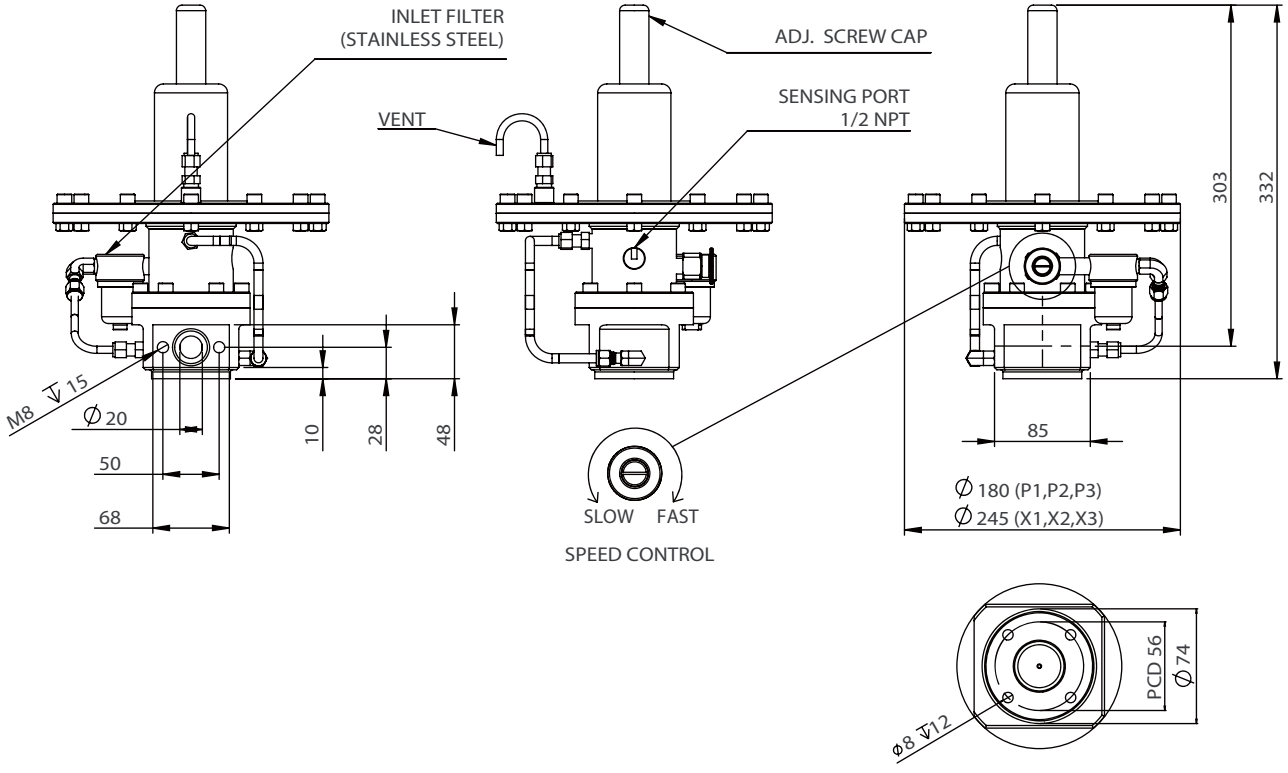
For pressure range X1, typically within 12.7 mmAq when flowing 5 to 70 percent of advertised capacities.

[DIMENSIONS]

