



DRINKERS
Installation Manual

INDIV



INDEX

1. SYSTEM OF DRINKER LINES.

- 1-1. General description of the system.
- 1-2. Drinker lines.
 - 1-2-1. General description.
- 1-3. Assembly of the drinker lines.

2. SUSPENSION OF THE DRINKER LINES.

- 2-1. General description.
 - 2-1-1. System with a winch in the middle of the house .
 - 2-1-2. System with a winch on one side of the house.
- 2-2. Assembly of the suspended system of drinker lines (configuration of the winch in the middle of the house).
- 2-3. Assembly of the suspended system of drinker lines (configuration of the winch on one side of the house).

3. STARTING OF THE DRINKERSYSTEM.

- 3-1. Testing of the system.

4. MAINTENANCE OF THE SYSTEM.

- 4-1. Flushing of the tube.
 - 4-1-1. General description.
 - 4-1-2. Flushing procedure.
 - 4-1-3. Appropriate moment to flush the system.
- 4-2. Maintenance after a period of medication.
- 4-3. Maintenance before ending a breeding period.
- 4-4. Maintenance after a breeding period.

5. PROCEDURE TO MANAGE THE ZIGGITY DRINKERS APPLICATIONS FOR THE FATTENING CHICKEN

- 5-1. Procedures BEFORE putting the chicken.
- 5-2. Procedures AT THE MOMENT of putting the chicken.
- 5-3. Procedures of adjustments and DAILY checking.

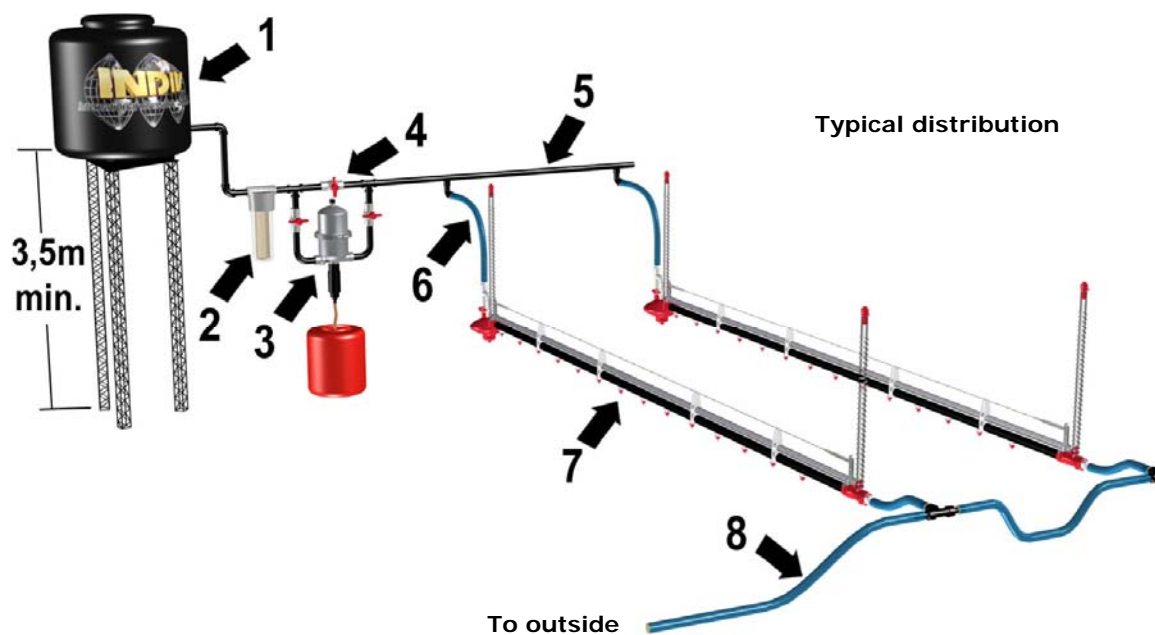
6. RECOMMENDATIONS TO OBTAIN A DRY BED.

- 6-1. General description.
- 6-2. Procedure for a dry bed using a witness line.

1. SYSTEM OF DRINKER LINES

1-1. GENERAL DESCRIPTION OF THE SYSTEM

The elements that form the typical distribution of water in a drinker line are numbered in the graph below.



- 1- Tank of water.
- 2- Water filter.
- 3- Medication distributor.
- 4- Kit for the medication distributor
- 5- Breeding tubes for the drinker lines and drinker kit.
- 6- Inside hose of water for the lines of drinkers.
- 7- Line of drinkers.
- 8- Outside hose of water for the drinker lines.

NOTE:

See attachment at the end of the manual of the water feeder and medicator.

