

**Series 1807A
Pressure Regulating Valves
Pilot Type
for ANSI 150-600
DIN/BS 4504 PN10-PN100
JIS 10K-40K**

Pilot Type Pressure Regulating Valves

General

The KOMOTO PR-1807A pressure reducing valves are the most advanced two-path control pilot type pressure regulators. Pilot type pressure regulators provide better accuracy and higher capacity compared to conventional direct type pressure regulators. And Two-path control type of pilot operated regulators offer quicker response time and more precise control ability than other types of pilot operated regulators.

The KOMOTO PR-1807A pressure reducing valves precisely control downstream pressure to a predetermined set-pressure. The superior performance of KOMOTO PR-1807A series is due to the amplifying effect of the pilot and the two-path control system. Changes in outlet pressure act quickly on the actuator diaphragm to provide fast response to system changes.

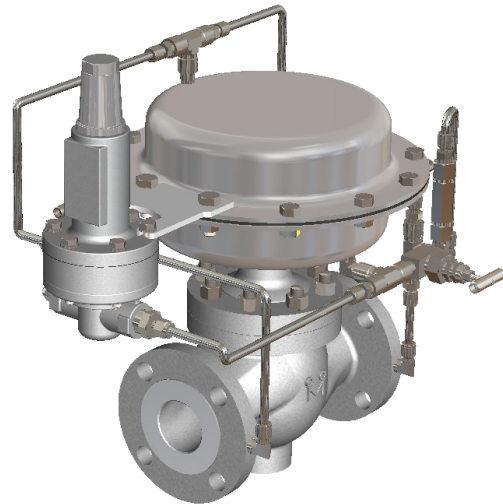


Figure 1. Series 1807A

Features

- Quick acting two-path control pilot control system
- Top-entry design for ease of maintenance
- Variable actuator sizes for all pressure control ranges
- Sufficient balanced diaphragm for increased sensitivity
- Full port design for high capacity
- Stable guiding piston design
- Tight shut-off with soft seat at all pressure differentials
- Excellent pressure control rangeability
- Light weight and compact design

Control range:

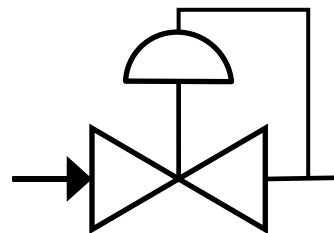
- 0.005 to 45 BarG

Temperature Range :

- -25 ~ 200 °C

Size :

- 1/2" ~ 2"



< Downstream Pressure Control >

Pressure Reducing Regulators

Pressure Reducing Regulators maintain designed pressure of downstream while providing the required fluid flow.




Pilot-Operated Regulators are designed for high flow rates and precision control. Pilot valves sense small changes of downstream pressure and amplify movement of main regulating valves.

Series 1807A Specifications

Valve Type	Pressure Regulating Valve (Pilot Type)											
Valve Model	Series 1807A											
Body Type	Globe											
Trim Type	Balanced											
Valve Size (Inch)	1	1-1/2	2	2-1/2	3	4	5	6	8	10	12	
(mm)	25	40	50	65	80	100	125	150	200	250	300	
Valve Cv	11.4	20.6	36.3	50.4	81	126.6	176.4	262.8	414	649.2	1014	
Diaphragm Type Actuator Minimum Differential Pressure (BarG)	0.2	0.3	0.3	0.35	0.35	0.35	0.4	0.4	0.5	0.5	0.5	
Piston Type Actuator Minimum Differential Pressure (BarG)	0.35	0.35	0.35	0.4	0.4	0.4	0.45	0.45	0.5	0.5	0.5	
Pressure Rating	ANSI 150Lb ~ 600Lb, JIS 10K ~ 40K, PN10 ~ PN100											
End Connection	RF, FF, SW, BW, RTJ, etc											
Body Materials	A216 WCB, A351CF8/CF8M, A351CF3/CF3M, A105 and etc.											
Trim Materials	Stainless steel, Monel [®] and Hastelloy [®] C											
Bonnet Type	Plain											
Diaphragm Materials	Nitrile (NBR), Fluorocarbon (FKM) and Ethylenepropylene (EPDM)											
Disk/Seat Material	Nitrile (NBR), Fluorocarbon (FKM) and PTFE											

* Other special materials are available upon request. Please consult with KOMOTO technical sales representatives.

