



# MiniMax™ Classic

## Use and Assembly Guide



Original use and assembly guide

**ROXELL®**

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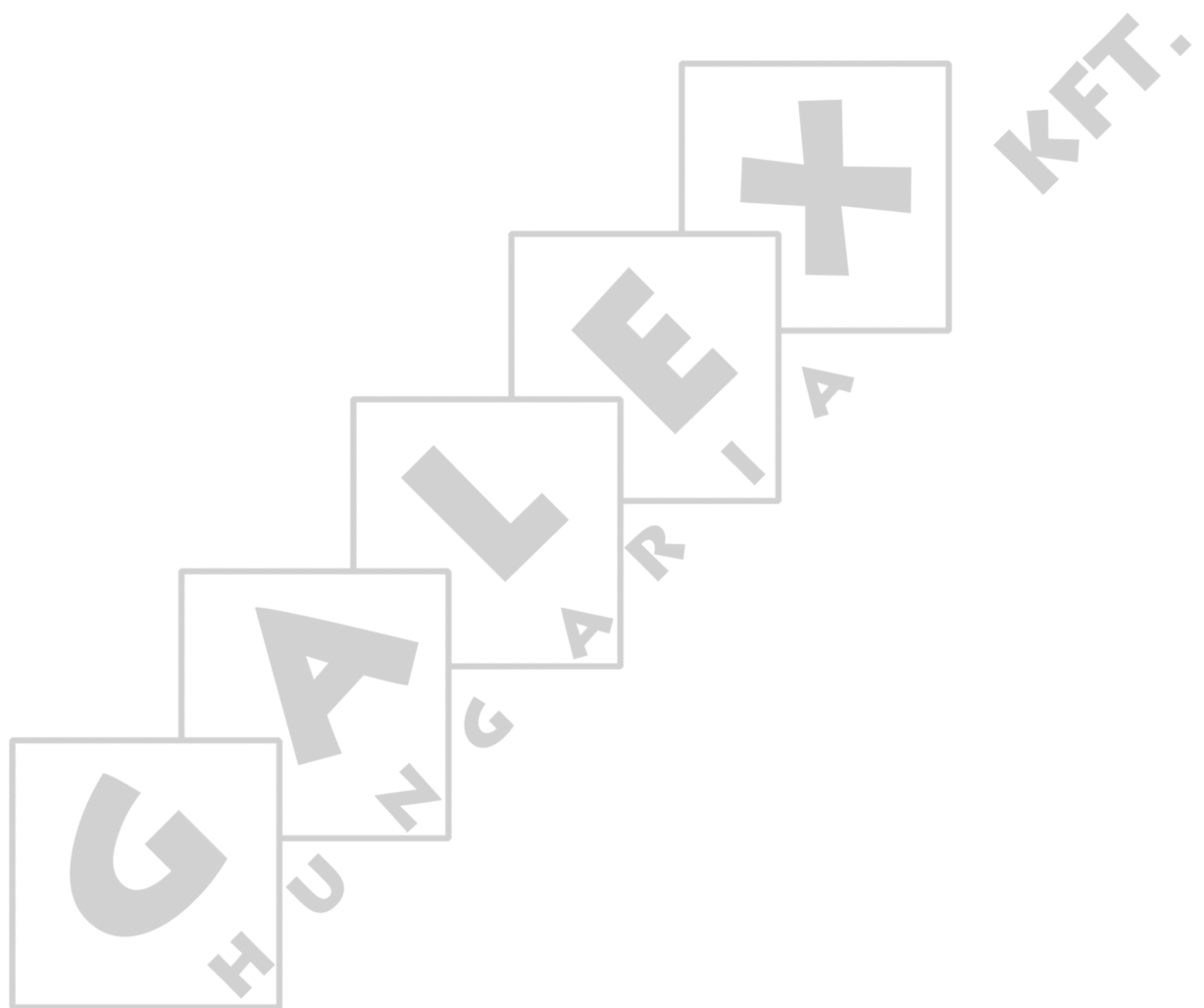
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## GENERAL INFORMATION

**THESE INSTRUCTIONS MUST BE READ, UNDERSTOOD AND ALL POINTS OBSERVED BY THE USER, THE RESPONSIBLE AND OPERATING PERSONNEL.**

### 1. OBEY THE LEGAL REGULATIONS AND THE APPLICABLE RULES!

This concerns, among other things, the European directives transposed into national legislation and/or the laws, safety and accident prevention regulations that apply in the user's country.

During assembly, operation and maintenance of the installation the legal regulations concerned and the applicable technical rules must be obeyed.

### 2. INTENDED USE

The installation has been designed solely for intensive livestock use and has been developed according to the applicable rules of good workmanship. Extra loading of the product is therefore prohibited. Any other use is considered to be improper use. The manufacturer is not responsible for damage resulting there from. The user bears sole responsibility.

### 3. NOT-INTENDED USE

All use different than described in point 2" intended use" is at the responsibility of the end user.

### 4. LIABILITY

The (Extended) Warranty will not apply if any of the following has occurred: failure to conduct incoming goods inspection with regards to the Products, improper handling, transportation, modification or repair; accident, abuse or improper use; improper assembly, installation, connection or maintenance (having regard to Roxell's most current assembly, installation, connection and maintenance manuals); force majeure; negligence, lack of supervision or of maintenance on the part of customer; normal wear and tear; use of cleansing agents and disinfectants that are excluded in Roxell's most current use and maintenance manuals; use of cleansing agents and disinfectants in violation with the instructions received from the suppliers; or use of the Products in an ATEX-surrounding.

The (Extended) Warranty shall not apply in the event of a defect caused either by materials or accessories supplied by or services rendered by Customer, or by an intervention by a person or entity which is not authorised or qualified for carrying out such intervention. Furthermore, the (Extended) Warranty will only apply if the Products are used in livestock houses and if all parts or components of the Products are supplied by Roxell.

Roxell will not be liable for any damages caused due to improper use, assembly, installation, connection or maintenance of the Products. In this respect, the Customer expressly acknowledges that (i) all use, assembly, installation, connection or maintenance must be done in accordance with Roxell's most current assembly, installation, connection and maintenance manuals and (ii) the electrical installation on which the Products must be connected must be done in accordance with applicable local legislation on electrical installations. Furthermore, the Products must be tested both mechanically and electrically in accordance with state of the art techniques and applicable local legislation.

### 5. PERSONNEL QUALIFICATIONS

#### USER:

The person who uses a function or operation of a product for their work or who works on the product. The user must be able to read the instructions for use and fully understand them. The user has knowledge of the functioning and construction of the installation.

#### TECHNICALLY TRAINED PERSON:





An expert who can assemble and maintain the installation (**mechanically/electrically**), and resolve malfunctions. On the basis of his/her technical training and experience, he/she has sufficient knowledge to be able to assess activities, recognise possible dangers and rectify dangerous situations.

## 6. INFORMATION ABOUT THE RESIDUAL RISKS - USED SAFETY SIGNS

There are three levels of danger, which you can recognize from the signal word

- \* **DANGER**
- \* **WARNING**
- \* **CAUTION**

The nature and source of the imminent danger and possible consequences of not obeying warnings is stated here!

 <b>DANGER</b>	<p><b>DANGER</b> indicates a direct imminent danger that can result in a serious or even fatal accident if the safety measures are not respected.</p>
 <b>WARNING</b>	<p><b>WARNING</b> indicates a possible imminent danger that can result in a serious accident or damage to the product if the safety measures are not respected.</p>
 <b>CAUTION</b>	<p><b>CAUTION</b> indicates possible, dangerous situations that can result in minor physical injury or material damage if the safety measures are not respected.</p>
	<p>This symbol refers to supporting information.</p>
<p> <input checked="" type="checkbox"/> allowed  <input type="checkbox"/> not allowed         </p>	

## 7. STORAGE

Put all parts to be assembled in a room or at a location where the not yet assembled components are protected against weather influences.

## 8. TRANSPORT

Depending on the size of the parts and according to local circumstances and local legislation, the parts of the machine have to be transported with a forklift.

The forklift must be operated by a qualified person and in accordance with the rules of good workmanship.

When lifting the load, always check if the center of gravity of the load is stable.

## 9. DISMANTLING

Dismantle the installation and its components in accordance with the environmental legislation of the country or the local authorities applicable at that time. All functioning products and exchange parts must be stored and disposed of in accordance with the applicable environmental regulations.

### Environmental information for customers in the European Union



European directive 2002/96/EC amended by the Directive 2008/34/EC requires that equipment that bears this symbol on the product or packaging must not be disposed of with unsorted household waste. This symbol indicates that the product must be disposed of separately. You are yourself responsible for the destruction of this and other electrical and electronic equipment via the disposal channels designated for that purpose by the national or local government. The correct destruction and recycling of this equipment prevents any negative consequences for the environment and health. For more information about destroying your old equipment, contact your local authorities or waste disposal service.

### Information about waste disposal - electrical/electronic material for companies

#### 1. In the European Union

If you have used the product for commercial purposes and you want to dispose of it, contact Roxell who will give you information about the return of the product. It is possible that you will have to pay a disposal charge for the return and recycling. Small products (and small quantities) can be processed by the local collection agencies.

#### 2. In other countries outside the European Union

If you want to dispose of this product, contact the local authorities for information concerning the correct disposal procedure.

## 10. THE LEVEL OF NOISE EMISSION

The noise level of the installation in operation does not exceed 70dB(A).

## 11. LOCK OUT TAG OUT – LOCK METHOD GENERAL

- Everyone needs his own lock and tag (label), which can't be removed by other persons.
- Inform all persons who are influenced by the procedure.
- Localize all sources of energy (electric, hydraulic, pneumatic).
- Switch off.
- Lock out and tag out.
- Check if the source of energy is switched off.
- Remove any remaining energy.

## 12. USE PERSONAL PROTECTIVE EQUIPMENT.

Ensure you wear personal protective equipment (gloves, dust masks...).

## 13. SUFFICIENT LIGHTING - ILLUMINANCE

- **A minimum illuminance of 200 lux is necessary** during usage, maintenance and installation.
- Provide at the installation **(portable) emergency lighting in case of power failure.**

## 14. ELECTRICAL EQUIPMENT, CONTROL PANELS, COMPONENTS AND DRIVE UNITS

- To operate control panels, there must be **at least 70 cm of free space.**
- Control panels must **always remain closed.** The key of the control panel must be in possession of an authorized person.
- The necessary measures must be taken by the user to keep out **rats, mice and other vermin from the control panels**
- If electrical equipment, control panels, components and drive units are damaged, the system must be stopped **IMMEDIATELY!**
- Electrical equipment, control panels, components and drive units should **NEVER be sprayed with water or other liquid!**
- Electrical equipment, control panels, components and drive units should **NEVER be covered with any material.**

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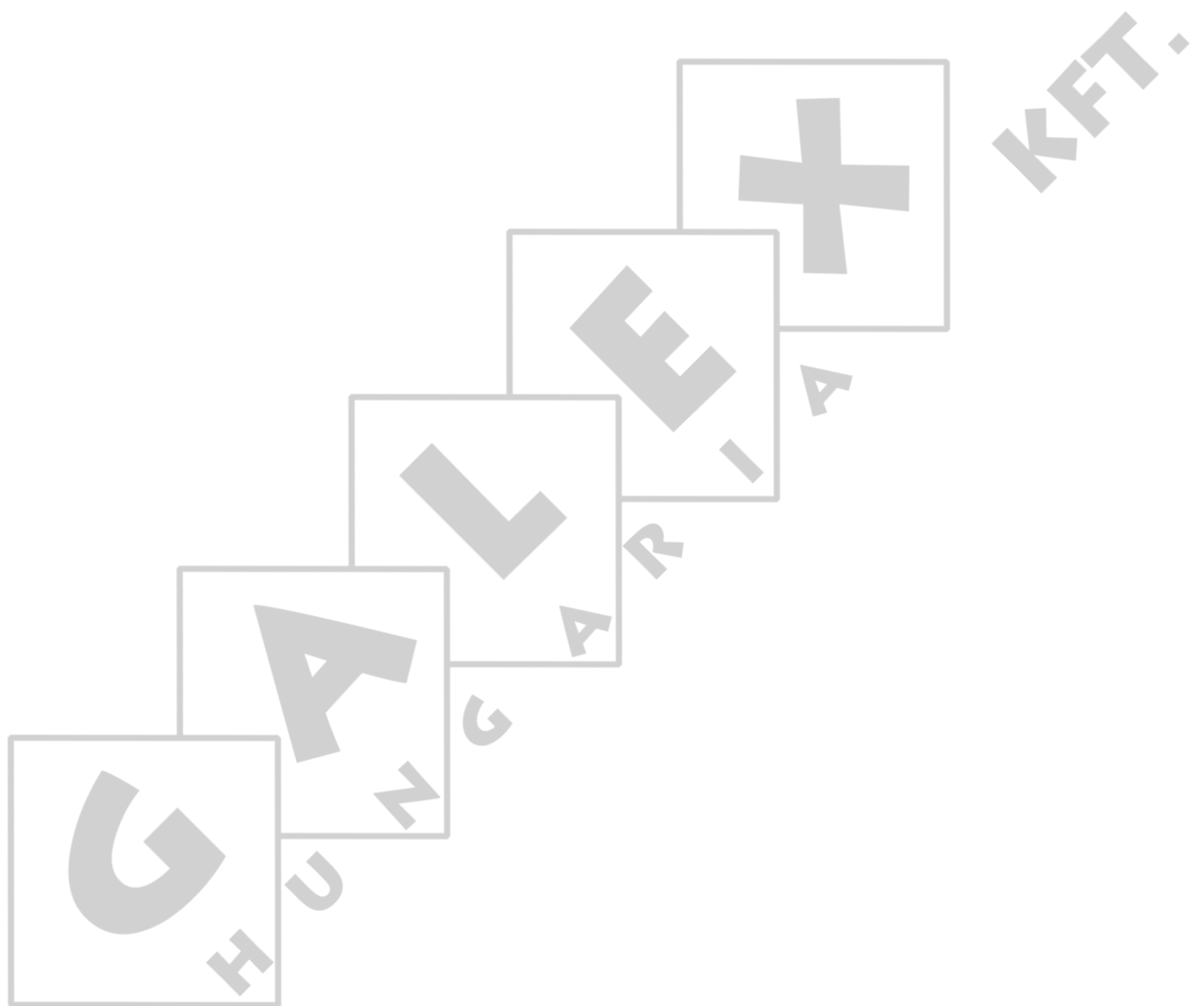
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# PART I

## INSTRUCTIONS FOR THE USER



Handwriting practice sheet with horizontal lines and a large watermark reading 'G HUNGARIAN KFT.'.

## GENERAL SAFETY RULES

Minimax/HaiKoo/Comeo Nr: 002.../009.../001

Automatisch pannen voedersysteem voor vleestkuijkens

Automatic pan feeding system for broilers

Winching systeem

Liersysteem voor voer- en drinklijnen

Winching system for feed- and drink lines



**DANGER**

## IMPORTANT

**Carefully read the following instructions before USING the system**

1. Before you do any **repair**, or **maintenance works**, always **disconnect the electricity supply**.
2. Ensure you wear **personal protection equipment** (gloves, dust masks).
3. The system **starts automatically**.  
**Never** use your **hands** at **dangerous locations** (feed intake boots, drive units, control units or outlet holes in the tubes) before you have **completely switched off** the transport system and made sure that **nobody** can **switch it on** without your knowledge.
4. **Never** allow **unauthorized persons** to **enter the house** in your absence.
5. **Be careful** when **lowering** or **winching** up the feeding lines/circuits :
  - **stop** immediately at the slightest hitch.
  - **never** stay **underneath** when lowering or winching up the lines/circuit.
6. If the auger stalls : **immediately** switch **off** the system. Carefully read the trouble shooting guide and strictly follow instructions. Contact a **technically trained person**.  
An auger **under tension** can **cause very serious injuries** when released.
7. Regularly check the **elbow/trough and/or tube connections**. Tighten if necessary.
8. Ensure that the **hopper cover (grill)** or **cover** on the 100 kg hopper **closes properly**.
9. Regularly check that the **control unit (pan)** and/or the **motor handy box** are properly closed.



This **SYMBOL** will be used to draw your attention to matters that are of **GREAT IMPORTANCE** for your **SAFETY**.

It means : **WARNING** - follow the safety instructions : disconnect the current - re-read the safety rules.

In short : **BE ALERT**. **IGNORING** these instructions can cause **SE-RIOUS INJURIES** or even **DEATH**.

## DIRECTIONS FOR OPERATING THE SYSTEM

Minimax line = feeding system for broilers, turkeys (0-14 weeks), layers, quails, guinea fowl and ducks

### **PUTTING THE SYSTEM INTO USE**

The oil on the new auger and the tubes will slow up feed transport at the beginning.

When using a new feeder line for the first time, fill up the hopper with 25kgs of feed.



Switch on the feeder until this feed is distributed, then repeat the procedure until the whole line is filled. By doing this :

- you limit the load on the motor of a long feeder line.
- at the same time, you test the switches and make sure that the feeder line has been properly installed.
- you become used to the system.

If instead there are small marks of rust either on the inside of the tube as on the auger, we advise to mix the first 5kg of feed with a portion ( $\frac{1}{4}$ l) of maize oil. This is to avoid the noise and trembling during the starting up.

### **CONTROL UNIT**

The last feeder pan on the line (the control pan) is the most important one. It must be emptied first because it starts the next feed supply.

Take care that there are enough birds eating from this pan. Birds are sensitive to light, moisture, draught and temperature. They will shun places with an environment deviating from the average. You can have more light above the control pan by installing for example a small spotlight which lightens the control pan only.

Keep the pan free of litter and manure. It has to be the most attractive pan on the line.

Take care that temperature, moisture, ventilation are constant at this location.

More birds will feed from the control pans if you install them at a distance of 2-3m from the end wall. The same remark goes for the outside line (next to the side walls).

### **FILLING THE HOPPERS**

The drop tube of the feeder line furthest from the bin is equipped with a level switch.

This level switch controls the feed supply from the bin.

If, for certain reasons, the last line is not enough used by the birds, it is possible that the other lines might run empty. This can be prevented by using a time clock.

The time clock should be set such that the feeder is regularly emptied or decreased to a low feed level.

However, you can help to ensure that enough birds eat from the last line by taking care of :

- ventilation
- house structure
- insulation
- litter
- distribution of feeders and drinkers.

When planned correctly, you will have a very even spread of the birds over the whole floor area of the house.

### **USING THE SYSTEM WITH ONE DAY OLD CHICKS**

1. Suspend the 100kg hopper at the correct height.

The weight of the filled hopper will stretch the main cable to which the chain is fixed when the installation is new.

The connection between the hopper and the first feeder tube will then no longer be level. This can result in premature wear and/or failures.

If necessary, shift suspension one or more links to level the line.

2. Put ALL pans on the floor before placing the one day olds. Then scatter the litter around the pans.

Take care that all feed windows open simultaneously and completely. Now the suspension cords of the tubes are suitably stretched.

As the pans sink deeper into the litter after a few days, the windows will remain completely open.

The suspensions of hopper and control unit must also be suitably stretched.

3. Warm up the house and the litter at least 24 hours before placing the birds.

Fill all pans with feed.

Switch off the feeder lines as soon as all pans are filled.

The chicks now have enough feed for two days. One pan with open windows holds about 1,6 kg - about 0,6kg with closed windows.

Refill all pans after two days and stop the feeder lines. Repeat this every day until the birds are 5-7 days old. So you get a good control of feed intake during the important starting phase.

You can now easily switch over to automatic filling by means of the control pan. The feeder line starts automatically as soon as this pan is empty. All pans are filled.

You can feed automatically from the first day on, but then you must regularly check feed intake at the control pan.



4. The point in time to operate with closed feed windows will depend upon the type of feed.

We recommend the 5th. day for free flowing, pelleted feed - max. 20 days for difficult flowing (mash) feed.

Winch up the feeder line until all windows are closed.

Attention : all pans are still sitting on the floor !

Birds get used to the lower feed level. Raise the feeder lines a little some days after closing the feed windows. Pans swing and the feed is better spread.

Winch up the feeder lines gradually as the birds grow.

The back/neck of the birds (even the smallest) must be slightly bent over while eating.

Correct operation will help you to prevent feed waste.

### **USING THE SYSTEM FOR OLDER BIRDS**

1. Suspend the lines at the correct height. You will obtain optimum results when the birds can easily pick the feed from the deepest part of the pan.

If birds necks rest on the edge of the pan, the feeder line is adjusted too high.

On the contrary, if birds perch on the edge of the pan, the line is adjusted too low.

You will prevent feed waste by keeping the pans at the correct height !

The correct position of the feed level ring will be found by experience.

You must consider feed composition, fat content and type of birds.

The following feed level adjustments were derived from practice :

- free flowing feed : feed level ring in position 2, 3 or 4
- difficult flowing feed : feed level ring in position 5, 6 or 7

Optimum feeding results will be obtained with adequate pan height, correct adjustment of the feed level ring and use of a time clock

Have the pans emptied at least once a day. So the birds will always get fresh feed.

2. When using pans with a 4 strut grill for ducks or turkeys, add the collar.
- from 3-4 weeks on (peking ducks)
  - from 6-7 weeks on (turkeys and other ducks)

This will decrease feed wastage.

3. If the birds have been without feed for a considerable period, you must be very careful when filling up the feeder lines.

The 100kg. hopper should be filled before starting the lines. So the transport system has a head start to supply the hoppers.

Spread some feed on the litter so that the birds do not rush onto the pans when the augers start.

Another method : winch up the feeder lines so that birds cannot reach the pans. Only then fill up the pans and lower the lines : but make sure that birds don't push each other under the pans as they are lowered.

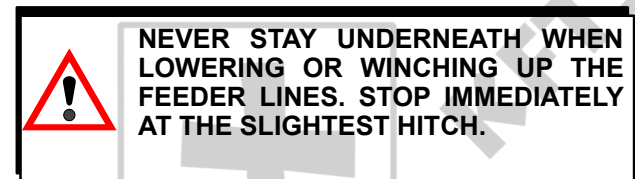
Keep an eye on the feed supply.

Walk along the lines and gently disperse birds.

### **AT THE END OF A CROP**

Have all pans emptied at the end of the crop. Also auger all feed out of the tubes.

Winch up the complete installation to remove birds and manure.



Take care not to damage the pans (with heavy objects or machines) when cleaning out the house.

### **MAINTENANCE**

To clean the installation winch up the feeder lines to a working height of about 1m.

Remove possible feed residues by turning the pans a couple of times 180 degrees around the tubes or by removing the pans from the grills.

You can now easily clean the rotating pans one after another by means of a high pressure cleaner.

To put back the pan : take it in one hand (like a dish) and push it into the grill from below.

With the other hand, hold the feed level ring so that the grill cannot go up.

### **DON'T FORGET TO COVER UP THE CONTROL PAN WITH PLASTIC !**

Motors and switches are IP55. This means that they resist splashing, NOT jets from a high pressure cleaner.

After cleaning, tip the water out of the pans.

Take care that no water remains in the feed intake boot (corrosion !!!) You can avoid this :

- by loosening the tube clamp and turning the feed intake boot with the opening downwards before you use the high pressure cleaner, or
- by hanging up the feed intake boot, so that all remaining water flows away through the hole in the tube. This method requires an extra suspension point next to the 100kg hopper or fixing the hopper suspension chain to the feed intake boot.

The pan, made of high quality polypropylene, resists practically all cleansers and disinfectants.

If you want to use an aggressive product (\*\*) first contact your supplier !!

Hang the **OPERATION INSTRUCTIONS** at a spot inside the house where it catches the eye.

(\*\*) P.S. Gaseous formaldehyde (formalin), liquid caustic soda or solution of caustic soda, hypochlorite or chlorine water cresoles are very corrosive and they will quickly affect the installation !

**WHAT TO DO BEFORE INSTALLING THE NEXT BATCH OF BIRDS ?**

Check operation of your system before placing the birds.

More particularly, take care that :

- \* all feed level tubes are at the same level (always keep feed level as low as possible)
- \* all switches react promptly the control pans are properly adjusted (low feed level).
- \* the antiperch wire is still stretched (springs must be stretched (about 6cm )
- \* the time clock (when used) is programmed
- \* there are no leaks in the feed supply system
- \* there is no old, stale and/or tainted feed in the bin
- \* the feeder lines are well aligned. Especially the power unit and the hopper must be well aligned and at the same level.

**PROGRAMMED FEEDING**

With the feeding system it is possible to programme feeding. This means : feeding according to a programme set on a time-clock.

It also means : to make sure that no feed is supplied during certain periods.

Pans are emptied between meals (if you want this).

**ADVANTAGES :**

- \* 0 to 4 points better feed conversion :
  - birds waste less feed (lower feed level).
  - fresh feed available at several preset times = more resting periods ; a better digestion ; more appetite.
  - you can observe birds better during the meal. Sick birds are more easily identified.
- \* the system works more regularly (less switching on/of).
- \* less risk that the system runs empty. You have better control of the system's performance.

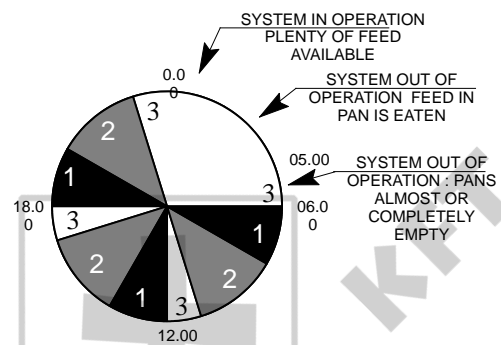
**HOW TO PROGRAMME :**

There are many ways.

Your house, the breed of birds, the feed you choose and the possibilities you have as a user, determine the best programme.

The purpose is always the same : divide the 24 hour period in 4 segments of 6 hours.

Each segment has 3 periods : is characterized by a period of :




Our experiences have lead to the following recommendations of use :

- Set the programme right from the beginning .
- See that pans are emptied for the first time after 3 weeks, not sooner. Divide the 24 h in 4 segments of 6 hours.
- Since the birds do not eat for 1/2 hour to 2 hours, there is more activity at the start of a new segment. This means that the occupation per pan and per drinker should not exceed our recommendations.
- You have to gain experience. Do not expect to obtain 4 points better feed conversion from the first time.
- During the summer it might get colder in the house during the night. Adjust your programme by having the system operate longer during the night segment.
- Do not programme with poor quality birds. Interrupt the programme in case of illness and do not let the system become empty.
- Influences of season, breed, age, house climate, feed also play a role.

To get the maximum profit out of your system, you should develop your own programme according to the circumstances.

For any further advice, contact **ROXELL NV** .

<b>MAINTENANCE INSTRUCTIONS</b>				
 <b>DANGER</b>	<b>Switch off the main switch first. Use personal protective equipment.</b>	3-monthly	6-monthly	Yearly
<b>ACTIONS IN GREY BACKGROUND MUST BE DONE BY A TECHNICALLY TRAINED PERSON.</b>				
1. Power unit				
- Make fan dust-free				X
- Check possible damages to electrical wiring				X
2. Poultry intake boot with sensor				
- Check sensor				X
3. 100kg hopper (lines)				
- Check level switch				X
4. Suspension				
- Check operation of (central) winch	X			
- Check operation of (central) winch. Grease after cleaning.				X
- Check connection of cable	X			
- Check connection of pulleys	X			
- Check suspension of tubes and motors	X			
- Keep suspension cord/cable in tension	X			
5. Poultry perch cable above the tubes/elbows				
- Check cable				X
6. Pans				
- Check possible damages of pans				X
7. Sensors/switches				
- Check operation of safety switch or sensor.		X		
- Check electrical wiring				X
8. Control pan				
- Remove the pan and clean the inside tube				X
- Clean (dry) sensor head and central tube				X
- Check switch of control units				X
9. Lines/circuits				
- Check screws and bolts in the system after the <b>first month and after each batch</b> . Tighten if necessary.	X			
- Keep tubes level.	X			
- Remove all feed from the system when the system will be out of use for a period.	X			

## TROUBLE SHOOTING GUIDE



**DANGER**

**Switch off the main switch first.  
Use personal protective equipment.**

ACTIONS IN GREY BACKGROUND MUST BE DONE BY A TECHNICALLY TRAINED PERSON.		
PROBLEM	CAUSE	CORRECTIVE ACTION
1. None of the feeder lines run.	No current.	Replace defective fuses or reset circuit breakers. Check current supply to the house.
	Defective time clock.	Replace defective clock.
	Time clock not properly set.	Readjust tabs.
2. One/more lines do not run. Pans are empty	Wires from motor damaged.	Measure current in motor wires. Replace wires if defective.
	Motor protection switched off.	See points 3. & 4. Reset motor overload button.
	Defective control unit switch.	Replace defective control unit switch box.
	Control unit not functioning properly.	Adjust level of control pan. Hang an extra lamp above it. Check temperature. Control unit must be the most attractive one, especially the control unit of the feeder line below the Flex-Auger control unit.
3. Motor is often overloaded.	Defective sensor/minimum switch control unit or 100kg hopper.	Check control unit sensor or switch. Replace if necessary.
	Oil on auger overloads the motor.	Clean the auger by running repeatedly 25kgs of feed through the line.
	Not enough current supply to the motors.	Check current supply at motor location. Start the motor. Measure start current on motors. Wiring must be thick enough to guarantee good operation of the system.
4. Auger stalls.	Object blocks the auger. Motor runs, then stalls. Feed sticks to the tubes.	Check if there are no objects in the boot, the control unit and the drop holes of the feeder pans. Remove any objects.
	Anchor bearing worn out or broken.	Replace bearing. <b>Gently</b> slide auger back into the tubes. Don't let it jump back : your <b>finger</b> or the <b>bearing</b> could be <b>damaged</b> .
	Auger not enough stretched.	Shorten the auger.
5. Tubes / boot wear rapidly, much noise when system runs.	Object blocks the auger.	Remove the object.
	Auger kinked or bent at the wear point. Auger end overlaps the anchor end.	Make sure not to kink the auger when using gripping pliers. Auger must not overlap the anchor end.
6. Not enough feed supplied to fill up the lines.	Flex-Auger drop holes are too small or point upwards.	Make holes wider/turn tubes with holes downwards.
	Flow regulator in boot of feed supply system blocks passage of the feed.	Adjust flow regulator to get a higher capacity.
	Flex-Auger capacity is too low.	Check the capacity of the Flex-Auger according the specifications. Check the installation of the Flex-Auger.
	Not enough time set on the time clock.	Extend operation time per meal.
7. Feed drops directly on the adjuster ring of the grill.	Pan not installed over the hole.	Remove the top support. Install the pan ass'y over the hole and the lips.

PROBLEM	CAUSE	CORRECTIVE ACTION
8.Windows are open and feed level is too low.	Some windows are actually closed.	Adjust height of feeder line until all windows completely open and close simultaneously.
9.Windows are closed and feed level is too high.	Adjuster ring set too high.	Adjust height. See OPERATOR'S GUIDE.
	Not all windows are closed or completely closed.	Adjust height of feeder line until all windows completely open and close simultaneously.
10.Windows are closed and feed level is too low.	Adjuster ring set too low.	Adjust height. See OPERATOR'S GUIDE.
	Feeder line not winched up high enough.	Winch up feeder line higher until all pans simultaneously are clear of the litter.
11.Hopper 1 is empty while the feed level in the second hopper corresponds with the position of the level switch	Birds massively move to one side of the house, i.e. depending upon the position of the sun.	<p><b>A. The problem occurs sporadically :</b></p> <p>You can solve the problem by changing the round hole in the Flex- Auger tube above hopper 1 into a rectangular one. Install two outlet drops above hopper 1 (see fig. 3.) if necessary, so that more feed drops into hopper 1. Install the level switch low in hopper 2 (see fig. 2.). Install and adjust drop tubes to all hoppers high enough.</p> <p><b>B. The problem occurs regularly :</b></p> <p>Install a level switch high in each hopper. Install the level switch low in the last hopper. Install and adjust the drop tube high, so that the feed in tube A (over switch level) is carried to hopper 2.</p>

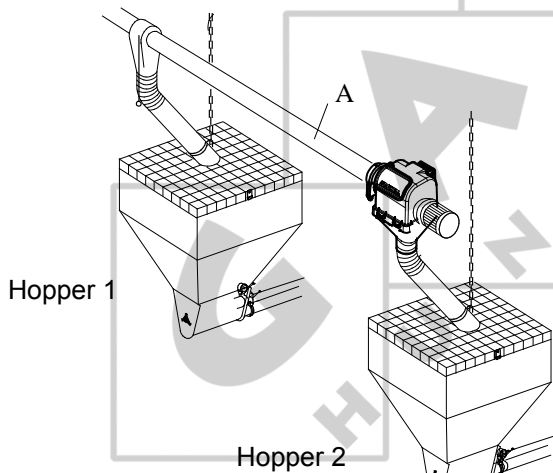


FIGURE 1.

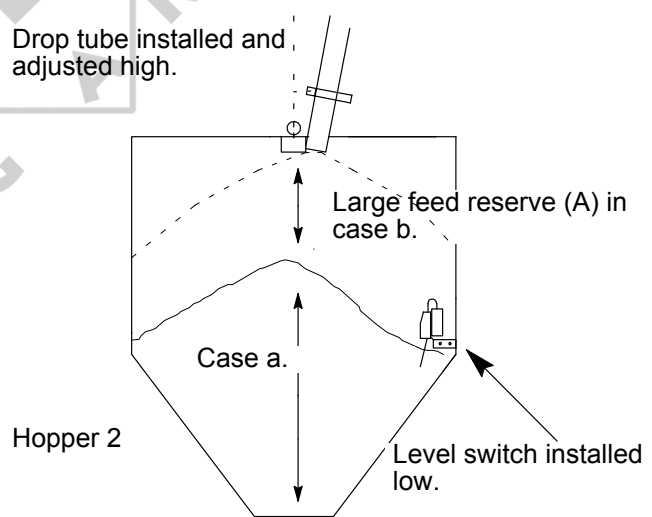


FIGURE 2.

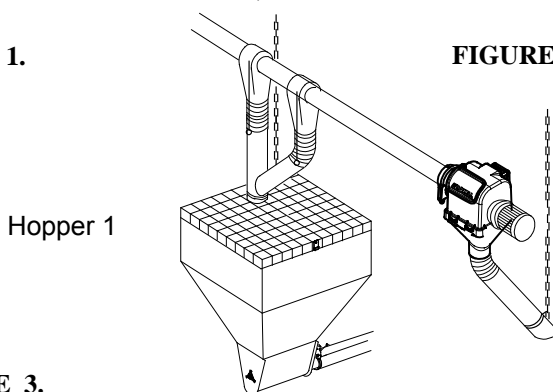
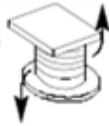


FIGURE 3.

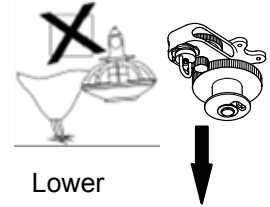
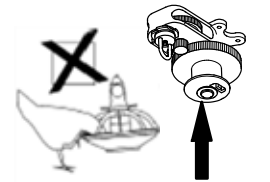
For floor feeding - from day-old chicks to broilers, turkeys (<12kg) layers (also breeders), ducks

AVOID FEED WASTAGE = ADJUST FEEDER HEIGHT

Winch up

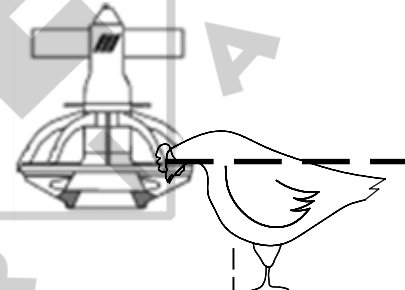
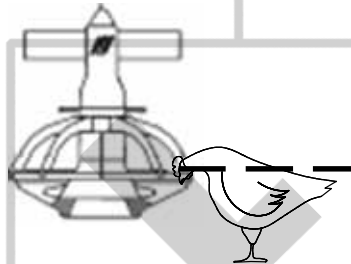
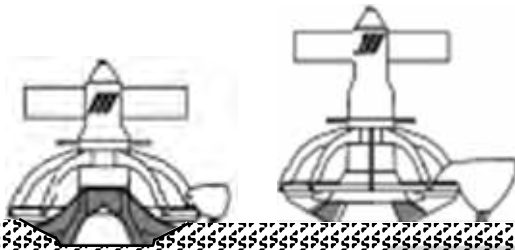


Winch up



Lower

EASY START



Age of birds 0 1 2 3 4 5 6 Weeks

open feed windows

pans full (manual operation)

closed feed windows

automatic operation on control pan

**BROILERS  
LAYERS  
(rearing)**

**DUCKS  
TURKEYS**

**DUCKS**

**TURKEYS**

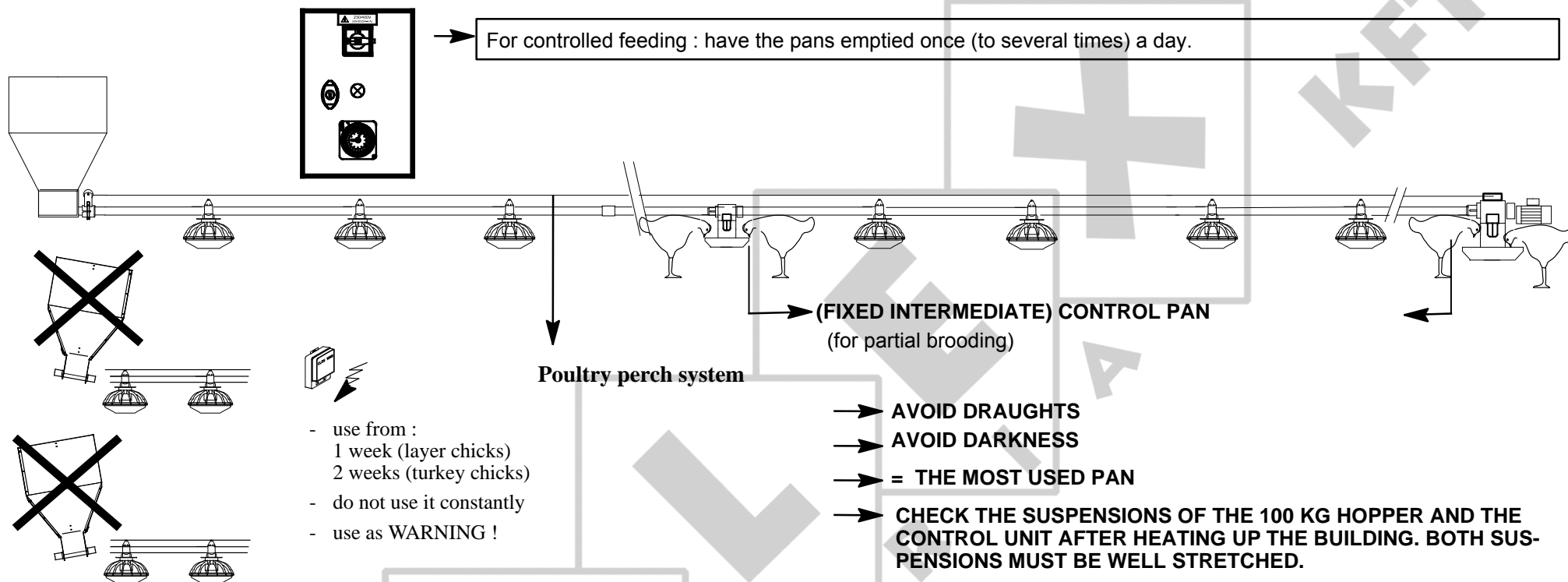
add feed saver collar (with 4-strut grill)



# MINIMAX<sup>line</sup>

## OPERATOR'S GUIDE

# ROXELL®



	Number of birds per pan (*)
1 Broilers	50 → 100 (max. 150kg/pan)
2 Turkeys (0 → 14 weeks)	50 → 70
3 Turkey poults - rearing (0→6 weeks) (12kg)	60 → 70
4 Free range layers (also breeders)	26(EC) → 45
5 Free range layers rearing (also breeders)	26 → 45
6 Ducks	60 → 70
7 Guinea fowls, pheasants	50 → 90
8 Quails	300
* (heavy birds/light birds) (poor ventilation/good ventilation)	

### CLEANING

- \* The last day : run the tubes empty and let the birds empty the pans as much as possible.
- \* Remove possible feed residues by turning the pans a couple of times 180 degrees around the tubes or by removing the pans from the grills.
- \* Protect electrical components against water.
- \* Clean the whole system by means of a high-pressure cleaner (max. 100 Bar).
- \* When using aggressive detergents or disinfectants consult your supplier.





**Inbouwverklaring betreffende niet voltooide machines (Richtlijn 2006/42/EG, Bijlage II.1.B)**  
**Declaration of incorporation of partly completed machinery (Directive 2006/42/EC, Annex II.1.B)**

Fabrikant/Manufacturer:  
Roxell, Industrielaan 13, 9990 Maldegem  
Tel: +32 50 72 91 72  
Fax: +32 50 71 67 21

Verklaart geheel onder eigen verantwoordelijkheid dat het product:  
Declares on its own responsibility that the product:

MiniMax/HaiKoo/CoMeo Nr: 001.../002.../009...  
Automatisch pannen voedersysteem voor vleeskuikens.  
Automatic pan feeding system for broilers.

Waarop deze verklaring betrekking heeft, in overeenstemming is met:

- de volgende richtlijnen: 2006/42/EG (Machinerichtlijn); 2014/30/EU (Elektromagnetische Compatibiliteit).
- de geharmoniseerde Europese Normen: EN ISO 13857; EN 349; EN ISO 12100; EN 60204-1; EN 61439-1; EN 61439-2

**Het is verboden bovengenoemd product in gebruik te stellen voordat de machine waarin het wordt ingebouwd in overeenstemming met de bepalingen van de Machinerichtlijn is verklaard.**

Tevens verbindt de fabrikant (of zijn gemachtigde) zich om op met redenen omkleed verzoek van de nationale autoriteiten de relevante informatie over deze niet voltooide machine door te geven. De wijze van doorgifte is digitaal. De wijze van informatieverstrekking laat de intellectueel-eigendomsrechten van de fabrikant van de niet voltooide machine onverlet.

(NL)

Relating to this declaration is in accordance with

- The following directives 2006/42/EC (Machinery Directive); 2014/30/EU (Electromagnetic Compatibility).
- The harmonised European standards: EN ISO 13857; EN 349; EN ISO 12100; EN 60204-1; EN 61439-1; EN 61439-2

**This product must not be put into service until the machinery into which it is to be incorporated has been declared in conformity with the provisions of the Machinery Directive.**

The manufacturer (or its agent) also undertakes, at the duly reasoned request of the national authorities, to provide the relevant information concerning this partly completed machinery. The method of transmission will be digital. The manner in which the information is provided does not prejudice the manufacturer's intellectual property rights concerning the partly completed machinery.

(EN)

Plaats, Datum / Place, Date: Maldegem, 01/01/2020

00105304

.....  
Dhr. Gino Van Landuyt  
Managing Director

"This part may only be filled out if all built-in subparts are delivered by Roxell"

**EG-verklaring van overeenstemming (Richtlijn 2006/42/EG, Bijlage II.1.A)**  
**EC-declaration of conformity (Directive 2006/42/EC, Annex II.1.A)**

Wij/We \_\_\_\_\_

(naam installateur/name fitter)

\_\_\_\_\_  
(volledig adres en land/complete address)

Verklaren geheel onder eigen verantwoording de  
Declare completely on own justification that

\_\_\_\_\_  
(naam machine/name machinery)

\_\_\_\_\_  
(nummer CE-label/number CE-label)

In een installatie te hebben ingebouwd geheel volgens de Roxell-voorschriften en in overeenstemming met de bepalingen van de Machinerichtlijn.

Has been incorporated in conformity with the provisions of the Machinery Directive and the prescriptions of Roxell bvba.

\_\_\_\_\_  
(plaats, datum/place, date)

\_\_\_\_\_  
(naam, handtekening/name, signature)

De EG-verklaring van overeenstemming / inbouwverklaring betreft uitsluitend de machine of niet voltooide machine in de toestand waarin zij op de markt is gebracht, met uitsluiting van de later bijvoorbeeld door de verdeler en/of installateur en/of eindgebruiker toegevoegde componenten en/of verrichte bewerkingen.

The EC-declaration of conformity / declaration of incorporation relates exclusively to the machinery or partly completed machine in the state in which it was placed on the market and excludes components which are added and/or operations carried out thereafter for instance by the distributor and/or the installer and/or the final user.





**EG-verklaring van overeenstemming** (*Richtlijn 2006/42/EG, Bijlage II.1.A*)  
**EC-declaration of conformity** (*Directive 2006/42/EC, Annex II.1.A*)

Fabrikant/Manufacturer:  
 Roxell, Industrielaan 13, 9990 Maldegem  
 Tel: +32 50 72 91 72  
 Fax: +32 50 71 67 21

Verklaart geheel onder eigen verantwoordelijkheid dat het product:  
 Declares on its own responsibility that the product:

Winching system Nr: 00102368 / 00102087  
 Liersysteem voor voer- en drinklijnen; manueel en gemotoriseerd  
 Winching system for feed- and drink lines; manual and motorised  
 Nummer CE-label/number CE-label : \_\_\_\_\_

Waarop deze verklaring betrekking heeft, in overeenstemming is met:

- de volgende richtlijnen: 2006/42/EG (Machinerichtlijn); 2014/30/EU (Elektromagnetische Compatibiliteit).
- de geharmoniseerde Europese Normen: EN ISO 13857; EN 349; EN ISO 12100; gemotoriseerd: EN 60204-1; EN 61439-1; EN 61439-2

De EG-verklaring van overeenstemming / inbouwverklaring betreft uitsluitend de machine of niet voltooide machine in de toestand waarin zij op de markt is gebracht, met uitsluiting van de later door bijvoorbeeld de verdeler en/of installateur en/of eindgebruiker toegevoegde componenten en/of verrichte bewerkingen.