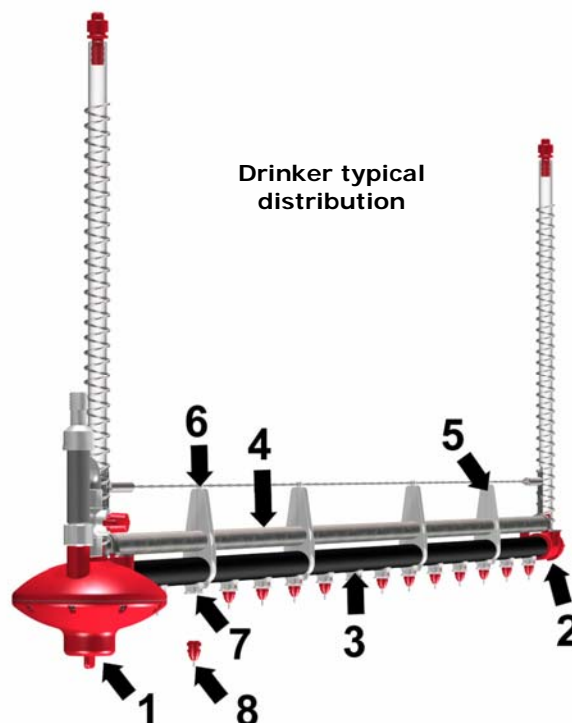
1-2. LINE OF DRINKERS

1-2-1. General description

The elements that form a line of drinkers are numbered in the graph below.

Line of drinker

- 1- Pressure regulator (105FS1491).
- 2- End of line stopper with automatic valve by washing (1051733).
- 3- Drinker tube (Ø33mmx3m) with assembled seats and union connectors.
- 4- Galvanized support tube (Ø 1"x4m) (160CC1675-4MTS) and galvanized connectors (160CO-GAL-D25).
- 5- Hanger (105COLDD33).
- 6- Aircraft cable Ø1.6mm (anti-perch) (1605192).
- 7- Twin- lock nipple seats (1051829).
- 8- Nipple drinker (1052382).



1-3. ASSEMBLY AND INSTALLATION OF DRINKER LINES

The following is a suggested sequence to assemble the drinker lines.

- 1- Calculate the **distance (C) to the start of the tubes** in that way the drinker line will be centered within the house.

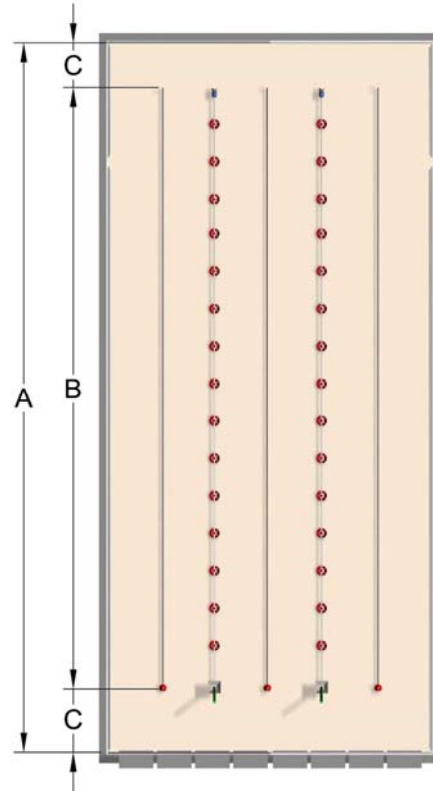
That can be determined by doing the following calculation:

$$C = \frac{A - B}{2}$$

- A** = Inside length of the house
B = Number of Drinker tubes x 3m

The **distance (C)** should not be inferior to **1,5 m** from the ends of the house to be able to move without problems.

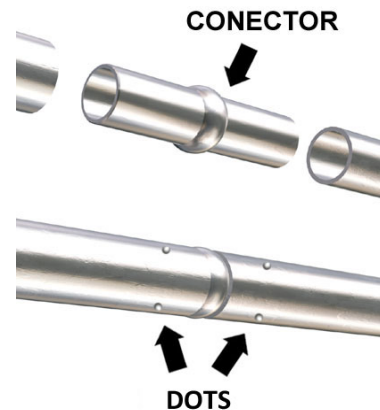
- 2- Assemble the support tubes formed by the 1"x 4m (160CC1675-4mts) of galvanized tubes of 1" (160CO-GAL-D25) starting with distance **C** calculated from the end of the house.



VERY IMPORTANT:

After assembling the tubes with the connector, two indentation must be taken with a punch (marked) on both sides of the connection to guarantee the rigidity of the connection

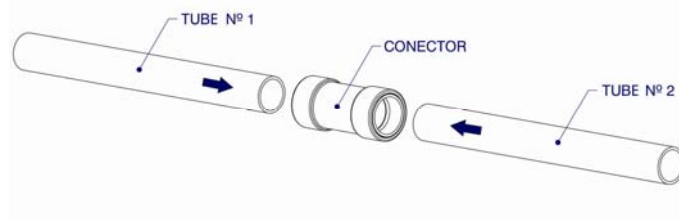
- 3- Assemble the water tubes formed by Ø33/3m drinker tubes and the connectors starting at the end of the previously assembled support tube so that the unions of both tubes are aligned.



