NYVALVES

DIRECT-ACTIVATED PRESSURE CONTROL VALVE

NYVALVES THE SOLUTION IN SPECIAL VALVES
PHONE: 1888 441 3986
www.nyvalves.com

Z-TIDE

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9. The assemble & testing !

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1. Why our Direct-Activated type is popular !

A : New Piston & balance design
B : Four valve material for different application
C : Widely Pressure Range from 0.01~60 Bar
D : Easy Install & pressure adjusting
E : Respond quickly & working stable
F : Less working Noice

DIRECT-ACTIVATED PRESSURE CONTROL VALVE

*Direct-Activated Pressure Reducing Valve
(Stainless Steel 316)

*Direct-Activated Pressure Sustaining/ Back Pressure Valve
(Stainless Steel 316)

*Low Pressure Type Direct-Activated
Pressure Reducing Valve
(Stainless Steel 316)
Pressure Adjusting Range : 0.2~1.5 kgf/cm2
0.01~0.2 kgf/cm2

*Direct-Activated Pressure Relief Valve
(Stainless Steel 316)
Valve Body Testing Pressure : 35 kgf/cm2
Maximum Applied Pressure : 25 kgf/cm2

*Direct-Activated Pressure Reducing Valve
(Cast Iron/Flange Type)
Valve Body Testing Pressure : 21 kgf/cm2
Maximum Applied Pressure: 16 kgf/cm2

*Direct-Activated Pressure Reducing Valve
(Bronze/Thread Type)
Valve Body Testing Pressure : 21 kgf/cm2
Maximum Applied Pressure : 16 kgf/cm2

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2. The Operation of Direct-Activated Pressure Control Valve

The spring inside the valve body controls the operation of valve gate to reach the setting pressure.

3. Our Piston and Diaphragm D. A. Pressure Control Valve

Piston D. A. Pressure Control Valve

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Diaphragm type D. A. Pressure Control Valve

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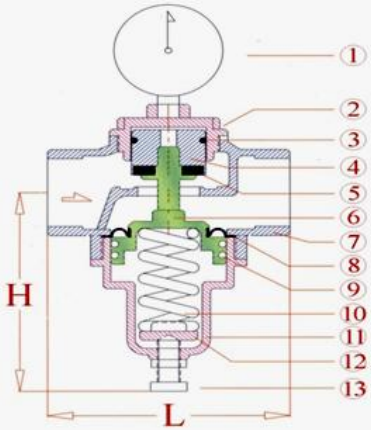
4. Select an appropriate type for different function

DIRECT-ACTIVATED PRESSURE REDUCING VALVE
(STAINLESS STEEL 316／Thread Type)

- Valve Body is made by Stainless Steel #316, suitable for fluid, Air and Vapor.
- The gate is designed for opening status, which will not influence the water supply function under unstable inlet pressure condition.
- When the outlet pressure responds directly to the pressure control chamber and adjusts the setting pressure, it responds quickly and adjusts the pressure accurately.
- Design of piston and diaphragm improves the inability of sustaining pressure and leakage.

- Pressure Adjusting Range：1～6 kgf/cm²
  4～10 kgf/cm²
  8～13 kgf/cm²
- Pressure needed from fully-closed gate to fully-opened gate：1.5 kgf/cm² （1 kgf/cm² = 14.2 psi）
- Applied Temperature：-15°C～100°C
  -15°C～200°C (For steam)
- Valve Body Testing Pressure：35 kgf/cm²
- Maximum Applied Pressure：25 kgf/cm²



No	Part Name	Material
1	Gauge	Stainless Steel
2	Cover	316 Stainless Steel
3	U-ring	NBR/Viton
4	Piston	316 Stainless Steel
5	Sealing spacer	NBR/Viton/Teflon
6	Shaft	316 Stainless Steel
7	Main body	316 Stainless Steel
8	Diaphragm	NBR/Viton
9	O-ring	NBR/Viton
10	Spring	Spring Steel
11	Spring cover	316 Stainless Steel
12	Washer	Brass
13	Adjusting stem	316 Stainless Steel

(Thread end)

Item No	Size	H(mm)	L(mm)	Weight(kg)	CV
RET15-S	1/2"	80	70	0.80	2.4
RET20-S	3/4"	105	85	1.00	9.0
RET25-S	1"	105	92	1.05	11.0
RET40-S	1 1/2"	130	115	2.30	21.0
RET50-S	2"	130	120	2.50	25.0

(Flange end)

Item No	Size	H(mm)	L(mm)	Weight(kg)	CV
REF50-S	2"	130	120	12	25.0
REF65-S	2 1/2"	185	210	16	75.0
REF80-S	3"	185	225	18	80.0
REF100-S	4"	230	250	25	120.0
REF150-S	6"	270	310	45	250.0

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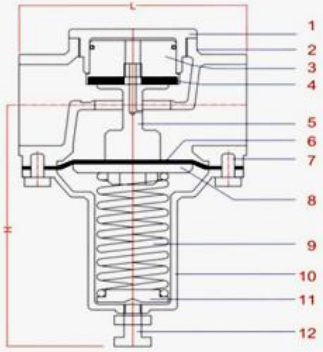
- DAP. Relief , Low PRV

DIRECT-ACTIVATED PRESSURE REDUCING VALVE

(Bronze／Thread Type)

- The gate is designed for opening status, which will not influence the water supply function under unstable inlet pressure condition.
- When the outlet pressure responds directly to the pressure control chamber and adjusts the setting pressure, it responds quickly and adjusts the pressure accurately.

- Pressure Adjusting Range：1～5 kgf/cm²
  4～9 kgf/cm²
  (special order is needed for other range)
- Valve Body Testing Pressure：21 kgf/cm²
- Maximum Applied Pressure：12 kgf/cm²
- Pressure needed from fully-closed gate to fully-opened gate：1 kgf/cm² (1 kgf/cm²=14.2 psi)
- Applied Temperature：-15～80°C
- Applied Fluid：Fresh water



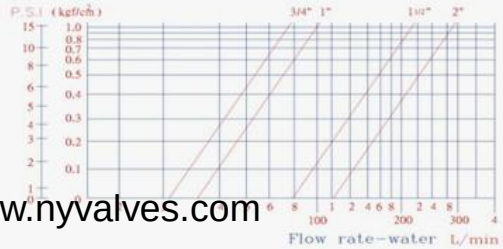
No	Part Name	Material
1	Upper Cover	Bronze
2	Valve Body	Bronze
3	Piston	Brass
4	Sealing	NBR
5	Shaft	Brass
6	Diaphragin	NBR
7	Fixed Bolt	Electroplated Iron
8	Diaphragm Washer	Electroplated Iron
9	Spring	Spring Steel
10	Spring Cover	Bronze
11	Spring Washer	Electroplated Iron
12	Adjusting Bolt	Stainless Steel

Item No	Connect	H(mm)	L(mm)	Weight(kg)	CV
RET20-C	PT 3/4"	105	80	0.90	6.0
RET25-C	PT 1"	105	85	0.95	8.0
RET40-C	PT 1.5"	140	105	2.40	18.0
RET50-C	PT 2"	145	110	2.50	21.0

$$CV=\frac{Q}{\sqrt{\triangle P/S}}$$

Q=GPM (gallon/min)
△P=P1-P2 (p.s.i)
P1=Inlet absolute pressure
P2=Outlet absolute pressure
S=Fluid Density (Water=1)
1 gallon=3.785 liter

Flow Chart of Direct-activated Pressure Reducing Valve(Bronze)



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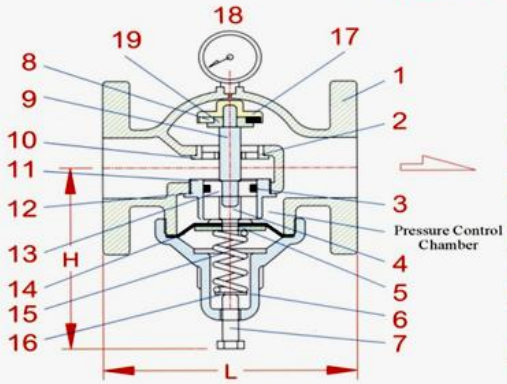
DIRECT-ACTIVATED PRESSURE REDUCING VALVE
(Cast Iron／Flange Type)

- The gate is designed for opening status, which will not influence the water supply function under unstable inlet pressure condition.
- When the outlet pressure responds directly to the pressure control chamber and adjusts the setting pressure, it responds quickly and adjusts the pressure accurately.

