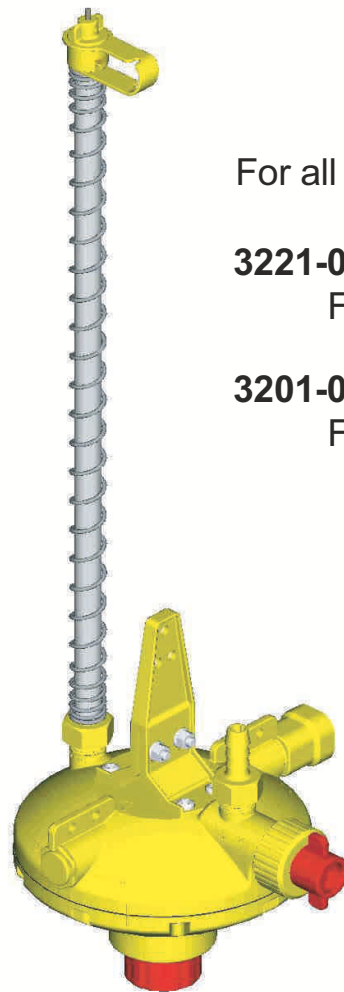


# Floor Drinking Systems

## Optima Pressure Regulator *Assembly and Operating Instructions*

*Instruction Number: IM-030-10 07/2004*



For all variations of the following series:

**3221-00, 3226-00, 3231-00, 3236-00**  
For cage watering systems

**3201-00, 3206-00, 3211-00, 3216-00**  
For floor watering systems

**LUBING**

**LUBING Systems, L.P.**  
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Cleveland, TN 37311 • USA  
423 709.1000 telephone  
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# LUBING



## Introduction

The LUBING pressure regulator is intended for the pressure adjustment in watering systems, in which the drinking water pressure must be varied between 0 and 40 inches water column.

Consider the following points for a troublefree function:

Regular control of the water quality, particularly on iron and lime content. Consider our defaults to the water quality in the cleaning instruction art. 0981.

- Upstream water filter with sufficient mesh size and passage quantity.
- Input pressure between 5 and 45 psi. With a high tank that corresponds to a minimum height of 118 inches.
- Do not use aggressive cleaning agents (acid, etc.). Consider the resistance list in the cleaning instruction art. 0981! If there is no information about the additive to be used, please inquire.

	<b>Warning of cold weather!</b> Frost can destroy construction units of the pressure regulator!
	<b>Warning of corrosive materials!</b> Aggressive cleaners or acids can destroy construction units of the pressure regulator! Consider cleaning instruction art. 0981!

In trouble the supplier/manufacturer is to be informed immediately!

Maintenance and repair work may be accomplished only by trained personnel. During neglect of the instructions and/or when not intended use any warranty claim is void!

