

CONTROL LOOPS AND ACCESSORIES



Bermad Quick Reference



Dear user,

This quick reference pocket book is designed to assist you when handling and servicing Bermad valves. It contains the most common Bermad products and applications. For those not found herein, please call Bermad representative.

The quick reference is divided into three sections:

	Page
Section A: Basic Bermad valves	
by series name:.....	A/1-A/4
<hr/>	
Section B: Control accessories:.....	B/1-B/26
1. Photo of accessory and names of its component parts	
2. Number/Icon on drawings	
3. Connection ports and working modes	
<hr/>	
Section C: Schematics of control loops:...	C/1-C/48
1. Name of schematic and valve functions*	
2. Control loops and accessories	
3. Control lists	

(*) **Note:** The letter N in model numbers denotes series number, such as 200, 300, 400, etc.

For example: Model 430 may appear as N30
Model 720 = N20 etc.



List of Abbreviations

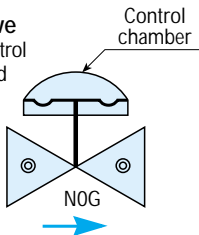
PCP	Plastic Pilot Valve – PC Series
PCM	Metal Pilot Valve – PC Series
PLT	Metal Pilot Valve – #X, #2, #3
AMV	Automatic Metering Valve
PRV	Pressure Reducing Valve
PSV	Pressure Sustaining Valve
NO	Normally Open
NC	Normally Closed

Icon of Basic Valve on Drawings



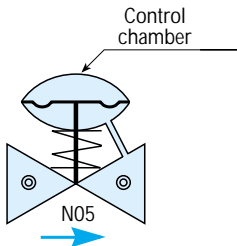
1. Hydraulic Control Valve

This icon denotes that the control loop suits all basic single and double chambered valves.



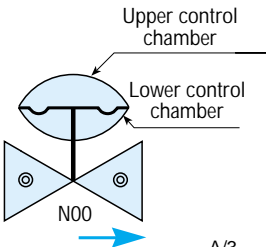
2. Single Chambered Hydraulic Control Valve

This icon denotes that the control loop suits basic single chambered valves.


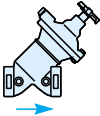
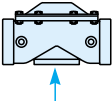
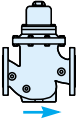




3. Double Chambered Hydraulic Control Valve

This icon denotes that the control loop suits basic double chambered valves.



Valve Type Identification According to Series

		Valve type
 <p>200 Series Plastic Hydraulic/ Electric Control Valves</p>		Single chambered
 <p>300 Series Metal Body Hydraulic/ Electric Control Valves</p>		Single or double chambered
 <p>R-Series "RAM HYDRANT" 3" Hydraulic Control Valves</p>		Single chambered
 <p>900 Series Hydrometers/ Automatic Metering Valves</p>		Single chambered
 <p>400 Series "RAM" Hydraulic Diaphragm Control Valves</p>		Single chambered
 <p>700 Series Hydraulic Diaphragm Control Valves</p>		Single or double chambered



Section B

Control Accessories

N°	Name of accessory	page
4A	In Line Self Flushing Filter	B/3
4	Control Filter	B/3
4F	Large Control Filter	B/3
26	4-way Three Positions - Manual Selector	B/4
1, 2	2-way - Cock Valve	B/4
27	Shuttle valve	B/5
14MB	2-way Bermad Solenoid pilot valve (NC)	B/6
15MB	3-way Bermad Solenoid pilot valve (NO)	B/7
15MCB	3-way Bermad Solenoid pilot valve (NC)	B/8
15LM	3-way Bermad Latching Solenoid pilot valve	B/9
14C	2-way Solenoid pilot valve (NC)	B/10
15	3-way "ASCO" type solenoid pilot valve (NO)	B/11
50	2-way Hydraulic Control pilot valve (Metal)	B/12
54	3-way Hydraulic Control pilot valve (Metal)	B/13
50P	2-way Hydraulic Control pilot valve (Plastic)	B/14
32A	3-way Multi Purpose pilot valve (PCP)	B/15
28AP	2-way Pressure Reducing pilot valve (PCP)	B/16
28AP	2-way Pressure Reducing pilot valve (PCM)	B/17

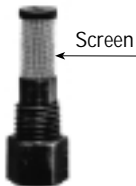
N°	Name of accessory	page
30A	2-way Pressure Sustaining pilot valve (PCM)	B/18
3Q-A	2-way Pressure Relief - Quick Type(PCM)	B/19
29P	2-way Flow Control Pilot Valve (Paddle Type - Plastic)	B/20
29M	2-way Flow Control Pilot Valve (Paddle Type - Metal)	B/21
10	3-way Positioning Pilot Valve #X (PLT)	B/22
8	2-way Pressure Reducing Pilot Valve #2 (PLT)	B/23
9	2-way Pressure Sustaining Pilot Valve #3 (PLT)	B/24
40	3-way Pilot Valve (for AMV)	B/25
41	5-way Sequential Pilot Valve (AMV)	B/26

In Line, Self Flushing Filter

For filtration of control loop

Number/Icon
on Drawings

4A



Control Filter

For filtration of control loop

Number/Icon
on Drawings

4



Large Control Filter

For filtration of highly contaminated
water supplied to control loop

Number/Icon
on Drawings

4F

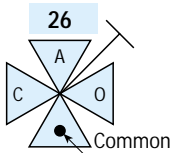


4-way Three Positions - Manual Selector



Operating handle

Number/Icon on Drawings



Operating Modes:



Mode A:
Automatic

Passage between
common and A



Mode O:
Open

Passage between
common and O



Mode C:
Close

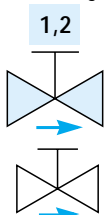
Passage between
common and C

2-way - Cock Valve

Operating handle



Number/Icon on Drawings



Operating Modes:



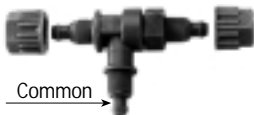
Mode (Open):
Passage through
cock valve



Mode (Close):
No passage through
cock valve

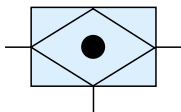
Shuttle Valve to Select the Higher of Two Pressures

Plastic



Number/Icon
on Drawings

27



Metal



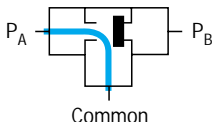
Connection Ports:

Common - Central

P_A - Control Pressure

P_B - Control Pressure

Operating Modes:



Mode A:

P_A Higher than P_B ,
passage between P_A
and common



Mode B:

P_A Lower than P_B ,
passage between P_B
and common



2-way Bermad Solenoid Pilot Valve (NC)



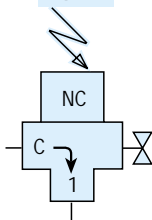
Actuator

Pilot valve
base

Manual
override

Number/Icon
on Drawings

14MB



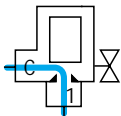
Operation:

Electric remote control or
manual override

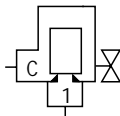
Connection Ports:

C – Pressure
1 – Valve

Operating Modes:

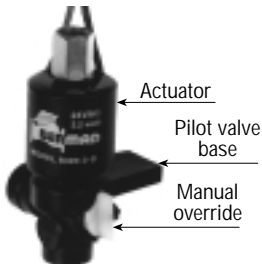


Mode A:
Energized, passage
between C and 1.
(Main valve opens)

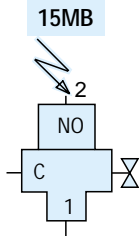


Mode B:
De-energized, no passage
between C and 1.
(Main valve closes)

3-way Bermad Solenoid Pilot Valve (NO)



Number/Icon
on Drawings



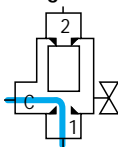
Operation:

Electric remote control or manual override

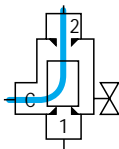
Connection Ports:

C – Valve
2 – Pressure
1 – Vent

Operating Modes:



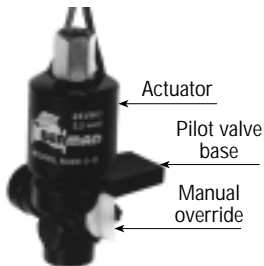
Mode A:
Energized, passage
between C and 1.
(Main valve opens)



Mode B:
De-energized, passage
between 2 and C.
(Main valve closes)

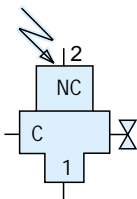


3-way Bermad Solenoid Pilot Valve (NC)



Number/Icon
on Drawings

15MCB



Operation:

Electric remote control or manual override

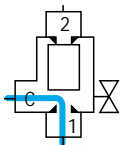
Connection Ports:

C – Valve

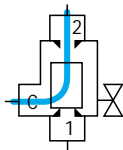
1 – Pressure

2 – Vent

Operating Modes:

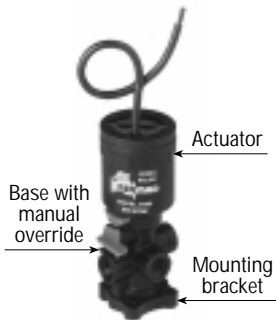


Mode A:
Energized, passage
between 1 and C.
(Main valve closes)



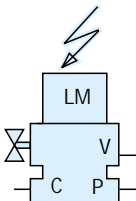
Mode B:
De-energized, passage
between 2 and C.
(Main valve opens)

3-way Bermad Latching Solenoid Pilot Valve



Number/Icon
on Drawings

15LM



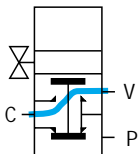
Operation:

Electric pulse or
manual override

Connection Ports:

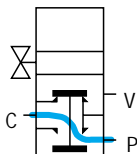
C – Valve
P – Pressure
V – Vent

Operating Modes:



Mode A:

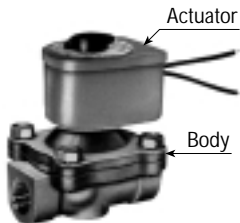
Passage between C and V.
(Main valve opens).



