Installation and Operation Manual

Indicator Post

Fire Protection Products

IPO888 | IPO365 | IPOL888 | WPO999 | WPO365

This manual is also available online.

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SAFETY PRECAUTIONS

Caution

Read and understand carefully this document prior attempting to install Fivalco® products. Failure to follow these instructions could cause severe injury, product and/or property damage.

Installation, maintenance and replacement of Fivalco® products must be implemented by an experienced, well trained installer. Wear safety glasses, helmet, hand and foot protection during installation.

The owner is responsible for maintaining the system in proper operation condition.

Fivalco shall not be held responsible for any incidents arising from improper installation, operation and maintenance work. The responsibility for this must rest with the installer and user.

Disclaimer

This manual serves as a general guideline and reference to the installers and users. Every effort has been made to ensure the information contained in this manual is accurate at the time of publication. Fivalco Limited assumes no responsibility or liability for any errors and/or misinterpretation of the information. Contact your local vendor, distributor or Fivalco Limited for detail technical data and specification of each model, and if any additional information is required. We reserve the right to alter this manual without notice.

"The quality goes in before our name goes on"

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Indicator Post

INDICATOR POST

1 GENERAL

Indicator posts are an essential component of fire protection systems, used to operate and visibly indicate the open or close status of buried gate valves from above ground. Failure of an indicator post to function correctly, whether due to improper installation, incorrect adjustment, or lack of maintenance, can result in delays during emergency operations, leading to serious safety risks and property damage.

Indicator posts are typically installed in outdoor environments and must be properly adjusted to match the fully open and closed positions of the valve they operate. Improper installation or adjustment may result in misleading position indicators, potentially causing fire protection valves to remain closed when they should be open.

Routine inspection, lubrication, and testing are necessary to ensure long-term reliability and performance. Neglecting maintenance can result in corrosion, stiffness, or loss of visibility in the position indicator, compromising system safety during critical situations.

2 UNLOADING & TRANSPORTATION

A vital consideration in handling valves should be avoid damaging or scratching the coating protection.

All valves should be unloaded carefully. Each valve should be carefully lowered from the truck to the ground; it should not be dropped. In the case of larger valves, forklifts or slings around the body of the valve or under the skids should be used for unloading. Only hoists and slings with adequate load capacity to handle the weight of the valve or valves should be used. Hoists should not be hooked into or chains fastened around yokes, stem, or handwheels. Failure to carefully follow these recommendations is likely to result in damage to the valve.

3 STORAGE

Valves should be stored in the fully closed position to prevent the entry of foreign material that could cause damage to the seating surface. Do not remove the protective caps until installation. Whenever practical, valves should be stored indoors under dry, cool conditions, away from direct sunlight and corrosive or otherwise chemically active atmosphere. If outside storage is required, means should be provided to protect the operating mechanism from weather elements. During outside storage, valves should be protected from the weather, sunlight, ozone, and foreign materials. In colder climates where valves may be subject to freezing temperatures, it is absolutely essential to remove the water from the valve interior and close the valve before storage. Failure to do so many results in a cracked valve casting and or deterioration of the resilient seat material.

4 INSPECTION PRIOR TO INSTALLATION

Indicator posts should be inspected at the time of receipt for damage in shipment. The initial inspection should be to verify compliance with specifications (type, size, material, pressure and temperature ratings), direction of opening, and type of end connections. A visual inspection of the seating surfaces should be performed to detect any damage in shipment or scoring of the seating surfaces. Inspection personnel should look for bent stems, broken handwheels, cracked parts, loose bolt, missing parts and accessories, and any other evidence of mishandling during shipment.

Each valves should be operated through one complete opening-and-closing cycle in the position in which it is to be installed. Contact your vendor or local representative immediately if any disorder is found.

5 INSTALLATION – VERTICAL TYPE

Before beginning the installation process, it is essential to verify that the Non-Rising Stem (NRS) Gate Valve is in the fully closed position. This ensures proper alignment and engagement with the indicator post mechanism during assembly.

Step 1 – Debug the OPEN and SHUT indicator discs.

1.1 Rotate the lifting ring (Part 1) counterclockwise to loosen it. Remove the lifting ring (Part 1) and the flat washer (Part 2) in sequence, then remove the operating lever (Part 3). Use an open-end wrench to remove the three hexagon bolts (Part 4), Three flat washers (Part 5), one loop screw (Part 6), and one hexagon nut (Part 7) in sequence.