Pressure Reducing Regulators Outlet Pressure Range

Pilot Type		Outlet Pressure Range (BarG)		Spring Type
	EP	0.004	~ 0.0072	Silver Type 1
		0.0048	~ 0.018	Silver Type 2
		0.012	~ 0.036	Silver Type 3
		0.024	~ 0.06	Silver Type 4
	LP & LT	0.04	~ 0.12	Silver Type 5
		0.08	~ 0.3	Silver Type 6
		0.2	~ 0.6	Silver Type 7
	MP & HT	0.4	~ 1.2	White Type 1
		0.8	~ 3	White Type 2
		2	~ 6	Yellow
		4	~ 10.8	Blue
		7.2	~ 15	Red (HT only)
	HP & HT	10	~ 24	Green
		16	~ 36	Brown Type 1
		24	~ 48	Brown Type 2

Model Selection Guide

Model	Code	Type	Set Pressure Range (BarG)
PR-1807A	EP	Very Low Pressure	0.005 ~ 0.05
	LP	Low Pressure	0.05 ~ 0.5
	MP	Mid. Pressure	0.5 ~ 7
	HP	High Pressure	7 ~ 40
	LT	Low Pressure & High Temperature	0.05 ~ 0.5
	HT	High Pressure & High Temperature	0.5 ~ 40

1. PR-1807AEP — Very Low Pressure (Tank Blanketing Valve)

PR-1807AEP tank blanketing pressure regulators are used for accurate pressure control on very low pressure of gas blanketing systems, which is introducing an inert gas into a storage tank.

Tank blanketing regulators reduce a high-pressure gas, such as Nitrogen, and maintain positive pressure in a tank which is slightly higher than atmospheric pressure. By maintaining the pressure, they reduce possibility of tank collapse while the liquid in the tank is being pumped out.

Temperature Range

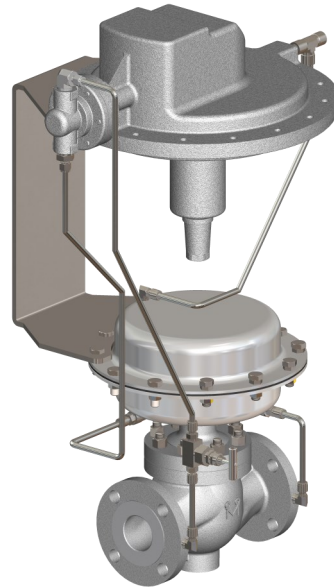
- -25 ~ 80 °C

Diaphragm Material

- Nitrile (NBR), Fluorocarbon (FKM)

Disk & Elastomer Seal Material

- Nitrile (NBR), Fluorocarbon (FKM)



PR-1807AEP

Set Pressure Range (BarG) : 0.005 ~ 0.05

2. Diaphragm Type

PR-1807ALP — Low Pressure, PR-1807AMP — Medium Pressure

Introduction

PR-1807ALP/MP series pilot-operated, spring-loaded, diaphragm type regulators provide precise downstream pressure control at low and medium set pressures. The large pilot diaphragm area of PR-1807ALP provides more accurate control at low-pressure settings.

Maximum Inlet Pressure

- 20 BarG

Temperature Range

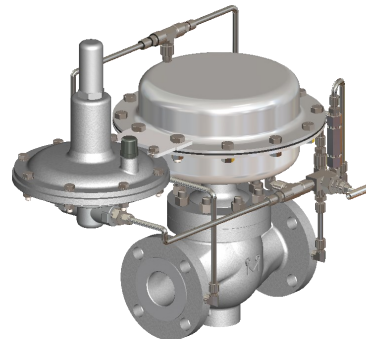
- -25 ~ 80 °C Nitrile (NBR)
- -25 ~ 120 °C Fluorocarbon (FKM)

Diaphragm Material

- Nitrile (NBR), Fluorocarbon (FKM)