Mode B:

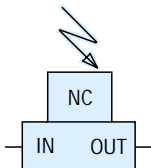
Passage between P and C.
(Main valve closes).

2-way Solenoid Pilot Valve (NC)



Number/Icon
on Drawings

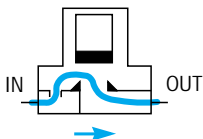
14C



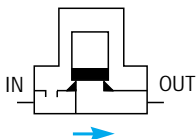
Operation:
Electric remote control

Connection Ports:
IN – Pressure
OUT – Valve

Operating Modes:



Mode A:
Energized, passage
between IN and OUT.
(Main valve opens).



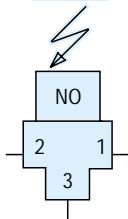
Mode B:
De-energized, no passage
between IN and OUT.
(Main valve closes).

3-way Solenoid Pilot Valve "ASCO" Type (NO)



Number/Icon
on Drawings

15



Operation:

Electric remote control

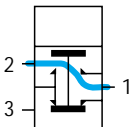
Connection Ports:

1 – Valve

2 – Vent

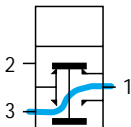
3 – Pressure

Operating Modes:



Mode A:

Energized, passage
between 1 and 2.
(Main valve opens).



Mode B:

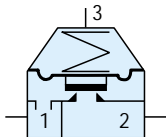
De-energized, passage
between 3 and 1.
(Main valve closes).

2-way Hydraulic Control Pilot Valve (Metal)



Number/Icon
on Drawings

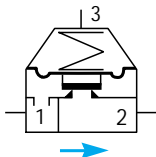
50



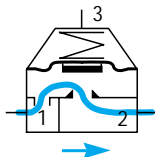
Operation:
Hydraulic remote control

Connection Ports:
1 – Upstream pressure
2 – Downstream pressure
3 – Control chamber

Operating Modes:



Mode A:
(3) Hydraulic control -
connected, no passage
between 1 and 2.
(Main valve closes).



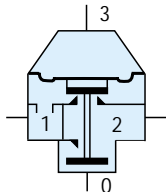
Mode B:
(3) Hydraulic control -
not connected, passage
between 1 and 2.
(Main valve opens).

3-way Hydraulic Control Pilot Valve (Metal)



Number/Icon
on Drawings

54



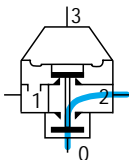
Operation:

Hydraulic remote control

Connection Ports:

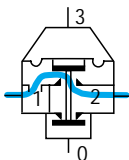
- 0 – N.O. - Upstream pressure, N.C. - Vent
- 1 – N.C. - Upstream pressure, N.O. - Vent
- 2 – Common
- 3 – Control chamber

Operating Modes:



Mode A:

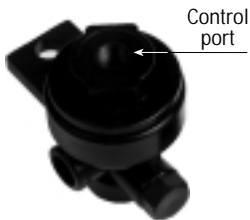
(3) Hydraulic control - actuated. Passage between 0 and 2.



Mode B:

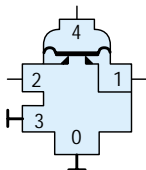
(3) Hydraulic control - not actuated. Passage between 1 and 2.

2-way Hydraulic Control Pilot Valve (Plastic)



Number/Icon
on Drawings

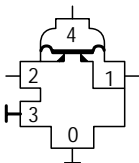
50P



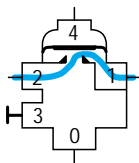
Operation:
Hydraulic remote control

Conecciones:
1 – Upstream pressure
2 – Downstream pressure
4 – Control chamber
0/3 – Plugged

Operating Modes:



Mode A:
(4) Hydraulic control - actuated. No passage between 1 and 2.
(Main valve closes).



Mode B:
(4) Hydraulic control - not actuated. Passage between 1 and 2.
(Main valve opens).

PC-X-A-P 3-way Multi Purpose Pilot Valve (PCP) to Regulate Upstream or Downstream Pressure

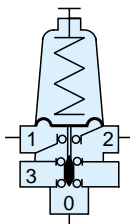


Connection Ports:

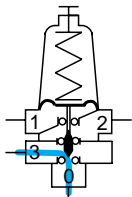
- 0 – Upstream for reducing; vent for sustaining
- 1 – Sensing, regulated pressure
- 2 – Vent for reducing; upstream for sustaining
- 3 – Control chamber of valve

Number/Icon
on Drawings

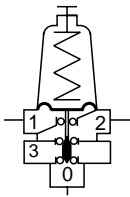
32A



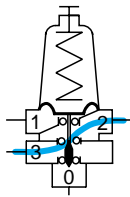
Operating Modes:



Mode A:
Regulated pressure higher than preset pressure:
Passage between 0 and 3.



Mode B:
Regulated pressure equals preset pressure:
No passage. The pilot "locked". (Main valve under preset pressure)



Mode C:
Regulated pressure lower than preset pressure:
Passage between 3 and 2.



PC-20-A-P 2-way Pressure Reducing Pilot Valve (PCP) to Regulate Constant Downstream Pressure

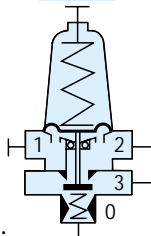


Connection Ports:

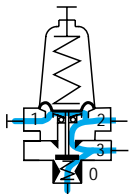
- 1 – Plugged or downstream (sensing only)
- 2 – Downstream
- 3 – Control chamber of valve
- 0 – Upstream pressure with integrated restriction

Number/Icon on Drawings

28AP

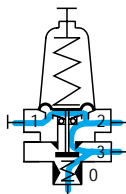


Operating Modes:

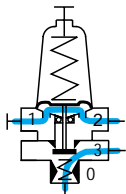


Mode A:
Regulated pressure lower than preset pressure:
Passage between 2 and 3. (Main valve opens).

B/16



Mode B:
Regulated pressure equals preset pressure: Controlled passage between 3 and 2. (Main valve under preset pressure).



Mode C:
Regulated pressure higher than preset pressure:
No passage between 2 y 3. (Main valve closes).

PC-20-A-M 2-way Pressure Reducing Pilot Valve (PCM) to Regulate Constant Downstream Pressure



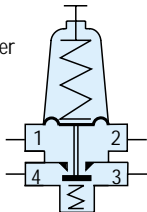
Connection Ports:

- 1 or 2 – Downstream/
sensing
- 3 – Control chamber
on valve
- 4 – Upstream

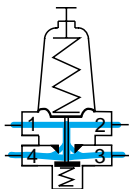
Note: Install restriction
at inlet upstream.

Number/Icon
on Drawings

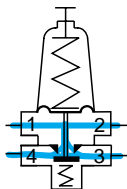
28A



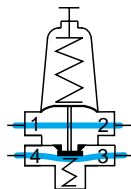
Operating Modes:



Mode A:
Regulated
pressure lower
than preset
pressure:
Passage between
4/3 and 1/2.
(Main valve
opens).



Mode B:
Regulated pressure
equals preset
pressure: Controlled
passage between
4/3 and 1/2. (Main
valve under preset
pressure).



Mode C:
Regulated
pressure higher
than preset
pressure:
Passage between
1/2 and 4/3. (Main
valve closes).



PC-30-A-M 2-way Pressure Sustaining Pilot Valve (PCM) to Sustain Constant Upstream Pressure



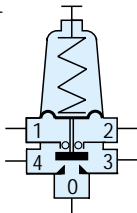
Connection Ports:

- 1 or 2 – Sensing
- 3 – Control chamber on valve
- 4 – Upstream
- 0 – Downstream

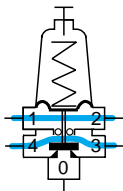
Note: Install restriction at inlet upstream.

Number/Icon
on Drawings

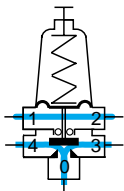
30A



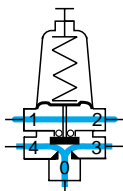
Operating Modes:



Mode A:
Regulated pressure lower than preset pressure: No passage between 3/4 and 0. (Main valve closes).



Mode B:
Regulated pressure equals preset pressure: Controlled passage between 3/4 and 0. (Main valve under preset pressure).



Mode C:
Regulated pressure higher than preset pressure: Passage between 3/4 and 0. (Main valve opens).

PC-3Q-A-M 2-way Pressure Relief (Quick Type) Pilot Valve (PCM)

for Protection Against Water Hammer

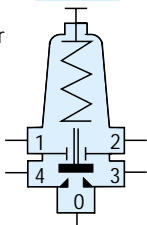


Connection Ports:

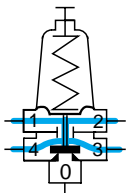
- 1 o 2 – Upstream
- 3 o 4 – Control chamber of valve
- 0 – Downstream

Number/Icon
on Drawings

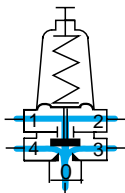
3Q-A



Operating Modes:



Mode A:
System pressure lower than preset pressure: No passage between 3/4 and 0. (Main valve closes).



Mode B:
System pressure higher than preset pressure. Passage between 3/4 and 0. (Main valve opens).



PC-70-P 2-way Flow Control Pilot Valve (PaddleType-Plastic) to Limit Preset Flow



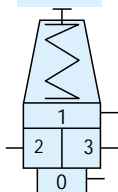
Connection Ports:

- 1 – Upstream
- 2 – Downstream
- 3 – Control chamber of valve
- 0 – Upstream

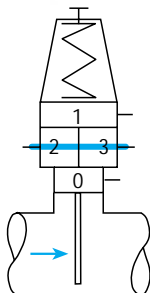
*Paddle sizes available according pipe size.