The glue type connectors to connect the water tubes are pressure connectors or O'rings

3.1- Assembly of the connectors

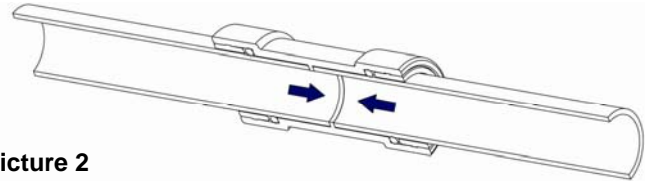
It is suggested that for the proper connection of the tubes the assemble should be done **in the following** way in order to avoid expansions or contractions produced by the changes of temperature do not disconnect the tubes.



A- Fasten Pipe Nº 1 to the galvanized hanging tube.

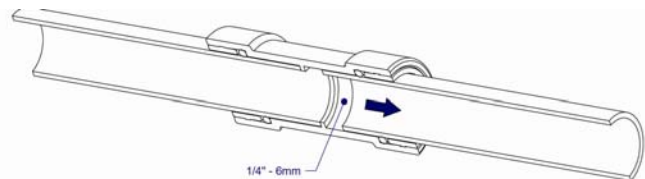
Picture 1

B- Install the connector on tube Nº 1 and Nº 2 both against the interior end of the connector.



Picture 2

C- Hold the position of the connector and tube Nº 1 and pull outside pipe Nº 2 approximately 1/4" or 6mm.

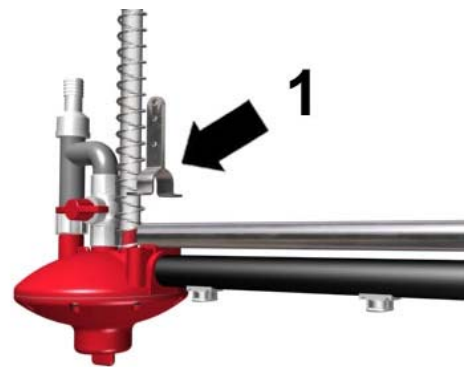


D- Fasten tube Nº2 to a galvanized support tube.

4- Install the pressure regulator (105FS1491) at the end of the tube close to the feeding transversal line.

A- Insert the drinker tube in the water outlet of the regulator about 3 cm until it stops.

B- Attach the galvanized tube with the suspension clap provided **(1)** and the regulator.



5- Install the hangers (1) (105COLDD33) matching the black tube of water and the galvanized support tube.

IMPORTANT:

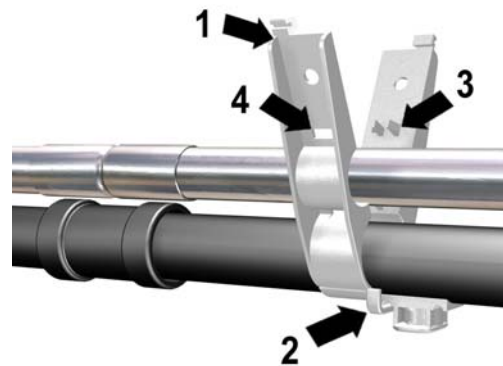
A- Install **4 hangers on each drinker tube** of 3 m guarantying 4 suspensions on every 3m section.

B- The hangers have to be **distributed equally** along every section.

C- **The first hanger of the section has to be located 5 cm away from the tube connection** to avoid any deformation caused by flexion.

D- If it is possible, locate the hanger close to the ridge (2) against the closest seat.

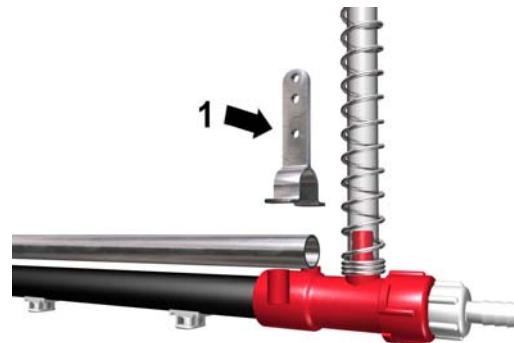
E- Be sure that the locking tabs (3) located on both sides of the galvanized tubes, are totally inserted in the holes (4), guaranteeing a proper closure.



6- Installation automatic final valve (1051733).

A- Insert the drinker tube at about 3 cm in the final stopper of the line until it stops.

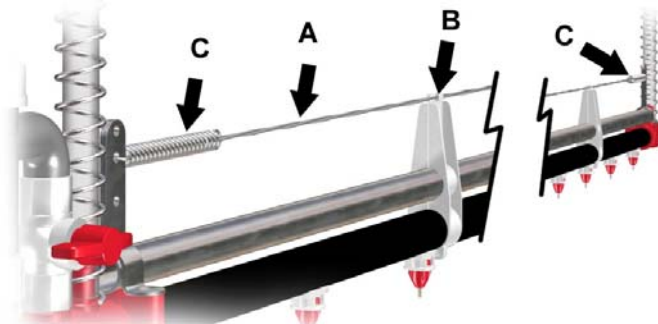
B- Attach the galvanized tube with the suspension bracket (1) supplied with the final stopper.



7- Hang the entire drinker line at a comfortable working height following all the numbered steps in the suspension of drinkers section.