**(NL)**

Relating to this declaration is in accordance with

- The following directives 2006/42/EC (Machinery Directive); 2014/30/EU (Electromagnetic Compatibility).
- The harmonised European standards: EN ISO 13857; EN 349; EN ISO 12100; motorised: EN 60204-1; EN 61439-1; EN 61439-2

The EC-declaration of conformity / declaration of incorporation relates exclusively to the machinery or partly completed machine in the state in which it was placed on the market and excludes components which are added and/or operations carried out thereafter for instance by the distributor and/or the installer and/or the final user.

**(EN)**

Plaats, Datum / Place, Date: Maldegem, 01/01/2020

.....  
 Dhr. Gino Van Landuyt  
 Managing Director

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## PART II

## COMPONENTS

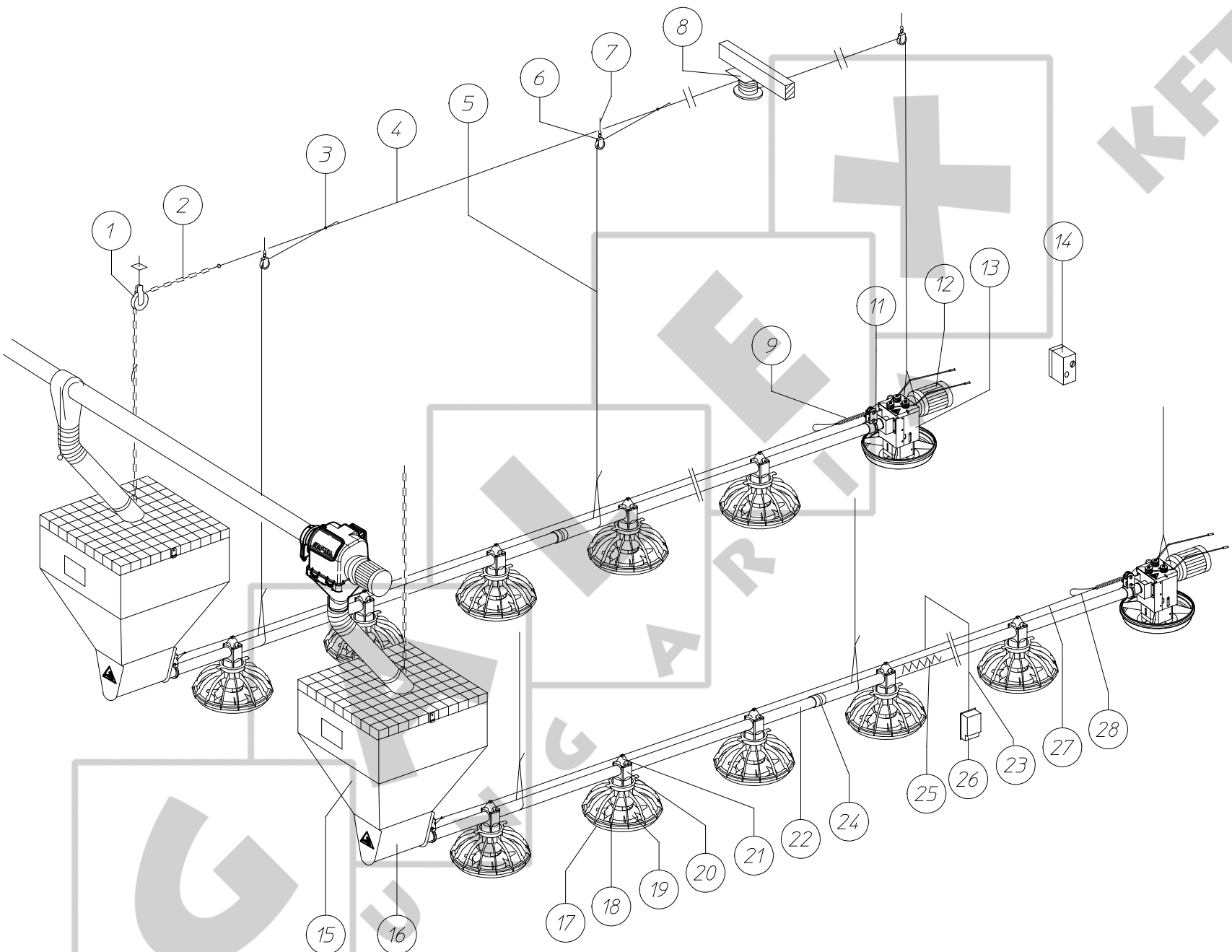
### **Environmentally-friendly design**

The motors comply with the Ecodesign legislation.

### **Communication**

For all communication concerning parts/spare parts refer to the appropriate part number (not part name).

GENERAL LAY - OUT

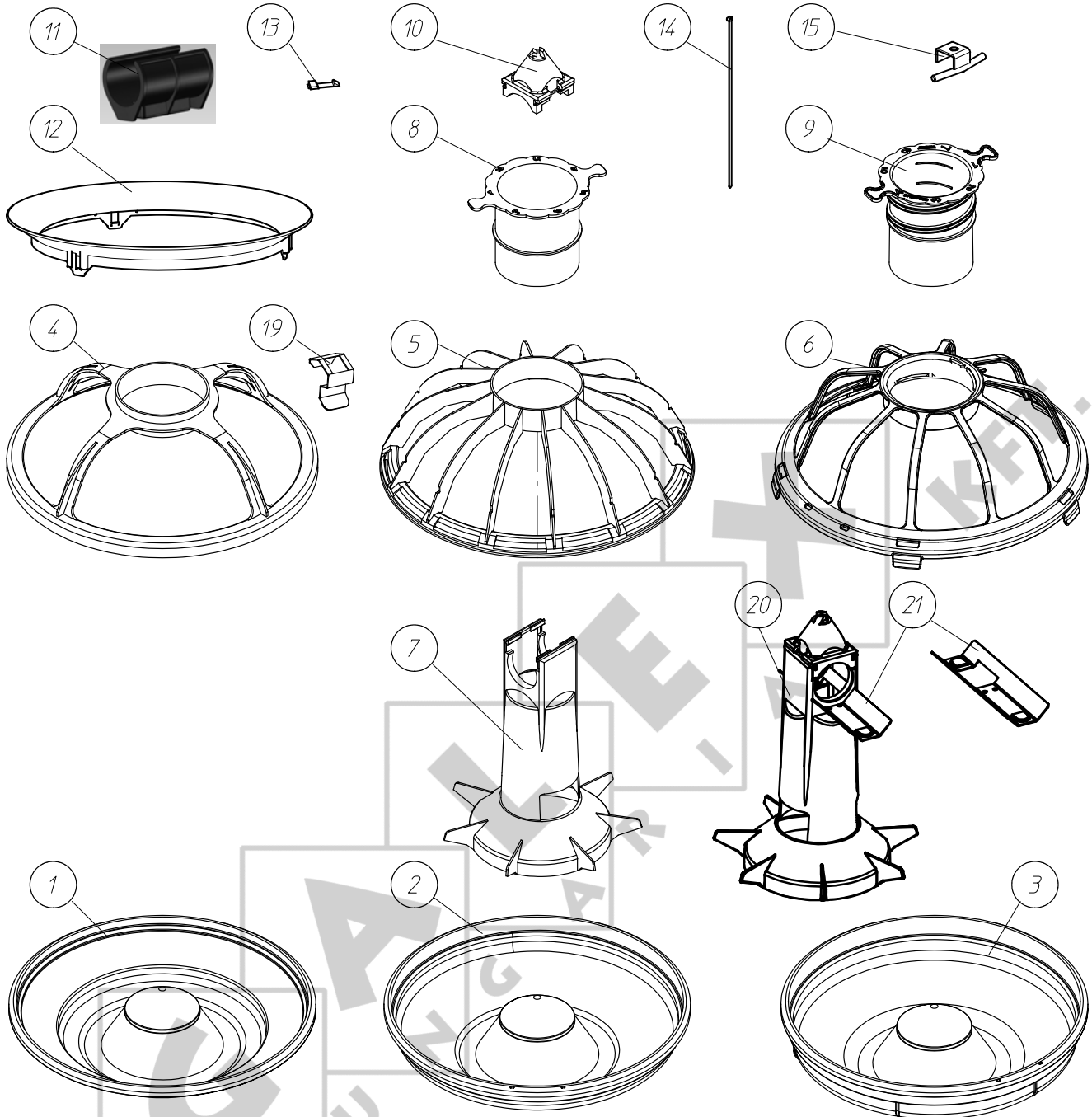


## COMPONENT NUMBERS

Key	Name	Number
1	HEAVY DUTY PULLEY	00100412
*	HEAVY DUTY PULLEY-STAINLESS STEEL	00103564
2	CHAIN DIAM. 3,5mm	00100750
*	CHAIN Ø3 STAINLESS STEEL	00103606
3	CABLE CLAMP NO. 5	00100545
*	CABLE CLAMP NR.5 - ST.ST.	11015211
4	CABLE DIAM. 5mm	00100388
*	CABLE Ø4 MM - STAINLESS STEEL	01001924
5	SUSPENSION CORD	00100610
6	SMALL PULLEY WITH STAINLESS STEEL HOOK	00104349
7	SCREW HOOK 90mm	05000872
*	SCREW HOOK 90 MM STAINLESS STEEL	05000484
7	SCREW HOOK 160mm	05000237
*	SCREW HOOK 160 MM STAINLESS STEEL	05000492
8	HAND OPERATED CENTR. WINCH	00102368
9	SPRING	00400077
*	SPRING - STAINLESS STEEL	00402594
11	ANCHOR BRACKET LOW	00102681
*	ANCHOR BRACKET - LOW - STAINLESS STEEL	00103580
12	POWER UNIT	SEVERAL
13	CONTROL UNIT	00102889
*	CONTROL UNIT STAINLESS STEEL	00104844
14	MOTOR STARTER	SEVERAL
15	100KG HOPPER	00100602
*	100 KG HOPPER-STAINLESS STEEL	00103630
16	FEED INTAKE BOOT POULTRY (OPTION)	00106500
*	FEED INTAKE BOOT POULTRY - ST.ST.	00106625
*	POULTRY INTAKE BOOT WITH SENSOR - 230 V AC (OPTION)	00108952
*	POULTRY INTAKE BOOT WITH SENSOR - 24 V DC (OPTION)	00108950
17	FEEDER PAN	SEVERAL
18	GRILL ASSY	SEVERAL
19	SUPPORT CONE	00101212
20	ADJUSTER RING	SEVERAL
21	TOP SUPPORT	00101220
22	TUBES	SEVERAL
23	CABLE FOR PERCH GUARD - 50M	00106847
	CABLE FOR PERCH GUARD - 100M	00106855
24	TUBE CLAMP ASSY DIAM. 45mm	00102921
*	TUBE CLAMP ASSEMBLY DIA. 45 MM ST.ST.	00104877
25	AUGER	00100974
26	POULTRY PERCH GUARD	00105692
27	CABLE - 1/16" - 1.5MM - 250M	00106839
	CABLE - 1/16" - 1.5MM - 500M	00106831
*	CABLE Ø1.5 MM (1/16") STAINLESS STEEL	00103598
28	DUPLEX CABLE CLAMP ST. ST. - 3MM	00106945

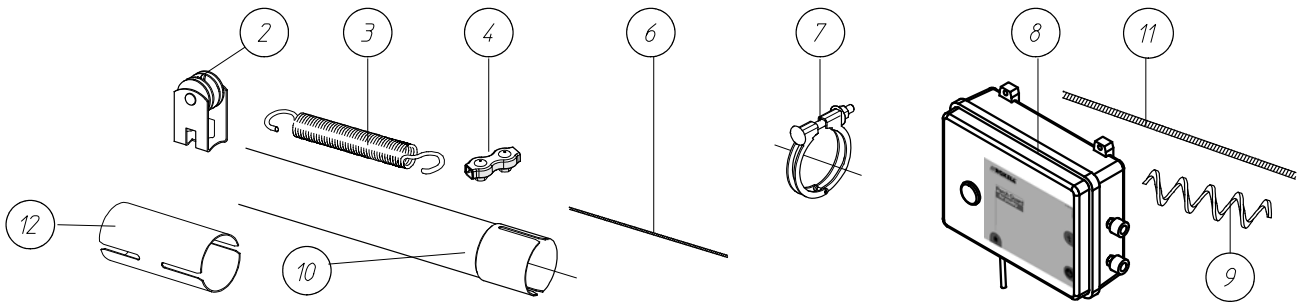
\* OPTION FOR DUCKS

**PARTS MINIMAX LINE FEEDER PANS**



Key	Name	Part Nr.	Key	Name	Part Nr.
1	FEEDER PAN - MINIMAX L	00104281	*11	SHUT-OFF SHELL	00105262
2	FEEDER PAN - MINIMAX CLASSIC	00101196	*12	ANTI-WASTE COLLAR (MULTIMAX)	00400572
3	FEEDER PAN - MINIMAX H	00104224	*13	SUPPORT LOCK	10401230
4	4-STRUT GRILL	00400564	*14	HINGE JOINT	00101105
5	14-STRUT GRILL	00101246	*15	TOOL FOR HINGE JOINT (MINIMAX)	09701376
6	10 STRUT GRILL	00103135	*19	GRILL LOCK MULTIMAX PAN - 15MM	00403667
7	SUPPORT CONE	00101212	*20	MINIMAX CONE W/SLEEVE	00103085
8	ADJUSTER RING - SHORT	00101204	*21	SHUT-OFF SLIDE FOR MINIMAX	00104752
9	ADJUSTER RING - LONG	00202549	*	OPTION	
10	TOP SUPPORT	00101220			

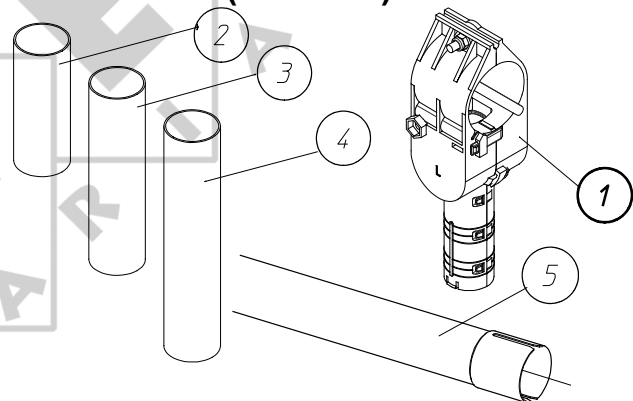
### FEEDER LINE COMPONENTS



Key	Name	Part Nr.	Key	Name	Part Nr.
2	ANCHOR BRACKET - LOW	00102681	10	TUBE 2.90 M WITHOUT HOLES	00500074
3	SPRING	00400077		TUBE 2.9 M W/3 RECTANGULAR HOLES	00101121
4	DUPLEX CABLE CLAMP ST.ST. - 3 MM	00106945		TUBE 2.9 M W/4 RECTANGULAR HOLES	00101113
6	CABLE 1/16" - 1.5 MM - 250 M	00106839		TUBE 3.05M W/4 RECTANGULAR HOLES	00102301
	CABLE 1/16" - 1.5 MM - 500 M	00106831		TUBE 3.05M W/3 RECTANGULAR HOLES	00102293
7	TUBE CLAMP ASSEMBLY Ø45 MM	00102921		TUBE 2.75M WITH 4 RECTANGULAR HOLES	00105171
8	POULTRY PERCH GUARD	00105692	11	CABLE F. PERCH GUARD - 50 M	00106847
9	AUGER PF/ATF	00100974		CABLE F. PERCH GUARD - 100 M	00106855
			12	TUBE CONNECTOR DIA. 45 MM	00100552

### CHICK STARTER OUTLET ASS'Y KIT (OPTION)

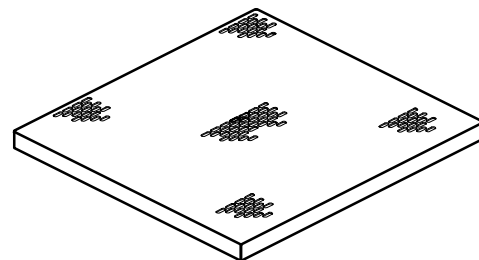
Key	Name	Part Nr.
1	CHICK STARTER OUTLET ASS'Y KIT (50PCS)	A44869-50
	CHICK STARTER OUTLET ASS'Y KIT (20PCS)	A44899-20
2	EXTENSION TUBE 84 MM (50PCS)	41357-50
	EXTENSION TUBE 84 MM (20PCS)	41357-20
3	EXTENSION TUBE 122 MM (50PCS)	49800-50
	EXTENSION TUBE 122 MM (20PCS)	49800-20
4	EXTENSION TUBE 152 MM (50PCS)	49556-50
	EXTENSION TUBE 152 MM (20PCS)	49556-20
5	TUBE 2.74M W/4+4 RECT HOLES	00104158
	TUBE 3.05M W/4+4 RECT. HOLES	00104133
	TUBE 3.05M W/4+1 RECT. HOLES	00108264
	TUBE 2.74M W/4+1 RECHT.HOLES	00108272



### OPTION FOR DUCKS : FEEDER LINE COMPONENTS - ST. ST.

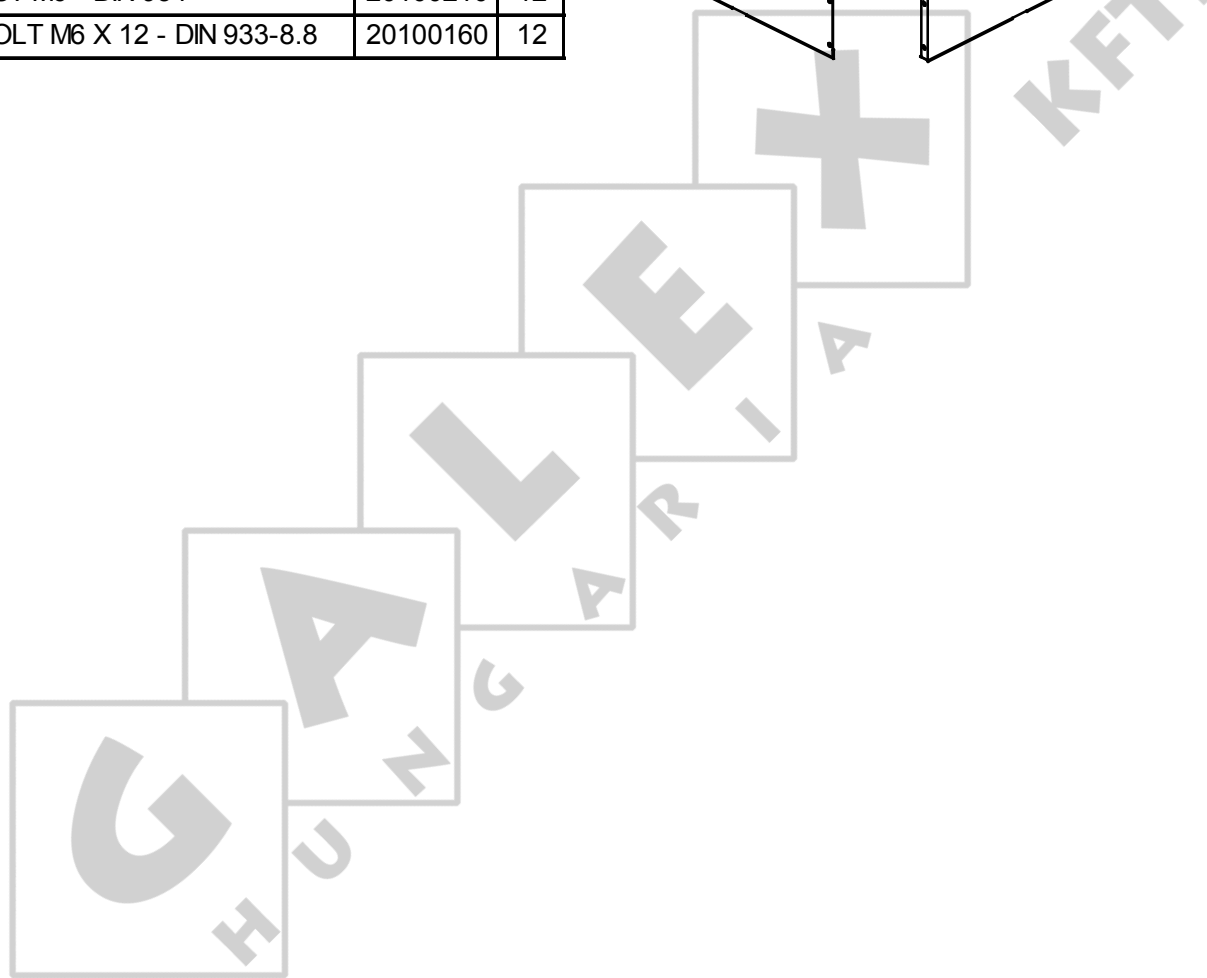
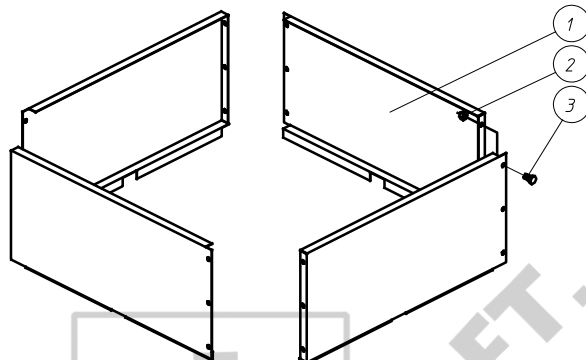
Key	Name	Part Nr.	Key	Name	Part Nr.
2	ANCHOR BRACKET - LOW - STAINLESS STEEL	00103580	10	TUBE 3.05M W/O HOLES - ST.ST.	00104232
3	SPRING - STAINLESS STEEL	00402594		TUBE 3.05M W/1 RECTANGULAR HOLE - ST.ST.	00104240
4	SET SCREW M8 X8	00101394		TUBE 3.05M W/3 RECTANGULAR HOLES- ST.ST.	00104265
5	DUPLEX CABLE CLAMP ST.ST. - 3 MM	00106945		TUBE 3.05M W/4 RECTANGULAR HOLES- ST.ST.	00104273
7	TUBE CLAMP ASSEMBLY Ø45 MM	00102921	11	CABLE F. PERCH GUARD - 50 M	00106847
8	POULTRY PERCH GUARD	00105692		CABLE F. PERCH GUARD - 100 M	00106855
9	AUGER PF/ATF	00100974	12	TUBE CONNECTOR DIA. 45 MM	00100552

**STRAINER FOR 100KG HOPPER -  
00100982**



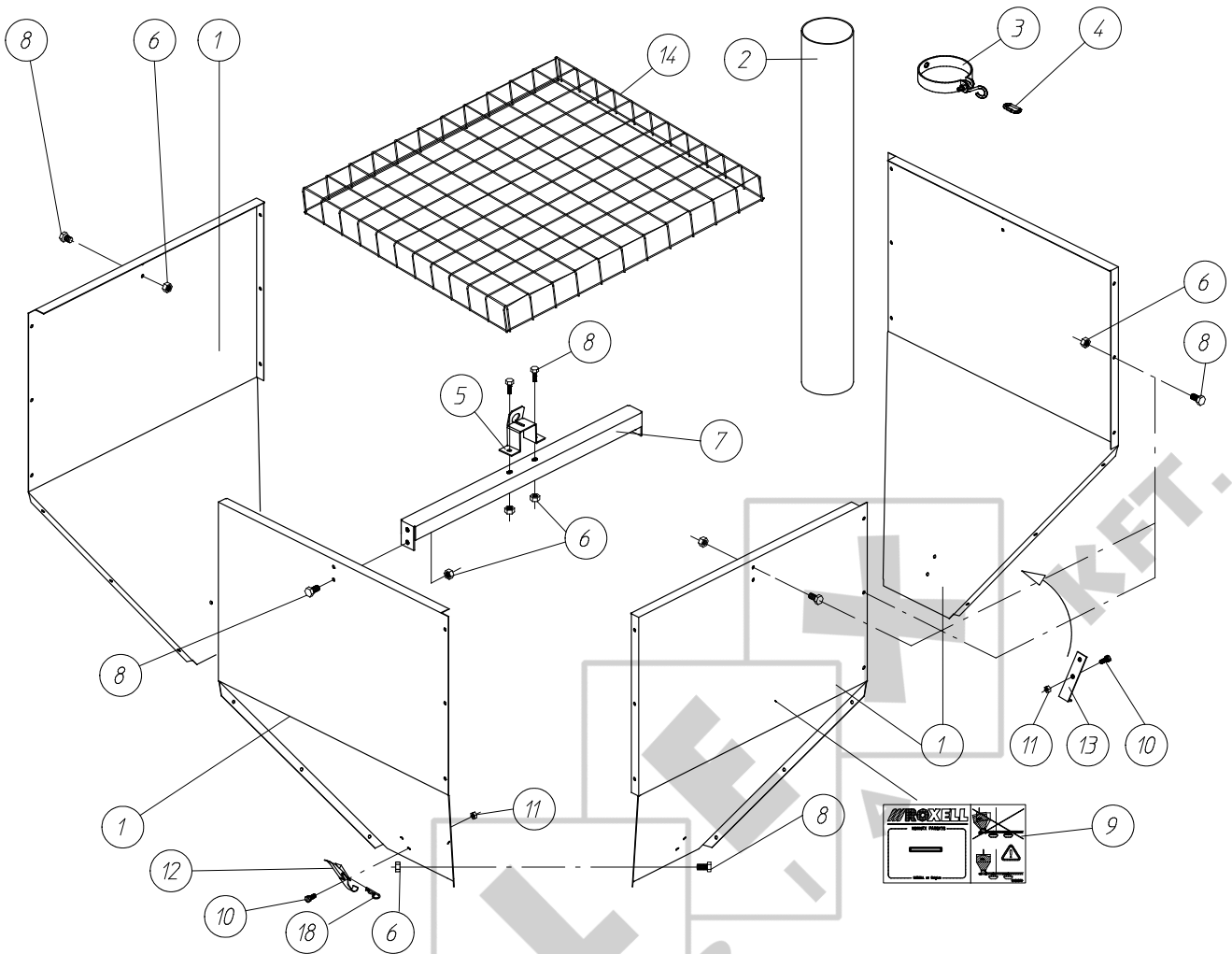
**HOPPER EXTENSION 50KG- 00101238**

Key	Name	Part Nr.	Qt.
1	HOPPER EXTENSION SIDE	10104719	4
2	NUT M6 - DIN 934	20100210	12
3	BOLT M6 X 12 - DIN 933-8.8	20100160	12



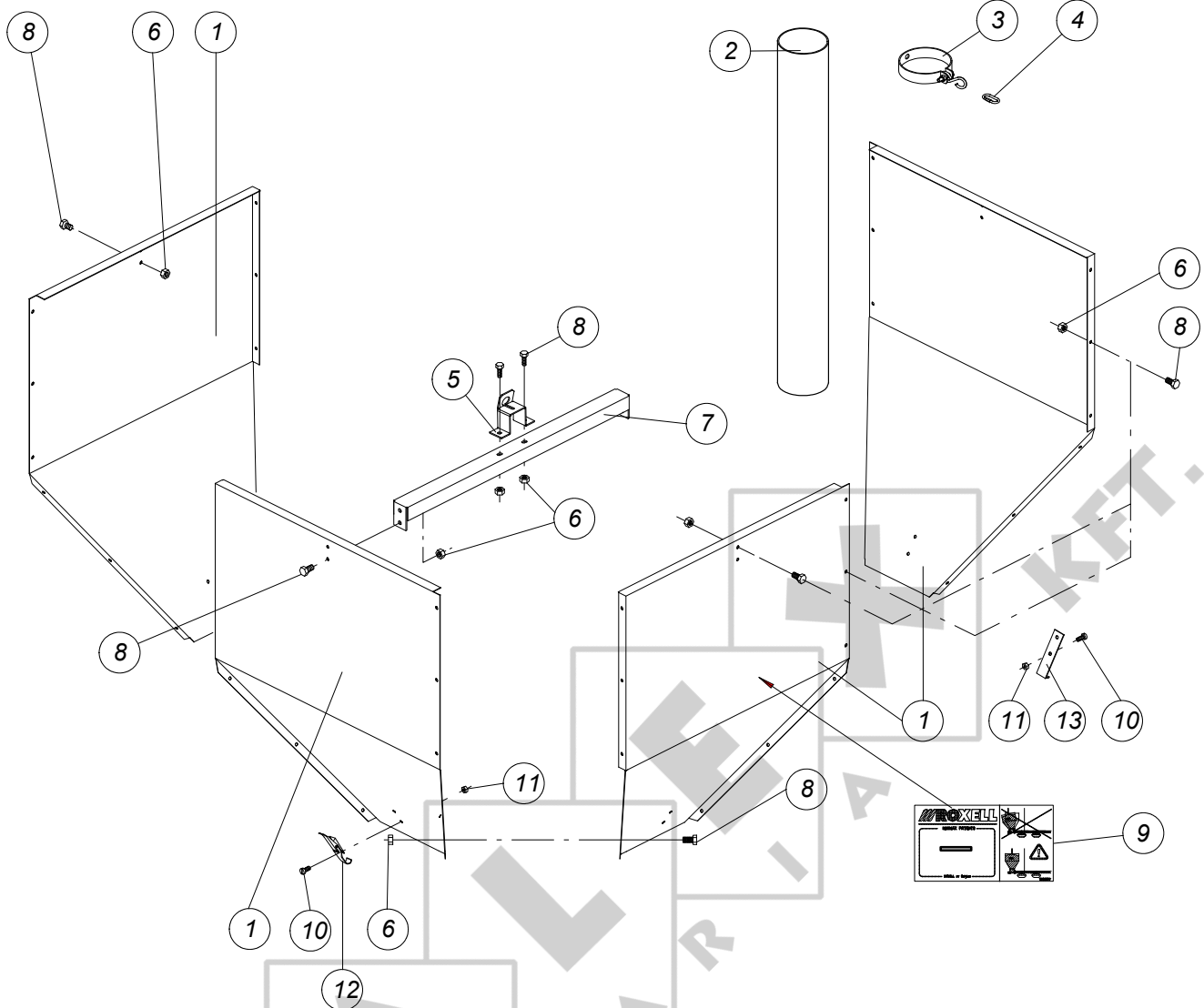


### 100KG HOPPER - 00100602



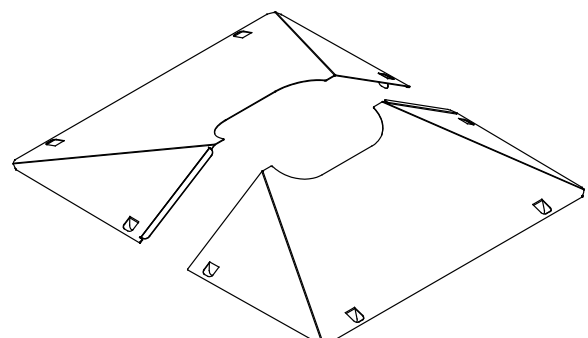
Key	Name	Part Nr.	Qt.	Key	Name	Part Nr.	Qt.
1	HOPPER SIDE	10102259	4	9	PATENT DECAL COM-ATF-MINIMAX	10103893	1
2	PVC TUBE DIAM. 90 - L = 700 MM	10102382	1	*10	SCREW M4x10-DIN 84 - 4.8	20100806	8
*3	TUBE SUPPORT ASS'Y	10102390	1	*11	NUT M4	20100681	8
*4	SCREW LINK DIA. 3.5	10203156	1	*12	FASTENER 30-1056 MSZN	10201697	1
*5	HOPPER HOOK	10105393	1	*13	FASTENING HOOK	10102200	1
*6	NUT M6 - DIN 934	20100210	34	14	HOPPER COVER GRILL	10103075	1
7	HANGER	10102291	1	*18	SPRING COTTER ø2	20100749	1
*8	BOLT M6 X 12 - DIN 933-8.8	20100160	34	*	HARDWARE KIT	10102341	1

**OPTION FOR DUCKS : 100 KGHOPPER-STAINLESS STEEL - 00103630**



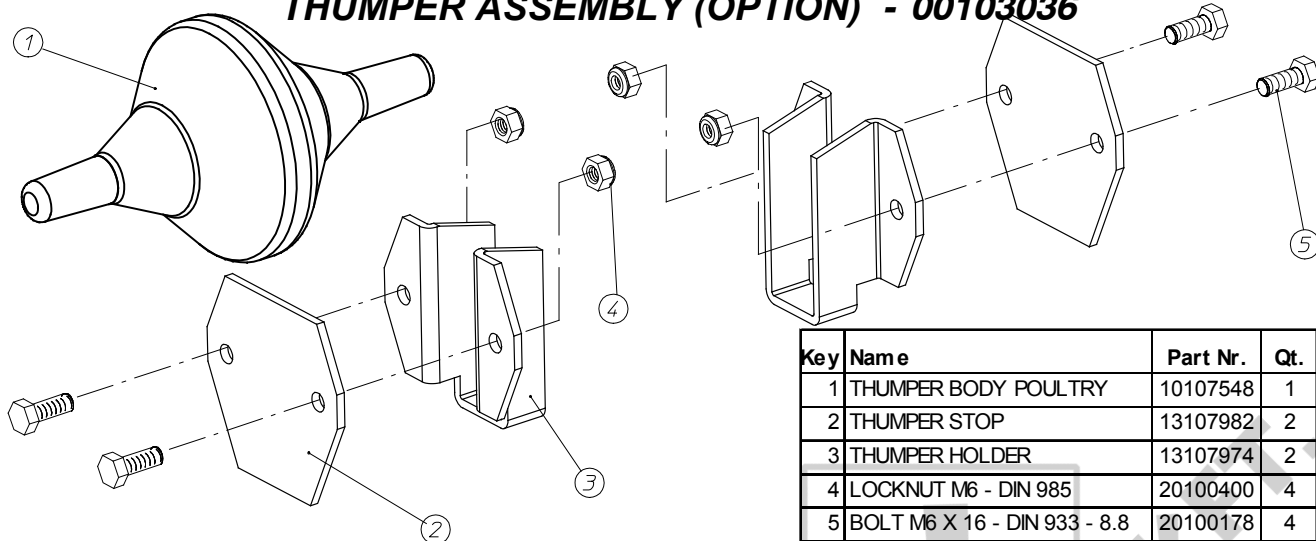
Key	Name	Part Nr.	Qt.	Key	Name	Part Nr.	Qt.
1	HOPPER SIDE - ST.ST.	10107779	4	*8	BOLT M6X12-DIN 933-A2	20103883	34
2	PVC TUBE Ø90 - L = 700 MM	10102382	1	9	PATENT DECAL	10103893	1
*3	TUBE SUPPORT ASS'Y - ST.ST.	10107829	1	*10	SCREW M4 x 16 - DIN 933- A2	20102638	8
*4	SCREW LINK Ø3.5	10203156	1	*11	NUT M4 DIN 934 - A2	20102646	8
*5	HOPPER HOOK - ST.ST.	10107795	1	*12	FASTENER 30-1056 SS	10107845	1
*6	NUT M6 - DIN 934 - A2 STAINLESS STEEL	20102257	34	*13	FASTENING HOOK - ST.ST.	10107811	1
7	HANGER - ST.ST.	10107787	1	*	HARDWARE KIT	10107803	1

**COVER HALF FOR 100KG HOPPER - 10102267**



**CANNON BALL (OPTION) - 00102228**

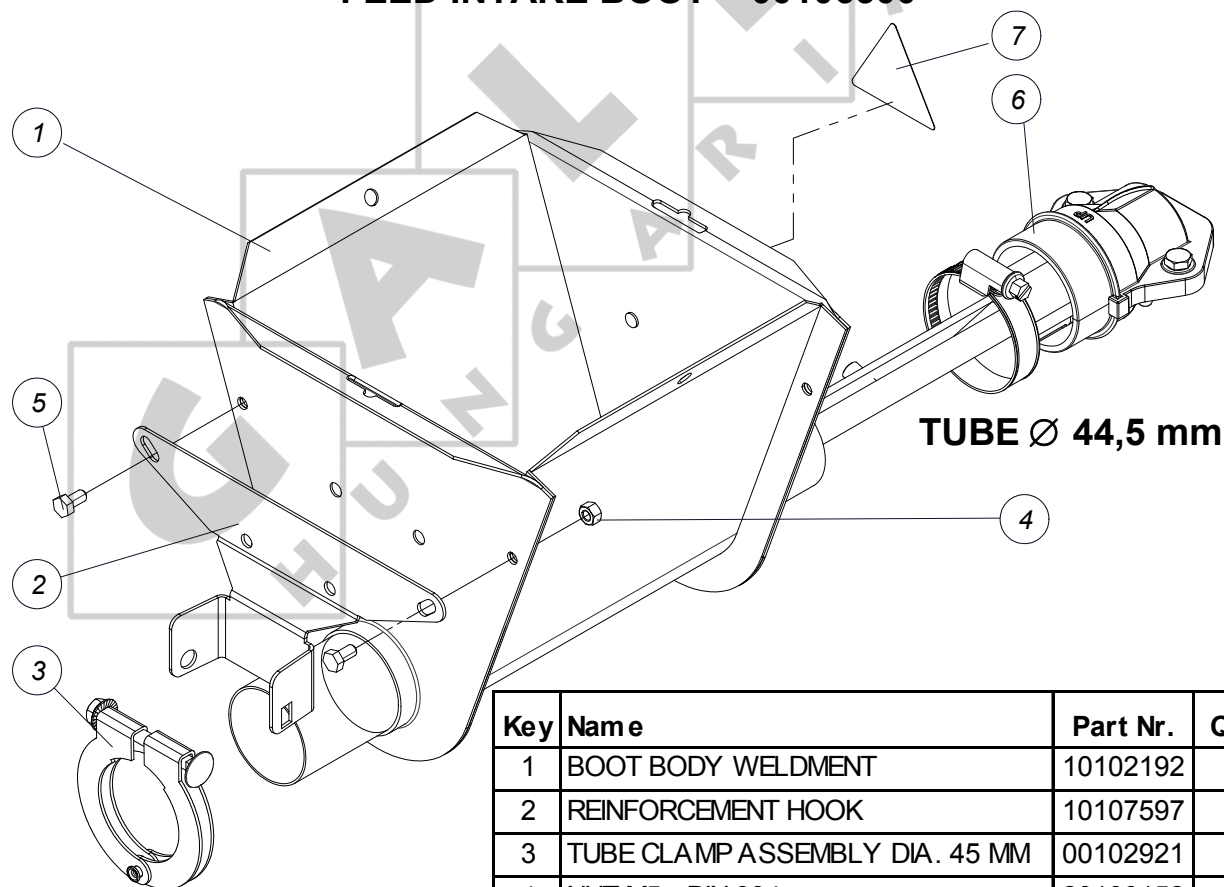
**THUMPER ASSEMBLY (OPTION) - 00103036**



Key	Name	Part Nr.	Qt.
1	THUMPER BODY POULTRY	10107548	1
2	THUMPER STOP	13107982	2
3	THUMPER HOLDER	13107974	2
4	LOCKNUT M6 - DIN 985	20100400	4
5	BOLT M6 X 16 - DIN 933 - 8.8	20100178	4

**THUMPER KIT FOR DOUBLE INTAKE BOOT(OPTION) - 00106765 (II-4)**

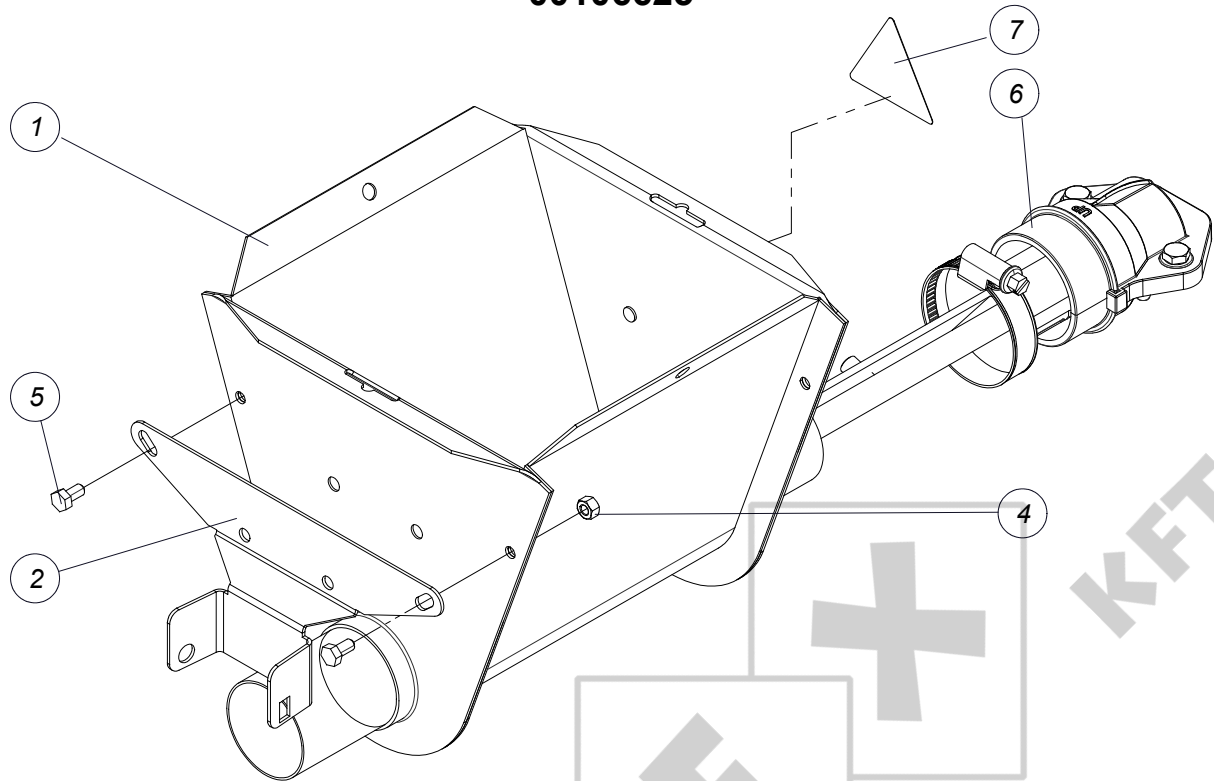
**FEED INTAKE BOOT - 00106500**



**TUBE Ø 44,5 mm**

Key	Name	Part Nr.	Qt.
1	BOOT BODY WELDMENT	10102192	1
2	REINFORCEMENT HOOK	10107597	1
3	TUBE CLAMP ASSEMBLY DIA. 45 MM	00102921	1
4	NUT M5 - DIN 934	20100152	2
5	BOLT M5X10 DIN 933	20100111	2
6	ANCHOR & BEARING ASS'Y	10111441	1
7	DECAL - HANDS WARNING	13106596	1

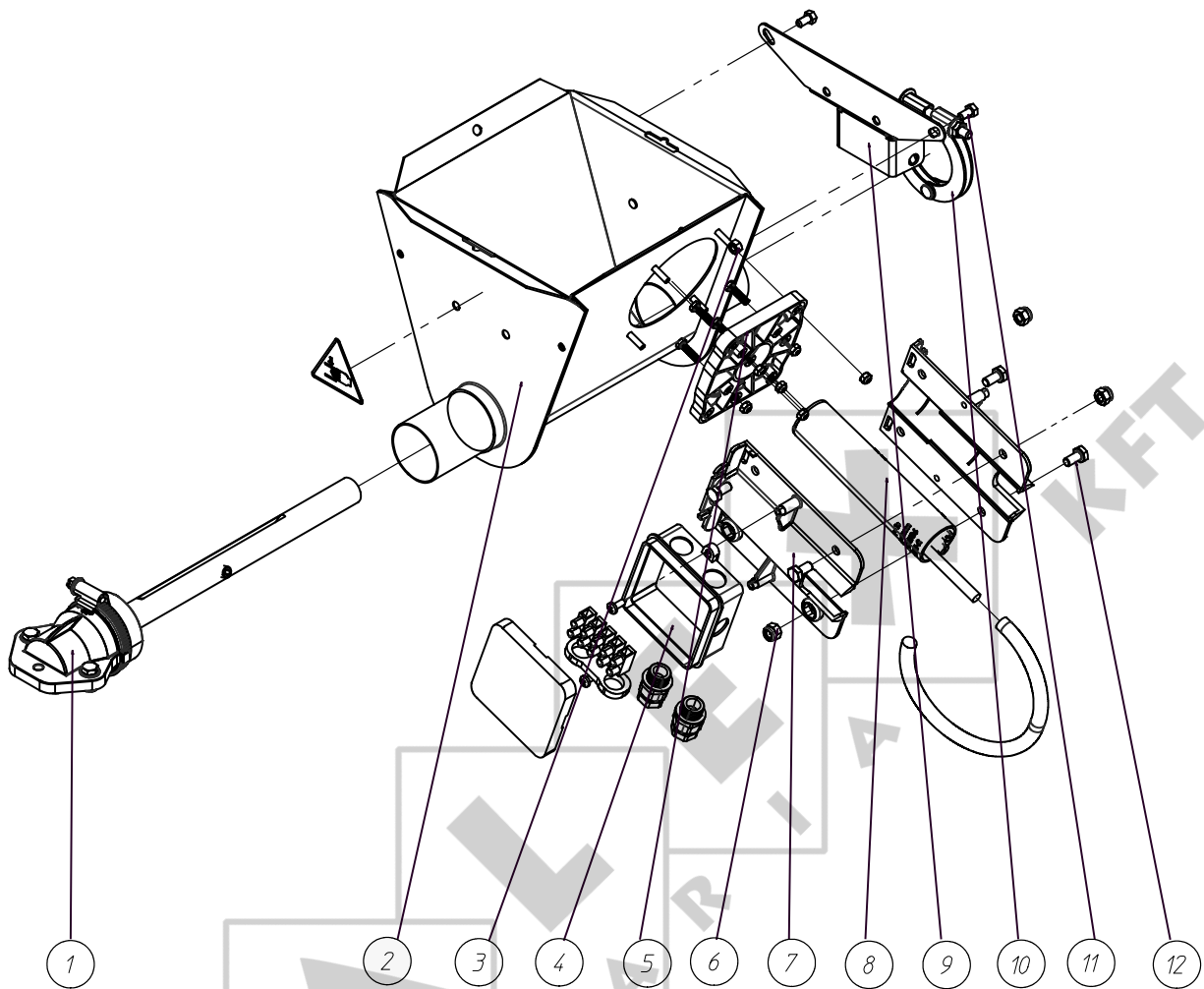
**OPTION FOR DUCKS : FEED INTAKE BOOT POULTRY ST. ST. -  
00106625**