Number/Icon on Drawings

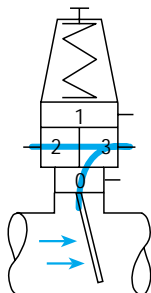
29P



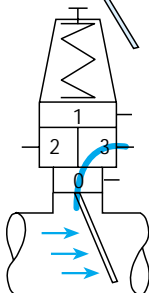
Operating Modes:



Mode A:
Flow lower than preset flow:
passage between 2 and 3.
B/20



Mode B:
Flow equals preset flow: controlled flow, passage between 2 and 3, 0 and 3.



Mode C:
Flow higher than preset flow:
passage between 0 and 3.

PC-70-M 2-way Flow Control Pilot Valve (PaddleType-Metal) to Limit Preset Flow



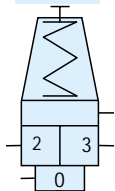
Connection Ports:

- 2 – Downstream
- 3 – Control chamber of valve
- 0 – Upstream

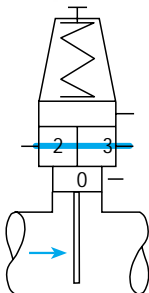
*Paddle sizes available according pipe size.

Number/Icon on Drawings

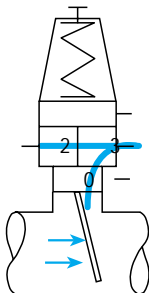
29M



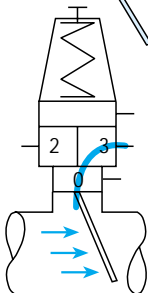
Operating Modes:



Mode A:
Flow lower than preset flow:
passage between 2 and 3.



Mode B:
Flow equals preset flow:
controlled flow,
passage between 2 and 3, 0 and 3.



Mode C:
Flow higher than preset flow:
passage between 0 and 3.



3-way Positioning Pilot Valve #X (PLT)

to Regulate Upstream or Downstream Pressure

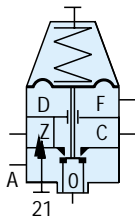


Connection Ports:

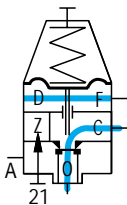
- 0 – Upstream for reducing, vent for sustaining
- C – Control chamber of valve
- A/Z – Vent for reducing, upstream for sustaining
- F/D – Sensing
- 21 – Built in needle valve

Number/Icon
on Drawings

10

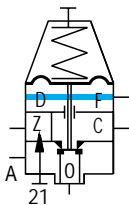


Operating Modes:

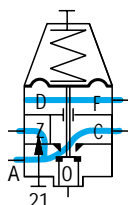


Mode A:
Regulated pressure higher than preset pressure:
Passage between 0 and C.

B/22



Mode B:
Regulated pressure equals preset pressure: Pilot locked, no passage through pilot.



Mode C:
Regulated pressure lower than preset pressure:
Passage between C and Z.

2-way Pressure Reducing Pilot Valve #2 (PLT) to Maintain Constant Preset Downstream Pressure

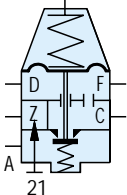


Connection Ports:

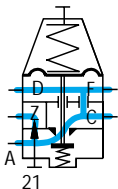
- Z – Upstream
- A – Control chamber of valve
- C – Downstream
- F/D – Sensing
- 21 – Built in needle valve

Number/Icon
on Drawings

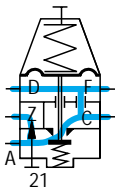
8



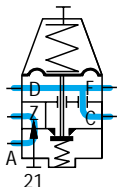
Operating Modes:



Mode A:
Regulated pressure lower than preset pressure:
Passage between A and C. (Main valve opens).



Mode B:
Regulated pressure equals preset pressure: Controlled passage between A and C. (Main valve under preset pressure).



Mode C:
Regulated pressure higher than preset pressure:
No passage between A and C. (Main valve closes).



2-way Pressure Sustaining Pilot Valve #3 (PLT) to Maintain Constant Preset Upstream Pressure

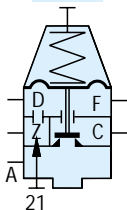


Connection Ports:

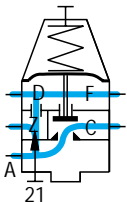
- Z – Upstream
- A – Control chamber of valve
- C – Downstream
- F/D – Sensing
- 21 – Built in needle valve

Number/Icon on Drawings

9

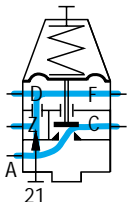


Operating Modes:



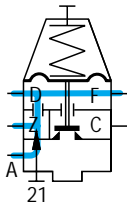
Mode A:

Regulated pressure higher than preset pressure: Passage between A and C. (Main valve opens).



Mode B:

Regulated pressure equals preset pressure: Controlled passage between A and C. (Main valve under preset pressure).



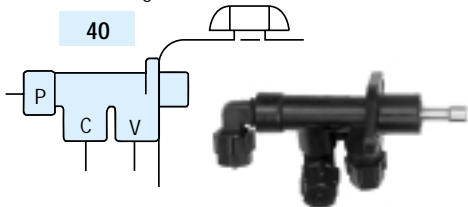
Mode C:

Regulated pressure lower than preset pressure: No passage between A and C. (Main valve closes).

3-way Pilot Valve (for AMV)

Number/Icon
on Drawings

40



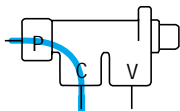
Connection Ports:

- P – Upstream pressure
- C – Control chamber of AMV
- V – Vent

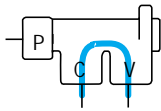
Operation:

By manual setting knob

Operating Modes:

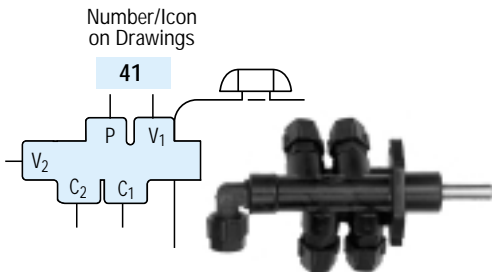


AMV Closed
passage between
P and C.



AMV Open
passage between
C and V.

5-way Sequential Pilot Valve for Sequential AMV System



Connection Ports:

P – Pressure

C₁ – Control chamber of AMV

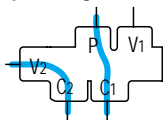
V₁ – Vent or Connection to preceding AMV

C₂ – Connection to next AMV in sequence

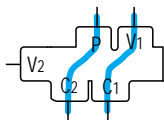
V₂ – Vent

Operation: Setting knob

Operating Modes:



AMV Closed
passage between
P–C₁ and C₂–V₂.



AMV Open (Set)
passage between
P–C₂ and C₁–V₁.

Section C



List of Schematics of Control Loops

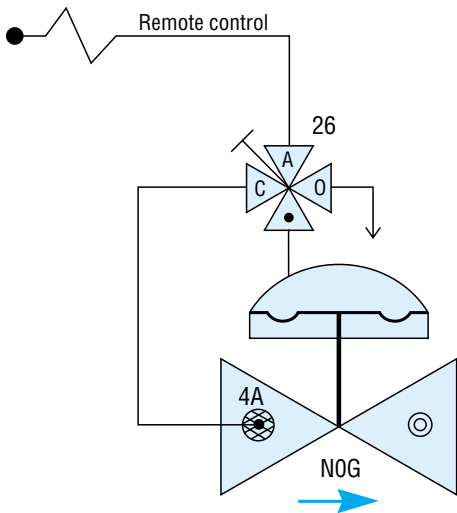
Model	page
Hydraulic Remote Control Valve with Manual Selector	C/5
NC Valve with Hydraulic Remote Control and Manual Selector	C/6
Automatic Metering Valve (AMV)	C/7
Electric Control Valve (NC) with 3-way Control Loop	C/8
Electric Control Valve (NC) with 3-way Control Loop and Manual Selector	C/9
PRV with 2-way Control Loop and Manual Closing	C/10
Pressure Reducing - AMV with 2-way Control Loop	C/11
PRV with 2-way Control Loop and Manual Closing	C/12
PRV 200 Series with 2-way Control Loop and Manual Closing	C/13
PRV with 2-way Control Loop and Manual Opening & Closing	C/14
Pressure Reducing AMV with 2-way Control Loop	C/15
PRV with 3-way Control Loop and Manual Selector	C/16
PRV with 3-way Control Loop and Manual Selector	C/17
Pressure Reducing AMV with 3-way Control Loop	C/18
PRV with 2-way Control Loop, Hydraulic Remote Control and Manual Closing	C/19
PRV with 2-way Control Loop, Hydraulic Remote Control and Manual Closing	C/20

Model	page
PRV with 2-way Control Loop, Hydraulic Remote Control and Manual Opening & Closing	C/21
PRV with 3-way Control Loop Remote Control and Manual Selector	C/22
PRV with 2-way Control Loop (NC), Electric Remote Control and Manual Closing	C/23
PRV with 2-way Control Loop (NC), Electric Remote Control and Manual Closing	C/24
PRV 200 Series with 2-way Control Loop (NC), and Electric Remote Control	C/25
PRV with 2-way Control Loop (NC), Electric Remote Control and Manual Opening & Closing	C/26
PRV with 3-way Control Loop (NC), Electric Remote Control and Manual Selector	C/27
PSV with 2-way Control Loop and Manual Closing	C/28
PSV with 2-way Control Loop and Manual Opening & Closing	C/29
PSV with 3-way Control Loop and Manual Selector	C/30
PSV with 3-way Control Loop and Manual Selector	C/31
PSV with 2-way Control Loop (NC), Electric Remote Control and Manual Closing	C/32
PSV with 2-way Control Loop (NC), Electric Remote Control and Manual Opening & Closing	C/33
PSV with 3-way Control Loop (NC), Electric Remote Control and Manual Selector	C/34
Pressure Relief (Quick Type) Valve	C/35