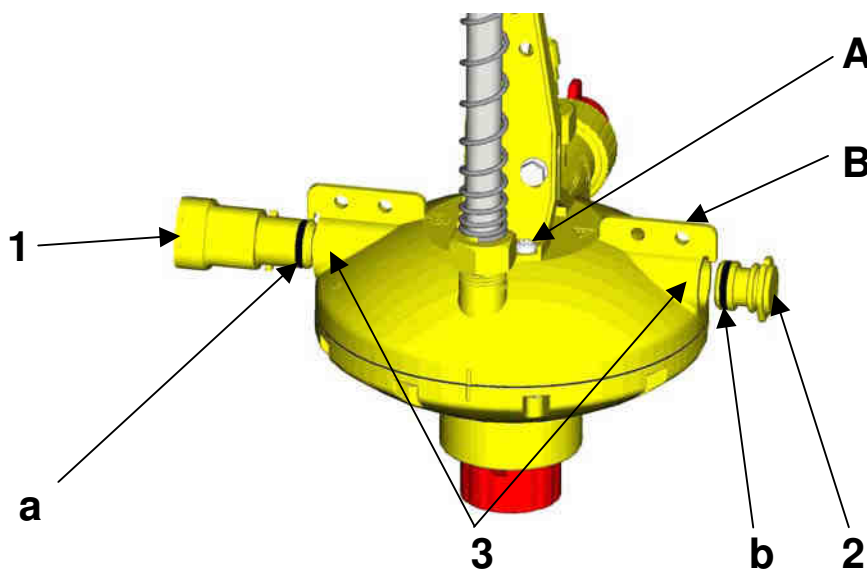


fig. 1

# LUBING

## Assembly Instruction

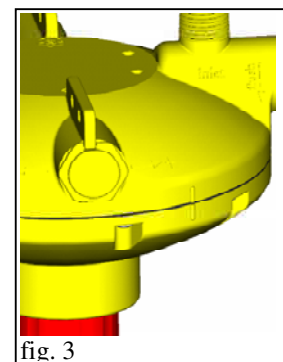
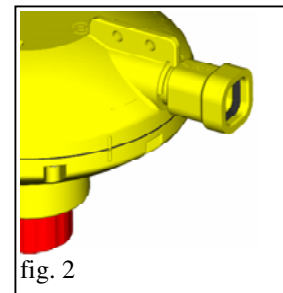
The LUBING pressure regulator is delivered pre-mounted. A penetration of dust or dirt during transport is prevented by the packing. Pay attention to cleanliness also during assembling. Each pollution could affect the function of the pressure regulator and also impair construction units in water direction behind it (e.g. nipple, slope regulator, etc.).

### **Flush thoroughly before start-up!**

Only trained persons may demount the pressure regulator and accomplish other repairs!

### **Connecting to the drinking line:**

- Remove transport plugs (3 pieces).
- Coat O-ring with lubricant (vaseline, acidless fat, detergent) (see fig. 1 on page 2).
- Put the transition piece **(1)** into the opening **(3)**. Rotate the transition piece in such a way that the bar of the adapter seizes into the groove of the pressure regulator (fig. 2).
- For pressure regulator with 2 outlets (Middle connection) art. 3206-00 ; 3216-00 ; 3226-00 ; 3236-00 and all variants of these series:  
Turn the plug with the groove upwards and pull it out (see fig. 3).  
Put the second transition piece in as described above.



Coat the form seal(s) **(c)** in the transition piece with lubricant (vaseline, acidless fat, detergent, etc.).

#### **Note!**

In order to avoid damages of the form seal, the following is to be considered before putting the nipple pipe into the transition piece:

***The outside nipple pipe edge must be easily beveled!***

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## **Cage- and aviary management**

- Put the nipple pipe into the transition piece. The weight of the pressure regulator must be taken up by a mounting plate! The mounting plate must be fastened to the upper part of the pressure regulator at the position A or B. At the position B the screw length must be considered.

## **Floor management**

### **Front connection:**

- Fasten the holder (6) with 4 screws BZ5,5x13 (e) to the pressure regulator.
- Nipple pipe must be shorten about 110 mm.  
Use for the separation of the nipple pipe the LUBING pliers art. 4441.  
Pay attention to cleanliness. Contamination and chips from the nipple pipe remove if necessary flush the drinking line.
- Twist and push the nipple pipe into the transition piece.
- Attach the pressure regulator **straight** with the holder onto the aluminum profile of the drinking element with 2 screws M 6x20, Disk and nut (f).

### **Middle connection:**

- Separate the nipple pipe at the planned place for the pressure regulator.



#### **Note!**

Do not place the pressure regulator over the sheet metal couplings of the aluminum profiles!

Use for the separation of the nipple pipe the LUBING pliers art. 4441.

Pay attention to cleanliness. Contamination and splinters from the nipple pipe remove if necessary flush the drinking line. The distance between the pipe ends must amount to **200 mm**. Place the holder (6) in the center and mark holes for attachment (f). Bore aluminum profile with drill  $\varnothing$  7 mm.

- Push nipple pipe apart around **50 mm** (for each side approx. 25 mm).
- Fasten the pressure regulator with the holder (6) and the 4 provided screws BZ5,5x13 (e) to the aluminum profile.
- Push the nipple pipe on both sides into the transition piece (approx. on each side 25 mm).

#### **Note!**

In order to avoid damages of the form seal, the following is to be considered before putting the nipple pipe into the transition piece:

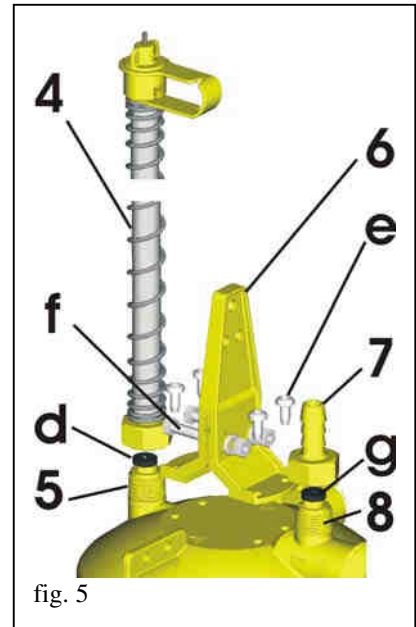
***The outside nipple pipe edge must be easily beveled!***