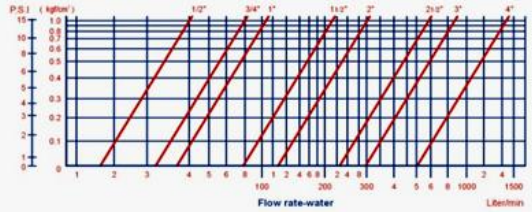
- Pressure Adjusting Range：0.5～5 kgf/cm²
  3～8 kgf/cm²
- Valve Body Testing Pressure：21 kgf/cm²
- Maximum Applied Pressure：12 kgf/cm²
  (1 kgf/cm²=14.2 psi)
- Applied Temperature：-15～80℃

◎Special order is needed for other material and specification.
◎Pressure gauge shows outlet pressure.



No	Part Name	Material	No	Part Name	Material
1	Main Body	Cast Iron	11	Cylincler	Bronze
2	O-ring	NBR	12	O-ring	NBR
3	U-ring	NBR	13	Piston	Bronze
4	Diaphragm Fixed Bar	Brass	14	Diaphragm	NBR
5	Diaphragm Washer	Brass	15	Spring	Stainlss Steel
6	Valve Cover	Cast Iron	16	Spring Positioner	Brass
7	Adjusting stem	Stainlss Steel	17	Valve Cover Gate	Brass
8	Sealing Spacer	NBR	18	Pressure Gauge	Upon request
9	Center Shaft	Brass	19	Sealing Ring	Brass
10	Shaft Guiding Seat	Bronze			

Flow Chart of Direct-activated Pressure Reducing Valve



Item No	Size	H(mm)	L(mm)	Weight(kg)	CV
RET50-F	2"	150	190	11	21
RET65-F	2.5"	165	210	15	38
RET80-F	3"	200	225	17	55
RET100-F	4"	220	250	24	95

5. How to choose the main body & seal ?

A : Main Body – Inlet Pressure

B : Seal choose - NBR : -15 ~ 80 ℃

- Viton : 80 ~ 120 ℃
- Teflon : 150~ 200 ℃

6. New Model for retail market !

Direct – Activated Pressure Reducing Valve

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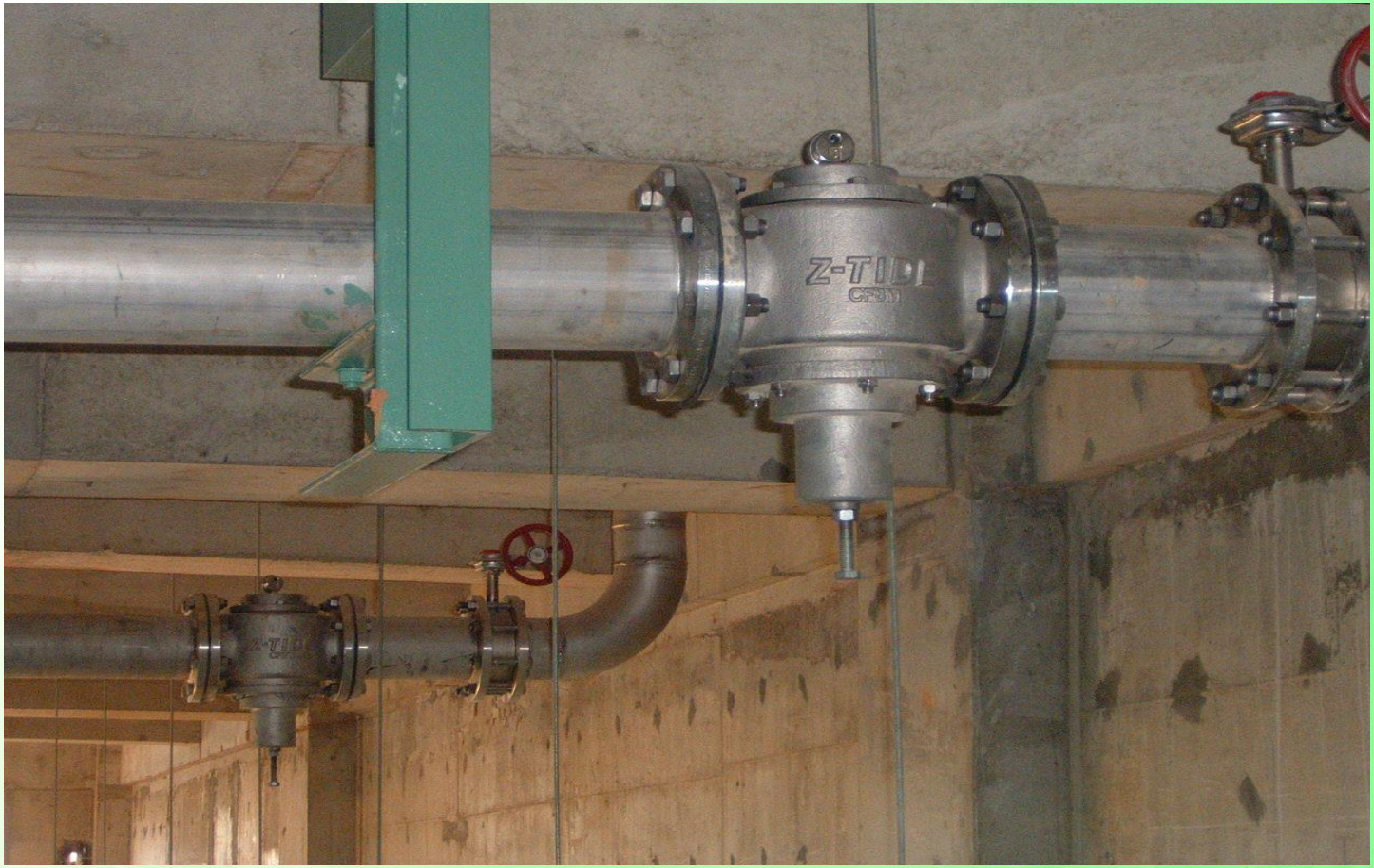
7. The Installation of our D. A. Pressure Control Valve ！

AU Optronics -03



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Na-Ya - 08

Gen-Hwa Building

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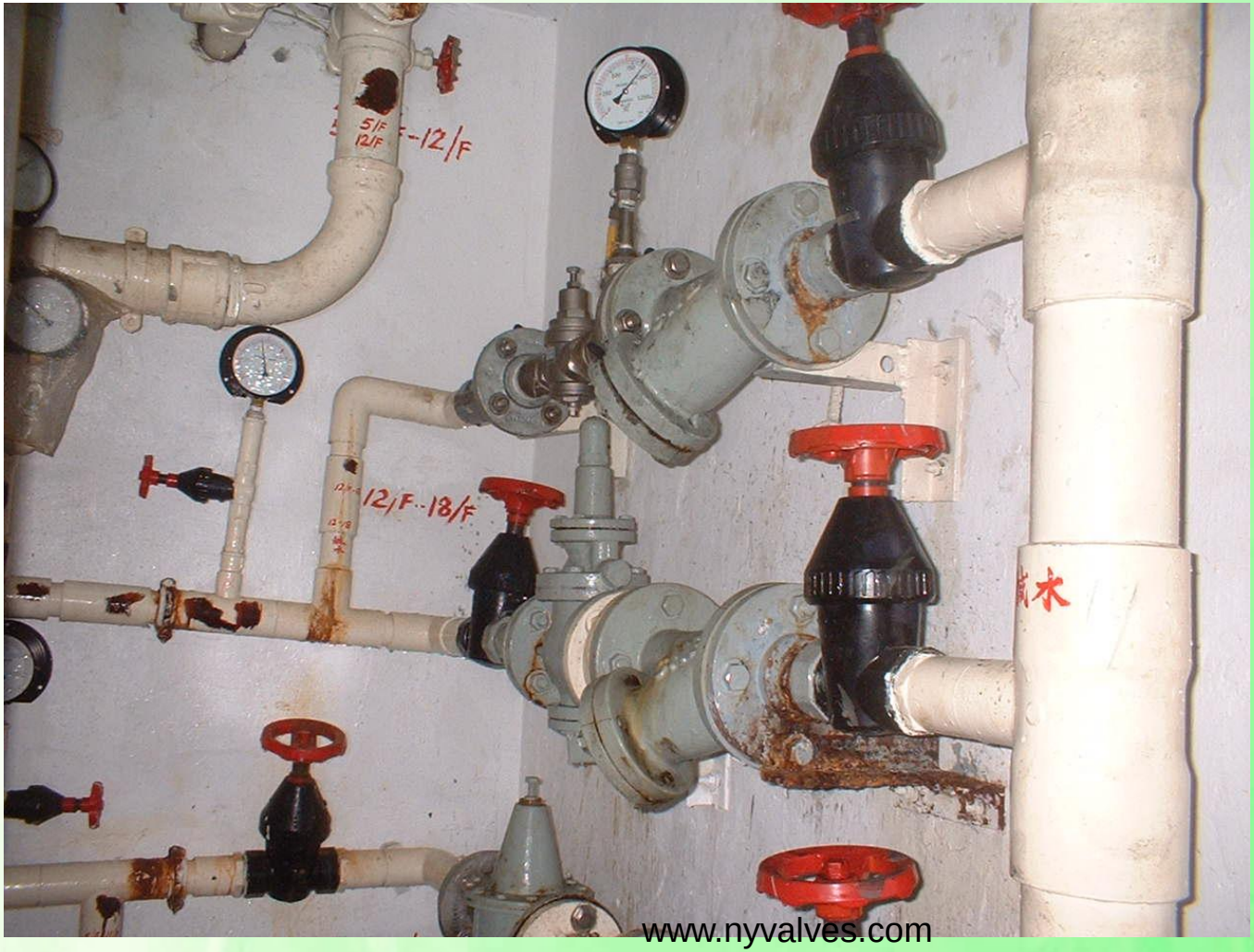
Dream Park - 05



