Installation Guide
for
ControlMate FM

Contents

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Installation Guide For Palmer ControlMate-FM

The following step numbers refer to the arrow numbers on the “ControlMate-FM Installation Plan”

1) Connect flow pulse unit from meter to ControlMate box (only if using flow to control desired pressure)

2) Cut a length of blue pipe long enough to connect PRV downstream pressure to solenoid box.

3) Connect a female quick fit connector to one end of blue pipe and insert into solenoid box male connector.

4) Connect a male quick fit connector to other end of blue pipe and insert into the downstream pressure female connector on the PRV.

5) Cut a short length of red pipe (approx. 150mm) and connect one end to red port on solenoid box.

6) Connect filter to other end of red pipe (black end)

7) Cut a short length of red pipe (approx. 150mm) and connect one end to filter (red end)

8) Connect other end of red pipe to one of the double outlets from the pipe splitter.

9) Cut a short length of red pipe (approx. 300mm) and connect one end to the remaining double outlet from the pipe splitter.

10) Connect a female quick fit connector to the other end of the red pipe and insert into the remaining solenoid box male connector.

11) Cut a short length of red pipe (approx. 750mm) and connect one end to the single outlet from the pipe splitter.

12) Connect other end of the red pipe to pipe tee.

13) Cut a short length of red pipe (approx. 750mm) and connect one end to pipe tee.

14) Connect other end of the red pipe to the red port on the 3-way valve tee. Make sure the 3-way valve tee handle is pointing towards the green port.

15) Cut a length of red pipe long enough to connect the PRV to the pipe tee. Connect one end to the remaining port on the pipe tee.

16) Connect a male quick fit connector to the other end of the red pipe and insert into the upstream pressure female connector on the PRV.

17) Lock PRV in set position and remove adjusting screw from PRV pilot. Replace this with the Palmer Actuator, screwing in approximately the same distance as the removed screw.

18) Cut a length of green pipe long enough to connect the Palmer Actuator to the 3-way valve tee. Connect one end of the green pipe to the black port on the 3-way valve tee and the other end to the top of the Palmer Actuator.

19) Cut a length of green pipe long enough to connect the 3-way valve tee to the solenoid box. Connect one end to the remaining green port on the 3-way valve tee and the other end to the remaining green port on the solenoid box.

The PRV can now be un-locked slowly, whilst watching the downstream pressure on the ControlMate. Alter the Palmer Actuator by screwing in or out to return the downstream pressure to the approximate setting before installation began.

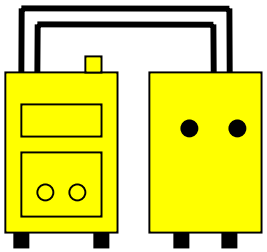
Set Up Notes For Palmer Actuator

Screw in the Palmer Actuator slowly clockwise till the desired maximum downstream pressure +2m is displayed on the ControlMate. Leave a few minutes to make sure the pressure settles. Lock the bottom nut in place.

Hold the center bolt in place whilst screwing out the Palmer Actuator slowly anti-clockwise till the desired minimum downstream pressure –2m is displayed on the ControlMate. Leave for a few minutes to make sure the pressure settles. Lock the top nut in place.

Now follow ControlMate-FM Basic Setup Notes.

Equipment Requirements For ControlMate-FM Installation



1 x ControlMate-FM &
attached solenoid box

Note :

It is advisable to have some means of fixing the ControlMate and solenoid box to the wall of the chamber.

1 x Filter

Red Pipe

Blue Pipe

1 x Palmer Actuator

Green Pipe

1 x Pipe Splitter

2 x Male quick fit connectors
2 x Female quick fit connectors

1 x Pipe Tee

1 x Flow Pulse Unit

1 x 3 Way Valve Tee

Figure 1

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ControlMate-FM Installation Plan