***Coat the form seal(s) (c) in the transition piece with lubricant (vaseline, acidless fat, detergent, etc.)!***

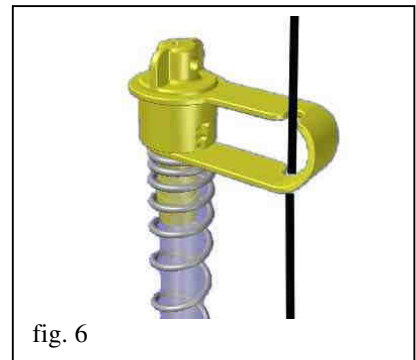
- Attach the pressure regulator **straight** with the holder onto the aluminum profile of the drinking element with 2 screws M 6x20, Disk and nut (f).

# LUBING

- Screw breather (4) with gasket (d) on the breather port (5) (connection ½" laterally marks with: "**breather**").  
The spiral spring keeps also at the flushing pressure the breather hose firm without additional safety device on the breather hose connector.



- Open the breather cap with the bayonet fixing and unwind the strap at the hanging up line or the hanging up wire rope and close breather cap again.



## Water connecting:

- Screw hose connector (7) with gasket (g) onto the inlet port (8) (connection ½" laterally marks with: "**Inlet**").
- Push water connection tube onto the hose connector and secure with a clip against slipping.

**The pressure regulator is now ready for use.**

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## Operating Instructions

### Technical Data:

Inlet pressure: 4-45 lbs  
Adjustable water column: 0 to 36 inches  
Flow rates: 400 gallons/hr

### Adjusting the water column:

At the red adjusting wheel (9), at the lower surface of the pressure regulator, the desired level is adjusted. In the clockwise direction for increasing and counterclockwise direction for decreasing water column height. On the pressure regulator housing indicated with + and - (10). The height of the water column is indicated by the red ball in the breather hose. The water column is measured of the lower edge of the nipple pipe.



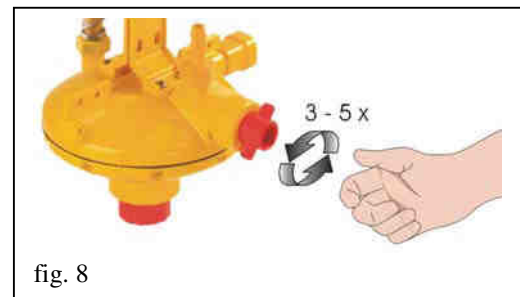
### Flushing:

#### **Important !**

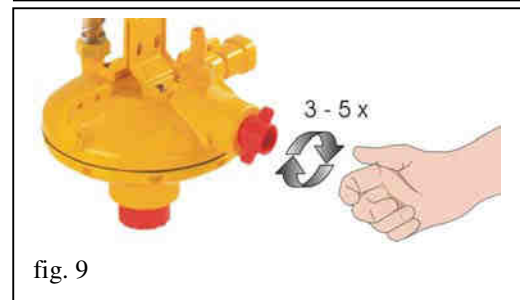
Make sure that the breather unit at the end of the drinking line is preset for flushing. Failing to preset the breather unit may cause damage parts of the pressure regulator or the drinking system!

***With the flushing breather unit this processing step is void!***

- The flushing procedure will be started with 3 - 5 turns counterclockwise at the red knob (11). The valve in the breather cap seals the breather during flushing.



- To terminating the flushing procedure bring the red knob into the starting position and if necessarily furnish the breather units at the end of the drinking line again on normal function.