Key	Name	Part Nr.	Qt.
1	BOOT BODY WELDMENT - STAINLESS STEEL	10107738	1
2	REINFORCEMENT HOOK - ST.ST.	10107761	1
4	LOCKNUT M5-DIN 985-A2	20102109	2
5	BOLT M5X10 - DIN 933 - A2	20103750	2
6	ANCHOR & BEARING ASS'Y	10111441	1
7	DECAL - HANDS WARNING	13106596	1

\* POULTRY INTAKE BOOT WITH SENSOR - 230 V AC - 00108952

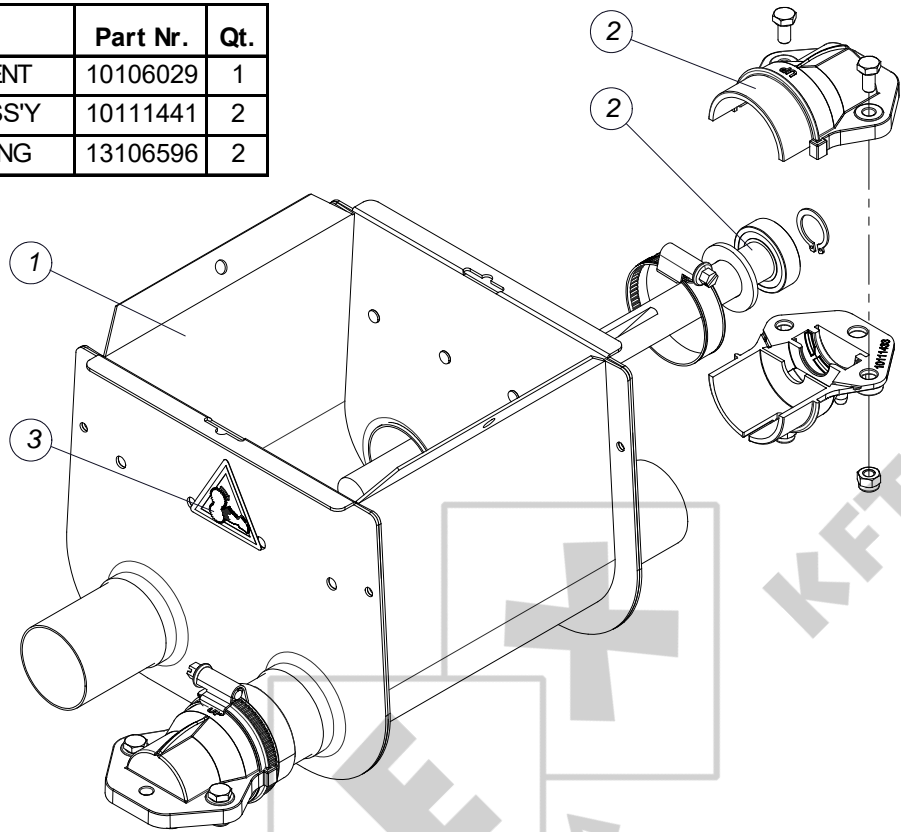
\*\* POULTRY INTAKE BOOT WITH SENSOR - 24 V DC - 00108950



Key	Name	Part Nr.	Qt.
1	ANCHOR & BEARING ASS'Y	10111441	1
2	BOOT BODY WELDM F/SENSOR	10112428	1
3	NUT M5 - DIN 934	20100152	2
4	HANDY BOX OBO A8	15000037	1
5	SENSOR DISTANCE PIECE 80 MM	10112436	1
6	LOCKNUT M6 - DIN 985	20100400	4
7	SENSOR HOLDER	13000443	2
*8	SENSOR VC12RT230106821 S3 D1	03103678	1
**8	SENSOR VC12 RTM24106821-2 24-230VAC/DC	03104586	1
9	REINFORCEMENT HOOK	10107597	1
10	TUBE CLAMP ASS'Y ø45	10112037	1
11	BOLT M5X10 DIN 933	20100111	2
12	BOLT M6X12 - DIN 933-8.8	20100160	4

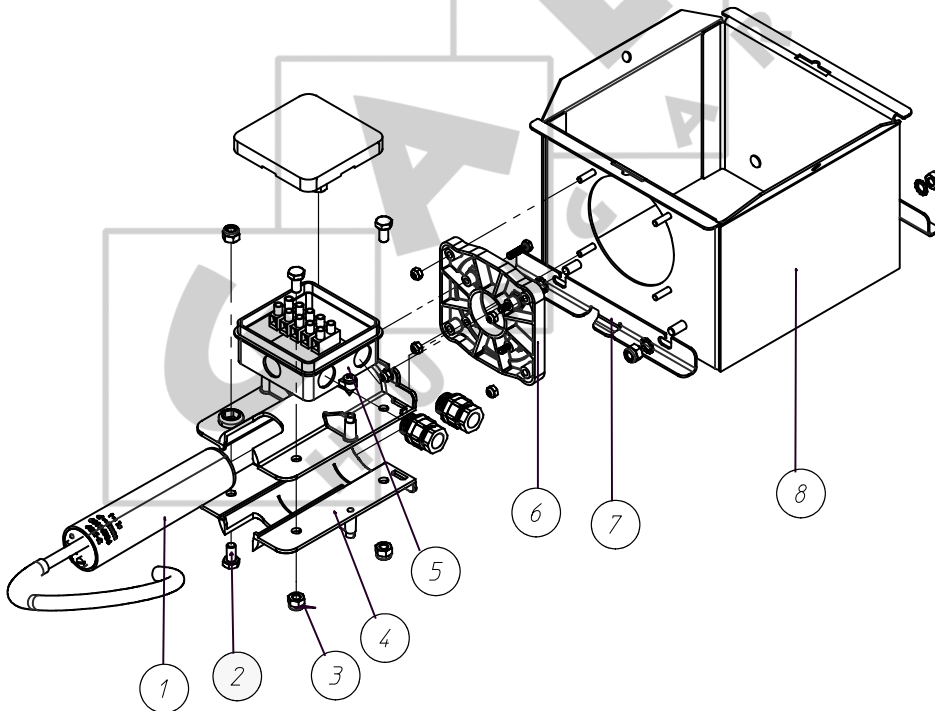
**OPTION: DOUBLE FEED INTAKE BOOT - 00106518**

Key	Name	Part Nr.	Qt.
1	DOUBLE BOOT WELDMNT	10106029	1
2	ANCHOR & BEARING ASS'Y	10111441	2
3	DECAL - HANDS WARNING	13106596	2

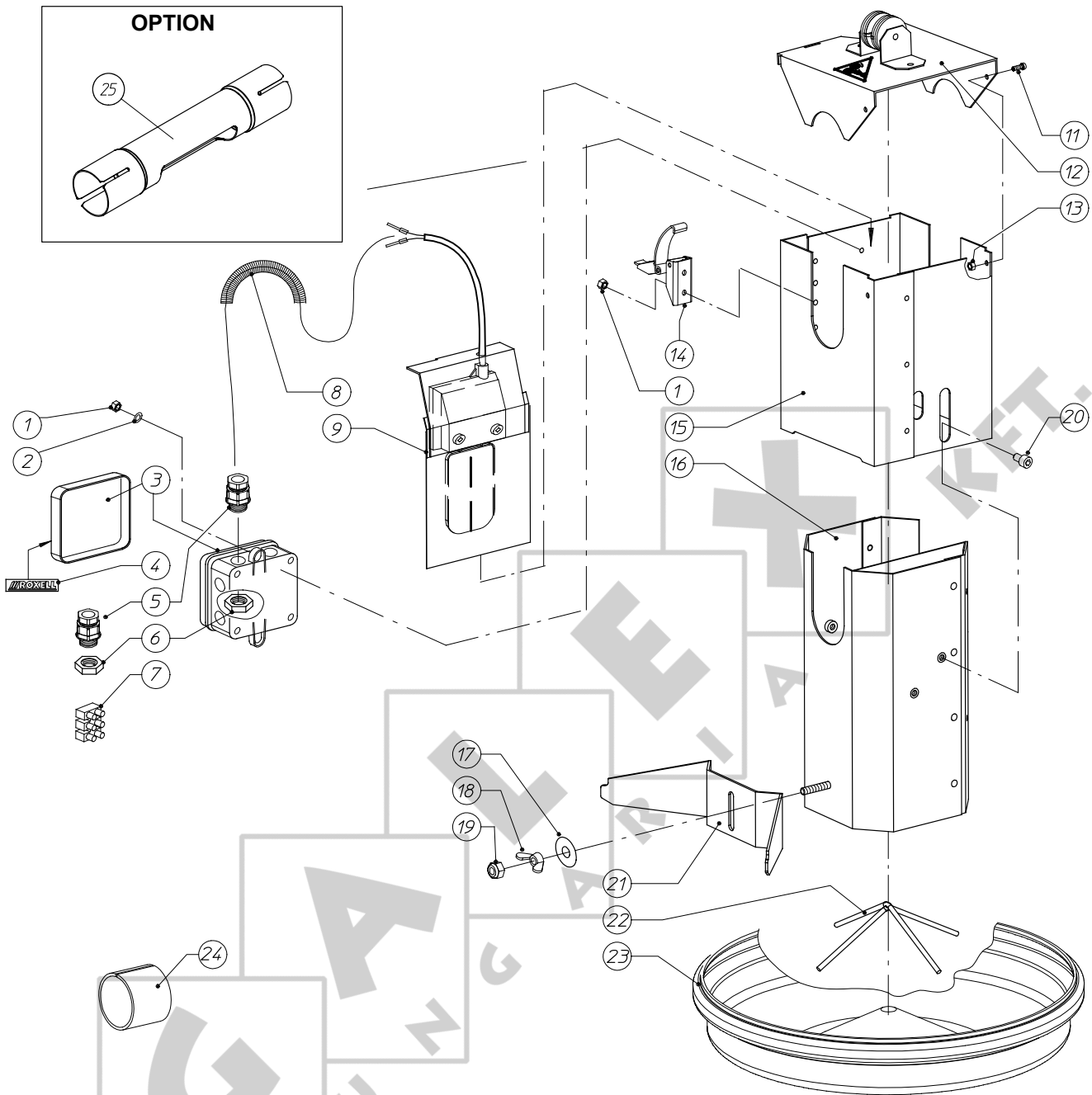


\* **OPTION: EXTENSION WITH SENSOR - 230 V AC - 03000901**

\*\* **OPTION: EXTENSION WITH SENSOR - 24 V DC - 03000899**

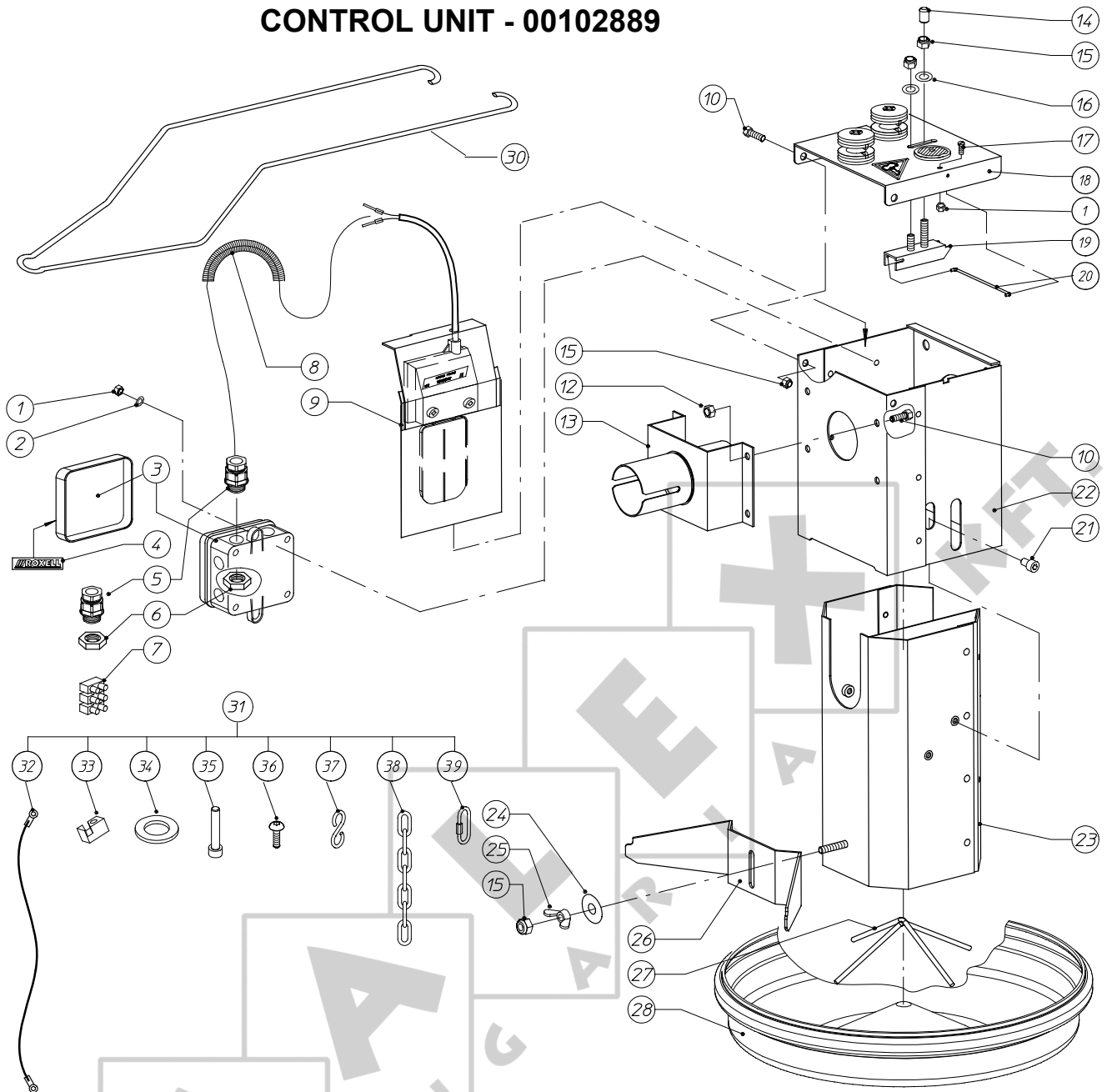


### INTERMEDIATE CONTROL - 00102897



Key	Name	Part Nr.	Qt.	Key	Name	Part Nr.	Qt.
1	NUT M4	20100681	4	15	OUTSIDE BODY ASS'Y - INT.C.U.	10107399	1
2	WASHER 4.3X9X0.8	20100566	2	16	INSIDE BODY ASS'Y	10107373	1
3	HANDY BOX OBO A8	15000037	1	17	WASHER 6.4X18X1.5 - DIN 9021	20100756	2
4	ROXELL DECAL - 42X10	13600598	1	18	WINGNUT M6-AMERICAN TYPE	20100335	2
5	CABLE RING PG 9	15001472	2	19	LOCKNUT M6 - DIN 985	20100400	2
6	CABLE RING NUT PG 9 POLY. G.V.	10102978	2	20	SOCKET CAP SCREW M6X10 - DIN 912	20101713	2
7	CLAMP STROKE 27 20 6E/3	10103109	1	21	PAN SUPPORT RH	10106847	2
8	CABLE SPRING	10106870	1	22	AGITATOR - POULTRY	00102392	1
9	LEVEL SWITCH COMPLETE	10111540	1	23	FEEDER PAN - MAX C	00101477	1
10	BOLT M5X10 DIN 933	20100111	2	*24	DISTANCE RING INTERM.CONTROL	10107258	2
11	TOP CLOSURE ASS'Y INT.CONTROL	10107407	1	25	TUBE W/DROP HOLE (2 EXP. ENDS)- L=240MM	00102954	1
12	LOCKNUT M5 - DIN 985	20100392	2	*	HARDWARE KIT	10107357	1
13	DRAW LATCH 97-50-260-11	10107415	1				

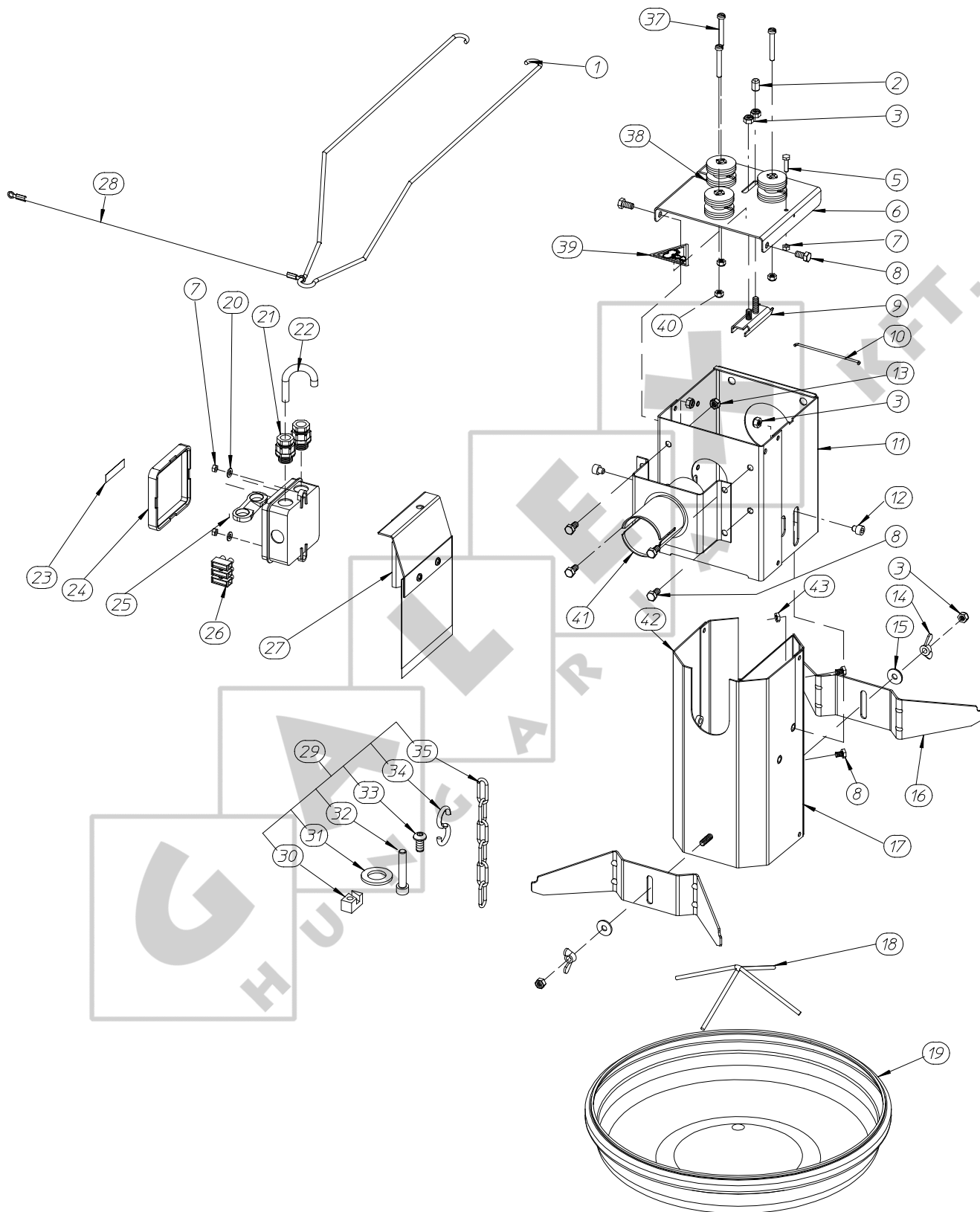
**CONTROL UNIT - 00102889**



Key	Name	Part Nr.	Qt.	Key	Name	Part Nr.	Qt.
1	NUT M4	20100681	3	21	SOCKET CAP SCREW M6X10 - DIN 912	20101713	2
2	WASHER 4.3X9X0.8	20100566	2	22	OUTSIDE BODY ASS'Y .	10107381	1
3	HANDY BOX OBO A8	15000037	1	23	INSIDE BODY ASS'Y	10107373	1
4	ROXELL DECAL - 42X10	13600598	1	24	WASHER 6.4X18X1.5 - DIN 9021	20100756	2
5	CABLE RING PG 9	15001472	2	25	WINGNUT M6-AMERICAN TYPE	20100335	2
6	CABLE RING NUT PG 9 POLY. G.V.	10102978	2	26	PAN SUPPORT RH	10106847	2
7	CLAMP STROKE 27 20 6E/3	10103109	1	27	AGITATOR - POULTRY	00102392	1
8	CABLE SPRING	10106870	1	28	FEEDER PAN - MAX C	00101477	1
9	LEVEL SWITCH COMPLETE	10111540	1	30	ANTI ROOST GUARD	10107860	1
10	BOLT M6X12 - DIN 933-8.8	20100160	6	31	HARDWARE KIT	10107431	1
12	NUT M6 - DIN 934	20100210	4	32	CONNECTING WIRE	10107472	1
13	TUBE BRACKET ASS'Y	10107175	1	33	DRIVE BLOCK	10100782	1
14	FERRULE	10107209	1	34	WASHER Ø34X20X3 - DIN 126	20100483	1
15	LOCKNUT M6 - DIN 985	20100400	6	35	SOCKET CAP SCREW M6X35 DIN 912	20102158	1
17	PRESS SCREW M4X8 - GALVANIZED	27000314	1	36	FLAT ROUND HEAD SCREW M8X16	20104196	4
18	TOP CLOSURE ASS'Y CONTROL UNIT	10107423	1	37	"S" HOOK	05000013	2
19	LATCH	10107183	1	38	CHAIN Ø2.5 LG=149MM	10107449	1
20	LATCH SPRING	10107191	1	39	SCREW LINK Ø3.5	10203156	1



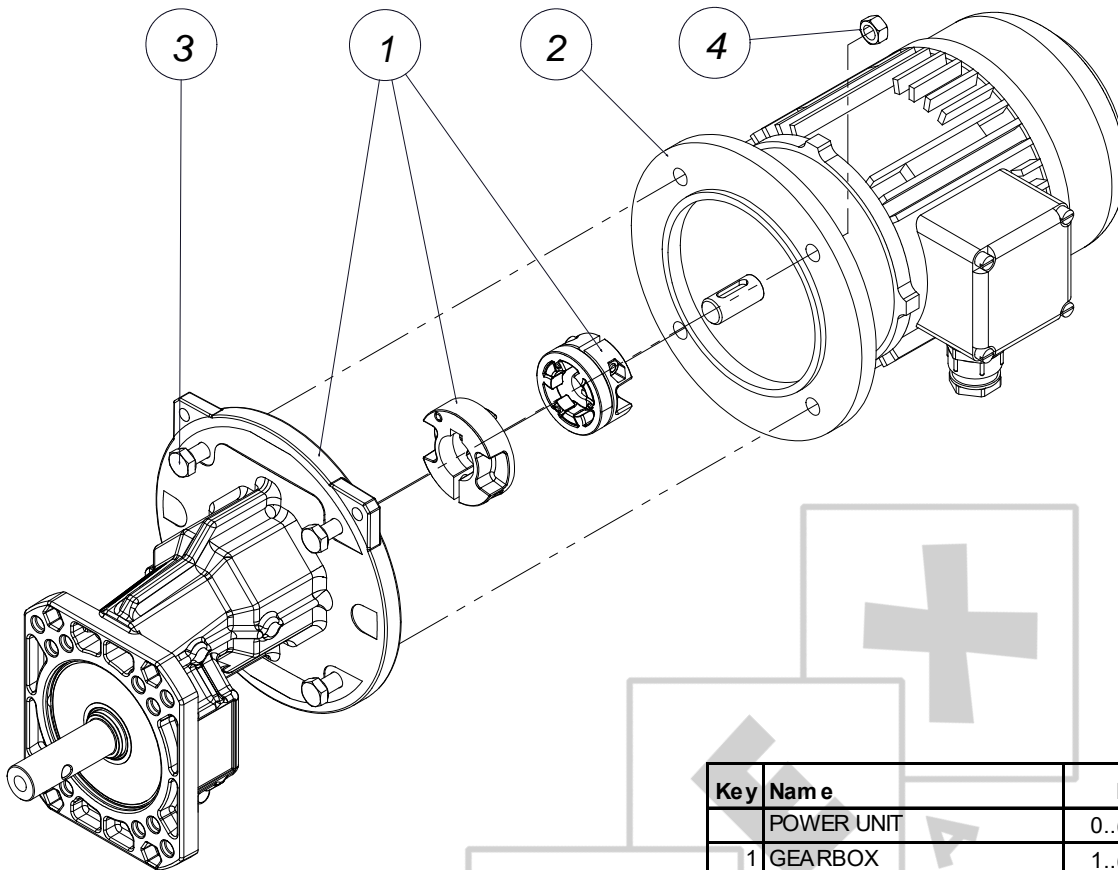
# OPTION FOR DUCKS : CONTROL UNIT STAINLESS STEEL - 00104844



**OPTION FOR DUCKS : CONTROL UNIT STAINLESS STEEL - 00104844**

Key	Name	Part Nr.	Qt.	Key	Name	Part Nr.	Qt.
1	ANTI ROOST GUARD	10107860	1	23	ROXELL DECAL - 42X10	13600598	1
2	FERRULE	10107209	1	24	HANDY BOX OBO A8	15000037	1
3	LOCKNUT M6-DIN 985-A2	20101960	6	25	CABLE RING HOLDER (2xPG9)	15010119	1
5	SCREW M4 x 16 - DIN 933- A2	20102638	1	26	CLAMP STROKE 27 20 6E/3	10103109	1
6	TOP CLOSURE - STAINLESS STEEL	10110260	1	27	LEVEL SWITCH COMPLETE - ST.ST.	10111581	1
7	NUT M4 DIN 934 - A2	20102646	3	28	CONNECTING WIRE	10100105	1
8	BOLT M6X12-DIN 933-A2	20103883	8	29	HARDWARE KIT	10110583	1
9	LATCH STAINLESS STEEL	10110393	1	30	DRIVE BLOCK	10100782	1
10	LATCH SPRING	10107191	1	31	WASHER Ø34X20X3 - DIN 126	20100483	1
11	OUTSIDE BODY ASS'Y STAINLESS STEEL	10110427	1	32	SOCKET CAP SCREW M6X35 DIN 912	20102158	1
12	SOCKET CAP SCR.M6X6-DIN 912-A2	20108726	2	33	FLAT ROUND HEAD SCREW M8X16-A2	20109161	4
13	NUT M6 - DIN 934 - A2 STAINLESS STEEL	20102257	4	34	"S" HOOK - Ø5 - STAINLESS STEEL	15008709	3
14	WINGNUT M6-DIN 315-STAINLESS STEEL	20104337	2	35	CHAIN Ø3MM STAINLESS STEEL LG=162 MM	10110575	1
15	WASHER Ø6.4X18X1.6 DIN 9021 - A2	20104329	2	37	SCREW CH.HD.M5X35 DIN84-A2	20108916	3
16	PAN SUPPORT ST.ST.	09801200	2	38	ANCHOR INSULATOR	10100139	3
17	INSIDE BODY ASS'Y STAINLESS STEEL	10110468	1	39	DECAL - HANDS WARNING	13106596	1
18	AGITATOR - POULTRY	00104851	1	40	LOCKNUT M5-DIN 985-A2	20102109	3
19	FEEDER PAN - MAX C	00101477	1	41	TUBE BRACKET ASS'Y ST.ST.	10110252	1
20	WASHER 5.3X10X1 - DIN 125 - A2	20102315	2	42	BAFFLE - ST.ST.	10110443	1
21	CABLE RING PG 9	15001472	2	43	LOCKNUT M6-DIN 985-A2	20101960	2
22	CABLE SPRING	10106870	1				

### POWER UNIT

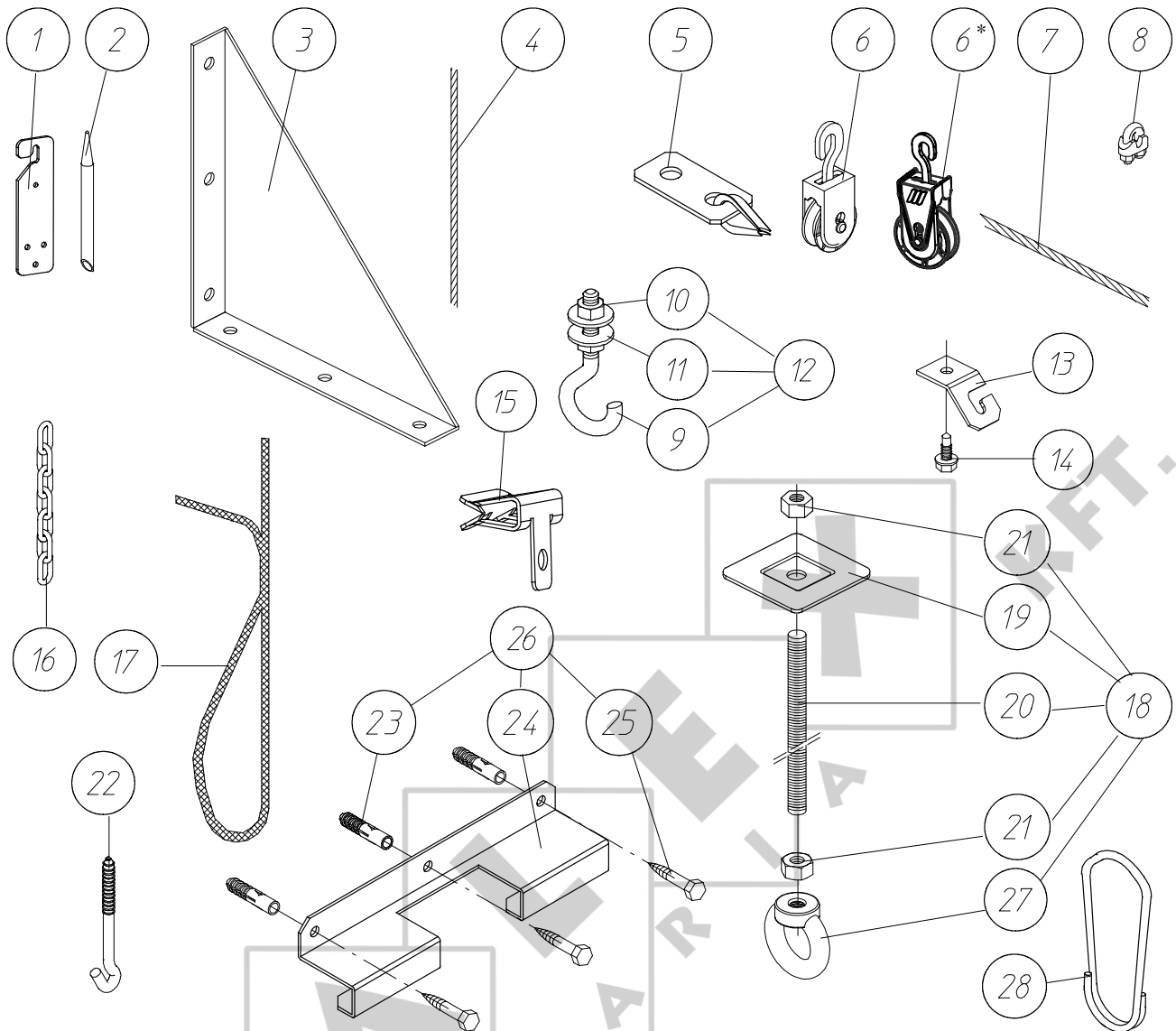


Key	Name	Part Nr.	Qt.
	POWER UNIT	0..(See table)	1
1	GEARBOX	1..(See table)	1
2	MOTOR	1..(See table)	1
3	BOLT M8X30-DIN 933-8.8	20100244	4
4	NUT M8 - DIN 934	20200028	4

System	Minimax Classic (50 Hz)	Minimax Classic (60 Hz)
Gearbox With Key	10106441	
Gearbox With F-Coupling alu	10111821	10112317
Type Elastic Coupling Set (CS 71-80-90)	<b>CS71 13204180</b>	<b>CS71 13204180</b>
Motor Shaft	<b>Ø14</b>	<b>Ø14</b>
Ratio	3.867	4.73
Output speed 50Hz	350	NA
Output speed 60Hz	NA	360
Construction size	71	71
Motor speed 50Hz(RPM)	1500	NA
Motor speed 60Hz(RPM)	NA	1800
Feed capacity kg	520	520
Drive 3x230/400V 50Hz IE1	<b>00107092</b>	
Motor IE1	10106482 (0,37kW)	
Drive 3x200/346V 50Hz	<b>00107100</b>	
Motor	10104487 (0,37kW)	
Drive 1x230V 50Hz	<b>00107108</b>	
Motor	10106656 (0,37kW)	
Drive 3x220-230/380-400V 60Hz		<b>00108784</b>
Motor		10106482 (0,37kW)
Drive 3x200/346V 60Hz		<b>00108808</b>
Motor		10104487 (0,37kW)
Drive 1x220V 60Hz		<b>00108800</b>
Motor		10106656 (0,37kW)

Capacitor 1 phase motor	
09802330	RUN CAPACITOR 10 µF
09802338	RUN CAPACITOR 12,5 µF
09802346	RUN CAPACITOR 18 µF
09802354	RUN CAPACITOR 20 µF
09802362	RUN CAPACITOR 25 µF
09802370	RUN CAPACITOR 30 µF
09802378	RUN CAPACITOR 45 µF
09802386	RUN CAPACITOR 50 µF
09802394	START CAPACITOR 12,5 µF
09802402	START CAPACITOR 14 µF
09802410	START CAPACITOR 16 µF
09802418	START CAPACITOR 20 µF
09802426	START CAPACITOR 25 µF
09802442	START CAPACITOR 36-43 µF
09802450	START CAPACITOR 56-63 µF
09802458	START CAPACITOR 108-130 µF

### SUSPENSION COMPONENTS

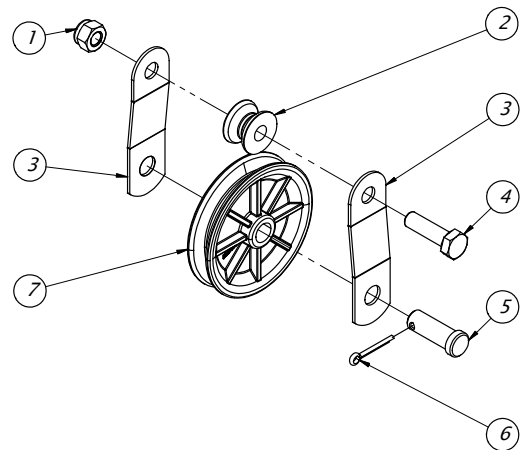


Key	Name	Part Nr.	Key	Name	Part Nr.
*1	ADJUSTMENT LEVELER	00602060	14	SELF DRILLING SCREW 6.3X25	00103077
**	ADJUSTMENT LEVELER - STAINLESS STEEL	00602078	15	CADDY CLIPS TYPE 4H58	20104220
2	NEEDLE TO FIX SUSPENSION CORD	00100792	16	CHAIN DIA. 3.5 MM	00100750
3	WALL BRACKET FOR CENTRAL WINCH	00101097	**	CHAIN ø3 - STAINLESS STEEL	00103606
*4	CABLE 3/32" - ø2.5 MM - 250M	00106887	17	SUSPENSION CORD	00100610
	CABLE 3/32" - ø2.5 MM - 500M	00106895	18	ANCHOR BOLT ASSEMBLY	00100404
**	CABLE ø2.5MM - STAINLESS STEEL	00402586	19	FOOT	10101657
5	CABLE CONNECTION ASSEMBLY	00102699	20	SCREW SPINDLE M12 x 350	10107530
6	SMALL PULLEY WITH STAINLESS STEEL HOOK	00104349	21	NUT M12-DIN 934	20100582
*6	PLASTIC PULLEY Ø45MM W/ ST.ST. HOOK	00107198	22	SCREW HOOK 90 MM	05000872
7	CABLE ø 5MM - 3/16" - (7x7)	00100388	**	SCREW HOOK 90MM - STAINLESS STEEL	05000484
**	CABLE ø4 MM - STAINLESS STEEL	01001924		SCREW HOOK 160 MM	05000237
8	CABLE CLAMP NO. 5	00100545	**	SCREW HOOK 160MM - STAINLESS STEEL	05000492
**	CABLE CLAMP NR.5 - STAINLESS STEEL	11015211	*23	PLUG DIA. 10 MM - NYLON	20102034
9	SCREW HOOK M6 X 60	20103156	*24	WALL BRACKET FOR HOPPER	10107878
10	NUT M6 - DIN 934	20100210	*25	HEXAG.WOOD SCREW 6X40-DIN 571	20102026
11	WASHER 6.4x18x1.5-DIN 9021	20100756	*26	KIT WITH WALL BRACKET FOR HOPPER	00104331
12	SUSPENSION HOOK M6x60	05000302	27	EYENUT M12	20104279
13	SUSPENSION PLATE	00103069	*28	HANGER Ø45MM	00100354
			*	OPTION	

\*\* OPTION FOR DUCKS

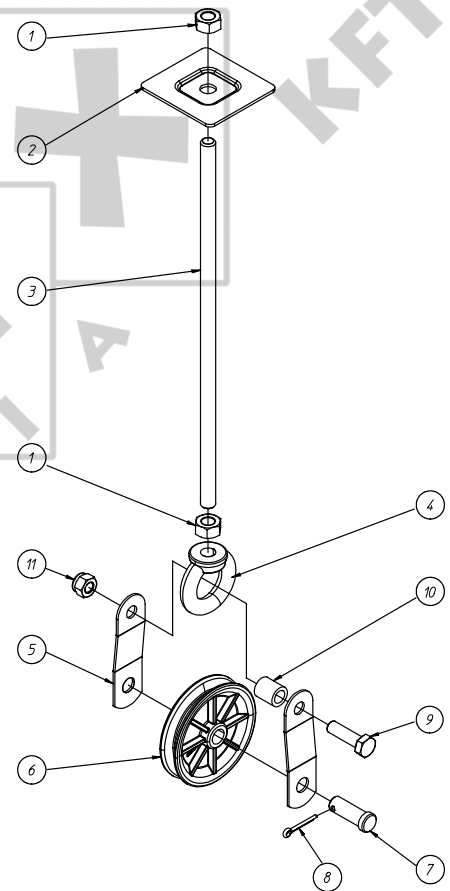
### SINGLE EYE PULLEY - 00100420

Key	Name	Part Nr.	Qt.
1	LOCKNUT M10-DIN 985	20100426	1
2	CABLE GUIDE WHEEL	10111417	1
3	PULLEY SIDE PLATE (SE)	10111391	2
4	BOLT M10X35-DIN 933	20102190	1
5	CLEVIS PIN	10101723	1
6	SPLIT PIN 3x25-DIN 94	20100533	1
7	PULLEY WHEEL	10101707	1



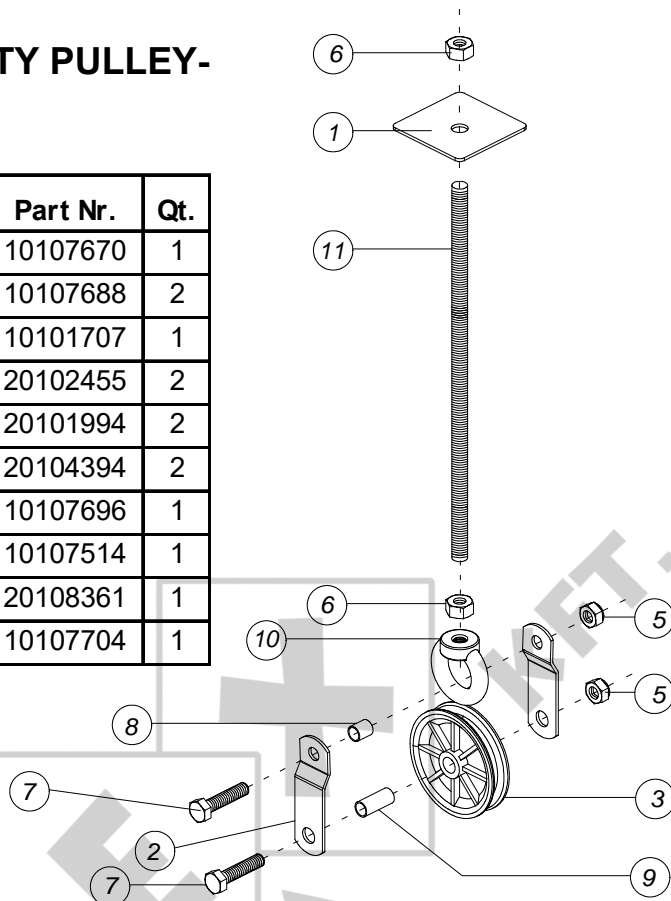
### HEAVY DUTY PULLEY - 00100412

Key	Name	Part Nr.	Qt.
1	NUT M12-DIN 934	20100582	2
2	FOOT	10101657	1
3	SCREW SPINDLE M12 x 350	10107530	1
4	EYENUT M12	20104279	1
5	PULLEY SIDE PLATE (SE)	10111391	2
6	PULLEY WHEEL	10101707	1
7	CLEVIS PIN	10101723	1
8	SPLIT PIN 3x25-DIN 94	20100533	1
9	BOLT M10X35-DIN 933	20102190	1
10	SPACER	10101715	1
11	LOCKNUT M10-DIN 985	20100426	1

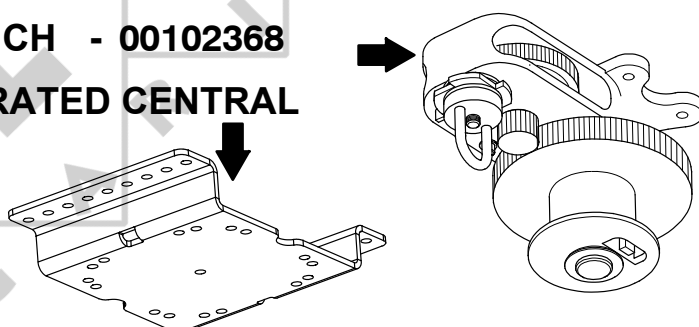


**OPTION FOR DUCKS : HEAVY DUTY PULLEY-  
STAINLESS STEEL - 00103564**

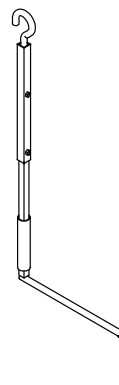
Key	Name	Part Nr.	Qt.
1	FOOT - STAINLESS STEEL	10107670	1
2	PULLEY SIDE PLATE - STAINLESS STEEL	10107688	2
3	PULLEY WHEEL	10101707	1
5	LOCKNUT M 10 - DIN 985 - A2	20102455	2
6	NUT M10-DIN 934 - STAINLESS STEEL	20101994	2
7	BOLT M10X50 DIN 933 - STAINLESS STEEL.	20104394	2
8	STAINLESS STEEL TUBE Ø15 LG=12	10107696	1
9	SPACER PULLEY WHEEL	10107514	1
10	EYENUT M10 - DIN582 - A2	20108361	1
11	SCREW SPINDLE M10x330 - ST.ST.	10107704	1



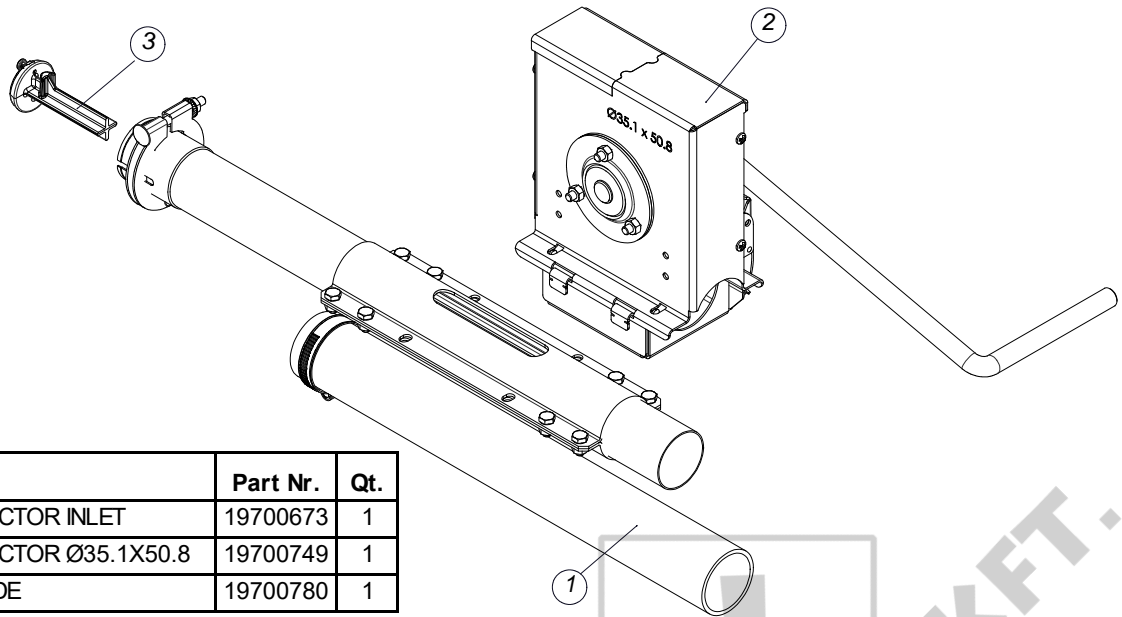
**HAND OPERATED CENTRAL WINCH - 00102368**  
**MOUNTING PLATE F/HAND OPERATED CENTRAL WINCH - 02001188**