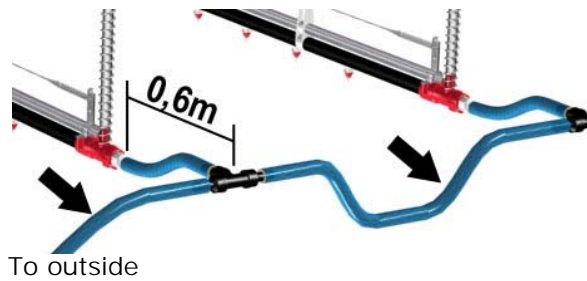
8- Install the galvanized steel cable Ø1.6mm(A) (anti-perch) (1605192) along all the line, making it go through the top part of each hanger (B) using springs (C) (supplied with the regulator and the valve) to tighten the line.

9- Install the Nipple drinkers TL (1052382) into each seat of the water line using the tool to remove the nipples (105956) supplied with them.



10- Connect the tube with the supply, the entrance of water with the pressure regulator, located at the end of the line using the provided hose.

11- Connect from the automatic final valve (at the end of the line of hoses) **the outing of water to the exterior**, using 0,6m of hose between the valve the outing conduit made up by the hose , the joint and the Tee.



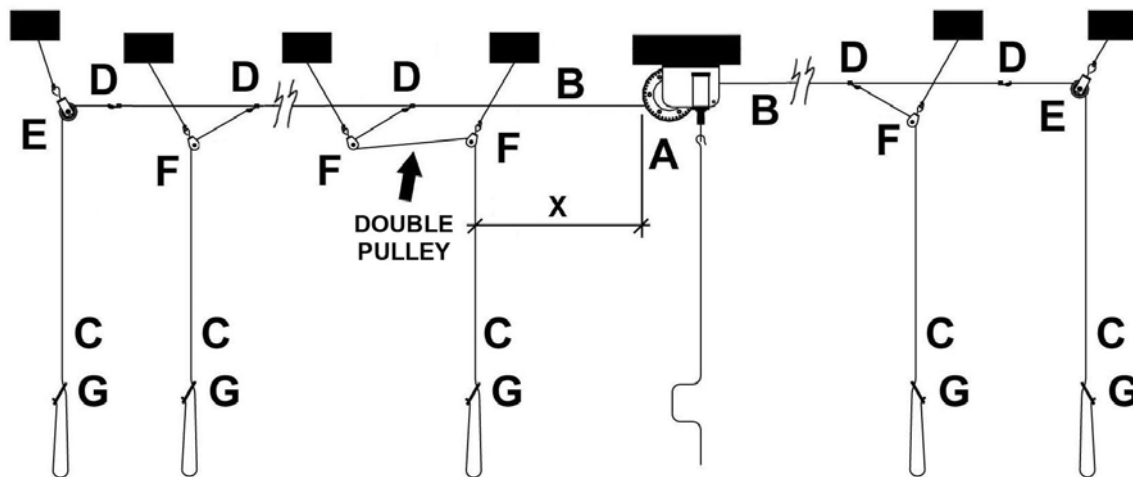
2. SUSPENSION OF THE DRINKER LINES

2-1. GENERAL DESCRIPTION

The following are concepts and general details to take into account for the proper working of the suspension system and the rising of the drinker lines.

There are two ways of installing the system:

2-1-1. System with a winch in the middle of the house.



A- Double hub winch, 1500lb or 2000lb (700 o 900Kg) (160AS9125).

B- Galvanized steel wire of $\varnothing 1/8''$ (3mm) (160AR1030).

C- Nylon cord $\varnothing 3\text{mm}$ (160CC5505M).

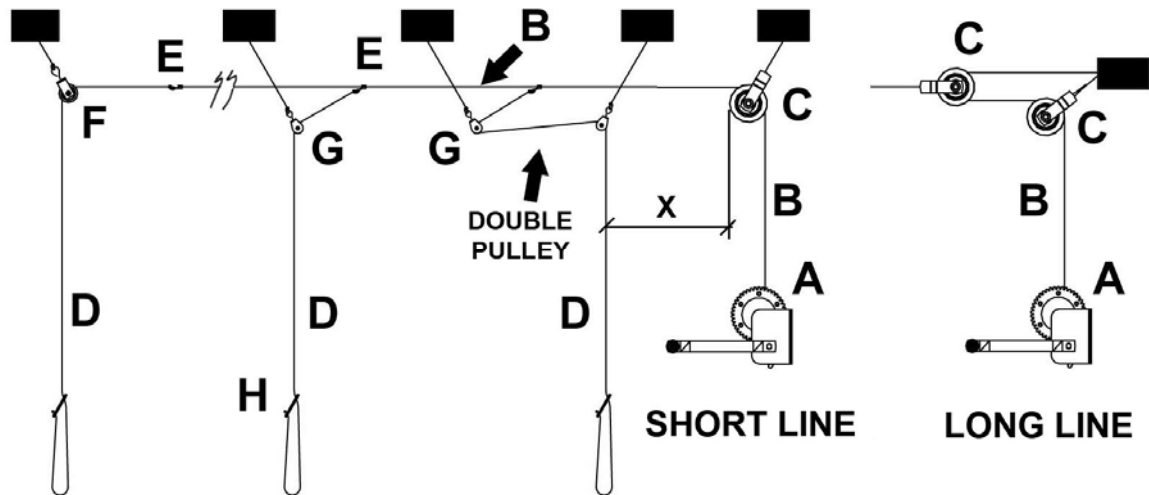
D- Stak-on, closed (steakon1/8) (160AS1052).