Note: To remove the operating lever (Part 3), first lift End A, support the lever, then lift End B to fully remove it. (See Figure 1)

1.2 Remove the dust cover (Part 8). Use snap ring pliers to remove the shaft circlip (Part 9), and pull the indicator (Component 3) downward from Part 10.
(See Figure 2 & Figure 3)

1.3 Debug Indicator Component 3:
Set the position of the **SHUT** indicator disc (Part 11) at a distance of 213.7±0.5mm as shown in the figure.
(This is the factory preset position).

Rotate the **OPEN** indicator disc (Part 12) to a position corresponding to a distance of H1 mm as shown in the figure, where:

H1 = 2 x number of opening turns of the NRS Gate Valve *(in mm)*
The numbers indicated refer to the gate valve specifications of Fivalco products.

Note: Refer to Table 1, Table 2, Table 3, Table 4 and Table 5 for H1distance and debug according to actual conditions. (See Figure 3)

1.4 After debugging Indicator Component 3, use snap ring pliers to reinstall the shaft circlip (Part 9), install the dust cover (Part 8) onto Part 10, and reassemble it into Indicator Component 2. *(See Figure 2)*

TABLE 1									
Model	**IPO365**								
Parameter	**Install the 3288 series NRS Gate Valve (300psi)**								
Size	50	65	80	100	125	150	200	250	300
Number of Opening Turns	11.5	13	16	20	25	30	20	25	30
H1 (mm)	23	26	32	40	50	60	40	50	60
H4	173.0	173.0	193.0	217.0	277.5	312.0	397.0	492.0	578.0
H7	234.0	234.0	259.5	279.0	348.5	383.0	492.0	600.0	673.0

TABLE 2									
Model	**IPO365**								
Parameter	**Install the 3288 series NRS Gate Valve (365psi)**								
Size	50	65	80	100	125	150	200	250	300
Number of Opening Turns	11.5	13	16	20	25	30	16.7	20.8	25.0
H1 (mm)	23	26	32	40	50	60	33.3	41.7	50.0
H4	196	196	224	252	343	343	423	534	613
H7	218	218	248	281	375	375	455	559	659

TABLE 3									
Model	**IPO888**								
Parameter	**Install the 3288 series NRS Gate Valve (300psi)**								
Size	50	65	80	100	125	150	200	250	300
Number of Opening Turns	11.5	13	16	20	25	30	20	25	30
H1 (mm)	35	39	48	60	75	90	60	75	90
H4	173.0	173.0	193.0	217.0	277.5	312.0	397.0	492.0	578.0
H7	234.0	234.0	259.5	279.0	348.5	383.0	492.0	600.0	673.0

TABLE 4									
Model	**IPO888**								
Parameter	**Install the 3288 series NRS Gate Valve (365psi)**								
Size	50	65	80	100	125	150	200	250	300
Number of Opening Turns	11.5	13	16	20	25	30	16.7	20.8	25.0
H1 (mm)	35	39	48	60	75	90	50.1	62.4	75.0
H4	196	196	224	252	343	343	423	534	613
H7	218	218	248	281	375	375	455	559	659

TABLE 5					
Model	**IPOL888**				
Parameter	**Install the 3288 series NRS Gate Valve**				
Size	350	400	450	500	600
Number of Opening Turns	63	72	80	88	105
H1 (mm)	94.5	108	120	132	150
H4	741	816	936	1021	1173
H7	889.5	964.5	1084	1169	1344.5
Bury Depth (min)	50.87"	53.82"	58.54"	61.89"	67.87"
Bury Depth (max)	158.35"	161.3"	166.02"	169.37"	175.35"

Step 2 – Cut the Coupling Assembly (H2) and Support Tube (H3) according to buried depth.

2.1 Cut the coupling assembly (H2) based on the buried depth.
(See Figure 5 / Figure 4 / Table 1 / Table 2 / Table 3 / Table 4 / Table 5)
H2MAX = H6 + 983.7 – H7 – 388
H2MIN = H6 + 983.7 – H7 – 718

Note: Coupling component 4 may be adjusted in length. Use the split pin (Part 24) to connect and fix the pinholes of Part 23, Part 22, and both pieces of Part 21.