Model	page
Pressure Relief (Quick Type) Valve, 700 Series	C/36
PRV and PSV with 2-way Control Loop and Manual Closing	C/37
PRV and PSV with 3-way Control Loop and Manual Selector	C/38
Flow Control Valve Orifice Type with 2-way Control Loop and Manual Closing	C/39
Flow Control Valve Orifice Type with 2-way Control Loop and Manual Closing	C/40
Flow Control Hydrometer with 2-way Control Loop and Manual Selector	C/41
Flow Control AMV with 2-way Control Loop	C/42
Flow Control and Pressure Reducing Hydrometer with 2-way Control Loop (PC Paddle Type)	C/43
Flow Control and Pressure Reducing Hydrometer with 2-way Control Loop (PC Paddle Type)	C/44
Flow Control and Pressure Reducing Hydrometer with 2-way Control Loop (PC Paddle Type)	C/45
Flow Control and Pressure Reducing AMV with 2-way Control Loop (PC Paddle Type)	C/46
Sequential AMV	C/47
Schematic of Sequential System	C/48

NOG-Z

Hydraulic Remote Control Valve with Manual Selector



Control List:

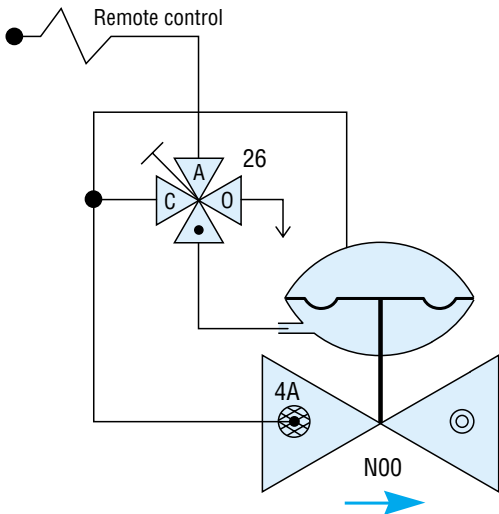
NOG – Single or double chambered hydraulic valve

4A – In line, self flushing filter

26 – 4 way manual selector

N00-NC-Z

NC Valve with Hydraulic Remote Control and Manual Selector



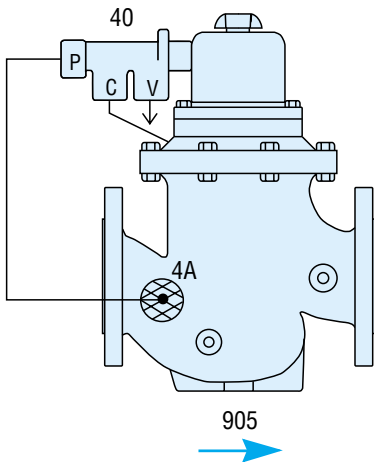
Control List:

N00 - Double chambered hydraulic valve

4A - In line, self flushing filter

26 - 4-way manual selector

900-D Automatic Metering Valve(AMV)

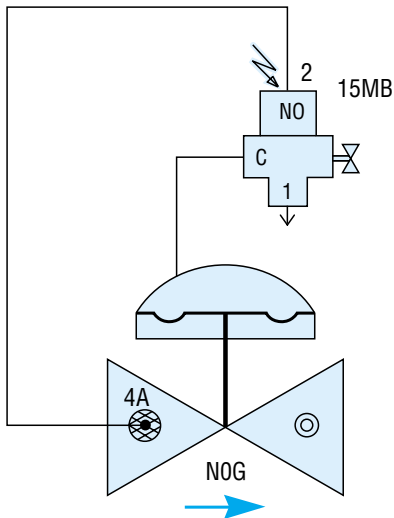


Control List:

- 905 – Basic hydrometer
- 4A – In line, self flushing filter
- 40 – 3 way control valve (for AMV only)

N10

Electric Control Valve (NC) with 3-way Control Loop

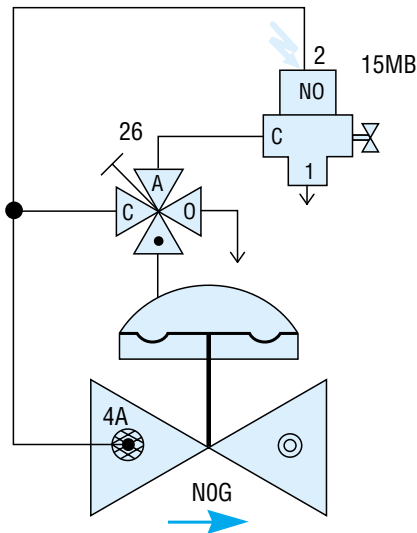


Control List:

- NOG – Single or double chambered hydraulic valve
- 4A – In line, self flushing filter
- 15MB – 3-way Bermad solenoid pilot valve (NO)

N10-Z

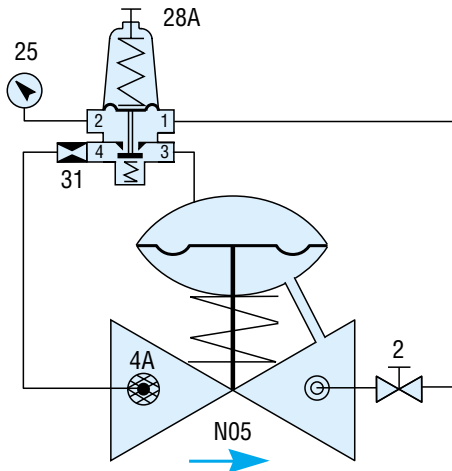
Electric Control Valve (NC) with 3-way Control Loop and Manual Selector



Control List:

- NOG – Single or double chambered hydraulic valve
- 4A – In line, self flushing filter
- 26 – 4-way manual selector
- 15MB – 3-way Bermad Solenoid (NO)

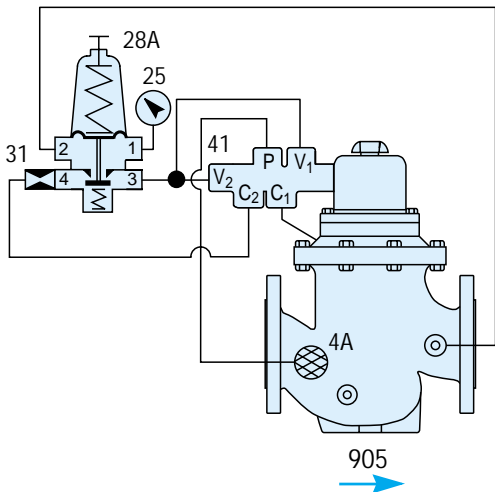
N20-2W-(PCM) PRV with 2-way Control Loop and Manual Closing



Control List:

- N05 – Single chambered hidraulic valve
- 4A – In line, self flushing filter
- 2 – Cock valve
- 28A – 2-way PCM pressure reducing pilot valve
- 25 – Pressure gauge (optional)
- 31 – Control orifice

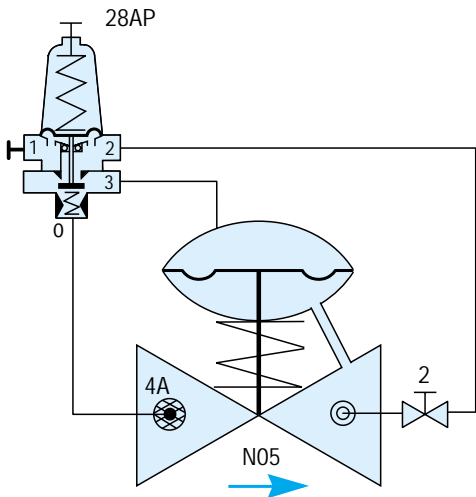
920-D-2W-(PCM) Pressure Reducing - AMV with 2-way Control Loop



Control List:

- 905 - Basic hydrometer
- 28A - 2-way PCM pressure reducing pilot valve
- 41 - 5-way sequential pilot valve (for AMV only)
- 31 - Control orifice
- 25 - Pressure gauge (optional)
- 4A - In line, self flushing filter

N20-2W-(PCP) PRV with 2-way Control Loop and Manual Closing

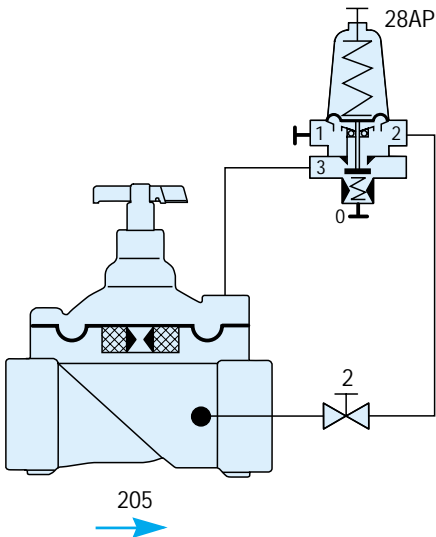


Control List:

- N05 - Single chambered hydraulic valve
- 4A - In line, self flushing filter
- 2 - Cock valve
- 28AP - 2-way PCP pressure reducing pilot valve

220-2W-(PCP)