INLINE 13mm 20mm

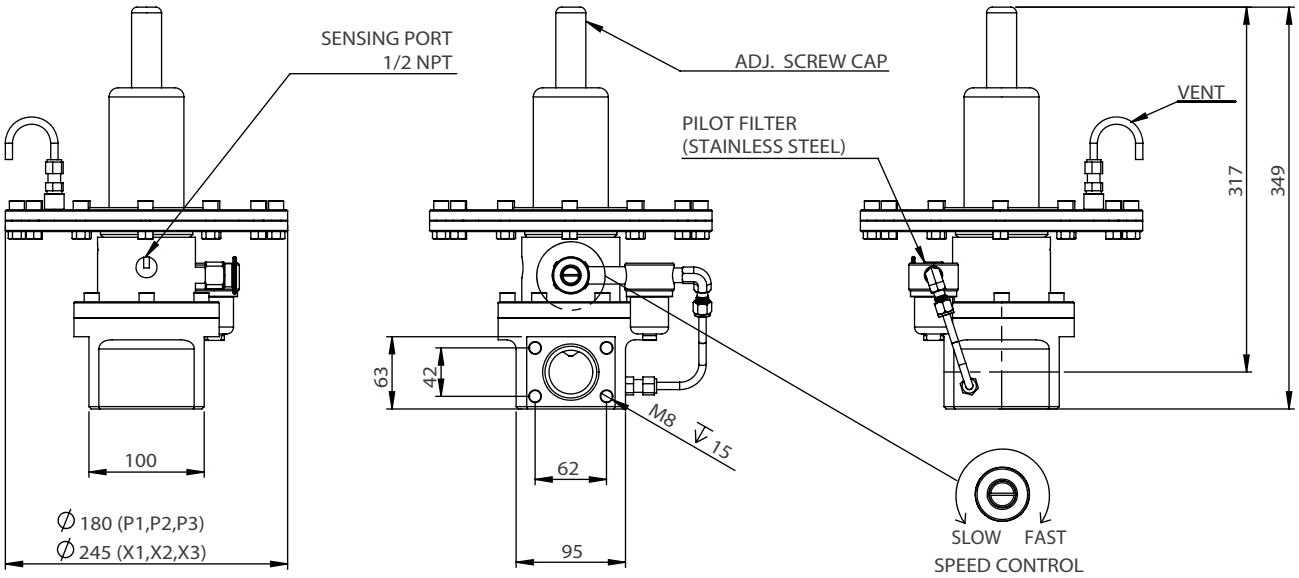


ANGLE 13mm 20mm

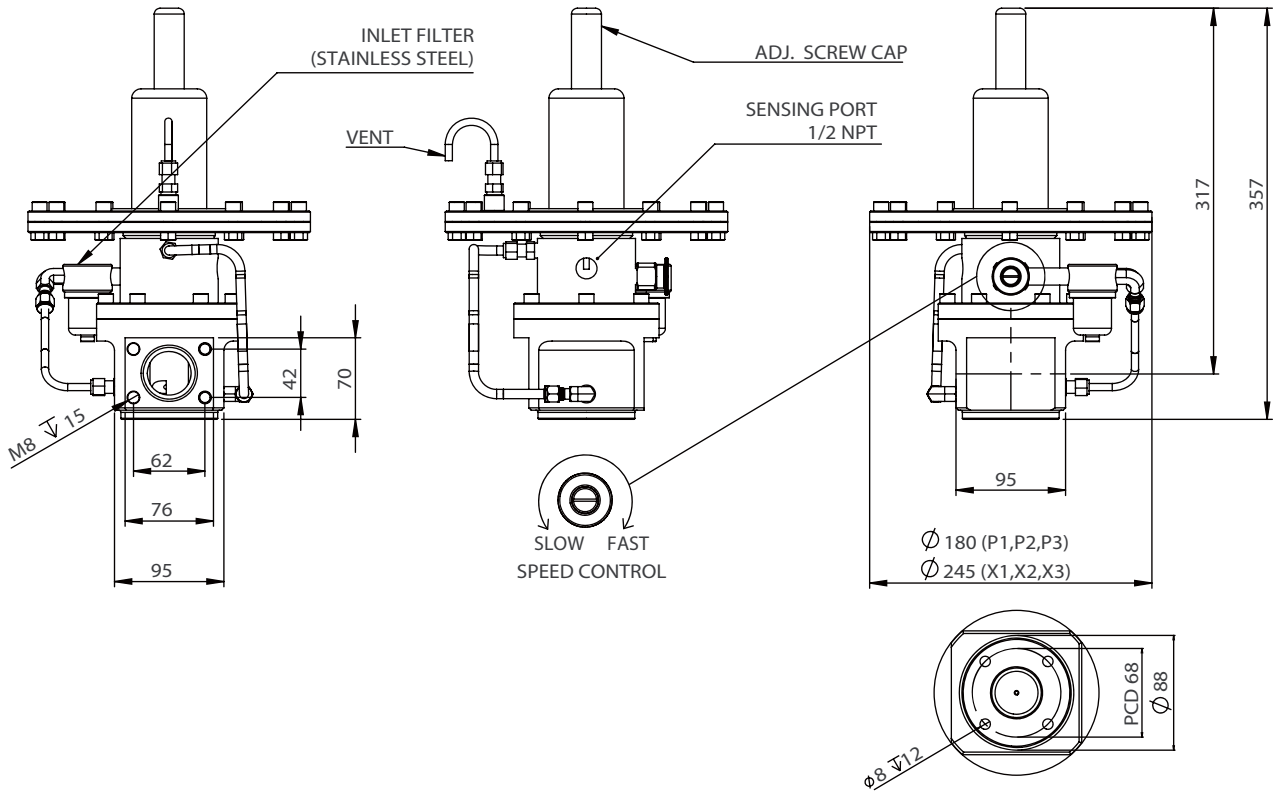


[DIMENSIONS]

INLINE 25mm 38mm



ANGLE 25mm 38mm



[PRODUCT CODE]