2.2 Cut the support tube (H3) of Part 13 based on the buried depth.
(See Figure 5 / Table 1 / Table 2 / Table 3 / Table 4 / Table 5)

H3MAX = H6 + 983.7 – H4 – 209 – 388
H3MIN = H6 + 983.7 – H4 – 209 – 718

Step 3 – Install the operating pipe on the gate valve (Valve in closed position)
(For the installation diagram, see Figure 5).

3.1 Ensure the NRS Gate Valve (Component 5) is fully closed. Use the hexagon head bolts (Part 14) and hexagon nuts (Part 15) to fix the base assembly onto the valve flange.

3.2 Insert the support tube (Part 13) into the shaft hole of base assembly (Part 6). Use hexagon head bolts (Part 16) and hexagon nuts (Part 17) to fix and tighten them evenly in a diagonal pattern.

3.3 Connect the lower pipe body (Part 20) to the support tube (Part 13). Use hexagon head bolts (Part 18) and hexagon nuts (Part 19) to secure and tighten in a diagonal pattern.

3.4 Align the Coupling Component 4 with the square head of the NRS Gate Valve (Component 5). Then, align Indicator Component 2 with the square hole of the coupling assembly.

3.5 Use an open-end wrench to install three hexagon bolts (Part 4), three flat washers (Part 5), one loop screw (Part 6), and one hexagon nut (Part 7) in sequence. Install the operating lever (Part 3) as shown in the figure. Tighten the flat washer (Part 2) and lifting ring (Part 1) clockwise to complete the installation.

Note: Installation dimensions should follow actual on-site measurements. The above provides a standard installation method.

** Please verify the buried depth before installation. Fivalco will not be responsible for any consequences resulting from incorrect depth measurement.