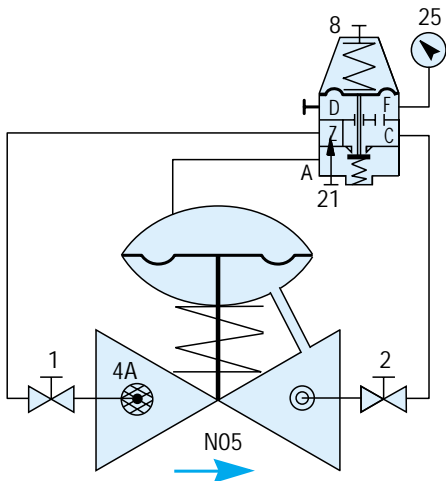
PRV 200 Series with 2-way Control Loop and Manual Closing



Control List:

- 205 – Basic valve - 200 Series with orifice
- 28AP – 2-way PCP pressure reducing pilot valve
- 2 – Cock valve

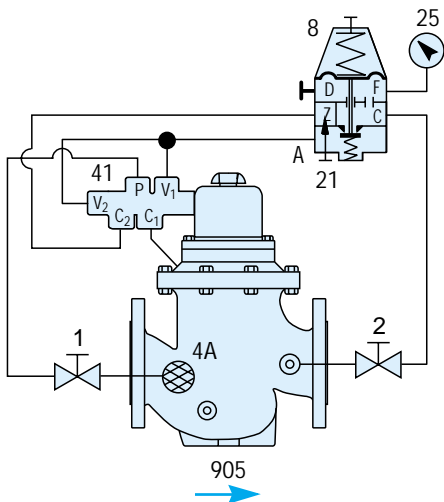
N20-2W-(PLT #2) PRV with 2-way Control Loop and Manual Opening & Closing



Control List:

- N05 – Single chambered hidráulic valve
- 4A – In line, self flushing filter
- 1,2 – Cock valve
- 25 – Pressure gauge (optional)
- 8 – 2-way pressure reducing pilot valve #2 (PLT)
- 21 – Built in needle valve

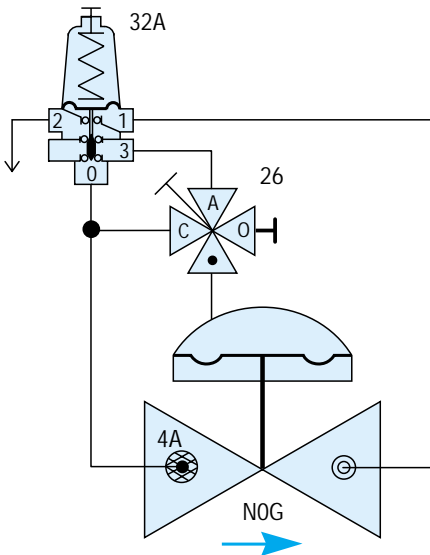
900-D-2W-(PLT #2) Pressure Reducing AMV with 2-way Control Loop



Control List:

- 905 – Basic hydrometer
- 4A – In line, self flushing filter
- 8 – 2-way pressure reducing pilot valve #2 (PLT)
- 25 – Pressure gauge (optional)
- 41 – 5-way sequential pilot valve (for AMV only)
- 1,2 – Cock valve
- 21 – Built in needle valve

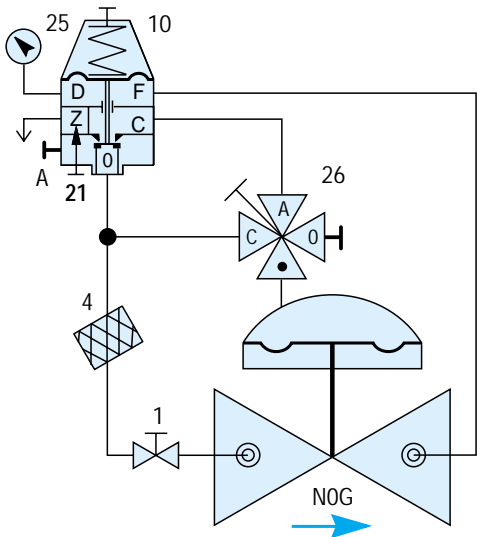
N20-ZX-(PCP) PRV with 3-way Control Loop and Manual Selector



Control List:

- NOG – Single or double chambered hydraulic valve
- 4A – In line, self flushing filter
- 32A – 3-way PCP pressure reducing pilot valve
- 26 – 4-way manual selector

N20-ZX-(PLT #X) PRV with 3-way Control Loop and Manual Selector

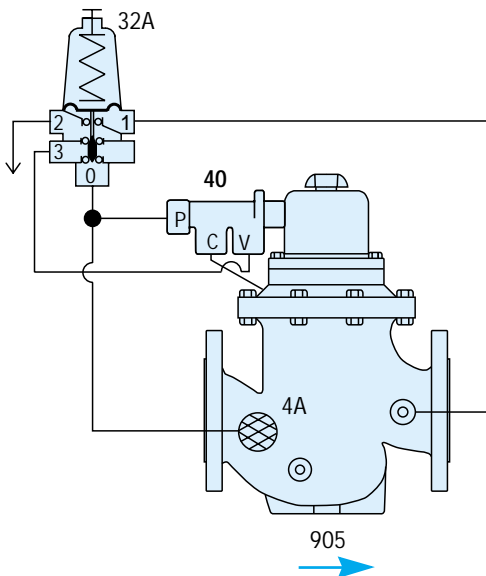


Control List:

- NOG – Single or double chambered hydraulic valve
- 1 – Cock valve
- 4 – Control filter
- 10 – 3-way positioning pilot valve #X
- 25 – Pressure gauge (optional)
- 26 – 4-way manual selector
- 21 – Built in needle valve



920-DX-(PCP) Pressure Reducing AMV with 3-way Control Loop

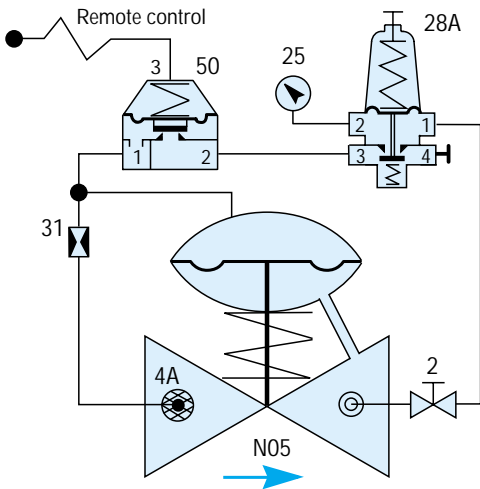


Control List:

- 905 – Basic Hydrometer
- 4A – In line, self flushing filter
- 32A – 3-way PCP pressure reducing pilot valve
- 40 – 3-way control valve (for AMV only)

N20-50-2W-(PCM)

PRV with 2-way Control Loop, Hydraulic Remote Control and Manual Closing

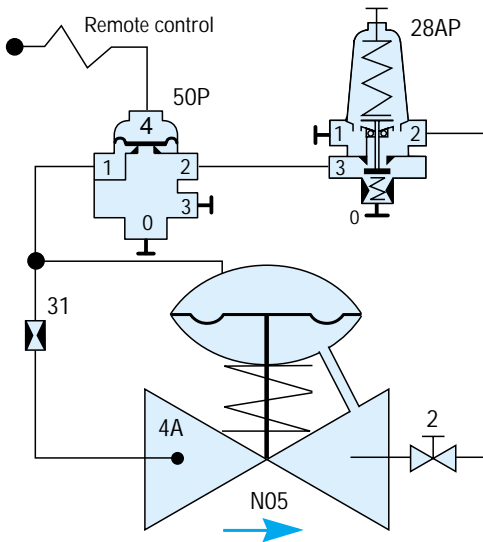


Control List:

- N05 – Single chambered hydraulic valve
- 4A – In line, self flushing filter
- 28A – 2-way PCM pressure reducing pilot valve
- 25 – Pressure gauge (optional)
- 2 – Cock valve
- 50 – 2-way metal hydraulic control valve
- 31 – Control orifice

N20-50-2W-(PCP)

PRV with 2-way Control Loop, Hydraulic Remote Control and Manual Closing

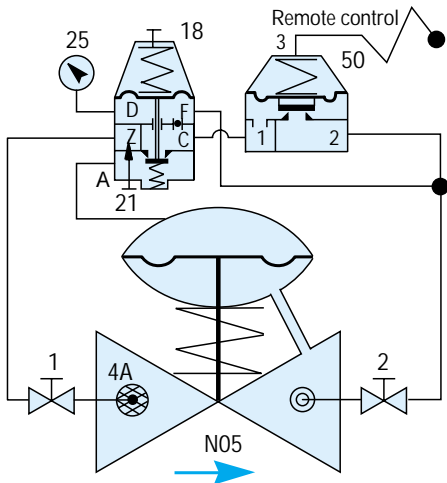


Control List:

- N05 - Single chambered hydraulic valve
- 4A - In line, self flushing filter
- 2 - Cock valve
- 28AP - 2-way PCP pressure reducing pilot valve
- 50P - 2-way plastic hydraulic control pilot valve
- 31 - Control orifice

N20-50-2W-(PLT#2)

PRV with 2-way Control Loop, Hydraulic Remote Control and Manual Opening & Closing



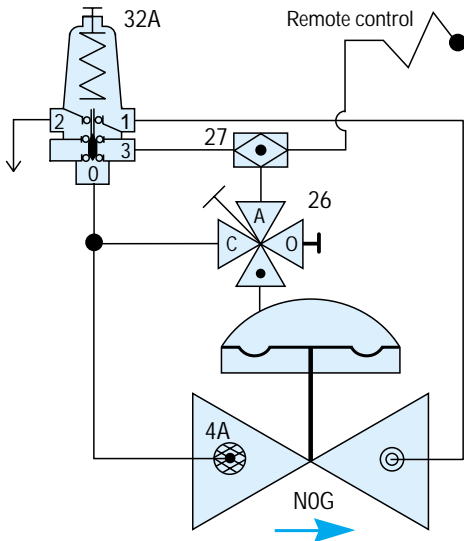
Control List:

- N05 – Single chambered hydraulic valve
- 4A – In line, self flushing filter
- 1,2 – Cock valve
- 25 – Pressure gauge (optional)
- 50 – 2-way metal hydraulic control valve
- 18 – 2-way remote control sensing pressure reducing pilot valve #2R
- 21 – Built in needle valve

N20-50-ZX-(PCP)

PRV with 3-way Control Loop

Remote Control and Manual Selector

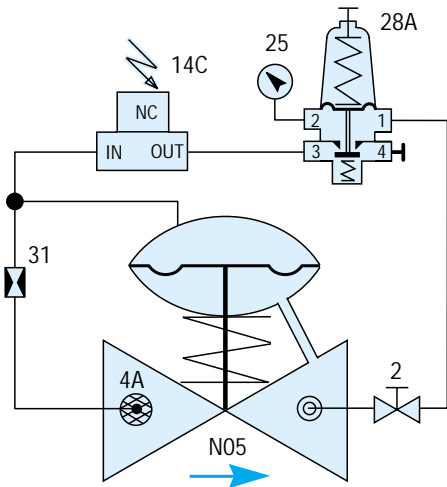


Control List:

- NOG – Single or double chambered hydraulic valve
- 4A – In line, self flushing filter
- 26 – 4-way manual selector
- 27 – Shuttle valve
- 32A – 3-way PCP pressure reducing pilot valve

N20-55-2W-(PCM)

PRV with 2-way Control Loop (NC), Electric Remote Control and Manual Closing

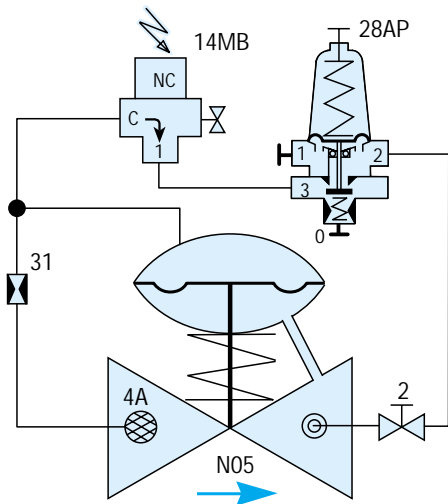


Control List:

- N05 – Single chambered hydraulic valve
- 4A – In line, self flushing filter
- 25 – Pressure gauge (optional)
- 2 – Cock valve
- 31 – Control orifice
- 14C – 2-way solenoid NC
- 28A – 2-way PCM pressure reducing pilot valve

N20-55-2W-(PCP)

PRV with 2-way Control Loop (NC), Electric Remote Control and Manual Closing

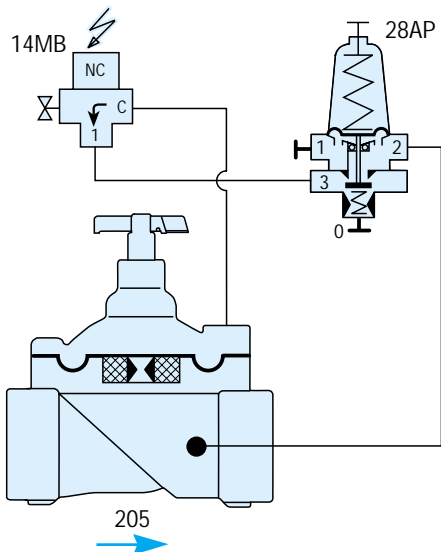


Control List:

- N05 - Single chambered hydraulic valve
- 4A - In line, self flushing filter
- 2 - Cock valve
- 31 - Control orifice
- 14MB - 2-way NC Bermad solenoid pilot valve
- 28AP - 2-way PCP pressure reducing pilot valve

220-55-2W-(PCP)

PRV 200 Series with 2-way Control Loop (NC) and Electric Remote Control

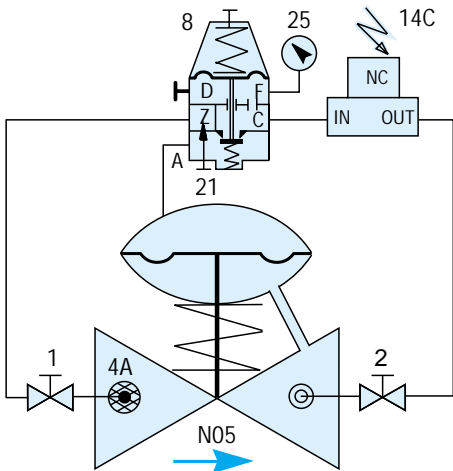


Control List:

- 205 – Basic valve 200 Series (with orifice)
- 14MB – 2-way NC Bermad solenoid pilot valve
- 28AP – 2-way PCP pressure reducing pilot valve

N20-55-2W-(PLT#2)

PRV with 2-way Control Loop (NC), Electric Remote Control and Manual Opening & Closing

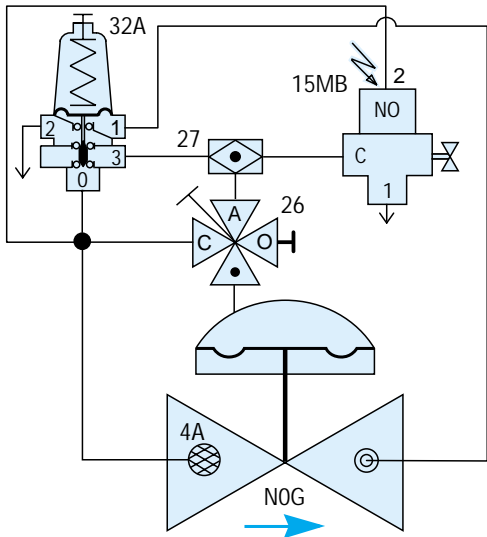


Control List:

- N05 – Single chambered hydraulic valve
- 4A – In line, self flushing filter
- 1,2 – Cock valve
- 25 – Pressure gauge (optional)
- 14C – 2-way solenoid NC pilot valve
- 8 – 2-way (PLT) pressure reducing pilot valve #2
- 21 – Built in needle valve

N20-55-ZX-(PCP)

PRV with 3-way Control Loop (NC), Electric Remote Control and Manual Selector



Control List:

NOG – Single or double chambered hydraulic valve

4A – In line, self flushing filter

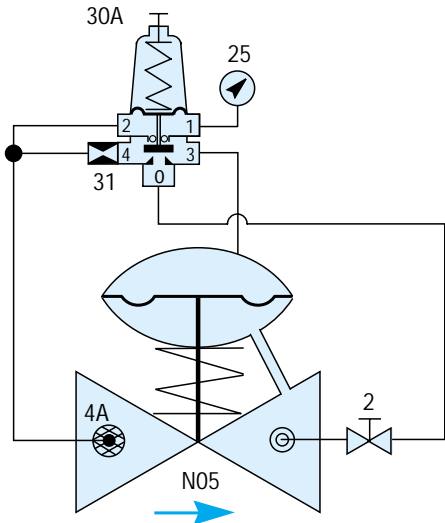
15MB – 3-way Bermad solenoid NO - pilot valve

26 – 4-way manual selector

27 – Shuttle valve

32A – 3-way PCP pressure reducing pilot valve C/27

N30-2W-(PCM) PSV with 2-way Control Loop and Manual Closing

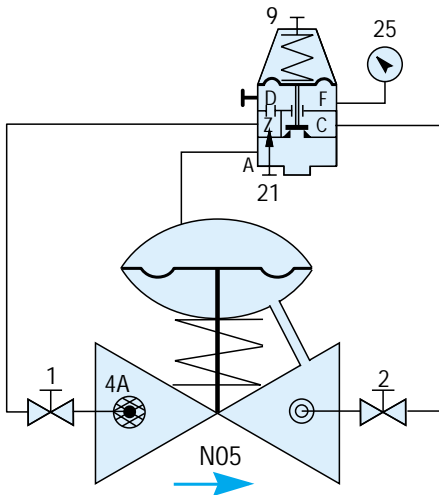


Control List:

- N05 – Single chambered hydraulic valve
- 30A – 2-way PCM pressure sustaining pilot valve
- 4A – In line, self flushing filter
- 2 – Cock valve
- 31 – Control orifice
- 25 – Pressure gauge (optional)

N30-2W-(PLT#3)

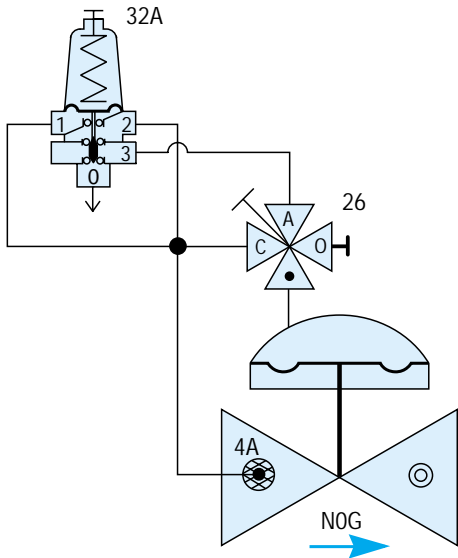
PSV with 2-way Control Loop and Manual Opening & Closing



Control List:

- N05 – Single chambered hydraulic valve
- 4A – In line, self flushing filter
- 1,2 – Cock valve
- 25 – Pressure gauge (optional)
- 9 – 2-way PLT pressure sustaining pilot valve #3
- 21 – Built in needle valve