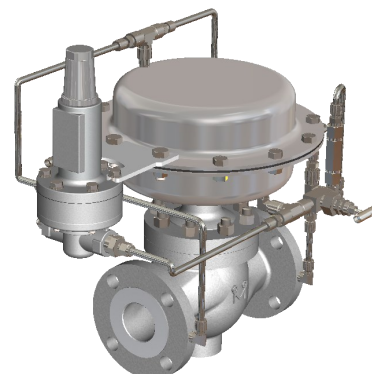
Disk & Elastomer Seal Material

- Nitrile (NBR), Fluorocarbon (FKM)



PR-1807ALP

Set Pressure Range (BarG) : 0.05 ~ 0.5



PR-1807AMP

Set Pressure Range (BarG) : 0.5 ~ 10

3. Piston Type

PR-1807AHP — High Pressure

Introduction

PR-1807AHP Series pilot-operated, spring-loaded, piston type regulators provide precise downstream pressure control at high set pressures.

Temperature Range

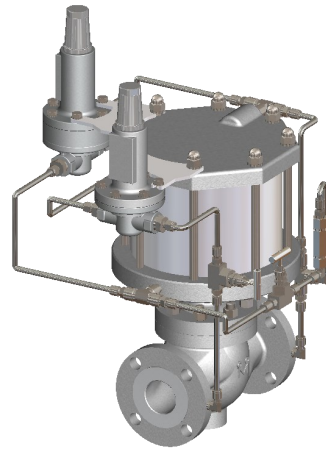
- -25 ~ 80 °c

Piston Elastomer Seal Material

- Nitrile (NBR), Fluorocarbon (FKM)

Disk & Elastomer Seal Material

- Nitrile (NBR), Fluorocarbon (FKM)



PR-1807AHP

Set Pressure Range (BarG) : 1 ~ 40

4. Piston Type

PR-1807ALT — Low Pressure & High Temperature, PR-1807AHT — High Pressure & High Temperature

Introduction

PR-1807ALT/HT Series pilot-operated, spring-loaded, piston type regulators are designed for high temperature services. The large pressure sensing area of PR-1807ALT provides more accurate control at low-pressure settings.

Temperature Range

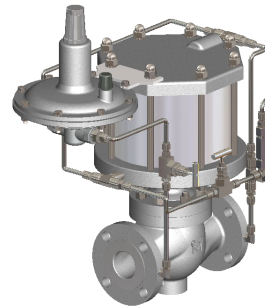
- -25 ~ 200 °c

Piston Elastomer Seal Material

- Fluorocarbon (FKM)

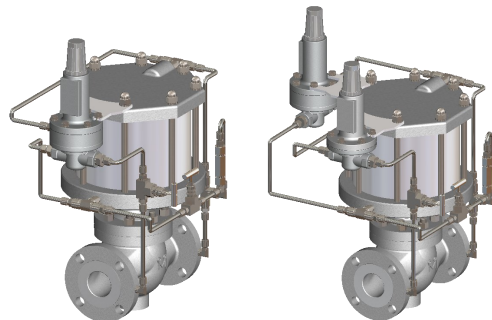
Disk & Elastomer Seal Material

- Fluorocarbon (FKM)