**TELESCOPICAL WINCH DRIVE ASSEMBLY -  
00102962**

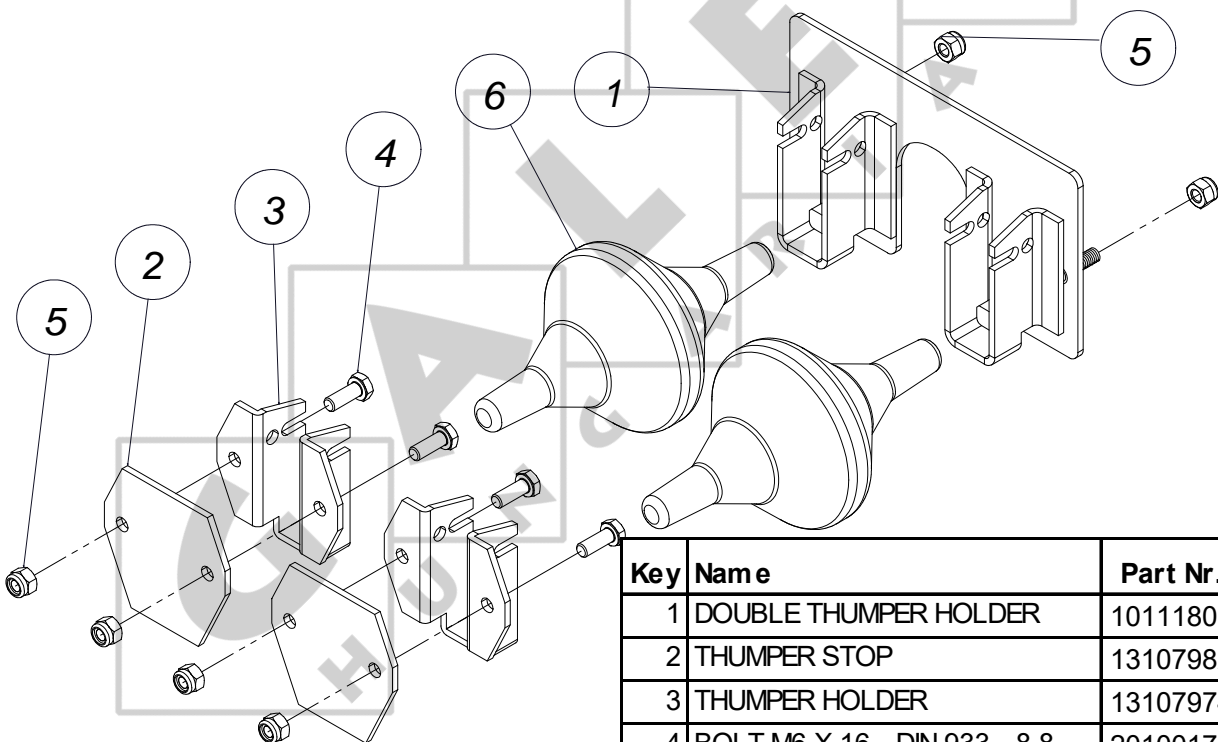


**OPTION : AUGER INJECTOR KIT - 09701905**



Key	Name	Part Nr.	Qt.
1	AUGER INJECTOR INLET	19700673	1
2	AUGER INJECTOR Ø35.1X50.8	19700749	1
3	AUGER GUIDE	19700780	1

**THUMPER KIT FOR DOUBLE INTAKE BOOT(OPTION) - 00106765**



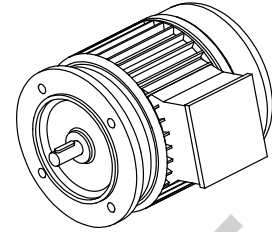
Key	Name	Part Nr.	Qt.
1	DOUBLE THUMPER HOLDER	10111805	2
2	THUMPER STOP	13107982	2
3	THUMPER HOLDER	13107974	2
4	BOLT M6 X 16 - DIN 933 - 8.8	20100178	2
5	LOCKNUT M6 - DIN 985	20100400	2
6	THUMPER BODY POULTRY	10107548	2

System	WINCH
Gearbox With Key	10106136
Motor Shaft	Ø14
Ratio	315
Output speed 50Hz	4.5
Output speed 60Hz	5.4
Construction size	71
Motor speed 50Hz(RPM)	1500
Motor speed 60Hz(RPM)	1800
3x230/400V 50Hz IE1	
Motor IE1	11111978 (0,25kW)
3x200/346V 50Hz	
Motor	11100476 (0,25kW)
1x230V 50Hz	
Motor	00102061 (0,25kW)
3x220-230/380-400V 60Hz	
Motor	00102343 (0,3kW)
3x200/346V 60Hz	
Motor	11102779 (0,3kW)
3x254/440V 60Hz	
Motor	11900842 (0,3kW)
1x220V 60Hz	
Motor	10103554 (0,37kW)

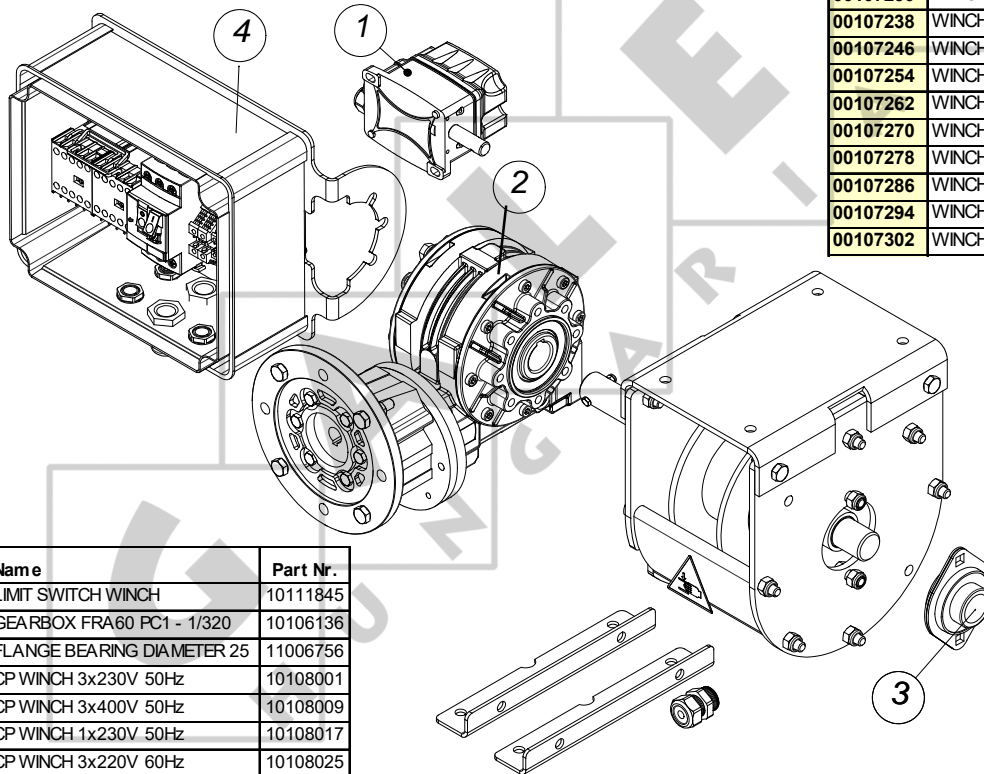
Capacitor 1 phase motor	
09802330	RUN CAPACITOR 10 µF
09802338	RUN CAPACITOR 12,5 µF
09802346	RUN CAPACITOR 18 µF
09802354	RUN CAPACITOR 20 µF
09802362	RUN CAPACITOR 25 µF
09802370	RUN CAPACITOR 30 µF
09802378	RUN CAPACITOR 45 µF
09802386	RUN CAPACITOR 50 µF
09802394	START CAPACITOR 12,5 µF
09802402	START CAPACITOR 14 µF
09802410	START CAPACITOR 16 µF
09802418	START CAPACITOR 20 µF
09802426	START CAPACITOR 25 µF
09802442	START CAPACITOR 36-43 µF
09802450	START CAPACITOR 56-63 µF
09802458	START CAPACITOR 108-130 µF

## MOTOR

FOR CENTRAL  
WINCH - MOTOR  
OPERATED



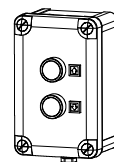
## WINCH W/SWITCH + CP - MOTOR OPERATED



00107214	WINCH W/SWITCH+CP 3x230V 50Hz
00107222	WINCH W/SWITCH+CP 3x400V 50Hz
00107230	WINCH W/SWITCH+CP 1x230V 50Hz
00107238	WINCH W/SWITCH+CP 3x220V 60Hz
00107246	WINCH W/SWITCH+CP 3x230V 60Hz
00107254	WINCH W/SWITCH+CP 3x380V 60Hz
00107262	WINCH W/SWITCH+CP 3x400V 60Hz
00107270	WINCH W/SWITCH+CP 1x220V 60Hz
00107278	WINCH W/SWITCH+CP 3x254V 60Hz
00107286	WINCH W/SWITCH+CP 3x440V 60Hz
00107294	WINCH W/SWITCH+CP 3x200V 60Hz
00107302	WINCH W/SWITCH+CP 3x346V 60Hz

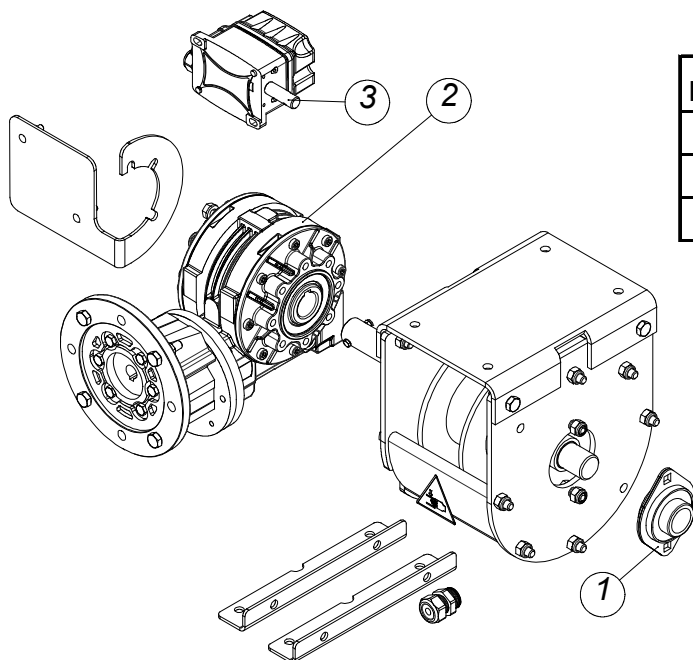
Key	Name	Part Nr.
1	LIMIT SWITCH WINCH	10111845
2	GEARBOX FRA60 PC1 - 1/320	10106136
3	FLANGE BEARING DIAMETER 25	11006756
4	CP WINCH 3x230V 50Hz	10108001
	CP WINCH 3x400V 50Hz	10108009
	CP WINCH 1x230V 50Hz	10108017
	CP WINCH 3x220V 60Hz	10108025
	CP WINCH 3x230V 60Hz	10108033
	CP WINCH 3x380V 60Hz	10108041
	CP WINCH 3x400V 60Hz	10108049
	CP WINCH 1x220V 60Hz	10108057
	CP WINCH 3x254V 60Hz	10108065
	CP WINCH 3x440V 60Hz	10108073
	CP WINCH 3x200V 60Hz	10108081
	CP WINCH 3x346V 60Hz	10108089

## STANDARD : CONTROL SWITCH FOR WINCH - 00107206





### WINCH W/SWITCH - MOTOR OPERATED - 00107190



Key	Name	Part Nr.
1	FLANGE BEARING DIAMETER 25	11006756
2	GEARBOX FRA60 PC1 - 1/320	10106136
3	LIMIT SWITCH WINCH	10111845

### OPTION : CONTROL PANEL FOR CENTRAL WINCH



**WARNING**

Do not use the winch control panel to directly switch motor currents. Only use the winch control panel to switch control currents up to 3 A at 240 V on an AC-15 load.

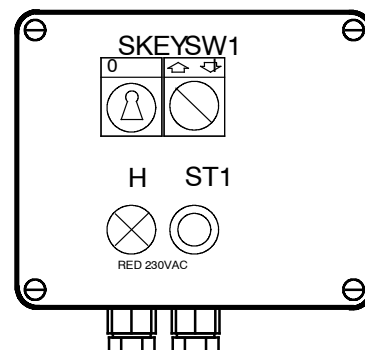
The motor must be protected against short circuits and overcurrents, in accordance with local regulations.

You can use a motor starter to switch and protect the motor.

**Always ensure solid earthing!**



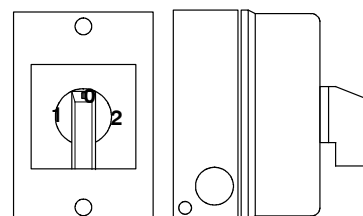
Used in combination with single-phase motors.



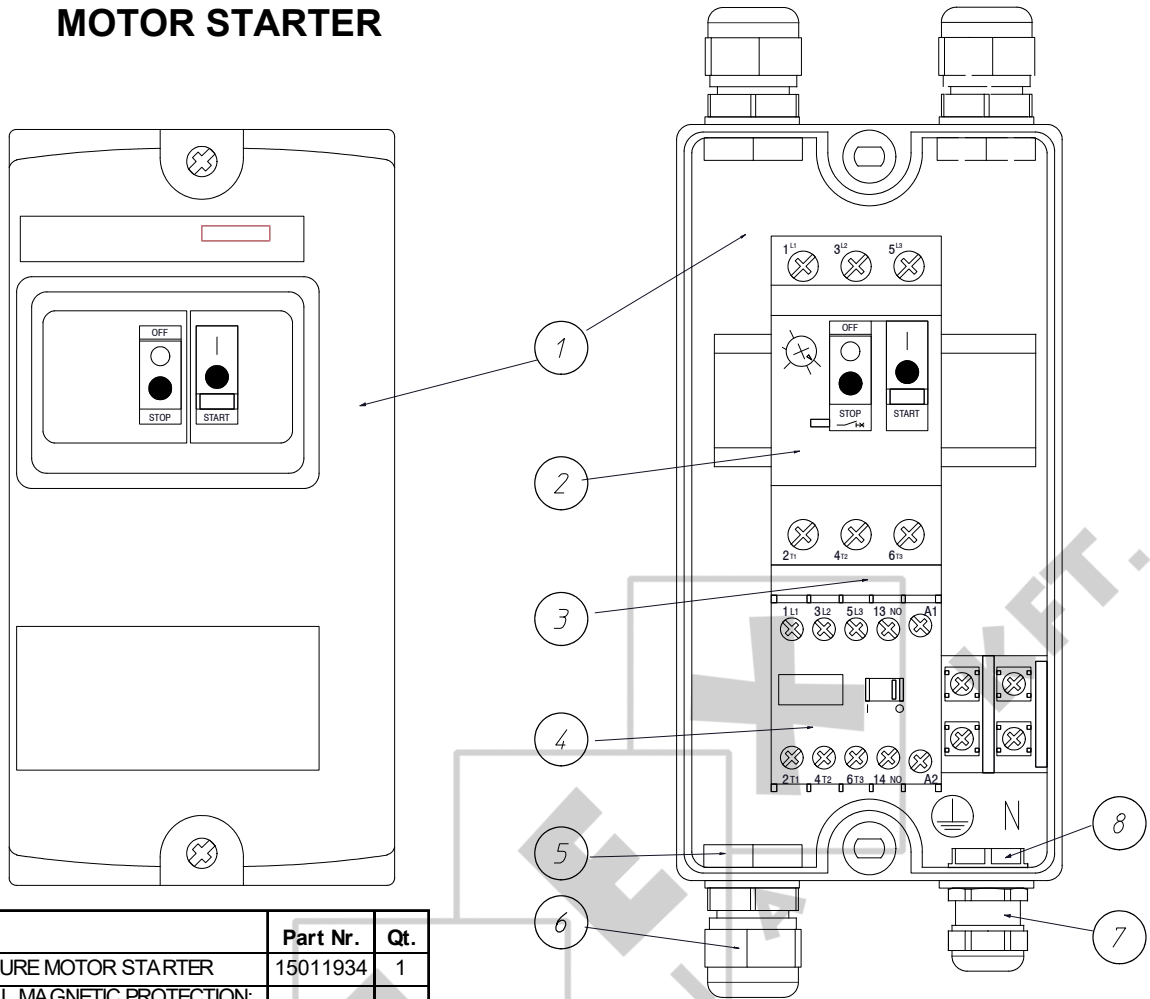
00101030	CONTROL PANEL FOR 1 WINCH MOTOR
00101048	CONTROL PANEL FOR 2 WINCH MOTORS
00101055	CONTROL PANEL FOR 3 WINCH MOTORS
00101063	CONTROL PANEL FOR 4 WINCH MOTORS
00101071	CONTROL PANEL FOR 5 WINCH MOTORS
00101089	CONTROL PANEL FOR 6 WINCH MOTORS

### OPTION: CONTROL SWITCH FOR WINCH - 00102327

(IN COMBINATION WITH THREE PHASE MOTORS)



# MOTOR STARTER



Key	Name	Part Nr.	Qt.
1	ENCLOSURE MOTOR STARTER	15011934	1
2	THERMAL MAGNETIC PROTECTION: See: Where used	-	1
3	MOUNT SOCLE GV2-AF01	15010291	1
4	CONTACTOR 3P+1NO 230VAC	15011926	1
5	CABLE RING NUT M20	15010440	3
6	CABLE RING V-TEC VM20 LGR	15010210	3
7	CABLE RING M16	10111755	1
8	CABLE RING NUT M16	10111763	1

## MOTOR STARTER USED FOR :

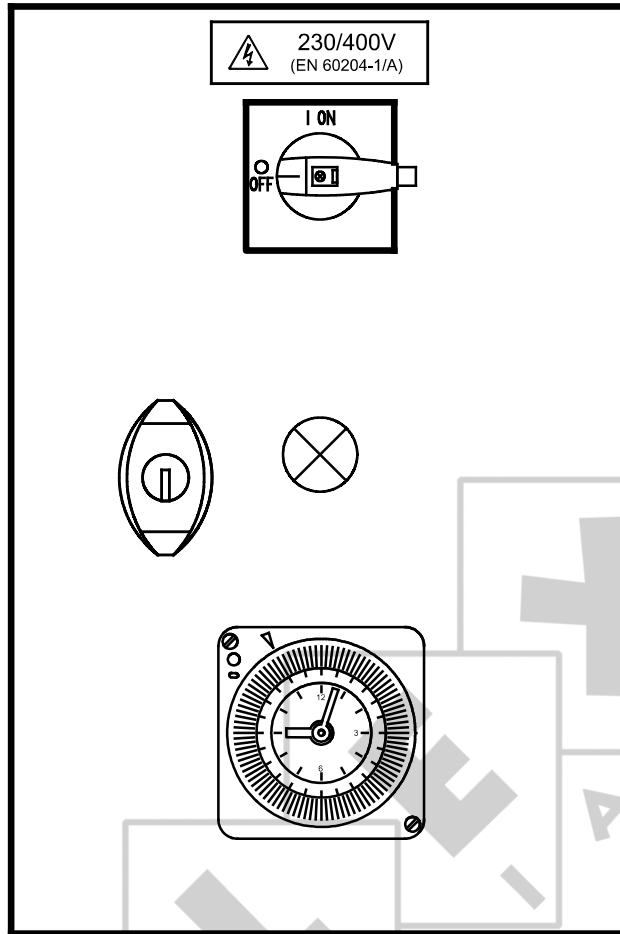
MOTOR RATING		SUPPLY VOLTAGE		
50Hz	60Hz	3-PH. 230V	3-PH. 400V	1-PH. 230V
0.18KW	0.22KW	05001233	05001225	05001241
0.25KW	0.30KW	05001233	05001225	05001241
0.37KW	0.44KW	05001241	05001233	05001249
0.55KW	0.66KW	05001249	05001241	05001249
0.74KW	0.90KW	05001249	05001241	05001257
1.10KW	1.32KW	05001257	05001249	05001265
1.25KW	1.50KW	05001257	05001249	05001265
1.50KW	1.80KW	05001265	05001249	05001265

## THERMAL-MAGNETIC MOTOR PROTECTION : WHERE USED

	05001225	05001233	05001241	05001249	05001257	05001265
MOTOR STARTER						
THERM. MAGNETIC PROTECT.	13600861	13900261	13600887	13900279	15004799	15006307
SCHNEIDER REF.	GV2- ME05	GV2- ME06	GV2- ME07	GV2- ME08	GV2- ME010	GV2- ME014
CURRENT	0,63- 1.00A	1.00- 1,60A	1,60- 2,50A	2,50- 4.00A	4.00- 6.30A	6.00- 10.00A

**ALWAYS PROVIDE A SOLID EARTHING !**

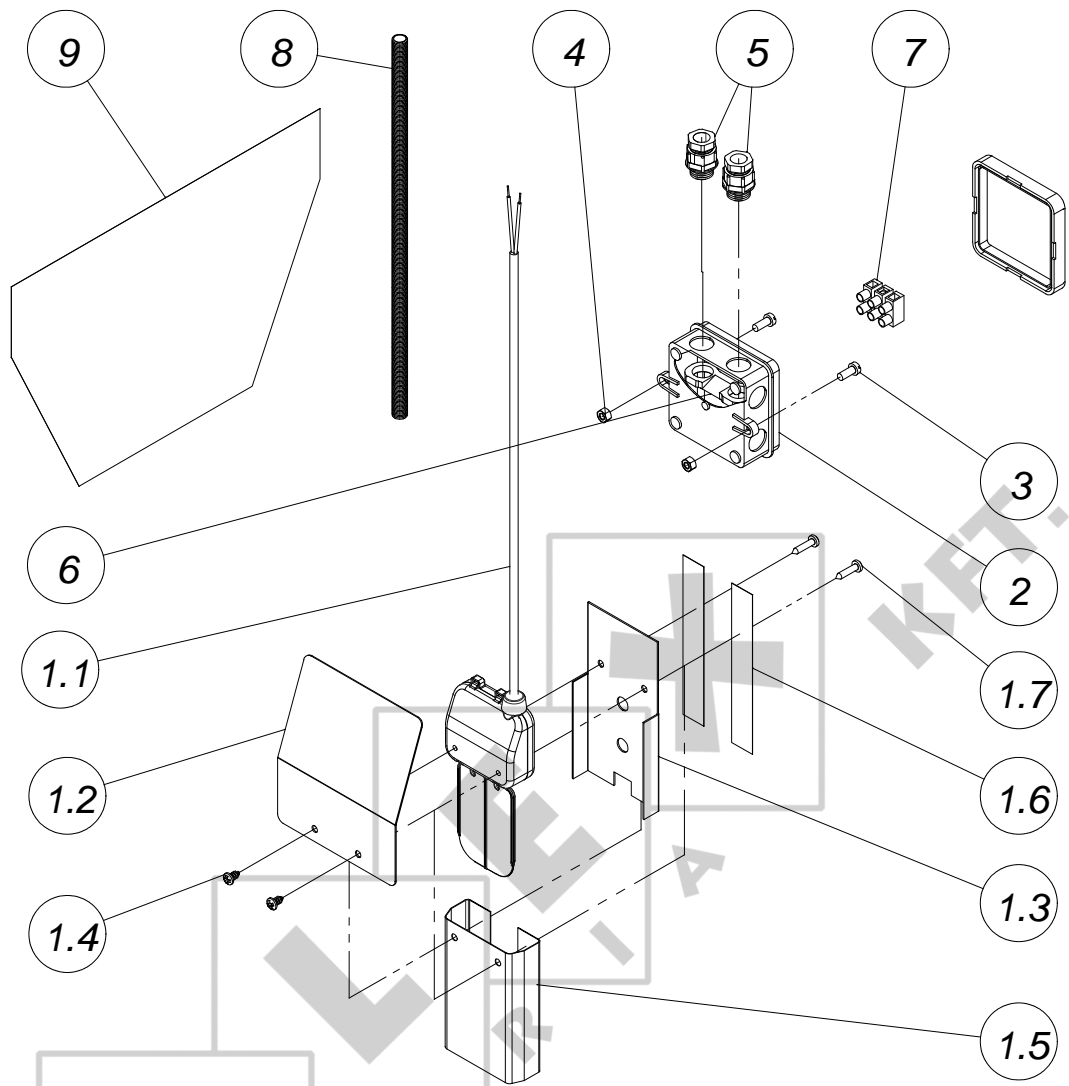
### CONTROL PANEL WITH TIME CLOCK - 00100685



### BOX W/COUNTER - 00102905

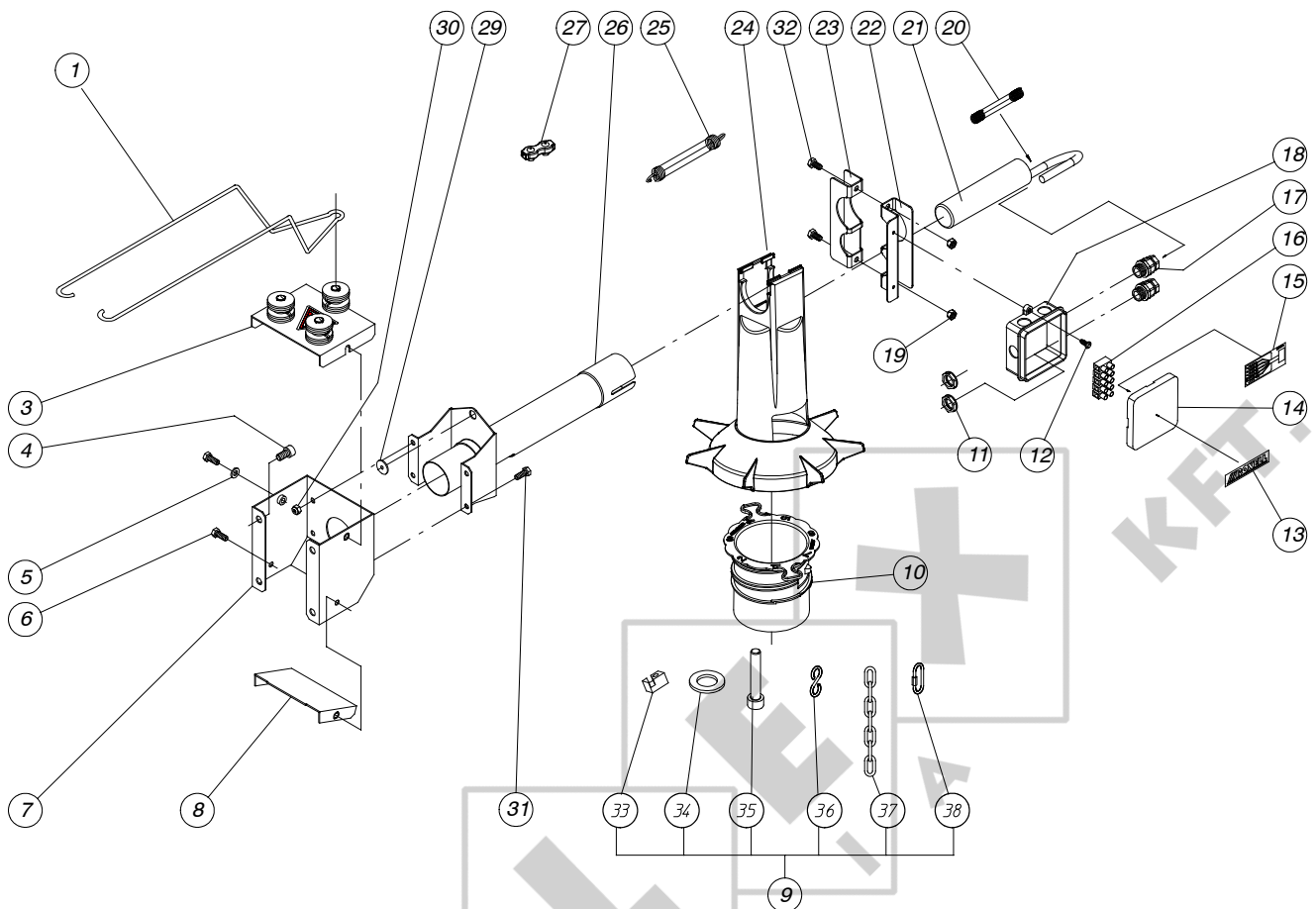


**MINIMUM SWITCH - 00201145**



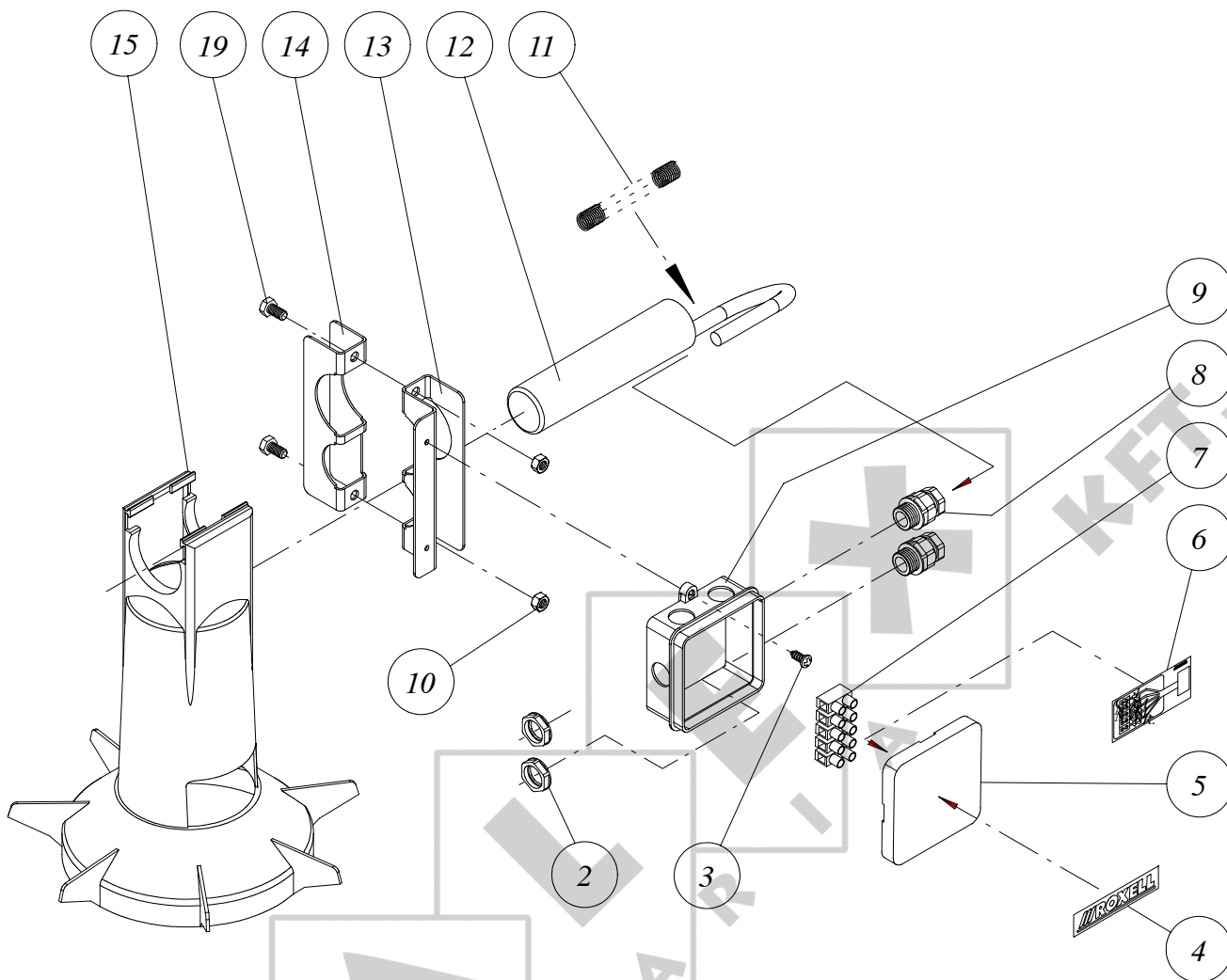
Key	Name	Part Nr.	Qt.
1	MINIMUM SWITCH COMPLETE	10206043	1
1.1	MINIMUM SWITCH ASS'Y	10203073	1
1.2	SWITCH COVER	10206035	1
1.3	SWITCH SUPPORT	10203107	1
1.4	PARCKER SCREW 4.2x9.5 DIN 7981	20102745	2
1.5	MINIMUM SWITCH SHIELD	10203115	1
1.6	ADHESIVE TAPE 19X0.23-2SIDE	30800726	2
1.7	PARKER SCREW 4.2x19 DIN 7981	20104535	2
2	HANDY BOX OBO A8	15000037	1
3	SCREW M5X12 DIN 84-4.8	20101135	2
4	NUT M5 - DIN 934	20100152	2
5	CABLE RING PG 9	15001472	2
6	CABLE RING HOLDER (2xPG9)	15010119	1
7	CLAMP STROKE 27 20 6E/3	10103109	1
8	SWITCH CORD GUARD	13104518	1
9	DRILL DECAL MINIMUM SWITCH	10203149	1

**MINIMAX END CONTROL UNIT W/SENSOR - 00205567**



Key	Name	Part Nr.	Qt.	Key	Name	Part Nr.	Qt.
1	ANTI ROOST GUARD	10107860	1	21	SENSOR VC12 RT230106821 OFF DELAY	03101185	1
3	TOP COVER ASS'Y	10205029	1	22	SENSOR HOLDER METAL RIGHT	10205854	1
4	SOCKET CAP SCREW M8 x 16 - 8.8	20103891	4	23	SENSOR HOLDER METAL LEFT	10205847	1
5	WASHER D.6.6x12x1.6-DIN 126	20100459	2	24	SUPPORT CONE MINIMAX - CU	10205839	1
6	BOLT M6X16 - DIN 933 - 8.8	20100178	4	25	SPRING	00400077	1
7	OVERFLOW BOX	10204998	1	26	TUBE BRACKET ASS'Y	10205060	1
8	BOTTOM PLATE	10204980	1	27	DUPLEX CABLE CLAMP ST.ST. - 3 MM	00106945	3
9	HARDWARE KIT	10205094	1	29	NYLON INSULATION SLEEVE M4	10205045	1
10	ADJUSTER RING - SHORT	00101204	1	30	LOCKNUT M6 - DIN 985	20100400	4
11	CABLE RING NUT PG 9 poly. G.V.	10102978	2	31	BOLT M6X16 - DIN 933 - 8.8	20100178	4
12	PARCKER SCREW 8 X 1/2"	20100525	2	32	BOLT M6X12 - DIN 933-8.8	20100160	2
13	ROXELL DECAL - 42 x 10	13600598	1	33	DRIVE BLOCK	10100782	1
14	HANDY BOX OBO A8	15000037	1	34	WASHER ø34x20x3-DIN126	20100483	1
15	ELECTRIC CONNECTION DECAL	13105341	1	35	BOLT M6X35 - DIN 931	20102307	1
16	CLAMP STROKE 47 40 6E/5	13303086	1	36	"S" HOOK	05000013	2
17	CABLE RING PG 9	15001472	2	37	CHAIN DIA. 2.5 LG=149 MM	10107449	1
18	HANDY BOX OBO A8	15000037	1	38	SCREW LINK DIA. 3.5	10203156	1
19	NUT M6 - DIN 934	20100210	2				
20	SWITCH CORD GUARD	13104518	1				

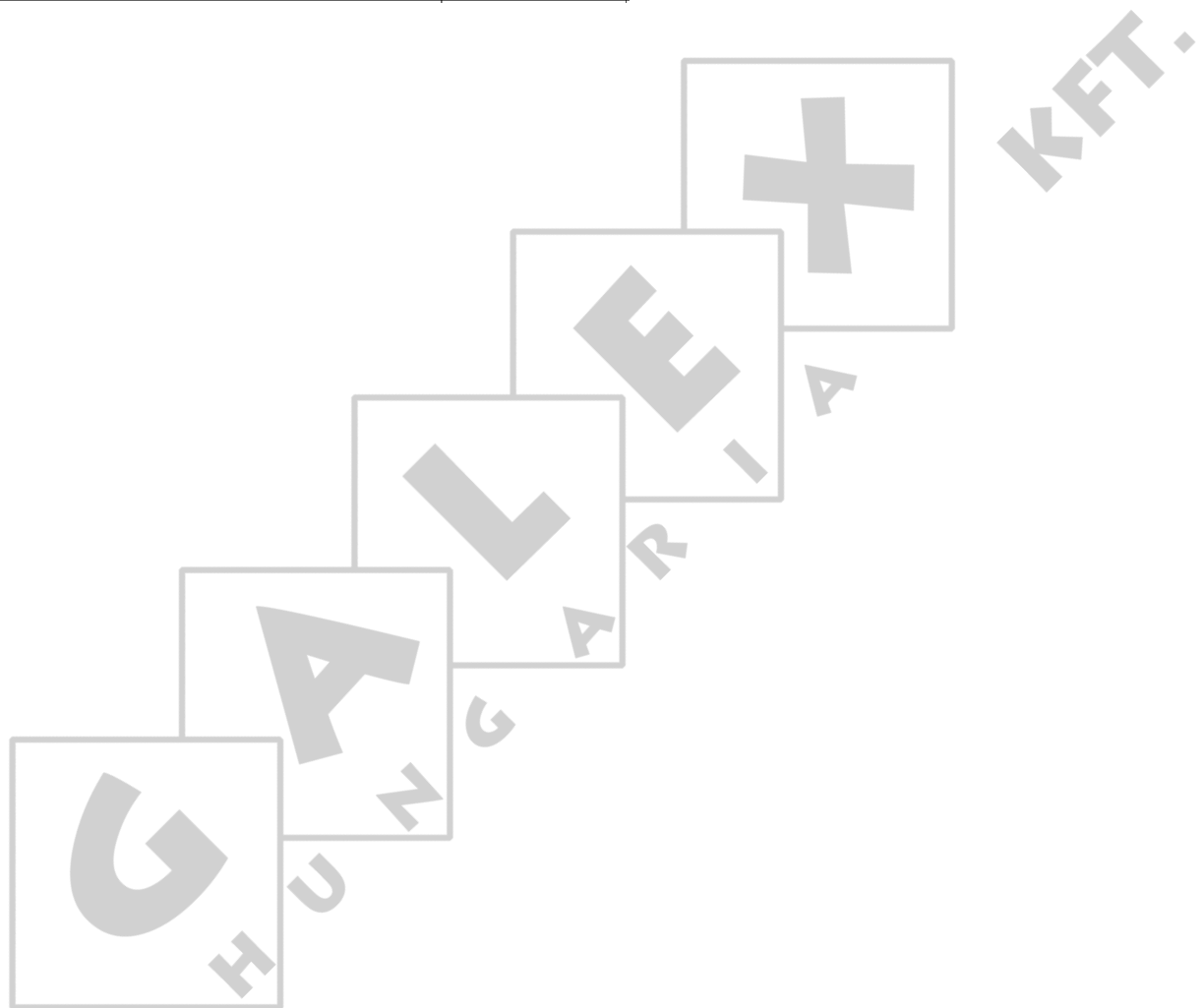
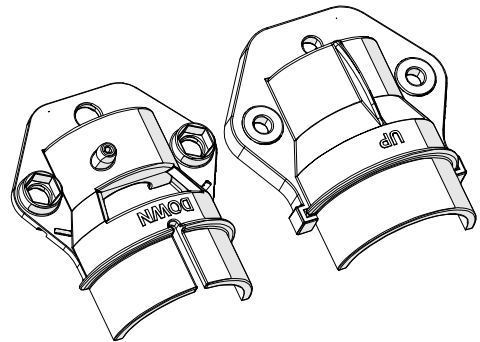
### MOVABLE INTERM.CONTROL UNIT WITH SENSOR - 00105288



Key	Name	Part Nr.	Qt.
2	CABLE RING NUT PG 9 poly. G.V.	10102978	2
3	PARCKER SCREW 8 X 1/2"	20100525	2
4	ROXELL DECAL - 42 x 10	13600598	1
5	HANDY BOX OBO A8	15000037	1
6	ELECTRIC CONNECTION DECAL	13105341	1
7	CLAMP STROKE 47 40 6E/5	13303086	1
8	CABLE RING PG 9	15001472	2
9	HANDY BOX OBO A8	15000037	1
10	NUT M6 - DIN 934	20100210	2
11	SWITCH CORD GUARD	13104518	1
12	SENSOR VC12 RT230106821 OFF DELAY	03101185	1
13	SENSOR HOLDER METAL RIGHT	10205854	1
14	SENSOR HOLDER METAL LEFT	10205847	1
15	SUPPORT CONE MINIMAX - CU	10205839	1
19	BOLT M6X12 - DIN 933-8.8	20100160	2

**SPARES SET BEAR. CAP HOLD - Ø44.5 (SET 10 PCS) - 00106929**

Name	Part Nr.	Qt.
BEAR.CAP HOLDER-Ø44.5 (SET 10PCS)	00106929	10
	Used in :	
FEED INTAKE BOOT POULTRY	00106500	
POULTRY INTAKE BOOT WITH SENSOR	00108950	
POULTRY INTAKE BOOT WITH SENSOR 230V AC	00108952	
DOUBLE FEED INTAKE BOOT	00106518	



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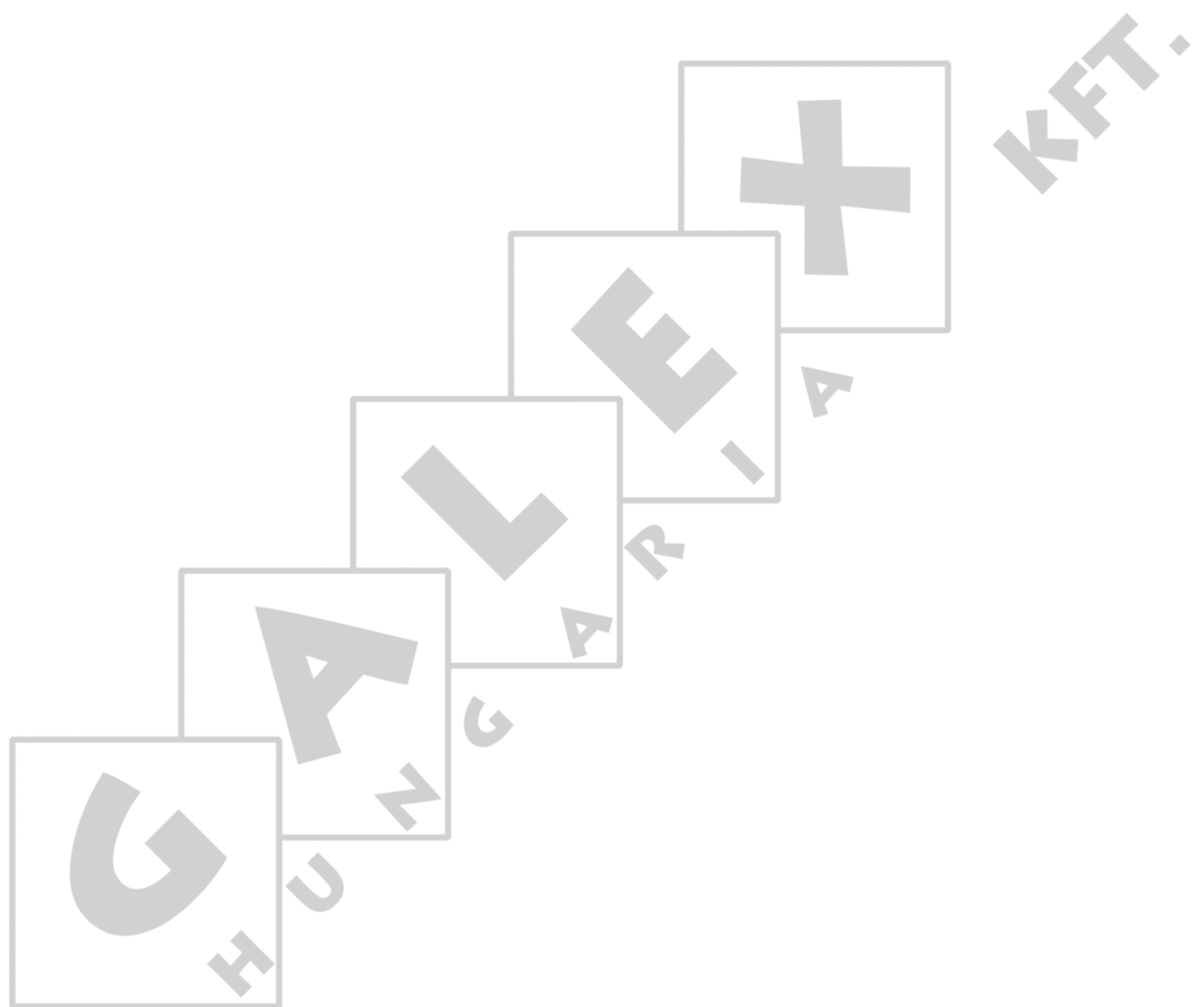
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# PART III

## INSTALLATION INSTRUCTIONS





## GENERAL SAFETY RULES



**DANGER**

### IMPORTANT

Carefully read the following instructions before you **INSTALL** the system

1. Be **CAREFUL** when handling the **ROLLS OF AUGER**.
  - When you release the **BINDING WIRE**, it is possible that the auger **UNROLLS**. This can cause injuries.
  - **ALWAYS** use **SAFETY GLOVES** when you slide the auger into the tube.
  - **ALWAYS** see that the auger **CANNOT SPRING BACK** (by using clamps) when you put it under tension .
2. Check all **TUBE CONNECTIONS** and all **TUBE CLAMPS** on control units, feed intake boots and bearings for **PROPER CLAMPING**. Tighten all tube clamps with a **TORQUE** of min. : 10Nm.
3. **TEST** the **SUSPENSION SYSTEM** for safe operation :
  - Firmly fasten the **WINCH** and the **SUSPENSION POINTS**. Firmly tighten **ALL CABLE CLAMPS**.
  - **WINCH UP THE FEEDER LINES THREE TIMES** and lower them again (full course). **NEVER STAND UNDERNEATH THE SYSTEM** when doing this.
  - Winching up and lowering must proceed **WITHOUT ANY HITCH**.
4. At the **FIRST START UP**, make sure that, if the auger **HITCHES** or **BLOCKS**, you can **IMMEDIATELY SWITCH OFF** the system with the main switch on the control panel.