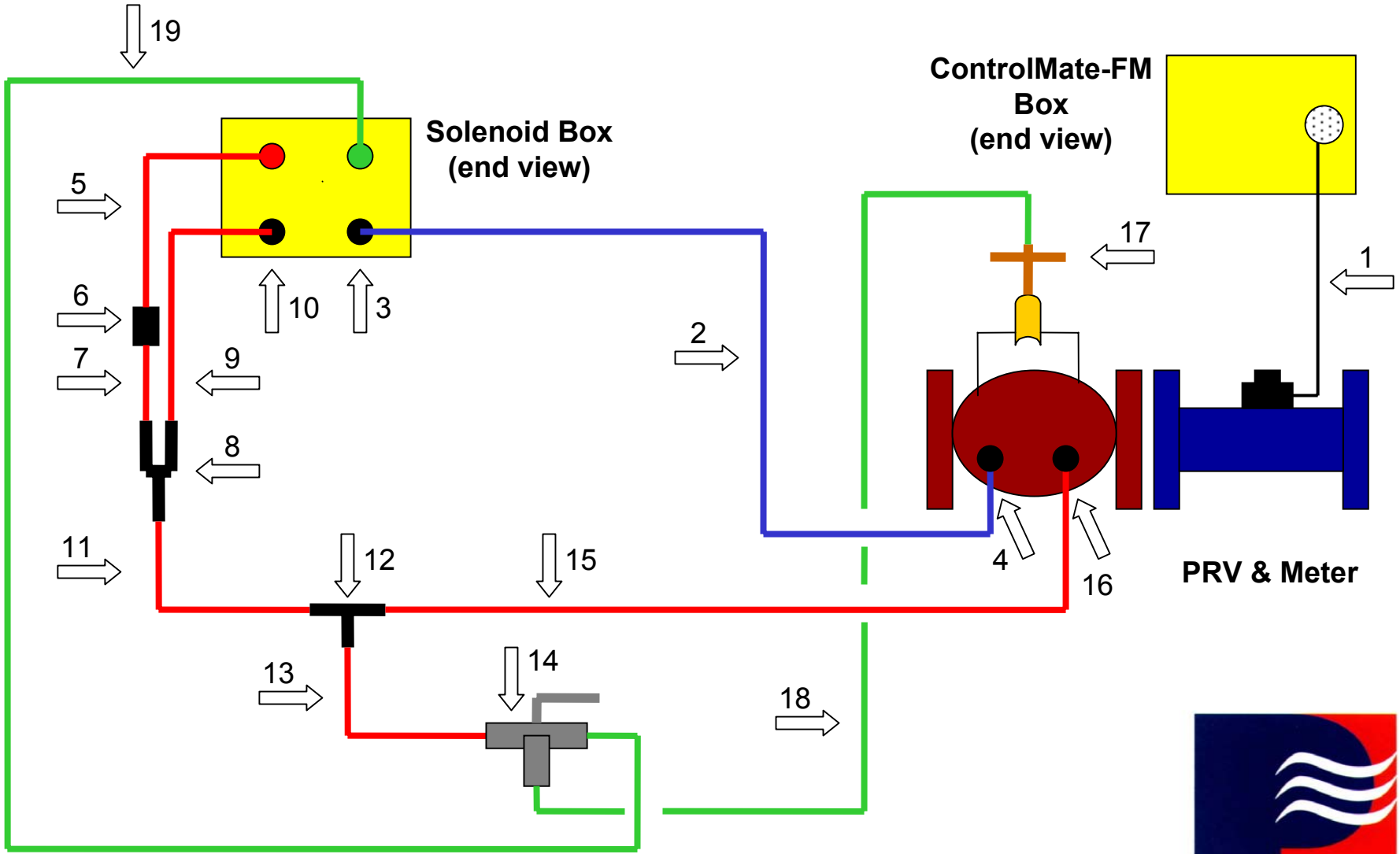

Figure 2

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ControlMate-FM Installation Plan
(For inlet pressures of 90m and above)