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Sawa – Air system

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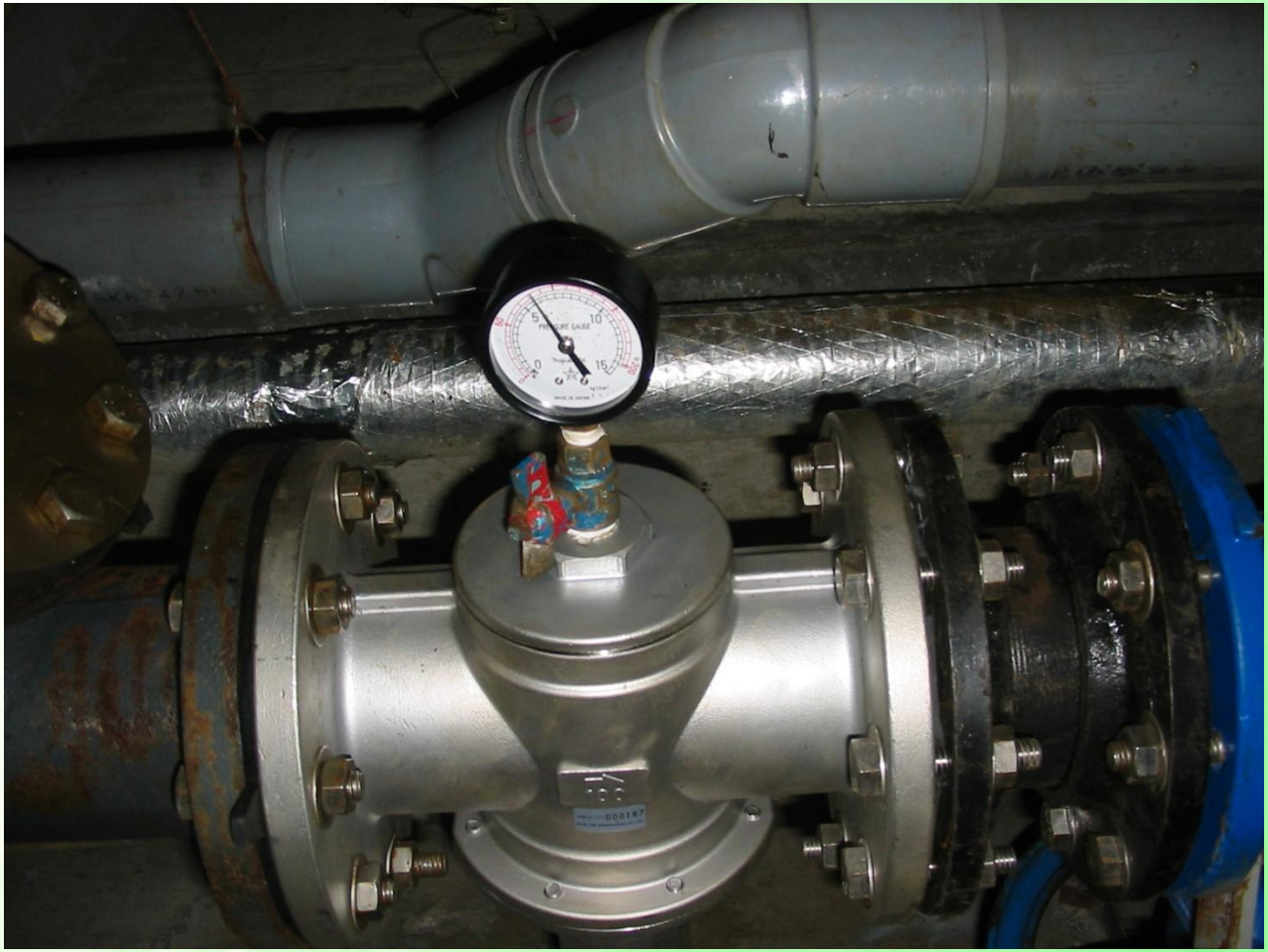
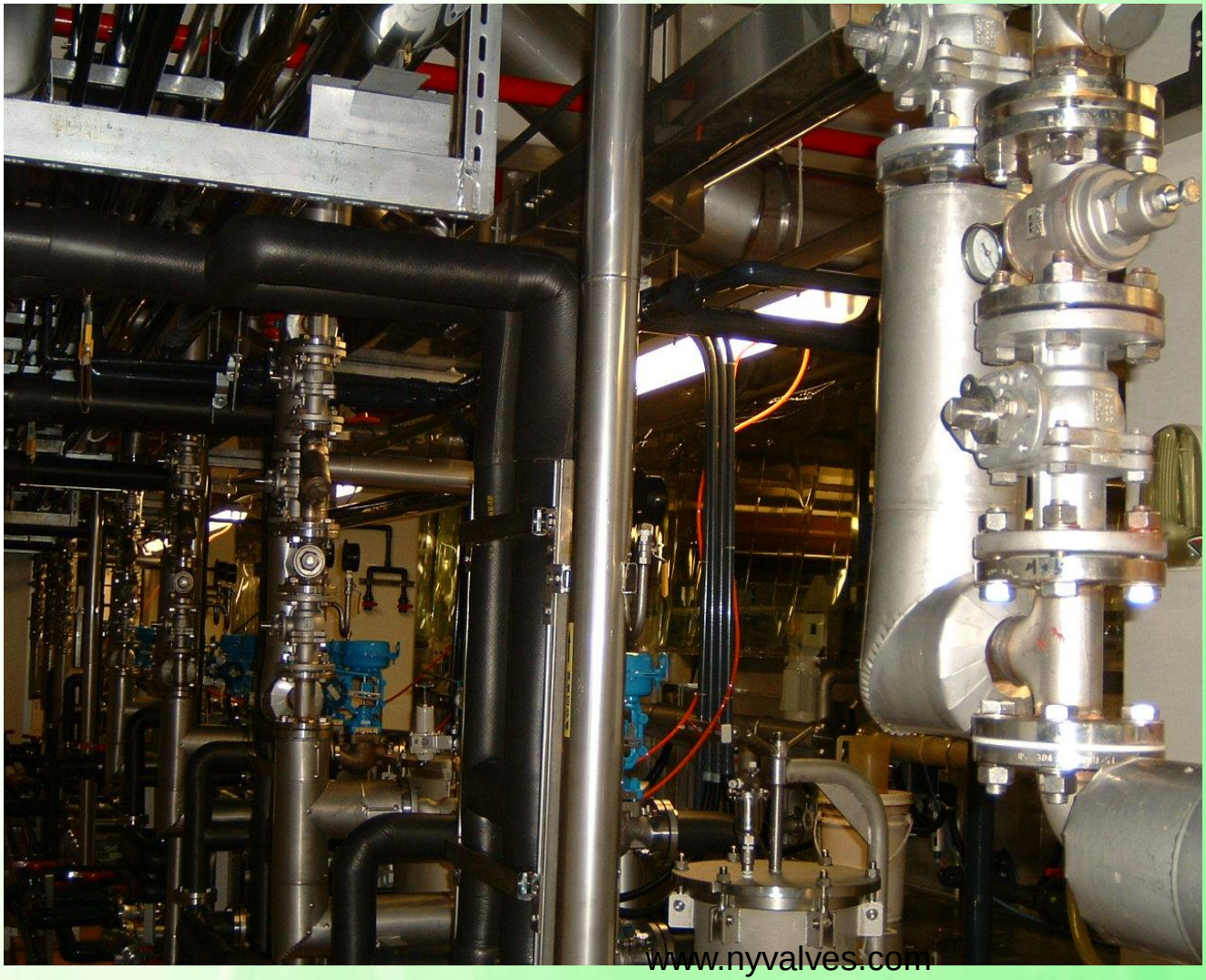
Chan Den - 07