This **SYMBOL** will be used to draw your attention to matters that are of **GREAT IMPORTANCE** for your **SAFETY**.

It means : **WARNING** - follow the safety instructions : disconnect the current - re-read the safety rules.

In short : **BE ALERT**.

**IGNORING** these instructions can cause **SERIOUS INJURIES** or even **DEATH**.



## COMPONENT NUMBERS

Key	Name	Number
1	HEAVY DUTY PULLEY	00100412
*	HEAVY DUTY PULLEY-STAINLESS STEEL	00103564
2	CHAIN DIAM. 3,5mm	00100750
*	CHAIN Ø3 STAINLESS STEEL	00103606
3	CABLE CLAMP NO. 5	00100545
*	CABLE CLAMP NR.5 - ST.ST.	11015211
4	CABLE DIAM. 5mm	00100388
*	CABLE Ø4 MM - STAINLESS STEEL	01001924
5	SUSPENSION CORD	00100610
6	SMALL PULLEY WITH STAINLESS STEEL HOOK	00104349
7	SCREW HOOK 90mm	05000872
*	SCREW HOOK 90 MM STAINLESS STEEL	05000484
7	SCREW HOOK 160mm	05000237
*	SCREW HOOK 160 MM STAINLESS STEEL	05000492
8	HAND OPERATED CENTR. WINCH	00102368
9	SPRING	00400077
*	SPRING - STAINLESS STEEL	00402594
11	ANCHOR BRACKET LOW	00102681
*	ANCHOR BRACKET - LOW - STAINLESS STEEL	00103580
12	POWER UNIT	SEVERAL
13	CONTROL UNIT	00102889
*	CONTROL UNIT STAINLESS STEEL	00104844
14	MOTOR STARTER	SEVERAL
15	100KG HOPPER	00100602
*	100 KG HOPPER-STAINLESS STEEL	00103630
16	FEED INTAKE BOOT POULTRY (OPTION)	00106500
*	FEED INTAKE BOOT POULTRY - ST.ST.	00106625
*	POULTRY INTAKE BOOT WITH SENSOR - 230 V AC (OPTION)	00108952
*	POULTRY INTAKE BOOT WITH SENSOR - 24 V DC (OPTION)	00108950
17	FEEDER PAN	SEVERAL
18	GRILL ASSY	SEVERAL
19	SUPPORT CONE	00101212
20	ADJUSTER RING	SEVERAL
21	TOP SUPPORT	00101220
22	TUBES	SEVERAL
23	CABLE FOR PERCH GUARD - 50M	00106847
	CABLE FOR PERCH GUARD - 100M	00106855
24	TUBE CLAMP ASSY DIAM. 45mm	00102921
*	TUBE CLAMP ASSEMBLY DIA. 45 MM ST.ST.	00104877
25	AUGER	00100974
26	POULTRY PERCH GUARD	00105692
27	CABLE - 1/16" - 1.5MM - 250M	00106839
	CABLE - 1/16" - 1.5MM - 500M	00106831
*	CABLE Ø1.5 MM (1/16") STAINLESS STEEL	00103598
28	DUPLEX CABLE CLAMP ST. ST. - 3MM	00106945

\* OPTION FOR DUCKS

## TOOLS

1. LOCK GRIP PLIERS



2. HEAVY HAMMER, LIGHT HAMMER



7. SET OF FLAT OPEN END WRENCHES AND RING WRENCHES (6-22MM)



14. HOLE SAW DIA 32-09701699 (SENSOR)

- Ø40 - 09700022 (MODEL 55),
- Ø51 - 09700030 (MODEL 75),
- Ø70 - 09700048 (MODEL 90),
- Ø108 - 09700055 (MODEL 125)
- Ø130MM (Holes in wall)



8. CABLE CUTTING PLIERS



15. HOLE SAW HOLDER - 09700071



4. DRILLING MACHINE



9. SET OF DRILLS (METAL Ø 3-13) & CONCRETE



10. GRINDING MACHINE



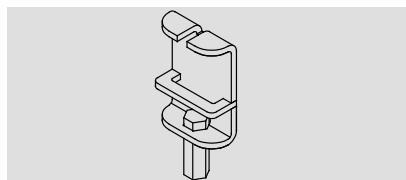
17. TUBE CUTTER



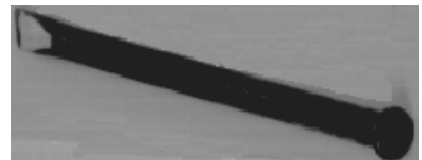
5. SCREW DRIVER WITH BATTERY (SLOT & CROSS) + NUT TIGHTENER



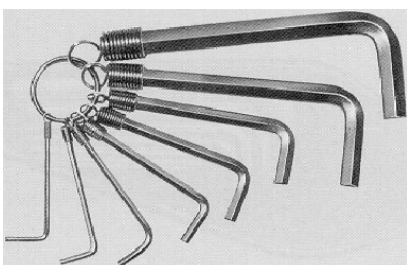
12. DRIVER FOR SCREW HOOKS DIA. 6MM - 09700220



18. LONG CHISEL



6. SET OF HEX WRENCHES



13. SOCKET SCREW DRIVERS - 19700236



20. ELECTRICAL HEATED KNIFE (OPTIONAL)



### TO INSTALL ALL FEEDER PAN COMBINATIONS

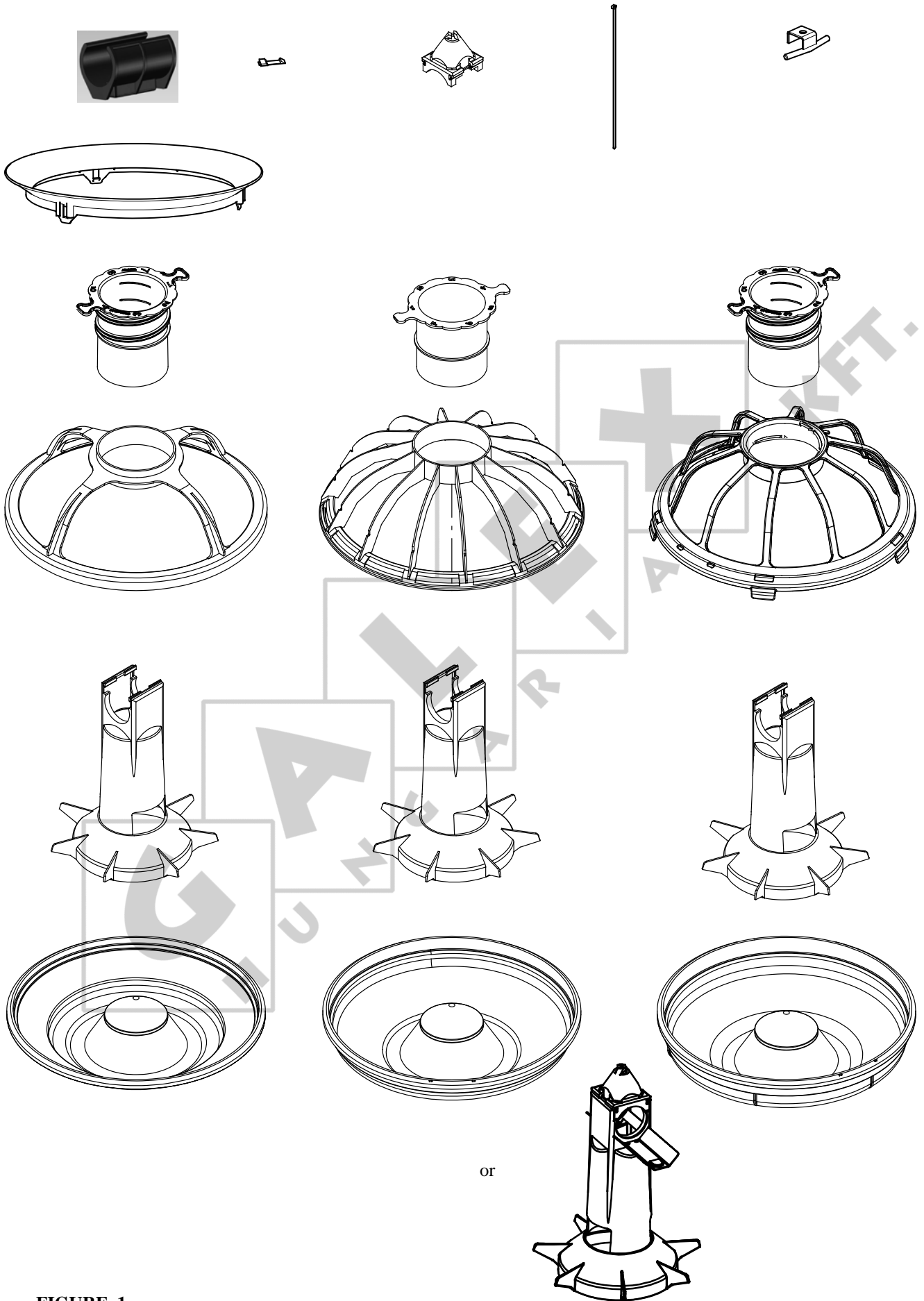
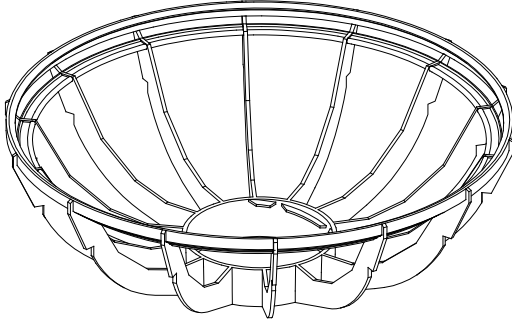


FIGURE 1.

Turn the grill on the adjuster ring.



Block the adjuster ring between 4 nails.

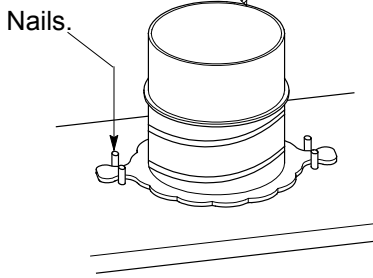
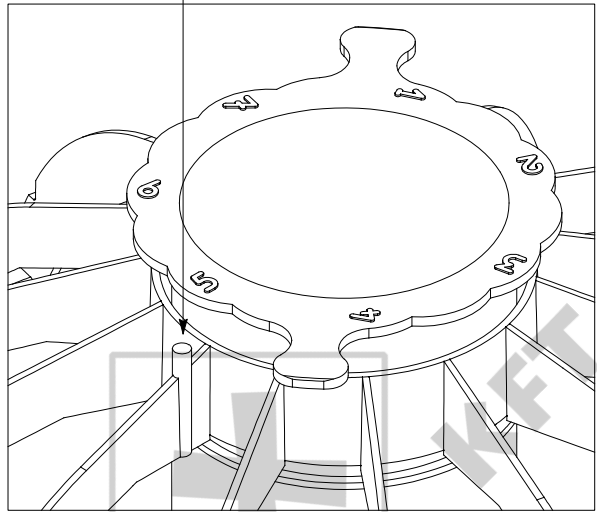


FIGURE 2.

Adjust the adjuster ring in the desired position. This position depends upon the kind of feed you use and the age of the animals.

Marker.



The figure on the adjuster ring opposite the marker determines the feed level.

FIGURE 3.

Slide the support cone into the grill with adjuster ring.

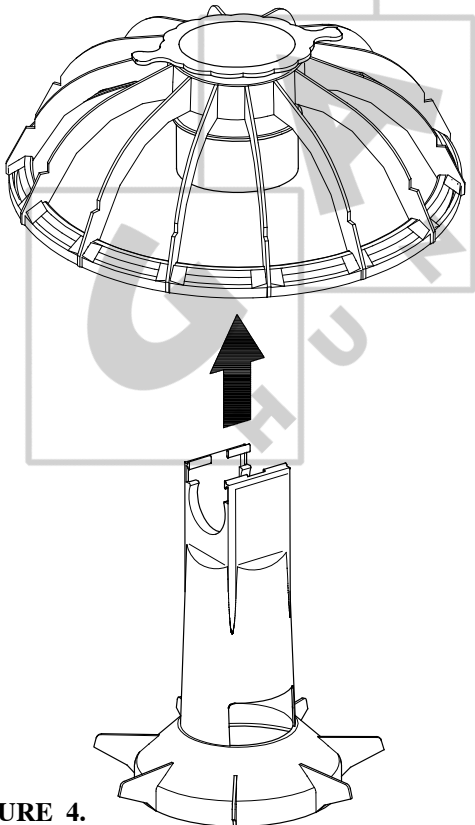


FIGURE 4.

Put the assembly below the drop hole in the tube.

Take care that both lips enter the support cone.

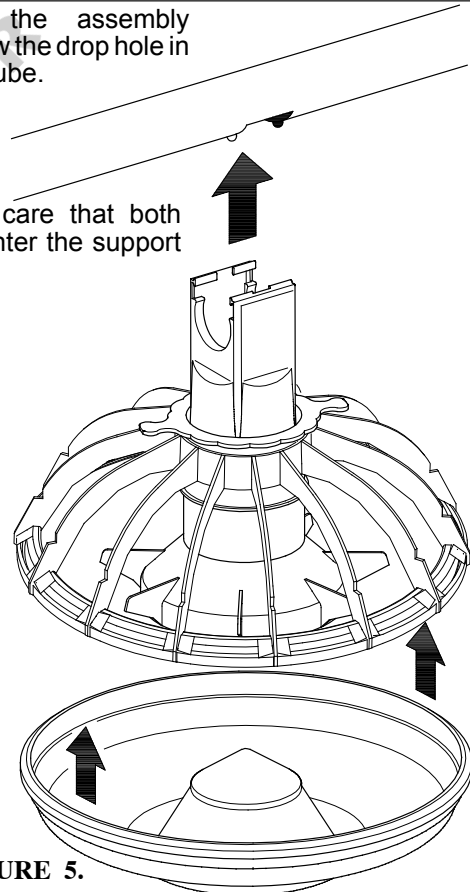


FIGURE 5.



Slide the top support over the assembly.

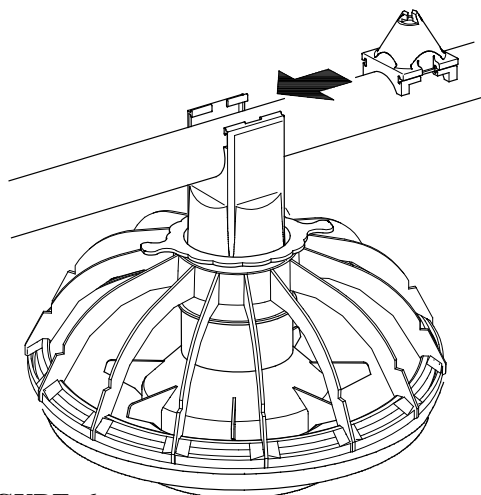


FIGURE 6.

MAKE A QUICK CHECK.

- is the pan free swinging
- does it shift on the tube
- is the top support well secured
- is the transition grill-pan edge smooth. Make sure that there are no gaps between the pan edge and the grill by firmly pressing the grill into position.
- are all windows completely opened and closed by the telescopic action of the pan unit

**TO REMOVE THE PAN**

You can remove the top support by PRESSING THE MIDDLE LIPS.

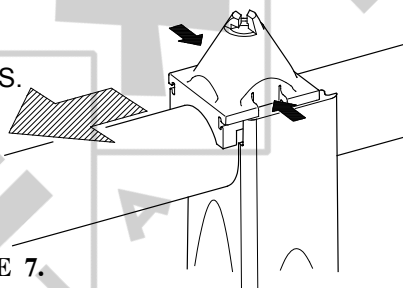
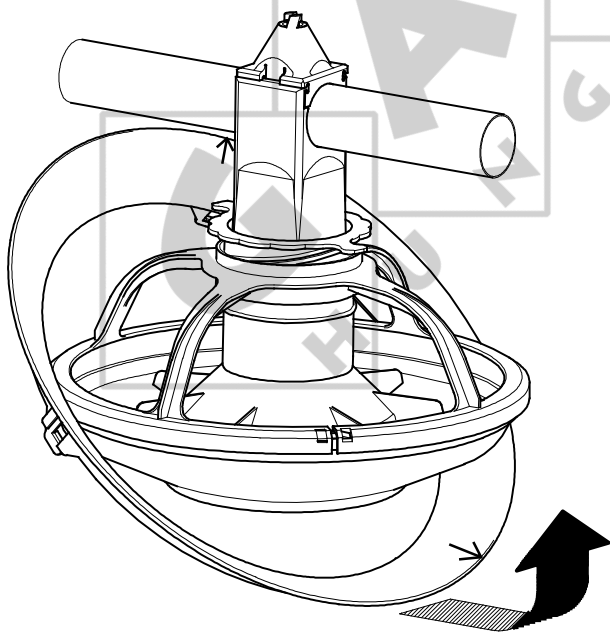


FIGURE 7.

**OPTIONAL :  
TO INSTALL THE ANTI WASTE COLLAR**



Pull anti-waste collar over the pan.

FIGURE 8.

Hook one of the clickfingers, marked with arrow at top of anti-waste collar (Figure 8.), behind the pan support edge.

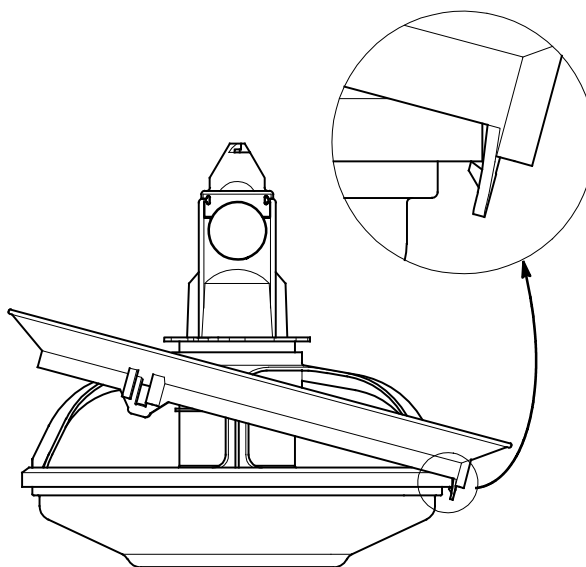


FIGURE 9.

With both hands, get hold of the upper edge of the anti-waste collar at the position of the 2 other clickfingers (arrows - see Figure 8.). **PAY ATTENTION TO THE CORRECT POSITION OF YOUR THUMB !!!** Click simultaneously.

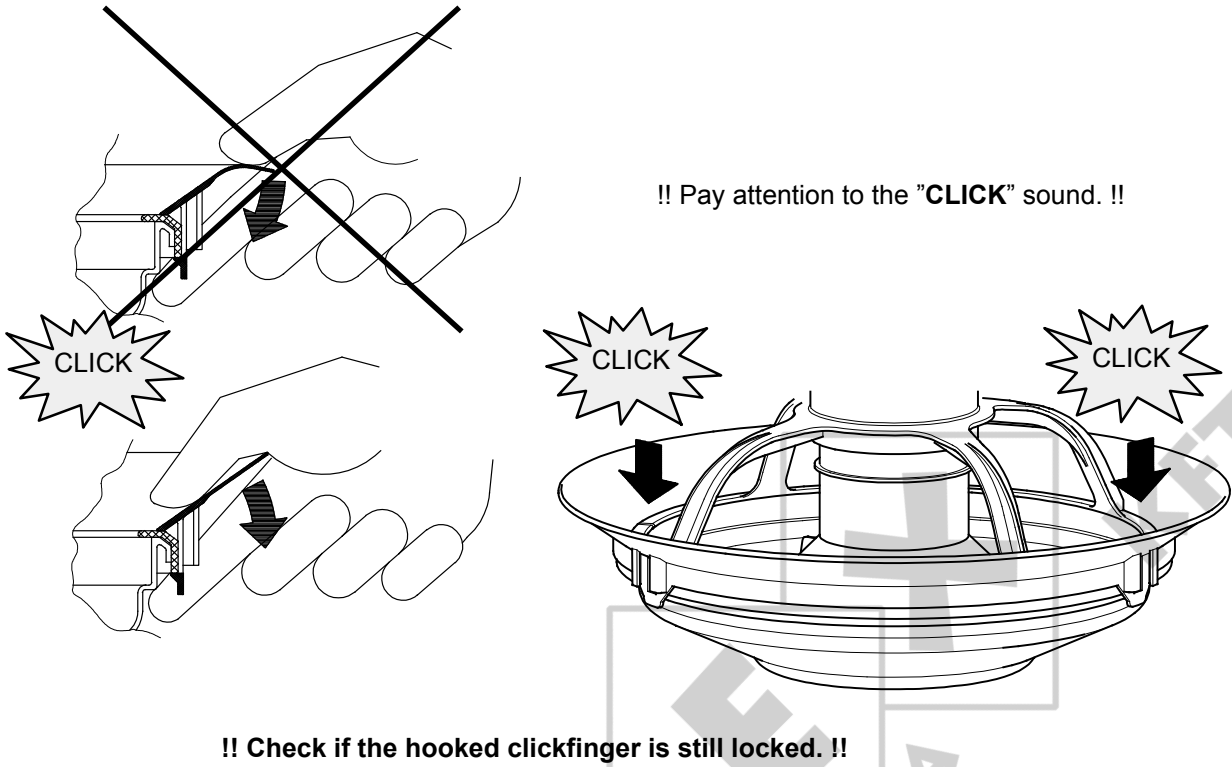


FIGURE 10.

**OPTIONAL : TO INSTALL THE SHUT-OFF-SHELL.**

Put shut-off-shell underneath the drop hole in the tube.

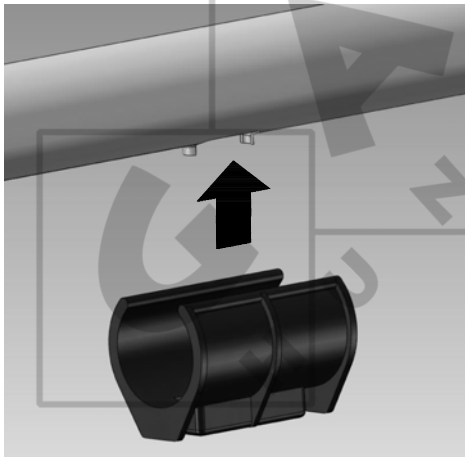


FIGURE 11.

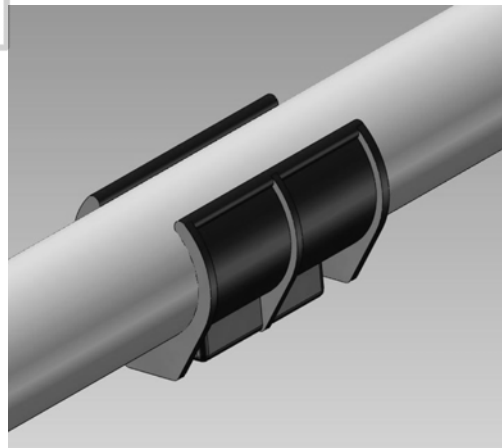
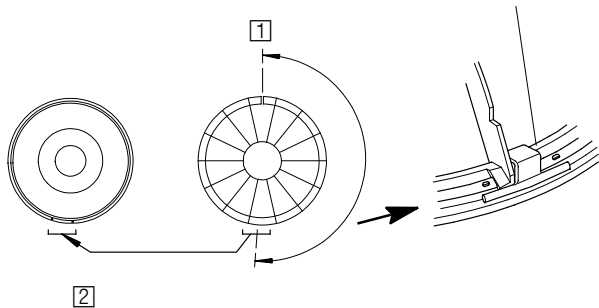


FIGURE 12.

### OPTION : INSTALLATION OF THE MINIMAX LINE HINGED PAN

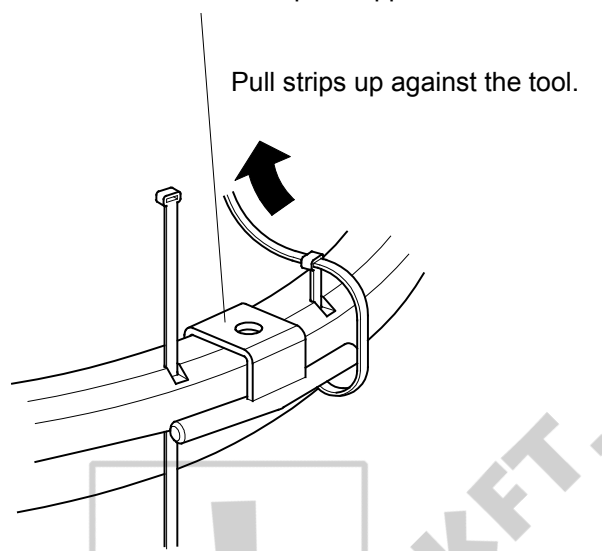
Tool for hinge joint Minimax Line.



Put the hinges [2] on the grill opening. [1]..

FIGURE 13.

Put the tool on the pan support.



Cut the surplus strips.

Remove the tool by pushing the strips aside.

FIGURE 14.

### OPTION : TO INSTALL THE GRILL LOCK

1. Put the locking hook through the hole in the grill.

Locking hook.

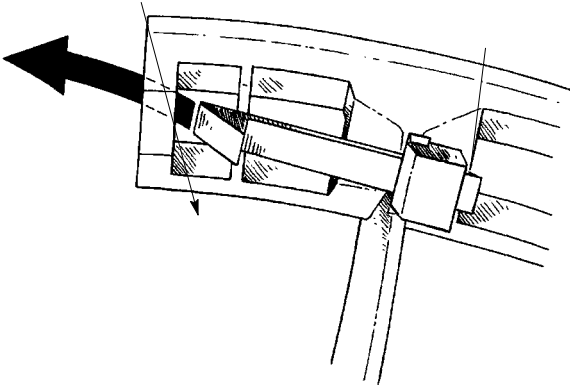
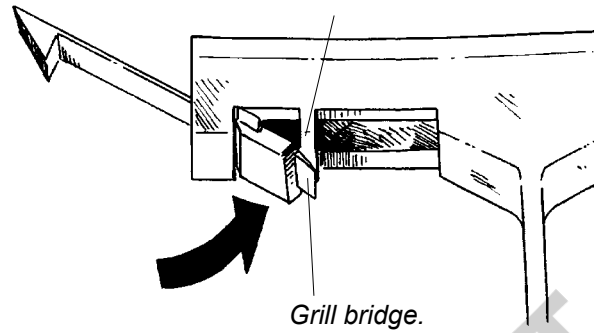


FIGURE 15.

2. Push the block of the locking hook in the hole of the grill.

Locking hook tab.



Grill bridge.

!Make sure the locking hook tab catches behind the grill bridge.

FIGURE 16.

3. Move the locking hook back and forth to keep the locking hook tab in place behind the grill bridge.

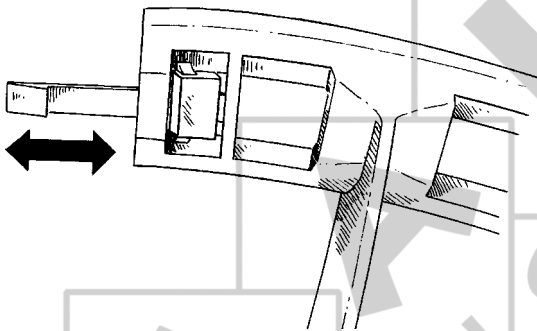


FIGURE 17.

4. To lock the grill : put the grill on the locking hook.

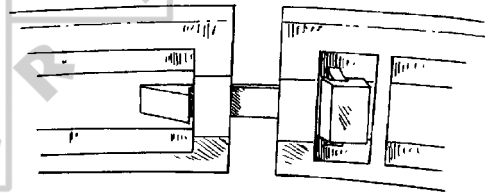
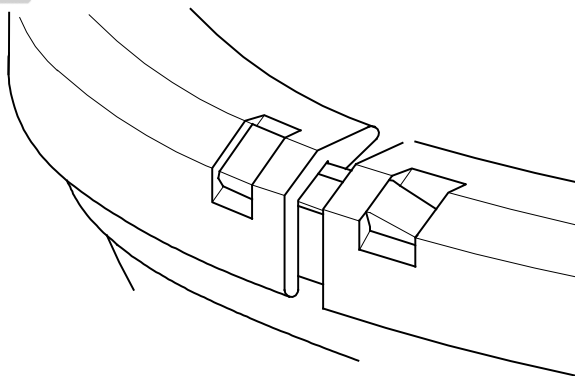
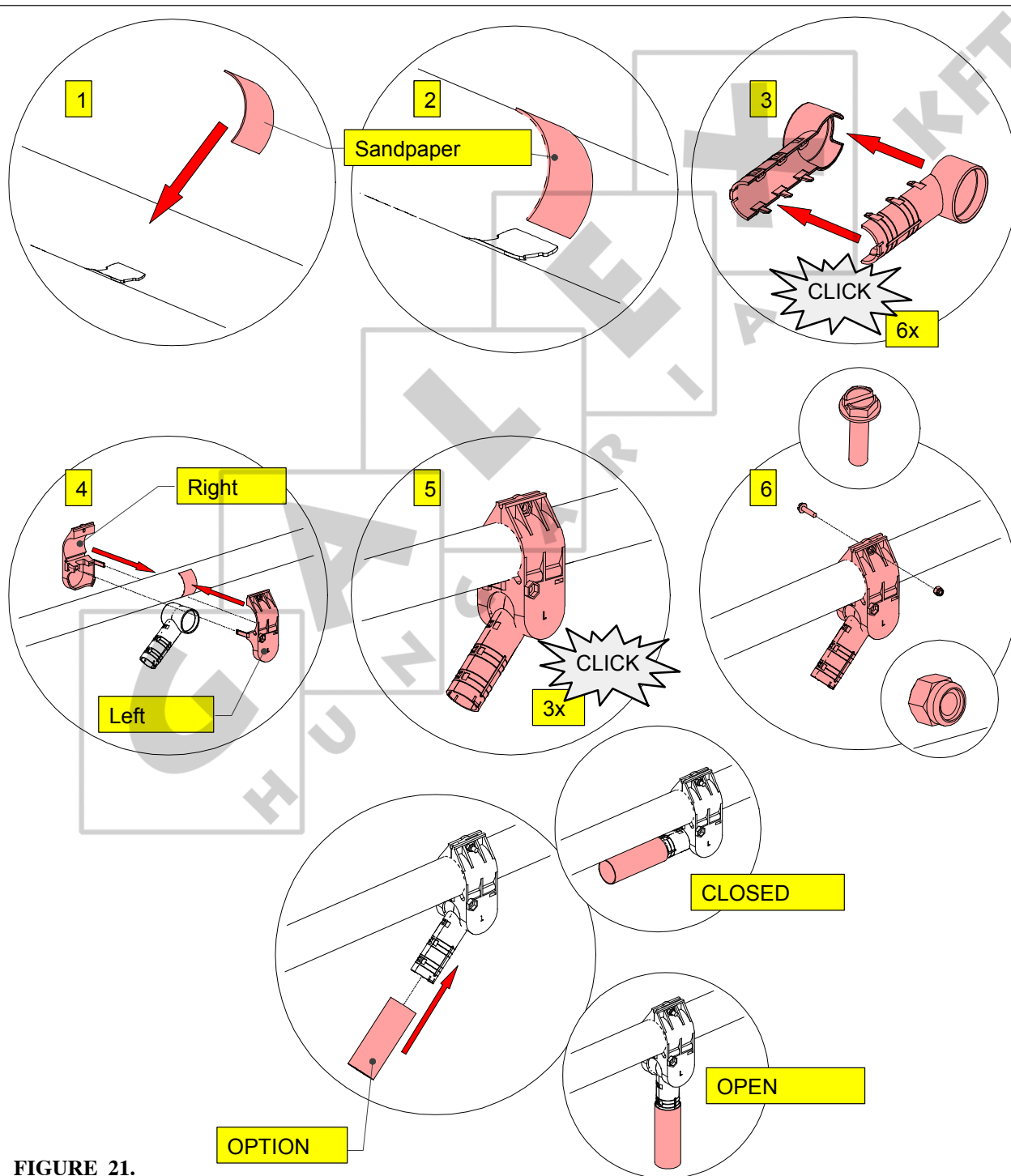
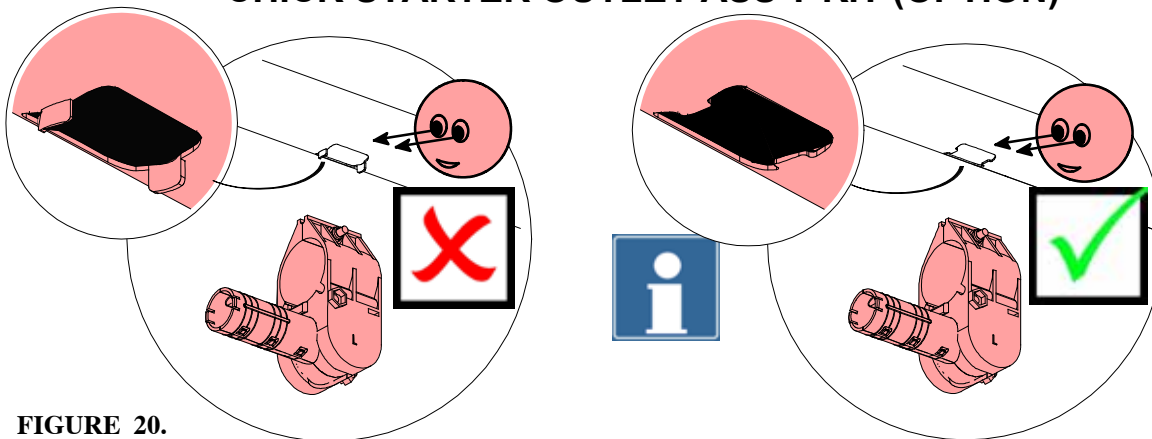


FIGURE 18.

FIGURE 19.



### CHICK STARTER OUTLET ASS'Y KIT (OPTION)



### TO INSTALL THE SHUT OFF SLIDE

#### FOR PARTIAL STARTING - REAR

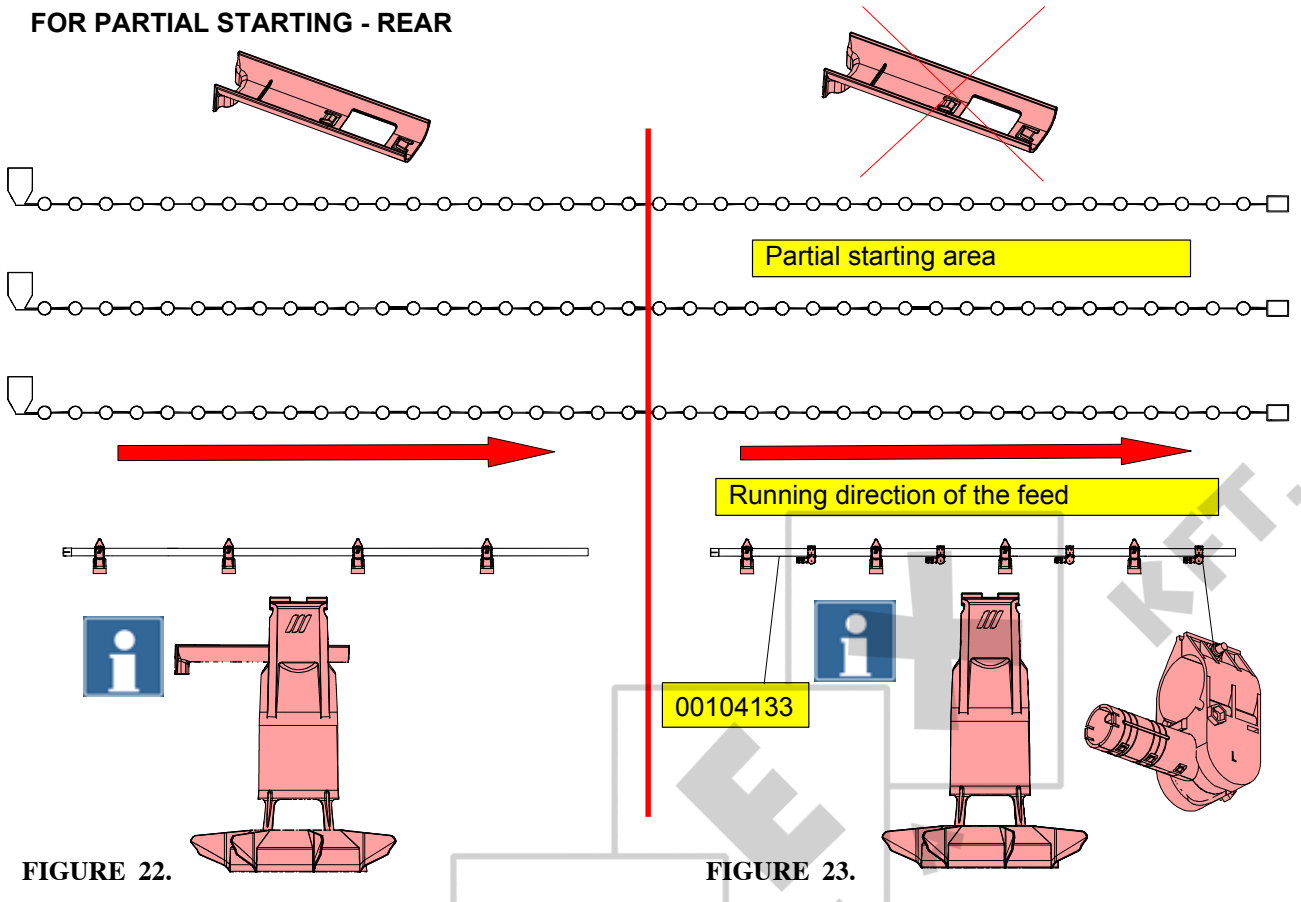


FIGURE 22.

FIGURE 23.

#### FOR PARTIAL STARTING - FRONT

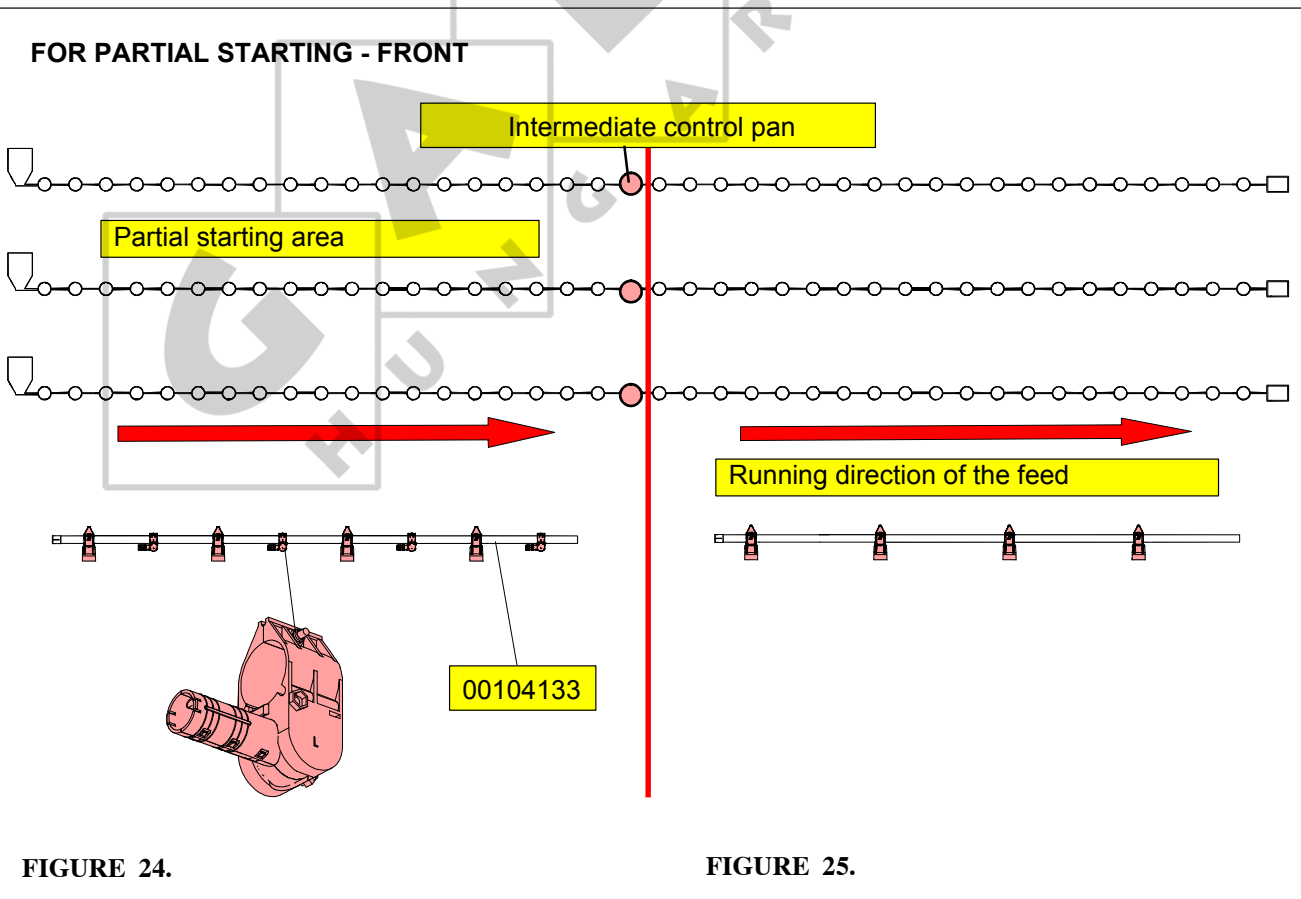


FIGURE 24.

FIGURE 25.

### TOTAL HOUSE BROODING

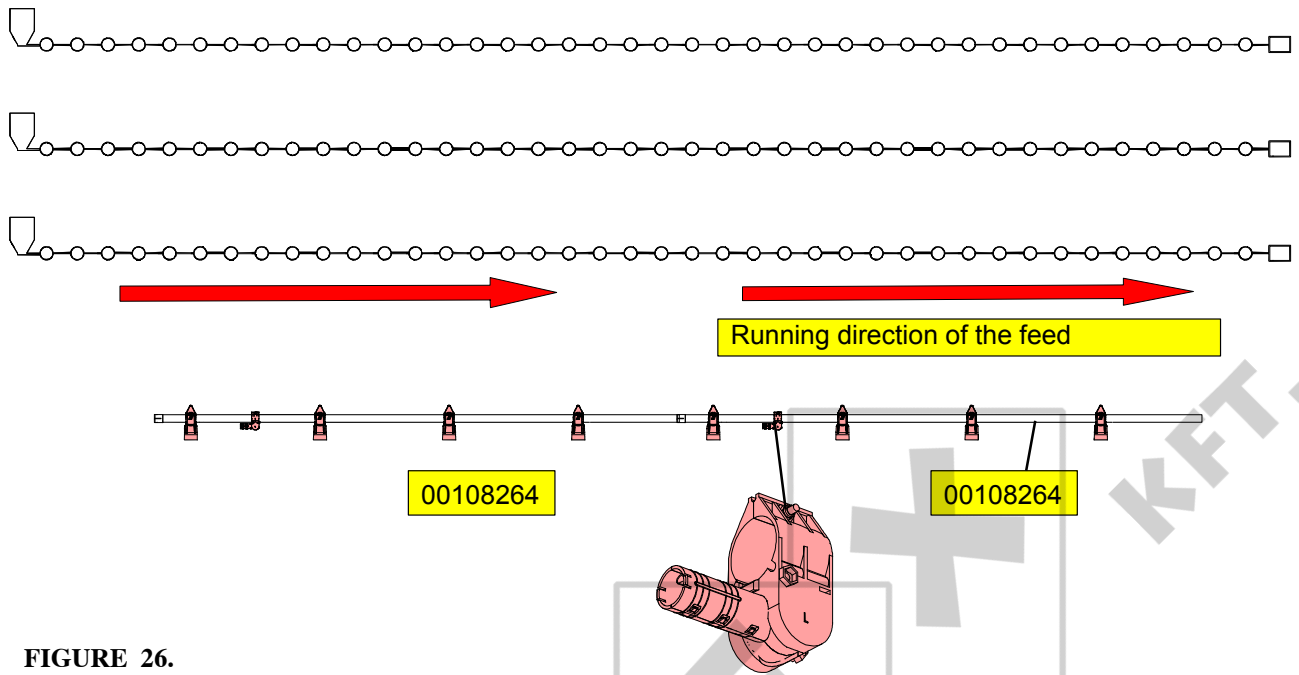


FIGURE 26.

### TO INSTALL THE FEEDER LINE

Put the tubes with the pans on the floor. Tube sockets pointed towards the 100kg hopper.  
 Slide a tube clamp over each socket.  
 Make a row at the spot where you will suspend the tubes.