PR-1807ALT

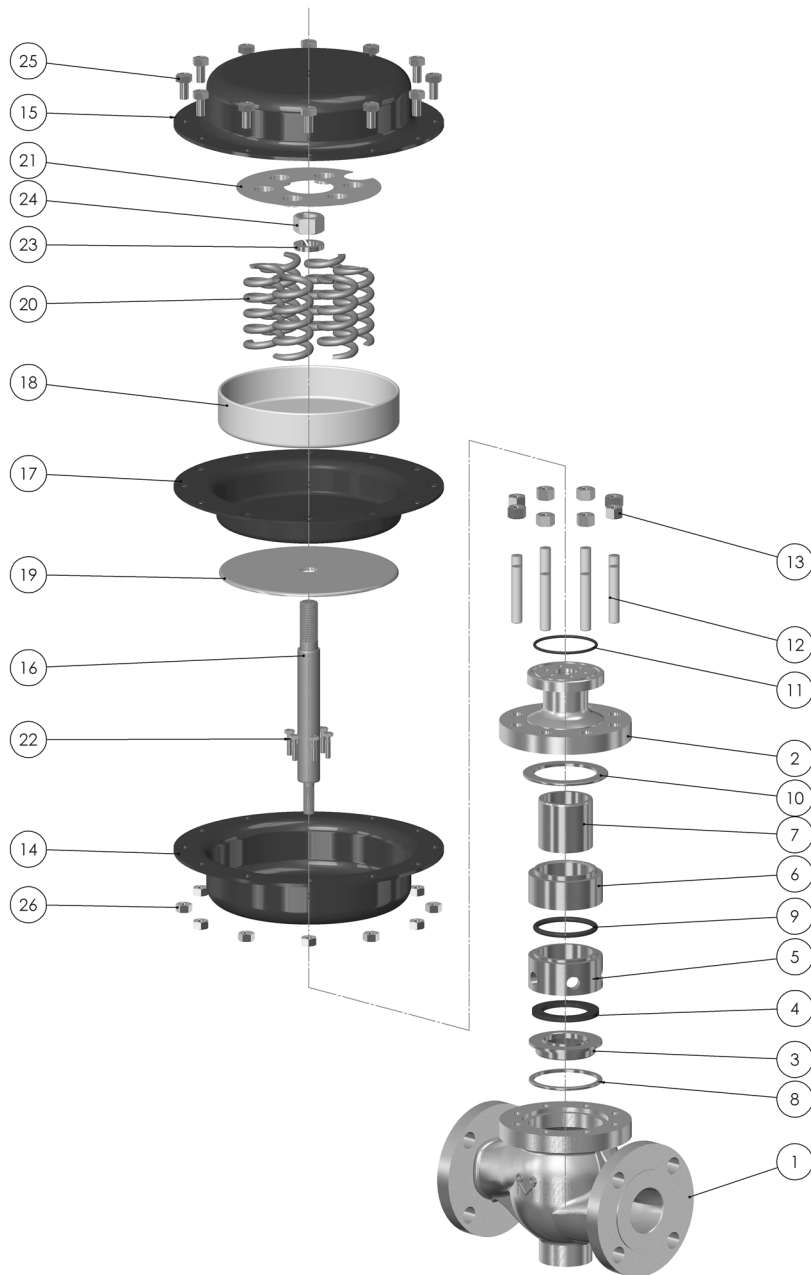
Set Pressure Range (BarG) : 0.05 ~ 0.5



PR-1807AHT

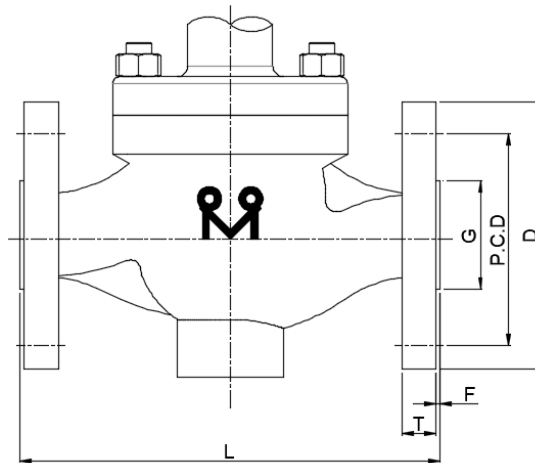
Set Pressure Range (BarG) : 0.5 ~ 40

General Parts List



No	Parts
1	BODY
2	BONNET
3	SEAT RING
4	DISC
5	CAGE BALANCE
6	CAGE CYLINDER
7	PORT
8	SEAT GASKET
9	BALANCE SEAL
10	BONNET GASKET
11	O-RING
12	STUD BOLT
13	HEX. HEAVY NET
14	DIAPHRAGM CASE
15	SPRING CASE
16	STEM
17	DIAPHRAGM
18	DIAPHRAGM PLATE
19	BACK PLATE
20	SPRING
21	SPRING PLATE
22	BOLT
23	SPRING WAHER
24	LOCK NUT
25	BOLT
26	NUT