### Service Instruction:

**The Pressure Regulator must be thoroughly flushed after each medication or cleaning!**



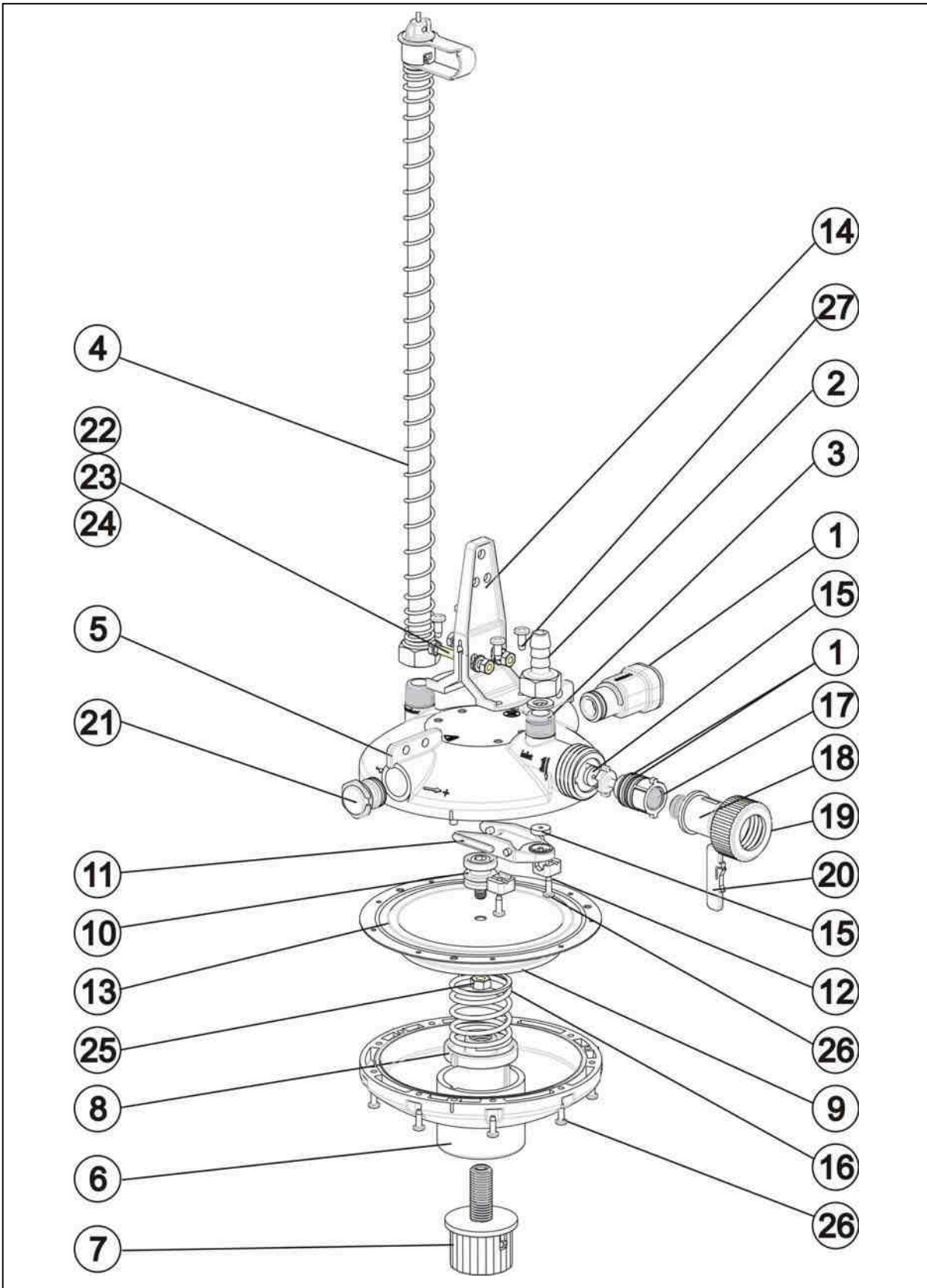
Aggressive and solvent-containing media can cause leakages and loss depending upon kind and concentration!

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## Regulator Assembly

Pressure Regulator cpl. with addition parts

Art. 3221-00, 3226-00, 3231-00, 3236-00



# LUBING

## Spare parts list

#	Qty.	Description
1	1/2*	Transition piece
2	1	Hose connector, ins. thread 1/2"
3	1	Washer 1/2" internal
4	1	Breather
5	1	Upper part
6	1	bottom part
7	1	adjustment wheel
8	1	adjustment nut
9	1	diaphragm plate
10	1	lever operation
11	1	Valve lever
12	2	Lever collet
13	1	diaphragm
14	1	Profile collet
15	2	Valve seal
16	1	Pressure spring
17	1	Flush bordering
18	1	Adjusting mechnism
19	1	Holder nut
20	1	Toggle
21	1	Plug complete
22	2	Washer Ø6,4 DIN 125
23	2	Hexagon bolt M6x20 DIN 933
24	2	Hexagon nut M6 DIN 934
25	1	Hexagon nut M 10 DIN 934
26	11	Slotted pan head screw BZ4,2x13 DIN 7981
27	4	Slotted pan head screw BZ5,5x13 DIN 7981
28	2	O-ring 20 x 2,5