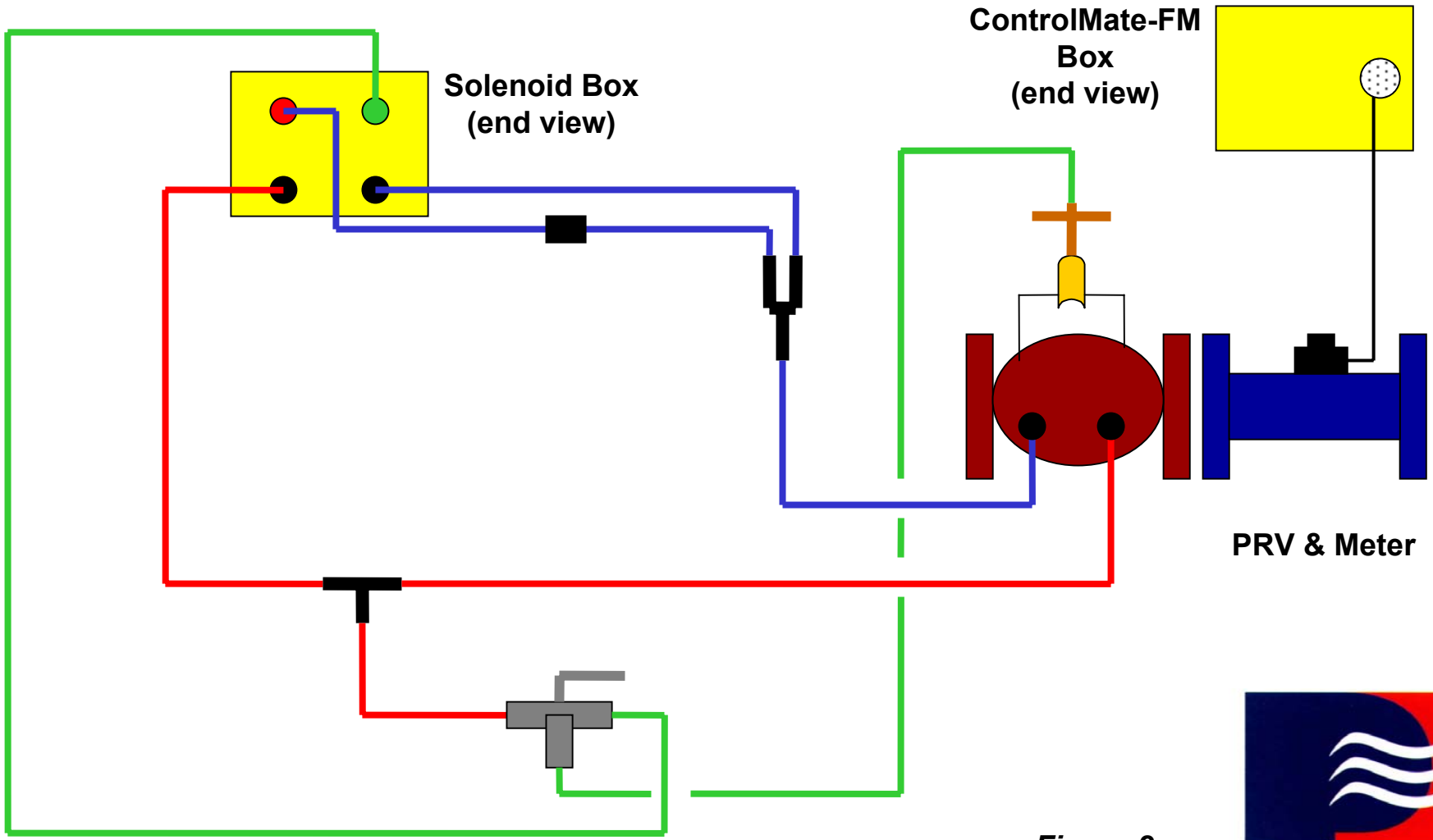

Figure 2a

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ControlMate-FM Basic Setup

Note

On the notes below a step stating “Choose” means using the **“Select”** button to toggle to the desired selection and the **“Next”** button to execute the selection.

On ControlMate - FM

Install ControlMate-FM on PRV as per installation plan and guidance notes, once Palmer Actuator is set correctly follow the instructions below to setup the ControlMate-FM.