TSDE- 03



TFP - 12

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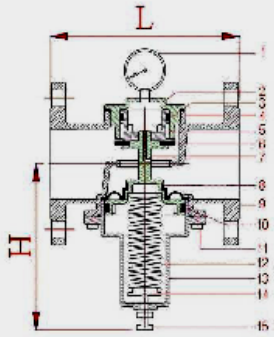
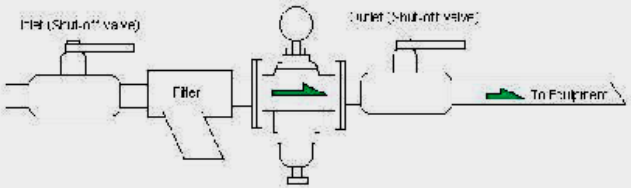
The Installation of Stainless Steel Direct-Activated PressureReducing Valve :



No	Part Name	Material
1	Gauge	Stainless Steel
2	Upper Cover	Stainless Steel 316
3	Washer	NBR / Viton
4	U-ring	NBR / Viton
5	Piston	Stainless Steel 316
6	Sealing Spacer	NBR / Viton / Teflon
7	Shaft	Stainless Steel 316
8	Diaphragm	NBR / Viton
9	Main Body	Stainless Steel 316
10	UH-ring	Viton
11	Fixed Bolt	Stainless Steel 304
12	Spring	Spring Steel
13	Lower Cover	Stainless Steel 316
14	Washer	Brass
15	Adjusting Stem	Stainless Steel 304



Before Installation:

1. Clean & remove all the impurities inside the pipe. A filter is recommended to install.
2. Make sure the direction is correct.
3. Setting pressure gets higher by turning the adjusting stem clockwise.
4. The pressure gauge indicates the outlet pressure.

Adjusting The Setting Pressure:

1. Turning anti-clockwise the adjusting stem to the lowest pressure.
2. Close the outlet. (If the outlet pressure is higher than setting pressure, please release the outlet pressure in advance.)
3. Adjusting the pressure to required setting pressure by turning clockwise the stem.
4. Check if the pressure is correct by opening & closing the outlet for several times.
5. Open the outlet shut-off valve and tighten the nut to fix the adjusting stem.

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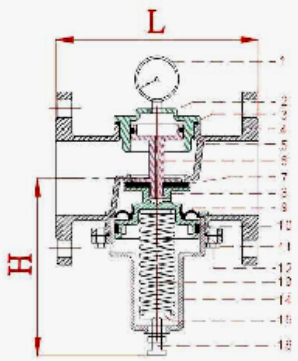
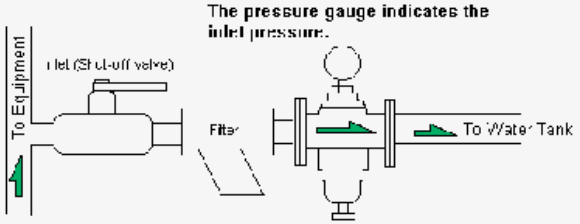
The Installation of Stainless Steel Direct-Activated Pressure Sustaining / Back Pressure Valve :



No	Part Name	Material
1	Gauge	Stainless Steel
2	Upper Cover	Stainless Steel 316
3	Washer	NBR / Viton
4	Main Body	Stainless Steel 316
5	U-ring	NBR / Viton
6	Shaft	Stainless Steel 316
7	Sealing Spacer	NBR / Viton / Teflon
8	Seat	Stainless Steel 316
9	Diaphragm	NBR / Viton
10	UH-ring	Stainless Steel 316
11	Washer	NBR / Viton
12	Fixed Bolt	Stainless Steel 304
13	Spring	Spring Steel
14	Lower Cover	Stainless Steel 316
15	Washer	Brass
16	Adjusting Stem	Stainless Steel 304



Before Installation:

1. Clean & remove all the impurities inside the pipe. A filter is recommended to install.
2. Make sure the direction is correct.
3. Setting pressure gets higher by turning the adjusting stem clockwise.
4. The pressure gauge indicates the inlet pressure.

Adjusting The Setting Pressure:

1. Turning anti-clockwise the adjusting stem to the lowest pressure.
2. Adjusting the pressure to the required setting pressure by turning clockwise the stem.
3. Tighten the nut to fix the adjusting stem.

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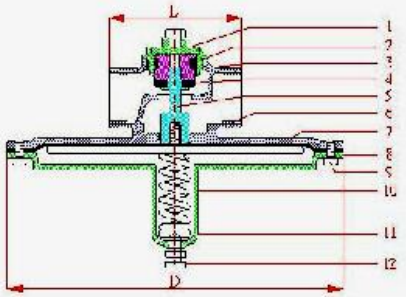
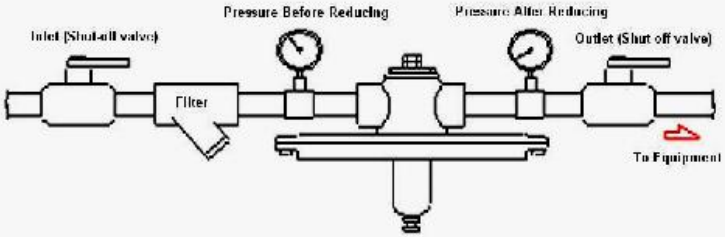
The Installation of Stainless Steel Direct-Activated Micro Pressure Reducing Valve:



No	Part Name	Material
1	Cover	Stainless Steel # 316
2	UH Ring	NBR
3	Piston	Stainless Steel # 316
4	Sealing	NBR
5	Shaft	Stainless Steel # 316
6	Main Body	Stainless Steel # 316
7	Diaphragm	Nylon-NBR
8	Spring Cover	Stainless Steel # 316
9	Stem	Stainless Steel # 304
10	Spring	Spring Steel
11	Washer	Brass
12	Stem	Stainless Steel # 304