E- Nylon pulley $\varnothing 2''$ (160AS5030).

F- Nylon swivel pulley, $\varnothing 7/8''$ (160AS5020).

G- Height adjuster for nylon cord (105AJUS-AL)..

2-1-2. System with winch at the end of the house.



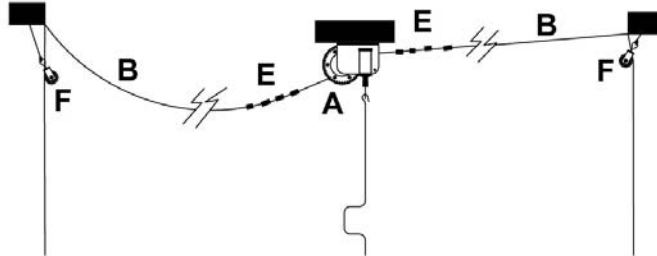
- A. Single hub winch 1200lb (550kg) (160AS9315).
- B. Galvanized steel wire $\varnothing 1/8"$ (3mm) 160AR1030).
- C. Melting pulley $\varnothing 3 \frac{1}{2}"$ (160AS5011).
- D. Nylon cord $\varnothing 3$ mm (160CC5505M)
- E. Stak-on, (steakon1/8") closed (160AS1052) or open (160AS6012).
- F. Nylon pulley $\varnothing 2"$ (160AS5020).
- G. Nylon swivel pulley, $\varnothing 7/8"$ (160AS5020)
- H. Height adjuster for nylon cord (105AJUS-AL).

2-2. INSTALLATION OF SRINKER LINE SUSPENSION SYSTEM (Design with *winch in the middle* of the house)

The following are suggested steps for the installation of the drinker line suspension system.

It is supposed that the drinker line is on the floor an completely assembled.

- 1- **Attach the double hub winch (A)** in the middle of the house.
- 2- **Attach the Ø2" Nylon pulleys (F) (160AS5030)** aligning them vertically to the respective attachments at the end of the line of drinkers (metal hanger in the valve and metal hanger in the regulator).



- 3- **Unroll cable (B)** from one end of line to the other, passing it through the winch.
- 4- **(*)Thread from one side the stak-on (Stak-on 1/8"160AS1052) (E)** in equal number to the total number of suspensions of the line.
- 5- **(*) slide the compression stak-ons (Stakon 1/8"160AS1052) (E)** until it reaches the winch leaving on each side of the winch the necessary amount.

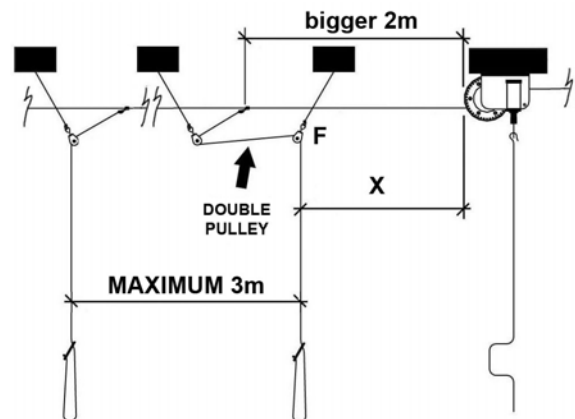
(*)NOTE: put this items into practice, if nico sleeves are used.

- 6- **Fix the wire to the winch** following the fixing procedure described in the manual.
- 7- **Fix in a provisional fashion both ends of the cable** to the pulley hardware at the ends of the line.
- 8- **Tighten the wire with the winch** so that the cable rises and remains tight.

From the winch: attach the drop assemblies made up by the nylon cord (C), the pulley 7/8" (160AS5020) (F) and the height adjuster (G).

IMPORTANT:

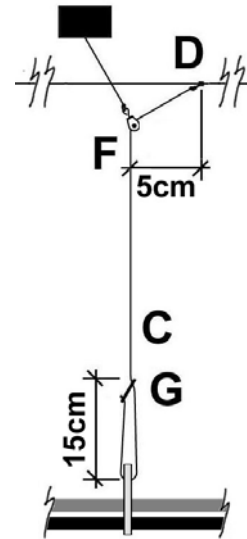
- a- If the **distance (X)** between the first suspension and the winch is less than 2m (or the maximum hanging height) a double pulley(*) system should be used in order to avoid the stak-on dragging into the winch.



(*) see chapter 2-3 long line.