1) Turn controller on by holding down **“Next”** button

2) Press **“Next”** button to Setup screen

3) Choose **“Setup”** on the Continue screen

4) Press **“Next”** button 3 times to get through the default Pin Code of 000

5) Press **“Next”** button to get through Date & Time screen

6) Press **“Next”** button to get through the Battery screen

7) Choose **“Auto Time”** or **“Auto Flow”** on Current Settings screen

8) Choose **“OK”** on Confirm screen

9) Enter Litres / Pulse value (**“Select”** button changes value, **“Next”** button moves to next value, only if connecting to flow). Choose **“OK”** on the Confirm screen

10) Press **“Next”** button to progress through User Pin screen

11) Choose **“Values”** to progress through the Continue screen

12) Press **“Select”** to show options Edit, Insert, Delete, End

13) Choose **“Edit”** to progress through to Flow (or Time) & Pressure values 1

14) Enter Flow (or Time) value 1 (**“Select”** button changes value, **“Next”** button moves to next value)

15) Enter Pressure value 1 (**“Select”** button changes value, **“Next”** button moves to next value)

16) Choose **"OK"** on the Confirm screen

17) Press **"Next"** button to progress through to Flow (or Time) & Pressures values 2

18) Press **"Select"** to show options Edit, Insert, Delete, End

19) Choose **"Edit"** to progress through to Flow (or Time) & Pressure values 2

20) Enter Flow (or Time) value 2 (**"Select"** button changes value, **"Next"** button moves to next value)

21) Enter Pressure value 2 (**"Select"** button changes value, **"Next"** button moves to next value)

22) Choose **"OK"** on the Confirm screen

23) Press **"Next"** button to progress through to Add New Values screen

24) Choose **"Add"** to progress through the Add New Values screen

25) Enter Flow (or Time) value 3 (**"Select"** button changes value, **"Next"** button moves to next value)

26) Enter Pressure value 3 (**"Select"** button changes value, **"Next"** button moves to next value)

27) Choose **"OK"** on the Confirm screen

28) Press **"Next"** button to progress through to Add New Values screen

29) Choose **"Add"** to progress through the Add New Values screen

30) Enter Flow (or Time) value 4 (**"Select"** button changes value, **"Next"** button moves to next value)

31) Enter Pressure value 4 (**"Select"** button changes value, **"Next"** button moves to next value)

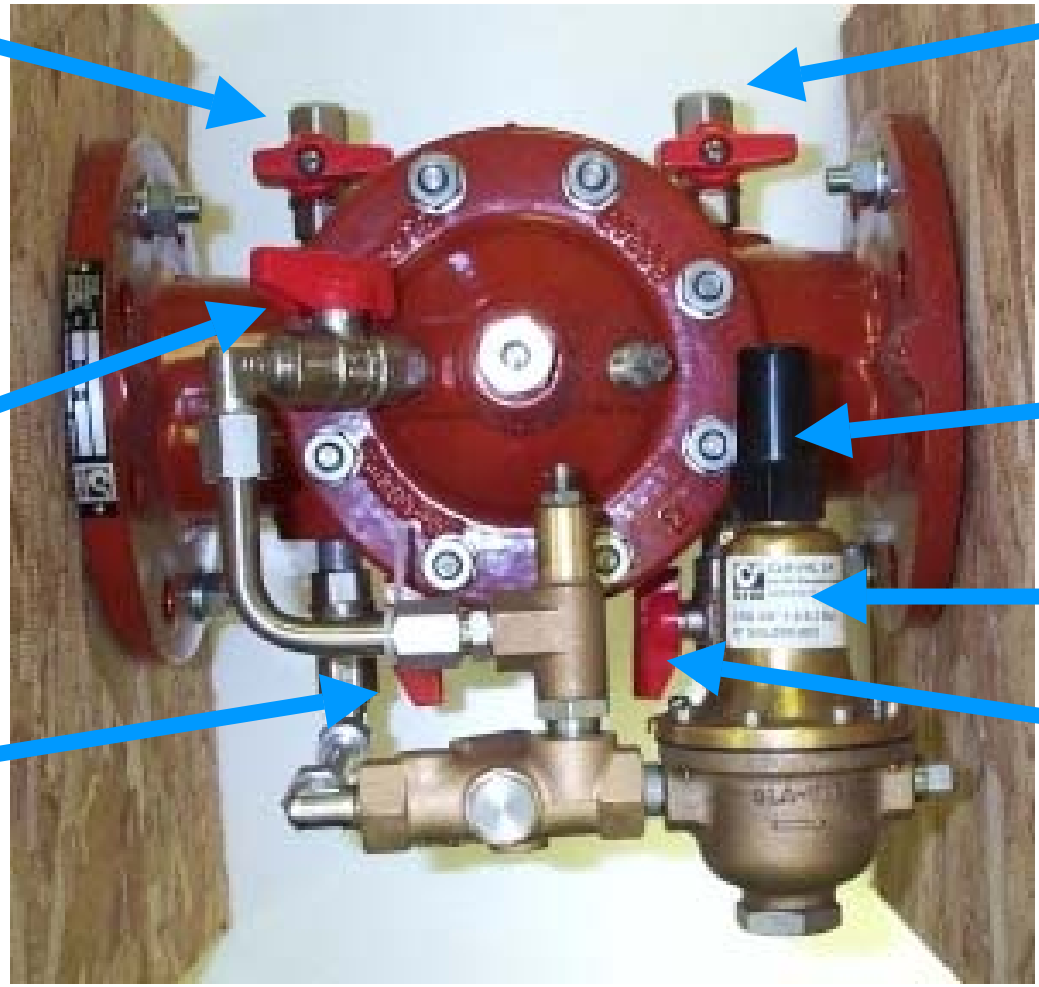
32) Choose **"OK"** on the Confirm screen