FIGURE 5
Installation Schematic Diagram

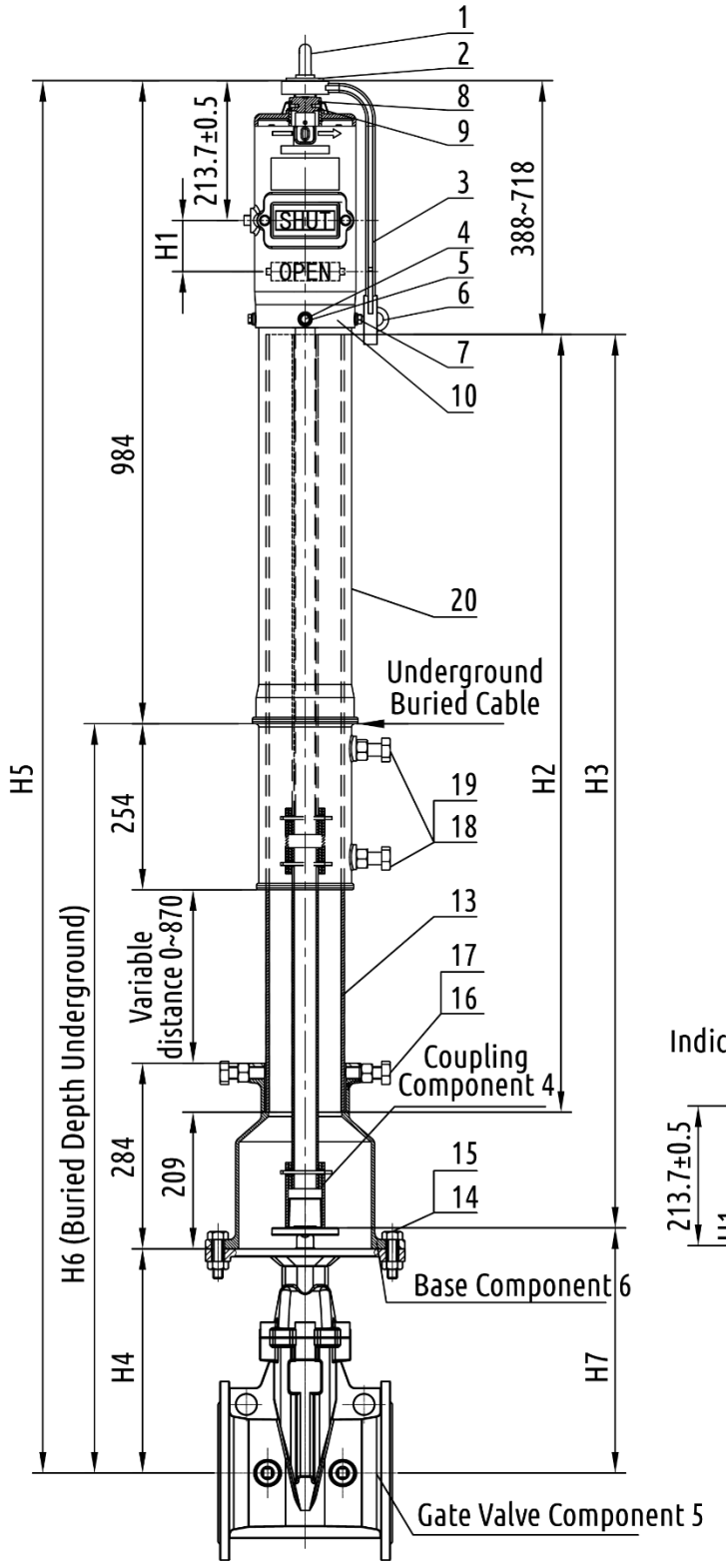


FIGURE 1
Indicator Component 1

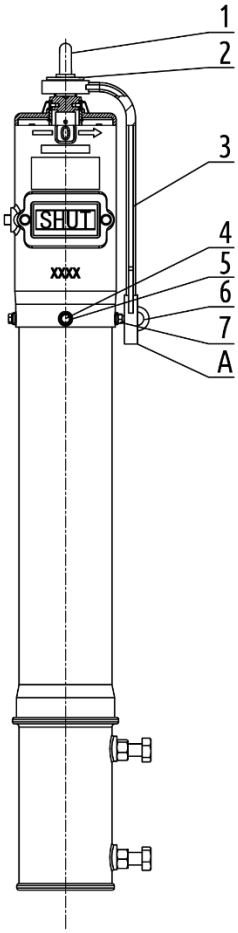


FIGURE 2
Indicator Component 2

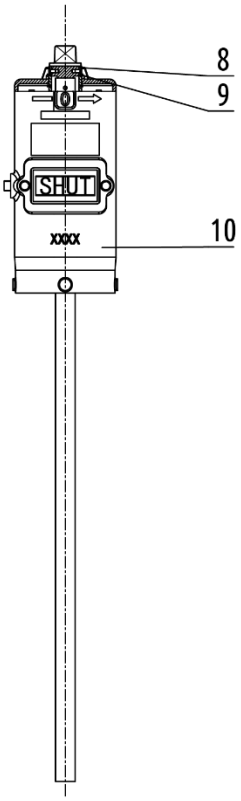


FIGURE 3
Indicator Component 3

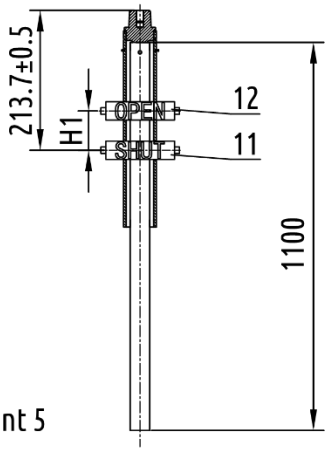
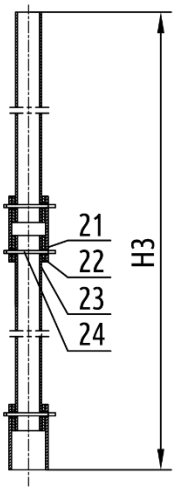


FIGURE 4
Coupling Component 4



6 INSTALLATION – WALL TYPE

Ensure that the NRS Gate Valve is in the fully open position before installing the wall type indicator post.

Step 1 – Create the wall hole.
Drill a hole through the mounting wall with a diameter of at least 4.7" (120mm) but no greater than 7.1" (180mm). The clearance hole must be centered and concentric with the operating nut of the NRS gate valve.

Step 2 – Drill the mounting holes.
Drill four equally spaced holes on a 10.5" (267mm) bolt circle into the mounting wall using a ¾" (19mm) drill bit. Ensure the bolt circle is centered and concentric with the valve's operating nut.