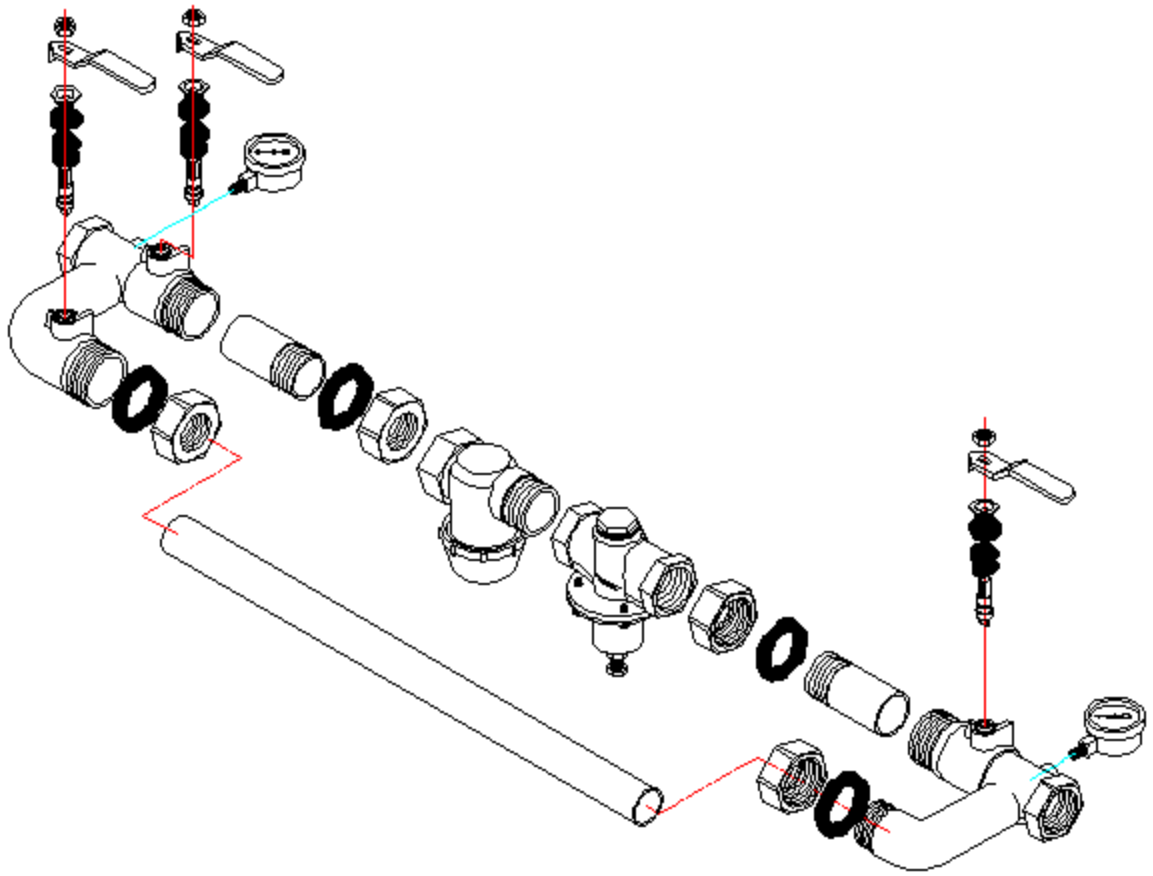


Before Installation:

1. The valve should be installed in horizontal pipeline and the adjusting stem should be placed downward.
2. Clean & remove all the impurities inside the pipe. A filter is recommended to install.
3. Make sure the direction is correct.
4. Setting pressure gets higher by turning the adjusting stem clockwise

Adjusting The Setting Pressure:

1. Turning anticlockwise the adjusting stem to the lowest pressure.
2. Close the outlet. (If the outlet pressure is higher than setting pressure, please release the outlet pressure in advance.)
3. Adjusting the pressure to required setting pressure by turning clockwise the stem.
4. Check if the pressure is correct by opening & closing the outlet for several times.
5. Open the outlet shut-off valve and tighten & fix the nut of adjusting stem.



8. The application of D. A. Pressure Control Valve

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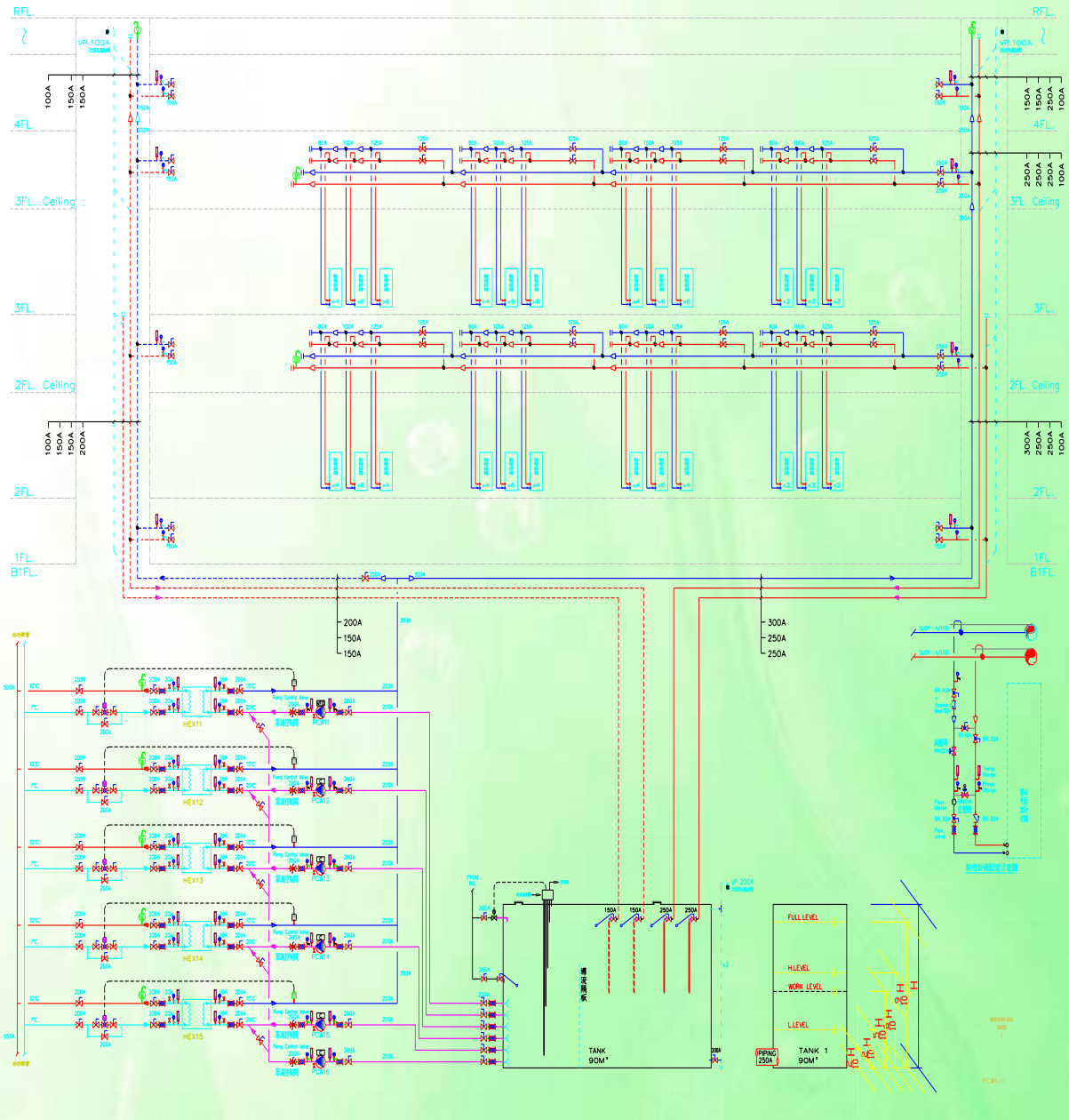