- b- **The distance from the winch should be between 2,5 and 3 m (maximum).**

- 9- **Fix the first pulley (F) of nylon of Ø7/8" (160AS5020) aligning it with its respective hanger of the drinker.**
- 10- **Pass the nylon cord Ø3mm (C) through the pulley (F) through the height adjuster (G) for the nylon cord, through the hanger eyelet(on the floor in vertical position) and once again trough the height adjuster(G) leaving 15 cm between hanger and adjuster for the regulation.**
- 11- **Make a knot in the nylon cord at the end of the adjuster.**
- 12- **Fix the stak on (D), 5cm before the pulley (F).**
- 13- **Cut and fix the nylon cord Ø3mm (C) to the eyelet on the stak-on, leaving the cord tense and the hanger of the drinker on the floor in a vertical position.**
- 14- **Repeat these steps with each suspension set, up to the end of the line, take into account that the distance should be between 2,5 and 3m (maximum).**



2-3. INSTALLATION OF THE DRINKER LINES SUSPENSION SYSTEM (Design with the *winch at the end of the house*)

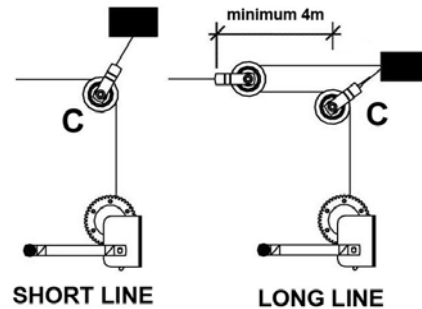
The following is a suggested sequence for the installation of drinker lines suspension system at the end of the house.

The drinker line is supposed to be on the floor and fully assembled.

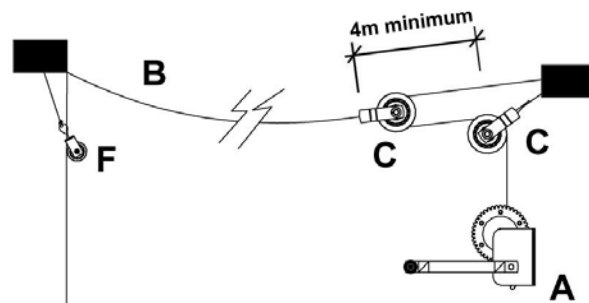
When the **line is short** (length of less than 70m), only one pulley will be used (C) Ø3-1/2" (160AS5011).

If the **line is longer** (generally the case), **two pulleys** will be used (C) Ø3 1/2" (160AS5011) in order to use the minimum winch reducing the power of itself to the half.

Having this configuration into consideration, **the distance between the pulleys** should be **double the maximum distance of the lifting or no less than 4m**.



- 1- **Firmly attach the winch (A)** at the most convenient end of the house.
- 2- **Attach the Ø3 ½" pulley (C) (160AS5011).**
- 3- **Attach the Ø2" pulley (F)** aligning it vertically with the respective attachment at the end of the end of the line of hangers (metallic hanger in valve or metallic hanger in the regulador)
- 4- **Unroll the wire (B)**, from one end of the line until it reaches the winch.
- 5- **Thread from this end to the stackons (E) (Stakon 1/8")** in equal number to the number of drops on the entire line



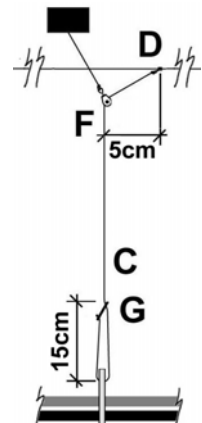
- 6- If the **line is short**, slide the wire in the pulley (C) and fix it to the winch according to the specifications attached to the manual.

If the **line is long**:

- a- Wire the pulleys and the winch, considering the 4m distance between both and the specifications of the winch attached
- b- Fix the second cable (B) to the winch.

- 7- **Attach in a provisional fashion the cable end** to the pulley (F) on the opposite end to the winch.
- 8- **Tighten the wire with the winch** so that the cable rises and remains tense

From the winch: Attach the hanger kits made up of the nylon cord (C) the pulley 7/8" (F) and the height adjuster (G).

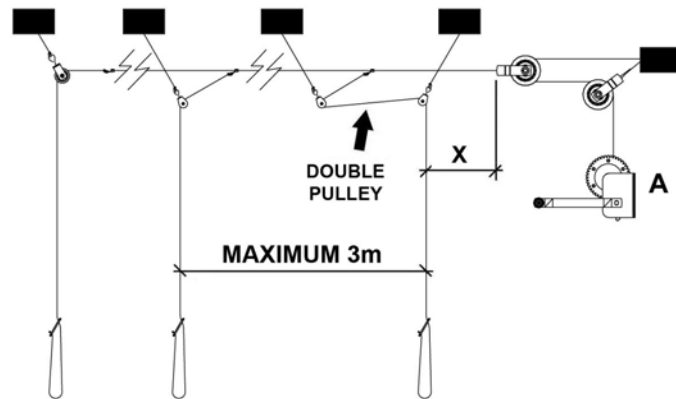


IMPORTANT:

- c- If the **distance (X)** between the first suspensions and the **winch does not allow its installation** because of being too close, a double **pulley system** should be used..
- d- **The maximum distance between the suspensions is of 3m.**

9- **Fijar la primer Polea (F)** de Nylon de **Ø7/8"** alineándola con el respectivo colgador del bebedero.

10- **Pass the nylon cord Ø 3mm (C)**, through the pulley, through the height adjuster(G), through the hanger eyelet (on the floor and in vertical position) and **again through the height adjuster (G)** leaving 15cm between the hanger and the adjuster for the regulation.