Step 3 – Mount the Wall type Indicator Post.
Bolt the flange of the body (Part 16) to the wall using four bolts (provided by the customer).

Step 4 – Remove the cover.
Remove the cover (Part 22) by loosening the two bolts (Part 6) and nuts (Part 7). Set the cover aside.

Step 5 – Insert and mark the stem rod.
Insert the stem (Part 18), cotter pin (Part 19), and crane coupling (Part 20) – preassembled at the factory – through the wall post indicator body (Part 16) and the wall.

Fully engage the crane coupling with the operating nut of the NRS gate valve.

Once engaged, mark the stem rod at a point between 1.25" (32mm) below and 2" (50mm) above the top surface of the body.

Step 6 – Cut the stem.
Cut the stem rod (Part 18) at the mark made in Step 5.

Step 7 – Adjust the target plates.
Adjust the "**OPEN**" target plate (Part 10) so it is squarely centered in the window (Part 12) when the valve is fully open.

Repeat this procedure with the "**SHUT**" target plate when the valve is fully closed.

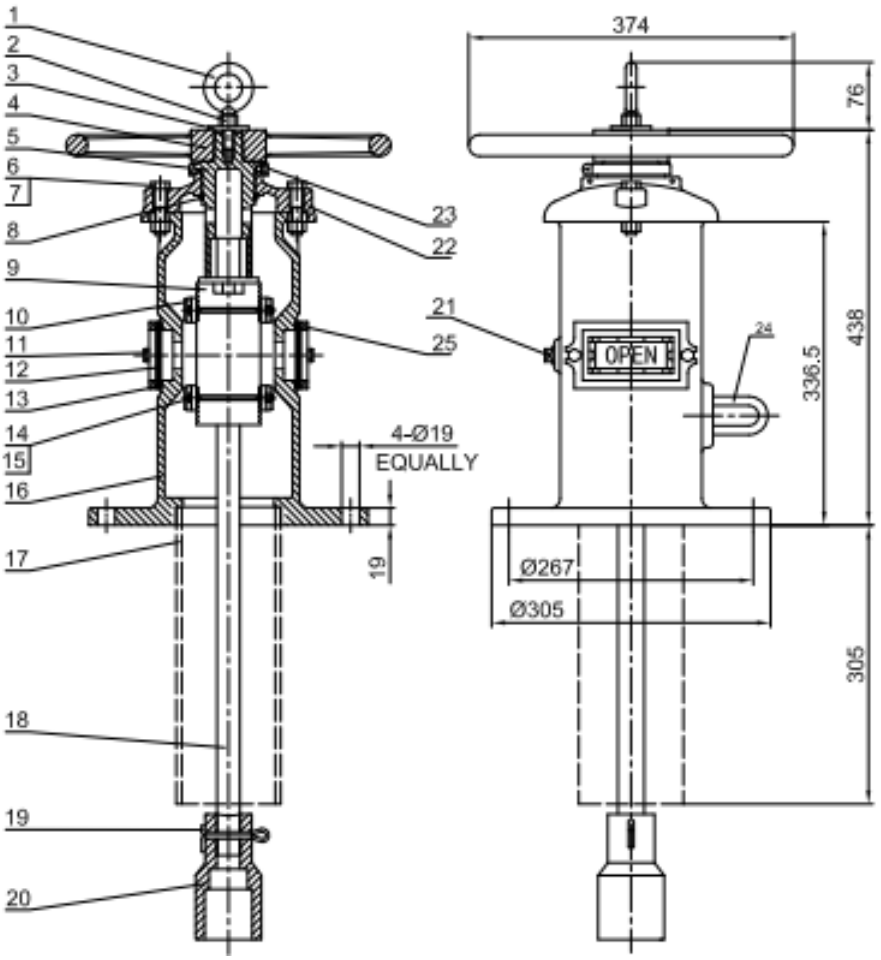
Adjustment is done by loosening the hex bolts (Part 14) and nuts (Part 15).

Step 8 – Reassemble the cover.
Place the cover (Part 22) back onto the body (Part 16). Ensure that the ears on the target nut (Part 21) fit into the grooves on the sides of the body.