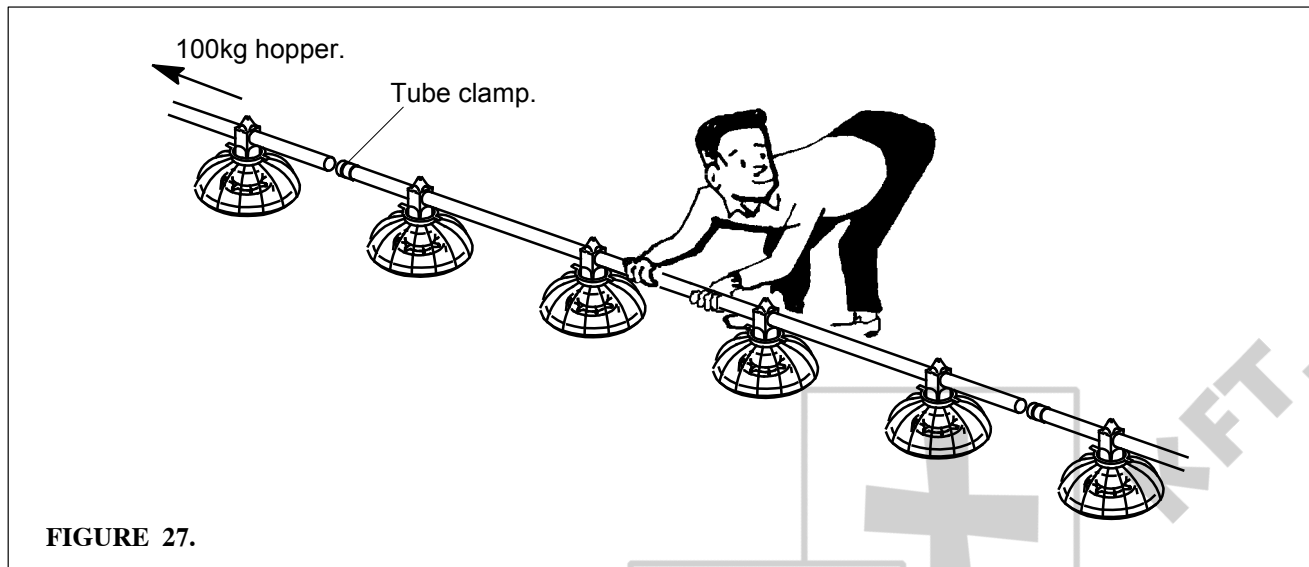


FIGURE 27.

Connect the tubes : push each tube as far as possible into the socket of the next tube.  
**ATTENTION** : All holes well aligned and pointing straight downwards ! (Welding seams upside.)

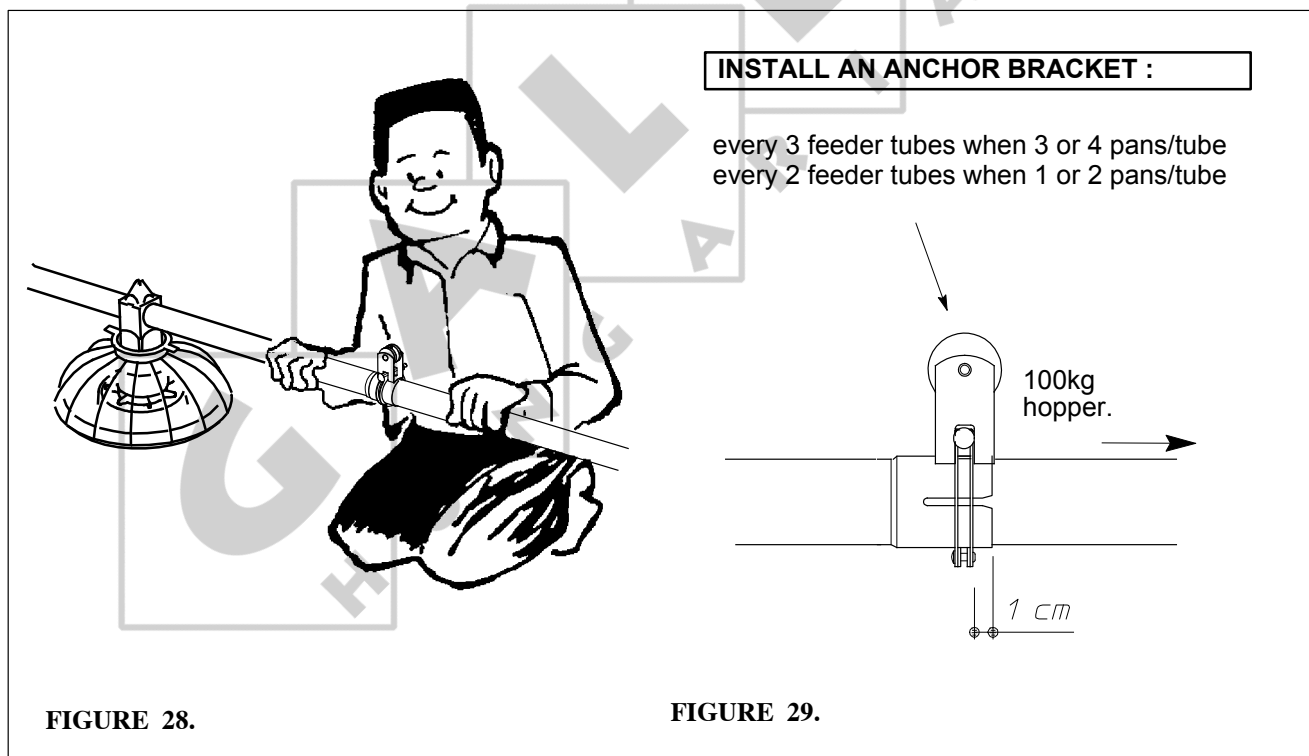


FIGURE 28.

FIGURE 29.

Firmly tighten all tube clamps (Min. 10Nm.). Do not deform the tubes. By connecting all tubes on the floor you automatically compensate for any unevenness of the floor.

**THIS IS VERY IMPORTANT FOR THE SIMULTANEOUS OPENING AND CLOSING OF ALL WINDOWS IN THE MINIMAX LINE PANS !**



## FEEDER LINE SUSPENSION

**THE SUSPENSION OF THE SYSTEM IS VERY IMPORTANT : IT MUST BE DONE CAREFULLY AND ACCURATELY ! CLOSELY STUDY THE INSTRUCTIONS BEFORE STARTING THE SUSPENSION.**

### SUSPENSION COMPONENTS

#### IN A WOODEN BEAM :

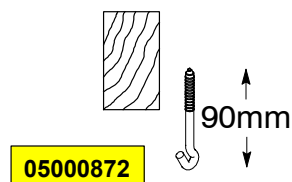


FIGURE 30.

#### WOOD : + INSULATION

Drill a small hole in HARD WOOD.  
This will prevent screw hooks from breaking off.

Use a drilling machine with our special driver for-screw hooks.

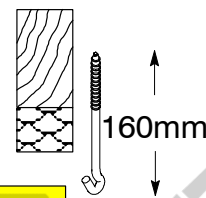


FIGURE 31.

#### IN A CONCRETE BEAM :

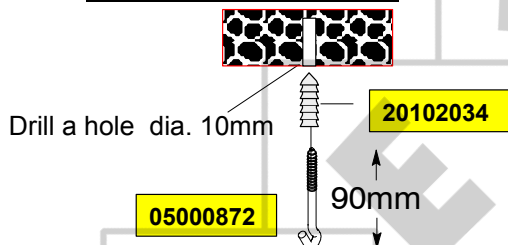


FIGURE 32.

#### IN A METAL GIRDER :

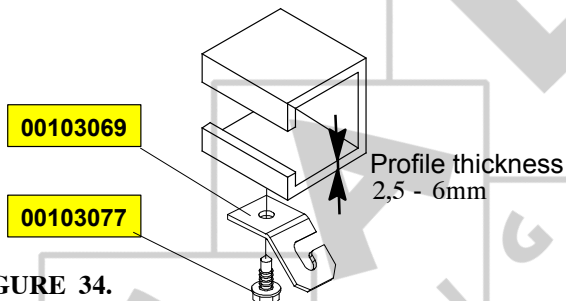


FIGURE 34.

#### IN METAL I GIRDER

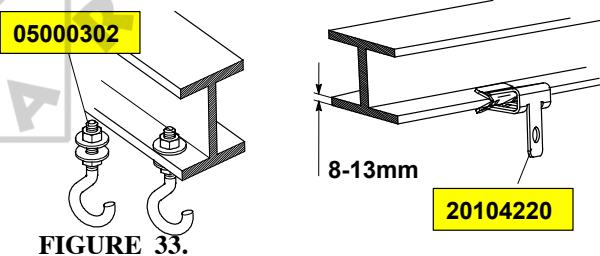


FIGURE 33.

#### OPTION FOR DUCKS :

- 05000484 - SCREW HOOK 90 MM STAINLESS STEEL
- 05000492 - SCREW HOOK 160 MM STAINLESS STEEL

**PROCEDURE :**

- First determine the position of the feeder lines.
- Then measure the distance from the wall to the first feeder line.
- Mark from this spot the suspension points on the ceiling over the whole length of the line.



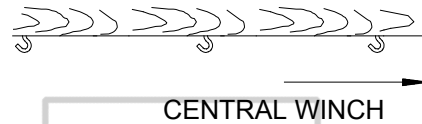
- EACH SUSPENSION POINT (SMALL PULLEY) SHOULD BE ABLE TO HOLD A LOAD OF 100KG .
- THE FIXING OF THE HEAVY DUTY PULLEY (100KG HOPPER) SHOULD BE ABLE TO HOLD 300KGS.

**DANGER**

**SUSPEND THE CONTROL UNIT AT LEAST 3M FROM THE HOUSE END WALL !**

Turn screw hooks every 3-3,5m into the girders of the roof on the marked line.

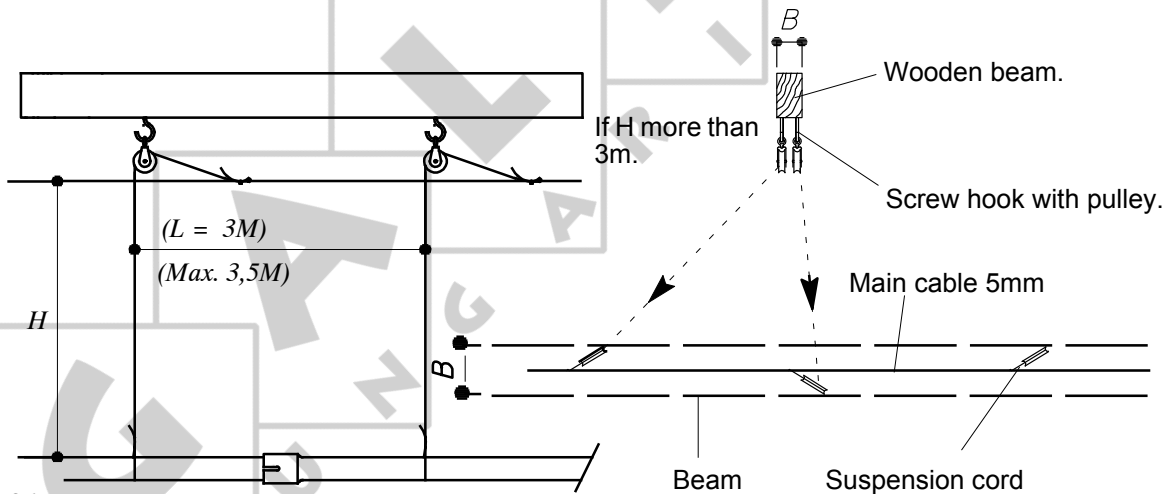
Screw hook openings point away from the central winch.



**MAKE SURE SUSPENSION POINTS ARE WELL ALIGNED !!!**

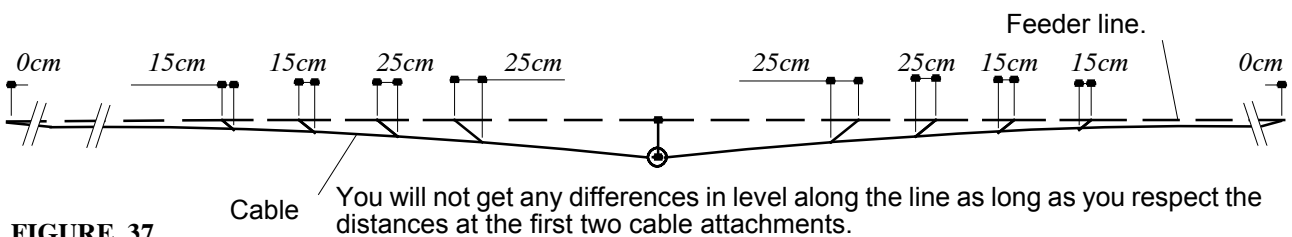
**FIGURE 35.**

If winching-up height (H) exceeds 3m, place suspension hooks crosswise off the beam center line. So the cable clamps will not touch the pulleys when you wind up the line.



**FIGURE 36.**

If lifting height is more than 3m, you can install the central winch somewhat out of line. So the pulleys will not touch the cable clamps. (Alternative system : see Fig. 36.)



**FIGURE 37.**

## CENTRAL WINCH INSTALLATION



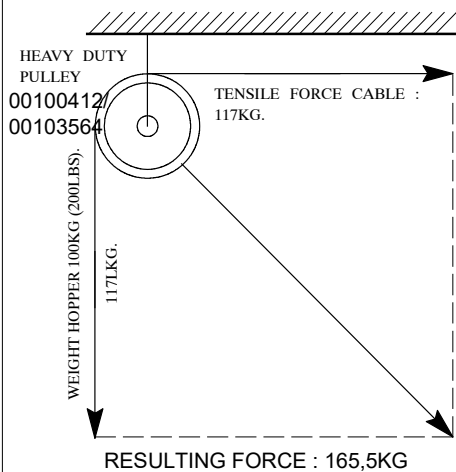
**DANGER**

**Important:** Install winch about in the middle, at the first fixation in the direction of the 100 kg hopper\*, not at the end of a line! Maximum lifting power: 800 kg.

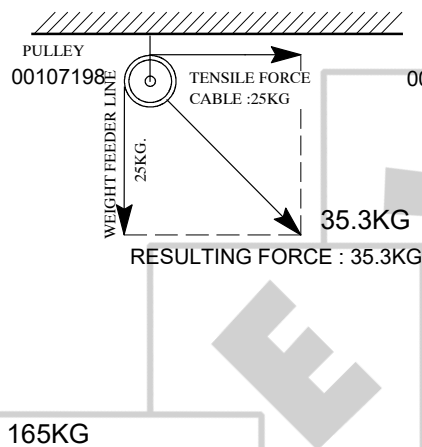
The traction of the winch is 800 kg. Install the winch at a solid spot in the roof construction. Reinforce when necessary.

\* You can easily determine the winch location by means of forces:

- On hopper suspension



- On standard pulley



- On power unit suspension

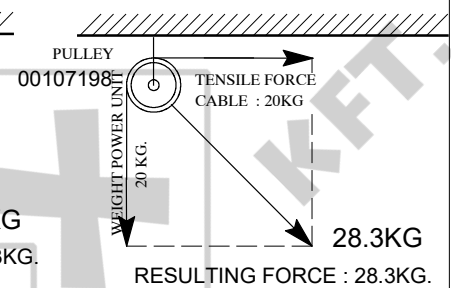
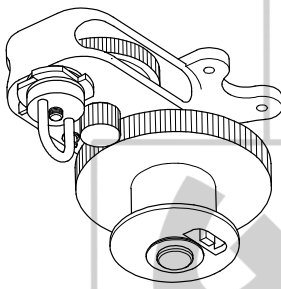


FIGURE 38.

= HAND-OPERATED CENTRAL WINCH.



Roxell supplies the hand operated winch without mounting plate and bolts/nuts.

Fix the winch directly to a SOLID CEILING.

If you want to use a mounting plate: see drawing. You can install plate & winch in any direction.

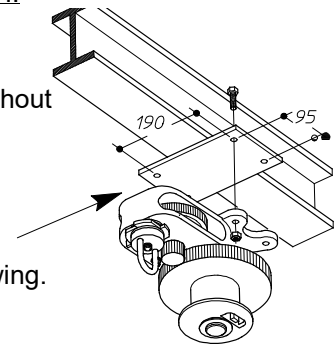
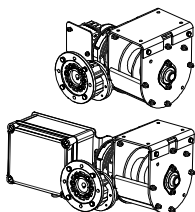


FIGURE 39.

Winching up speed : 1 m/minute.



= CENTRAL WINCH W/GEARBOX (MOTOR OPERATED), supplied with MOUNTING PLATE.



Install the motor after finishing the installation.

Fix this plate to the ceilings before the insulation. Pay attention to the correct direction.

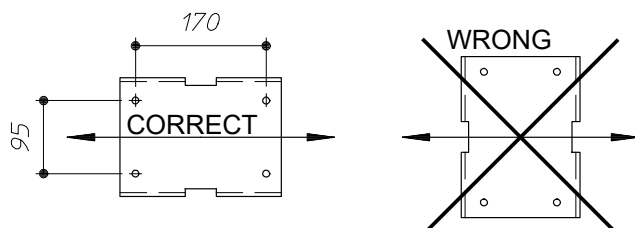


FIGURE 40.

Fix the winch to the plate with bolts and locknuts.

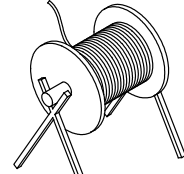
## TO INSTALL THE MAIN CABLE

**CONSIDER THE DOUBLE DIVERSION !! ONLY THEN INSTALL THE CABLE. YOU CAN HANG THE MAIN CABLE IN THE SCREW HOOKS FOR THE TIME BEING.**



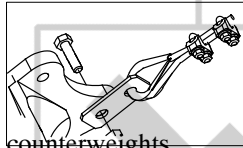
**DANGER**

- Start at the end of the circuit.
- Hang the roll of cable in a support to prevent torsion when unrolling the cable.
- Pull the cable through the first pulley.
- Unroll the cable towards the winch until you have the required length.

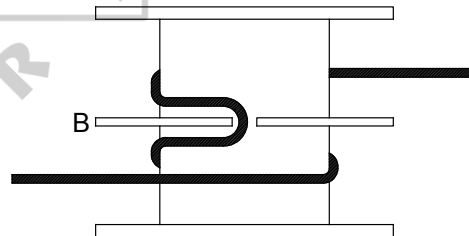
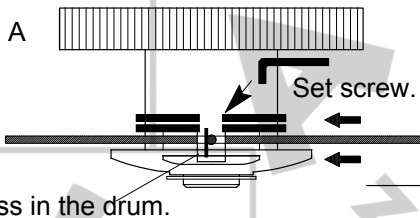


Pull the main cable through the bottom hole of the drum.

- **Always** connect the main cable with **two** cable clamps.
- Hook the cable over the recess in the drum (if necessary use a screw driver and a light hammer).
- Fix the cable with a set screw. See that you **do not damage** the cable by tightening too much.
- Make **4 full turns** on the drum, guide the cable against the drum flange and make sure that windings touch each other.
- **Always** fix the main cable with **two** cable clamps.
- Stretch the main cable by using counterweights (e.g. : power units).



- Guide the main cable through the winch.
- Hook the cable on the drum flange.
- Make **4 full turns** on the drum, guide the cable against the drum flange and make sure that windings touch each other.



**FIGURE 41.** - Now you can start the complete suspension of the system

**AFTER INSTALLING THE SUSPENSION CABLES, MAKE SURE THAT THE CABLE RUNS ALONGSIDE (NOT THROUGH) THE SCREW HOOKS AND THE PULLEYS. THE MAIN CABLE RUNS ONLY THROUGH THE HEAVY DUTY PULLEYS AND THE PULLEYS AT BOTH ENDS OF THE CIRCUIT.**

SINGLE DIVERSION

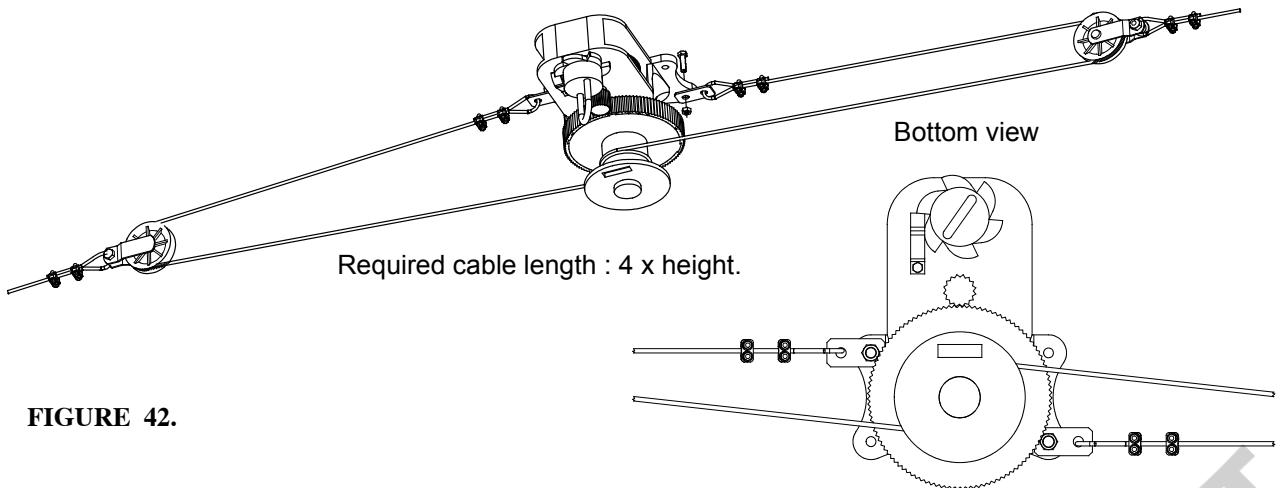


FIGURE 42.

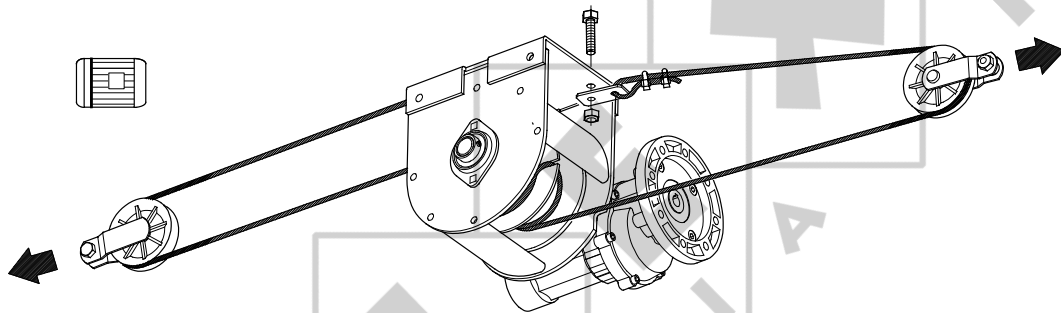


FIGURE 43.

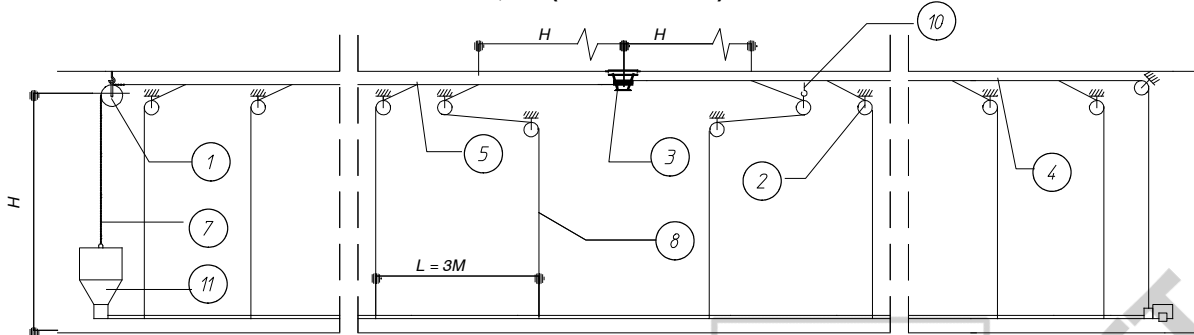
## DRAWINGS OF SUSPENSION SYSTEM WITH CENTRAL WINCH



**DANGER**

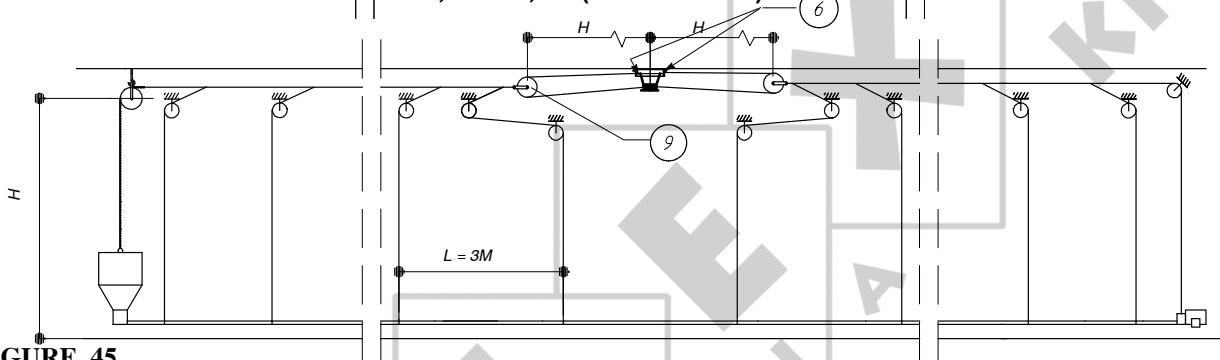
**FOR YOUR SAFETY : NEVER MAKE THE INSTALLATIONS LONGER THAN THE RECOMMENDED LENGTH.**

**31 - 85,9M (MAX. 300KG)**



**FIGURE 44.**

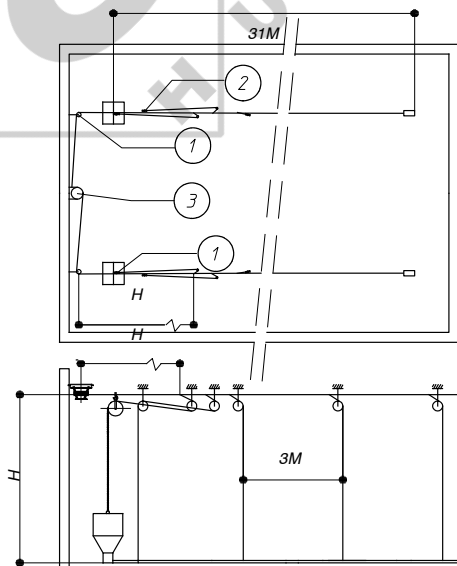
**85,9 - 165,3M (MAX. 523KG.)**



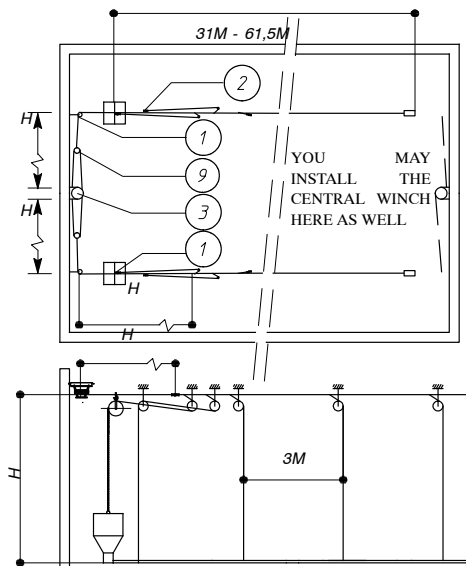
**FIGURE 45.**

Key	Part Nr.	St.st.	Name	Key	Part Nr.	St.st.	Name
1	00100412	00103564	HEAVY DUTY PULLEY	7	00100750	00103606	CHAIN DIAM. 3,5MM
2	00104349	00104349	SMALL PULLEY WITH STAINLESS STEEL HOOK	8	00100610	-	SUSPENSION CORD
3	00102368	-	HAND OPERATED CENTRAL WINCH	9	00100420	-	SINGLE EYE PULLEY
4	00100388	00101924	CABLE DIAM. 5 mm	10	05000872	05000484	SCREW HOOK 90MM
5	00100545	11015211	CABLE CLAMP NR. 5 (4mm St. St.)	11	00100602	00103630	100KG HOPPER
6	00102699	-	CABLE CONNECTION SET	OPTION FOR DUCKS :			

## TWO SHORT FEEDER LINES WITH ONE CENTRAL WINCH



**FIGURE 46.**

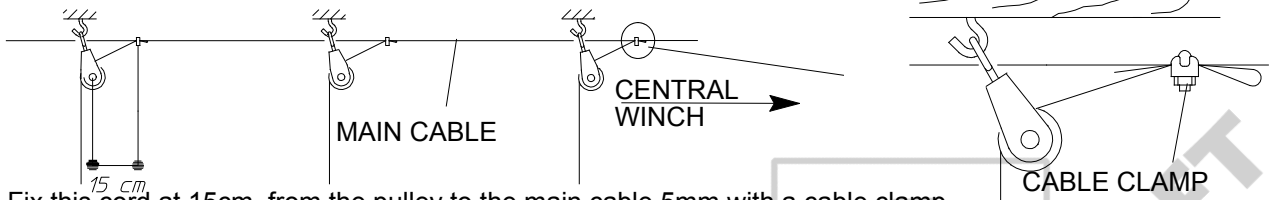


**FIGURE 47.**

## LINE SUSPENSION

**MAKE SURE THAT THE MAIN CABLE 5mm DOES NOT HANG IN, BUT BESIDE THE SCREW HOOKS AND PULLEYS !**

Hang a **SMALL PULLEY** on each **SCREW HOOK**.  
Slide a piece of suspension cord through each pulley (towards the central winch)



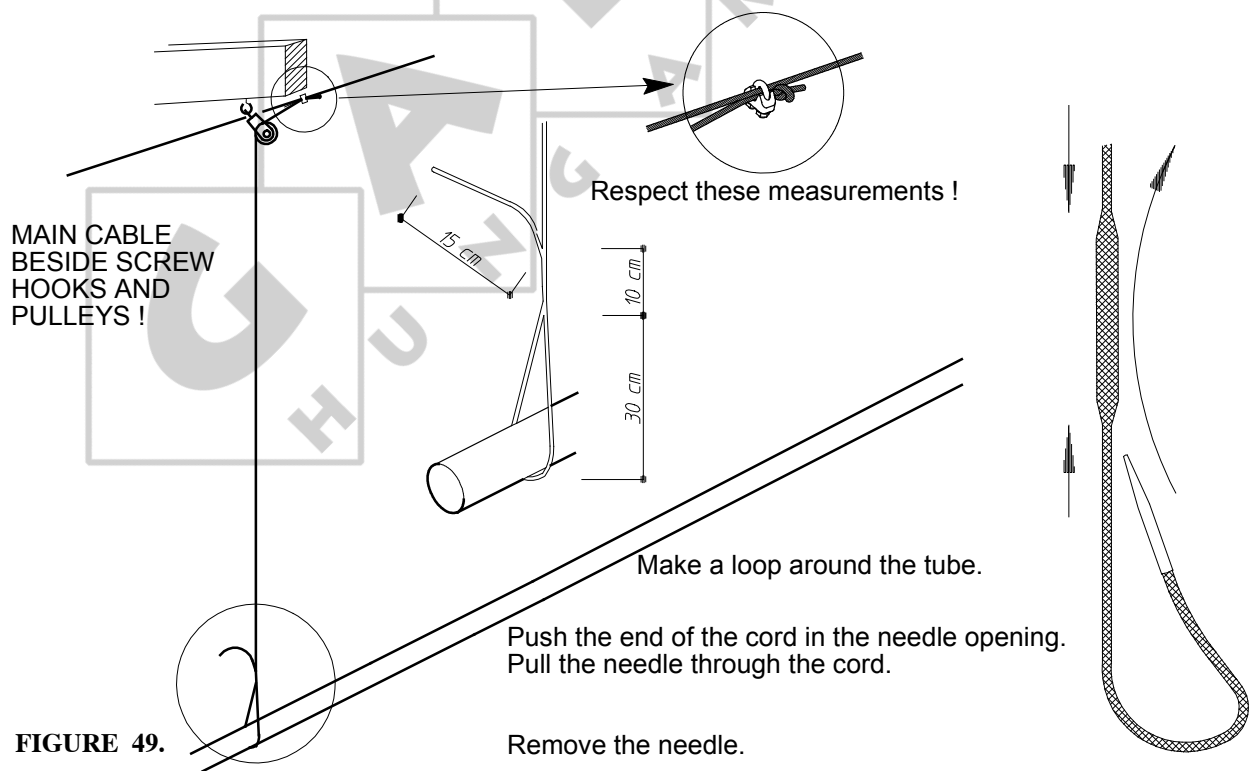
Fix this cord at 15cm from the pulley to the main cable 5mm with a cable clamp.

**FIGURE 48.**

Start suspending from the central winch. Proceed to both ends until the whole feeder line is suspended. Determine the length of cord to be cut as follows :

- pull the cord downward under slight tension until it touches the tube.
- add 55cm.

**CUT BY MEANS OF A SOLDERING IRON OR AN ELECTRICALLY HEATED KNIFE.**



**FIGURE 49.**

**REMARK : AFTER INSTALLATION OF THE PANS, WHEN THE LINE HANGS LEVEL, YOU CAN INSERT THE CORD END BACK INTO THE CORD. THIS ADDS TO THE HEIGHT THE LINE CAN BE RAISED AND ALLOWS A NEATER FINISH.**

**OPTIONAL :**

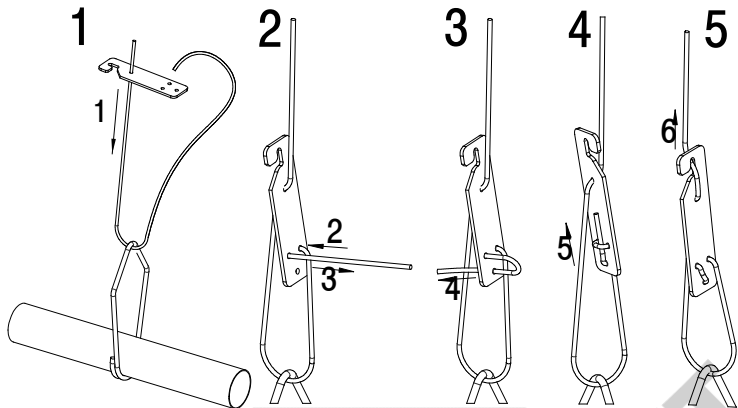
As an option, you can suspend the line with cable 3/32 "ST.ST." (00106887/250M - 00106895/500M /00402586).

Determine the length of cable to be cut as follows :

- pull the cable downward under slight tension until it touches the tube.
- Add 10cm.
- Cut here.

Fix the suspension cable as follows :

**TO START, SUSPEND ALL CABLES UNDER SLIGHT TENSION.**



**FIGURE 50.**

**TO INSTALL THE CONTROL UNIT AND THE MOTOR**

1. Fix the gearmotor to the mounting plate with the 4 bolts supplied.

2. Install the upper part with motor on the lower part of the control unit.

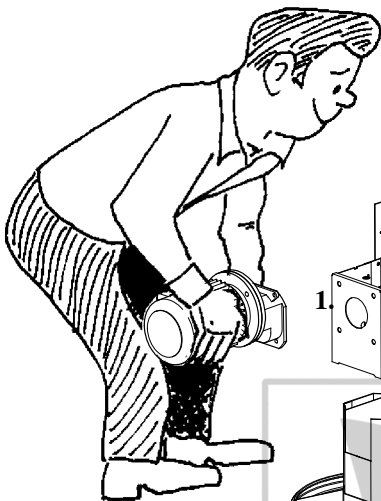
3. Put the socket cap screw in the correct groove as indicated

4. Slide the tube clamp ass'y with anchor bracket on the end sleeve of the control unit.

5. Push the expanded end as far as possible on the end tube. All drop holes must point straight downwards.

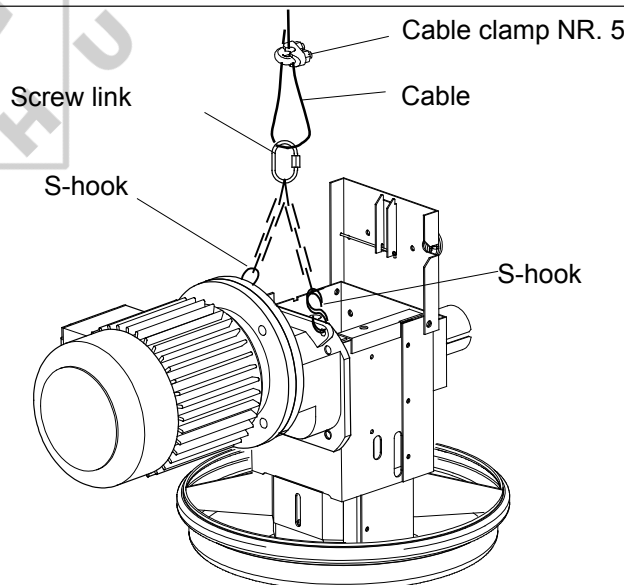
6. Tighten the tube clamp.

7. Leave the cover open



**FIGURE 51.**

**POWER UNIT SUSPENSION**



**FIGURE 52.**



## TO INSTALL AND SUSPEND THE 100KG HOPPER

Install the feed intake boot at the opposite end of the line.



Hopper hook.

Chain 3,5mm.

Install hopper cover lock.

Install hopper cover lock.

FIGURE 53.

Roxell supplies the 100Kg hopper unassembled.

Install as shown on page II-14.



**DANGER**

FIGURE 54.

Decal in front

After suspending the hopper : fix it to the feed intake boot with a clamp, hook and spring cotter.

FIGURE 57.

### HEIGHT ADJUSTMENT OF THE 100KG HOPPER

- 1 Pull chain backwards.

↑ winch up  
or  
↓ descend

the hopper to the desired height

- 2 Disengage the chain. It is locked while dropping into the slot.
- 3 Pull the chain through the hopper hook.

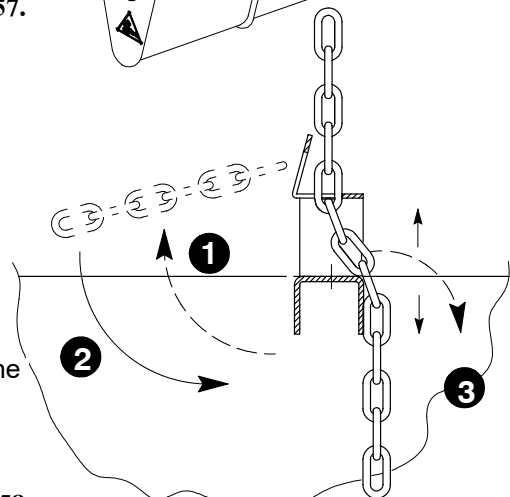
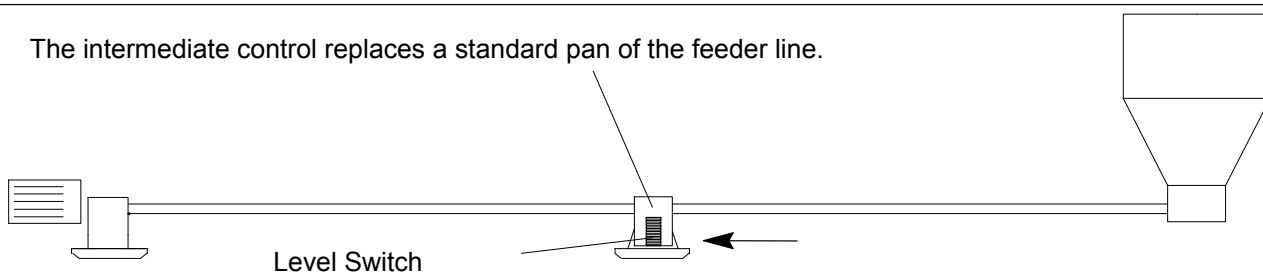


FIGURE 58.

## TO INSTALL THE INTERMEDIATE CONTROL

**INSTALL THE INTERMEDIATE CONTROL W/LEVEL SWITCH POINTING TOWARDS THE 100KG HOPPER.**

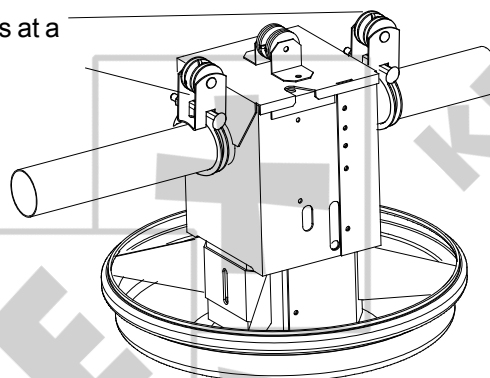
The intermediate control replaces a standard pan of the feeder line.



**FIGURE 57.**

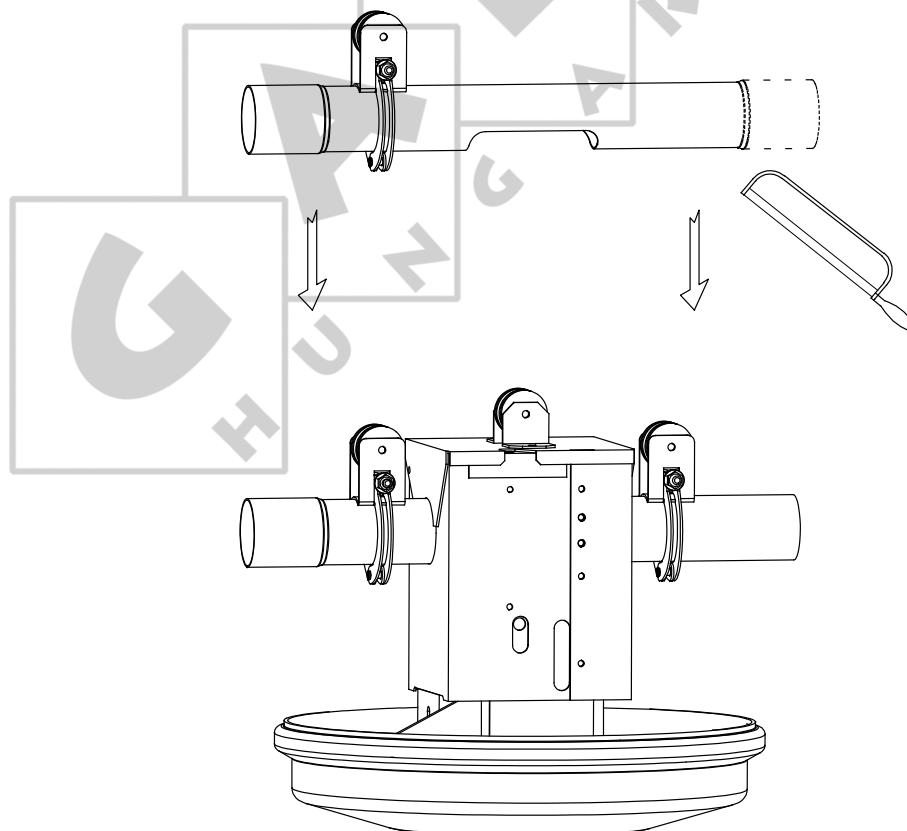
Install an anchor bracket on both sides at a distance of about 1cm.

These brackets prevent moving and excessive swinging of the pan.



**FIGURE 58.**

## TO INSTALL THE TUBE WITH HOLE



**FIGURE 59.**

## TO INSTALL THE AUGER



**DANGER**

**ALWAYS USE SAFETY GLOVES WHEN YOU WORK ON THE AUGER !**

Remove all wires, labels etc... from the auger.



**TAKE CARE THAT THE AUGER DOES NOT UNROLL !**

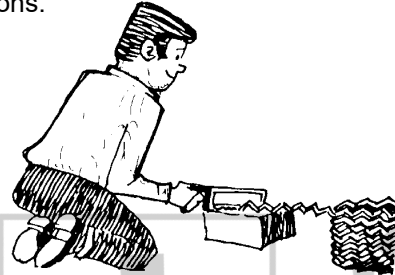
**DANGER**



If the auger is kinked or bent: straighten it by plying it over the upper leg.

**FIGURE 60.**

If you can't straighten the auger, cut out the kinked part. Then braise the auger according to our instructions.



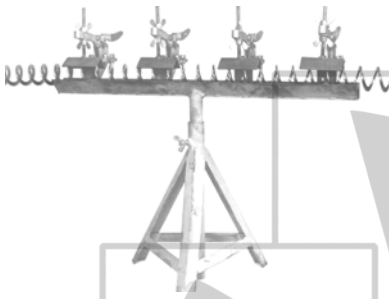
**! KINKS OR DENTS WEAR OUT THE TUBES !**

**FIGURE 61.**

Firmly clamp the auger in an angle or channel iron.

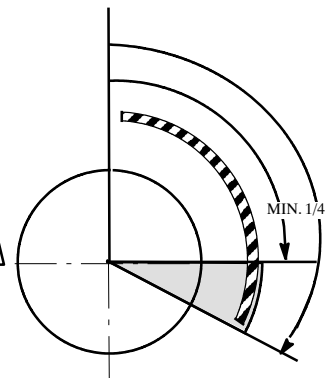
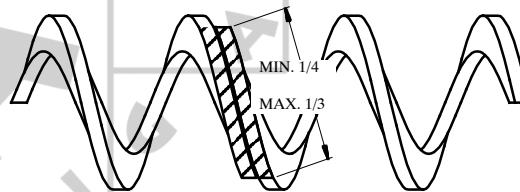
### **AUGER BRAZING**

Always use hard solder. We recommend a bronze, flux-coated rod. The joint must be well filled. Avoid sharp edges or rough corners : these wear out the tubes. Braze at low temperature.



### Weld length.

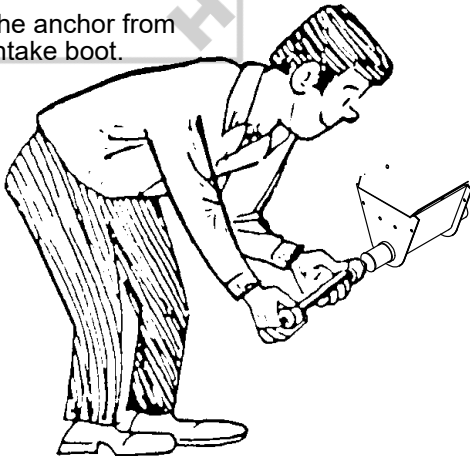
Min.  $\frac{1}{4}$  of the auger circumference, up to  
Max.  $\frac{1}{3}$  of the auger circumference.