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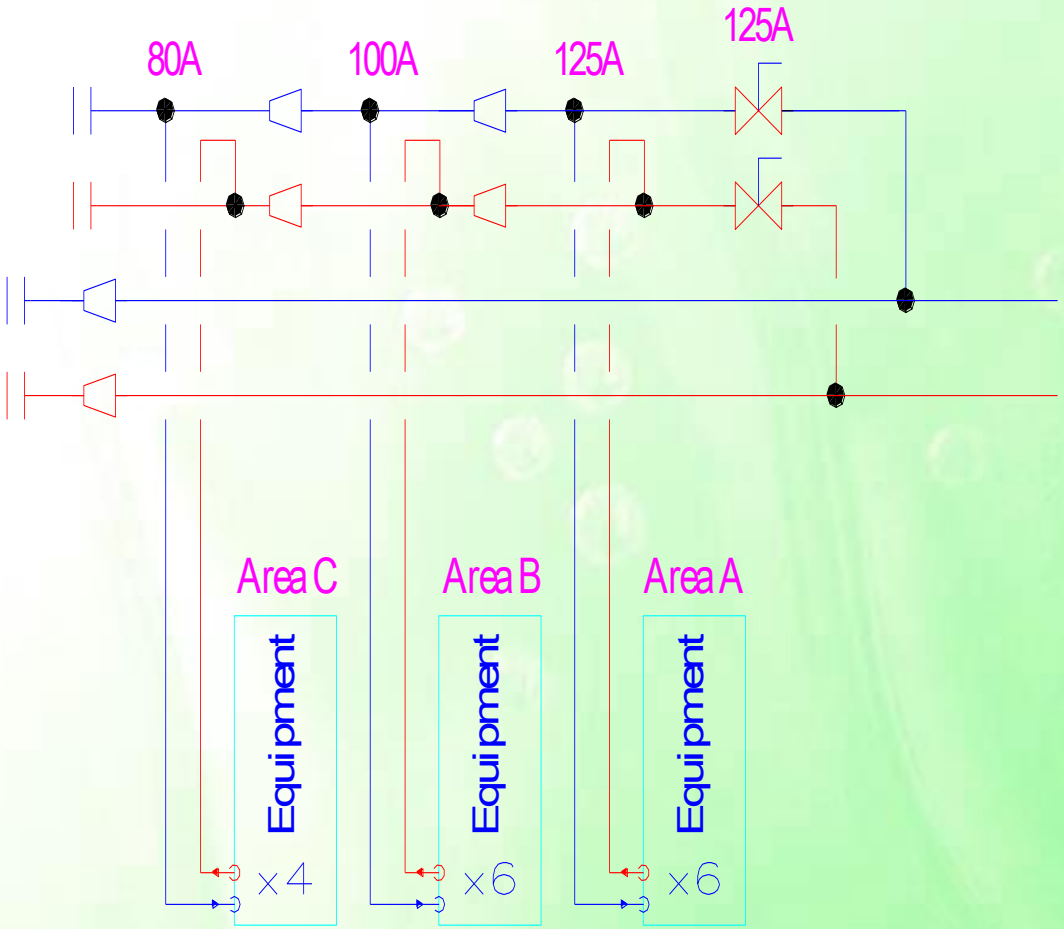
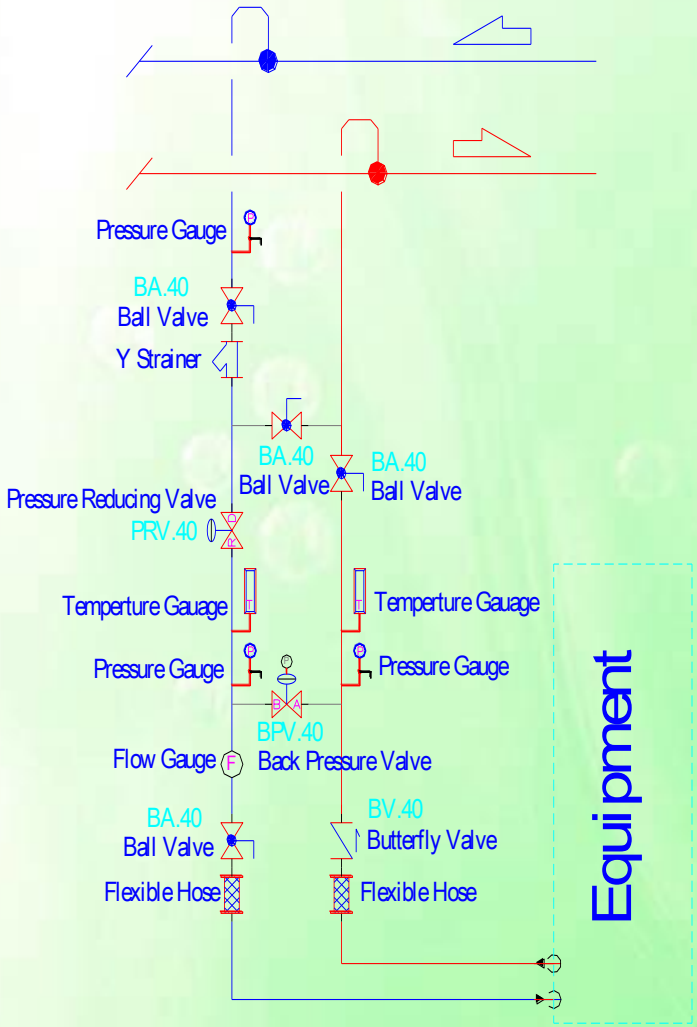
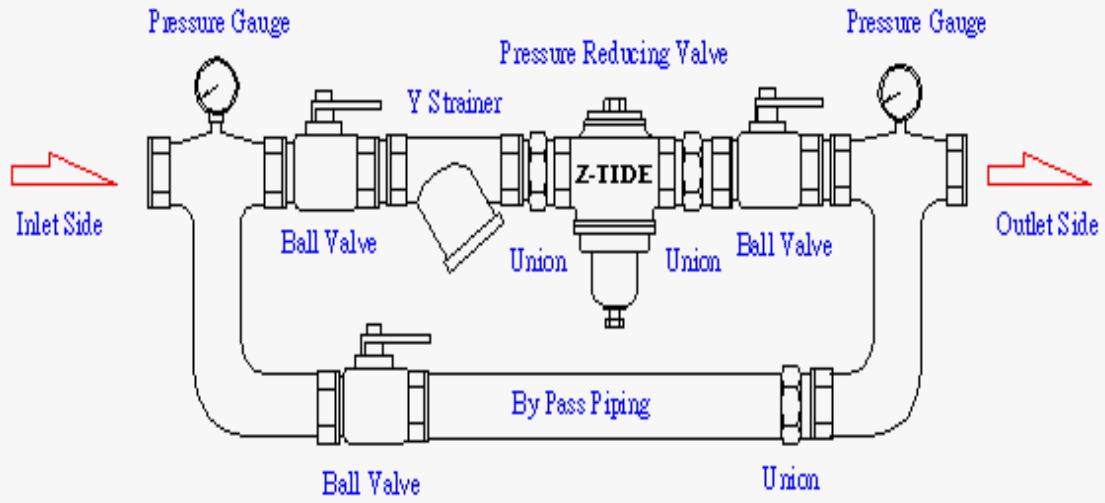

80A
100A
125A
125A
Area C
Area B
Area A
Equipment
×4
Equipment
×6
Equipment
×6


Pressure Gauge
BA.40
Ball Valve
Y Strainer
BA.40
Ball Valve
BA.40
Ball Valve
Pressure Reducing Valve
PRV.40
Temperture Gauage
Temperture Gauage
Pressure Gauge
Pressure Gauge
BPV.40
Flow Gauge
Back Pressure Valve
BA.40
Ball Valve
BV.40
Butterfly Valve
Flexible Hose
Flexible Hose
Equipment

Z-TIDE



Pressure Reducing Valve : Z-TIDE
MAX Working Pressure : 10 kgf/cm^2
Testing Pressure : 21 kgf/cm^2
Size : 1/2", 3/4" , 1" , 1 1/2" , 2"

Part Name	Materials
Pressure Reducing Valve	Stainless Steel #316
Ball Valve	Stainless Steel #304
Y Strainer	Stainless Steel #304
Pressure Gauge	Stainless Steel #304
By Pass Piping	Stainless Steel #304
Union and Fitting	Stainless Steel #304

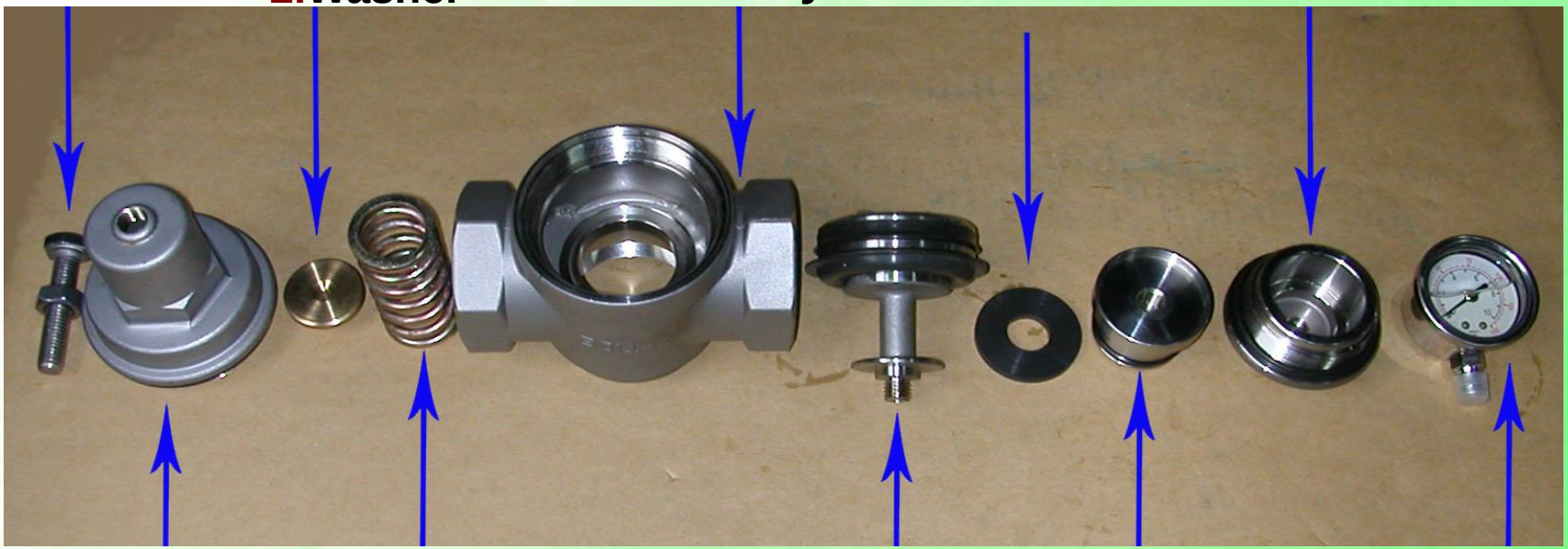
Z-TIDE VALVES	Article Name	Designed	Unit	Dwg. No	Prod. No
	Pressure Reducing Valve SET Thread Type		MM	PRV-SET-TH	
		Checked	Date		