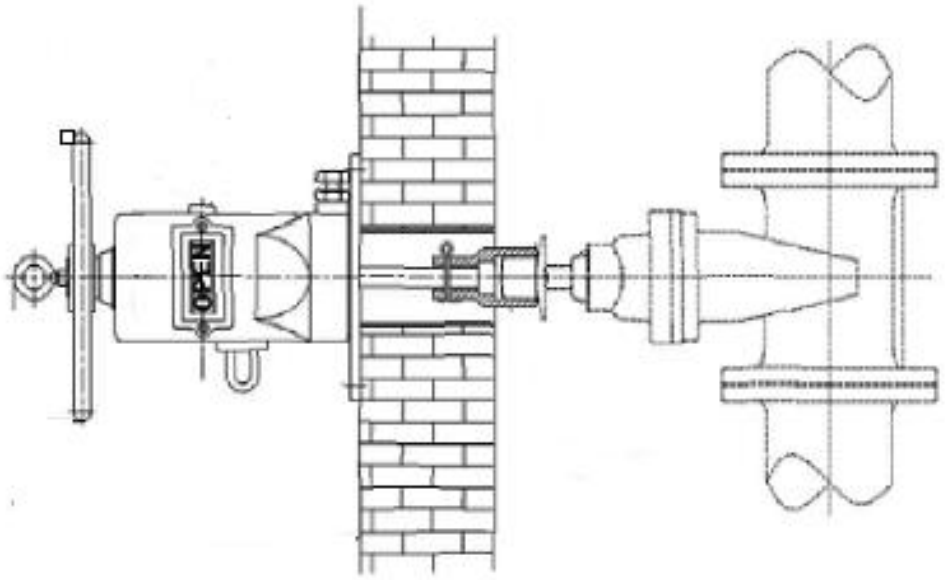
Tighten the two bolts and nuts (Part 6 & 7).

Verify that the "**OPEN**" and "**SHUT**" target plates (Part 10) are correctly positioned by fully opening and closing the valve using the handwheel (Part 4). Adjust if necessary.

Step 9 – Maintenance.
Oil the bearing inside the body (Part 16) at least once per year by adding a few drops of oil into the hole located on the top of the operating nut (Part 9).



The dimensions are in mm.



7 MAINTENANCE

If the valve is installed according to our standard procedures, it is maintenance free.
However, for every 4-5 years, we recommend that you carry out a routine check of the valve for leaks around the stem and the flange gaskets. All seals will in the course of time be influenced by air and sunshine, frequent and careful checks can reveal leaks. Moreover, we recommend you to adjust the bolts in the flange connections, as the compression of the flange gaskets may be reduced in the course of time and thus leaks may arise.

When the valves being used for some time, the leaking may be happened in the filling area because of the friction caused by the stem moving, you can tighten the connection nut of the filling flange and adjust; it is dangerous to change filling with the pipes full of pressure, so we do not suggest you change the filling when the valves are working. If it is dangerous because of the temperature, high pressure and chemical elements, the filling must not be changed under the pressure situation.

8 WARNINGS

The working pressure, temperature, suitable media of valves must be accord with the regulation of the illumination, or that maybe dangerous.

Prior to any maintenance work that requires disassembly make sure that the pressurized line involved is isolated, depressurized and drained before starting any dissembled. Failure to do so may result in sudden pressure release and subsequent severe injury or death. If the pressure exceed regulation, the valve maybe leak and the body maybe explode of craze.

If the temperature is too high, the material maybe invalidation and the valve may be broken. If the media does not accord with the regulation of the illumination, it may rot the body, seat or break the sealing, the body may corrode and craze, the media may be leaked.

WARRANTY STATEMENT

Fivalco's products are designed, engineered and manufactured within its specification of intended use, under the highest quality control possible. Commitment on quality and performance is always at the top of our agenda.

Fivalco warrants that for a period of thirty-six (36) months following delivery, the Fivalco products will perform in accordance with published specifications, and will be free from defects in material or workmanship provided that the products are stored and installed in accordance with recommendations in our catalogues.

Fivalco's obligation shall be to replace any product found to be defective in design, material or workmanship during the warranty period. Fivalco shall not be obligated to refund the purchase price and other liabilities on monetary compensation, nor shall it be obligated to pay for any labor or costs associated with the removal of the defective products or the reinstallation of those products. No warranty coverage will be provided for products that have been altered and / or used for a purpose other than that for which they were designed or installed contrary to Fivalco's guidelines.