Allow the joint to air cool. Rapid cooling makes the joint brittle and breakable.

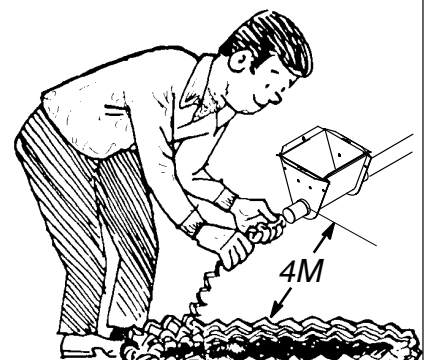
**FIGURE 62.**

Remove the anchor from the feed intake boot.



**FIGURE 63.**

Put the auger coil about 4m from the feed intake boot. Gradually unroll while giving short pushes to slide the auger into the tube.



**FIGURE 64.**

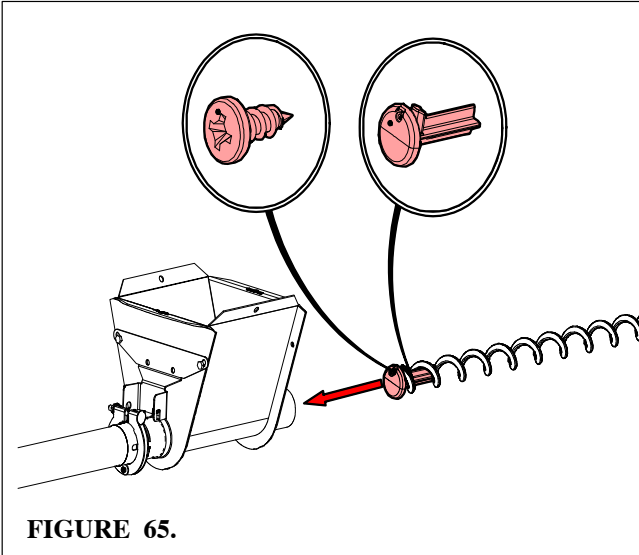


FIGURE 65.

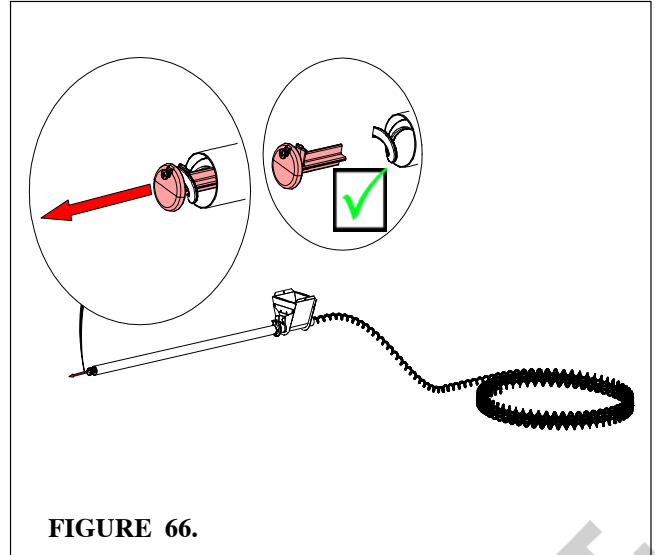


FIGURE 66.

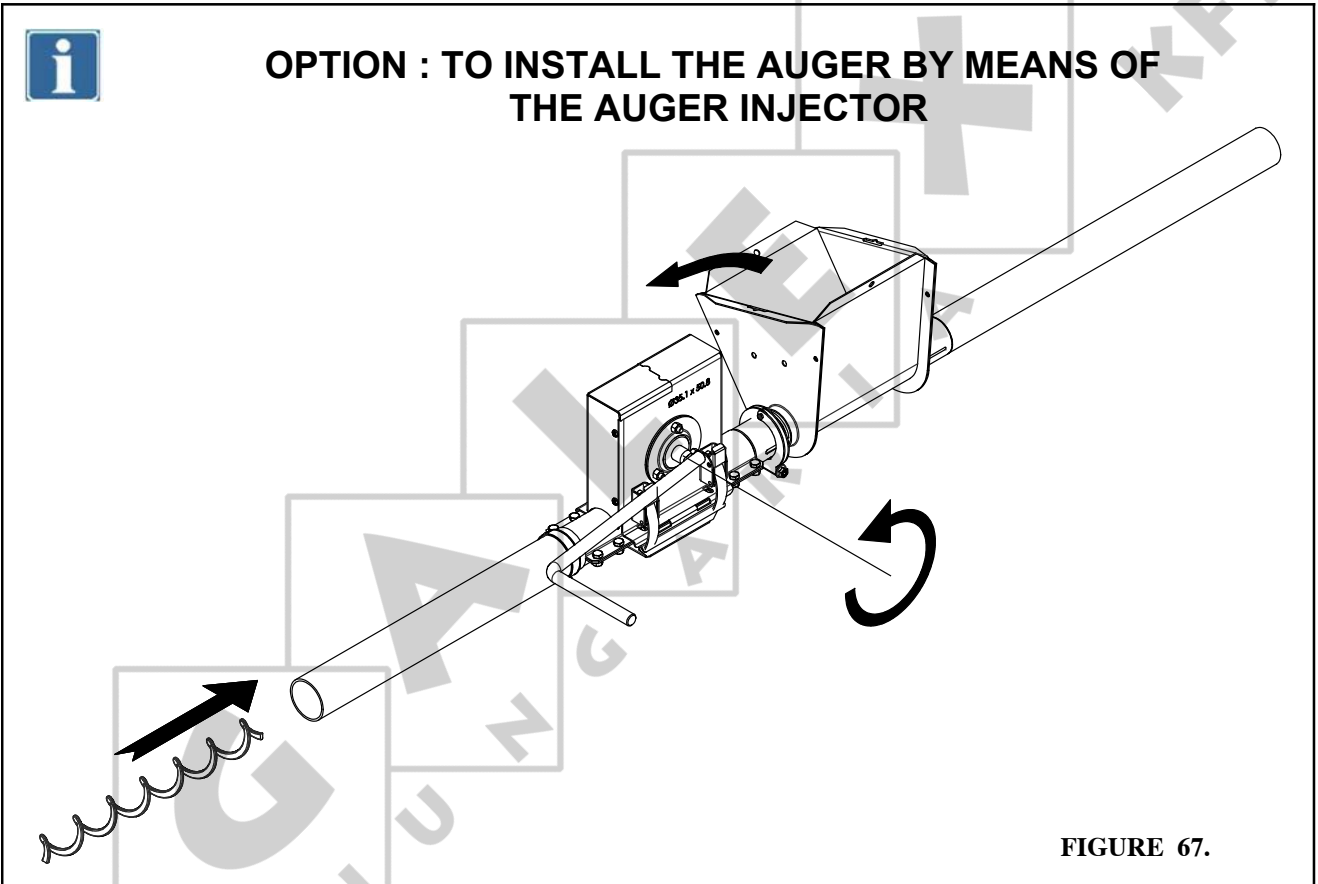


FIGURE 67.

Fix the auger to the drive shaft of the gearhead with the drive block.

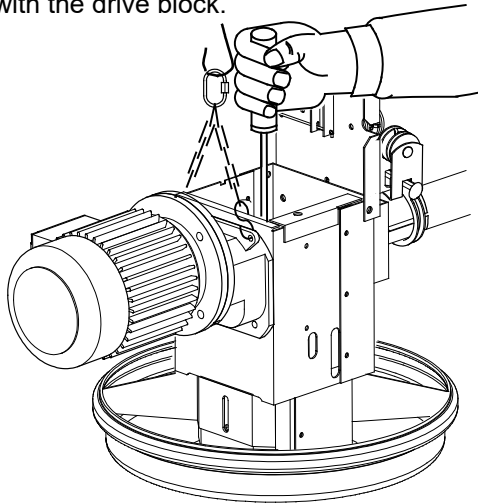


FIGURE 68.

Clamp the auger under the drive block.

Put the thin edge towards the gearbox.

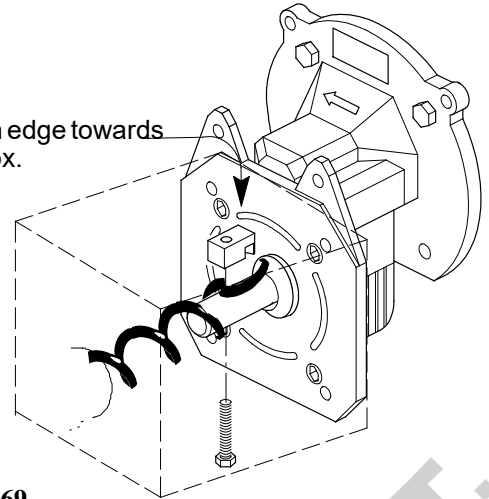


FIGURE 69.



**DANGER**

Tighten the bolt with a spanner, so that it cannot be twisted off by hand!

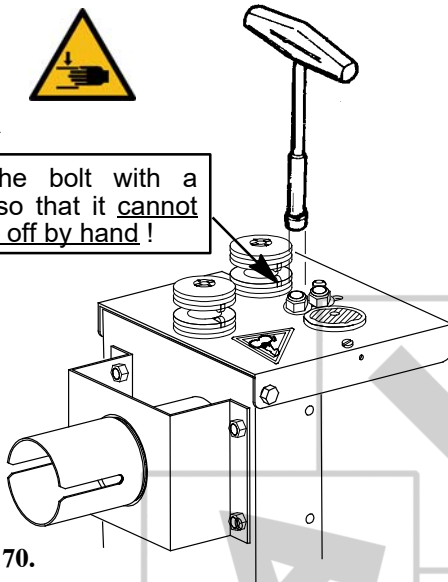


FIGURE 70.

Pull the auger until it stretches, then let it relax. Mark the auger at the edge of the feed intake boot.

Feed intake boot.

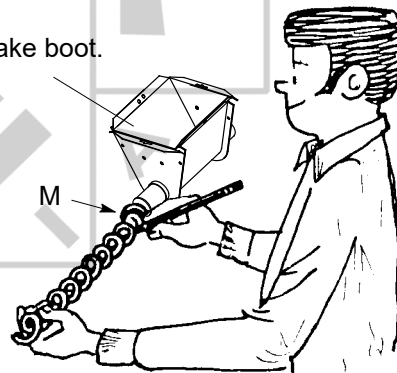


FIGURE 71.

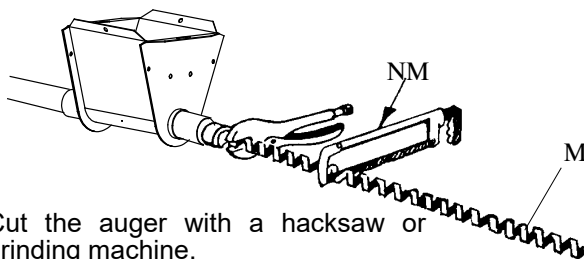


**DANGER**

**ALWAYS SEE THAT THE AUGER CANNOT SPRING BACK (BY USING CLAMPS) WHEN YOU PUT IT UNDER TENSION.**

Stretch the auger 1,7cm per 3m tube. Measure the required stretch from Mark M to the feed intake boot. Here you put a new mark NM

Now put a pliers past this mark NM. Let the auger slide back into the tube until the pliers rest against the feed intake boot.



Cut the auger with a hacksaw or grinding machine.

FIGURE 72.

Slide the anchor into the auger until the auger touches the anchor end.

Firmly tighten the set screw in the middle of the anchor, so it will expand and clamp the auger.

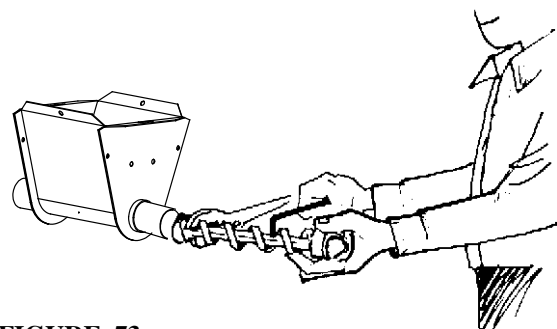


FIGURE 73.

Slide the auger slowly back into the tube. Reinstall the bearing holder and fix with a tube clamp.

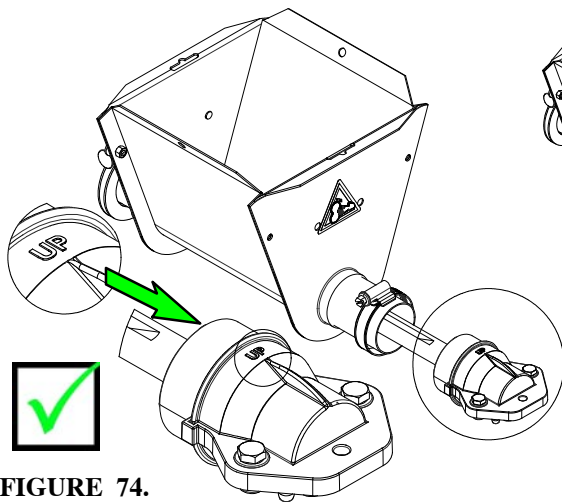
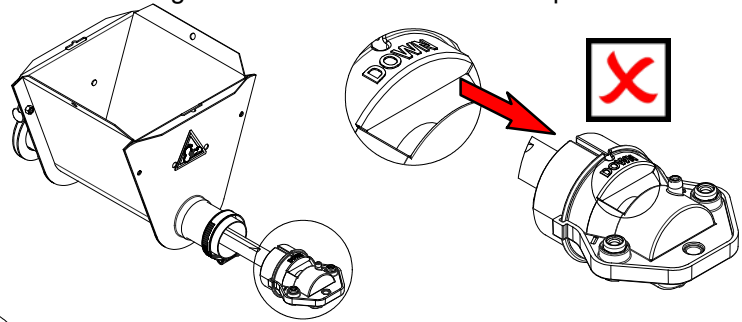


FIGURE 74.



Cautiously slide the cannon ball dia. 75mm (option - if ordered) into the feed intake boot.

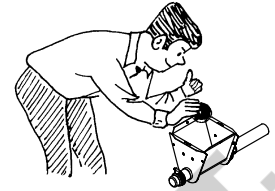


FIGURE 75.

### TO INSTALL THE THUMPER (OPTION)

**DO NOT USE THIS THUMPER WITH A DOUBLE FEED INTAKE BOOT !!!**

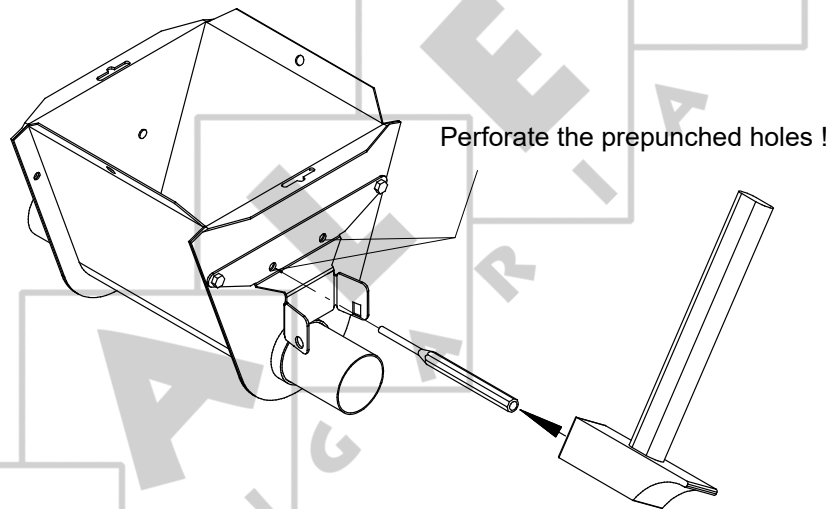


FIGURE 76.

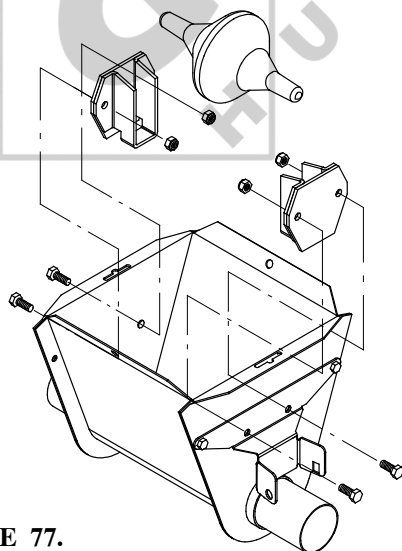


FIGURE 77.

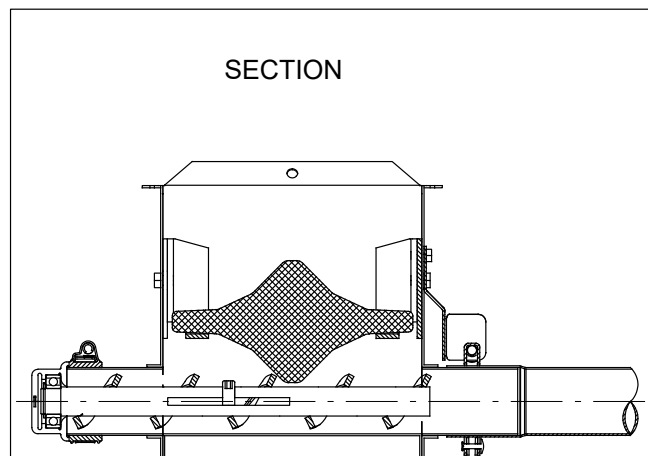


FIGURE 78.

**TO INSTALL MINIMAX CONTROL UNIT WITH SENSOR (OPTION)**

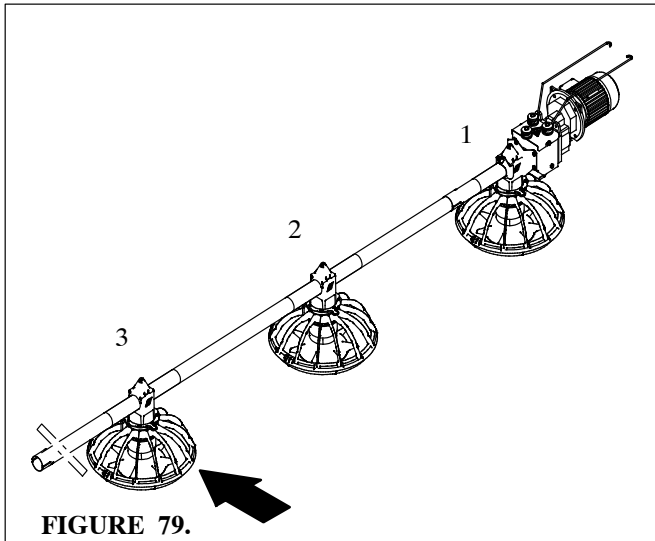


FIGURE 79.

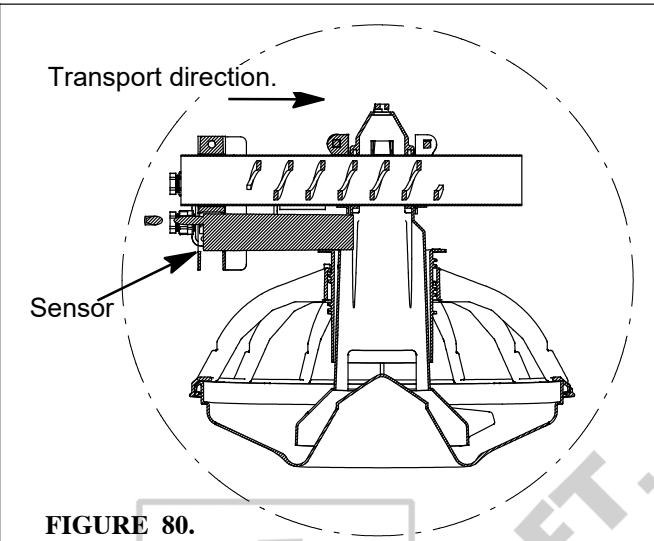


FIGURE 80.

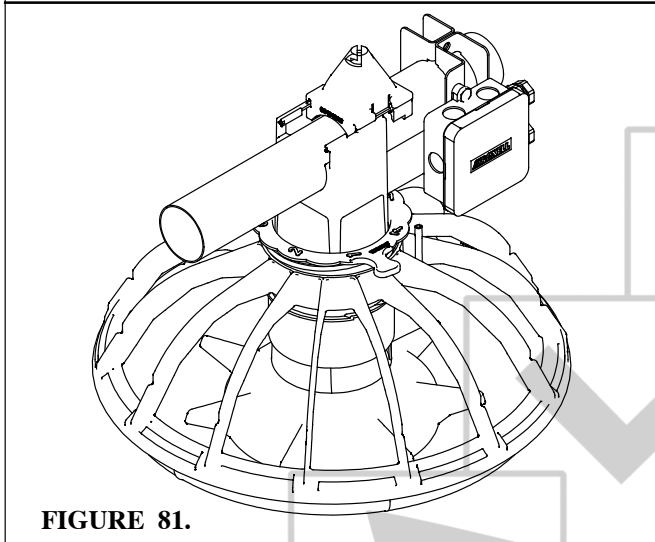
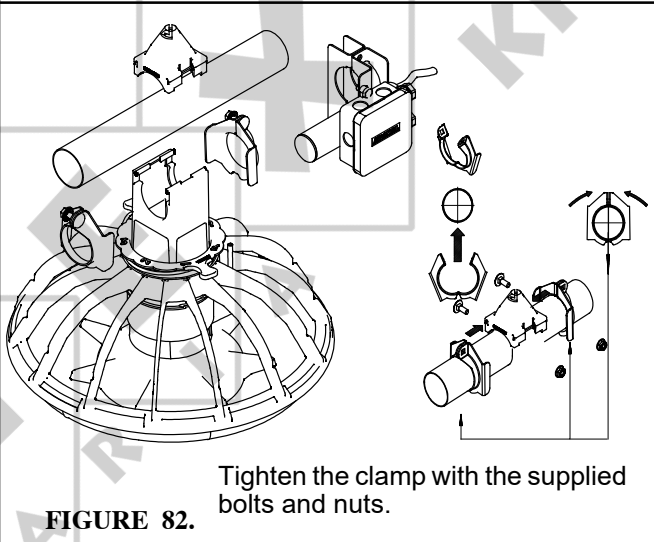


FIGURE 81.



Tighten the clamp with the supplied bolts and nuts.

FIGURE 82.

**TO SUSPEND THE POWER UNIT**

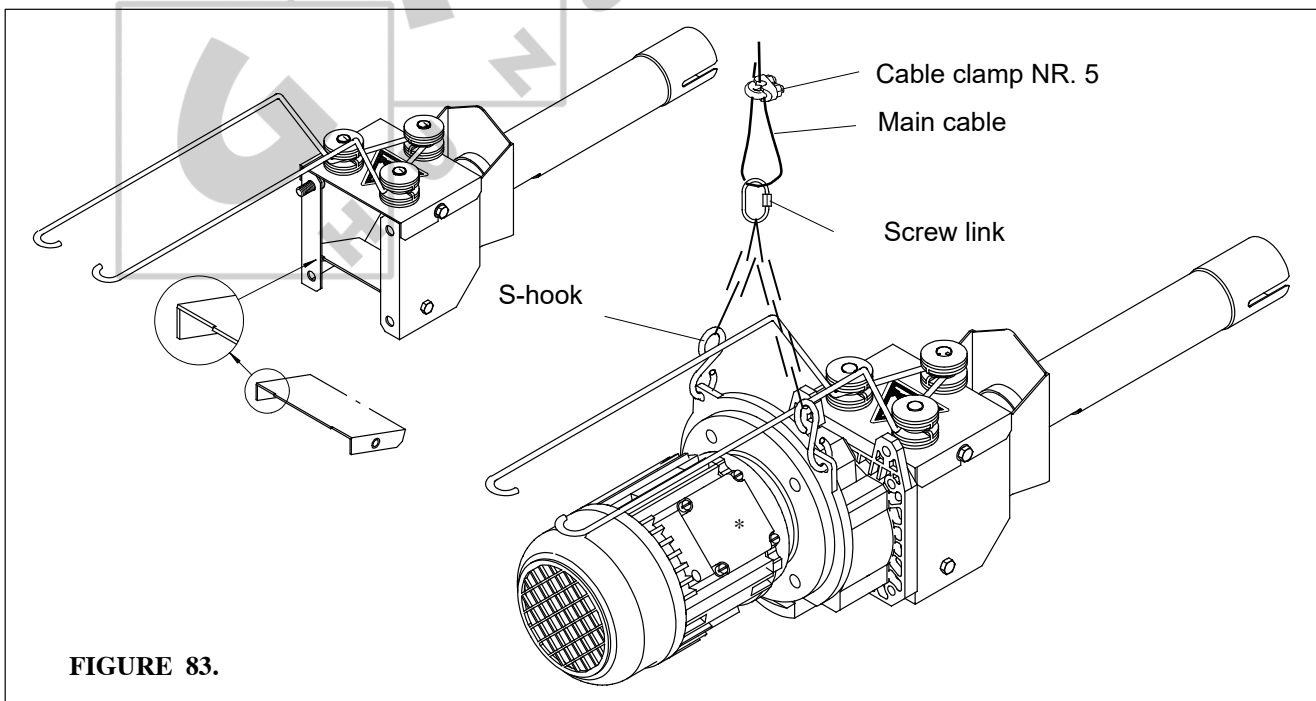


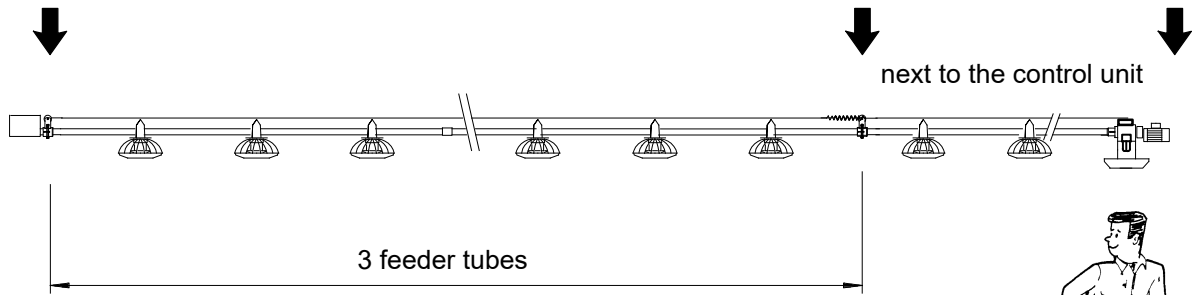
FIGURE 83.



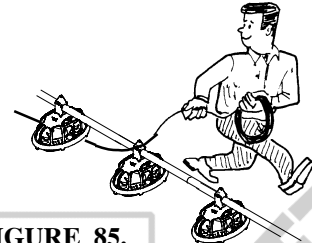
## TO INSTALL THE POULTRY PERCH GUARD

Position of the anchor brackets.  
next to the hopper

every 3 feeder tubes when 3 or 4 pans/tube  
every 2 feeder tubes when 1 or 2 pans/tube



Unroll the cable for poultry perch  
between 2 anchor brackets.

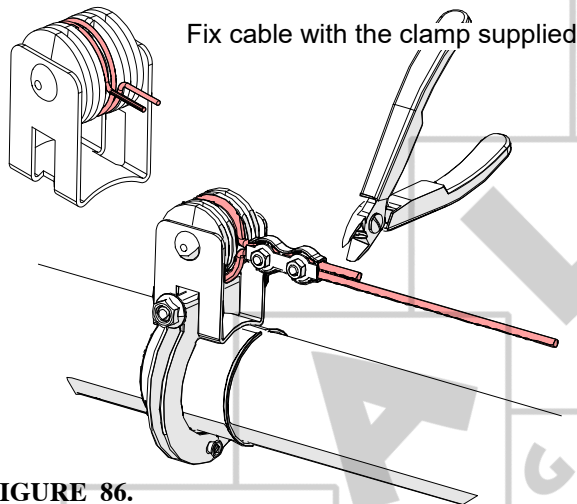


**FIGURE 84.**

**FIGURE 85.**

### START NEXT TO THE HOPPER

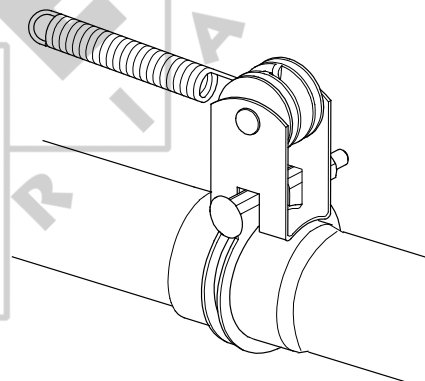
Make a double loop around the central notch of the  
anchor bracket.



**FIGURE 86.**

Click the cable into the upper cap of each pan up to  
the next cable connection.

Install a spring in the central notch of the second  
anchor bracket.



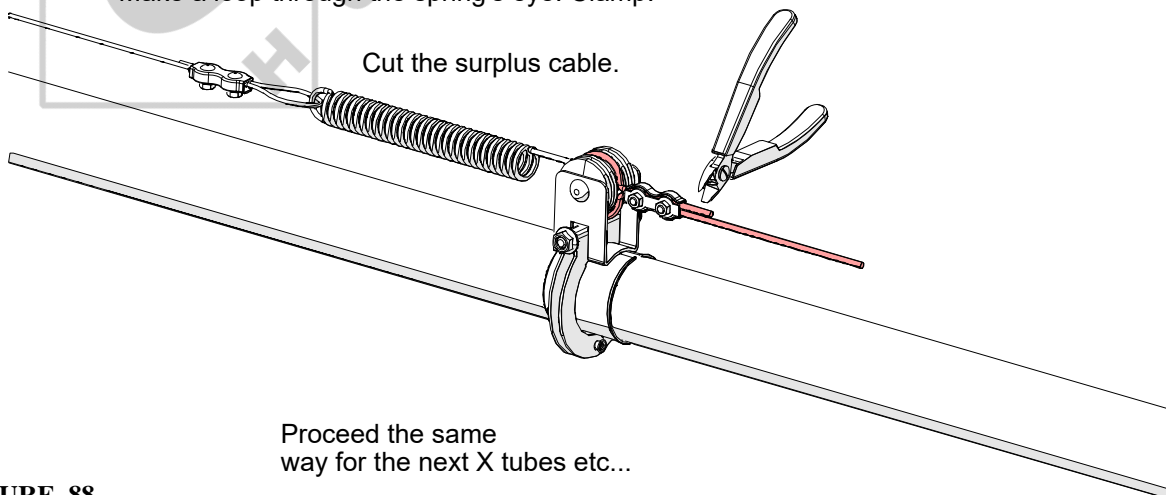
**FIGURE 87.**

### EVERY X FEEDER TUBES (see fig. 84.)

Firmly tighten the cable.

Make a loop through the spring's eye. Clamp.

Cut the surplus cable.



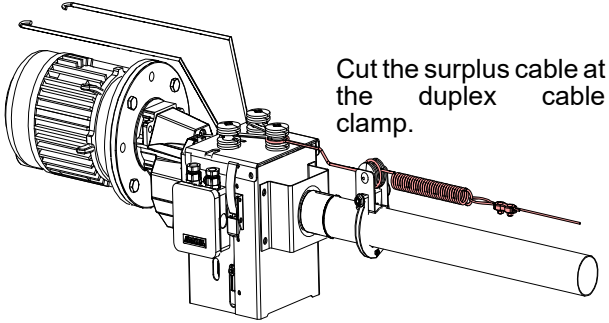
**FIGURE 88.**



**NEXT TO THE CONTROL UNIT**

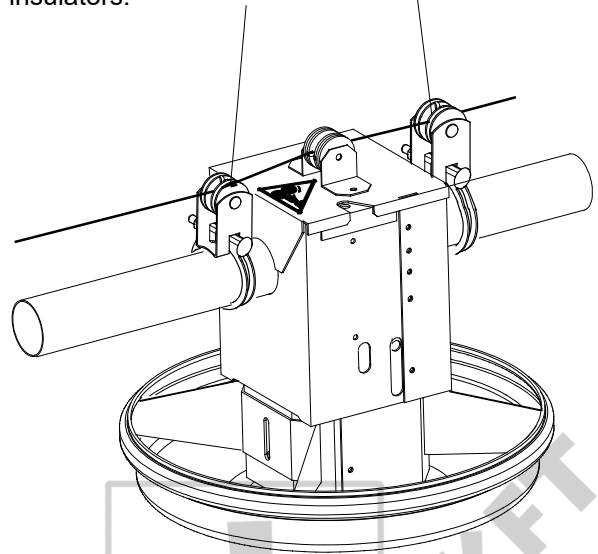
Use the connection wire to connect the cable for poultry perch guard.

Fasten the poultry perch cable the same way as in fig. 84.



**FIGURE 89.**

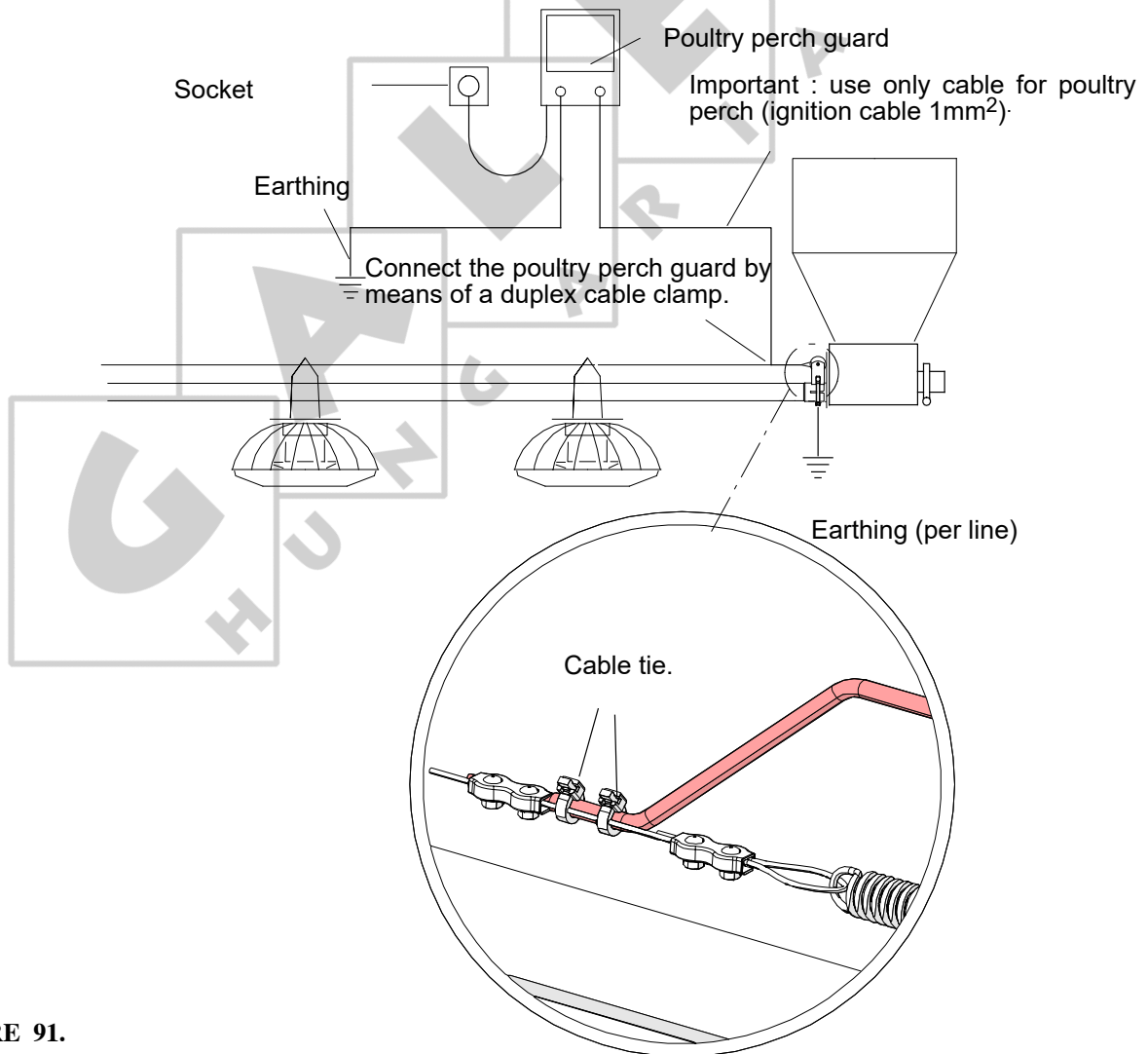
On the INTERMEDIATE CONTROL, put the cable for poultry perch guard on top of these insulators.



**FIGURE 90.**

**POULTRY PERCH GUARD AND FEEDER LINE MUST BE EARTHED !!!**

After all cables for poultry perch have been installed, connect the poultry perch guard to the 1/16" cable.



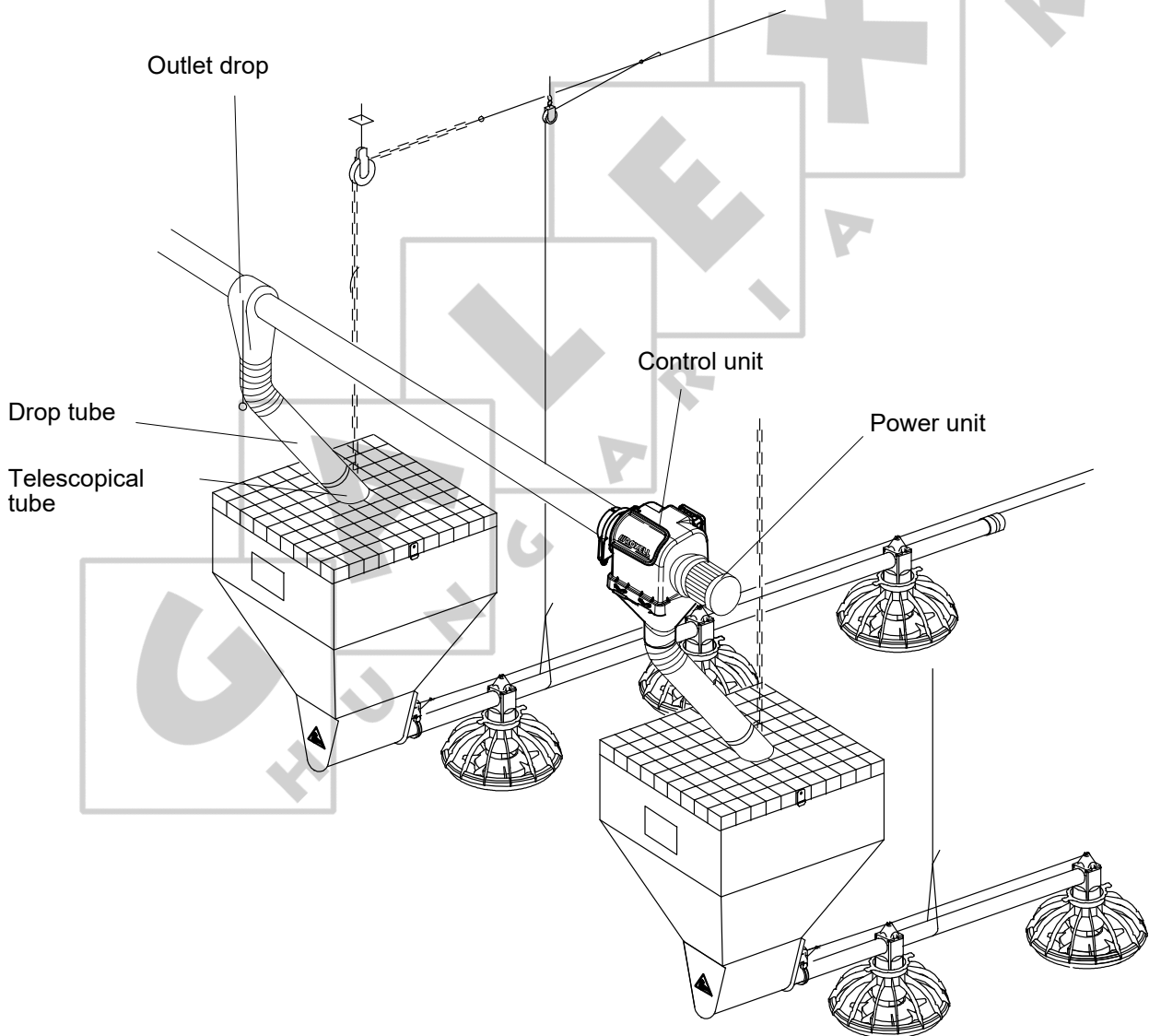
**FIGURE 91.**

## TO INSTALL THE FLEX AUGER FEED SUPPLY SYSTEM

**INSTALLATION INSTRUCTIONS : SEE OUR FLEX-AUGER OPERATOR'S MANUAL.  
ATTENTIVELY READ THESE INSTRUCTIONS.**

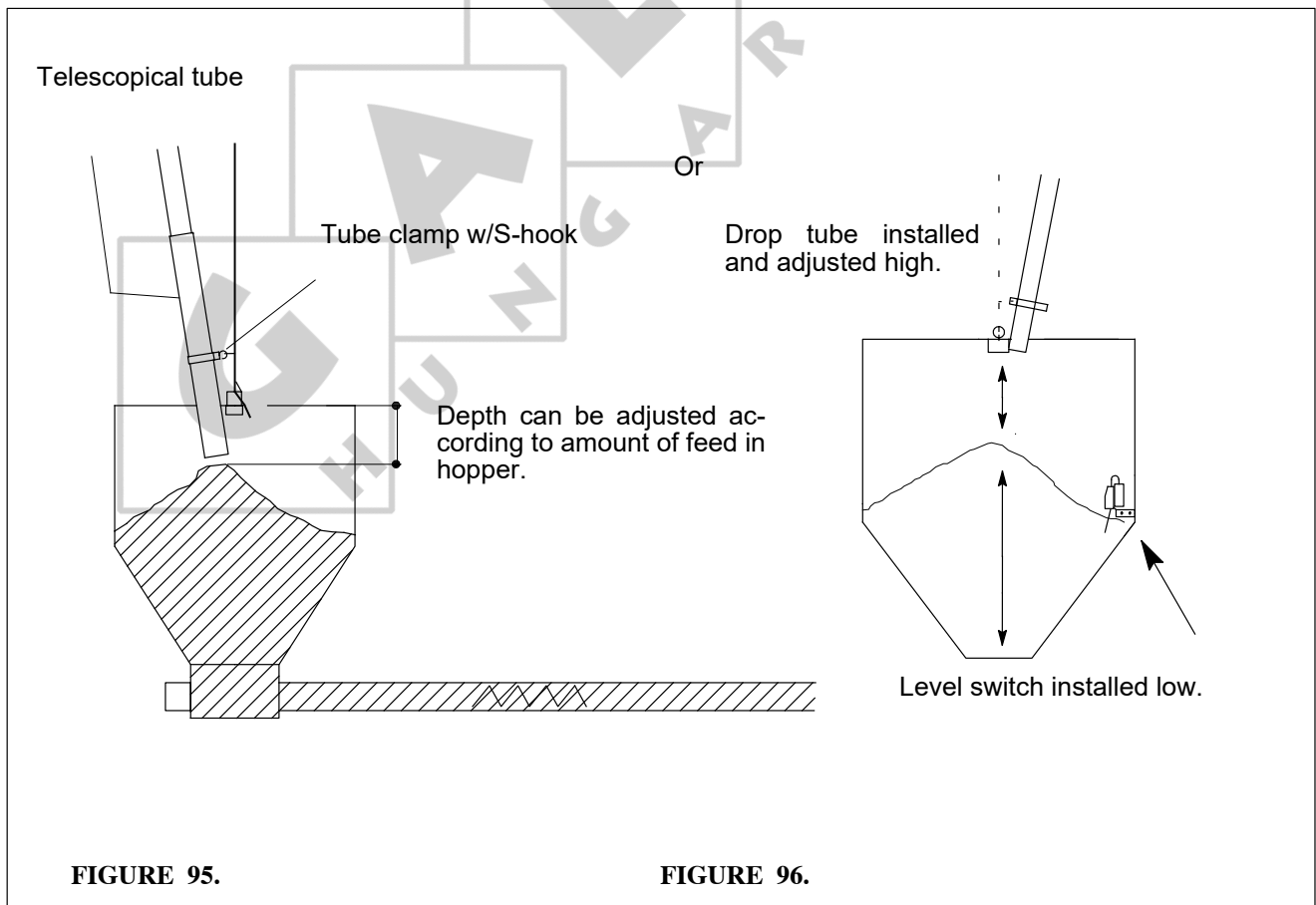
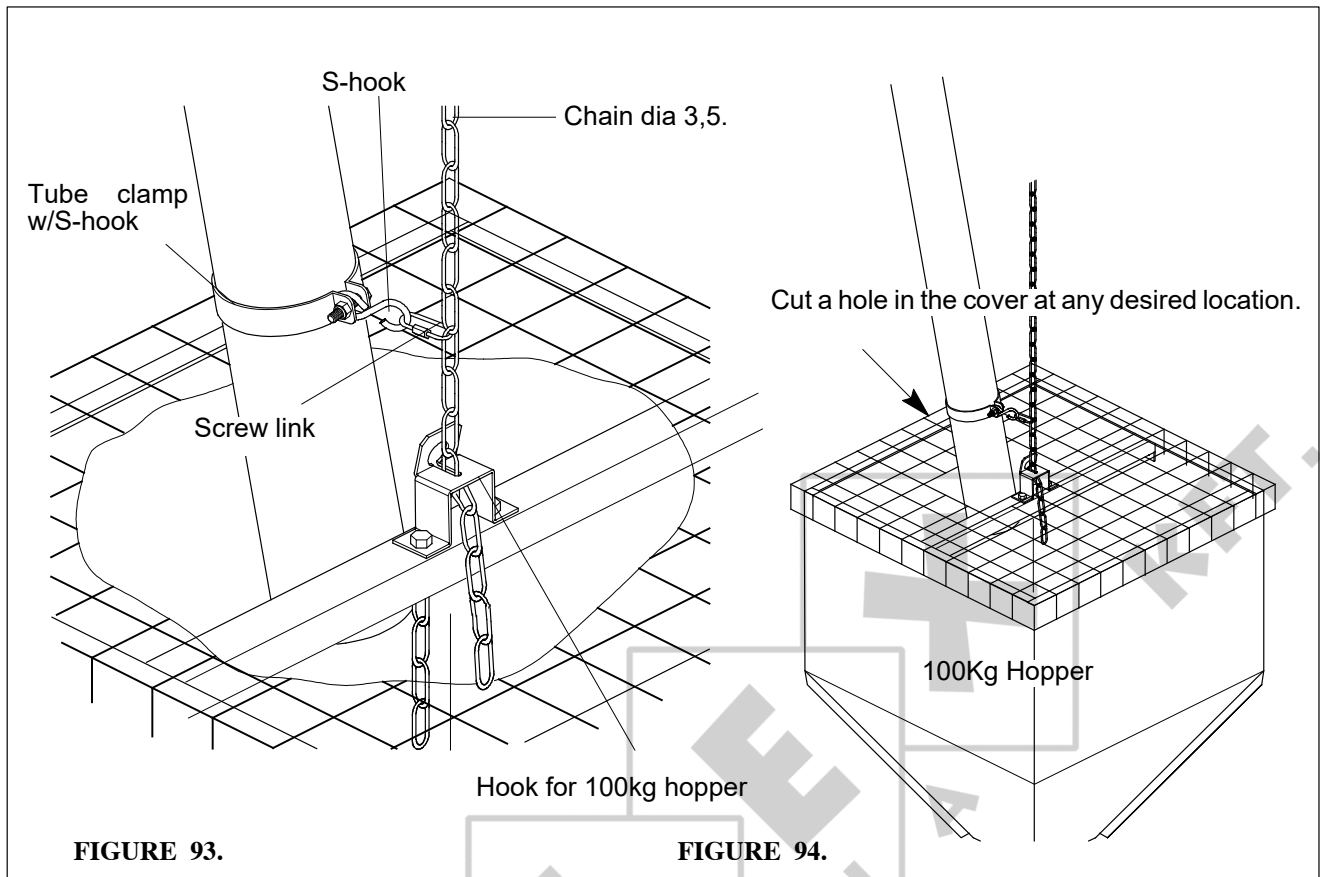
**ATTENTION :**

- Use as little elbows as possible.
- Make sure that there are no tube connections at locations where you need outlet drops !