11- **Make a knot** to the cord at the end of the adjuster.

12- **Fix the stak-on (D)** 5cm before the pulley (F).

13- **Cut and fix the nylon cord Ø3mm (C)** to the stak-on eyelet, leaving the **cord tense** and the drinker hanger on the floor **in vertical position**.

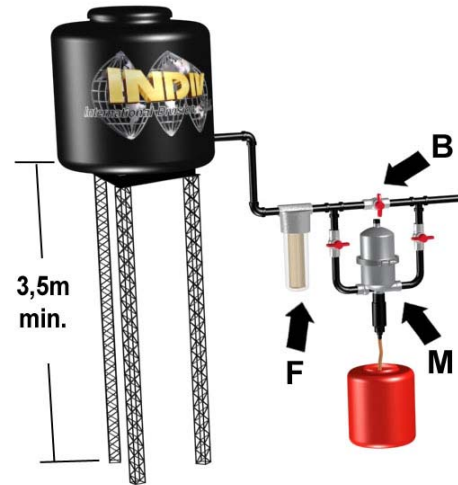
14- **Repeat the installation of the hanging sets up to the end of the line**, taking into account the maximum distance between the suspensors. They will be between 2,5 and 3m (**maximum**).

3. STARTING UP THE DRINKER SYSTEM.

3-1. VERIFY THE SYSTEM BEFORE STARTING UP

This should be done **before the starting up of the drinker**, to guarantee its proper working.

- Verify that the **tank** is installed **3,5 m height**.
- Verify that the **water filter (F)** is placed with its **respective cartridge**.
- When the installation has a **Medicator (M)**, this will be installed through a **bypass (B)** made up of 3 valves.
- Verify that the **in and out hoses are inserted**.
- Verify that all that all the seats of the lines have its nipple inserted.
- Verify that the **flushing valves** from the regulators **are closed** an in horizontal position.



IMPORTANT

- Verify that **both ends** of the drinker lines (regulator end and valve end) **are a few cm above the central part of the line to avoid the gathering of air inside the pipe.**

When the house is leaning on its sides:

- Verify that the **regulator is inserted on the higher part of the line.**
- Verify that the **transparent hose** of the column of water in the lower end is long enough to be able to visualize all the pressure at the higher end.

4. MAINTENANCE OF THE SYSTEM

4-1. FLUSHING OF THE TUBE

4-1-1. General description

The flushing of the tube should be done to clean impurities and to expel the air located in it self.

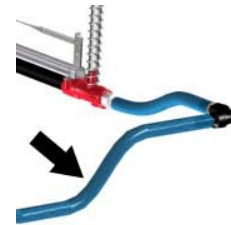
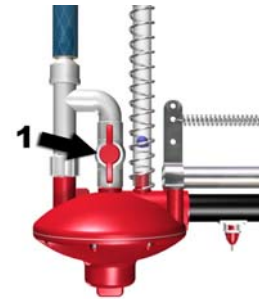
This is done every time that the medication period is finished.

4-1-2. Flushing procedure

- Open the flushing valve (1) completely **for a minute every 30m of the tube.**

NOTE:

When the flushing valve (1) of the regulator **is opened** the corresponding valve of the stopper located at the end of the line opens automatically, leaving the water run freely to the exterior through the previously installed hoses



4-1-3. Appropriate moment to flush the system.

- **Before putting the birds**, to clean and take out the impurities.
- During breeding, **from day 2 to 7** make two daily flushing to remove the air.
- **After the medication period** to clean the system.

4-2. MANTAINACE ONCE THE MEDICATION PERIOD IS FINISHED

Remove the biofilm and the waste from the drinkers and the tubes immediately after every intervention with medicine, vitamins, etc. Proceed in the following way:

- Put clean water in the drug tank of the medicator.

NOTE:

If it is possible, the use a product which has in its components oxygenated water in order to make a deep cleaning.

As it should be done with every intervention, consult a vet o person in charge of the procedure to determine whether or not the procedures are appropriate and acceptab.

- Flush the system one by one during one minute, at least, on 30 m along the system.

4-3. MANTAINANCE BEFORE FINISHING EVERY BREEDING PERIOD

- Two days before finishing the breeding (before removing the birds), 1 liter of vinegar every 100lt should be introduced in the water tank to clean the nipples and the tuve.

4-4. MANTAINANCE ONCE THE BREEDING PERIOD IS FINISHED

- **Charge** the water breeding line **with** a mixture of **oxygenated water** and water according to the manufacturer's instructions.

Let it rest and then wash the system with clean water flushing it.

- **Clean the ascendant tubes.**
- **Remove the tops** of the ascendant tubes and clean them.
- Revise the filter system, **substitute or clean the filter cartridge** according to need.
- Adjust the **water column pressure** in DAY 1 position.
- If there is any possibility of **freezing temperatures** in the house **drain the water lines of the drinkers.**

5. PROCEDURES FOR THE MANAGEMENT OF THE ZIGGITY DRINKERS APPLICATIONS FOR THE FATTENING CHICKEN

5-1. PRIOR PROCEDURES TO THE PLACING OF THE BIRDS

- **Clean, fix and remove** the air of the water tubes, **flushing** the system (see flushing).