9. The assemble & testing !

Assemble DAPRV

Assemble Z-Tide DAPRV Step by Step

1. Parts

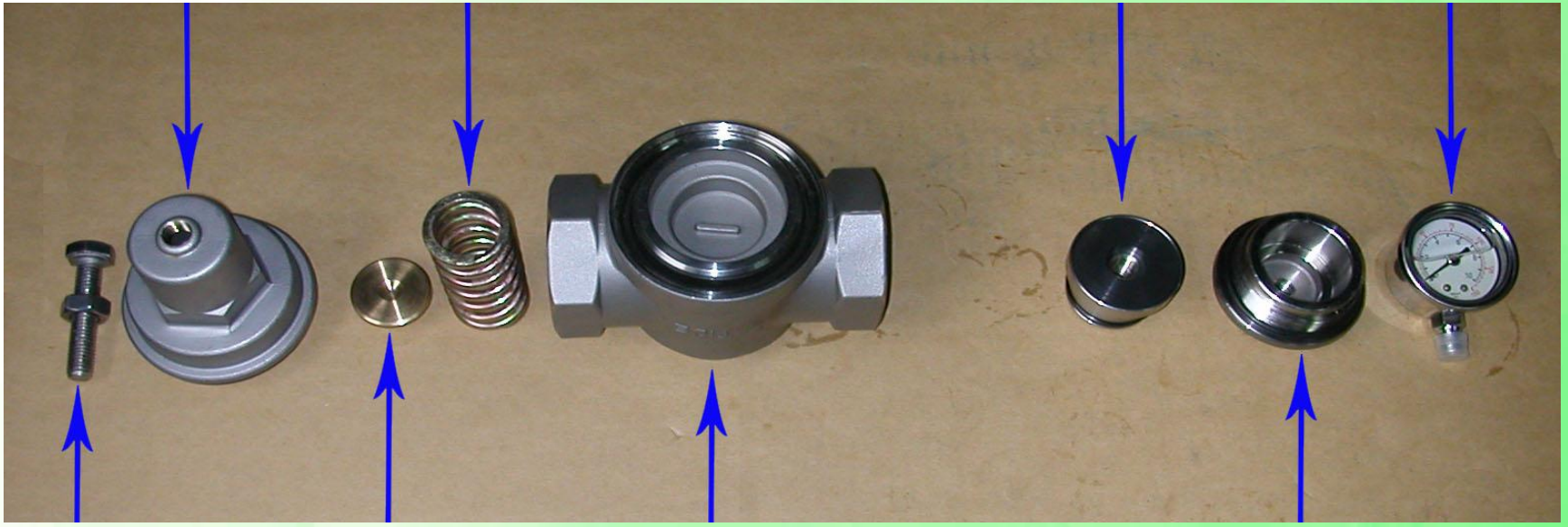


Assemble DAPRV

Assemble Z-Tide DAPRV Step by Step

2. Step1

6.Lower Cover **7.Spring** **Put 4.Sealing Spacer into 9.Piston** **10.Gauge**



1.Adjusting Stem **2.Washer** **Put 8.Shaft inside 3.Main body** **5.Upper Cover**

Assemble DAPRV

Assemble Z-Tide DAPRV Step by Step

3. Step2

1.Adjusting Stem 2.Washer Inverse 3.Main body 5.Upper Cover

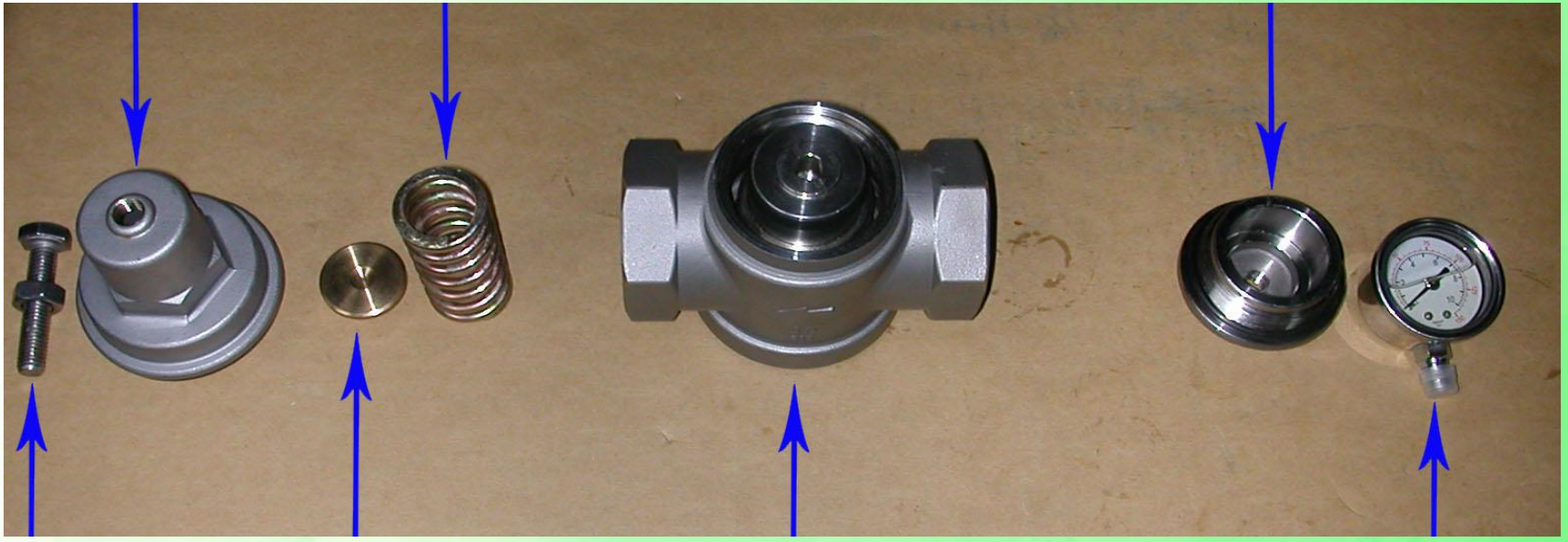
6.Lower Cover 7.Spring 9.Piston 10.Gauge