33) Press **"Next"** button to progress through to Add New Values screen

Repeat steps 29–33 to enter more values, otherwise follow step 34

34) Choose **"End"** instead of Add to conclude set up of Controller.

Cla-Val PRV Diagram



Top View

Figure 5

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Cla-Val PRV - Locking In The Set Position

Flow Direction

1) Close top cover isolation valve

Top View

Figure 6

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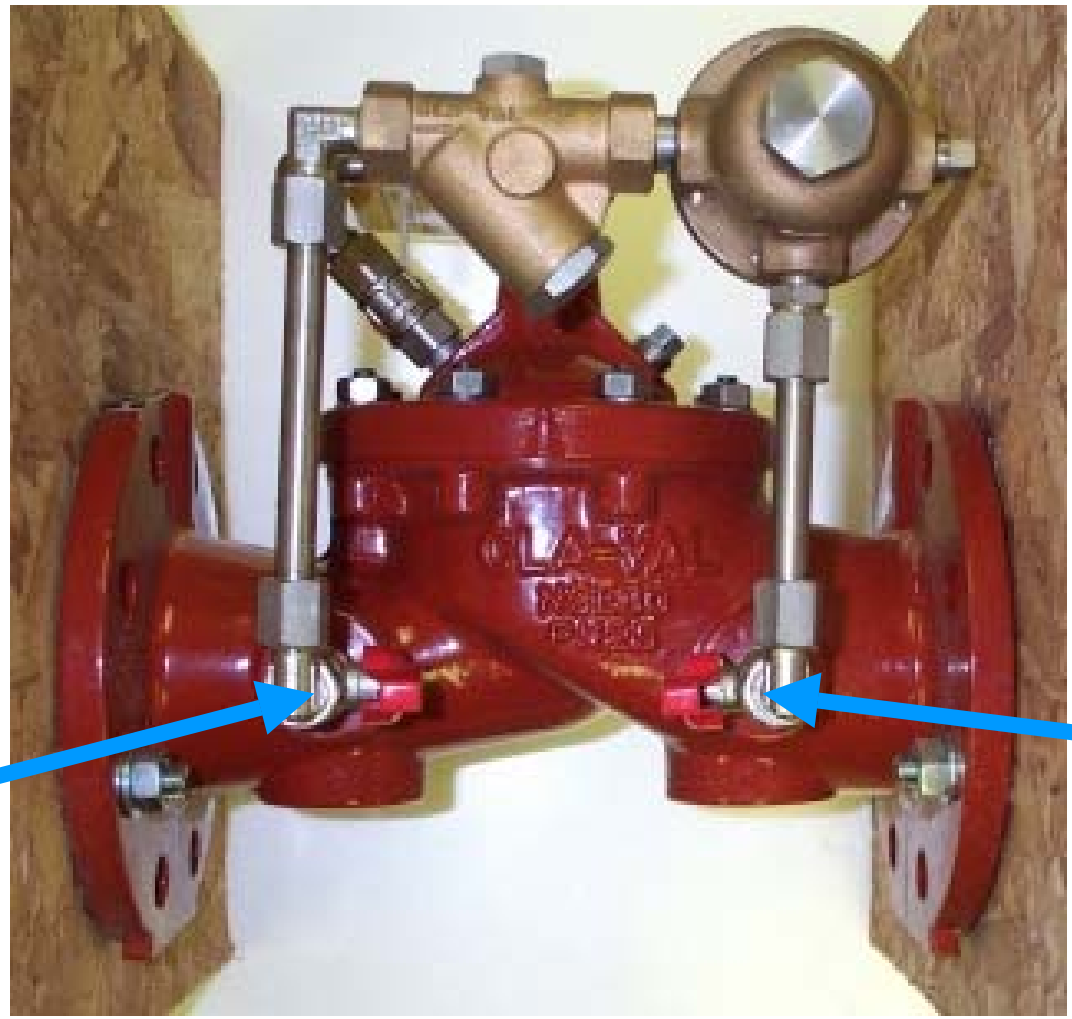
Cla-Val PRV - Locking In The Set Position