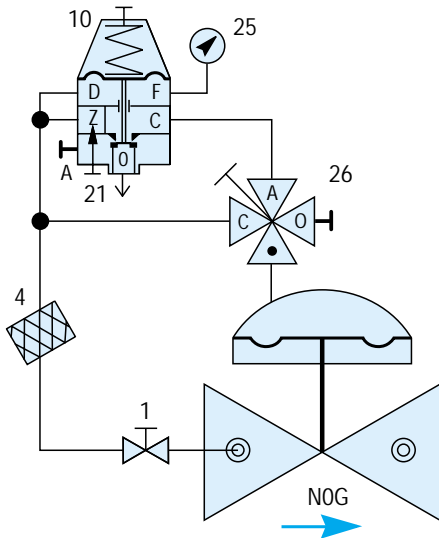
N30-ZX-(PCP) PSV with 3-way Control Loop and Manual Selector



Control List:

- NOG – Single or double chambered hydraulic valve
- 4A – In line, self flushing filter
- 32A – 3-way PCP positioning pilot valve
- 26 – 4-way manual selector

N30-ZX-(PLT#X) PSV with 3-way Control Loop and Manual Selector

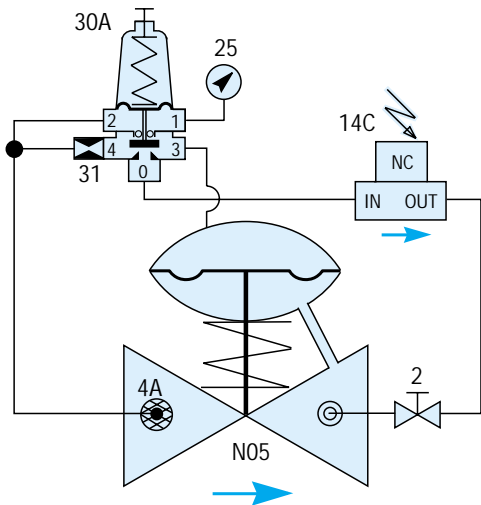


Control List:

- NOG – Single or double chambered hydraulic valve
- 1 – Cock valve
- 4 – Control filter
- 10 – 3-way PLT positioning pilot valve #X
- 25 – Pressure gauge (optional)
- 26 – 4-way manual selector
- 21 – Built in needle valve

N30-55-2W-(PCM)

PSV with 2-way Control Loop (NC), Electric Remote Control and Manual Closing

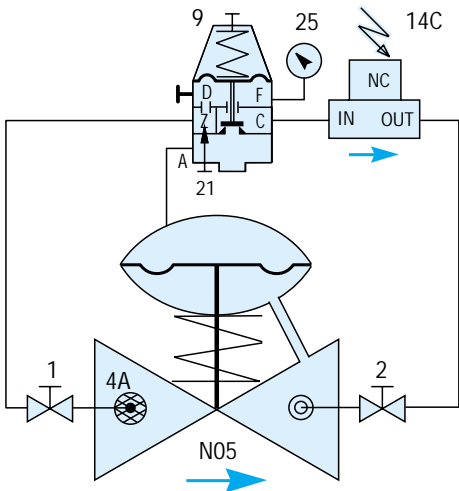


Control List:

- N05 – Single chambered hydraulic valve
- 30A – 2-way PCM pressure sustaining pilot valve
- 4A – In line, self flushing filter
- 31 – Control orifice
- 14C – 2-way solenoid NC pilot valve
- 25 – Pressure gauge (optional)
- 2 – Cock valve

N30-55-2W-(PLT #3)

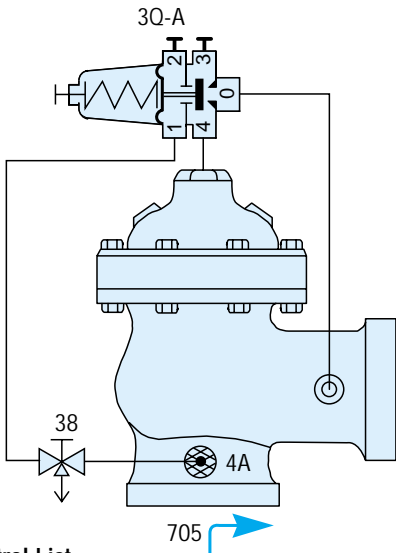
PSV with 2-way Control Loop (NC), Electric Remote Control and Manual Opening & Closing



Control List:

- N05 – Single chambered hydraulic valve
- 4A – In line, self flushing filter
- 1,2 – Cock valve
- 25 – Pressure gauge (optional)
- 9 – 2-way PLT pressure sustaining pilot valve #3
- 14C – 2-way solenoid pilot valve NC
- 21 – Built in needle valve

73Q-A-(PCM) Pressure Relief (Quick Type) Valve 700 Series

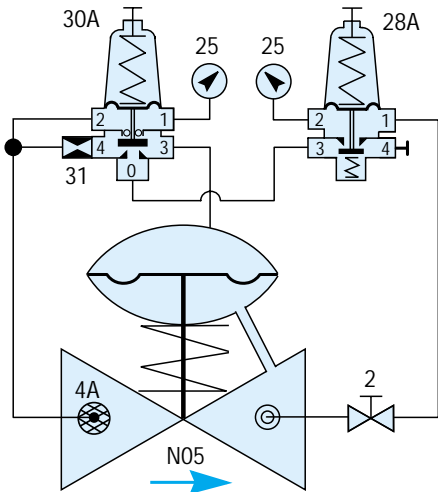


Control List:

- 705 - Single chambered angle pattern valve 700 series
- 3Q-A - 2-way PCM pressing relief (quick type) pilot valve
- 4A - In line, self flushing filter
- 38 - Cock valve (with port for pressure gauge)

N23-2W-(PCM)

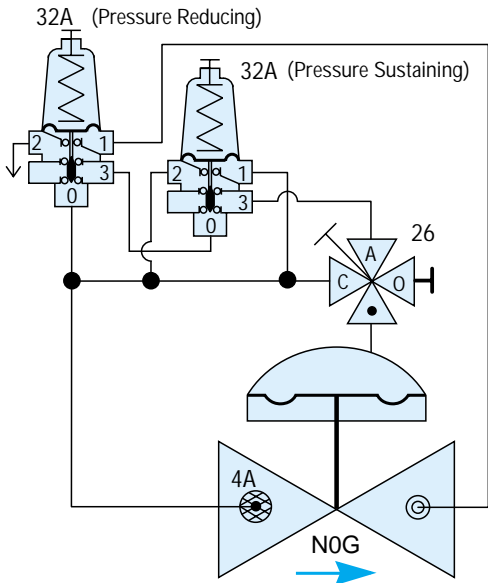
PRV and PSV with 2-way Control Loop and Manual Closing



Control List:

- N05 - Single chambered hydraulic valve
- 4A - In line, self flushing filter
- 28A - 2-way PCM pressure reducing pilot valve
- 30A - 2-way PCM pressure sustaining pilot valve
- 2 - Cock valve
- 31 - Control orifice
- 25 - Pressure gauge (optional)

N23-ZX-(PCP) PRV and PSV with 3-way Control Loop and Manual Selector

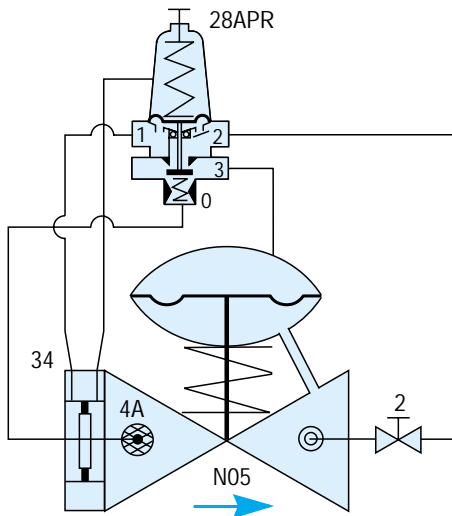


Control List:

- NOG – Single or double chambered hydraulic valve
- 4A – In line, self flushing filter
- 26 – 4-way manual selector
- 32A – 3-way PCP pressure reducing/sustaining pilot valve

N70-U-(PCP)

Flow Control Valve Orifice Type with 2-way Control Loop and Manual Closing

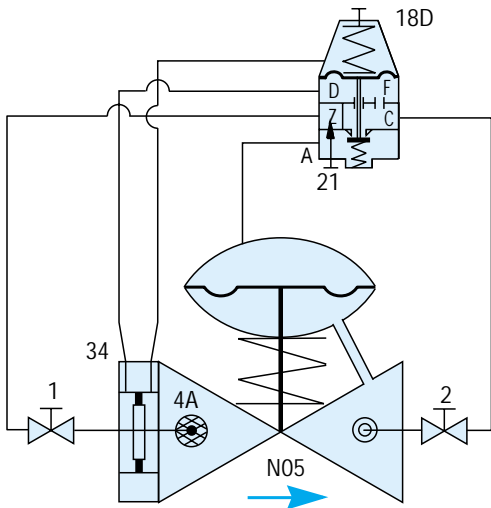


Control List:

- N05 – Single chambered hydraulic valve
- 4A – In line, self flushing filter
- 2 – Cock valve
- 34 – Orifice plate assy.
- 28APR – 2-way PCP press. red. pilot valve remote sensing

N70-U-(PLT #2D)