Assemble DAPRV

Assemble Z-Tide DAPRV Step by Step

4. Step3

6.Lower Cover **7.Spring** **5.Upper Cover**



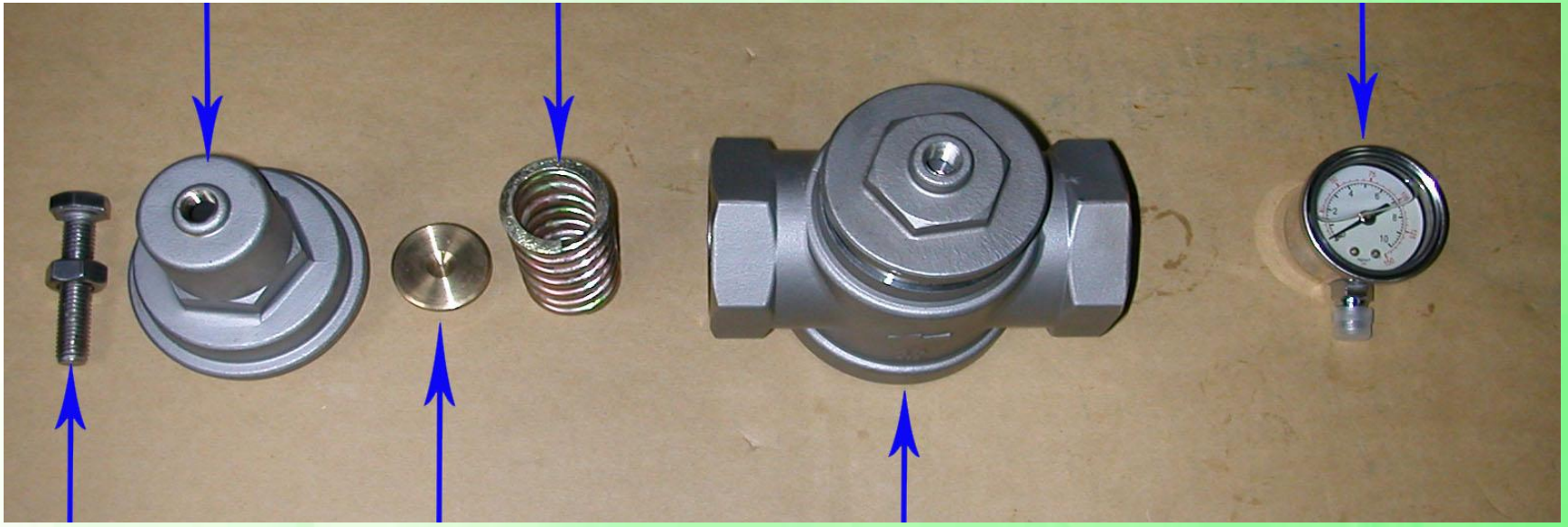
1.Adjusting Stem **2.Washer** **Screw 9.Piston to 8.Shaft** **10.Gauge**

Assemble DAPRV

Assemble Z-Tide DAPRV Step by Step

5. Step4

6.Lower Cover **7.Spring** **10.Gauge**



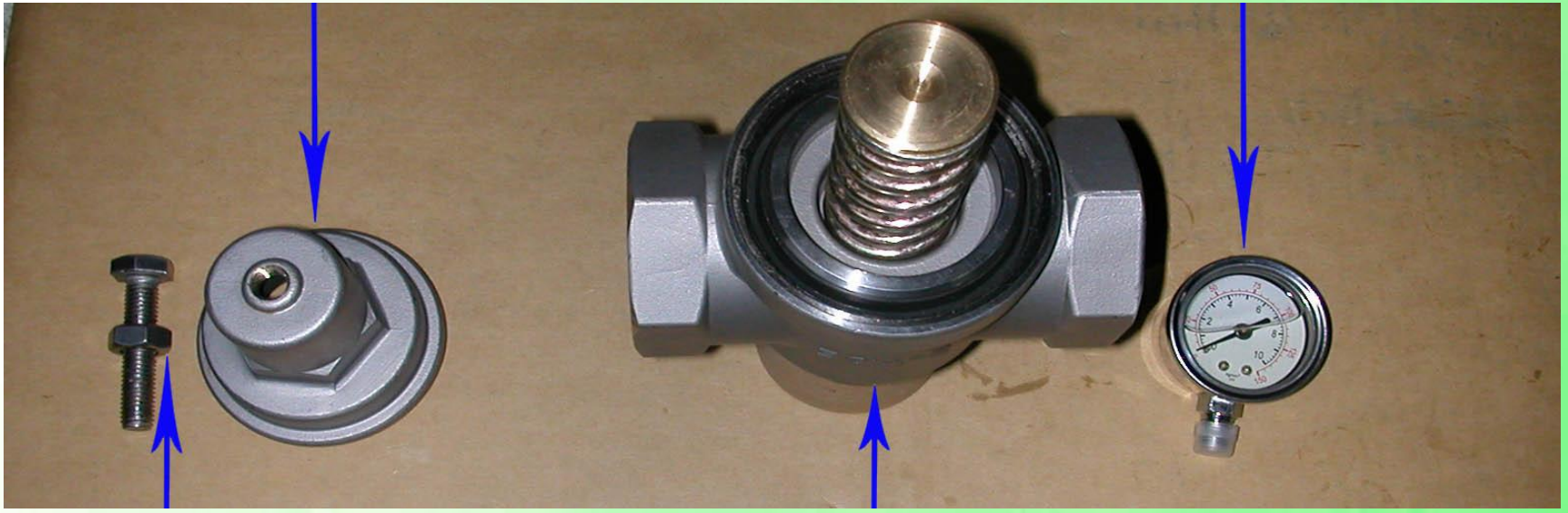
1.Adjusting Stem **2.Washer** **Screw 5.Upper Cover to 3.Main body**

Assemble DAPRV

Assemble Z-Tide DAPRV Step by Step

6. Step5

6.Lower Cover **10.Gauge**



1.Adjusting Stem

Put 7.Spring &
2.Washer on
3.Main body

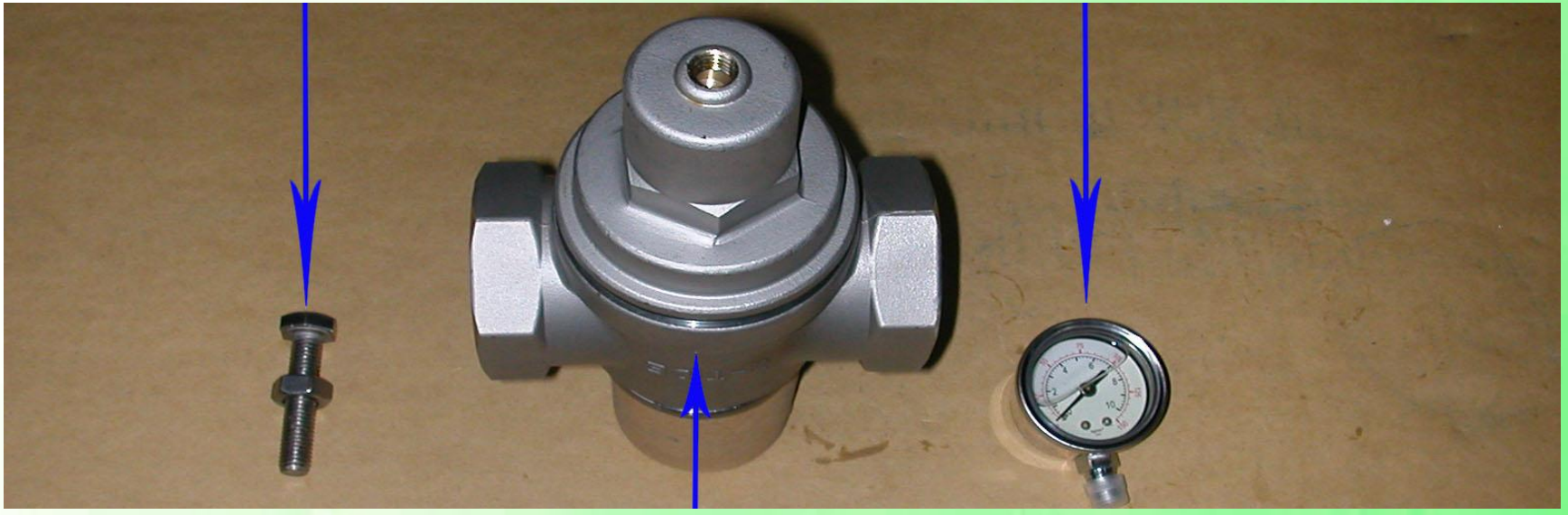
Assemble DAPRV

Assemble Z-Tide DAPRV Step by Step

7. Step6

1.Adjusting Stem

10.Gauge



Screw 6.Lower Cover to 3.Main body

Assemble DAPRV

Assemble Z-Tide DAPRV Step by Step

8. Step7

Screw 1.Adjusting Stem & 10.Gauge to 3.Main body

It's Done!!