- **Level the bed** under the drinker line, cleaning all the high and low spots.

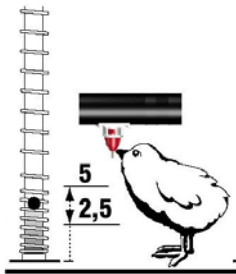


- **Adjust the regulators of pressure (1)** to the height of the little ball (2) of the water column that has the indicated position **DAY 1 – WEEK ONE** (see graph 1).



- **Manually start** along every line and in alternating fashion, the **drinker nipples** to verify that there is water along the whole system.

5-2. INSTANT PROCEDURES **WHEN** PLACING THE BIRDS



DAY 1 - WEEK 1

- Place the birds under the water breeding lines of the drinker.

- **Adjust the height** of the breeding line of water of the drinker according to the position DAY 1- WEEK observing that the height of the nipple should be aligned to the eye of the chick.



- **Verify whether or not there water** in the end nipples.

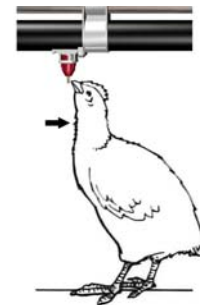
- **Daily flushing** is needed from day 2 to 7. It needs two flushing daily (see flushing).

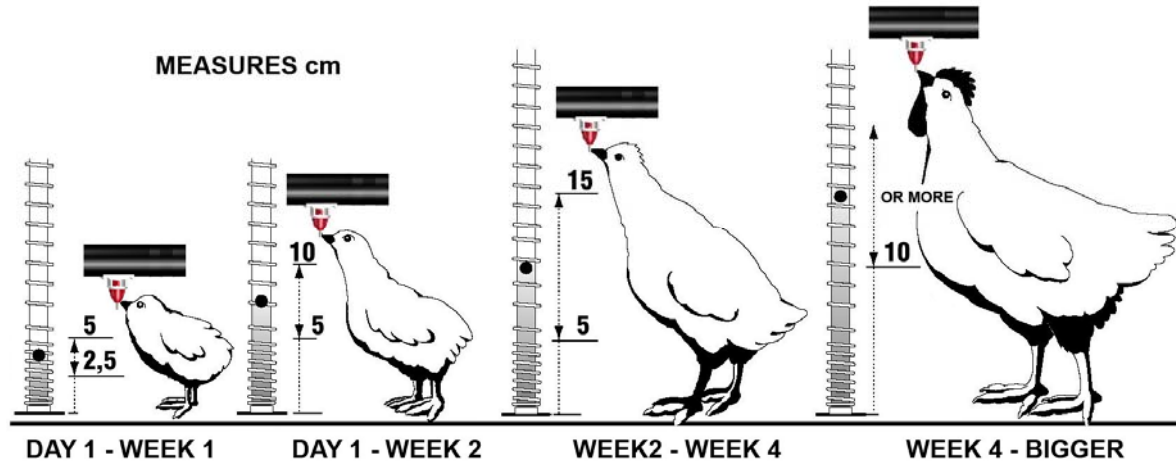
5-3. PROCEDURES OF ADJUSTMENT AND CONTROL **DAILY**

- **Adjust the height of the line according to height.**

The proper height from the floor to the nipple is based on the natural drinking position of the chicken, **the height of the nipple** should be the necessary so that **the chicken stretches the neck without effort.**

- Keep pressure in the water column (height of the little ball) among the limits given in the following graphs.





6. SUGGESTIONS TO HAVE A DRY BED

6-1. GENERAL DESCRIPTION

It is very important that the bed, below the drinkers, has a low percentage of humidity.

The pressure in the tube directly affects the quantity of the water administered by the drinker when it starts.

MORE PRESSURE = MORE WATER and LESS PRESSURE = LESS WATER

If the bed below the drinker gets too wet, it could be caused by:

- The height of the nipple according to the peak is incorrect.
- The pressure of the water column is too high according to the age of the bird.
Reduce the pressure 50% or less and check whether the water breeding line of the drinker is correct.

NOTE:

When the temperature is low and the ventilation is reduced, it is possible that a reduction in the water pressure is needed to maintain the bed in good conditions.

If the bed is completely dry below the drinker, a gradual raise of the pressure of the water column should be done until it gets slightly humid.

6-2. PROCEDURE FOR A DRY BED USING A WITNESS LINE

One drinker line is used as witnesses or reference, giving the rest of the lines more pressure.

- Start by regulating the pressure in each line of the system until the little ball in the level is positioned in the recommended height for the different ages of the chicken.

- **Regulate the witness line pressure** until the little ball in the level is positioned **a few cm higher than the other lines.**

“if it is below the witness line, the bed remains dry for 48 h, all the lines will get a witness pressure and the witness line 2cm more than the previous pressure.”

- **Repeat** the procedure until the 4th breeding week.
- **From week N° 4 onwards** the pressure regulator opens completely working at a maximum pressure.



Regulat assembly for the medicator and filter
(opcional)