Flow Direction



Note:- To un-lock PRV

1) Open inlet isolation valve

2) Open outlet isolation valve

3) Open top cover isolation valve

2) Close inlet isolation valve

3) Close outlet isolation valve

Side View

Figure 7

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Bermad PRV Diagram

Top View

Figure 8

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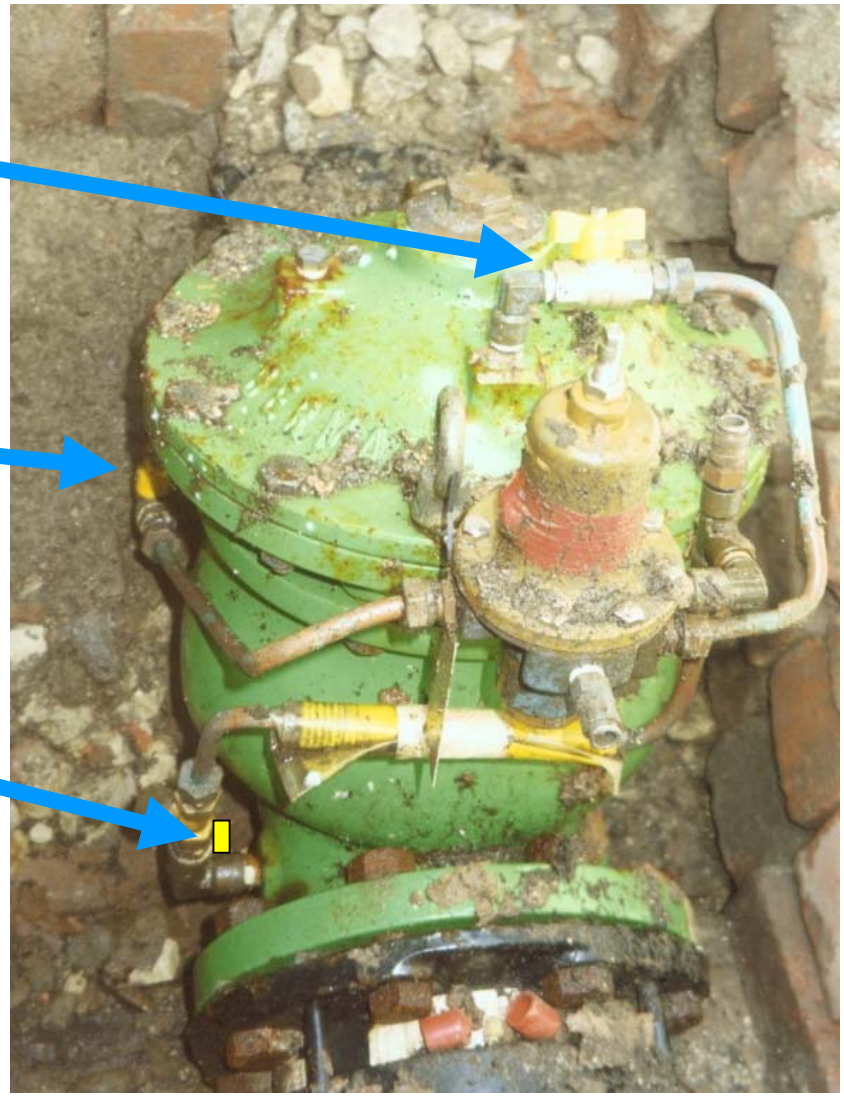
Bermad PRV - Locking In The Set Position