**FIGURE 92.**

## TO INSTALL THE TELESCOPICAL TUBE



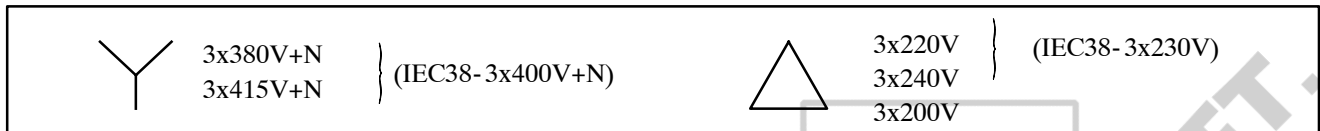
## ELECTRICITY .... WATCH OUT !

### LEAVE CONNECTIONS TO THE SYSTEM TO A QUALIFIED ELECTRICIAN !

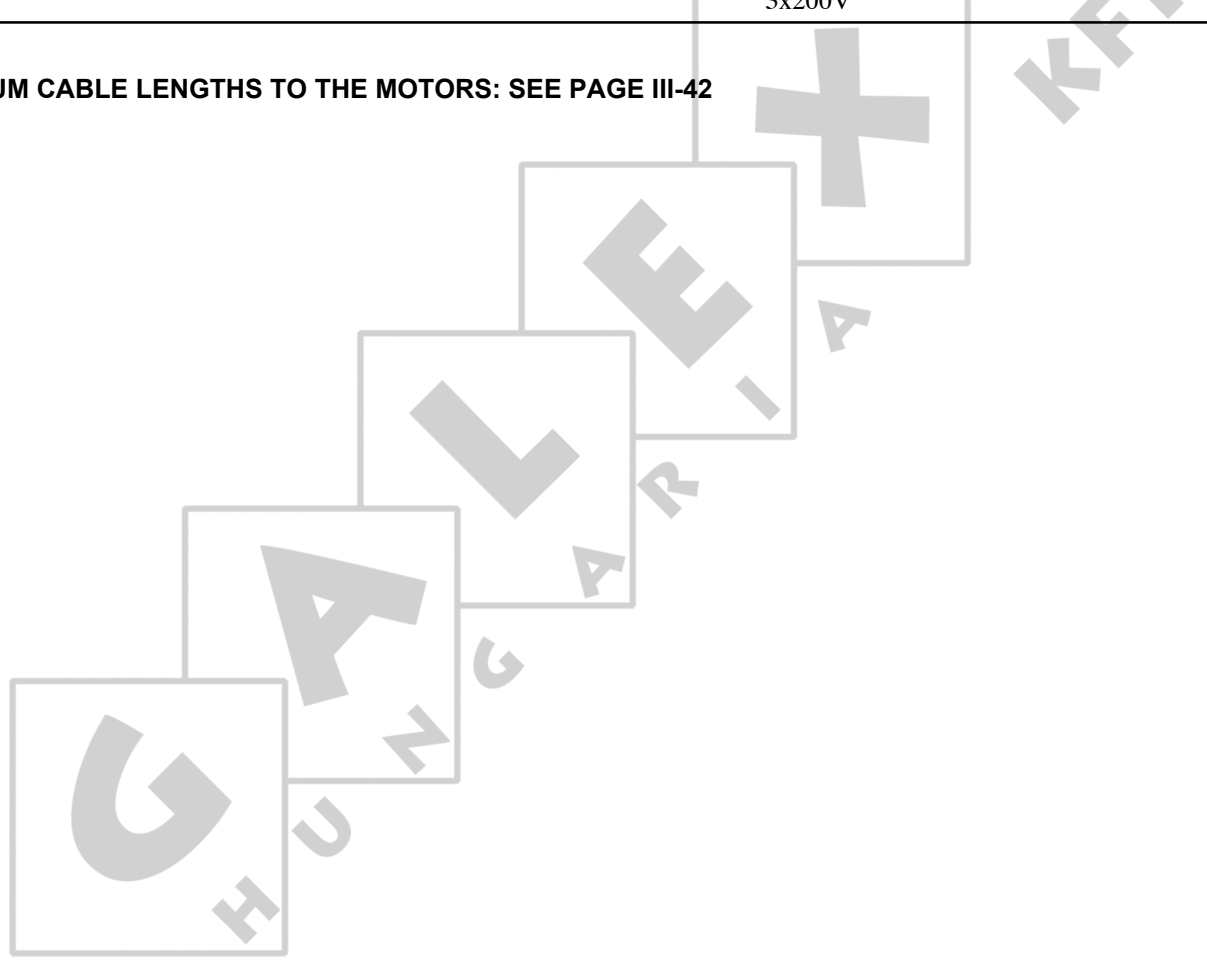
- Wire the system with the utmost care and attention.
- Always provide a solid earthing.
- Check all connections before you switch on.
- Always follow the wiring diagrams included in the control panels.
- Compare setting of the motor protection with the data on the motor label.
- Motor protections are set at minimum by the manufacturer.
- If you do not use a Roxell control panel, make sure to provide the necessary motor protections.
- Compare motor label plate and motor connection with local voltage :



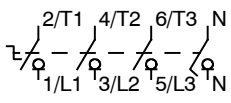
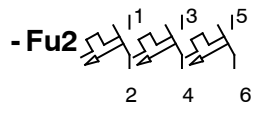
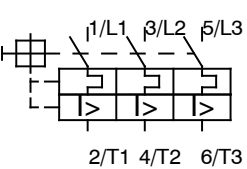
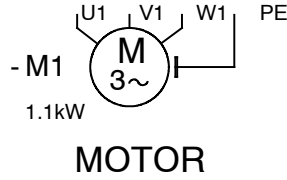
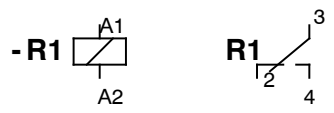
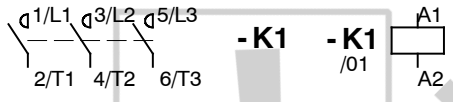
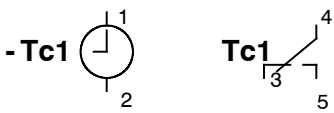
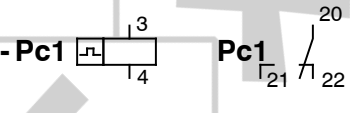
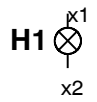
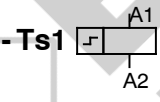
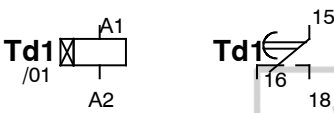
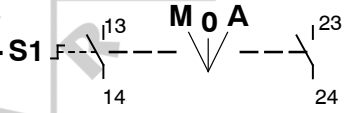
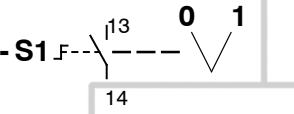
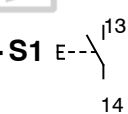
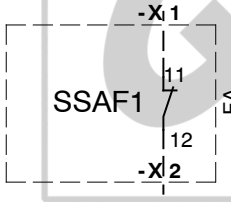
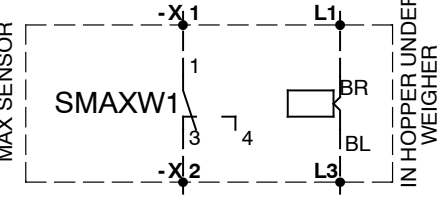
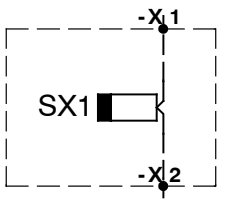
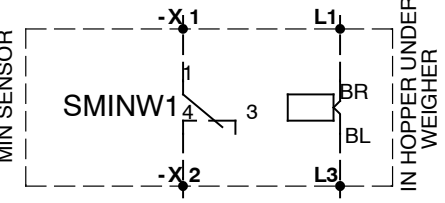
**DANGER**



**MAXIMUM CABLE LENGTHS TO THE MOTORS: SEE PAGE III-42**

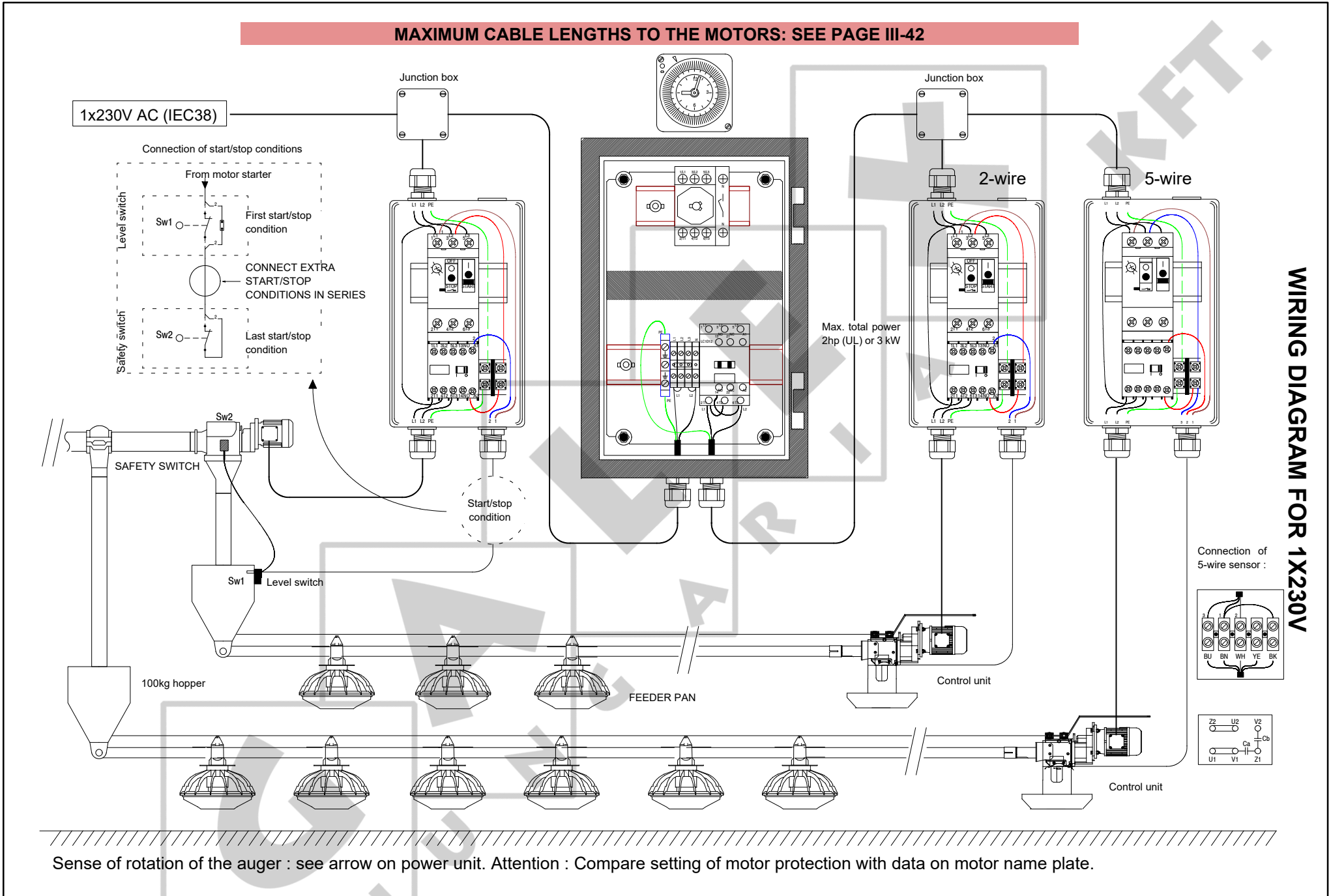


# ELECTRICAL SYMBOLS

 <p><b>-Si1</b> Main Switch</p>	 <p><b>-Fu2</b> Automatic fuse</p>
 <p><b>-Q1</b> Thermal-magnetic motor protection with auxiliary contacts</p>	 <p><b>-M1</b> Motor 1.1kW MOTOR</p>
 <p><b>-R1</b> Control circuit relay</p>	 <p><b>-K1</b> Contactor</p>
 <p><b>-Tc1</b> Time clock</p>	 <p><b>-Pc1</b> Preset counter</p>
 <p><b>H1</b> Signal Lamp</p>	 <p><b>-Ts1</b> Serial timer</p>
 <p><b>Td1</b> Adjustable timer with mode selection</p>	 <p><b>-S1</b> 3-position switch with M/O/A indication plate</p>
 <p><b>-S1</b> 2-position switch with 0/1 indication plate</p>	 <p><b>-S1</b> Push button</p>
<p>SAFETY SWITCH</p>  <p><b>SSAF1</b> Safety or level switch for Flex-Augers, Discaflex, ...</p>	<p>MAX SENSOR</p>  <p><b>SMAXW1</b> Sensor with NC-contact (supply on)</p>
<p>CONTROL PAN</p>  <p><b>SX1</b> Control sensor for Kixoo or Booztzer pans</p>	<p>MIN SENSOR</p>  <p><b>SMINW1</b> Sensor with NO-contact (supply on)</p>

MAXIMUM CABLE LENGTHS TO THE MOTORS: SEE PAGE III-42

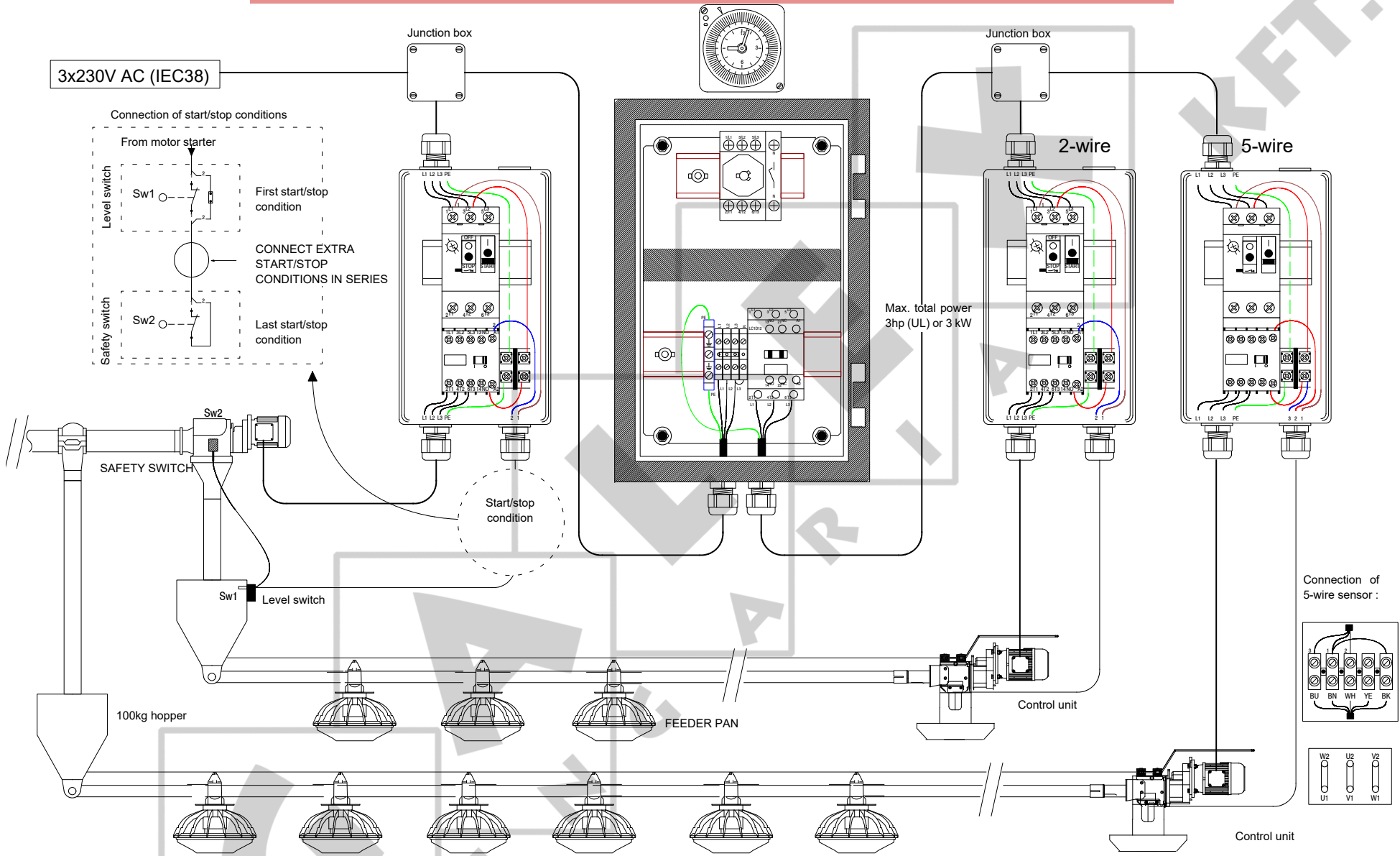
WIRING DIAGRAM FOR 1X230V



Sense of rotation of the auger : see arrow on power unit. Attention : Compare setting of motor protection with data on motor name plate.

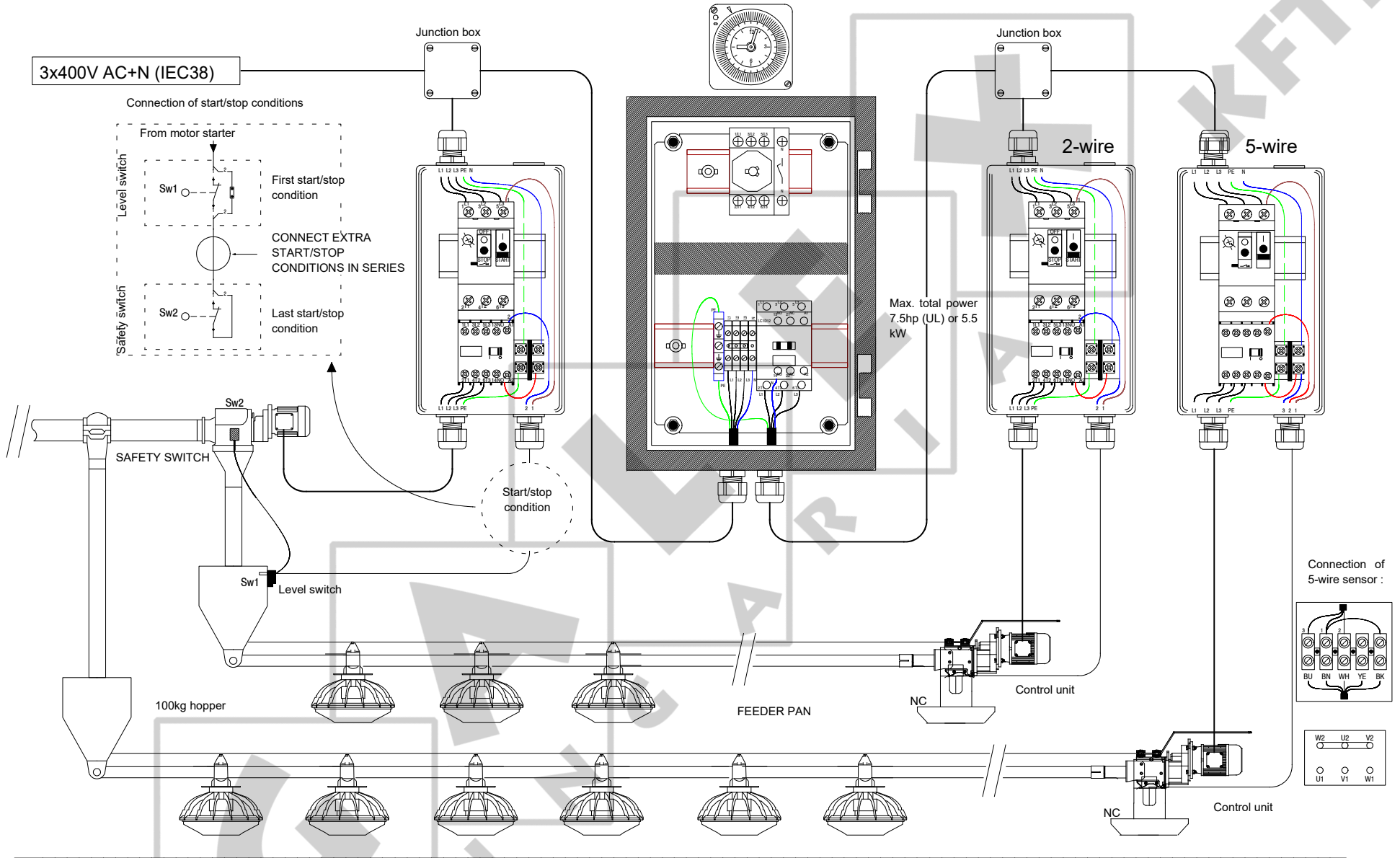
**MAXIMUM CABLE LENGTHS TO THE MOTORS: SEE PAGE III-42**

**WIRING DIAGRAM FOR 3X230V**



Sense of rotation of the auger : see arrow on power unit. Attention : Compare setting of motor protection with data on motor name plate.

MAXIMUM CABLE LENGTHS TO THE MOTORS: SEE PAGE III-42



Sense of rotation of the auger : see arrow on power unit. Attention : Compare setting of motor protection with data on motor name plate.

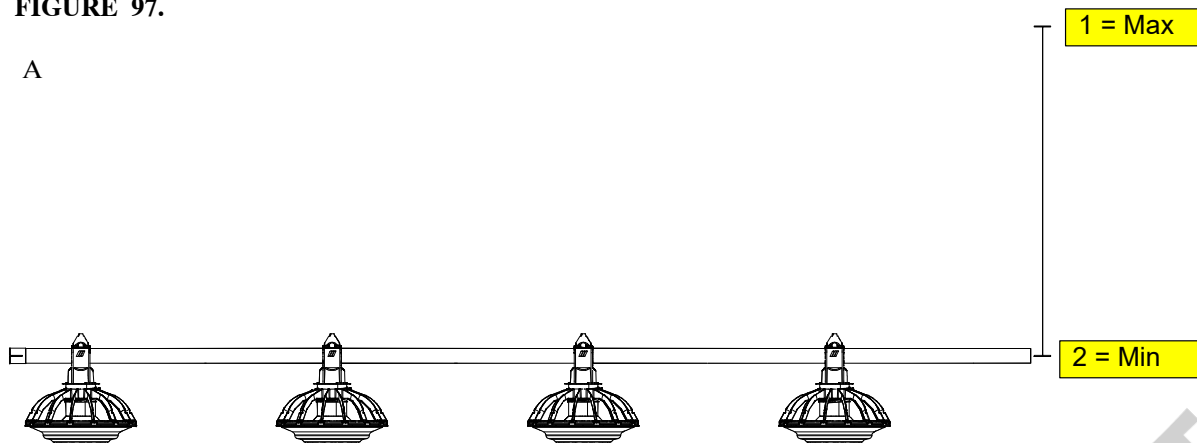
WIRING DIAGRAM FOR 3X400V



### ADJUSTMENT

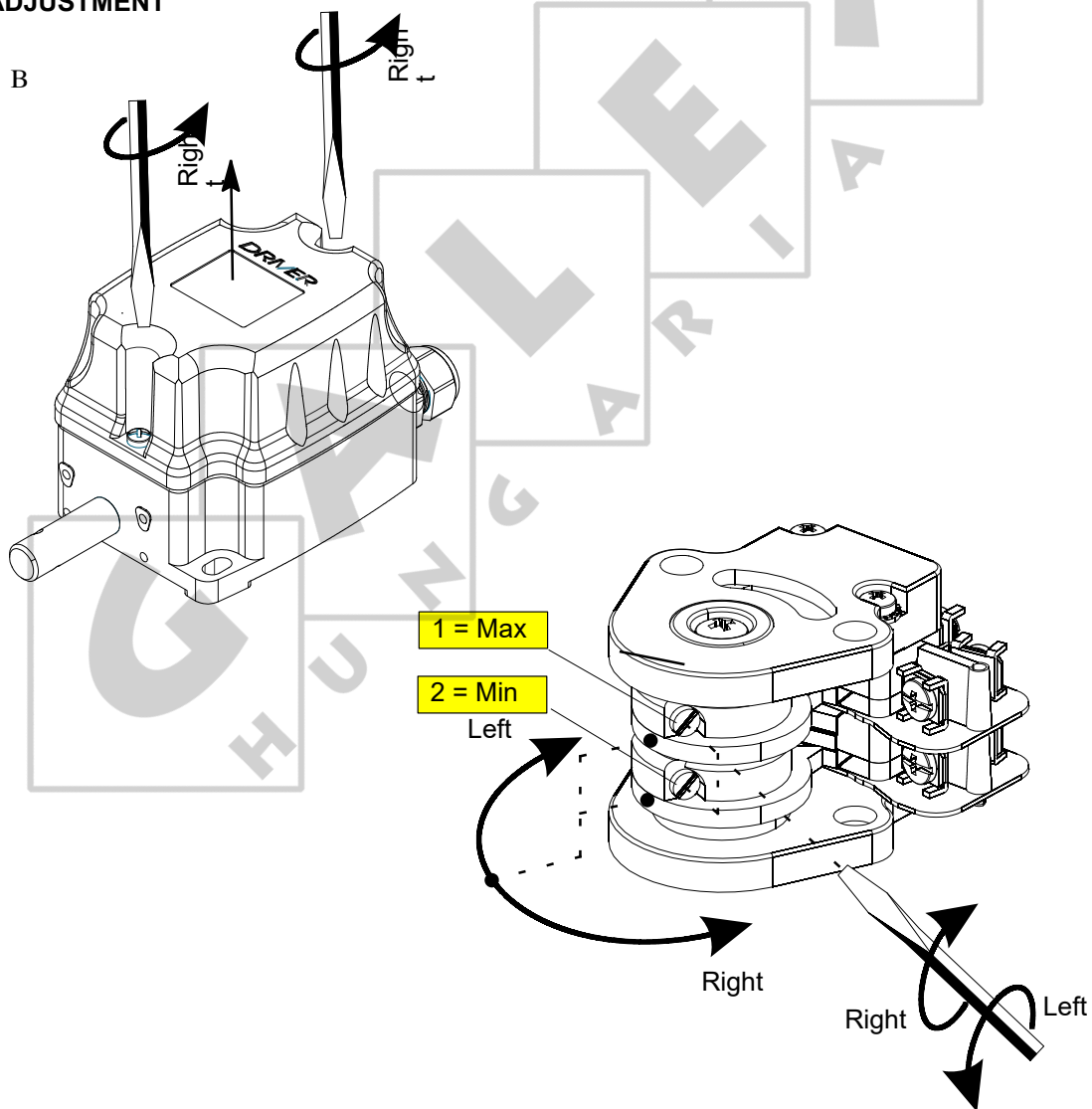
FIGURE 97.

A



### ADJUSTMENT

B



### ADJUSTMENT LIMIT SWITCH

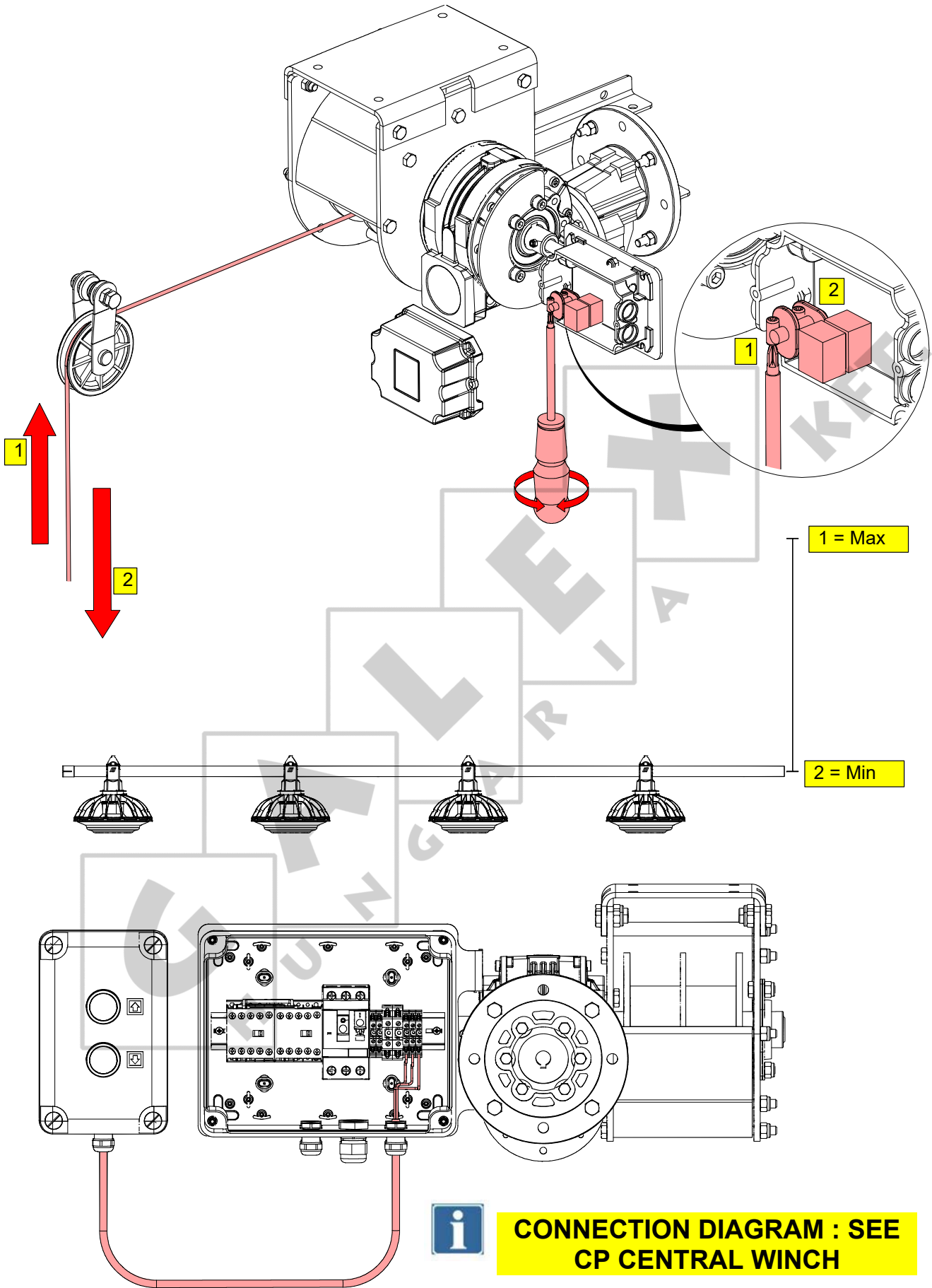
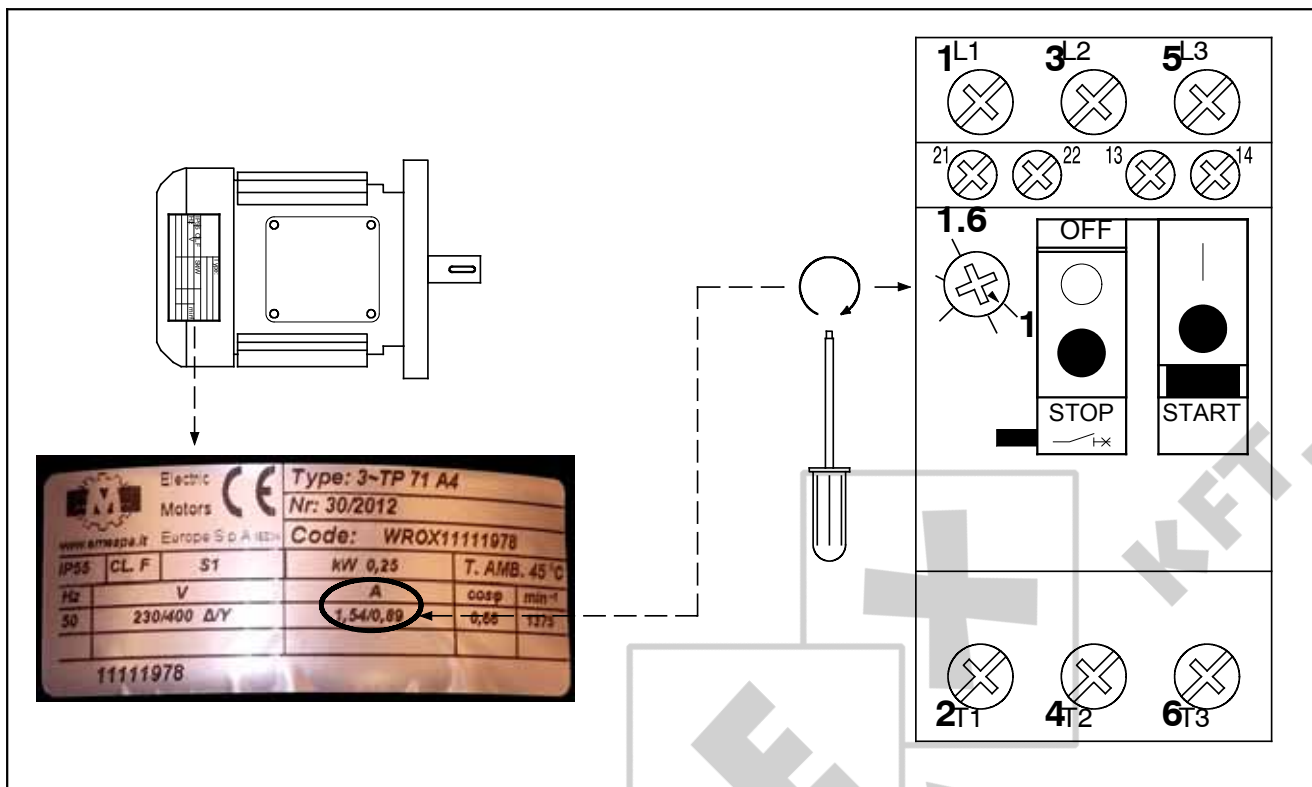


FIGURE 98.

### MOTOR PROTECTION



HUNGARY  
 AIR  
 TRADE

## MAXIMUM CABLE LENGTHS TO THE MOTORS

Calculation method:	IEC-HD 60364-5
Cable type:	PVC – XLPE – Silicon
Placing:	Open cable trough
Materials used:	Schneider Electric GV2 motor protections

Please be aware that you have to follow the local regulations for your country!

Motor Power (kW)	Net voltage	Protection	Max. cable length (m)	Wire gauge (mm <sup>2</sup> )
0.12	3x230V 50Hz	GV2ME04	0 - 442	1.5
			443 - 736	2.5
			737 - 1179	4
	3x400V 50Hz	GV2ME03	0 - 1232	1.5
			1233 - 2053	2.5
			2054 - 3285	4
0.18	1x230V 50Hz	GV2ME07	0 - 110	1.5
			111 - 185	2.5
			186 - 297	4
	3x230V 50Hz	GV2ME06	0 - 174	1.5
			175 - 290	2.5
			291 - 464	4
	3x400V 50Hz	GV2ME05	0 - 492	1.5
			493 - 821	2.5
			822 - 1314	4
0.22	3x220V 60Hz 3x230V 60Hz	GV2ME06	0 - 167	1.5
			168 - 279	2.5
			280 - 446	4
	3x380V 60Hz 3x400V 60Hz	GV2ME05	0 - 471	1.5
			472 - 785	2.5
			786 - 1257	4
0.25	1x230V 50Hz	GV2ME07	0 - 110	1.5
			111 - 185	2.5
			186 - 297	4
	3x230V 50Hz	GV2ME06	0 - 174	1.5
			175 - 290	2.5
			291 - 464	4
	3x400V 50Hz	GV2ME05	0 - 492	1.5
			493 - 821	2.5
			822 - 1314	4
0.37	1x230V 50Hz	GV2ME08	0 - 69	1.5
			70 - 116	2.5
			117 - 185	4
	3x230V 50Hz	GV2ME07	0 - 111	1.5
			112 - 185	2.5
			186 - 297	4
	3x400V 50Hz	GV2ME06	0 - 308	1.5
			309 - 513	2.5
			514 - 821	4

Motor Power (kW)	Net voltage	Protection	Max. cable length (m)	Wire gauge (mm <sup>2</sup> )
0.45	3x220V 60Hz 3x230V 60Hz	GV2ME07	0 - 107	1.5
			108 - 178	2.5
			179 - 285	4
	3x380V 60Hz 3x400V 60Hz	GV2ME06	0 - 294	1.5
			295 - 491	2.5
			492 - 785	4
0.55	3x230V 50Hz	GV2ME08	0 - 69	1.5
			70 - 116	2.5
			117 - 185	4
	3x230V 50Hz	GV2ME07	0 - 111	1.5
			112 - 185	2.5
			186 - 297	4
	3x400V 50Hz	GV2ME07	0 - 197	1.5
			198 - 328	2.5
			329 - 525	4
	3x400V 50Hz	GV2ME06	0 - 308	1.5
			309 - 513	2.5
			514 - 821	4
0.75	1x230V 50Hz	GV2ME10	0 - 44	1.5
			45 - 73	2.5
			74 - 117	4
	3x230V 50Hz	GV2ME08	0 - 69	1.5
			70 - 116	2.5
			117 - 185	4
	3x400V 50Hz	GV2ME07	0 - 197	1.5
			198 - 328	2.5
			329 - 525	4
0.9	1x220V 60Hz 1x230V 60Hz	GV2ME14	0 - 26	1.5
			27 - 44	2.5
			45 - 71	4
	3x220V 60Hz 3x230V 60Hz	GV2ME10	0 - 42	1.5
			43 - 70	2.5
			71 - 113	4
	3x380V 60Hz 3x400V 60Hz	GV2ME08	0 - 117	1.5
			118 - 196	2.5
			197 - 314	4
1.1	3x230V 50Hz	GV2ME10	0 - 44	1.5
			45 - 73	2.5
			74 - 117	4
	3x400V 50Hz	GV2ME08	0 - 123	1.5
			124 - 205	2.5
			206 - 328	4
1.32	3x220V 60Hz 3x230V 60Hz	GV2ME14	0 - 26	1.5
			27 - 44	2.5
			45 - 71	4
	3x380V 60Hz 3x400V 60Hz	GV2ME08	0 - 117	1.5
			118 - 196	2.5
			197 - 314	4

Motor Power (kW)	Net voltage	Protection	Max. cable length (m)	Wire gauge (mm <sup>2</sup> )
1.5	1x230V 50Hz	GV2ME14	0 - 27	1.5
			28 - 46	2.5
			47 - 74	4
	3x230V 50Hz	GV2ME10	0 - 44	1.5
			45 - 73	2.5
			74 - 117	4
	3x400V 50Hz	GV2ME08	0 - 123	1.5
			124 - 205	2.5
			206 - 328	4
1.8	3x220V 60Hz 3x230V 60Hz	GV2ME14	0 - 26	1.5
			27 - 44	2.5
			45 - 71	4
	3x380V 60Hz 3x400V 60Hz	GV2ME10	0 - 74	1.5
			75 - 124	2.5
			125 - 199	4
2.2	3x230V 50Hz	GV2ME14	0 - 27	1.5
			28 - 46	2.5
			47 - 74	4
	3x400V 50Hz	GV2ME10	0 - 78	1.5
			79 - 130	2.5
			130 - 208	4
2.64	3x380V 60Hz 3x400V 60Hz	GV2ME14	0 - 47	1.5
			48 - 78	2.5
			79 - 125	4

In reality, if the cable lengths are longer than the ones given in the tables above, then you have to take one of the following actions:

- Double the section of the PE (earth connection)
- Increase the section of the phases AND the PE (earth connection)
- Place a earth-leak circuit breaker

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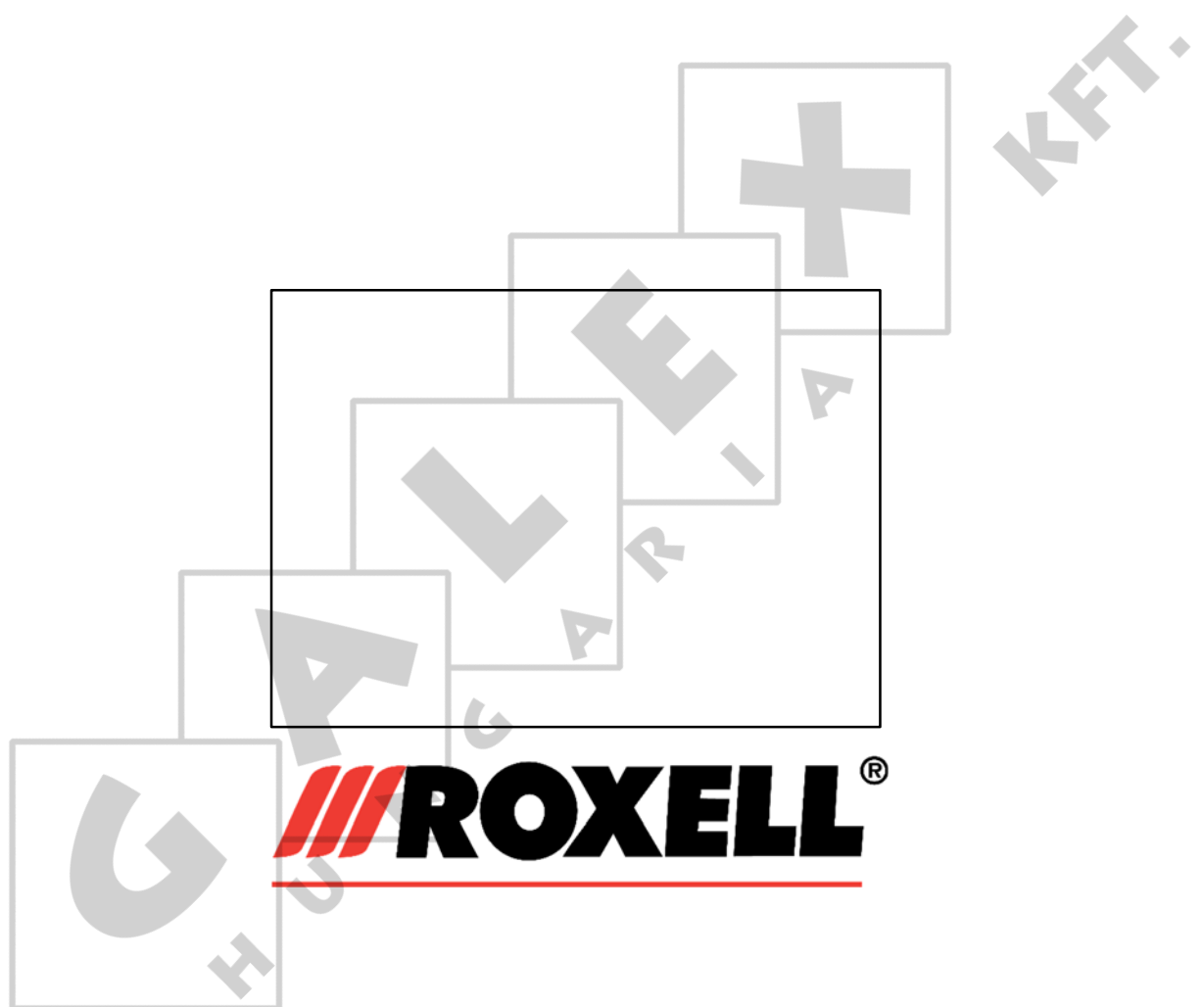
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