R3180	-	●	●	●	●	●	●
VOLTAGE		BODY CONFIGURATION	MAIN VALVE ORIFICE	PRESSURE RANGE	DIAPHRAGM	SEAL	FLANGE OPTION

BODY CONFIGURATION

I	IN-LINE
A	ANGLE

MAIN VALVE ORIFICE

13	Ø13mm Cv = 3.5	20	Ø20mm Cv = 7.7
25	Ø25mm Cv = 12.8	38	Ø38mm Cv = 25.7

PRESSURE RANGE

X1	12.7 - 150mmAq	X2	25.4 - 300mmAq
X3	50.8 - 600mmAq	X4	101 - 1200mmAq
P1	2 - 15psi	P2	2 - 30psi
P3	5 - 60psi	P4	5 - 120psi

DIAPHRAGM

1	PTFE+ Glassfiber	2	SUS 316
3	NBR	4	PTFE + NBR

SEAL

1	PTFE	3	NBR
4	FKM	5	FFKM

FLANGE OPTION

_	Please Consult Factory

1. [Flow Direction]

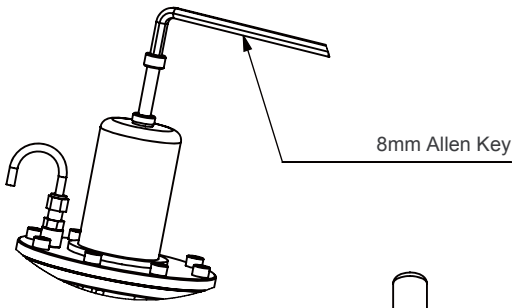
Make sure the correct air direction before installation.
Direction mark is shown on the valve body pointing out the air direction.
It is important that wrong air input direction will cause damage
on the internal parts.

2. [Set Outlet Pressure]

Scerw cap is always secured before it's shipped out.
Unlock actuator cap for outlet pressure adjustment.
Using 8mm Allen Key as for the handler.

a. Turn clockwise for higher pressure.
b. Turn counterclockwise for lower pressure.

When the pressure adjustment is complete, tighten the lock nut
and secure the screw cap.

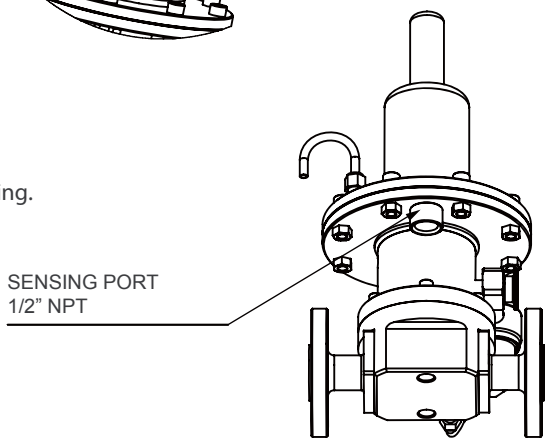


3. [Feedback Pressure]

Sensing port is alone with bottom plate with 1/2" NPT thread.
Sensing port has to be connected with tank individually before performing.

⚠ CAUTION

VALVE WILL NOT FUNCTION PROPERLY
IF THE SENSING PORT IS NOT CONNECTED



4. [Adjust Valve Response]

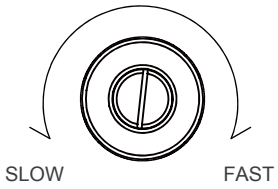
Speed control installed on the valve body as a flow control valve,
which is capable to control the sensitivities and response time of the valve.
Using Flat-Head screw driver to set the speed

a. turn clockwise tend to faster response time and higher accuracy,
b. turn counterclockwise tend to slower response time and lower accuracy.

It is not necessary to re-adjust again for first.

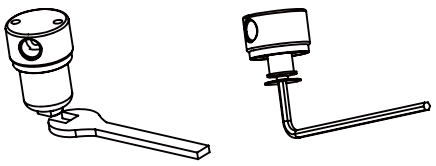
⚠ CAUTION

DO NOT TURN SPEED CONTROL TO FULLY CLOSE,
THIS WILL LEAD TO FULLY OPEN FLOW TO OUTPUT.



5. [Pilot Filter]

Filter package providing clean air into main body. We recommend
to replace filter element each year for the best performance.
To remove filter element from the package,
Using # 13 wrench turn conterclockwise to remove filter bowl.
Using 5mm Allen Key to remove filter element.



Qualified personnel to install, operating and maintaining valve is necessary. Before installation, inspect the valve and tubing for any shipment damage. Make valve body interior is clean or use suitable line gaskets and good bolting practices with a flanged body.

[TANK BLANKETING VALVE INSTALLATION]