1) Close top cover isolation valve

3) Close outlet isolation valve

2) Close intlet isolation valve



Side View

Note:- To un-lock PRV

1) Open inlet isolation valve

2) Open outlet isolation valve

3) Open top cover isolation valve

Flow Direction

Figure 9

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In-Bal PRV Diagram

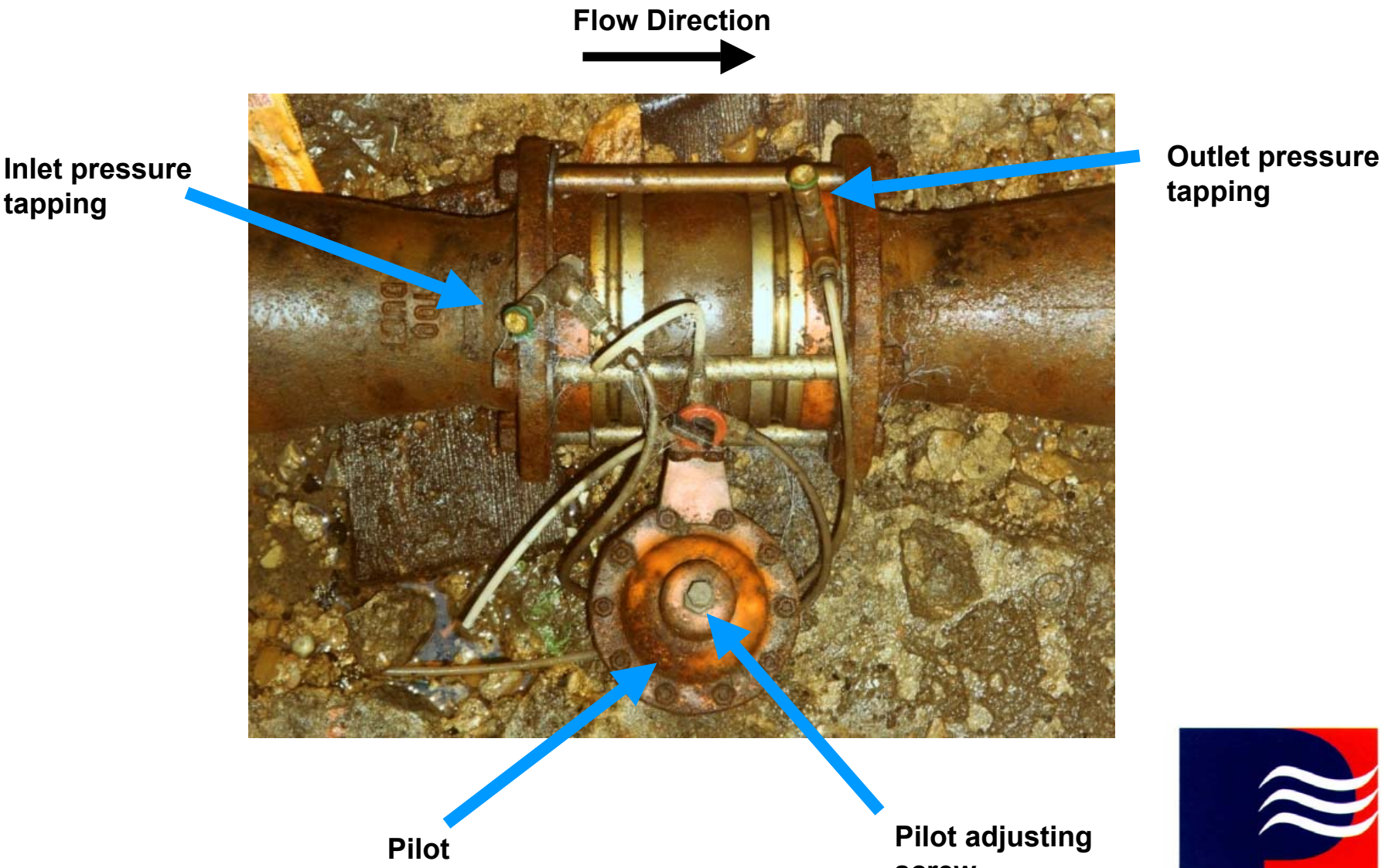

Figure 10

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