Dimension List



ANSI 150

Valve Size	L*	T	F	I.D	G	P.C.D	D	Diameter of Bolt	Number of Bolts	Diameter of Bolts, in
3/4	184	11.2	2	19.1	42.9	69.9	100	5/8	4	1/2
1	184	12.7	2	25.4	50.8	79.4	110	5/8	4	1/2
1 1/2	222	15.9	2	38.1	73	98.4	125	5/8	4	1/2
2	254	17.5	2	50.8	92.1	120.7	150	3/4	4	5/8
2 1/2	276	20.7	2	63.5	104.8	139.7	180	3/4	4	5/8
3	298	22.3	2	76.2	127	152.4	190	3/4	4	5/8
4	352	22.3	2	101.6	157.2	190.5	230	3/4	8	5/8
5	403	22.3	2	127	185.7	215.9	255	7/8	8	3/4
6	451	23.9	2	152.4	215.9	241.3	280	7/8	8	3/4
8	543	27	2	203.2	269.9	298.5	345	7/8	8	3/4
10	673	28.6	2	254	323.8	362	405	1	12	7/8
12	737	30.2	2	304.8	381	431.8	485	1	12	7/8

ANSI 300

Valve Size	L*	T	F	I.D	G	P.C.D	D	Diameter of Bolt	Number of Bolts	Diameter of Bolts, in
3/4	194	14.3	2	19.1	42.9	82.6	115	3/4	4	5/8
1	197	15.9	2	25.4	50.8	88.9	125	3/4	4	5/8
1 1/2	235	19.1	2	38.1	73	114.3	155	7/8	4	3/4
2	267	20.7	2	50.8	92.1	127	165	3/4	8	5/8
2 1/2	292	23.9	2	63.5	104.8	149.2	190	7/8	8	3/4
3	318	27	2	76.2	127.0	168.3	210	7/8	8	3/4
4	368	30.2	2	101.6	157.2	200	255	7/8	8	3/4
5	425	33.4	2	127	185.7	235	280	7/8	8	3/4
6	473	35	2	152.4	215.9	269.9	320	7/8	12	3/4
8	568	39.7	2	203.2	269.9	330.2	380	1	12	7/8
10	708	46.1	2	254	323.8	387.4	445	1 1/8	16	1
12	775	49.3	2	304.8	381	450.8	520	1 1/4	16	1 1/8

ANSI 600

Valve Size	L*	T	F	I.D	G	P.C.D	D	Diameter of Bolt	Number of Bolts	Diameter of Bolts, in
3/4	206	15.9	7	19.1	42.9	82.6	115	3/4	4	5/8
1	210	17.5	7	25.4	50.8	88.9	125	3/4	4	5/8
1 1/2	251	22.3	7	38.1	73	114.3	155	7/8	4	3/4
2	286	25.4	7	50.8	92.1	127	165	3/4	8	5/8
2 1/2	311	28.6	7	63.5	104.8	149.2	190	7/8	8	3/4
3	337	31.8	7	76.2	127.0	168.3	210	7/8	8	3/4
4	394	38.1	7	101.6	157.2	215.9	275	1	8	7/8
5	457	44.5	7	127	185.7	266.7	330	1 1/8	8	1
6	508	47.7	7	152.4	215.9	292.1	355	1 1/8	12	1
8	610	55.6	7	199.9	269.9	349.2	420	1 1/4	12	1 1/8
10	752	63.5	7	247.7	323.8	431.8	510	1 3/8	16	1 1/4
12	819	66.7	7	298.5	381	489	560	1 3/8	20	1 1/4

* Face to Face dimension is based on RF flange.

Warranty / Remedy

Korea Motoyama Inc. warrants goods of its manufacture as being free of defective materials and faulty workmanship for 12 months from the date of shipment, unless otherwise specified. In this period, all of our products claimed by original defects may be returned to our factory after notice and authorization by us. If warranted goods are returned to Korea Motoyama Inc. during the period of coverage, it will be repaired or replaced without charge for those items it finds defective. Such defects shall be exclusive of the effects of corrosion, erosion, normal wear or improper handling and storage. In case our engineers have field service, the user shall detach and install valves by his cost. Determination of the suitability of the Products for the use contemplated by the buyer or buyer's customer(s) is the sole responsibility of the buyer in connection therewith. The foregoing is buyer's sole remedy and is in lieu of all other warranties, expressed or implied, including those of merchantability and fitness for a particular purpose.

Specifications are subject to change without notices.

 **KOMOTO**
VALVES & CONTROLS

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