Flow Control Valve Orifice Type with 2-way Control Loop and Manual Closing

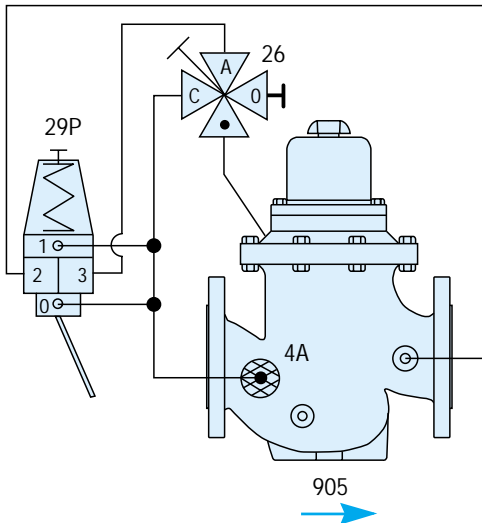


Control List:

- N05 – Single chambered hydraulic valve
- 4A – In line, self flushing filter
- 1,2 – Cock valve
- 34 – Orifice plate assy.
- 18D – Differential press. red. pilot valve PLT #2D
- 21 – Built in needle valve

970-W-Z-(PCP)

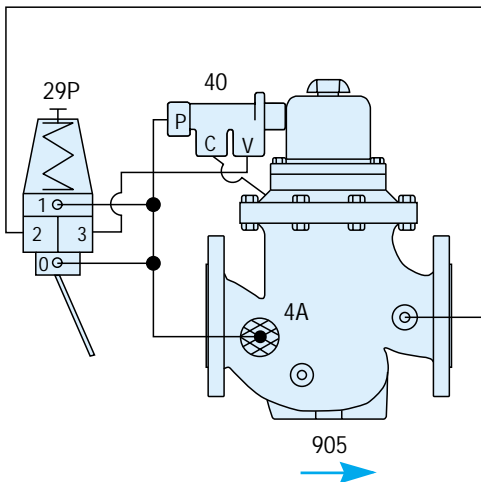
Flow Control Hydrometer with 2-way Control Loop and Manual Selector



Control List:

- 905 – Basic Hydrometer
- 4A – In line, self flushing filter
- 26 – 4-way manual selector
- 29P – 2-way PCP flow control pilot valve (paddle type)

970-D-(PCP) Flow Control AMV with 2-way Control Loop

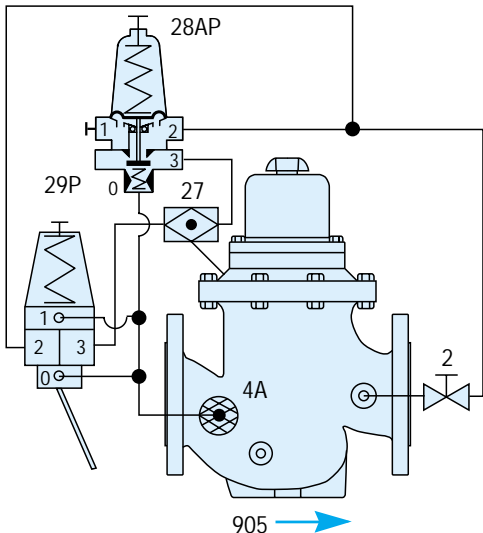


Control List:

- 905 – Basic Hydrometer
- 4A – In line, self flushing filter
- 29P – 2-way PCP flow control pilot valve (paddle type)
- 40 – 3-way control valve (for AMV only)

927-W-(PCP)

Flow Control and Pressure Reducing Hydrometer with 2-way Control Loop (PC Paddle Type)

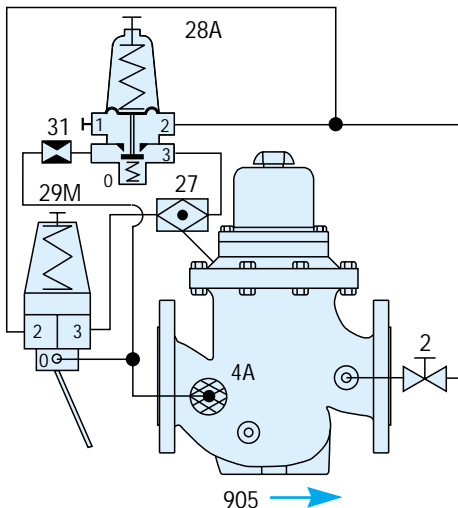


Control List:

- 905 – Basic Hydrometer
- 4A – In line, self flushing filter
- 2 – Cock valve
- 27 – Shuttling valve
- 29P – 2-way PCP flow control pilot valve (paddle type)
- 28AP – 2-way PCP pressure reducing pilot valve

927-W-(PCM)

Flow Control and Pressure Reducing Hydrometer with 2-way Control Loop (PC Paddle Type)

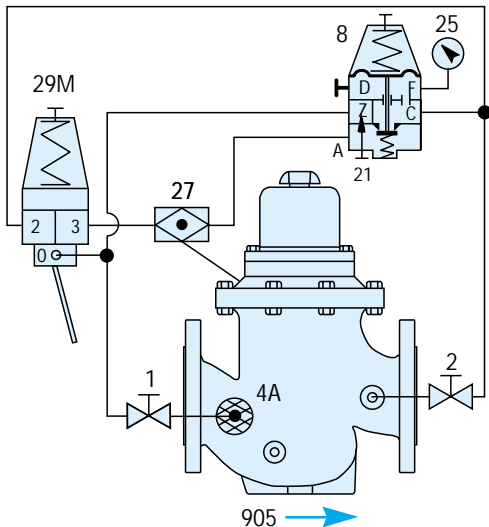


Control List:

- 905 – Basic Hydrometer
- 4A – In line, self flushing filter
- 2 – Cock valve
- 27 – Shuttle valve
- 29M – 2-way PCM flow control pilot valve (paddle type)
- 28A – 2-way PCM pressure reducing pilot valve
- 31 – Orifice

927-W-(PLT #2)

Flow Control and Pressure Reducing Hydrometer with 2-way Control Loop (PC Paddle Type)

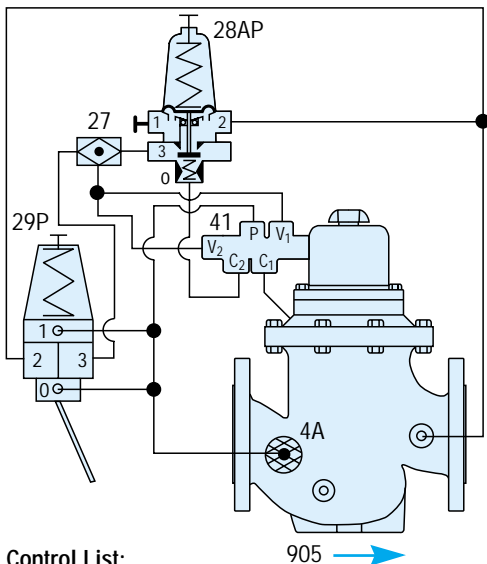


Control List:

- 905 - Basic Hydrometer
- 4A - In line, self flushing filter
- 1,2 - Cock valve
- 27 - Shuttle valve
- 29M - 2-way PCM flow control pilot valve (paddle type)
- 8 - 2-way pressure reducing pilot valve (PLT) #2
- 25 - Pressure gauge (optional)
- 21 - Built in needle valve

927-D-(PCP)

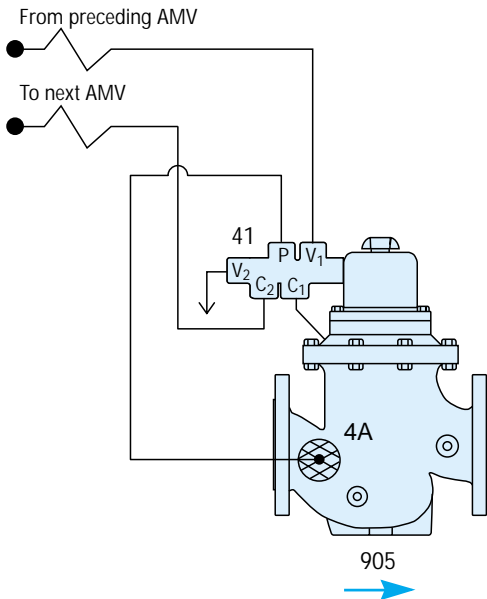
Flow Control and Pressure Reducing AMV with 2-way Control Loop (PC Paddle Type)



Control List:

- 905 – Basic Hydrometer
- 4A – In line, self flushing filter
- 41 – 5-way sequential pilot valve (for AMV only)
- 27 – Shuttle valve
- 29P – 2-way PCP flow control pilot valve (paddle type)
- 28AP – 2-way PCP pressure reducing pilot valve

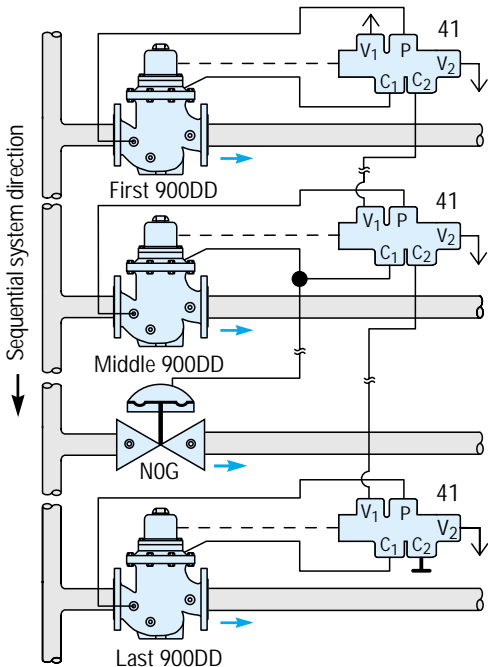
900-DD Sequential AMV



Control List:

- 905 – Basic Hydrometer
- 41 – 5-way sequential pilot valve (for AMV only)
- 4A – In line, self flushing filter

Schematic of Sequential System



Control List:

900DD – Sequential AMV

NOG – Single or double chambered hydraulic valve (N.C)

41 – 5-way sequential pilot valve